SAR Test Report

Report No.: AGC04183150401FH01

FCC ID	:	2AEMHM4GLTE
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Mobile Phone
BRAND NAME	:	OEM
MODEL NAME	:	M4GLTE
CLIENT	:	Shenzhen RF Technology Co., Ltd.
DATE OF ISSUE	:	May 14, 2015
STANDARD(S)	:	IEEE Std. 1528:2003 IEEE Std. 1528a:2005 FCC 47CFR § 2.1093 IEEE/ANSI C95.1:1992
REPORT VERSION	:	V1.0

*A*ttestation of Global Compliance(Shenzhen) Co., Ltd.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 14, 2015	Valid	Original Report

Test Report Certification

Applicant Name	Shenzhen RF Technology Co., Ltd.
Applicant Address	F/3~5, BuildingD, Longhua Baokun Industrial Zone, Baoan District, Shenzhen China
Manufacturer Name	Shenzhen RF Technology Co., Ltd.
Manufacturer Address	F/3~5, BuildingD, Longhua Baokun Industrial Zone, Baoan District, Shenzhen China
Product Designation	Mobile Phone
Brand Name	OEM
Model Name	M4GLTE
Different Description	N/A
IMEI 1	459432140185225
IMEI 2	459432140195471
EUT Voltage	DC3.7V by battery
Applicable Standard	IEEE Std. 1528:2003 IEEE Std. 1528a:2005 FCC 47CFR § 2.1093 IEEE/ANSI C95.1:1992
Test Date	May 6,2015 to May 12, 2015
Performed Location	Attestation of Global Compliance(Shenzhen) Co., Ltd.
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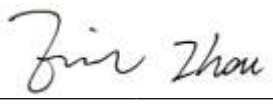
Report Template	AGCRT-US-4G/SAR (2015-05-01)

Tested By 

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1. SUMMARY OF MAXIMUM SAR VALUE

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

Frequency Band	Highest Reported SAR(W/Kg)	
	Head	Body-worn(with 10mm separation)
GSM 850	0.472	0.783
PCS 1900	0.454	0.586
UMTS Band II	1.302	1.276
UMTS Band V	0.554	1.082
LTE Band 4	1.398	1.556
LTE Band 17	0.367	1.171
WIFI 2.4G	0.199	0.172
Simultaneous Reported SAR	1.597	

The test plans were performed in accordance with IEEE Std. 1528:2003; IEEE1528a:2005; FCC 47CFR § 2.1093; IEEE/ANSI C95.1:1992 and the following specific FCC Test Procedures:

·KDB 447498 D01 General RF Exposure Guidance v05r02
·KDB 648474 D04 Handset SAR v01r02
·KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r03
·KDB 941225 D01 3G SAR Procedures v03
·KDB 941225 D06 Hot Spot SAR v02
·KDB 248227 D01 802.11 Wi-Fi SAR v02
·KDB 941225 D05 SAR for LTE Devices v02r03

2. GENERAL INFORMATION

2.1. EUT Description

General Information	
Product Designation	Mobile Phone
Test Model	M4GLTE
Hardware Version	L800B-25
Software Version	SW-M4QL-OEM-L800B-V01-20150101
Device Category	Portable
RF Exposure Environment	Uncontrolled
Antenna Type	Internal
GSM and GPRS&EGPRS	
Support Band	☒GSM 850 ☒PCS 1900 ☐GSM 900 ☐DCS 1800
GPRS &EGPRS Type	Class B
GPRS &EGPRS Class	Class 12(1Tx+4Rx, 2Tx+3Rx, 3Tx+2Rx, 4Tx+1Rx)
TX Frequency Range	GSM 850 : 820~850MHz; PCS 1900: 1850~1910MHz;
RX Frequency Range	GSM 850 : 869~894MHz; PCS 1900: 1930~1990MHz;
Release Version	R99
Type of modulation	GMSK for GSM/GPRS, GMSK&8-PSK for EGPRS
Antenna Gain	-1.0dBi(GSM 850), -0.8dBi (GSM 1900)
Max. Average Power (Max. Peak Power)	GSM850: 31.36dBm(32.87dBm- Peak Power) PCS1900: 28.26dBm(29.78dBm-Peak Power)
WCDMA	
Support Band	☒UMTS FDD Band II ☒UMTS FDD Band V ☐UMTS FDD Band IV ☐UMTS FDD Band I ☐UMTS FDD Band III ☐UMTS FDD Band VIII
HS Type	HSPA(HSUPA/HSDPA)
TX Frequency Range	WCDMA FDD Band II: 1852-1908MHz; WCDMA FDD Band V: 826-847MHz
RX Frequency Range	WCDMA FDD Band II: 1930-1990MHz WCDMA FDD Band V: 869-894MHz
Release Version	Rel-6
Type of modulation	QPSK
Antenna Gain	-1.0dBi(WCDMA 850), -0.8dBi (WCDMA 1900)

EUT Description(Continue)

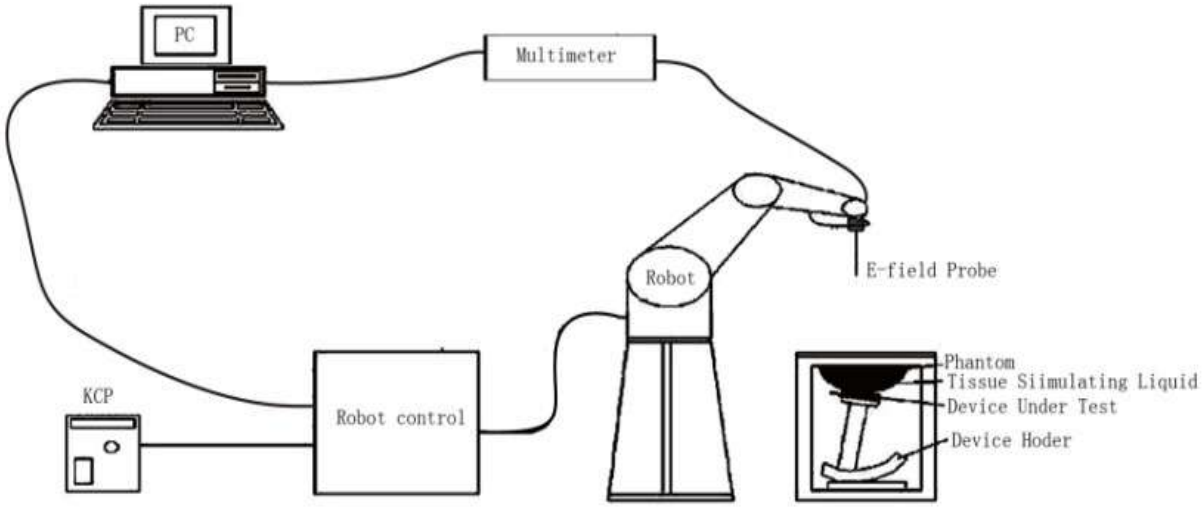
Max. Average Power (Max. Peak Power)	Band II: 21.41dBm (23.73dBm- Peak Power) Band V: 21.29dBm (23.63dBm- Peak Power)
LTE	
Support Band	☐Band 2 1900MHz ☒Band 4 1700MHz ☐Band 5 850MHz ☐Band 12 700MHz ☐Band 13 700MHz ☒Band 17 700MHz ☐Band 25 1900MHz ☐Band 26 850MHz ☐Band 28 700MHz
TX Frequency Range	Band 4:1710-1755 MHz; Band 17: 704-716 MHz
RX Frequency Range	Band 4:2110-2155 MHz; Band 17: 734-746 MHz
Release Version	Rel-8
Type of modulation	QPSK, 16QAM
Antenna Gain	-0.7dBi(LTE band 4), -1.0dBi(LTE band 17)
Max. Average Power (Max. Peak Power)	Band 4: 24.59dBm; Band 17: 24.27dBm
Bluetooth	
Bluetooth Version	☐V2.0 ☐V2.1 ☐V2.1+EDR ☒V3.0 ☐V3.0+HS ☒V4.0
Operation Frequency	2402~2480MHz
Type of modulation	☒GFSK ☒Π/4-DQPSK ☒8-DPSK
Avg. Burst Power	0.40dBm
Antenna Gain	1.0dBi
WIFI	
WIFI Specification	☐802.11a ☒802.11b ☒802.11g ☒802.11n(20) ☒802.11n(40)
Operation Frequency	2412~2462MHz
Avg. Burst Power	11b:9.69dBm,11g:8.33dBm,11n(20):8.26dBm,11n(40):6.30dBm
Antenna Gain	1.0dBi
Accessories	
Battery	Brand name: OEM Model No. : M4GLTE Voltage and Capacitance: 3.7 V & 2000mAh
Adapter	Brand name: OEM Model No. : M4GLTE Input: AC 100-240V, 50/60Hz, 0.3A Output: DC 5V, 1A
Earphone	Brand name: N/A Model No. : N/A

Note: CMU200 can measure the average power and Peak power at the same time

Product	Type
	☒ Production unit ☐ Identical Prototype

3. SAR MEASUREMENT SYSTEM

3.1. The SATIMO system used for performing compliance tests consists of following items



The COMOSAR system for performing compliance tests consists of the following items:

- The PC. It controls most of the bench devices and stores measurement data.A computer running WinXP and the Opensar software.
- The E-Field probe. The probe is a 3-axis system made of 3 distinct dipoles. Each dipole returns a voltage in function of the ambient electric field.
- The Keithley multimeter measures each probe dipole voltages.
- The SAM phantom simulates a human head. The measurement of the electric field is made inside the phantom.
- The liquids simulate the dielectric properties of the human head tissues.
- The network emulator controls the mobile phone under test.
- The validation dipoles are used to measure a reference SAR. They are used to periodically check the bench to make sure that there is no drift of the system characteristics over time.
- The phantom, the device holder and other accessories according to the targeted measurement.

3.2. COMOSAR E-Field Probe

The SAR measurement is conducted with the dissymmetric probe manufactured by SATIMO. The probe is specially designed and calibrated for use in liquid with high permittivity. The dissymmetric probe has special calibration in liquid at different frequency. SATIMO conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528 and relevant KDB files.) The calibration data are in Appendix D.

3.3. Isotropic E-Field Probe Specification

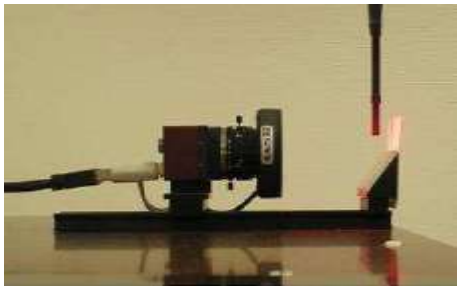
Model	SSE5	
Manufacture	SATIMO	
Frequency	0.3GHz-3GHz Linearity:±0.09dB(300MHz-3GHz)	
Dynamic Range	0.01W/Kg-100W/Kg Linearity:±0.09dB	
Dimensions	Overall length:330mm Length of individual dipoles:4.5mm Maximum external diameter:8mm Probe Tip external diameter:5mm Distance between dipoles/ probe extremity:2.7mm	
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 3 GHz with precision of better 30%.	

3.4. Robot

The COMOSAR system uses the KUKA robot from SATIMO SA (France).For the 6-axis controller COMOSAR system, the KUKA robot controller version from SATIMO is used. The XL robot series have many features that are important for our application: □ High precision (repeatability 0.02 mm) □ High reliability (industrial design) □ Jerk-free straight movements □ Low ELF interference (the closed metallic construction shields against motor control fields) □ 6-axis controller	

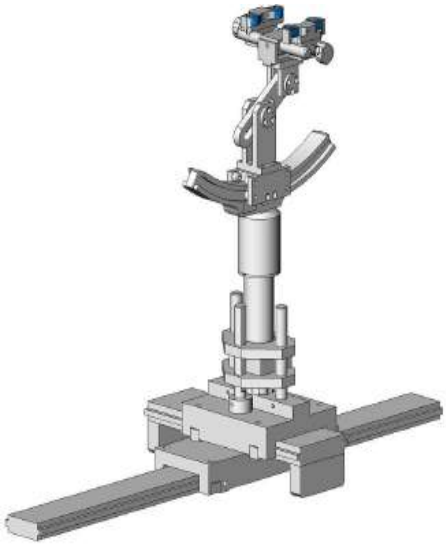
3.5. Video Positioning System

The video positioning system is used in OpenSAR to check the probe. Which is composed of a camera, LED, mirror and mechanical parts.The camera is piloted by the main computer with firewire link.
During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.
The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.



3.6. Device Holder

The COMOSAR device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (EPR).
Thus the device needs no repositioning when changing the angles.
The COMOSAR device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity εr =3 and loss tangent δ = 0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



3.7. SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas: □ Left head □ Right head □ Flat phantom	

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

4. SAR MEASUREMENT SYSTEM

4.1. Specific Absorption Rate (SAR)

SAR is related to the rate at which energy is absorbed per unit mass in object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and occupational/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume (dv) of given mass density (ρ). The equation description is as below:

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

SAR is expressed in units of Watts per kilogram (W/Kg)
SAR can be obtained using either of the following equations:

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

$$SAR = c_h \left.\frac{dT}{dt}\right|_{t=0}$$

Where

SAR	is the specific absorption rate in watts per kilogram;
E	is the r.m.s. value of the electric field strength in the tissue in volts per meter;
σ	is the conductivity of the tissue in siemens per metre;
ρ	is the density of the tissue in kilograms per cubic metre;
c_h	is the heat capacity of the tissue in joules per kilogram and Kelvin;
$\frac{dT}{dt} \mid t = 0$	is the initial time derivative of temperature in the tissue in kelvins per second

4.2. SAR Measurement Procedure

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurement are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface is 2.7mm This distance cannot be smaller than the distance os sensor calibration points to probe tip as `defined in the probe properties,

Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in SATIMO software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in db) is specified in the standards for compliance testing. For example, a 2db range is required in IEEE Standard 1528 and IEC62209 standards, whereby 3db is a requirement when compliance is assessed in accordance with the ARIB standard (Japan) If one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximum are detected, the number of Zoom Scan has to be increased accordingly.

Area Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100MHz to 6GHz

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{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 ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Step 3: Zoom Scan

Zoom Scan are used to assess the peak spatial SAR value within a cubic average volume containing 1g abd 10g of simulated tissue. The Zoom Scan measures points(refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1g and 10g and displays these values next to the job's label.

Zoom Scan Parameters extracted from KDB865664 d01 SAR Measurement 100MHz to 6GHz

Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{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: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
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.				

Step 4: Power Drift Measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the same settings. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

4.3. RF Exposure Conditions

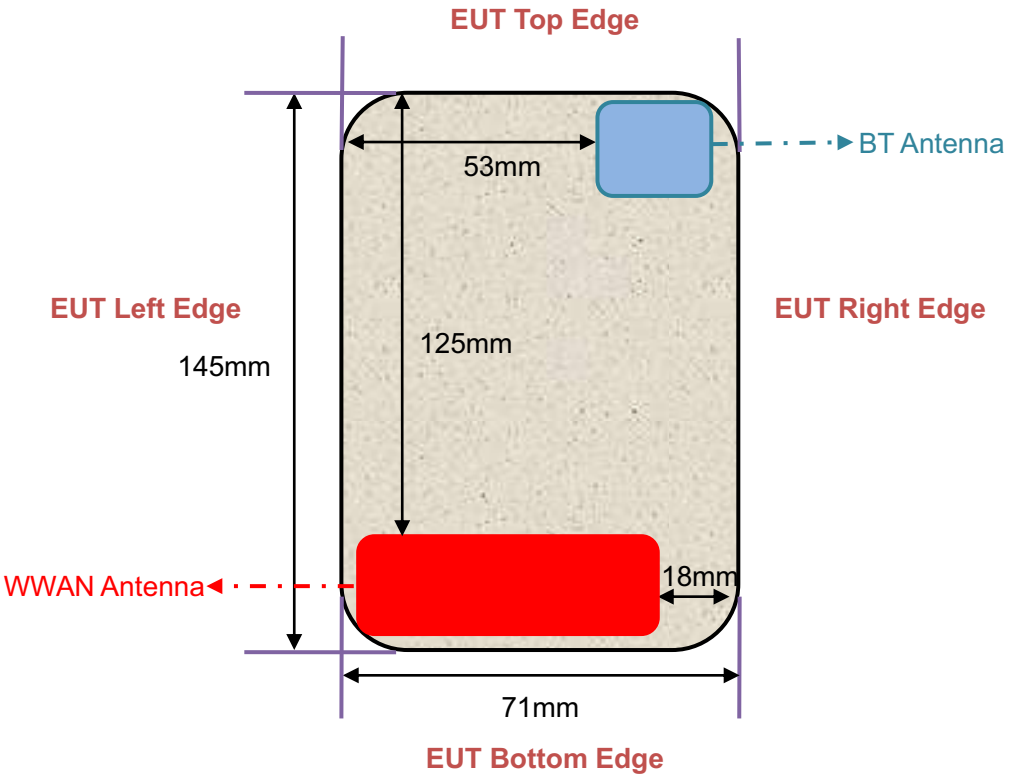
Test Configuration and setting:

The EUT is a model of GSM Portable Mobile Station (MS). It supports GSM/GPRS/EGPRS, WCDMA/HSPA, BT, WIFI, and support hot spot mode.

For WWAN SAR testing, the device was controlled by using a base station emulator. Communication between the device and the emulator were established by air link. The distance between the EUT and the antenna is larger than 50cm, and the output power radiated from the emulator antenna is at least 30db smaller than the output power of EUT.

For WLAN testing, the EUT is configured with the WLAN continuous TX tool through engineering command.

Antenna Location: (front view)



For WWAN mode:

Test Configurations	Antenna to edges/surface(mm)	SAR required	Note
Head			
Left Touch		Yes	-
Left Tilt		Yes	-
Right Touch		Yes	-
Right Tilt		Yes	-
Body			
Back	<25mm	Yes	-
Front	<25mm	Yes	-
Hotspot			
Back	<25mm	Yes	-
Front	<25mm	Yes	-
Edge 1 (Top)	125	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225D06 Hotspot SAR
Edge 2 (Right)	18	Yes	-
Edge 3 (Bottom)	1	Yes	-
Edge 4 (Left)	1	Yes	-

For WLAN mode:

Test Configurations	Antenna to edges/surface(mm)	SAR required	Note
Head			
Left Touch		Yes	-
Left Tilt		Yes	-
Right Touch		Yes	-
Right Tilt		Yes	-
Body			
Back	<25mm	Yes	-
Front	<25mm	Yes	-
Hotspot			
Back	<25mm	Yes	-
Front	<25mm	Yes	-
Edge 1 (Top)	1	Yes	-
Edge 2 (Right)	1	Yes	-
Edge 3 (Bottom)	113	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225D06 Hotspot SAR
Edge 4 (Left)	53	No	SAR is not required for the distance between the antenna and the edge is >25mm as per KDB 941225D06 Hotspot SAR

5. TISSUE SIMULATING LIQUID

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 15cm. For head SAR testing the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15cm For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15cm.The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5% are listed in 4.2

5.1. The composition of the tissue simulating liquid

Ingredient	Water	Salt	Sugar	HEC	Preventol	DGBE	TWEEN	Triton X-100
750 MHz Head	√	√	√	--	--	--	--	--
750 MHz Body	√	√	√	--	--	--	--	--
835MHz Head	√	√	√	√	√	--	--	--
835MHz Body	√	√	√	√	√	--	--	--
1750MHz Head	√	√	--	--	--	√	--	--
1750MHz Body	√	√	--	--	--	√	--	--
1900MHz Head	√	√	--	--	--	√	--	--
1900MHz Body	√	√	√	√	√	--	--	--
2450MHz Head	√	√	--	--	--	--	--	√
2450MHz Body	√	√	--	--	--	√	--	--

5.2. Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE 1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in IEEE 1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in IEEE 1528.

Target Frequency (MHz)	head		body	
	εr	σ (S/m)	εr	σ (S/m)
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	**41.5**	**0.90**	**55.2**	**0.97**
900	41.5	0.97	55.0	1.05
915	41.5	1.01	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	**40.0**	**1.40**	**53.3**	**1.52**
2450	**39.2**	**1.80**	**52.7**	**1.95**
3000	38.5	2.40	52.0	2.73

(εr = relative permittivity, σ = conductivity and ρ = 1000 kg/m3)

Target Frequency (MHz)	head		body	
	εr	σ (S/m)	εr	σ (S/m)
750	41.9	0.89	55.5	0.96
1750	40.1	0.90	53.4	1.49

5.3. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using SATIMO Dielectric Probe Kit and R&S Network Analyzer ZVL6.

Tissue Stimulant Measurement for 835MHz					
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 41.5 (39.425-43.575)	δ[s/m] 0.90(0.855-0.945)		
Head	824.2	42.61	0.87	20.8	May 6,2015
	826.4	42.07	0.88		
	835	41.86	0.89		
	836.6	41.70	0.90		
	846.6	41.17	0.91		
	848.8	40.68	0.93		
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 55.20(52.44-57-96)	δ[s/m]0.97(0.9215-1.0185)		
Body	824.2	56.02	0.94	21.0	May 6,2015
	826.4	55.75	0.95		
	835	55.24	0.95		
	836.6	54.67	0.96		
	846.6	54.01	0.98		
	848.8	53.42	0.99		

Tissue Stimulant Measurement for 1900MHz					
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr40.00(38.00-42.00)	δ[s/m]1.40(1.33-1.47)		
Head	1850.2	41.01	1.35	21.5	May 8,2015
	1852.4	40.88	1.36		
	1880	40.67	1.38		
	1900	40.32	1.41		
	1907.6	39.77	1.42		
	1909.8	39.19	1.43		
	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr53.30(50.635-55.965)	δ[s/m]1.52(1.444-1.596)		
Body	1850.2	54.70	1.46	21.7	May 8,2015
	1852.4	54.00	1.47		
	1880	53.68	1.50		
	1900	53.40	1.51		
	1907.6	53.06	1.53		
	1909.8	52.21	1.56		

Tissue Stimulant Measurement for 1750MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 40.1 (38.095-42.105)	δ[s/m] 0.90(0.855-0.945)		
	1720	41.82	0.87	22.1	May 10,2015
	1732.5	41.00	0.89		
	1745	40.57	0.90		
	1750	40.31	0.92		
Body	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 53.4(50.73-56.07)	δ[s/m] 1.49(1.4155-1.5645)		
	1720	54.92	1.43	22.2	May 10,2015
	1732.5	53.18	1.47		
	1745	53.00	1.50		
	1750	52.77	1.53		

Tissue Stimulant Measurement for 750MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 41.9 (39.805-43.995)	δ[s/m] 0.89(0.8455-0.9345)		
	709	42.85	0.86	21.9	May 11,2015
	710	41.99	0.87		
	711	41.57	0.89		
	750	41.01	0.91		
Body	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr 55.5(52.725-58.275)	δ[s/m]0.96(0.912-1.008)		
	709	56.47	0.94	22.1	May 11,2015
	710	55.50	0.96		
	711	54.18	0.97		
	750	54.00	0.98		

Tissue Stimulant Measurement for 2450MHz					
Head	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr39.2(37.24-41.16)	δ[s/m]1.80(1.71-1.89)		
	2412	40.51	1.78	21.5	May 12,2015
	2437	40.00	1.80		
	2450	39.78	1.83		
	2462	39.34	1.84		
Body	Fr. (MHz)	Dielectric Parameters (±5%)		Tissue Temp [°C]	Test time
		εr52.7(50.065-55.335)	δ[s/m]1.95(1.8525-2.0475)		
	2412	53.63	1.90	21.7	May 12,2015
	2437	53.10	1.92		
	2450	52.70	1.95		
	2462	51.66	1.96		

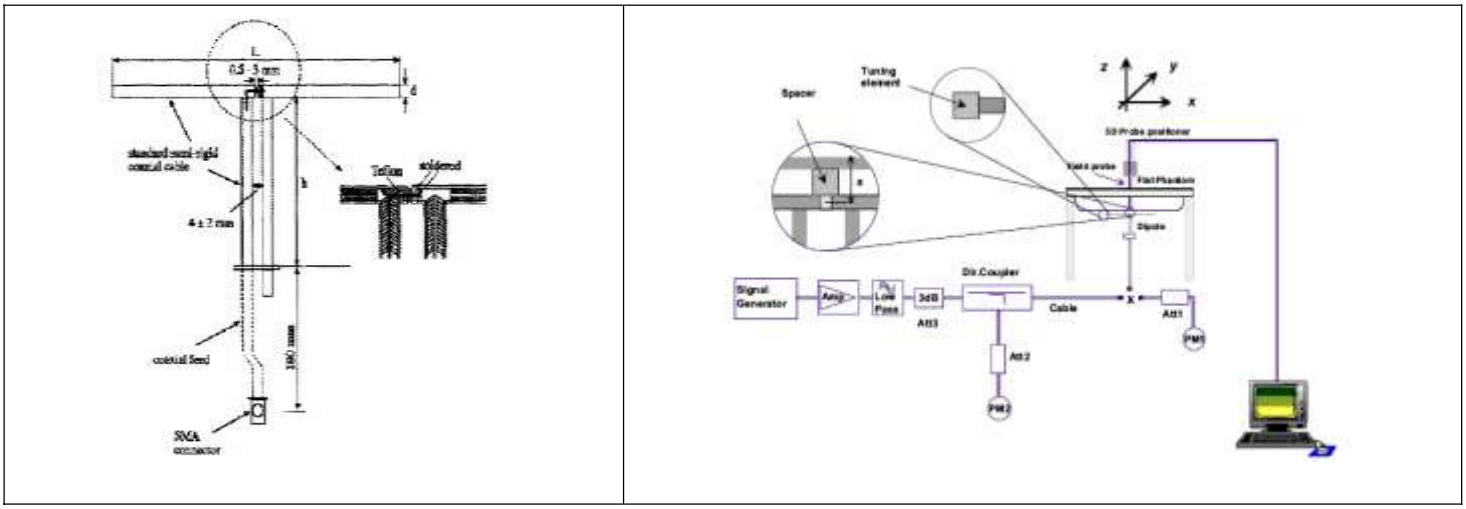
6. SAR SYSTEM CHECK PROCEDURE

6.1. SAR System Check Procedures

SAR system check is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are remeasured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

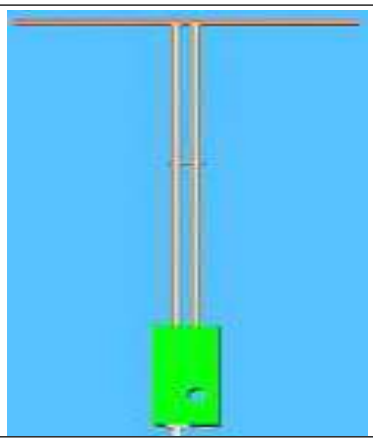
Each SATIMO system is equipped with one or more system check kits. These units, together with the predefined measurement procedures within the SATIMO software, enable the user to conduct the system check and system validation. System kit includes a dipole, and dipole device holder.

The system check verifies that the system operates within its specifications. It's performed daily or before every SAR measurement. The system check uses normal SAR measurement in the flat section of the phantom with a matched dipole at a specified distance. The system check setup is shown as below.



6.2. SAR System Check

6.2.1. Dipoles

	The dipoles used is based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of both IEEE and FCC Supplement C. the table below provides details for the mechanical and electrical Specifications for the dipoles.

Frequency	L (mm)	h (mm)	d (mm)
750MHz	176	100	6.35
835MHz	161.0	89.8	3.6
1800MHz	71.6	41.7	3.6
1900MHz	68	39.5	3.6
2450MHz	51.5	30.4	3.6

6.2.2. System Check Result

System Performance Check at 750MHz&835MHz &1800MHz &1900MHz & 2450 MHz for Head								
Validation Kit: SN 47/14DIP 0G750-340 &SN 46/11DIP 0G835-190 & SN46/11 DIP 1G800-186 & SN 46/11DIP 1G900-187 & SN46/11 DIP 2G450-189								
Frequency [MHz]	Target Value(W/Kg)		Reference Result (± 10%)		Tested Value(W/Kg)		Tissue Temp. [°C]	Test time
	1g	10g	1g	10g	1g	10g		
750	8.55	5.62	7.695-9.405	5.058-6.182	8.960	6.090	21.9	May 11,2015
835	9.60	6.20	8.64-10.56	5.58-6.82	10.236	6.532	20.8	May 6,2015
1800	38.17	19.98	34.353-41.987	17.982-21.978	40.725	20.816	22.1	May 10,2015
1900	39.65	20.24	35.685-43.615	18.216-22.264	40.231	20.482	21.5	May 8,2015
2450	54.40	23.75	48.96-59.84	21.375-26.125	56.781	26.143	21.5	May 12,2015
System Performance Check at 750MHz & 835MHz &1800MHz &1900MHz & 2450 MHz for Body								
Frequency [MHz]	Target Value(W/Kg)		Reference Result (± 10%)		Tested Value(W/Kg)		Tissue Temp. [°C]	Test time
	1g	10g	1g	10g	1g	10g		
750	8.78	5.86	7.902-9.658	5.274-6.446	8.820	5.985	22.1	May 11,2015
835	9.90	6.39	8.91-10.89	5.75-7.03	10.419	6.654	21.0	May 6,2015
1800	38.28	20.89	34.452-42.108	18.801-22.979	37.140	18.998	22.2	May 10,2015
1900	40.74	21.43	36.666-44.814	19.287-23.573	39.324	19.968	21.7	May 8,2015
2450	54.19	24.96	48.771-59.609	22.464-27.456	58.675	26.161	21.7	May 12,2015

7. EUT TEST POSITION

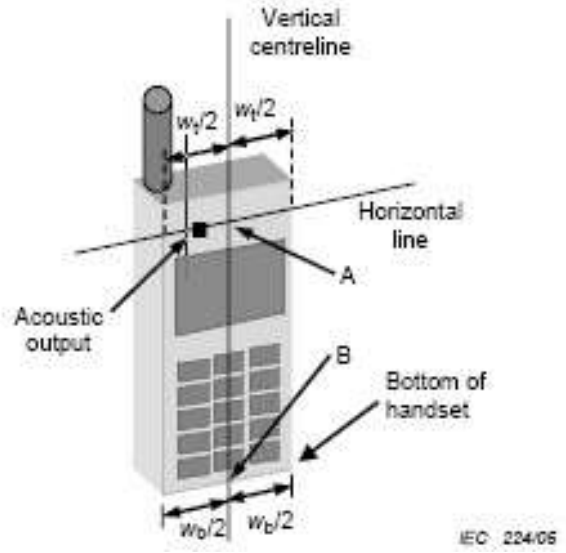
This EUT was tested in **Right Cheek, Right Titled, Left Cheek, Left Titled, Body back, Body front and 4 edges.**

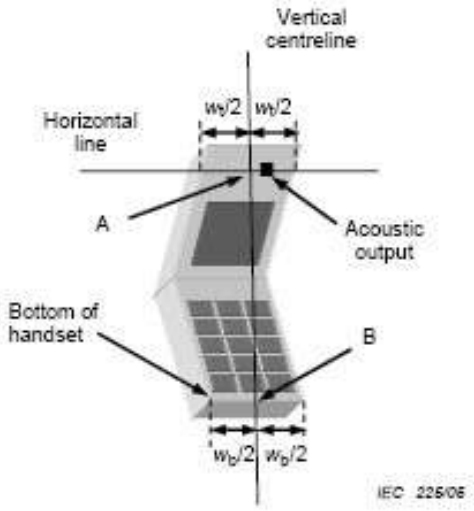
7.1. Define Two Imaginary Lines on the Handset

(1)The vertical centerline passes through two points on the front side of the handset the midpoint of the width wt of the handset at the level of the acoustic output, and the midpoint of the width wb of the handset.

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

(3)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 to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.





7.2. Cheek Position

(1) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center picec in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.

(2) To move the device towards the phantom with the ear piece aligned with the the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost

7.3. Title Position

(1) To position the device in the “cheek” position described above.

(2) While maintaining the device in the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until with the ear is lost.

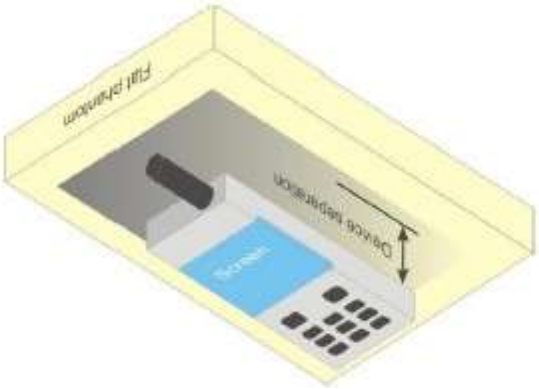
7.4. Body Worn Position

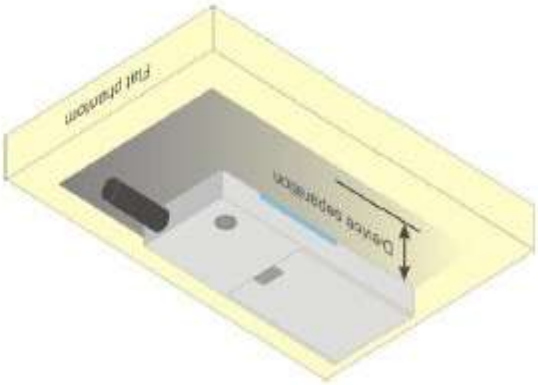
(1) To position the EUT parallel to the phantom surface.

(2) To adjust the EUT parallel to the flat phantom.

(3) To adjust the distance between the EUT surface and the flat phantom to **10mm.**

General Note: Referring KDB941225 D06 v02, when the overall device length and width are ≥ 9cm *5cm, the test distance is 10mm. SAR must be measured for all sides and surfaces with a transmitting antenna within 25mm from that surface or edge.





8. SAR EXPOSURE LIMITS

SAR assessments have been made in line with the requirements of IEEE1528, FCC Supplement C, and comply with ANSI/IEEE C95.1:1992 “Uncontrolled Environments” limits. These limits apply to a location which is deemed as “Uncontrolled Environment” which can be described as a situation where the general public may be exposed to an RF source with no prior knowledge or control over their exposure.

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

Type Exposure	Uncontrolled Environment Limit (W/kg)
Spatial Peak SAR (1g cube tissue for brain or body)	1.60
Spatial Average SAR (Whole body)	0.08
Spatial Peak SAR (Limbs)	4.0

9. TEST EQUIPMENT LIST

Equipment description	Manufacturer/ Model	Identification No.	Current calibration date	Next calibration date
SAR Probe	SATIMO	SN 22/12 EP159	12/03/2014	12/02/2015
SAR Probe	SATIMO	SN 04/13 EP165	12/03/2014	12/02/2015
TISSUE Probe	SATIMO	SN 45/11 OCPG45	12/03/2014	12/02/2015
Phantom	SATIMO	SN_4511_SAM90	Validated. No cal required.	Validated. No cal required.
Liquid	SATIMO	-	Validated. No cal required.	Validated. No cal required.
Comm Tester	R&S - CMU200	069Y7-158-13-712	03/06/2015	03/05/2016
Comm Tester	R&S- CMW500	S/N120909	10/21/2014	10/20/2015
Comm Tester	Agilent-8960	GB46310822	03/06/2015	03/05/2016
Multimeter	Keithley 2000	1188656	03/06/2015	03/05/2016
Dipole	SATIMO SID750	SN47/14 DIP 0G750-340	12/03/2014	12/03/2017
Dipole	SATIMO SID835	SN46/11 DIP 0G835-190	10/02/2014	10/01/2017
Dipole	SATIMO SID1800	SN46/11 DIP 1G800-186	11/14/2013	11/13/2016
Dipole	SATIMO SID1900	SN46/11 DIP 1G900-187	11/14/2013	11/13/2016
Dipole	SATIMO SID2450	SN46/11 DIP 2G450-189	11/14/2013	11/13/2016
Signal Generator	Agilent-E4438C	MY44260051	03/06/2015	03/05/2016
Power Sensor	NRP-Z23	US38261498	03/06/2015	03/05/2016
Spectrum Analyzer E4440	Agilent	US41421290	05/27/2014	05/26/2015
Network Analyzer	Rhode & Schwarz ZVL6	SN100132	03/06/2015	03/05/2016
Attenuator	Warison /WATT-6SR1211	N/A	N/A	N/A
Attenuator	Mini-circuits / VAT-10+	N/A	N/A	N/A
Amplifier	EM30180	SN060552	03/06/2015	03/05/2016
Directional Couple	Werlatone/ C5571-10	SN99463	07/30/2014	07/29/2015
Directional Couple	Werlatone/ C6026-10	SN99482	07/30/2014	07/29/2015
Power Sensor	NRP-Z21	1137.6000.02	10/22/2014	10/21/2015
Power Viewer	R&S	V2.3.1.0	N/A	N/A

Note: Per KDB 865664 Dipole SAR Validation Verification, AGC Lab has adopted 3 years calibration intervals. On annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:
1. There is no physical damage on the dipole;
2. System validation with specific dipole is within 10% of calibrated value;
3. Return-loss is within 20% of calibrated measurement;
4. Impedance is within 5Ω of calibrated measurement.

10. MEASUREMENT UNCERTAINTY

SATIMO Uncertainty Measurement uncertainty for 300 MHz to 3 GHz averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	6.98	6.98	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	1	1	1.16	1.16	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	1	1	2.33	2.33	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.87	2.87	∞
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Readout Electronics	E.2.6	0.02	N	1	1	1	0.03	0.03	∞
Response Time	E.2.7	3.0	R	$\sqrt{3}$	1	1	1.70	1.70	∞
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.16	1.16	∞
RF ambient Conditions	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.71	1.71	∞
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	5.0	R	$\sqrt{3}$	1	1	2.91	2.91	∞
Test sample Related									
Test sample positioning	E.4.2.1	0.03	N	1	1	1	0.05	0.05	N-1
Device Holder Uncertainty	E.4.1.1	5.00	N	1	1	1	4.95	4.95	∞
Output power Variation - SAR drift measurement	6.6.2	0.65	R	$\sqrt{3}$	1	1	0.36	0.36	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	$\sqrt{3}$	1	1	0.02	0.02	∞
Liquid conductivity deviation from target value	E.3.2	5.00	R	$\sqrt{3}$	0.64	0.43	1.83	1.23	∞
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.18	2.14	∞
Liquid permittivity - deviation from target value	E.3.2	0.03	R	$\sqrt{3}$	0.6	0.49	0.01	0.01	∞
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.06	4.95	M
Combined Standard Uncertainty			RSS				11.17	10.63	∞
Expanded Uncertainty (95% Confidence interval)			k				22.34	21.26	

SATIMO Uncertainty System uncertainty for 300 MHz to 3 GHz averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	6.98	6.98	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	1	1	1.16	1.16	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	1	1	2.33	2.33	∞
Boundary Effects	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.87	2.87	∞
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Readout Electronics	E.2.6	0.02	N	1	1	1	0.03	0.03	∞
Response Time	E.2.7	3.0	R	$\sqrt{3}$	1	1	1.70	1.70	∞
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.16	1.16	∞
RF ambient Conditions	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.71	1.71	∞
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	5.0	R	$\sqrt{3}$	1	1	2.91	2.91	∞
Dipole									
Dipole axis to liquid Distance	8,E.4.2	1.00	N	$\sqrt{3}$	1	1	0.55	0.55	N-1
Input power and SAR drift measurement	8,6.6.2	0.65	R	$\sqrt{3}$	1	1	0.36	0.36	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	$\sqrt{3}$	1	1	0.02	0.02	∞
Liquid conductivity - deviation from target value	E.3.2	5.00	R	$\sqrt{3}$	0.64	0.43	1.83	1.23	∞
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.18	2.14	∞
Liquid permittivity - deviation from target value	E.3.2	0.03	R	$\sqrt{3}$	0.6	0.49	0.01	0.01	∞
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.06	4.95	M
Combined Standard Uncertainty			RSS				10.03	9.42	
Expanded Uncertainty (95% Confidence interval)			k				20.05	18.85	

11. CONDUCTED POWER MEASUREMENT

GSM BAND

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1>				
GSM 850	824.2	**31.36**	-9	22.36
	836.6	31.34	-9	22.34
	848.8	31.22	-9	22.22
GPRS 850 （1 Slot）	824.2	30.71	-9	21.71
	836.6	30.67	-9	21.67
	848.8	30.64	-9	21.64
GPRS 850 （2 Slot）	824.2	28.35	-6	22.35
	836.6	28.33	-6	22.33
	848.8	28.28	-6	22.28
GPRS850 （3 Slot）	824.2	26.26	-4.26	22.00
	836.6	26.23	-4.26	21.97
	848.8	26.15	-4.26	21.89
GPRS 850 （4 Slot）	824.2	25.35	-3	**22.35**
	836.6	25.34	-3	22.34
	848.8	25.32	-3	22.32
EGPRS 850 （1 Slot）	824.2	25.15	-9	16.15
	836.6	25.12	-9	16.12
	848.8	25.08	-9	16.08
EGPRS 850 （2 Slot）	824.2	24.16	-6	18.16
	836.6	24.12	-6	18.12
	848.8	24.11	-6	18.11
EGPRS 850 （3 Slot）	824.2	22.37	-4.26	18.11
	836.6	22.34	-4.26	18.08
	848.8	22.31	-4.26	18.05
EGPRS 850 （4 Slot）	824.2	21.41	-3	18.41
	836.6	21.36	-3	18.36
	848.8	21.33	-3	18.33

GSM BAND CONTINUE

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
PCS1900	1850.2	**28.26**	-9	19.26
	1880	28.23	-9	19.23
	1909.8	28.19	-9	19.19
GPRS1900 （1 Slot）	1850.2	27.79	-9	18.79
	1880	27.75	-9	18.75
	1909.8	27.72	-9	18.72
GPRS1900 （2 Slot）	1850.2	25.41	-6	19.41
	1880	25.38	-6	19.38
	1909.8	25.35	-6	19.35
GPRS1900 （3 Slot）	1850.2	23.32	-4.26	19.06
	1880	23.31	-4.26	19.05
	1909.8	23.29	-4.26	19.03
GPRS1900 （4 Slot）	1850.2	22.41	-3	**19.41**
	1880	22.38	-3	19.38
	1909.8	22.36	-3	19.36
EGPRS1900 （1 Slot）	1850.2	24.31	-9	15.31
	1880	24.28	-9	15.28
	1909.8	24.25	-9	15.25
EGPRS1900 （2 Slot）	1850.2	23.38	-6	17.38
	1880	23.34	-6	17.34
	1909.8	23.29	-6	17.29
EGPRS1900 （3 Slot）	1850.2	21.36	-4.26	17.1
	1880	21.3	-4.26	17.04
	1909.8	21.31	-4.26	17.05
EGPRS1900 （4 Slot）	1850.2	20.47	-3	17.47
	1880	20.39	-3	17.39
	1909.8	20.35	-3	17.35
Maximum Power <2>				
GSM 850	824.2	30.89	-9	21.89
PCS1900	1850.2	27.82	-9	18.82

Note 1:
The Frame Power (Source-based time-averaged Power) is scaled the maximum burst average power based on time slots. The calculated methods are show as following:
Frame Power = Max burst power (1 Up Slot) – 9 dB
Frame Power = Max burst power (2 Up Slot) – 6 dB
Frame Power = Max burst power (3 Up Slot) – 4.26 dB
Frame Power = Max burst power (4 Up Slot) – 3 dB

HSDPA Setup Configuration:

The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
The RF path losses were compensated into the measurements.
A call was established between EUT and Based Station with following setting:
Set Gain Factors(βc and βd) parameters set according to each
Specific sub-test in the following table.C10.1.4.quoted from the TS34.121
Set RMC 12.2Kbps + HSDPA mode
Set Cell Power=-86dBm
Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
Select HSDPA Uplink Parameters
Set Delta ACK, Delta NACK and Delta CQI=8
Set Ack-Nack Repetition Factor to 3
Set CQI Feedback Cycle (k) to 4ms
Set CQI Repetition Factor to 2
Power Ctrl Mode=All Up bits
The transmitted maximum output power was recorded.
Table C.10.2.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	βc (Note5)	βd	βd (SF)	βc/βd	βHS (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15(Note 4)	15/15(Note 4)	64	12/15(Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: ΔACK, ΔNACK and ΔCQI = 30/15 with β_{hs} = 30/15 * β_c .
Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, ΔACK and ΔNACK = 30/15 with β_{hs} = 30/15 * β_c , and ΔCQI = 24/15 with β_{hs} = 24/15 * β_c .
Note 3: CM = 1 for βc/βd =12/15, hs/ c=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.
Note 4: For subtest 2 the c/ d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to c = 11/15 and d = 15/15.

HSUPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
ii. Set the Gain Factors (βc and βd) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
iii. Set Cell Power = -86 dBm
iv. Set Channel Type = 12.2k + HSPA
v. Set UE Target Power
vi. Power Ctrl Mode= Alternating bits
vii. Set and observe the E-TFCI
viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	βc	βd	βd (SF)	βc/βd	βHS (Note1)	βec	βed (Note 4) (Note 5)	βed (SF)	βed (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	βed1: 47/15 βed2: 47/15	4 4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, ΔACK, ΔNACK and ΔCQI = 30/15 with β_{hs} = 30/15 * β_c . For sub-test 5, ΔACK, ΔNACK and ΔCQI = 5/15 with β_{hs} = 5/15 * β_c .

Note 2: CM = 1 for βc/βd =12/15, hs/ c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the c/ d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to c = 10/15 and d = 15/15.

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: βed can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

UMTS BAND II

Mode	Frequency (MHz)	Avg. Burst Power (dBm)
WCDMA 1900 RMC	1852.4	**21.41**
	1880	21.38
	1907.6	21.35
WCDMA 1900 AMR	1852.4	21.11
	1880	21.09
	1907.6	21.06
HSDPA Subtest 1	1852.4	20.44
	1880	20.42
	1907.6	20.39
HSDPA Subtest 2	1852.4	20.46
	1880	20.42
	1907.6	20.39
HSDPA Subtest 3	1852.4	20.32
	1880	20.26
	1907.6	20.27
HSDPA Subtest 4	1852.4	20.43
	1880	20.38
	1907.6	20.36
HSUPA Subtest 1	1852.4	20.31
	1880	20.25
	1907.6	20.36
HSUPA Subtest 2	1852.4	20.34
	1880	20.28
	1907.6	20.27
HSUPA Subtest 3	1852.4	20.26
	1880	20.23
	1907.6	20.38
HSUPA Subtest 4	1852.4	20.35
	1880	20.31
	1907.6	20.29
HSUPA Subtest 5	1852.4	20.35
	1880	20.32
	1907.6	20.26

UMTS BAND V

Mode	Frequency (MHz)	Avg. Burst Power (dBm)
WCDMA 850 RMC	826.4	**21.29**
	836.6	21.25
	846.6	21.21
WCDMA 850 AMR	826.4	21.12
	836.6	21.08
	846.6	21.05
HSDPA Subtest 1	826.4	20.26
	836.6	20.24
	846.6	20.21
HSDPA Subtest 2	826.4	20.31
	836.6	20.25
	846.6	20.22
HSDPA Subtest 3	826.4	20.36
	836.6	20.31
	846.6	20.26
HSDPA Subtest 4	826.4	20.35
	836.6	20.25
	846.6	20.24
HSUPA Subtest 1	826.4	20.28
	836.6	20.26
	846.6	20.23
HSUPA Subtest 2	826.4	20.25
	836.6	20.18
	846.6	20.16
HSUPA Subtest 3	826.4	20.36
	836.6	20.32
	846.6	20.27
HSUPA Subtest 4	826.4	20.38
	836.6	20.35
	846.6	20.32
HSUPA Subtest 5	826.4	20.37
	836.6	20.33
	846.6	20.34

LTE Band

Conducted Power of LTE Band 4							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					19957	20175	20393
1.4MHz	QPSK	1	0	0	23.73	23.53	24.24
			3	0	23.83	23.60	24.32
			5	0	23.79	23.57	24.32
		3	0	0	23.91	23.61	24.27
			2	0	23.91	23.58	24.28
			3	0	23.91	23.63	24.29
		6	0	1	24.01	23.64	24.55
	16QAM	1	0	1	23.96	23.81	24.22
			3	1	24.08	23.90	24.35
			5	1	23.97	23.82	24.29
		3	0	1	23.96	23.53	24.08
			2	1	23.92	23.54	24.10
			3	1	23.93	23.58	24.14
		6	0	2	23.88	23.54	24.40
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					19965	20175	20385
3MHz	QPSK	1	0	0	23.80	23.50	24.15
			7	0	23.81	23.50	24.28
			14	0	23.83	23.53	24.36
		8	0	1	24.00	23.66	24.35
			4	1	24.01	23.64	24.40
			7	1	24.03	23.65	24.46
		15	0	1	23.96	23.64	24.21
	16QAM	1	0	1	24.00	23.70	24.20
			7	1	23.99	23.74	24.29
			14	1	23.97	23.64	24.39
		8	0	2	23.96	23.69	24.15
			4	2	23.97	23.65	24.20
			7	2	23.95	23.55	24.26
		15	0	2	23.82	23.70	24.04

Conducted Power of LTE Band 4							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					19975	**20175**	**20375**
5MHz	QPSK	1	0	0	23.99	23.67	24.18
			13	0	23.97	23.65	24.33
			24	0	23.95	23.64	24.52
		12	0	1	24.06	23.76	24.13
			6	1	24.06	23.75	24.20
			13	1	24.06	23.74	24.33
		25	0	1	24.01	23.67	24.20
	16QAM	1	0	1	24.20	23.92	23.90
			13	1	24.15	23.91	24.07
			24	1	24.13	23.93	24.22
		12	0	2	24.05	23.79	23.98
			6	2	24.05	23.78	24.07
			13	2	24.04	23.81	24.15
		25	0	2	23.92	23.65	24.01
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					20000	20175	20350
10MHz	QPSK	1	0	0	23.97	23.66	23.79
			25	0	23.99	23.65	24.05
			49	0	23.83	23.62	24.41
		25	0	1	24.05	23.70	23.91
			13	1	24.03	23.70	24.01
			25	1	23.95	23.70	24.20
		50	0	1	23.97	23.72	24.02
	16QAM	1	0	1	24.13	23.83	24.05
			25	1	24.14	23.87	24.20
			49	1	23.95	23.84	24.50
		25	0	2	23.91	23.65	23.77
			13	2	23.89	23.65	23.86
			25	2	23.80	23.67	24.00
		50	0	2	23.87	23.66	23.88

Conducted Power of LTE Band 4							
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					20025	20175	20325
15MHz	QPSK	1	0	0	23.99	23.71	23.76
			38	0	23.90	23.65	23.93
			74	0	23.75	23.72	24.51
		36	0	1	24.25	23.90	23.94
			18	1	24.20	23.82	24.11
			39	1	24.10	23.84	24.38
		75	0	1	24.18	23.88	24.16
	16QAM	1	0	1	24.15	23.87	23.97
			38	1	24.02	23.88	24.04
			74	1	23.92	23.92	24.49
		36	0	2	24.10	23.80	23.89
			18	2	24.04	23.76	24.00
			39	2	23.92	23.76	24.18
		75	0	2	24.02	23.81	24.03
Bandwidth	**Modulation**	**RB size**	**RB offset**	**Target MPR**	**Channel**	**Channel**	**Channel**
					20050	20175	20300
20MHz	QPSK	1	0	0	24.14	23.90	23.86
			50	0	24.00	23.77	23.95
			99	0	23.84	23.88	**24.59**
		50	0	1	24.03	23.78	23.82
			25	1	23.87	23.74	23.88
			50	1	23.80	23.81	24.08
		100	0	1	23.91	23.79	23.93
	16QAM	1	0	1	21.13	23.99	24.05
			50	1	24.24	23.90	24.13
			99	1	24.03	24.00	24.56
		50	0	2	23.94	23.68	23.79
			25	2	23.87	23.66	23.82
			50	2	23.71	23.73	23.96
		100	0	2	23.67	23.99	23.83

Conducted Power of LTE Band 17							
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 23755	Channel 23790	Channel 23825
5MHz	QPSK	1	0	0	24.17	24.15	24.16
			13	0	24.04	23.90	23.88
			24	0	23.76	23.63	23.50
		12	0	1	23.17	23.11	23.09
			6	1	23.07	23.03	22.95
			13	1	22.96	22.87	22.77
		25	0	1	23.08	23.02	22.95
	16QAM	1	0	1	23.50	23.47	23.57
			13	1	23.34	23.24	23.33
			24	1	23.08	22.94	22.94
		12	0	2	22.20	22.17	22.13
			6	2	22.12	22.07	22.03
			13	2	22.03	21.92	21.81
		25	0	2	22.11	22.03	22.02
Bandwidth	Modulation	RB size	RB offset	Target MPR	Channel 23780	Channel 23790	Channel 23800
10MHz	QPSK	1	0	0	24.18	24.10	23.87
			25	0	**24.27**	24.10	23.74
			49	0	24.04	23.84	23.42
		25	0	1	23.24	23.11	22.89
			13	1	23.20	23.06	22.70
			25	1	23.15	23.00	22.64
		50	0	1	23.18	22.99	22.74
	16QAM	1	0	1	23.63	23.14	23.11
			25	1	23.62	23.13	22.95
			49	1	23.43	22.94	22.62
		25	0	2	22.42	22.17	21.99
			13	2	22.39	22.13	21.83
			25	2	22.32	22.04	21.74
		50	0	2	22.22	22.05	21.81

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.
UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3.3-1 of the 3GPP TS36.101.

Table 6.2.3.3-1 Maximum Power Reduction (MPR) for Power class3

Modulation	Maximum Power Reduction (MPR) for Power[RB]						MPR(dB)
	1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz	
QPSK	＞5	＞4	＞8	＞12	＞16	＞18	≤1
16QAM	≤5	≤4	≤8	≤12	≤16	≤18	≤1
16QAM	＞5	＞4	＞8	＞12	＞16	＞18	≤2

The allowed A-MPR values specified below in Table 6.2.4.3-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of “NS_01”.3

Table 6.2.4.3-1: Additional Maximum Power Reduction (A-MPR) / Spectrum Emission requirements

Network Signaling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.2-1	1.4,3,5,10,15,20	Table 5.4.2-1	N/A
NS_03	6.6.2.2.3.1	2,4,10, 23, 25,35,36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.3.2	41	5	>6	≤1
			10, 15, 20	Table 6.2.4.3-4	
NS_05	6.6.3.3.3.1	1	10,15,20	≥ 50	≤ 1
NS_06	6.6.2.2.3.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.4.2-1	N/A
NS_07	6.6.2.2.3.3 6.6.3.3.3.2	13	10	Table 6.2.4.3-2	Table 6.2.4.3-2
NS_08	6.6.3.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4.3-3	Table 6.2.4.3-3
NS_11	6.6.2.2.1 6.6.3.3.13	231	1.4, 3, 5, 10,15,20	Table 6.2.4.3-5	Table 6.2.4.3-5
NS_12	6.6.3.3.5	26	1.4, 3, 5	Table 6.2.4.3-6	Table 6.2.4.3-6
NS_13	6.6.3.3.6	26	5	Table 6.2.4.3-7	Table 6.2.4.3-7
NS_14	6.6.3.3.7	26	10, 15	Table 6.2.4.3-8	Table 6.2.4.3-8
NS_15	6.6.3.3.8	26	1.4, 3, 5, 10, 15	Table 6.2.4.3-9 Table 6.2.4.3-10	Table 6.2.4.3-9, Table 6.2.4.3-10
NS_16	6.6.3.3.9	27	3, 5, 10	Table 6.2.4.3-11, Table 6.2.4.3-12, Table 6.2.4.3-13	
NS_17	6.6.3.3.10 6.6.3.3.11	28 28	5, 10	Table 5.4.2-1	N/A
			5	≥ 2	≤ 1
NS_18			10, 15, 20	≥ 1	≤ 4
NS_19			10, 15, 20	Table 6.2.4.3-15	Table 6.2.4.3-15
NS_20			5, 10, 15, 20	Table 6.2.4.3-14	Table 6.2.4.3-14
…					
NS_20	-	-	-	-	-

WIFI

Mode	Data Rate (Mbps)	Channel	Frequency(MHz)	Avg. Burst Power(dBm)
802.11b	1	01	2412	**9.69**
		06	2437	9.67
		11	2462	9.44
802.11g	6	01	2412	8.33
		06	2437	8.27
		11	2462	8.25
802.11n(20)	6.5	01	2412	8.26
		06	2437	8.23
		11	2462	8.19
802.11n(40)	13.5	03	2422	6.3
		06	2437	6.21
		09	2452	6.17

Bluetooth_V3.0

Modulation	Channel	Frequency(MHz)	Average Burst Power (dBm)
GFSK	0	2402	-0.73
	39	2441	**0.4**
	78	2480	0.27
π /4-DQPSK	0	2402	-1.6
	39	2441	-0.23
	78	2480	-0.54
8-DPSK	0	2402	-1.57
	39	2441	0.03
	78	2480	-0.3

Bluetooth_V4.0

Modulation	Channel	Frequency(MHz)	Peak Power (dBm)
GFSK	0	2402	-7.78
	19	2440	**-6.09**
	39	2480	-6.68

According to 3GPP 25.101 sub-clause 6.2.2 , the maximum output power is allowed to be reduced by following the table.

Table 6.1aA: UE maximum output power with HS-DPCCH and E-DCH

UE Transmit Channel Configuration	CM(db)	MPR(db)
For all combinations of ,DPDCH,DPCCH HS-DPDCH,E-DPDCH and E-DPCCH	0≤ CM≤3.5	MAX(CM-1,0)
Note: CM=1 for β_c/β_d=12/15, β_{hs}/β_c=24/15.For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.		

The device supports MPR to solve linearity issues (ACLR or SEM) due to the higher peak-to average ratios (PAR) of the HSUPA signal. This prevents saturating the full range of the TX DAC inside of device and provides a reduced power output to the RF transceiver chip according to the Cubic Metric (a function of the combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH).

When E-DPDCH channels are present the beta gains on those channels are reduced firsts to try to get the power under the allowed limit. If the beta gains are lowered as far as possible, then a hard limiting is applied at the maximum allowed level.

The SW currently recalculates the cubic metric every time the beta gains on the E-DPDCH are reduced. The cubic metric will likely get lower each time this is done .However, there is no reported reduction of maximum output power in the HSUPA mode since the device also provides a compensation for the power back-off by increasing the gain of TX_AGC in the transceiver (PA) device.

The end effect is that the DUT output power is identical to the case where there is no MPR in the device.

12. TEST RESULTS

12.1. SAR Test Results Summary

12.1.1. Test position and configuration

Head SAR was performed with the device configured in the positions according to IEEE 1528-2003, and Body SAR was performed with the device 10mm from the phantom.

12.1.2. Operation Mode

1. Per KDB 447498 D01 v05r02 ,for each exposure position, if the highest 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional.
2. Per KDB 865664 D01 v01r03,for each frequency band, if the measured SAR is ≥0.8W/Kg, testing for repeated SAR measurement is required , that the highest measured SAR is only to be tested. When the SAR results are near the limit, the following procedures are required for each device to verify these types of SAR measurement related variation concerns by repeating the highest measured SAR configuration in each frequency band.
   (1) When the original highest measured SAR is ≥0.8W/Kg, repeat that measurement once.
   (2) 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.
   (3) Perform a third repeated measurement only if the original, first and second repeated measurement is ≥1.5 W/Kg and ratio of largest to smallest SAR for the original, first and second measurement is ≥ 1.20.
3. Body-worn exposure conditions are intended to voice call operations, therefore GSM voice call mode is selected to be test.
4. Per KDB 648474 D04 v01r02,when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤1.2W/Kg, SAR testing with a headset connected is not required.
5. Per 941225 D06 v02, when the overall device length and width are>9cm×5cm, Hotspot mode with a test separation distance of 10mm. For device with form factors smaller than 9cm×5cm, Hotspot mode with a test separation distance of 5mm. Body SAR was also performed with the headset attached and without.
6. Per 248227 D01 v01r02, SAR is not required for 802.11g channels when the maximum average output power is less than 1/4dB higher than measured on the corresponding 802.11b channels.
7. Maximum Scaling SAR in order to calculate the Maximum SAR values to test under the standard Peak Power, Calculation method is as follows:

   Maximum Scaling SAR =tested SAR (Max.) ×[maximum turn-up power (mw)/ maximum measurement output power(mw)]
8. Per KDB 941225 D05v02r03, start with the largest channel bandwidth and measure SAR for QPSK with 1RB allocation using the RB offset and required test channel combination with highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
9. Per KDB 941125 D05v02r03, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
10. Per KDB 941125 D05v02r03. For QPSK with 100% RB allocation. SAR is not required when the highest maximum output power for 100% RB allocation is less than the highest maximum output power in 50% and 1RB allocation and the highest reported SAR is >1.45 W/Kg, the remaining required test channels must also be tested.

11. Per KDB 941125 D05v02r03. 16QAM output power for each RB allocation configuration is not 1/2 dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤1.45W/Kg, Per KDB 941225 D05v02r02, 16QAM SAR testing is not required.
12. Per KDB 941125 D05v02r03. Smaller bandwidth output power for each RB allocation configuration is >not 1/2 dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤1.45W/Kg. Per KDB 941125 D05v02r03, smaller bandwidth SAR testing is not required.

12.1.3. Test Result

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 51.3					
Product: Mobile Phone									
Test Mode: GSM850 with GMSK modulation									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Turn-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/Kg)**	**Limit W/kg**
SIM 1 Card									
Left Cheek	voice	190	836.6	-0.23	0.297	33.00	31.34	0.435	1.6
Left Tilt	voice	190	836.6	1.02	0.283	33.00	31.34	0.415	1.6
Right Cheek	voice	190	836.6	-0.98	**0.322**	33.00	31.34	**0.472**	1.6
Right Tilt	voice	190	836.6	0.25	0.256	33.00	31.34	0.375	1.6
Body back	voice	190	836.6	-0.63	**0.534**	33.00	31.34	**0.783**	1.6
Body front	voice	190	836.6	0.17	0.370	33.00	31.34	0.542	1.6
Left Cheek	GPRS-4 slot	190	836.6	0.26	0.182	27.00	25.34	0.267	1.6
Left Tilt	GPRS-4 slot	190	836.6	0.31	0.156	27.00	25.34	0.229	1.6
Right Cheek	GPRS-4 slot	190	836.6	0.98	**0.187**	27.00	25.34	**0.274**	1.6
Right Tilt	GPRS-4 slot	190	836.6	-1.00	0.179	27.00	25.34	0.262	1.6
Body back	GPRS-4 slot	190	836.6	0.23	**0.281**	27.00	25.34	**0.412**	1.6
Body front	GPRS-4 slot	190	836.6	-0.95	0.210	27.00	25.34	0.308	1.6
Edge 1 (Top)	GPRS-4 slot	190	836.6	0.61	0.010	27.00	25.34	0.015	1.6
Edge 2(Right)	GPRS-4 slot	190	836.6	1.02	0.188	27.00	25.34	0.276	1.6
Edge 3(Bottom)	GPRS-4 slot	190	836.6	0.36	0.032	27.00	25.34	0.047	1.6
Edge 4(Left)	GPRS-4 slot	190	836.6	0.15	0.132	27.00	25.34	0.193	1.6
SIM 2 Card									
Right Cheek	voice	190	836.6	-0.47	0.304	33.00	31.34	0.446	1.6

Note:
· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.
·The test separation for body is 10mm of all above table.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 56.7					
Product: Mobile Phone									
Test Mode: PCS1900 with GMSK modulation									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift <±5%)**	**SAR (1g) (W/kg)**	**Max. Turn-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/Kg)**	**Limit W/kg**
SIM 1 Card									
Left Cheek	voice	661	1880.0	0.69	0.219	30.00	28.23	0.329	1.6
Left Tilt	voice	661	1880.0	0.51	0.047	30.00	28.23	0.071	1.6
Right Cheek	voice	661	1880.0	-0.28	**0.302**	30.00	28.23	**0.454**	1.6
Right Tilt	voice	661	1880.0	-0.74	0.076	30.00	28.23	0.114	1.6
Body back	voice	661	1880.0	0.16	**0.390**	30.00	28.23	**0.586**	1.6
Body front	voice	661	1880.0	-0.33	0.362	30.00	28.23	0.544	1.6
Left Cheek	GPRS-4 slot	661	1880.0	-0.28	0.200	24.00	22.38	0.290	1.6
Left Tilt	GPRS-4 slot	661	1880.0	0.51	0.042	24.00	22.38	0.061	1.6
Right Cheek	GPRS-4 slot	661	1880.0	0.37	**0.273**	24.00	22.38	**0.396**	1.6
Right Tilt	GPRS-4 slot	661	1880.0	-0.15	0.043	24.00	22.38	0.062	1.6
Body back	GPRS-4 slot	661	1880.0	0.55	0.241	24.00	22.38	0.350	1.6
Body front	GPRS-4 slot	661	1880.0	-0.37	0.186	24.00	22.38	0.270	1.6
Edge 1 (Top)	GPRS-4 slot	661	1880.0	0.14	0.036	24.00	22.38	0.052	1.6
Edge 2(Right)	GPRS-4 slot	661	1880.0	-0.29	0.117	24.00	22.38	0.170	1.6
Edge 3(Bottom)	GPRS-4 slot	661	1880.0	0.61	**0.275**	24.00	22.38	**0.399**	1.6
Edge 4(Left)	GPRS-4 slot	661	1880.0	0.20	0.161	24.00	22.38	0.234	1.6
SIM 2 Card									
Right Cheek	voice	661	1880.0	0.29	0.293	30.00	28.23	0.440	1.6

Note:

· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

·The test separation for body is 10mm of all above table.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 56.7					
Product: Mobile Phone									
Test Mode: WCDMA Band II with QPSK modulation									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Turn-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/Kg)**	**Limit W/kg**
SIM 1 Card									
Left Cheek	RMC 12.2kbps	9262	1852.4	-0.21	0.996	21.50	21.41	1.017	1.6
Left Cheek	RMC 12.2kbps	9400	1880	-0.59	0.861	21.50	21.38	0.885	1.6
Left Cheek	RMC 12.2kbps	9538	1907.6	0.60	0.720	21.50	21.35	0.745	1.6
Left Tilt	RMC 12.2kbps	9400	1880	0.03	0.146	21.50	21.38	0.150	1.6
Right Cheek	RMC 12.2kbps	9262	1852.4	0.56	1.194	21.50	21.41	1.219	1.6
Right Cheek	RMC 12.2kbps	9400	1880	-0.41	**1.267**	21.50	21.38	**1.302**	1.6
Right Cheek	RMC 12.2kbps	9538	1907.6	-0.28	1.092	21.50	21.35	1.130	1.6
Right Tilt	RMC 12.2kbps	9400	1880	1.15	0.217	21.50	21.38	0.223	1.6
Body back	RMC 12.2kbps	9262	1852.4	-0.92	1.164	21.50	21.41	1.188	1.6
Body back	RMC 12.2kbps	9400	1880	0.16	0.967	21.50	21.38	0.994	1.6
Body back	RMC 12.2kbps	9538	1907.6	-0.35	**1.233**	21.50	21.35	**1.276**	1.6
Body front	RMC 12.2kbps	9400	1880	0.28	0.545	21.50	21.38	0.560	1.6
Edge 1 (Top)	RMC 12.2kbps	9400	1880	0.05	0.114	21.50	21.38	0.117	1.6
Edge 2(Right)	RMC 12.2kbps	9400	1880	0.47	0.144	21.50	21.38	0.148	1.6
Edge 3(Bottom)	RMC 12.2kbps	9262	1852.4	0.16	0.951	21.50	21.41	0.971	1.6
Edge 3(Bottom)	RMC 12.2kbps	9400	1880	-0.32	0.967	21.50	21.38	0.994	1.6
Edge 3(Bottom)	RMC 12.2kbps	9538	1907.6	-0.58	0.804	21.50	21.35	0.832	1.6
Edge 4(Left)	RMC 12.2kbps	9400	1880	0.22	0.265	21.50	21.38	0.272	1.6

Note:

· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

·The test separation for body is 10mm of all above table.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 51.3					
Product: Mobile Phone									
Test Mode: WCDMA Band V with QPSK modulation									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Turn-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/Kg)**	**Limit W/kg**
SIM 1 Card									
Left Cheek	RMC 12.2kbps	4183	836.6	-0.21	0.450	22.00	21.25	0.535	1.6
Left Tilt	RMC 12.2kbps	4183	836.6	-0.29	0.434	22.00	21.25	0.516	1.6
Right Cheek	RMC 12.2kbps	4183	836.6	0.02	0.437	22.00	21.25	0.519	1.6
Right Tilt	RMC 12.2kbps	4183	836.6	0.14	**0.466**	22.00	21.25	**0.554**	1.6
Body back	RMC 12.2kbps	4132	826.4	-0.29	0.910	22.00	21.29	1.072	1.6
Body back	RMC 12.2kbps	4183	836.6	-0.31	**0.910**	22.00	21.25	**1.082**	1.6
Body back	RMC 12.2kbps	4233	846.6	0.58	0.872	22.00	21.21	1.046	1.6
Body front	RMC 12.2kbps	4183	836.6	0.41	0.570	22.00	21.25	0.677	1.6
Edge 1 (Top)	RMC 12.2kbps	4183	836.6	-0.26	0.027	22.00	21.25	0.032	1.6
Edge 2(Right)	RMC 12.2kbps	4183	836.6	0.31	0.004	22.00	21.25	0.005	1.6
Edge 3(Bottom)	RMC 12.2kbps	4183	836.6	-0.02	0.383	22.00	21.25	0.455	1.6
Edge 4(Left)	RMC 12.2kbps	4183	836.6	-0.05	0.277	22.00	21.25	0.329	1.6

Note:

· When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

·The test separation for body is 10mm of all above table.

SAR MEASUREMENT												
Depth of Liquid (cm):>15					Relative Humidity (%): 55.6							
Product: Mobile Phone												
Test Mode: LTE Band IV												
BM (MHz)	**Modulation**	**Position**	**Test Mode**		**Channel**	**Freq. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Turn-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/Kg)**	**Limit (W/kg)**
			RB Allocation	**RB Start**								
20	**QPSK**	Left Cheek	1	0	20050	1720	0.21	1.024	24.60	24.14	1.138	1.6
		Left Cheek	1	0	20175	1732.5	-0.32	1.127	24.60	23.90	1.324	1.6
		Left Cheek	1	0	20300	1745	0.65	1.141	24.60	23.86	1.353	1.6
		Left Tilt	1	0	20175	1732.5	0.13	0.203	24.60	23.90	0.239	1.6
		Right Cheek	1	0	20050	1720	0.69	1.071	24.6	24.14	1.191	1.6
		Right Cheek	1	0	20175	1732.5	-0.45	1.151	24.6	23.9	1.352	1.6
		Right Cheek	1	0	20300	1745	0.12	1.016	24.6	23.86	1.205	1.6
		Right Tilt	1	0	20175	1732.5	0.85	0.315	24.60	23.90	0.370	1.6
		Left Cheek	50	0	20050	1720	-0.16	1.031	24.60	24.03	1.176	1.6
		Left Cheek	50	0	20175	1732.5	0.28	1.065	24.60	23.78	1.286	1.6
		Left Cheek	50	0	20300	1745	-0.63	1.157	24.60	23.82	1.385	1.6
		Left Tilt	50	0	20175	1732.5	0.31	0.204	24.60	23.78	0.246	1.6
		Right Cheek	50	0	20050	1720	1.98	1.104	24.60	24.03	1.259	1.6
		Right Cheek	50	0	20175	1732.5	-0.67	1.136	24.60	23.78	1.372	1.6
		Right Cheek	50	0	20300	1745	0.45	1.01	24.6	23.82	1.209	1.6
		Right Tilt	50	0	20175	1732.5	0.22	0.307	24.60	23.78	0.371	1.6
		Left Cheek	100	0	20050	1720	0.16	1.093	24.60	23.91	1.281	1.6
		Left Cheek	100	0	20175	1732.5	-0.82	1.106	24.60	23.79	1.333	1.6
		Left Cheek	100	0	20300	1745	0.13	**1.186**	24.60	23.93	1.384	1.6
		Left Tilt	100	0	20175	1732.5	-0.54	0.201	24.60	23.79	0.242	1.6
		Right Cheek	100	0	20050	1720	0.20	1.09	24.6	23.91	1.278	1.6
		Right Cheek	100	0	20175	1732.5	0.99	1.001	24.6	23.79	1.206	1.6
		Right Cheek	100	0	20300	1745	-1.02	1.16	24.6	23.79	**1.398**	1.6
		Right Tilt	100	0	20175	1732.5	0.38	0.328	24.60	23.79	0.395	1.6
		Body back	1	0	20050	1720	0.47	0.985	24.60	24.14	1.095	1.6
		Body back	1	0	20175	1732.5	0.02	1.005	24.60	23.90	1.181	1.6
		Body back	1	0	20300	1745	-0.36	1.092	24.60	23.86	1.295	1.6
		Body front	1	0	20050	1720	0.41	0.909	24.60	24.14	1.011	1.6
		Body front	1	0	20175	1732.5	-0.28	0.975	24.60	23.90	1.146	1.6
		Body front	1	0	20300	1745	-0.59	**1.312**	24.60	23.86	**1.556**	1.6
		Body front + Ear	1	0	20050	1720	0.32	1.009	24.60	24.14	1.122	1.6
		Body front + Ear	1	0	20175	1732.5	-0.02	0.963	24.60	23.90	1.131	1.6
		Body front + Ear	1	0	20300	1745	0.36	1.255	24.60	23.86	1.488	1.6
		Edge 1 (Top)	1	0	20175	1732.5	0.74	0.046	24.60	23.90	0.054	1.6
		Edge 2(Right)	1	0	20175	1732.5	0.23	0.402	24.60	23.90	0.472	1.6

CONTINUE:

SAR MEASUREMENT												
Depth of Liquid (cm):>15					Relative Humidity (%): 55.6							
Product: Mobile Phone												
Test Mode: LTE Band IV												
BM (MHz)	**Modulation**	**Position**	**Test Mode**		**Channel**	**Freq. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Turn-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/Kg)**	**Limit (W/kg)**
			RB Allocation	**RB Start**								
20	**QPSK**	Edge 3(Bottom)	1	0	20175	1732.5	0.84	0.666	24.60	23.90	0.782	1.6
		Edge 4(Left)	1	0	20175	1732.5	0.19	0.499	24.60	23.90	0.586	1.6
		Body back	50	0	20050	1720	0.32	0.984	24.60	24.03	1.122	1.6
		Body back	50	0	20175	1732.5	0.02	1.050	24.60	23.78	1.268	1.6
		Body back	50	0	20300	1745	0.15	1.096	24.60	23.82	1.312	1.6
		Body front	50	0	20050	1720	0.48	0.906	24.60	24.03	1.033	1.6
		Body front	50	0	20175	1732.5	-1.02	0.983	24.60	23.78	1.187	1.6
		Body front	50	0	20300	1745	-0.65	1.122	24.60	23.82	1.343	1.6
		Body back	100	0	20050	1720	-0.34	0.978	24.60	23.91	1.146	1.6
		Body back	100	0	20175	1732.5	0.18	0.946	24.60	23.79	1.140	1.6
		Body back	100	0	20300	1745	0.29	0.976	24.60	23.93	1.139	1.6
		Body front	100	0	20050	1720	0.36	0.958	24.60	23.91	1.123	1.6
		Body front	100	0	20175	1732.5	-0.27	1.000	24.60	23.79	1.205	1.6
		Body front	100	0	20300	1745	-1.02	1.062	24.60	23.93	1.239	1.6

SAR MEASUREMENT												
Depth of Liquid (cm):>15					Relative Humidity (%): 56.3							
Product: Mobile Phone												
Test Mode: LTE Band XVII												
BM (MHz)	**Modulation**	**Position**	**Test Mode**		**Channel**	**Freq. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Turn-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/Kg)**	**Limit (W/kg)**
			RB Allocation	**RB Start**								
10	**QPSK**	Left Cheek	1	0	23790	710	1.29	0.319	24.50	24.10	0.350	1.6
		Left Tilt	1	0	23790	710	0.36	0.247	24.50	24.10	0.271	1.6
		Right Cheek	1	0	23790	710	1.02	0.293	24.50	24.10	0.321	1.6
		Right Tilt	1	0	23790	710	-0.63	**0.335**	24.50	24.10	**0.367**	1.6
		Left Cheek	25	0	23790	710	0.74	0.249	24.50	23.11	0.343	1.6
		Left Tilt	25	0	23790	710	0.15	0.246	24.50	23.11	0.339	1.6
		Right Cheek	25	0	23790	710	-0.23	0.217	24.50	23.11	0.299	1.6
		Right Tilt	25	0	23790	710	0.63	0.182	24.50	23.11	0.251	1.6
		Left Cheek	50	0	23790	710	0.25	0.247	24.50	22.99	0.350	1.6
		Left Tilt	50	0	23790	710	1.02	0.316	24.50	22.99	0.447	1.6
		Right Cheek	50	0	23790	710	-0.56	0.217	24.50	22.99	0.307	1.6
		Right Tilt	50	0	23790	710	0.31	0.185	24.50	22.99	0.262	1.6
		Body back	1	0	23780	709	1.02	0.904	24.50	24.18	0.973	1.6
		Body back	1	0	23790	710	0.59	0.989	24.50	24.10	1.084	1.6
		Body back	1	0	23800	711	-0.23	**1.013**	24.50	23.87	**1.171**	1.6
		Body front	1	0	23790	710	-0.37	0.423	24.50	24.10	0.464	1.6
		Body back+ Ear	1	0	23790	710	1.02	0.719	24.50	24.10	0.788	1.6
		Edge 1 (Top)	1	0	23790	710	0.96	0.046	24.50	24.10	0.050	1.6
		Edge 2(Right)	1	0	23790	710	0.51	0.186	24.50	24.10	0.204	1.6
		Edge 3(Bottom)	1	0	23790	710	0.34	0.264	24.50	24.10	0.289	1.6
		Edge 4(Left)	1	0	23790	710	-1.88	0.449	24.50	24.10	0.492	1.6
		Body back	25	0	23780	709	0.25	0.796	24.50	23.24	1.064	1.6
		Body back	25	0	23790	710	0.74	0.810	24.50	23.11	1.116	1.6
		Body back	25	0	23800	711	-0.16	0.809	24.50	22.89	1.172	1.6
		Body front	25	0	23790	710	-0.32	0.362	24.50	23.11	0.499	1.6
		Body back	50	0	23780	709	0.74	0.746	24.50	23.18	1.011	1.6
		Body back	50	0	23790	710	0.02	0.807	24.50	22.99	1.143	1.6
		Body back	50	0	23800	711	0.50	0.822	24.50	22.74	1.233	1.6
		Body front	50	0	23790	710	-0.66	0.369	24.50	22.99	0.522	1.6

SAR MEASUREMENT									
Product: PPNN				Relative Humidity (%): 55.4					
Test Mode:802.11b									
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**SAR (1g) (W/kg)**	**Max. Turn-up Power (dBm)**	**Meas. output Power (dBm)**	**Scaled SAR (W/Kg)**	**Limit W/kg**
SIM 1 Card									
Left Cheek	DTS	6	2437	-0.23	0.137	10.00	9.67	0.148	1.6
Left Tilt	DTS	6	2437	-1.02	0.145	10.00	9.67	0.156	1.6
Right Cheek	DTS	6	2437	0.95	**0.184**	10.00	9.67	**0.199**	1.6
Right Tilt	DTS	6	2437	1.02	0.124	10.00	9.67	0.134	1.6
Body back	DTS	6	2437	0.61	**0.159**	10.00	9.67	**0.172**	1.6
Body front	DTS	6	2437	0.74	0.072	10.00	9.67	0.078	1.6
Edge 1 (Top)	DTS	6	2437	0.59	0.112	10.00	9.67	0.121	1.6
Edge 2(Right)	DTS	6	2437	-0.12	0.103	10.00	9.67	0.111	1.6
Edge 3(Bottom)	DTS	6	2437	-0.31	0.015	10.00	9.67	0.016	1.6
Edge 4(Left)	DTS	6	2437	0.19	0.036	10.00	9.67	0.039	1.6

Note:
- According to KDB248227, SAR is not required for 802.11n HT20/HT40 channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11a/b channels.
- All of above “DTS” means data transmitters.
- The test separation of all above table for body part is 10mm.

Repeated SAR								
Position	**Mode**	**Ch.**	**Fr. (MHz)**	**Power Drift (<±5%)**	**Once SAR (1g) (W/kg)**	**Twice SAR (1g) (W/kg)**	**Third SAR (1g) (W/kg)**	**Limit W/kg**
Right Cheek	RMC 12.2kbps	9400	1880	0.31	1.091	-	-	1.6
Body back	RMC 12.2kbps	9538	1907.6	-0.95	0.965	-	-	1.6
Body back	RMC 12.2kbps	4183	836.6	1.02	0.873	-	-	1.6
Right Cheek	100 RB #0	20300	1745	-0.64	1.088	-	-	1.6
Body front	1 RB #0	20300	1745	0.12	0.908	-	-	1.6
Body back	1 RB #0	23800	711	-1.00	0.903	-	-	1.6

Simultaneous Multi-band Transmission Evaluation:

Application Simultaneous Transmission information:

NO	Simultaneous state	Portable Handset			Note
		Head	Body-worn	Hotspot	
1	GSM(voice)+WLAN 2.4GHz (data)	Yes	Yes	-	-
2	WCDMA(voice)+WLAN 2.4GHz (data)	Yes	Yes	-	-
3	GSM(voice)+Bluetooth(data)	Yes	Yes	-	-
4	WCDMA(voice)+Bluetooth(data)	Yes	Yes	-	-
5	GPRS/EGDE(Data) + Bluetooth(data)	Yes	Yes	Yes	2.4GHz Hotspot
6	GPRS/EGDE(Data) + WLAN 2.4GHz (data)	Yes	Yes	Yes	2.4GHz Hotspot
7	WCDMA (Data) + Bluetooth(data)	Yes	Yes	Yes	2.4GHz Hotspot
8	WCDMA (Data) + WLAN 2.4GHz (data)	Yes	Yes	Yes	2.4GHz Hotspot
9	LTE+WLAN 2.4GHz (data)	Yes	Yes	-	-
10	LTE+ Bluetooth(data)	Yes	Yes	-	-
11	LTE+WLAN 2.4GHz (data)	Yes	Yes	Yes	2.4GHz Hotspot

NOTE:

1. WLAN and BT share the same antenna, and cannot transmit simultaneously.
2. Simultaneous with every transmitter must be the same test position.
3. KDB 447498 D01, BT SAR is excluded as below table.
4. KDB 447498 D01, for handsets the test separation distance is determined by the smallest distance between the outer surface of the device and the user; which is 0mm for head SAR and 10mm for body-worn SAR.
5. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
6. According to KDB447497 D01 4.3.2, simultaneous transmission SAR test exclusion is as follow:
   (1) Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna.
   (2) Any transmitters and antennas should be considered when calculating simultaneous mode.
   (3) For mobile phone and PC, it's the sum of all transmitters and antennas at the same mode with same position in each applicable exposure condition
   (4) When the standalone SAR test exclusion of section 4.3.1 is applied to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to the following to determine simultaneous transmission SAR test exclusion:

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

   where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.
7. When the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR to peak location separation ratio. The simultaneous transmitting antennas in each operating mode and exposure condition combination must be considered one pair at a time to determine the SAR to peak location separation ratio to qualify for test exclusion. The ratio is determined by (SAR1 + SAR2)1.5/Ri, rounded to two decimal digits, and must be ≤ 0.04 for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

Estimated SAR		Max Power including Tune-up Tolerance		Separation Distance (mm)	Estimated SAR (W/kg)
		dBm	mW		
BT	Head	1	1.259	0	0.052
	Body	1	1.259	10	0.026

Maximum test results (WWAN) with BT SAR:
BT: Head (0 cm gap): 0.052 W/kg and Body (1.0cm gap): 0.026 W/kg

Sum of the SAR for GSM 850 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/Kg)	SPLSR (Yes/No)
		GSM 850 Band	WI-Fi DTS Band	Bluetooth		
Head (voice)	Left Touch	0.435	0.148		0.583	No
	Left Tilt	0.415	0.156		0.571	No
	Right Touch	0.472	0.199		0.671	No
	Right Tilt	0.375	0.134		0.509	No
	Left Touch	0.435		0.052	0.487	No
	Left Tilt	0.415		0.052	0.467	No
	Right Touch	0.472		0.052	0.524	No
	Right Tilt	0.375		0.052	0.427	No
Body-worn	Rear	0.783	0.172		0.955	No
	Front	0.542	0.078		0.620	No
	Rear	0.783		0.026	0.809	No
	Front	0.542		0.026	0.568	No
Head (Data)	Left Touch	0.267	0.148		0.415	No
	Left Tilt	0.229	0.156		0.385	No
	Right Touch	0.274	0.199		0.473	No
	Right Tilt	0.262	0.134		0.396	No
	Left Touch	0.267		0.052	0.319	No
	Left Tilt	0.229		0.052	0.281	No
	Right Touch	0.274		0.052	0.326	No
	Right Tilt	0.262		0.052	0.314	No
Hotspot	Rear	0.412	0.172		0.584	No
	Front	0.308	0.078		0.386	No
	Edge 1	0.015	0.121		0.136	No
	Edge 2	0.276	0.111		0.387	No
	Edge 3	0.047	0.016		0.063	No
	Edge 4	0.193	0.039		0.232	No
	Rear	0.412		0.026	0.438	No
	Front	0.308		0.026	0.334	No
	Edge 1	0.015		0.026	0.041	No
	Edge 2	0.276		0.026	0.302	No
	Edge 3	0.047		0.026	0.073	No
	Edge 4	0.193		0.026	0.219	No

Note:

- According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/Kg, SPLSR assessment is not required.
- SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for GSM 1900 &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/Kg)	SPLSR (Yes/No)
		GSM1900 Band	WI-Fi DTS Band	Bluetooth		
Head (voice)	Left Touch	0.329	0.148		0.477	No
	Left Tilt	0.071	0.156		0.227	No
	Right Touch	0.454	0.199		0.653	No
	Right Tilt	0.114	0.134		0.248	No
	Left Touch	0.329		0.052	0.381	No
	Left Tilt	0.071		0.052	0.123	No
	Right Touch	0.454		0.052	0.506	No
	Right Tilt	0.114		0.052	0.166	No
Body-worn	Rear	0.586	0.172		0.758	No
	Front	0.544	0.078		0.622	No
	Rear	0.586		0.026	0.612	No
	Front	0.544		0.026	0.570	No
Head (Data)	Left Touch	0.290	0.148		0.438	No
	Left Tilt	0.061	0.156		0.217	No
	Right Touch	0.396	0.199		0.595	No
	Right Tilt	0.062	0.134		0.196	No
	Left Touch	0.290		0.052	0.342	No
	Left Tilt	0.061		0.052	0.113	No
	Right Touch	0.396		0.052	0.448	No
	Right Tilt	0.062		0.052	0.114	No
Hotspot	Rear	0.350	0.172		0.522	No
	Front	0.270	0.078		0.348	No
	Edge 1	0.052	0.121		0.173	No
	Edge 2	0.170	0.111		0.281	No
	Edge 3	0.399	0.016		0.415	No
	Edge 4	0.234	0.039		0.273	No
	Rear	0.350		0.026	0.376	No
	Front	0.270		0.026	0.296	No
	Edge 1	0.052		0.026	0.078	No
	Edge 2	0.170		0.026	0.196	No
	Edge 3	0.399		0.026	0.425	No
	Edge 4	0.234		0.026	0.260	No

Note:

- According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/Kg, SPLSR assessment is not required.
- SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for WCDMA Band II &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/Kg)	SPLSR (Yes/No)
		Band II Band	WI-Fi DTS Band	Bluetooth		
Head	Left Touch	1.017	0.148		1.165	No
	Left Tilt	0.150	0.156		0.306	No
	Right Touch	1.302	0.199		1.501	No
	Right Tilt	0.223	0.134		0.357	No
	Left Touch	1.017		0.052	1.069	No
	Left Tilt	0.150		0.052	0.202	No
	Right Touch	1.302		0.052	1.354	No
	Right Tilt	0.223		0.052	0.275	No
Body-worn	Rear	1.276	0.172		1.448	No
	Front	0.560	0.078		0.638	No
	Edge 1	0.117	0.121		0.238	No
	Edge 2	0.148	0.111		0.259	No
	Edge 3	0.994	0.016		1.010	No
	Edge 4	0.272	0.039		0.311	No
	Rear	1.276		0.026	1.302	No
	Front	0.560		0.026	0.586	No
	Edge 1	0.117		0.026	0.143	No
	Edge 2	0.148		0.026	0.174	No
	Edge 3	0.994		0.026	1.020	No
	Edge 4	0.272		0.026	0.298	No

Note:

- According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/Kg, SPLSR assessment is not required.
- SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for WCDMA Band V &Wi-Fi & BT:

RF Exposure Conditions	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/Kg)	SPLSR (Yes/No)
		WCDMA Band V	Wi-Fi DTS Band	Bluetooth		
Head	Left Touch	0.535	0.148		0.683	No
	Left Tilt	0.516	0.156		0.672	No
	Right Touch	0.519	0.199		0.718	No
	Right Tilt	0.554	0.134		0.688	No
	Left Touch	0.535		0.052	0.587	No
	Left Tilt	0.516		0.052	0.568	No
	Right Touch	0.519		0.052	0.571	No
	Right Tilt	0.554		0.052	0.606	No
Body-worn	Rear	1.082	0.172		1.254	No
	Front	0.677	0.078		0.755	No
	Edge 1	0.032	0.121		0.153	No
	Edge 2	0.005	0.111		0.116	No
	Edge 3	0.455	0.016		0.471	No
	Edge 4	0.329	0.039		0.368	No
	Rear	1.082		0.026	1.108	No
	Front	0.677		0.026	0.703	No
	Edge 1	0.032		0.026	0.058	No
	Edge 2	0.005		0.026	0.031	No
	Edge 3	0.455		0.026	0.481	No
	Edge 4	0.329		0.026	0.355	No

Note:

- According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/Kg, SPLSR assessment is not required.
- SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 4 &Wi-Fi & BT:

RF Exposure Conditions	UL RB Allocation	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/Kg)	SPLSR (Yes/No)
			LTE Band 4	Wi-Fi DTS Band	Bluetooth		
Head	1	Left Touch	1.353	0.148		1.501	No
		Left Tilt	0.239	0.156		0.395	No
		Right Touch	1.352	0.199		1.551	No
		Right Tilt	0.370	0.134		0.504	No
		Left Touch	1.353		0.052	1.405	No
		Left Tilt	0.239		0.052	0.291	No
		Right Touch	1.352		0.052	1.404	No
		Right Tilt	0.370		0.052	0.422	No
Body-worn		Rear	1.295	0.172		1.467	No
		Front	1.556	0.078		1.634	No
		Edge 1	0.054	0.121		0.175	No
		Edge 2	0.472	0.111		0.583	No
		Edge 3	0.782	0.016		0.798	No
		Edge 4	0.586	0.039		0.625	No
		Rear	1.295		0.026	1.321	No
		Front	1.556		0.026	1.582	No
		Edge 1	0.054		0.026	0.080	No
		Edge 2	0.472		0.026	0.498	No
		Edge 3	0.782		0.026	0.808	No
		Edge 4	0.586		0.026	0.612	No
Head	50	Left Touch	1.385	0.148		1.533	No
		Left Tilt	0.246	0.156		0.402	No
		Right Touch	1.372	0.199		1.571	No
		Right Tilt	0.371	0.134		0.505	No
		Left Touch	1.385		0.052	1.437	No
		Left Tilt	0.246		0.052	0.298	No
		Right Touch	1.372		0.052	1.424	No
		Right Tilt	0.371		0.052	0.423	No
Body-worn		Rear	1.312	0.172		1.484	No
		Front	1.343	0.078		1.421	No
		Rear	1.312		0.026	1.338	No
		Front	1.343		0.026	1.369	No

CONTINUE:

RF Exposure Conditions	UL RB Allocation	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/Kg)	SPLSR (Yes/No)
			LTE Band 4	Wi-Fi DTS Band	Bluetooth		
Head	100	Left Touch	1.384	0.148		1.532	No
		Left Tilt	0.242	0.156		0.398	No
		Right Touch	1.398	0.199		**1.597**	No
		Right Tilt	0.395	0.134		0.529	No
		Left Touch	1.384		0.052	1.436	No
		Left Tilt	0.242		0.052	0.294	No
		Right Touch	1.398		0.052	1.450	No
		Right Tilt	0.395		0.052	0.447	No
Body-worn		Rear	1.146	0.172		1.318	No
		Front	1.239	0.078		1.317	No
		Rear	1.146		0.026	1.172	No
		Front	1.239		0.026	1.265	No

Note:

- According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/Kg, SPLSR assessment is not required.
- SPLSR mean is “The SAR to Peak Location Separation Ratio “

Sum of the SAR for LTE Band 17 &Wi-Fi & BT:

RF Exposure Conditions	UL RB Allocation	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/Kg)	SPLSR (Yes/No)
			LTE Band 17	Wi-Fi DTS Band	Bluetooth		
Head	1	Left Touch	0.350	0.148		0.498	No
		Left Tilt	0.271	0.156		0.427	No
		Right Touch	0.321	0.199		0.520	No
		Right Tilt	0.367	0.134		0.501	No
		Left Touch	0.350		0.052	0.402	No
		Left Tilt	0.271		0.052	0.323	No
		Right Touch	0.321		0.052	0.373	No
		Right Tilt	0.367		0.052	0.419	No
Body-worn		Rear	1.171	0.172		1.343	No
		Front	0.464	0.078		0.542	No
		Edge 1	0.050	0.121		0.171	No
		Edge 2	0.204	0.111		0.315	No
		Edge 3	0.289	0.016		0.305	No
		Edge 4	0.492	0.039		0.531	No
		Rear	1.171		0.026	1.197	No
		Front	0.464		0.026	0.490	No
		Edge 1	0.050		0.026	0.076	No
		Edge 2	0.204		0.026	0.230	No
		Edge 3	0.289		0.026	0.315	No
		Edge 4	0.492		0.026	0.518	No
Head	25	Left Touch	0.343	0.148		0.491	No
		Left Tilt	0.339	0.156		0.495	No
		Right Touch	0.299	0.199		0.498	No
		Right Tilt	0.251	0.134		0.385	No
		Left Touch	0.343		0.052	0.395	No
		Left Tilt	0.339		0.052	0.391	No
		Right Touch	0.299		0.052	0.351	No
		Right Tilt	0.251		0.052	0.303	No
Body-worn		Rear	1.172	0.172		1.344	No
		Front	0.499	0.078		0.577	No
		Rear	1.172		0.026	1.198	No
		Front	0.499		0.026	0.525	No

CONTINUE:

RF Exposure Conditions	UL RB Allocation	Test Position	Simultaneous Transmission Scenario			Σ1-g SAR (W/Kg)	SPLSR (Yes/No)
			LTE Band 17	Wi-Fi DTS Band	Bluetooth		
Head	50	Left Touch	0.350	0.148		0.498	No
		Left Tilt	0.447	0.156		0.603	No
		Right Touch	0.307	0.199		0.506	No
		Right Tilt	0.262	0.134		0.396	No
		Left Touch	0.350		0.052	0.402	No
		Left Tilt	0.447		0.052	0.499	No
		Right Touch	0.307		0.052	0.359	No
		Right Tilt	0.262		0.052	0.314	No
Body-worn		Rear	1.233	0.172		1.405	No
		Front	0.522	0.078		0.6	No
		Rear	1.233		0.026	1.259	No
		Front	0.522		0.026	0.548	No

Note:

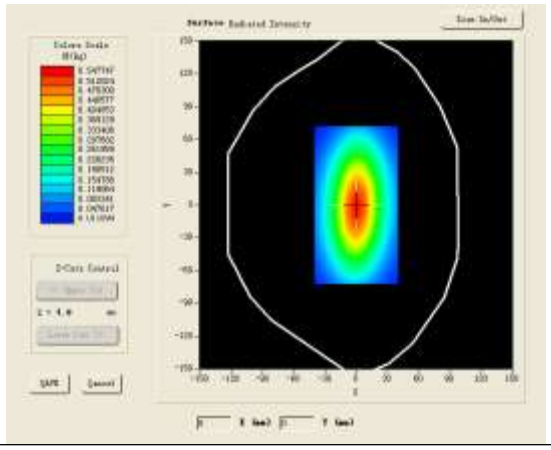
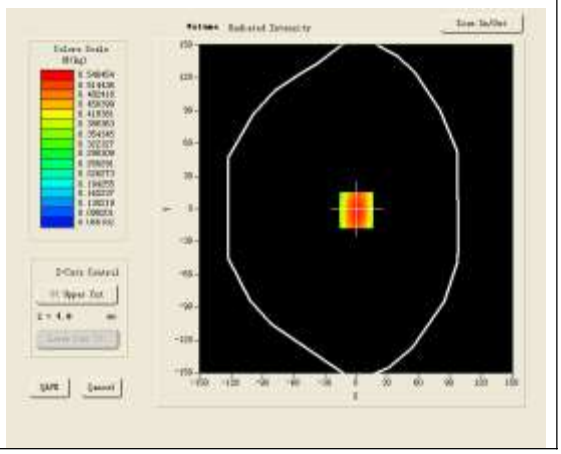
- According to KDB 447498 D01 General RF Exposure Guidance, when the simultaneous transmission SAR is less than1.6 W/Kg, SPLSR assessment is not required.
- SPLSR mean is “The SAR to Peak Location Separation Ratio “

APPENDIX A. SAR SYSTEM CHECK DATA

Test Laboratory: AGC Lab **Date: May 11,2015**
System Check Head 750 MHz
DUT: Dipole 750 MHz Type: SID 750
Communication System CW; Communication System Band: D750 (750.0 MHz); Duty Cycle: 1:1; Conv.F=4.31
Frequency: 750 MHz; Medium parameters used: f = 750 MHz; σ=0.91 mho/m; εr =41.01; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃):22.3, Liquid temperature (℃): 21.9

SATIMO Configuration
- Probe: SSE5; Calibrated: 12/03/2014; Serial SN 04/13 EP165
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

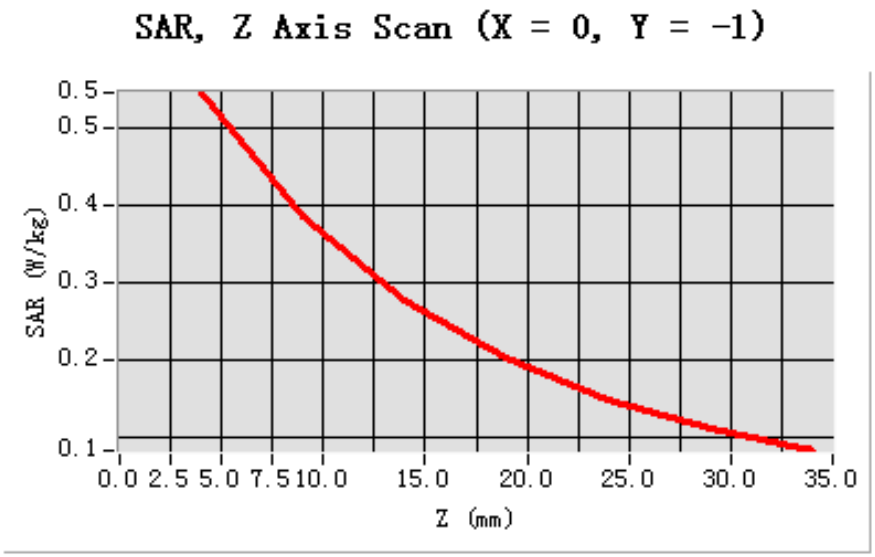
Configuration/System Check 750MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 750MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

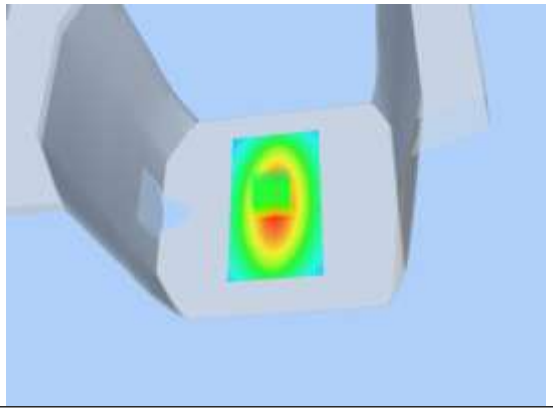
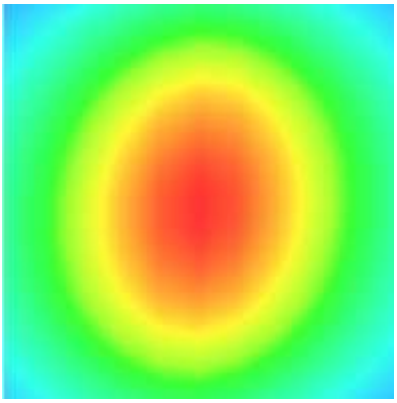
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-1.00

SAR 10g (W/Kg)	0.380642
SAR 1g (W/Kg)	0.560003

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5465	0.3852	0.2772	0.2016	0.1483	0.1100

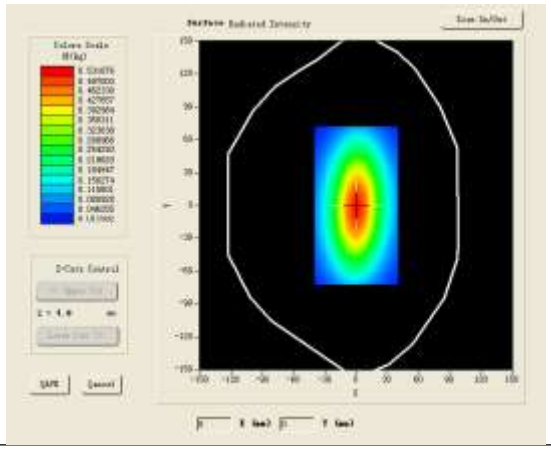
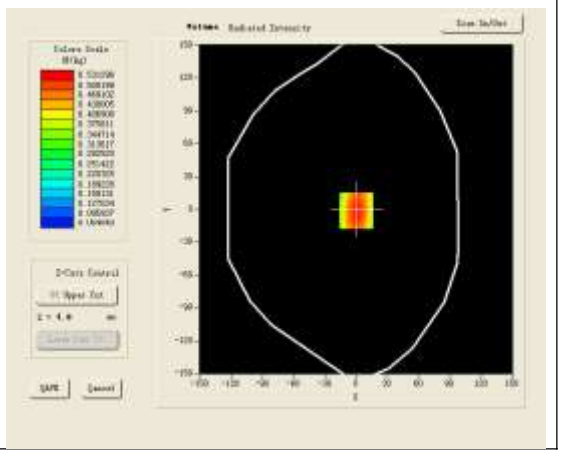


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 11,2015**
System Check Body 750 MHz
DUT: Dipole 750 MHz Type: SID 750
Communication System CW; Communication System Band: D750 (750.0 MHz); Duty Cycle: 1:1; Conv.F=4.43
Frequency: 750 MHz; Medium parameters used: f = 750 MHz; σ=0.98 mho/m; εr =54.00; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃):22.3, Liquid temperature (℃): 22.3

SATIMO Configuration
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.: SN 04/13 EP165
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

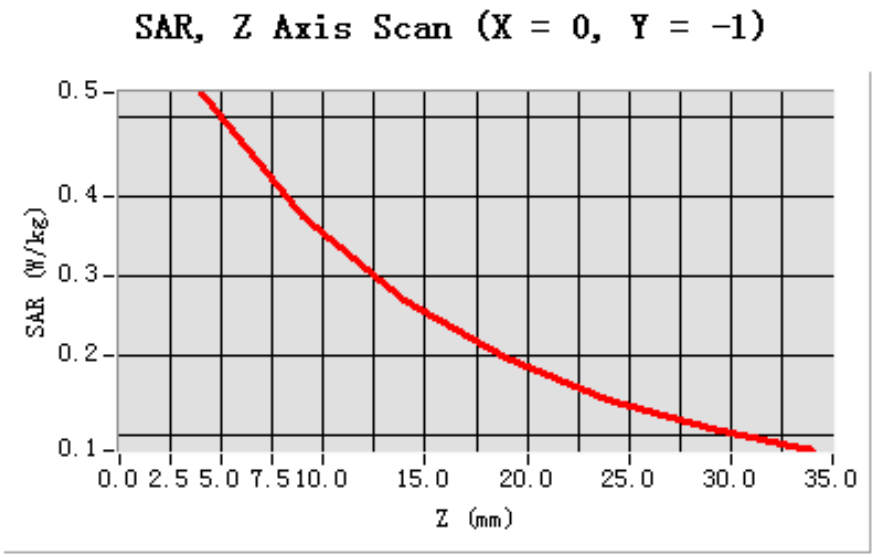
Configuration/System Check 750MHz Body/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 750MHz Body/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

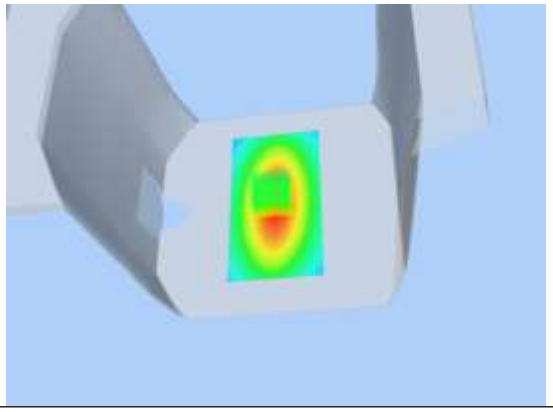
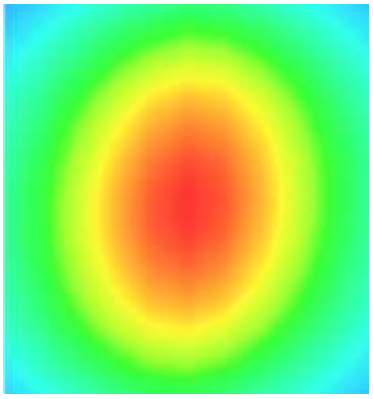
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-1.00

SAR 10g (W/Kg)	0.374084
SAR 1g (W/Kg)	0.551256

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5313	0.3746	0.2699	0.1962	0.1439	0.1069

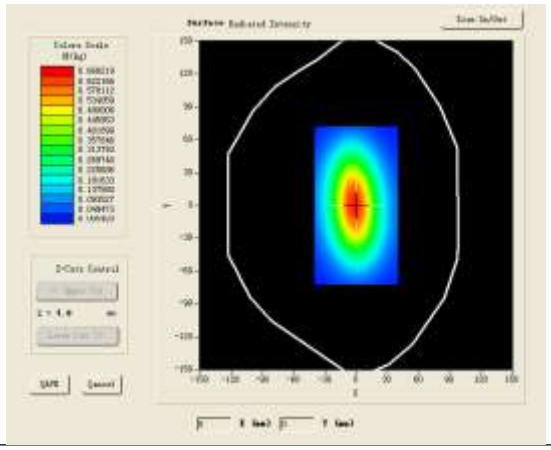
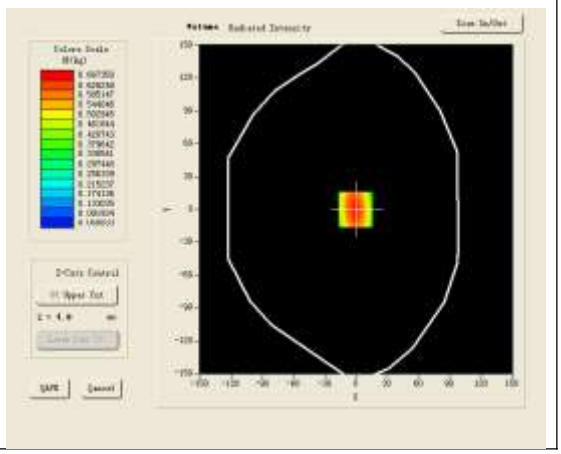


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 6,2015**
System Check Head 835 MHz
DUT: Dipole 835 MHz Type: SID 835
Communication System CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1; Conv.F=5.03
Frequency: 835 MHz; Medium parameters used: f = 835 MHz; σ=0.89 mho/m; εr =41.86; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18Bm
Ambient temperature (℃):21.2, Liquid temperature (℃): 20.8

SATIMO Configuration
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

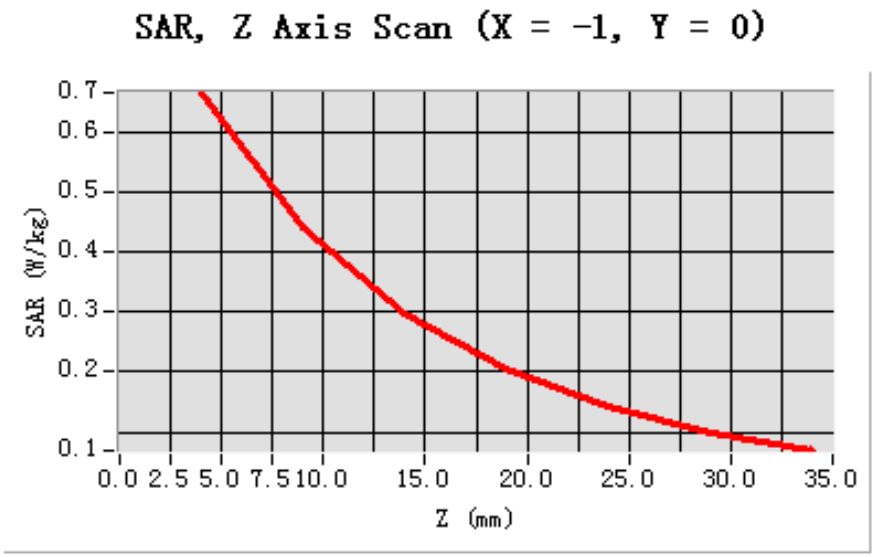
Configuration/System Check 835MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 835MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

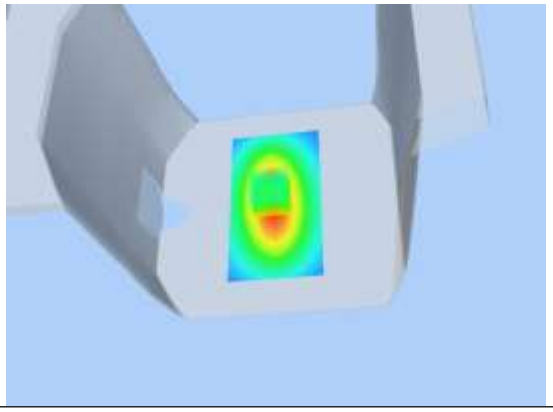
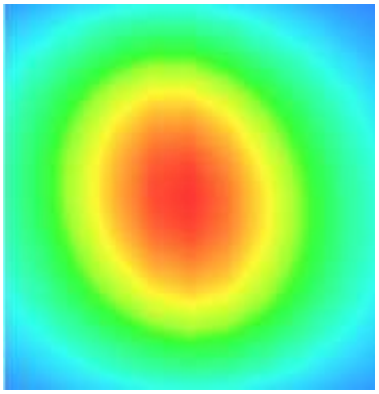
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=0.00

SAR 10g (W/Kg)	0.408223
SAR 1g (W/Kg)	0.639745

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6673	0.4416	0.2996	0.2051	0.1419	0.0988

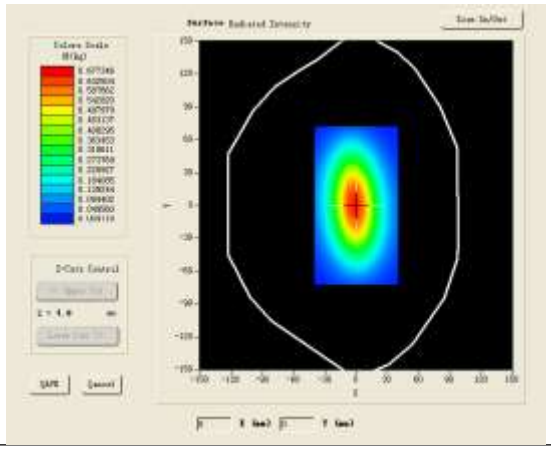
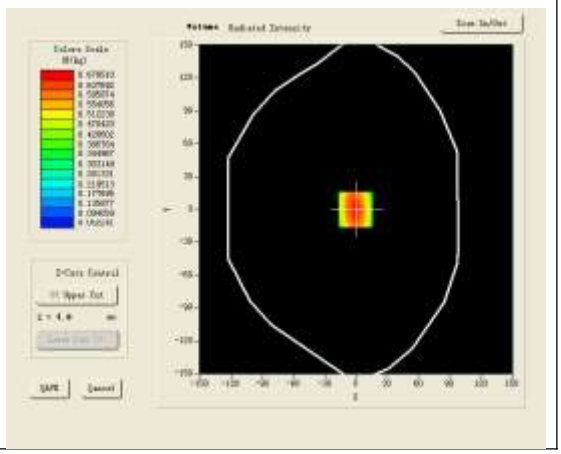


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 6,2015**
System Check Body 835 MHz
DUT: Dipole 835 MHz Type: SID 835
Communication System CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1; Conv.F=5.33
Frequency: 835 MHz; Medium parameters used: f = 835 MHz; σ=0.95 mho/m; εr =55.24; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃):21.2, Liquid temperature (℃): 21.0

SATIMO Configuration
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

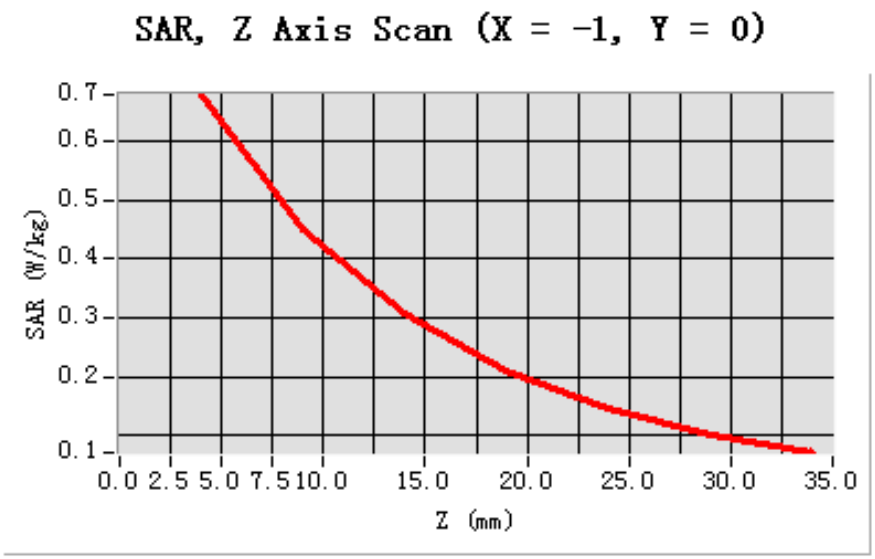
Configuration/System Check 835MHz Body/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 835MHz Body/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

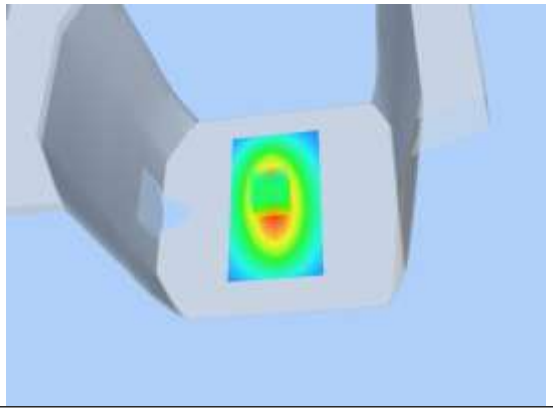
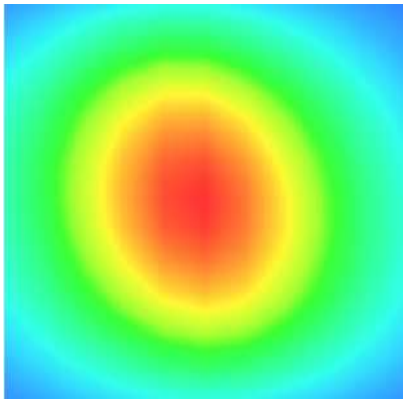
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=0.00

SAR 10g (W/Kg)	0.415857
SAR 1g (W/Kg)	0.651191

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6795	0.4504	0.3055	0.2090	0.1448	0.1009

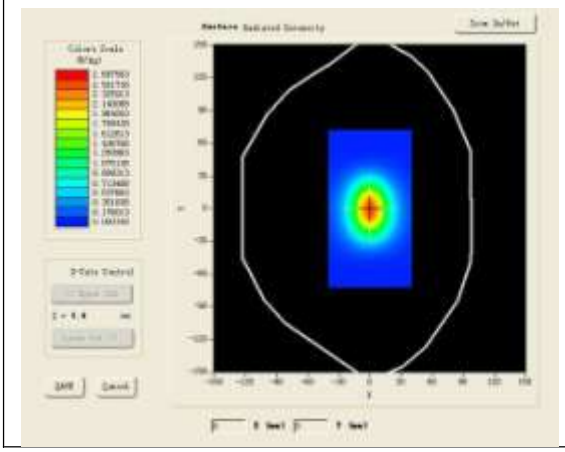
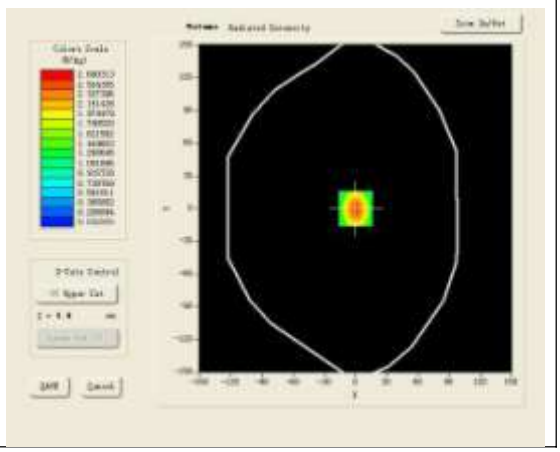


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 10,2015**
System Check Head 1750MHz
DUT: Dipole 1800 MHz; Type: SID 1800
Communication System: CW; Communication System Band: D1700 (1750.0 MHz); Duty Cycle:1:1; Conv.F=4.35
Frequency: 1750 MHz; Medium parameters used: f = 1750MHz; σ=0.92E mho/m; εr =40.31; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃): 22.5, Liquid temperature (℃): 22.1

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

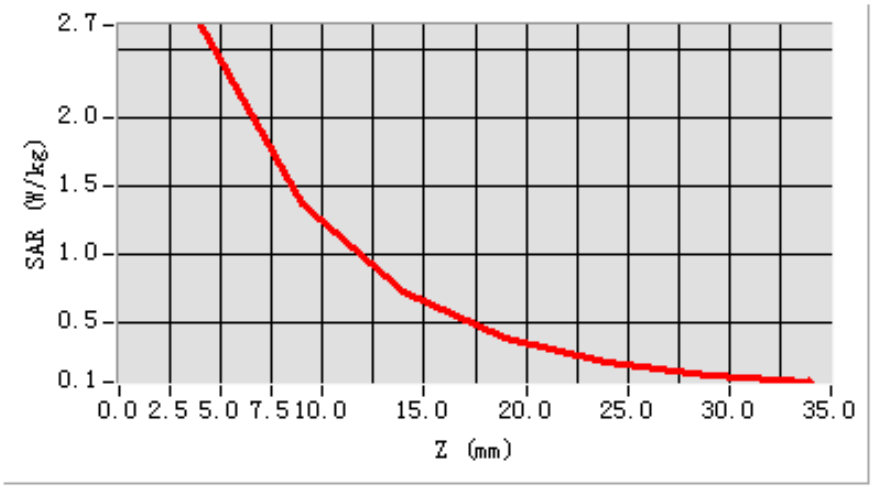
Configuration/System Check 1750MHz Head/Area Scan: Measurement grid: dx=8mm,dy=8mm
Configuration/System Check 1750MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

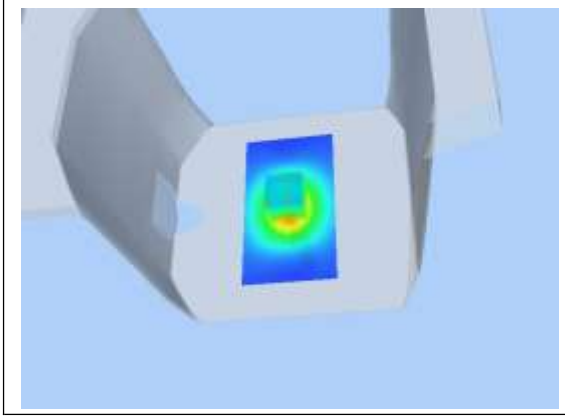
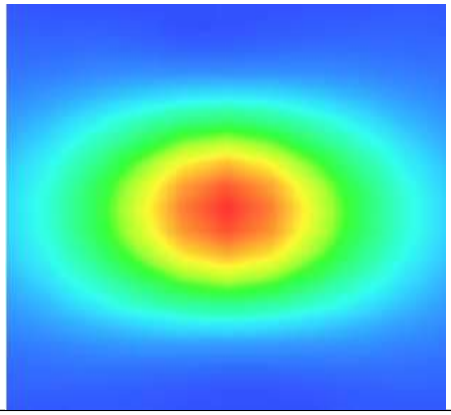
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.301007
SAR 1g (W/Kg)	2.545321

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.6804	1.3732	0.7249	0.3902	0.2142	0.1157

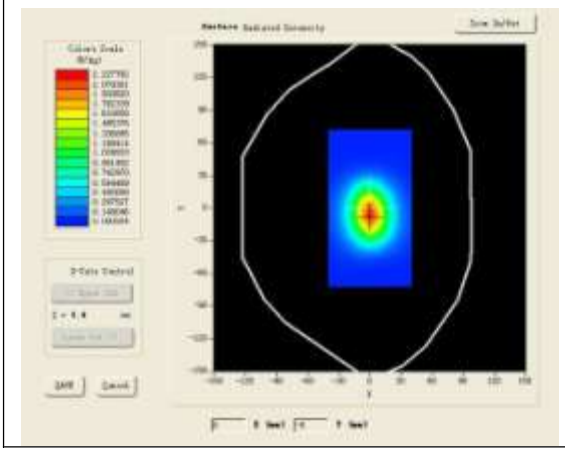
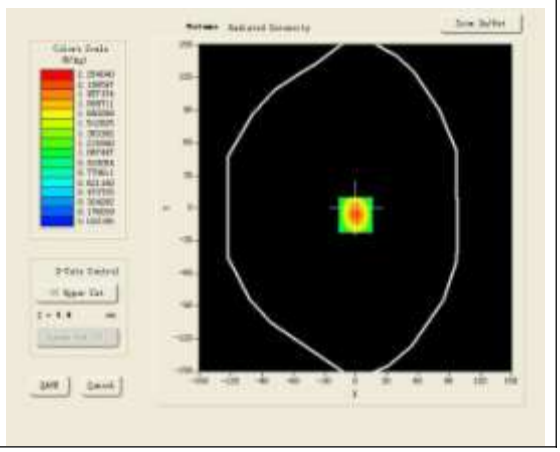


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 10,2015**
System Check Body 1750MHz
DUT: Dipole 1800 MHz; Type: SID 1800
Communication System: CW; Communication System Band: D1700 (1750.0 MHz); Duty Cycle:1:1; Conv.F=4.49
Frequency: 1750MHz; Medium parameters used: f = 1750MHz; σ=1.53 mho/m; εr =52.77; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃): 22.5, Liquid temperature (℃): 22.2

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

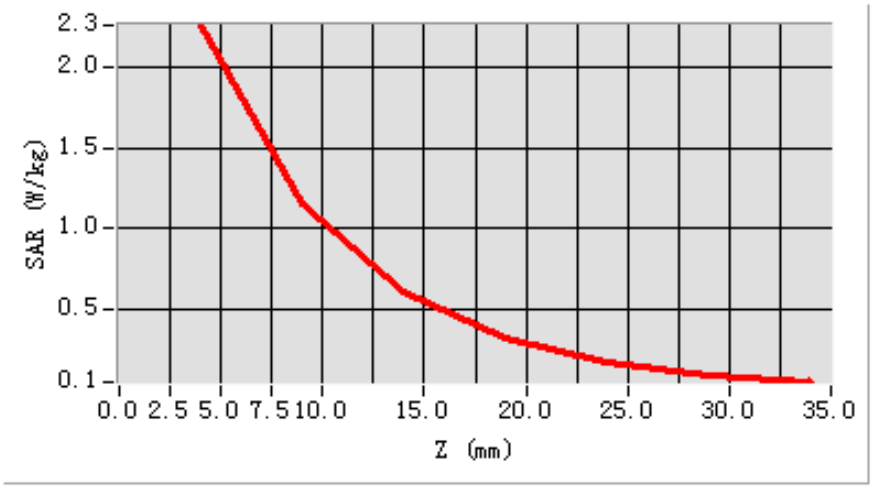
Configuration/System Check 1750MHz Body/Area Scan: Measurement grid: dx=8mm,dy=8mm
Configuration/System Check 1750MHz Body/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

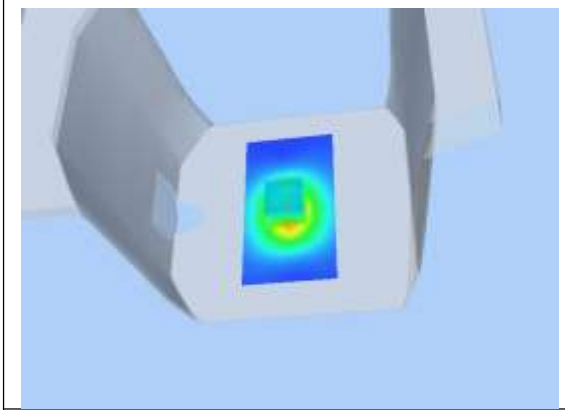
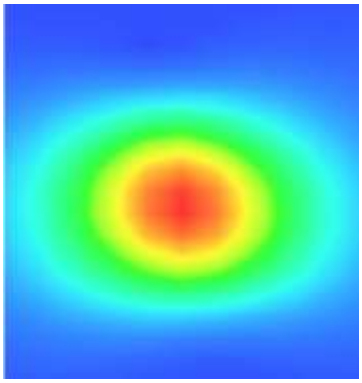
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-6.00

SAR 10g (W/Kg)	1.187380
SAR 1g (W/Kg)	2.321246

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.2561	1.1577	0.6118	0.3253	0.1787	0.0962

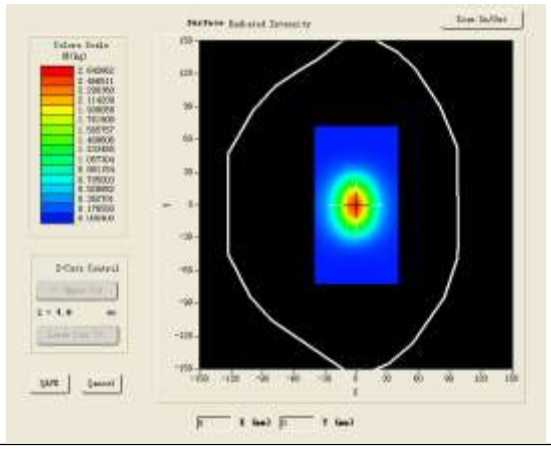
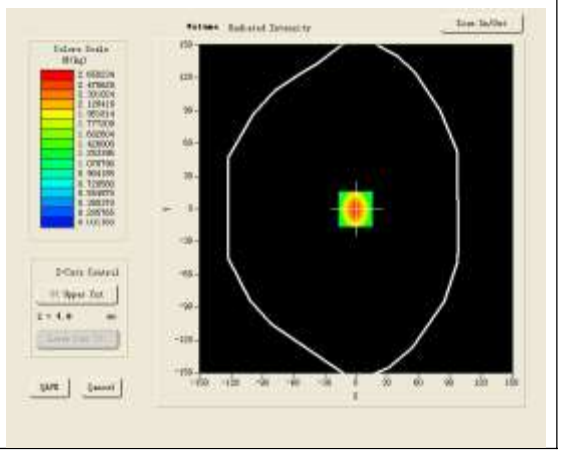


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 8,2015**
System Check Head 1900MHz
DUT: Dipole 1900 MHz; Type: SID 1900
Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle:1:1; Conv.F=4.31
Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ=1.41mho/m; εr =40.32 ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃):22.0, Liquid temperature (℃): 21.5

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

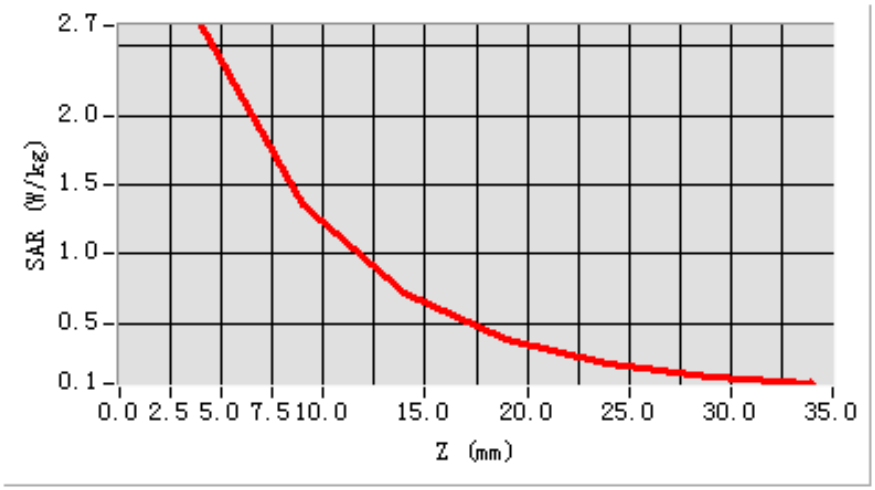
Configuration/System Check 1900MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 1900MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

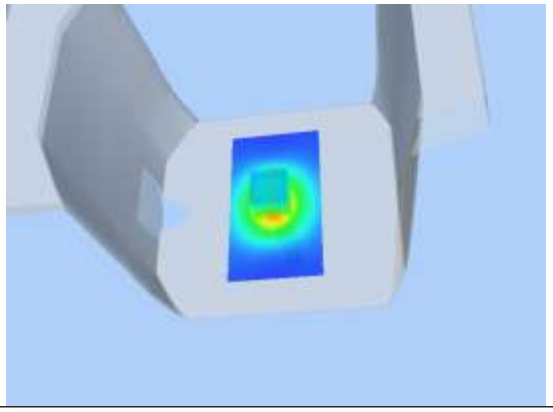
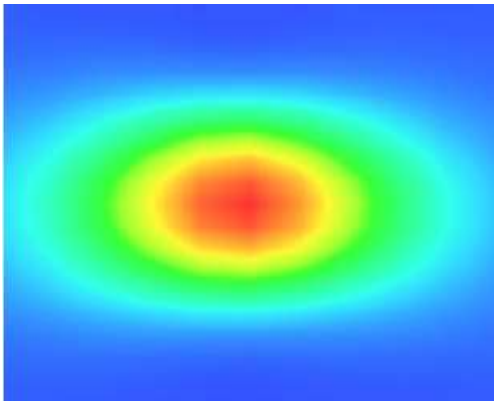
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=0.00

SAR 10g (W/Kg)	1.280102
SAR 1g (W/Kg)	2.514418

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.6489	1.3556	0.7113	0.3794	0.2076	0.1123

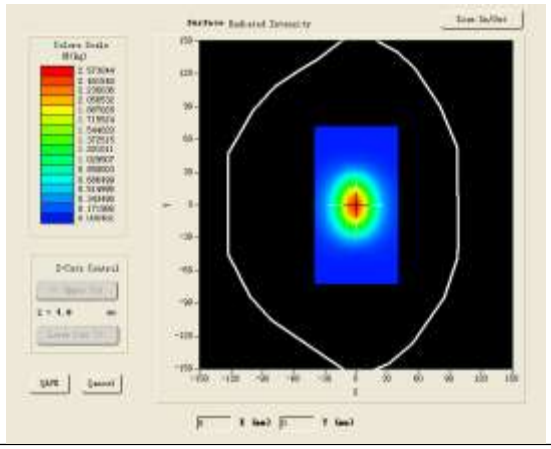
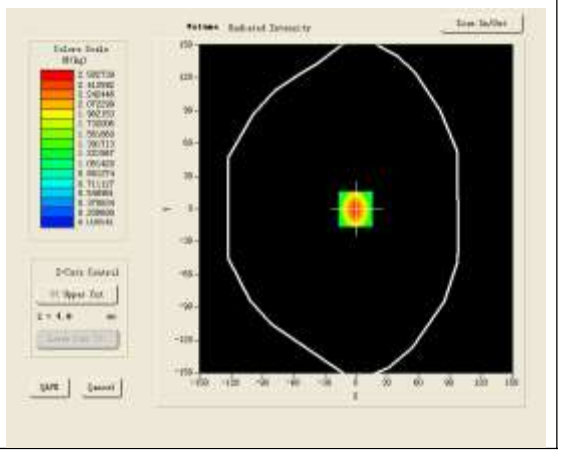


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 8,2015**
System Check Body 1900MHz
DUT: Dipole 1900 MHz; Type: SID 1900
Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle:1:1; Conv.F=4.17
Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ=1.51mho/m; εr =53.40; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃):22.0, Liquid temperature (℃): 21.7

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

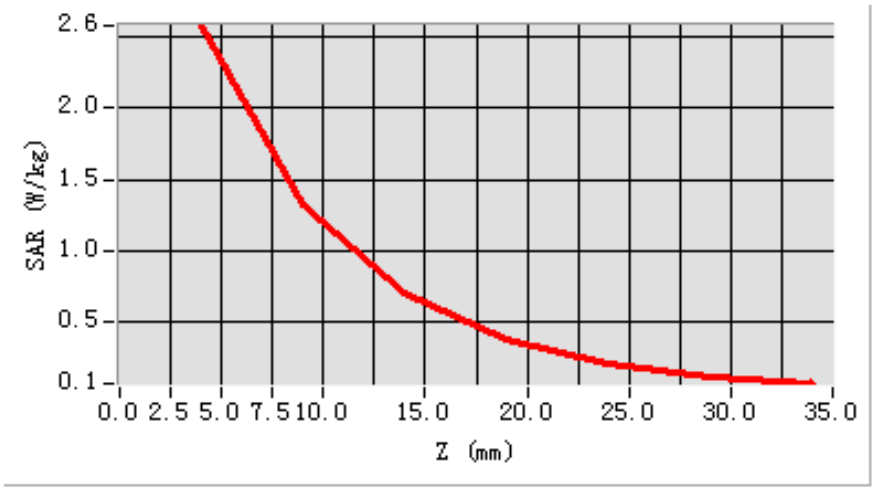
Configuration/System Check 1900MHz Body/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/System Check 1900MHz Body/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

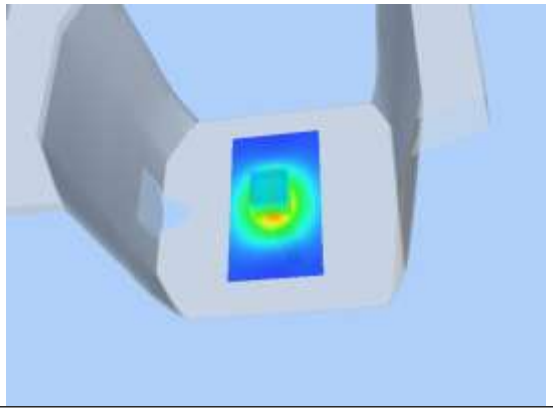
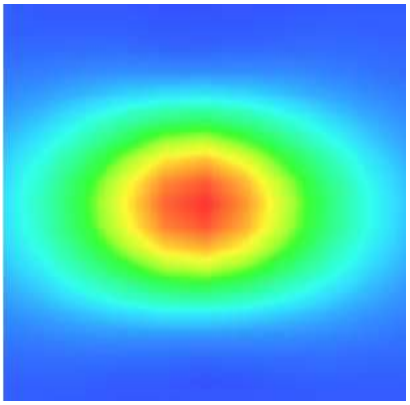
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=0.00

SAR 10g (W/Kg)	1.248016
SAR 1g (W/Kg)	2.457764

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.5890	1.3165	0.6921	0.3754	0.2014	0.1093

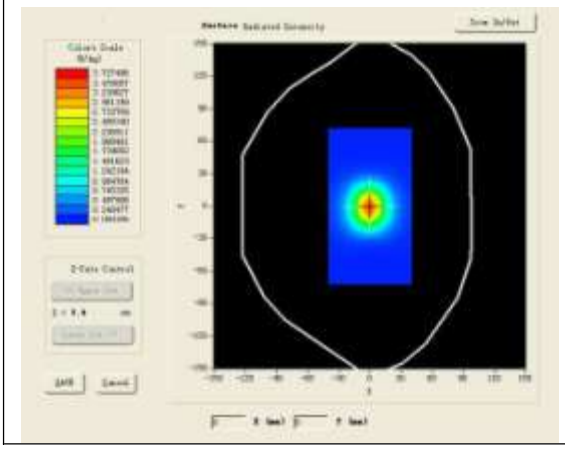
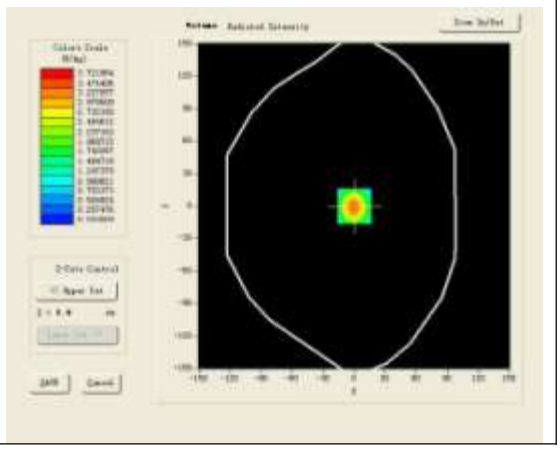


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date:May 12,2015**
System Check Head 2450 MHz
DUT: Dipole 2450 MHz Type: SID 2450
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Duty Cycle: 1:1; Conv.F=4.16
Frequency: 2450 MHz; Medium parameters used: f = 2450 MHz; σ =1.83mho/m; εr =39.78; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃):21.7, Liquid temperature (℃): 21.5

SATIMO Configuration:
•Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

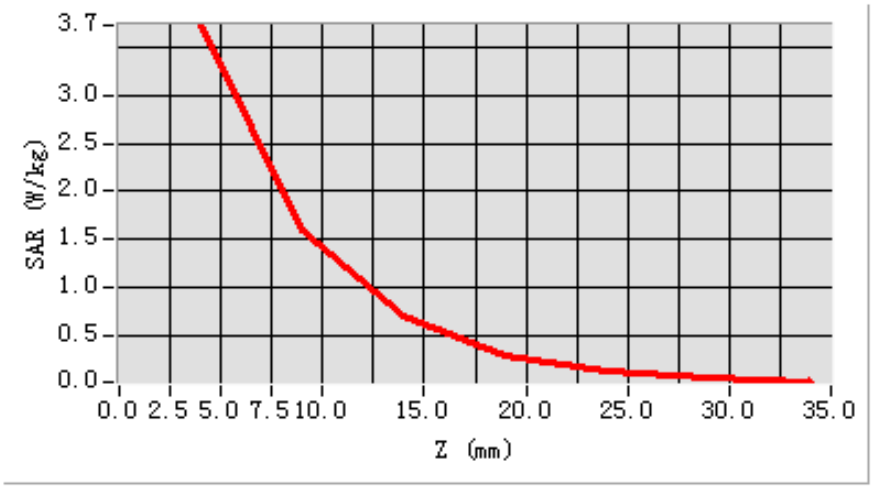
Configuration/System Check 2450 MHz Head/Area Scan: Measurement grid: dx=8mm,dy=8mm
Configuration/System Check 2450 MHz Head/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

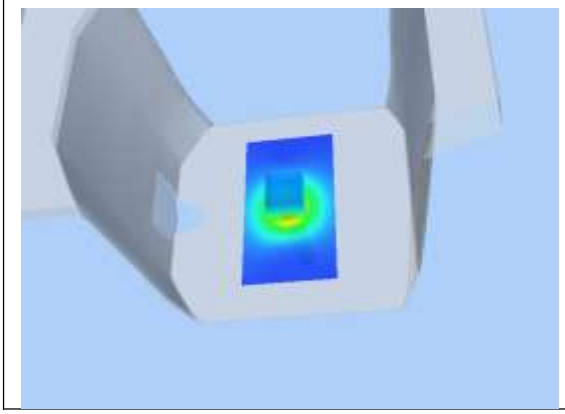
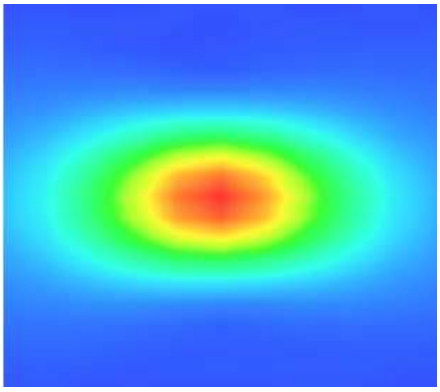
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.571427
SAR 1g (W/Kg)	3.548829

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	3.7218	1.5900	0.7083	0.3120	0.1374	0.0657

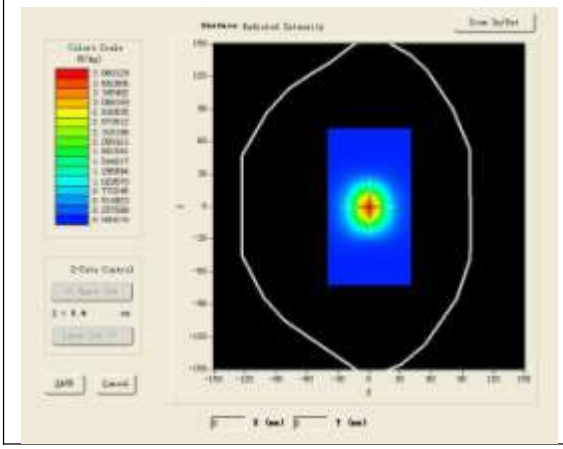
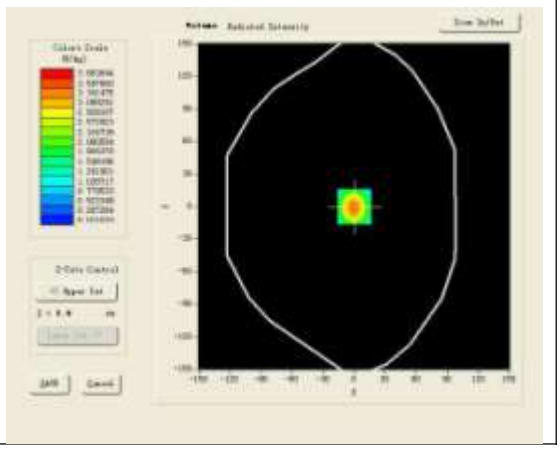


3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date:May 12,2015**
System Check Body 2450 MHz
DUT: Dipole 2450 MHz Type: SID 2450
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Duty Cycle: 1:1; Conv.F=4.07
Frequency: 2450 MHz; Medium parameters used: f = 2450 MHz; σ =1.95 mho/m; εr =52.70; ρ= 1000 kg/m³ ;
Phantom section: Flat Section; Input Power=18dBm
Ambient temperature (℃):21.7, Liquid temperature (℃): 21.7

SATIMO Configuration:
•Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN22/12 EP159
• Sensor-Surface: 4mm (Mechanical Surface Detection)
• Phantom: Flat Phantom; Type: Elliptical Phantom
• Measurement SW: OpenSAR V4_02_01

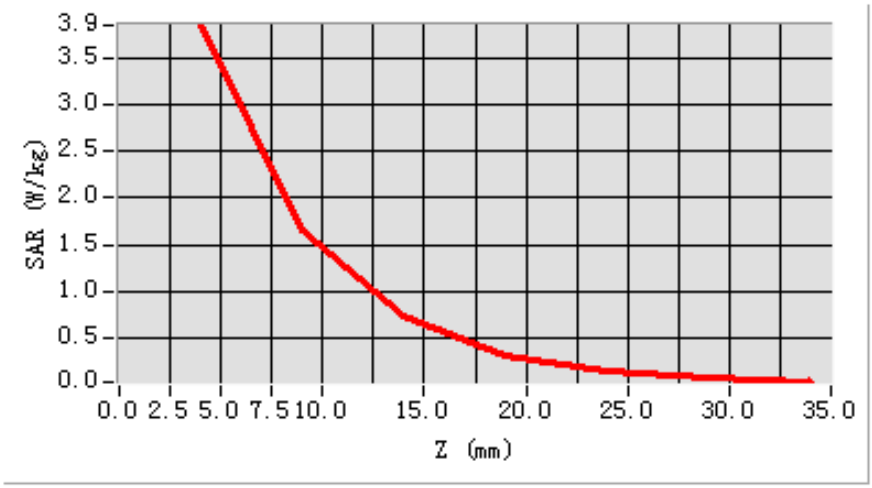
Configuration/System Check 2450 MHz Body/Area Scan: Measurement grid: dx=8mm,dy=8mm
Configuration/System Check 2450 MHz Body/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm

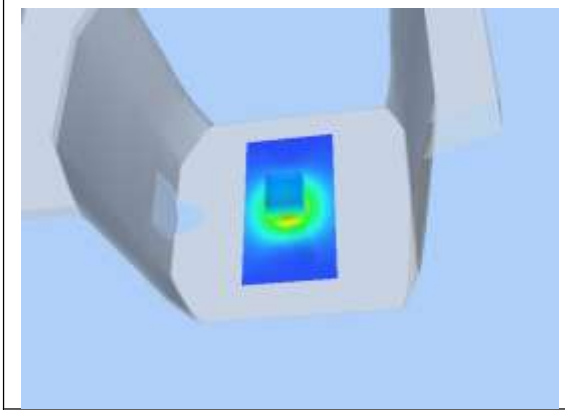
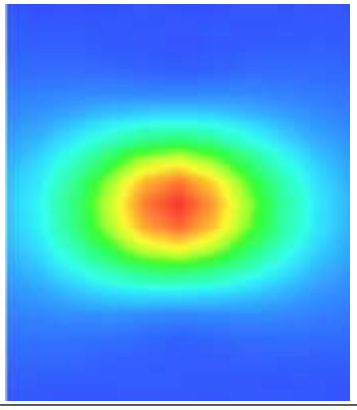
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.635049
SAR 1g (W/Kg)	3.667204

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	3.8528	1.6546	0.7297	0.3208	0.1449	0.0633



3D screen shot	Hot spot position
	

APPENDIX B. SAR MEASUREMENT DATA

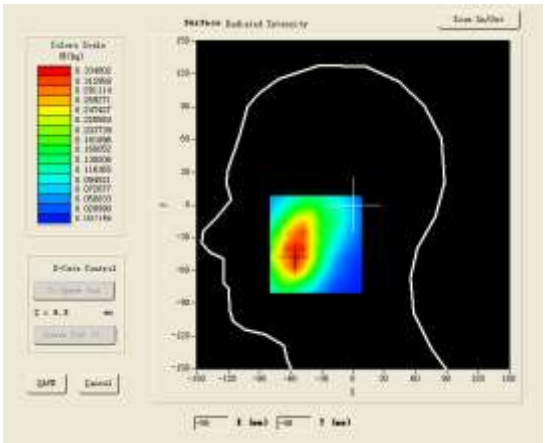
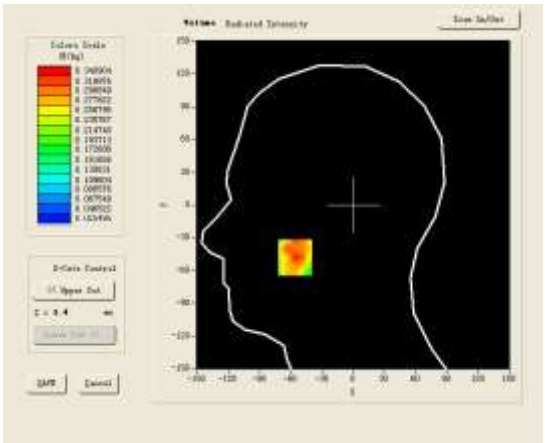
Test Laboratory: AGC Lab **Date: May 6,2015**
GSM 850 Mid- Touch-Right <SIM 1>
DUT: Mobile Phone ; Type: M4GLTE

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=5.03; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.90mho/m; εr = 41.70; ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM 850 Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/GSM 850 Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

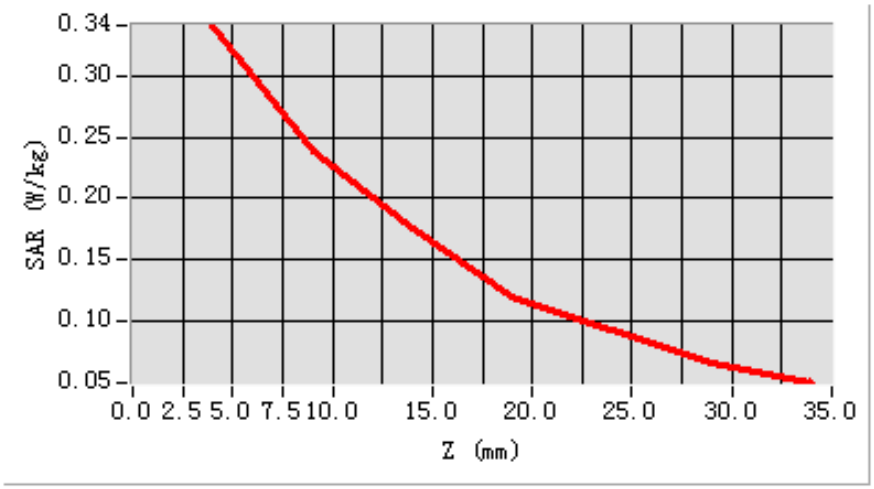
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

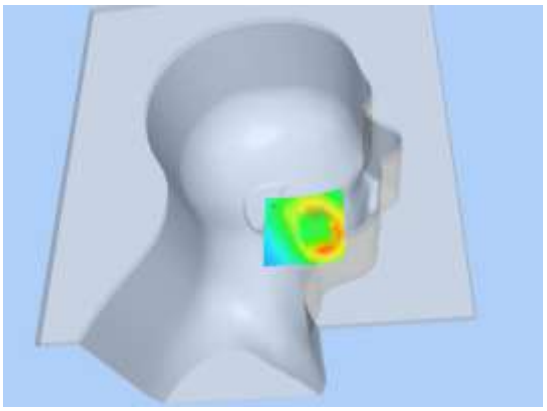
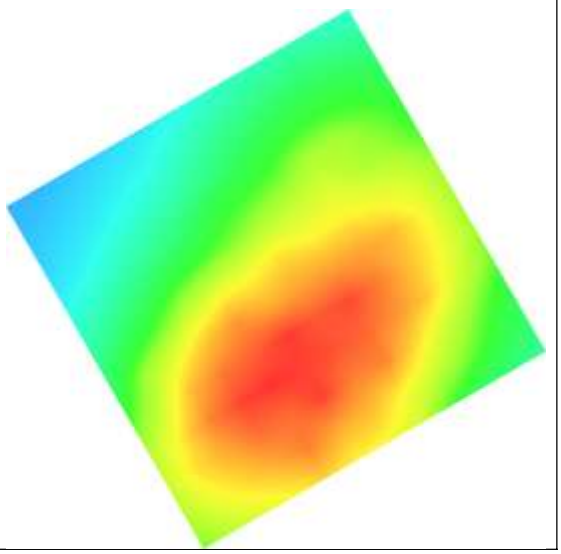
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-56.00, Y=-48.00

SAR 10g (W/Kg)	0.215292
SAR 1g (W/Kg)	0.322287

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3409	0.2392	0.1756	0.1192	0.0932	0.0653



3D screen shot	Hot spot position
	

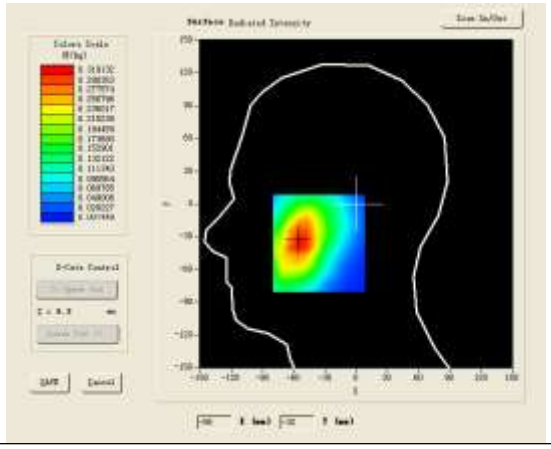
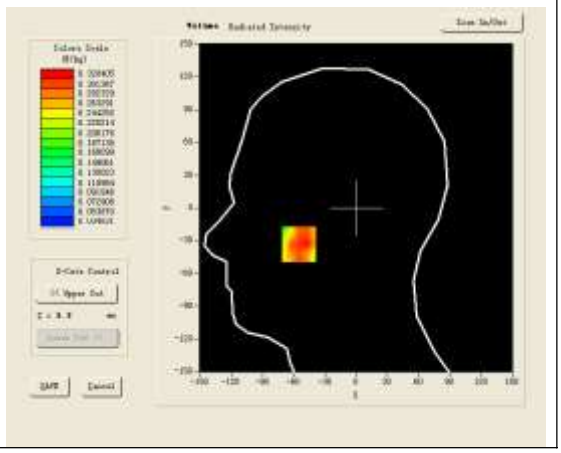
Test Laboratory: AGC Lab **Date: May 6,2015**
GSM 850 Mid- Touch-Right <SIM 2>
DUT: Mobile Phone ; Type: M4GLTE

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=5.03; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.90mho/m; εr = 41.70; ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM 850 Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/GSM 850 Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

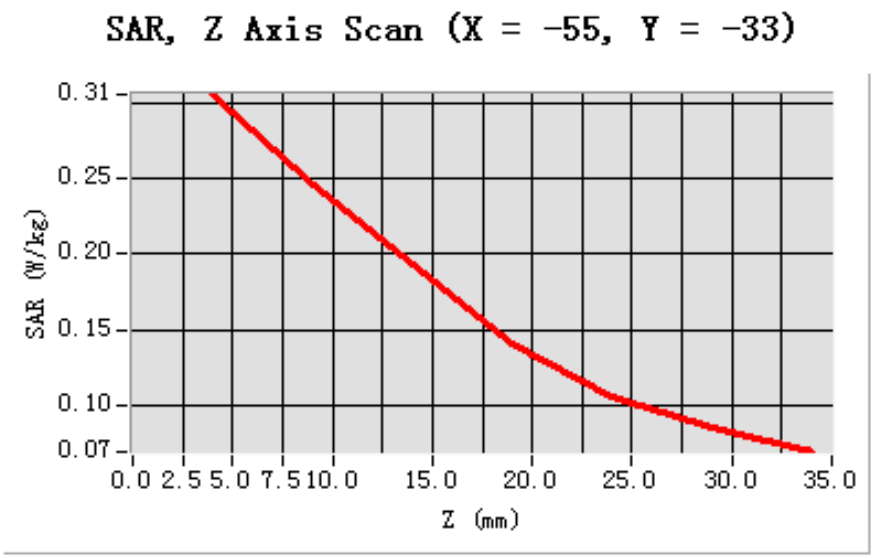
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

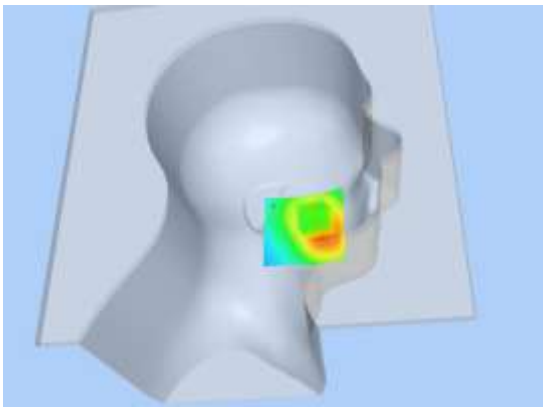
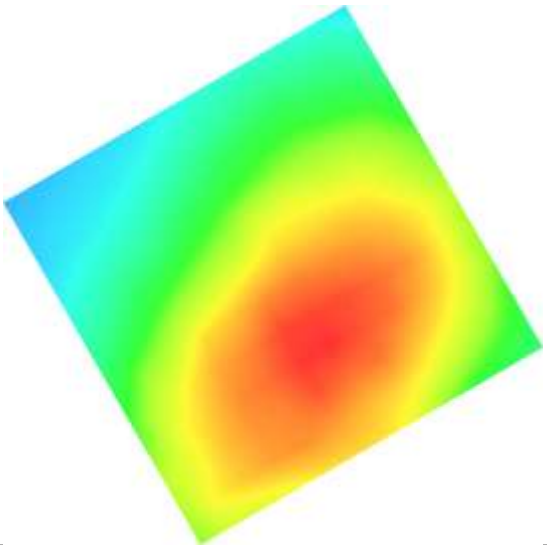
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-55.00, Y=-33.00

SAR 10g (W/Kg)	0.222152
SAR 1g (W/Kg)	0.303775

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3061	0.2458	0.1935	0.1412	0.1054	0.0853



3D screen shot	Hot spot position
	

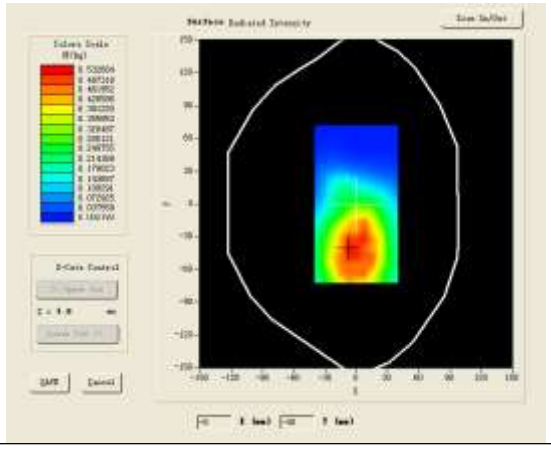
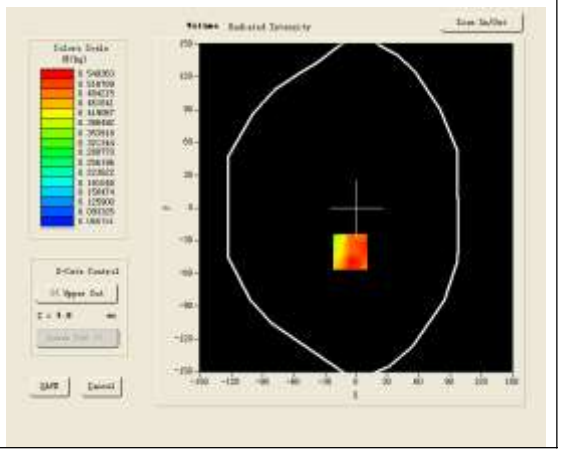
Test Laboratory: AGC Lab **Date: May 6,2015**
GSM 850 Mid- Body- Back <SIM 1>
DUT: Mobile Phone ; Type: M4GLTE

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3; Conv.F=5.33; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.96 mho/m; εr =54.67; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 21.0

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM 850 Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/GSM 850 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

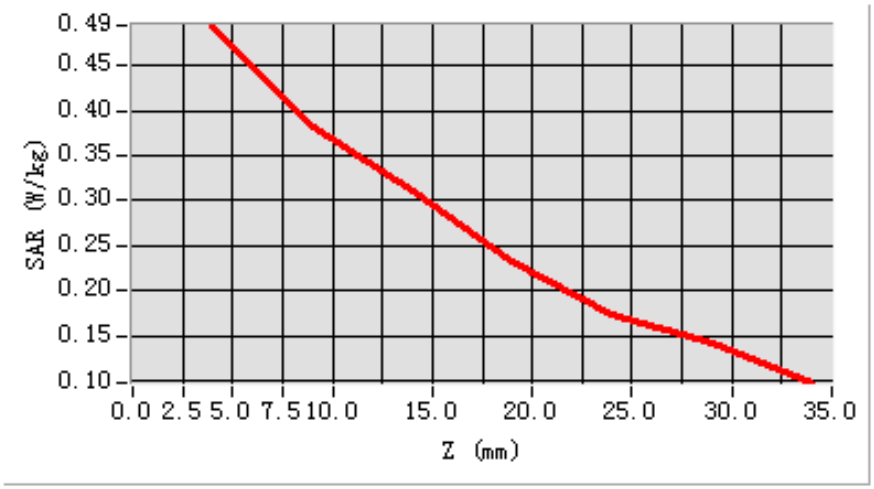
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

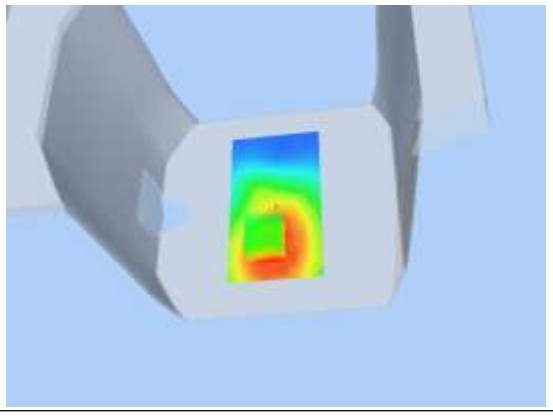
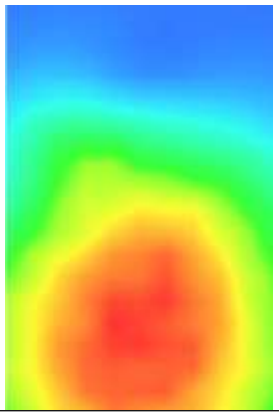
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-6.00, Y=-40.00

SAR 10g (W/Kg)	0.374474
SAR 1g (W/Kg)	0.534192

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4940	0.3826	0.3113	0.2339	0.1741	0.1428



3D screen shot	Hot spot position
	

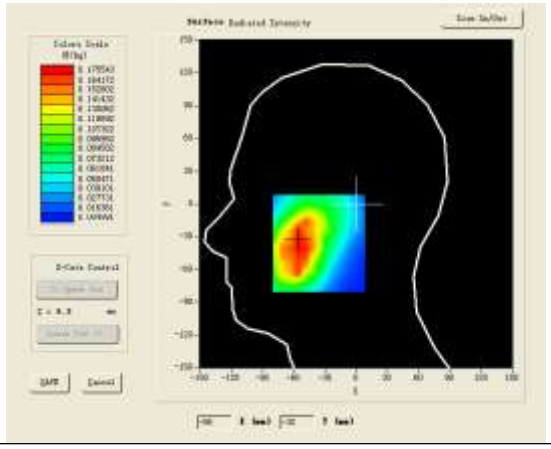
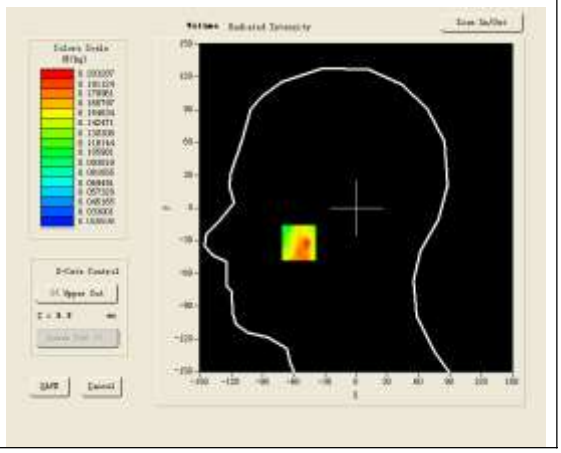
Test Laboratory: AGC Lab **Date: May 6,2015**
GPRS 850 Mid- Touch-Right (4up) <SIM 1>
DUT: Mobile Phone ; Type: M4GLTE

Communication System: GPRS-4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:2.1; Conv.F=5.03; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.90mho/m; εr = 41.70; ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ GPRS 850 Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ GPRS 850 Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

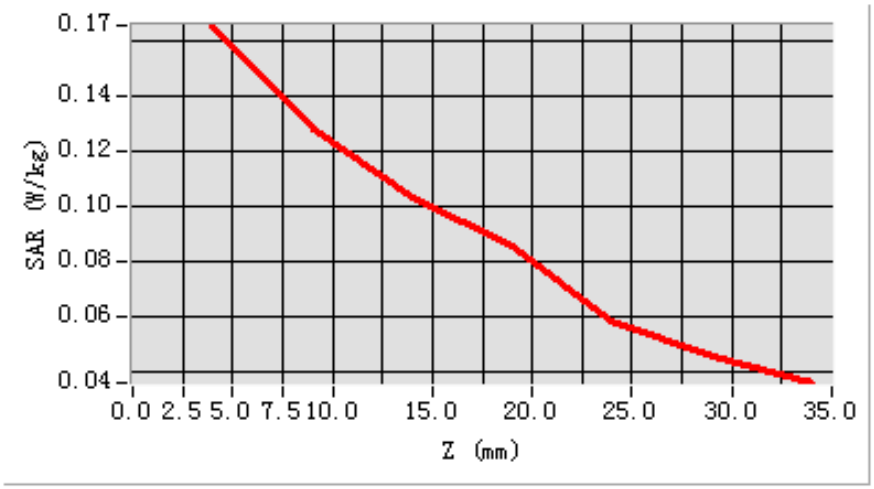
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 2.0)

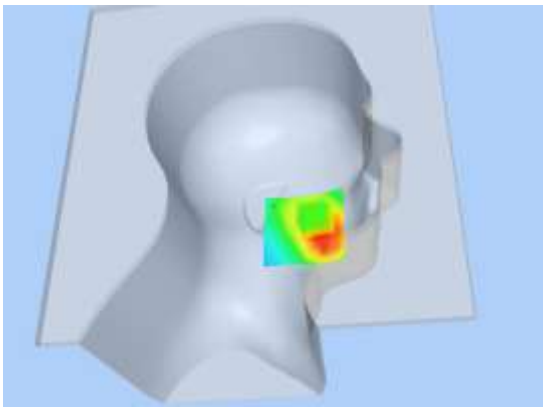
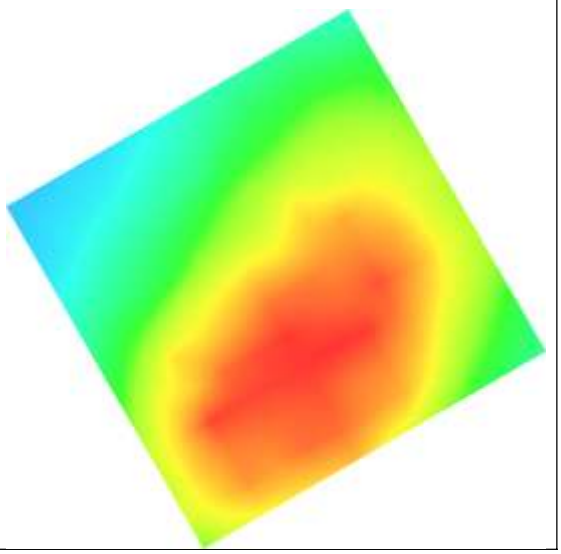
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-55.00, Y=-32.00

SAR 10g (W/Kg)	0.122062
SAR 1g (W/Kg)	0.187215

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1654	0.1279	0.1028	0.0855	0.0585	0.0454



3D screen shot	Hot spot position
	

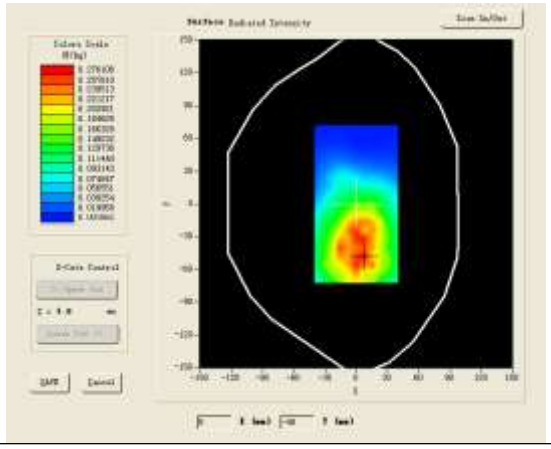
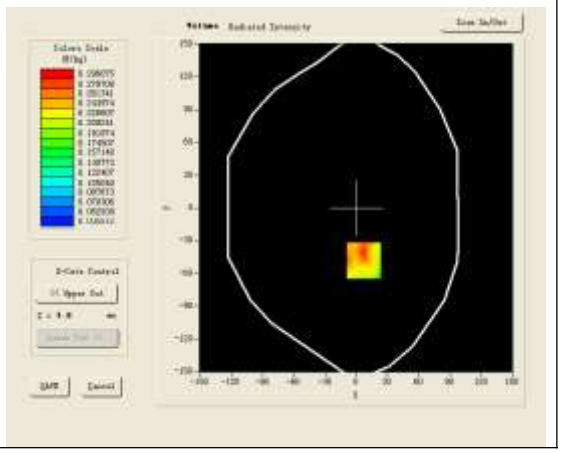
Test Laboratory: AGC Lab **Date: May 6,2015**
GPRS 850 Mid- Body- Back (4up) <SIM 1>
DUT: Mobile Phone ; Type: M4GLTE

Communication System: GPRS-4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:2.1; Conv.F=5.33; Frequency: 836.6 MHz; Medium parameters used: f = 835 MHz; σ= 0.96 mho/m; εr =54.67; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 21.0

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ GPRS 850 Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ GPRS 850 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

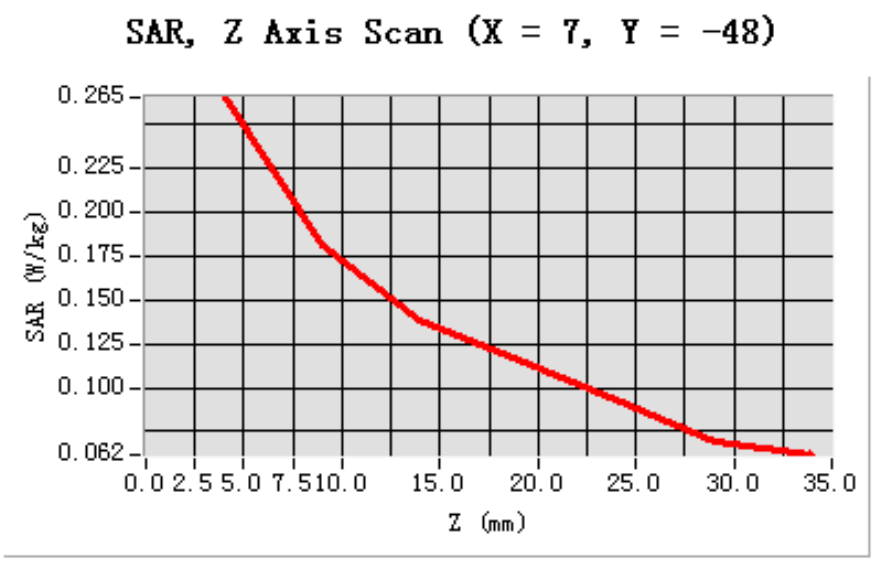
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	GSM 850
Channels	Middle
Signal	TDMA (Crest factor: 2.0)

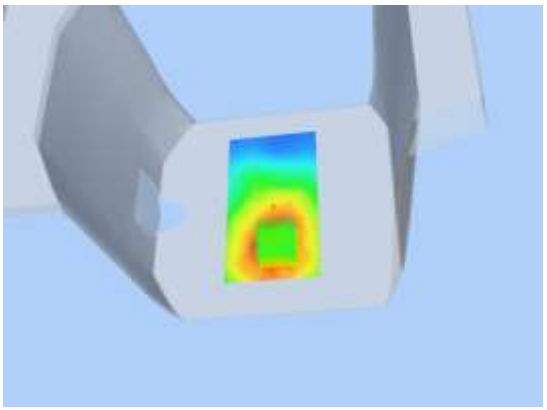
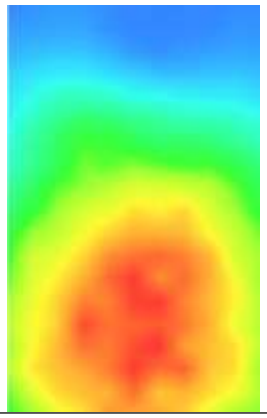
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=-48.00

SAR 10g (W/Kg)	0.188486
SAR 1g (W/Kg)	0.281243

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2650	0.1810	0.1378	0.1154	0.0926	0.0688



3D screen shot	Hot spot position
	

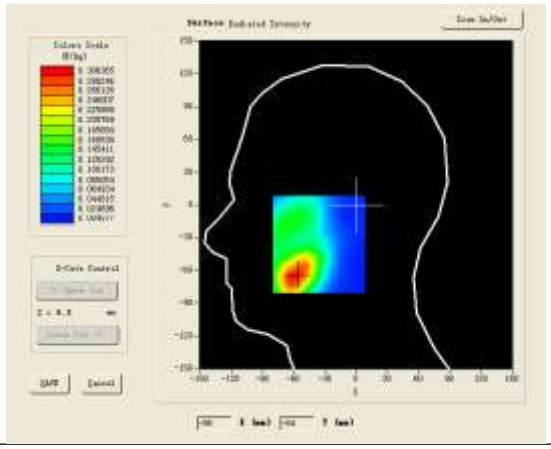
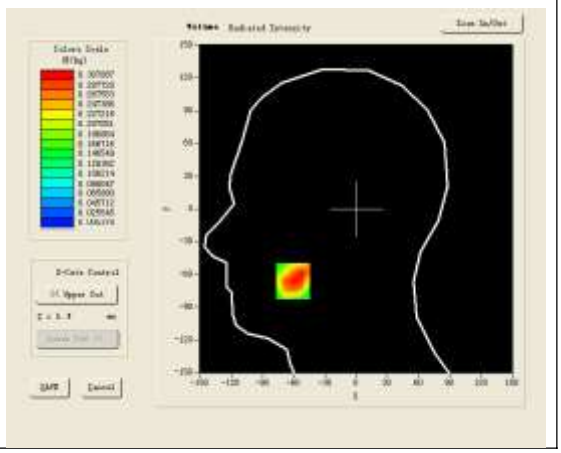
Test Laboratory: AGC Lab **Date: May 8,2015**
PCS 1900 Mid-Touch-Right <SIM 1>
DUT: Mobile Phone ; Type: M4GLTE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=4.31; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.38 mho/m; εr =40.67; ρ= 1000 kg/m³ ; Phantom section: Right Section
Ambient temperature (℃): 22.0, Liquid temperature (℃): 21.5

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/PCS1900 Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

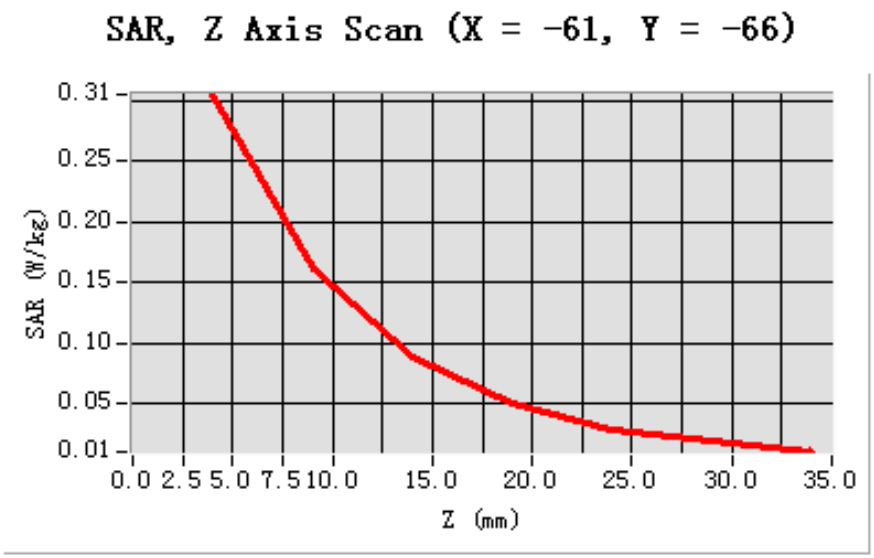
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

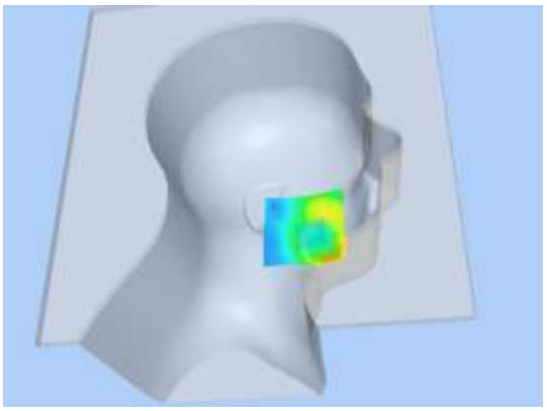
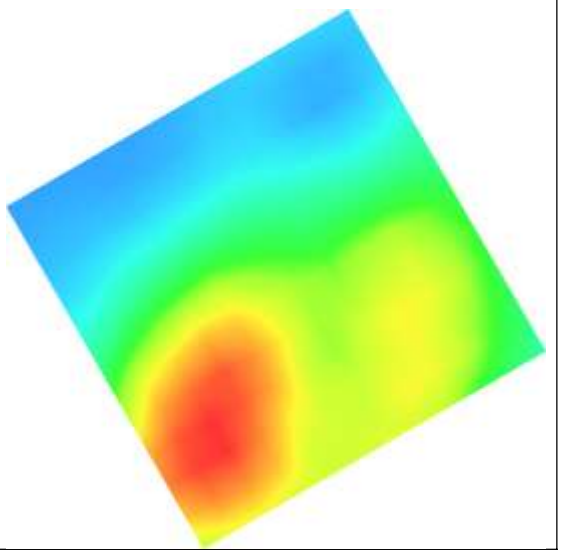
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-61.00, Y=-66.00

SAR 10g (W/Kg)	0.159965
SAR 1g (W/Kg)	0.301531

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3050	0.1611	0.0893	0.0512	0.0284	0.0192



3D screen shot	Hot spot position
	

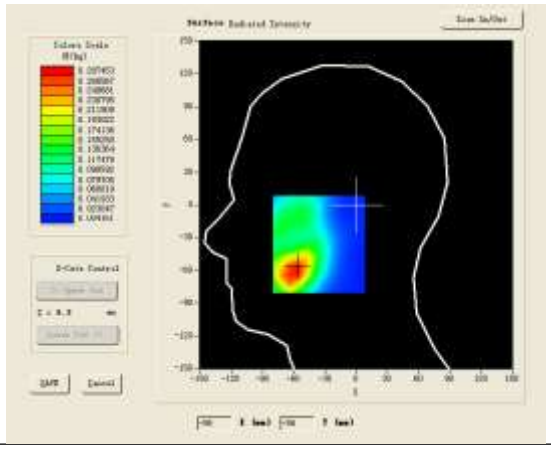
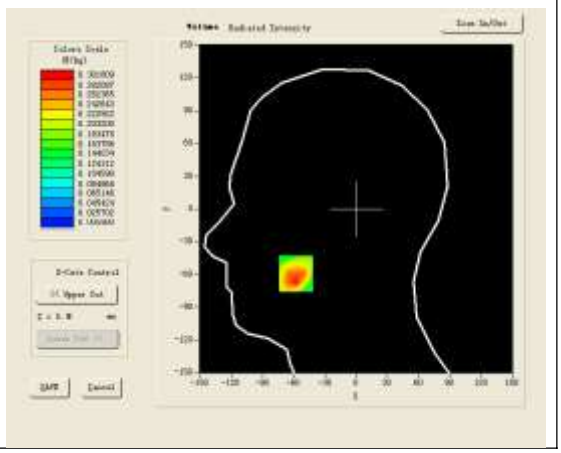
Test Laboratory: AGC Lab **Date: May 8,2015**
PCS 1900 Mid-Touch-Right <SIM 2>
DUT: Mobile Phone ; Type: M4GLTE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=4.31;
Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.38 mho/m; εr =40.67; ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃): 22.0, Liquid temperature (℃): 21.5

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/PCS1900 Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

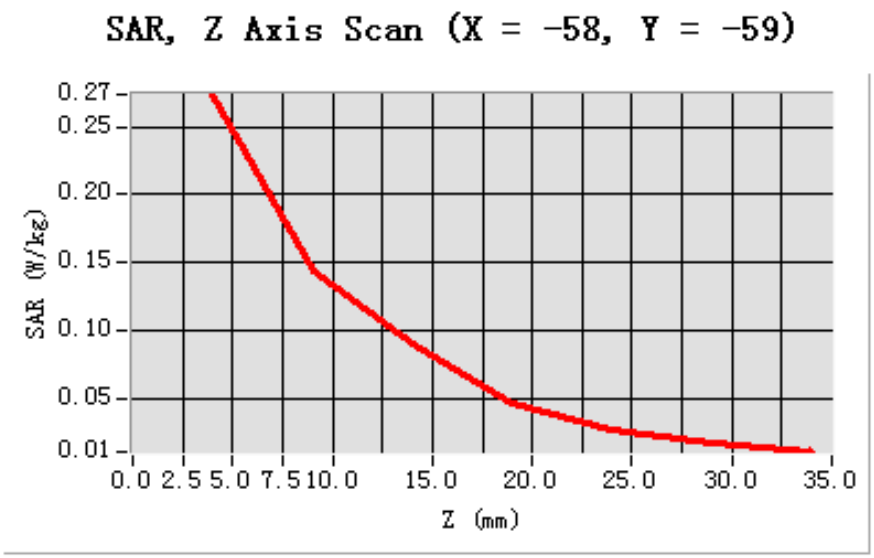
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

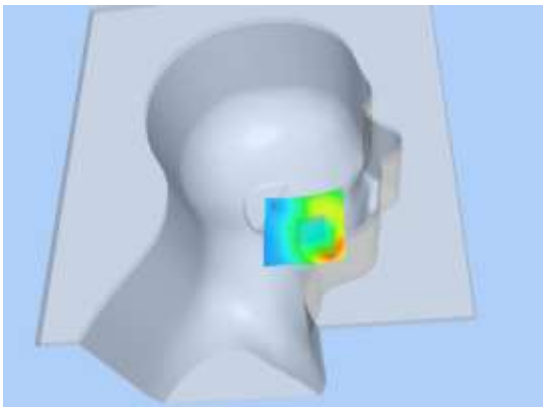
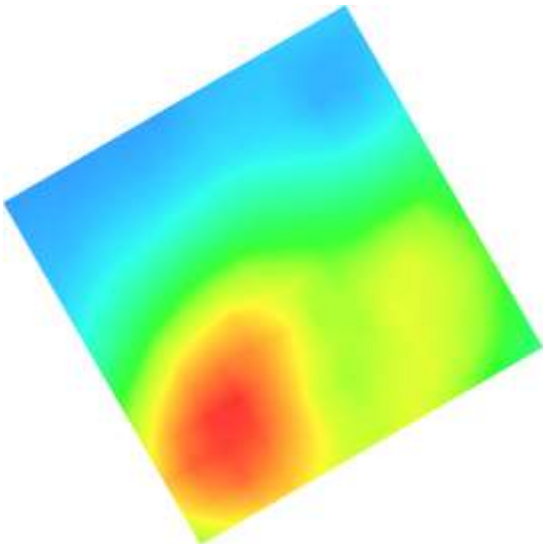
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-58.00, Y=-59.00

SAR 10g (W/Kg)	0.149656
SAR 1g (W/Kg)	0.293053

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2737	0.1432	0.0906	0.0456	0.0268	0.0170



3D screen shot	Hot spot position
	

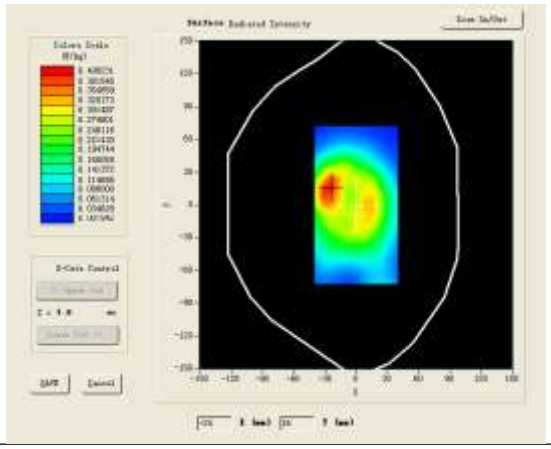
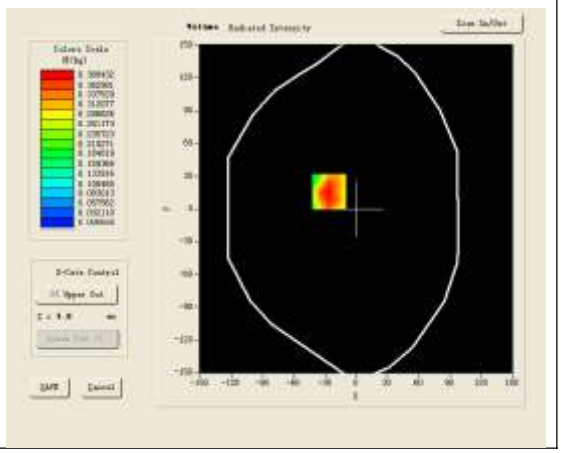
Test Laboratory: AGC Lab **Date: May 8,2015**
PCS 1900 Mid-Body-Back <SIM 1>
DUT: Mobile Phone ; Type: M4GLTE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=4.17;
Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.50 mho/m; εr =53.68; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 22.0, Liquid temperature (℃): 21.7

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/PCS1900 Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

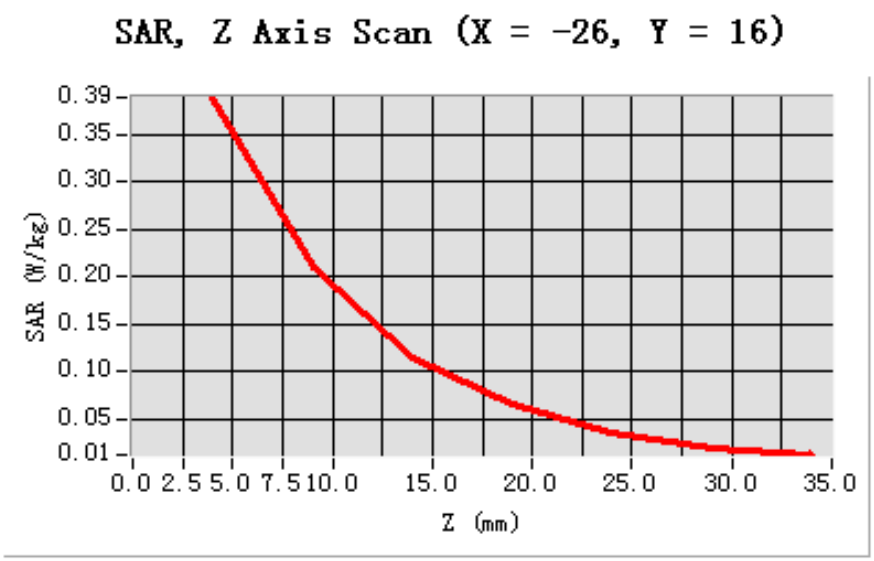
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

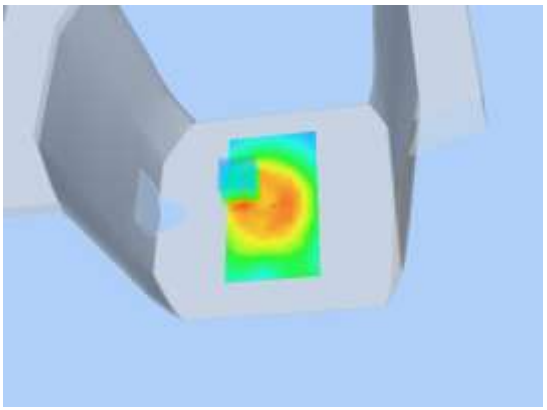
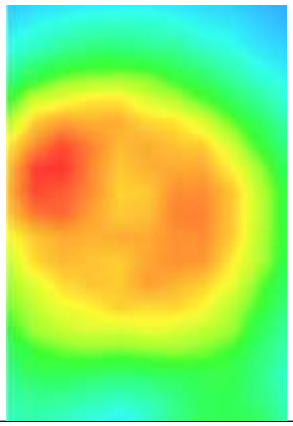
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-26.00, Y=16.00

SAR 10g (W/Kg)	0.211391
SAR 1g (W/Kg)	0.389767

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3884	0.2090	0.1129	0.0643	0.0350	0.0186



3D screen shot	Hot spot position
	

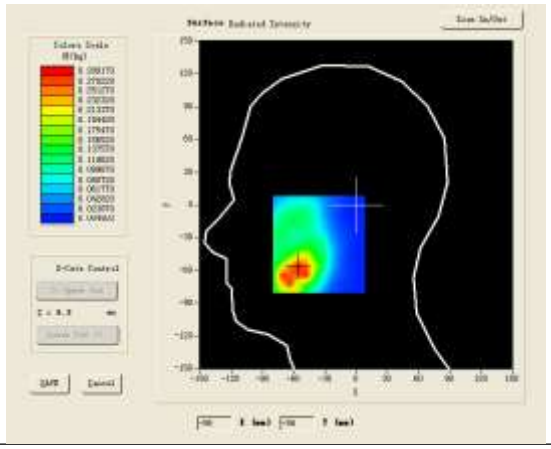
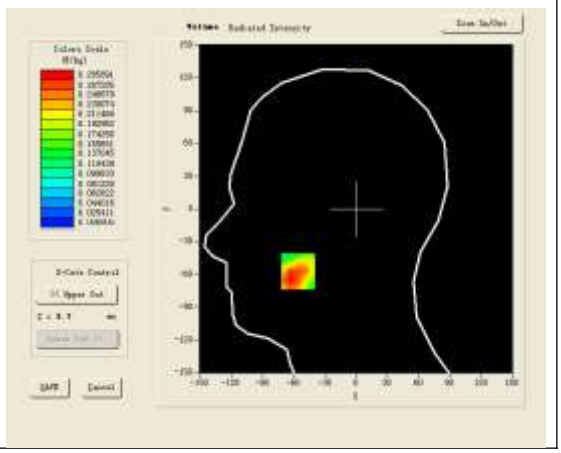
Test Laboratory: AGC Lab **Date: May 8,2015**
GPRS 1900 Mid-Touch-Right (4up) <SIM 1>
DUT: Mobile Phone ; Type: M4GLTE

Communication System: GPRS-4 Slot;; Communication System Band: PCS 1900; Duty Cycle: 1:2.1; Conv.F=4.31; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.38 mho/m; εr =40.67; ρ= 1000 kg/m³ ; Phantom section: Right Section
Ambient temperature (℃): 22.0, Liquid temperature (℃): 21.5

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ GPRS 1900 Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ GPRS 1900 Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

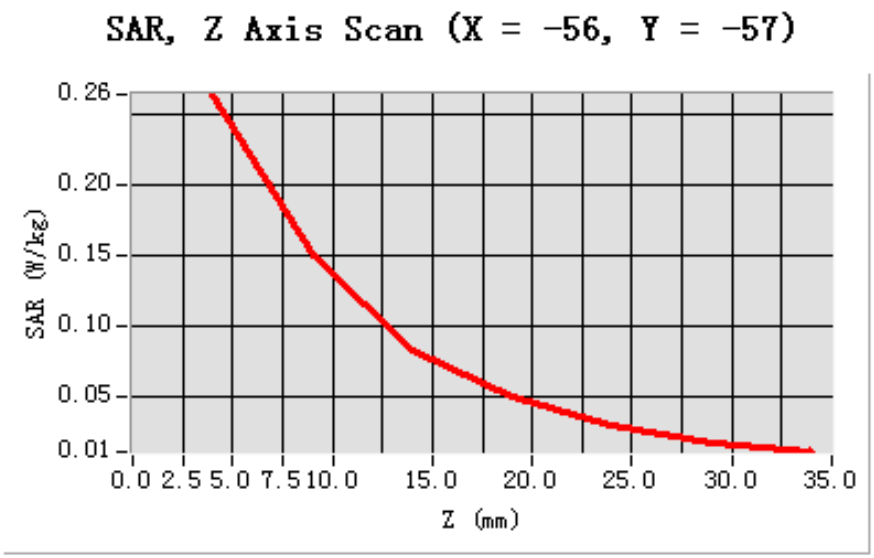
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 2.0)

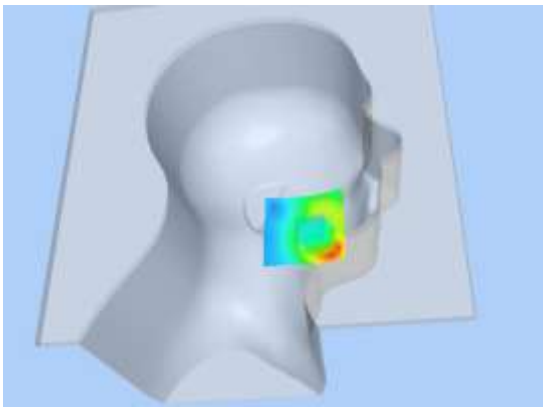
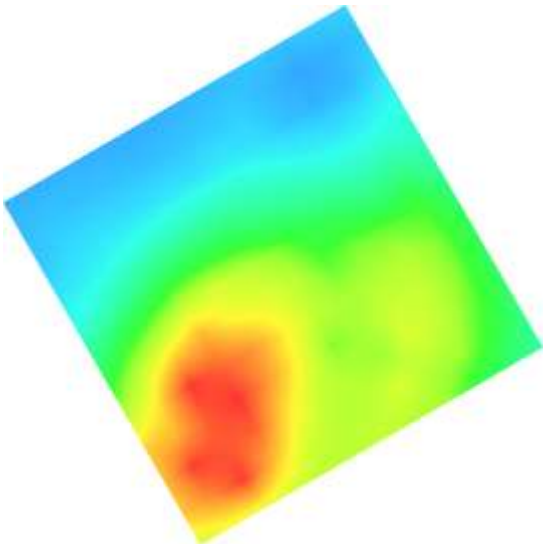
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=-56.00, Y=-57.00

SAR 10g (W/Kg)	0.152143
SAR 1g (W/Kg)	0.273452

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2645	0.1505	0.0841	0.0511	0.0310	0.0179



3D screen shot	Hot spot position
	

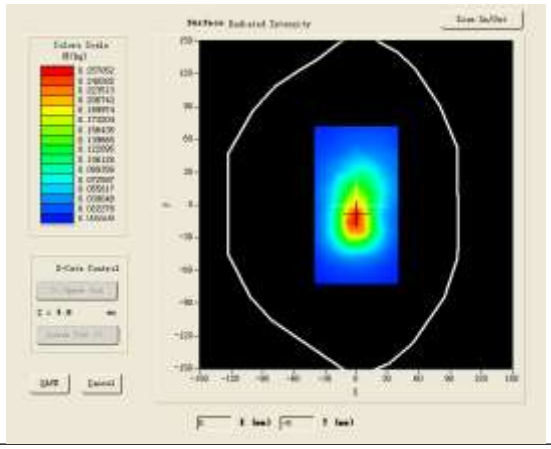
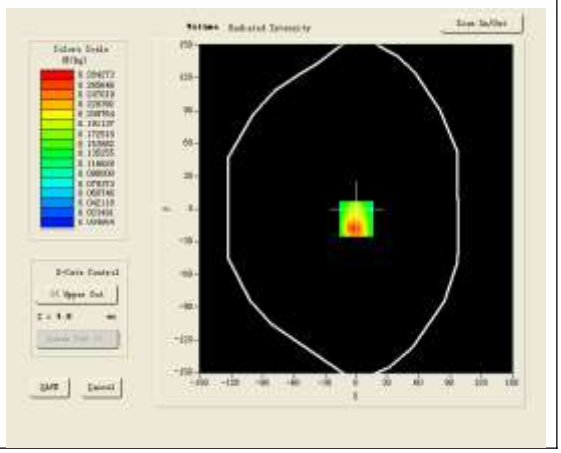
Test Laboratory: AGC Lab **Date: May 8,2015**
GPRS 1900 Mid Edge 3 (4up) <SIM 1>
DUT: Mobile Phone ; Type: M4GLTE

Communication System: GPRS-4 Slot;; Communication System Band: PCS 1900; Duty Cycle: 1:2.1; Conv.F=4.17; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.50 mho/m; εr =53.68; ρ= 1000 kg/m^3 ; Phantom section: Flat Section
Ambient temperature (℃): 22.0, Liquid temperature (℃): 21.7

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ GPRS 1900 Mid- Edge 3/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ GPRS 1900 Mid- Edge 3/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

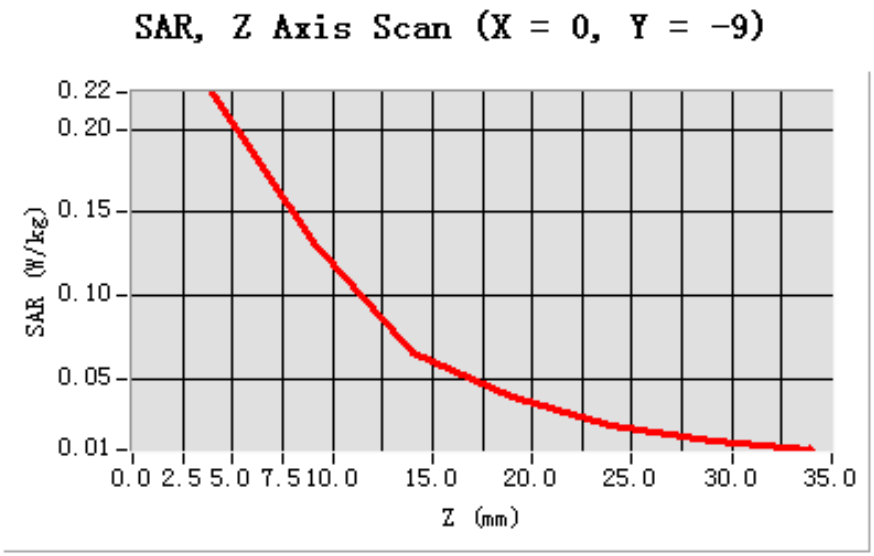
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Edge 3
Band	PCS 1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

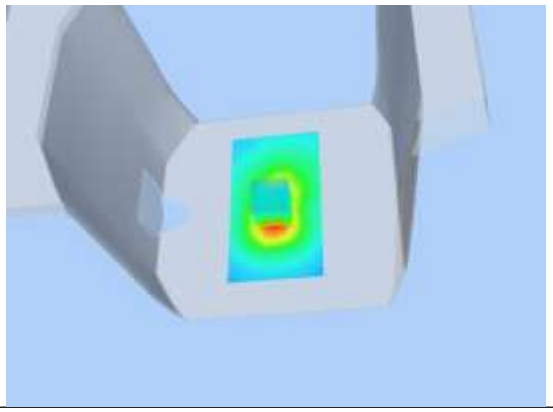
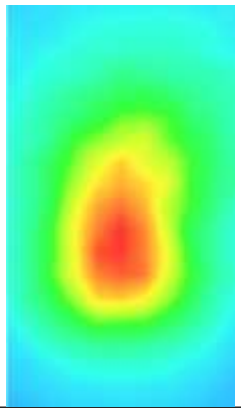
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-9.00

SAR 10g (W/Kg)	0.135374
SAR 1g (W/Kg)	0.274521

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2219	0.1324	0.0651	0.0396	0.0218	0.0123



3D screen shot	Hot spot position
	

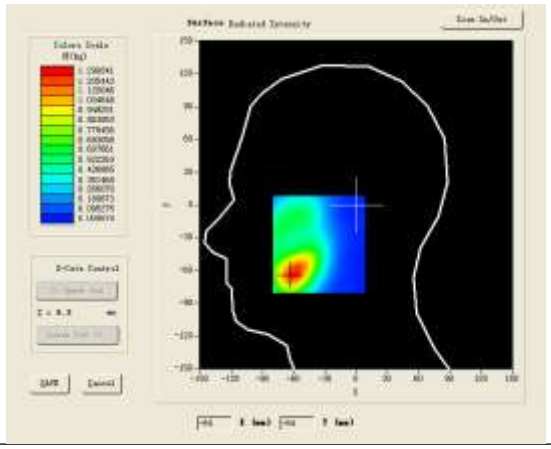
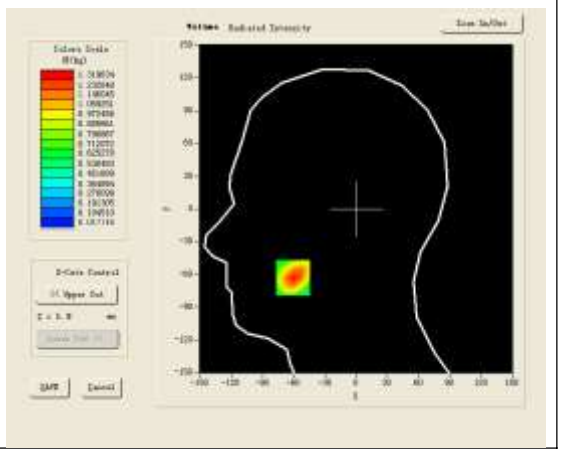
Test Laboratory: AGC Lab **Date: May 8,2015**
WCDMA Band Ⅱ Mid-Touch-Right (RMC)
DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: Band Ⅱ UTRA/FDD ;Duty Cycle:1:1; Conv.F=4.31;
Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.38 mho/m; εr =40.67; ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃): 22.0, Liquid temperature (℃): 21.5

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/WCDMA band Ⅱ Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/WCDMA band Ⅱ Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

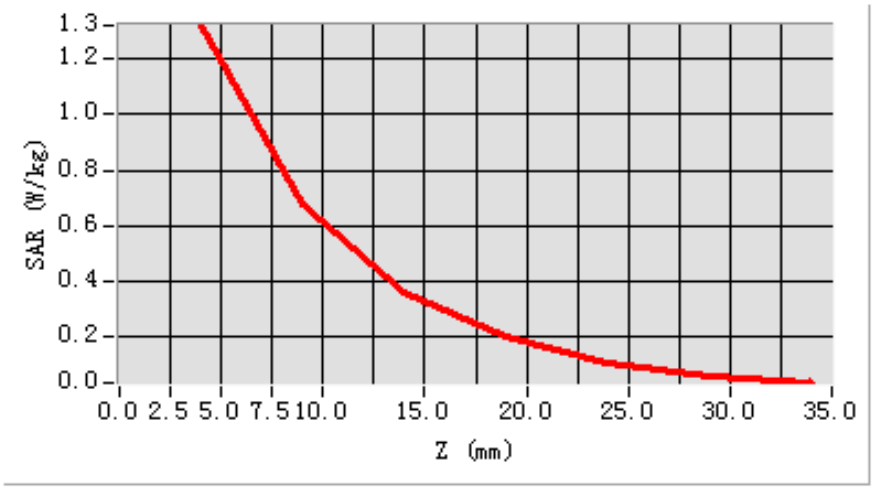
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	WCDMA band Ⅱ
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

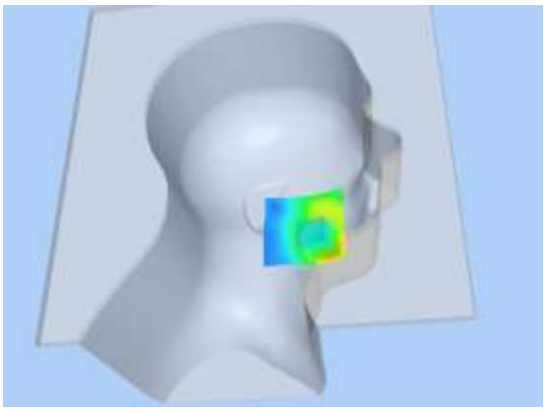
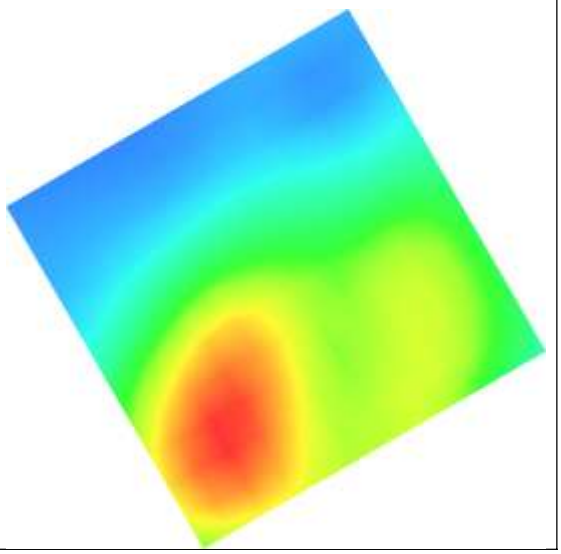
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-61.00, Y=-63.00

SAR 10g (W/Kg)	0.660246
SAR 1g (W/Kg)	1.266595

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3196	0.6787	0.3626	0.2029	0.1108	0.0637



3D screen shot	Hot spot position
	

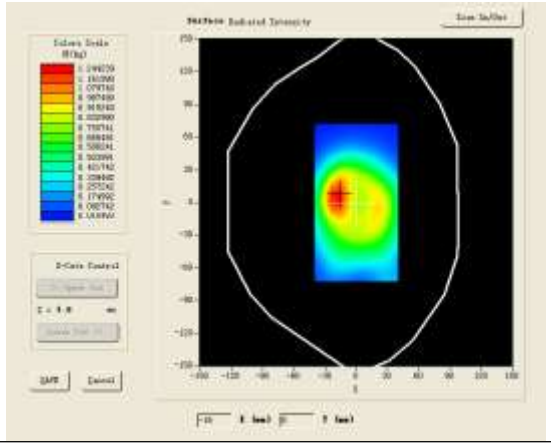
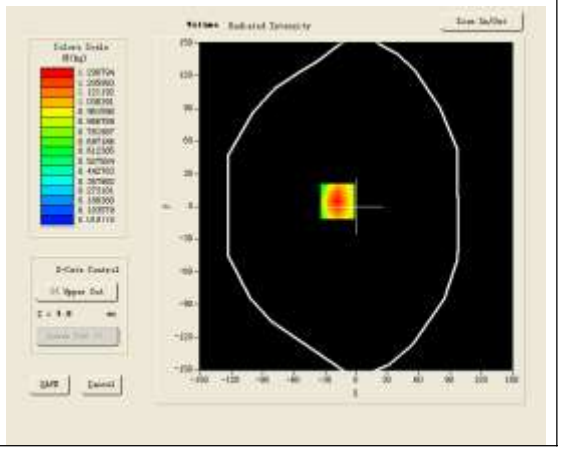
Test Laboratory: AGC Lab **Date: May 8,2015**
WCDMA Band Ⅱ High-Body-Towards Grounds (RMC 12.2kbps)
DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: Band Ⅱ UTRA/FDD ;Duty Cycle:1:1; Conv.F=4.17; Frequency: 1907.6 MHz; Medium parameters used: f = 1900 MHz; σ=1.53 mho/m; εr =53.06; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 22.0, Liquid temperature (℃): 21.7

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA band Ⅱ High -Body-back/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA band Ⅱ High -Body-back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

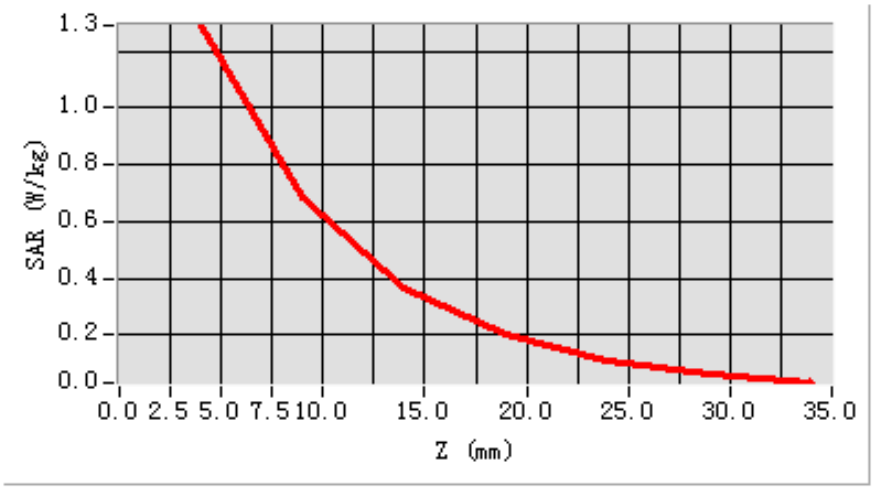
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	WCDMA band Ⅱ
Channels	High
Signal	CDMA (Crest factor: 1.0)

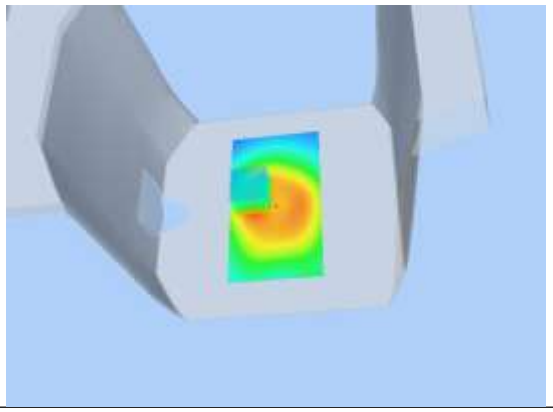
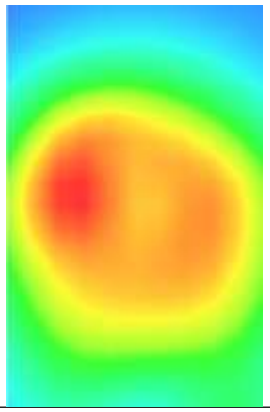
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-18.00, Y=5.00

SAR 10g (W/Kg)	0.661694
SAR 1g (W/Kg)	1.232516

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.2908	0.6848	0.3693	0.2009	0.1099	0.0604



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 6,2015**

WCDMA Band Ⅴ Mid-Tilt-Right (RMC)

DUT: Mobile Phone ; Type: M4GLTE

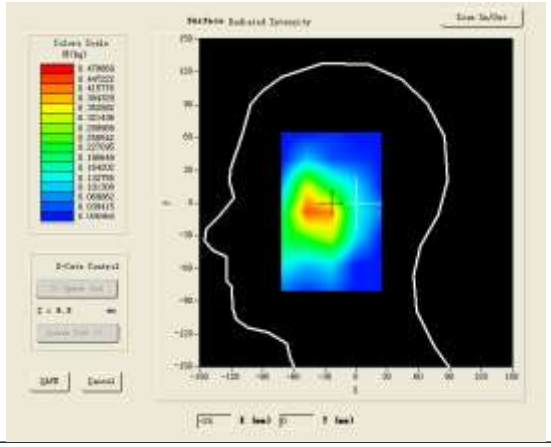
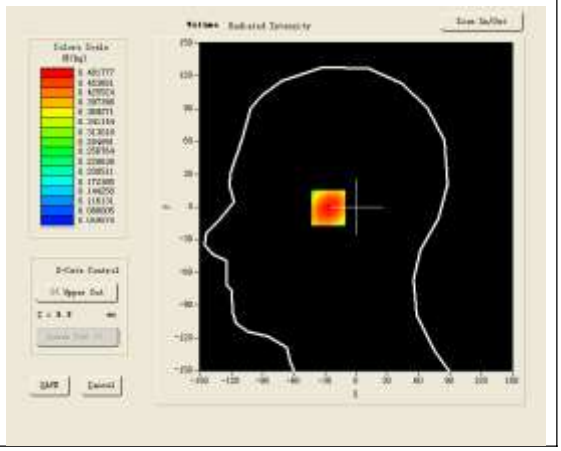
Communication System: UMTS; Communication System Band: BAND Ⅴ UTRA/FDD ; Duty Cycle:1: 1; Conv.F=5.03; Frequency: 836.6 MHz; Medium parameters used: f = 835MHz; σ=0.90 mho/m; εr =41.70; ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 20.8

SATIMO Configuration:

- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band Ⅴ Mid-Tilt-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA Band Ⅴ Mid-Tilt-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

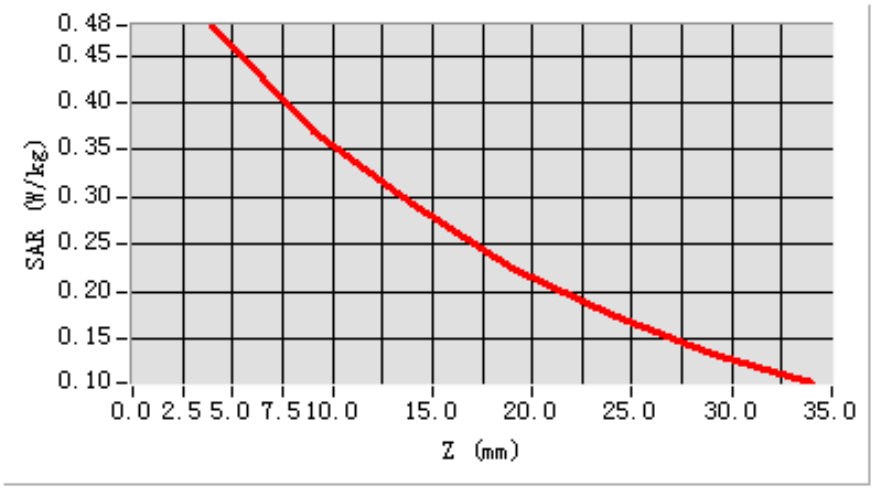
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Tilt
Band	WCDMA Band Ⅴ
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

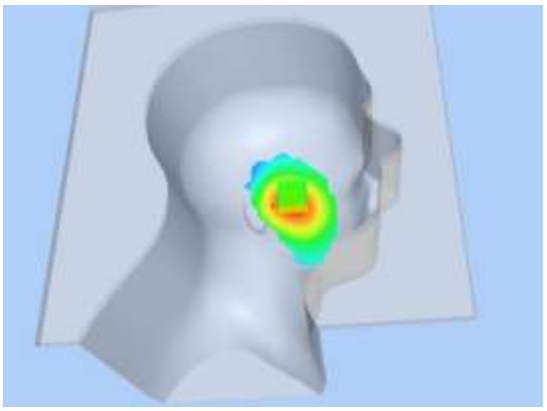
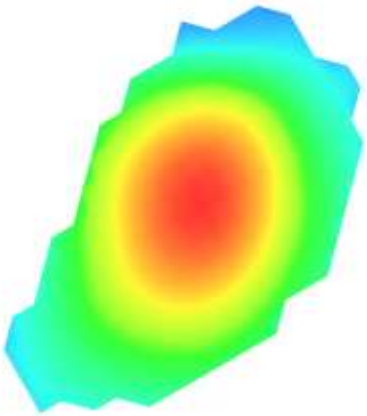
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-23.00, Y=0.00

SAR 10g (W/Kg)	0.340931
SAR 1g (W/Kg)	0.466388

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4818	0.3701	0.2931	0.2259	0.1753	0.1346



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 6,2015**

WCDMA Band Ⅴ Mid-Body-Towards Grounds (RMC)

DUT: Mobile Phone ; Type: M4GLTE

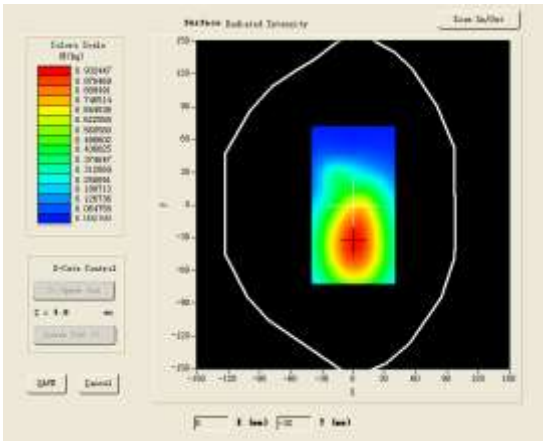
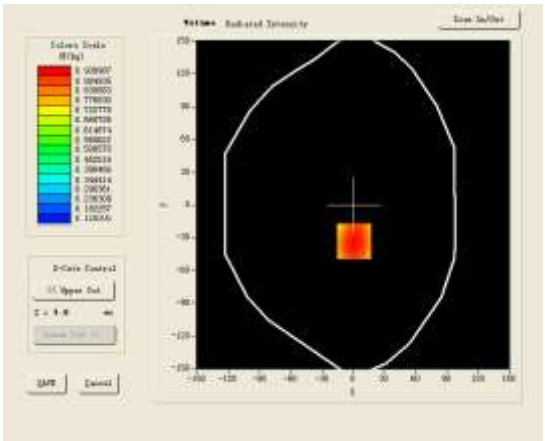
Communication System: UMTS; Communication System Band: BAND Ⅴ UTRA/FDD; Duty Cycle:1: 1; Conv.F=5.33; Frequency: 836.6 MHz; Medium parameters used: f = 835MHz; σ=0.96 mho/m; εr =54.67; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 21.0

SATIMO Configuration:

- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band Ⅴ Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA Band Ⅴ Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

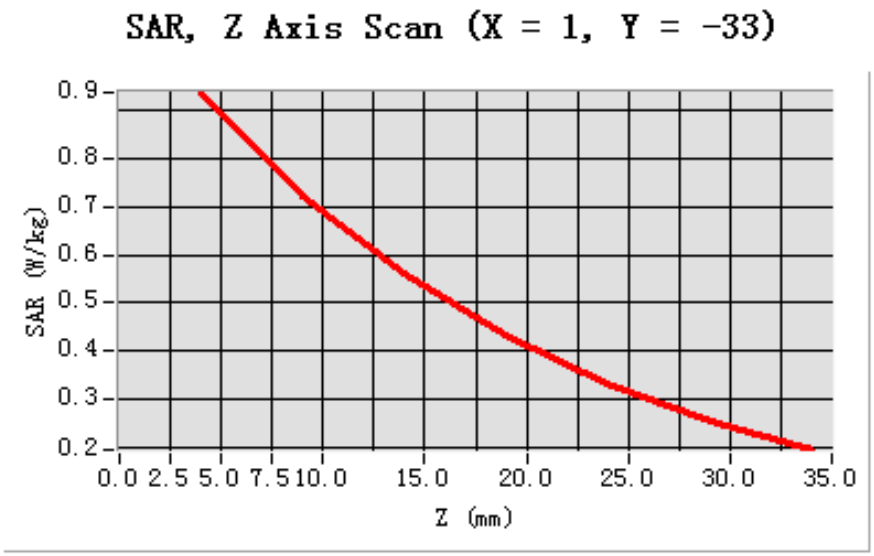
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	WCDMA Band Ⅴ
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

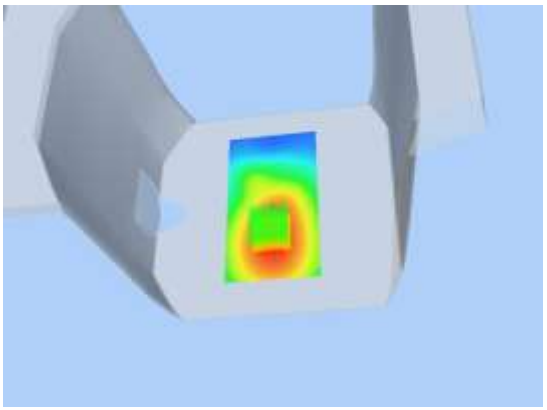
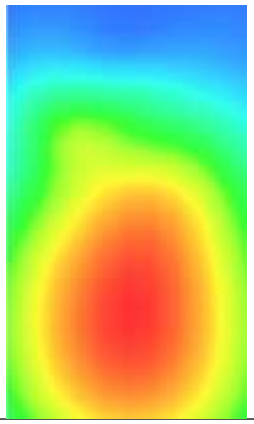
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=1.00, Y=-33.00

SAR 10g (W/Kg)	0.673136
SAR 1g (W/Kg)	0.910239

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9390	0.7243	0.5615	0.4307	0.3308	0.2539



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 10,2015**

LTE Band Ⅳ High-Touch-Right (100RB #0)

DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: LTE Band Ⅳ; Duty Cycle:1:1; Conv.F=4.35; Frequency:1745MHz; Medium parameters used: f =1750 MHz; σ= 0.90 mho/m; εr =40.57; ρ= 1000 kg/m³; Phantom section: Right Section
Ambient temperature (℃): 22.5, Liquid temperature (℃): 22.1

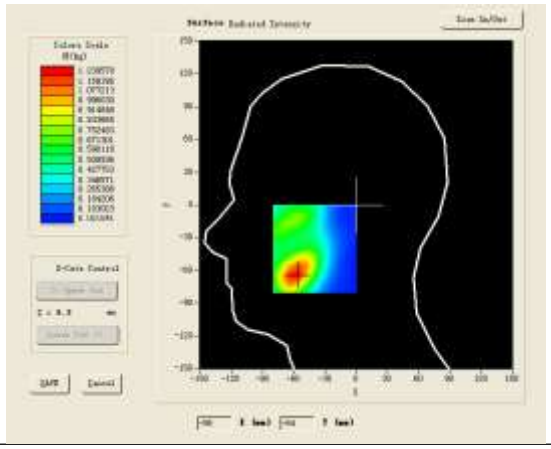
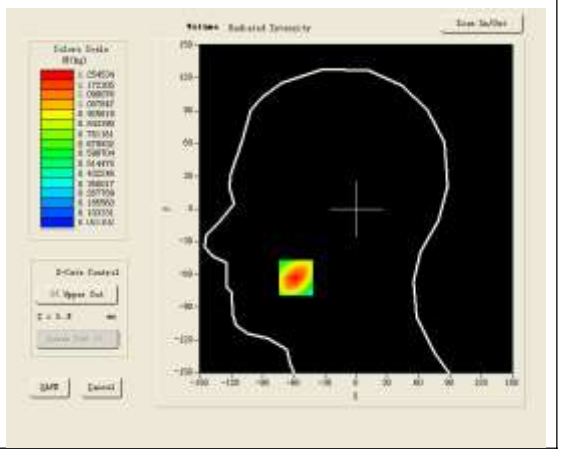
SATIMO Configuration:

- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ LTE Band ⅣHigh - Touch- Right /Area Scan: Measurement grid: dx=8mm, dy=8mm

Configuration/ LTE Band ⅣHigh - Touch- Right /Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

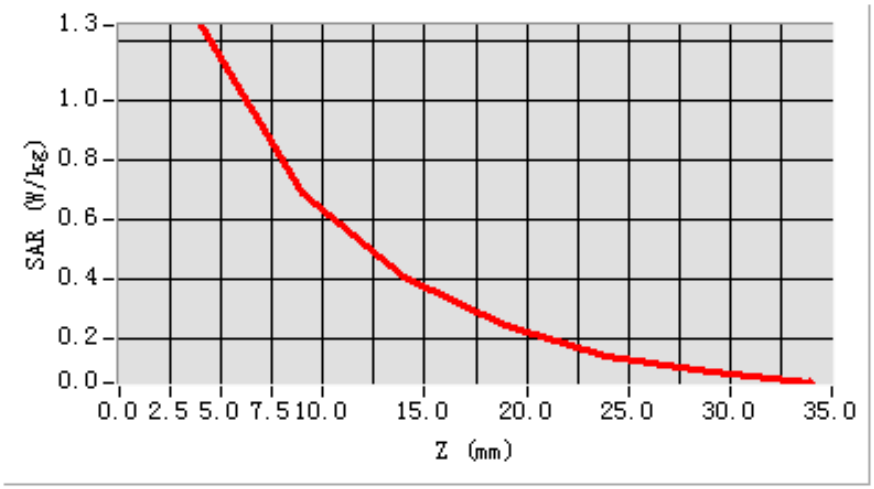
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE Band Ⅳ
Channels	High
Signal	OFDM (Crest factor: 1.0)

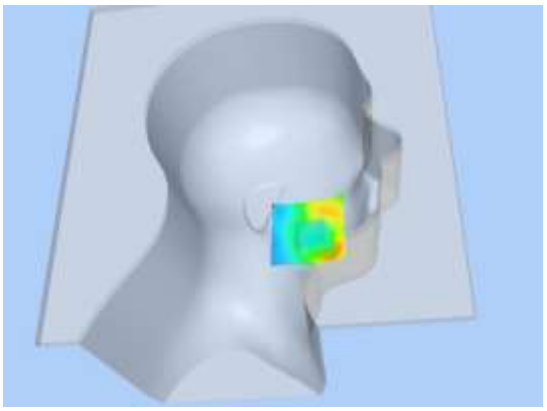
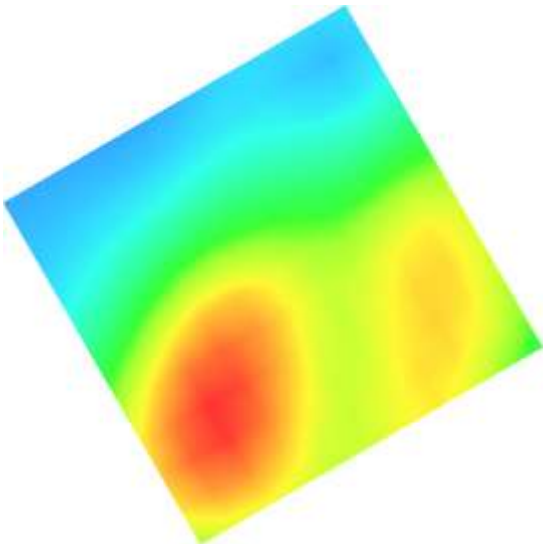
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-58.00, Y=-63.00

SAR 10g (W/Kg)	0.648746
SAR 1g (W/Kg)	1.160499

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.2545	0.6921	0.4062	0.2425	0.1420	0.0842



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab **Date: May 10,2015**

LTE Band ⅣHigh -Body-Front (1 RB #0)

DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: LTE Band Ⅳ; Duty Cycle:1:1; Conv.F=4.49; Frequency: 1745MHz; Medium parameters used: f = 1750 MHz; σ= 1.50 mho/m; εr =53.00; ρ= 1000 kg/m³ ; Phantom section: Flat Section
Ambient temperature (℃): 22.5, Liquid temperature (℃): 22.2

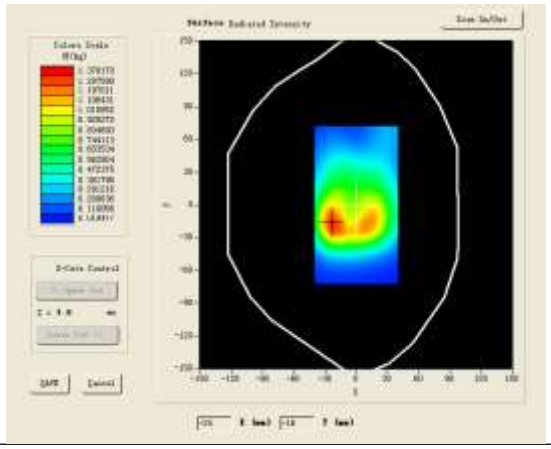
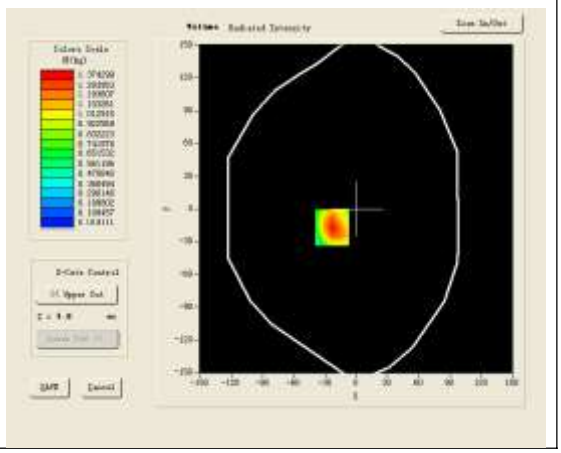
SATIMO Configuration:

- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ LTE Band ⅣHigh -Body-Front/Area Scan: Measurement grid: dx=8mm, dy=8mm

Configuration/ LTE Band ⅣHigh -Body-Front/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

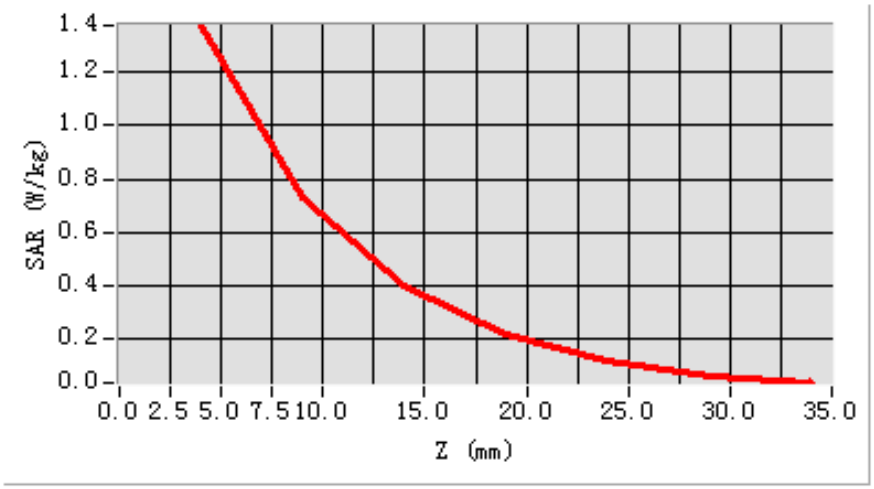
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body Front
Band	LTE Band Ⅳ
Channels	High
Signal	OFDM (Crest factor: 1.0)

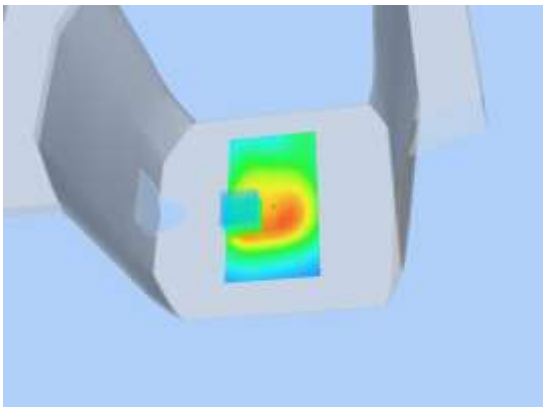
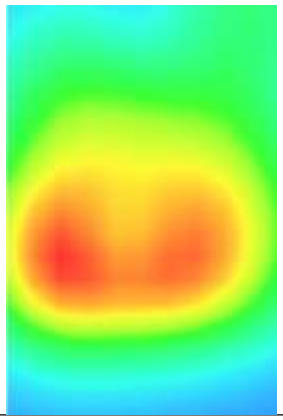
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-23.00, Y=-17.00

SAR 10g (W/Kg)	0.700024
SAR 1g (W/Kg)	1.311612

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3743	0.7327	0.3970	0.2173	0.1208	0.0668



3D screen shot	Hot spot position
	

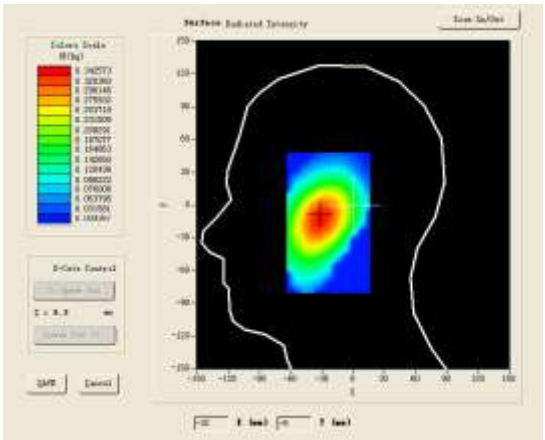
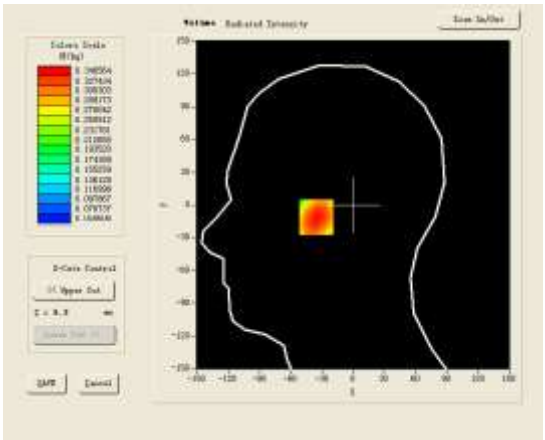
Test Laboratory: AGC Lab **Date: May 11,2015**
LTE Band XVII Mid-Tilt-Right (1 RB #0)
DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: LTE Band XVII I; Duty Cycle:1:1; Conv.F=4.31
Frequency:710MHz; Medium parameters used: f = 750 MHz; σ=0.87 mho/m; εr =41.99 ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃): 22.3, Liquid temperature (℃): 21.9

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 04/13 EP165
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ LTE Band XVII Mid-Tilt- Right /Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band XVII Mid-Tilt- Right /Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

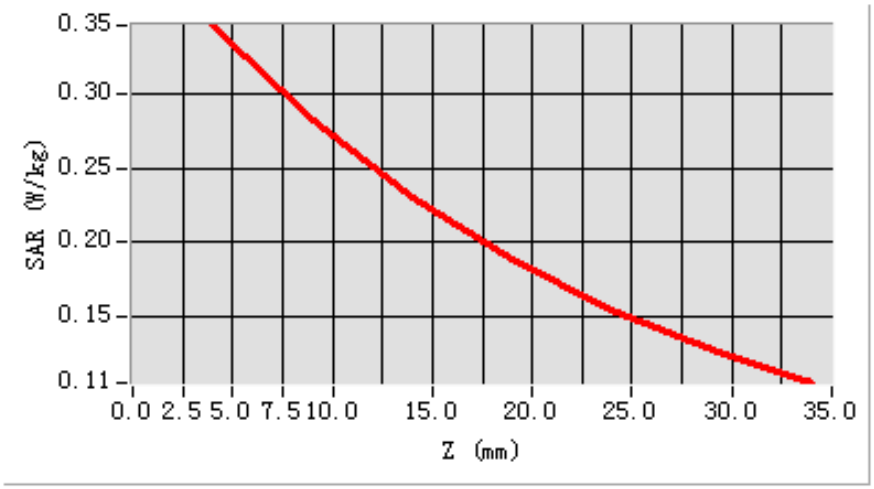
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Tilt
Band	LTE Band XVII
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

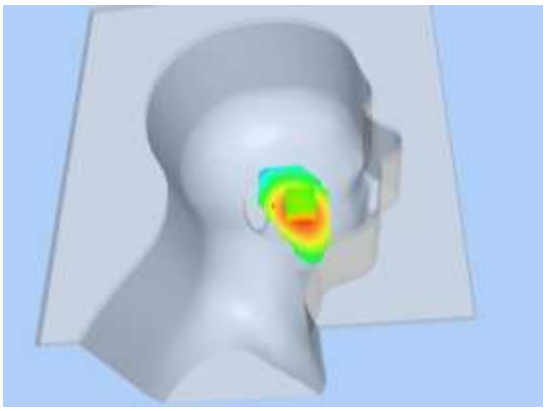
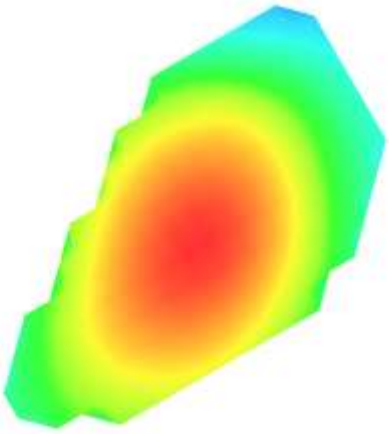
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-32.00, Y=-11.00

SAR 10g (W/Kg)	0.258129
SAR 1g (W/Kg)	0.335390

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3466	0.2832	0.2301	0.1881	0.1548	0.1280



3D screen shot	Hot spot position
	

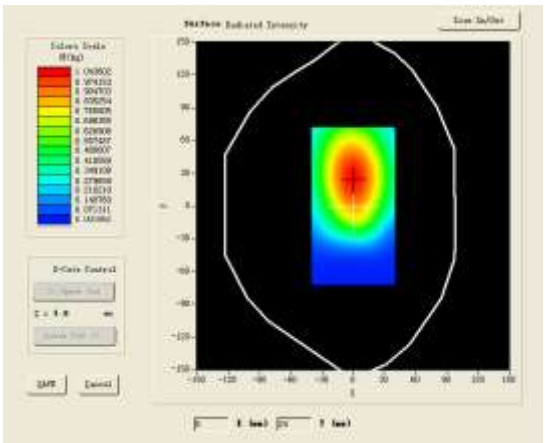
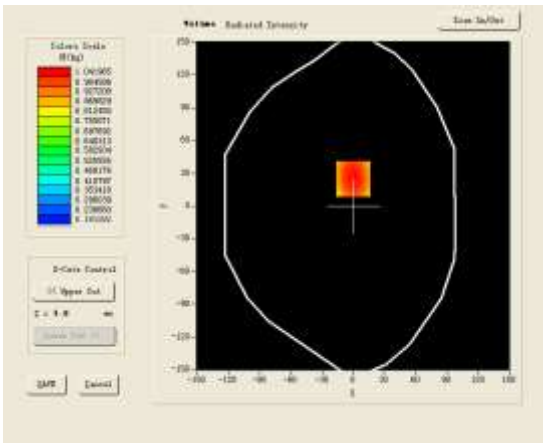
Test Laboratory: AGC Lab **Date: May 11,2015**
LTE Band XVII High-Body-Back (1 RB #0)
DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: LTE Band XVII; Duty Cycle:1:1; Conv.F=4.43;
Frequency: 711 MHz; Medium parameters used: f = 750 MHz; σ=0.97 mho/m; εr =54.18; ρ= 1000 kg/m^3 ;
Phantom section: Flat Sectio
Ambient temperature (℃): 22.3, Liquid temperature (℃): 22.1

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 04/13 EP165
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: Flat Phantom; Type: Elliptical Phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/ LTE Band XVII High -Body-back/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band XVII High -Body-back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

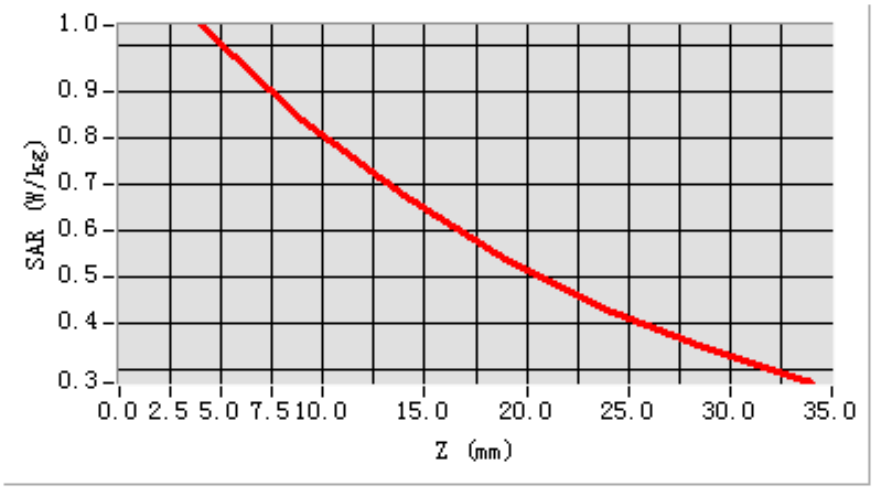
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	LTE Band XVII
Channels	High
Signal	OFDM (Crest factor: 1.0)

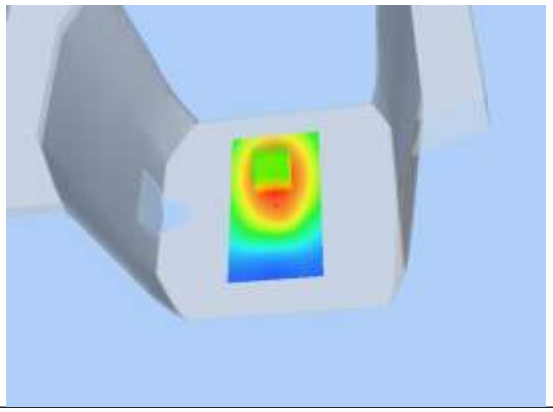
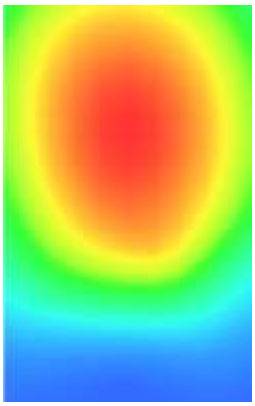
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=25.00

SAR 10g (W/Kg)	0.778892
SAR 1g (W/Kg)	1.013234

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0420	0.8364	0.6734	0.5389	0.4296	0.3413



3D screen shot	Hot spot position
	

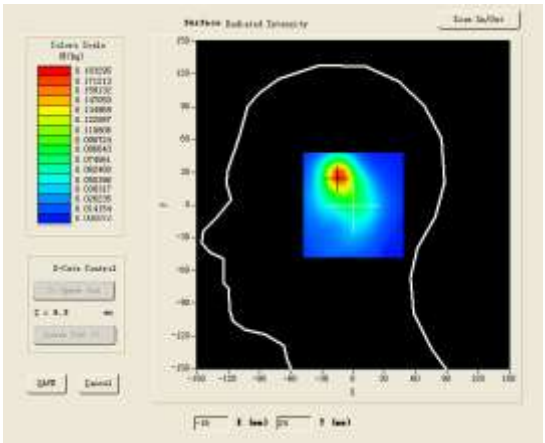
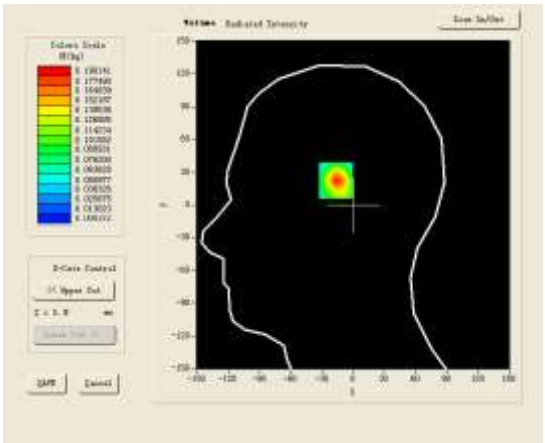
Test Laboratory: AGC Lab **Date:May 12,2015**
802.11b Mid-Touch- Right
DUT: PPNN; Type: MMNN

Communication System: Wi-Fi; Communication System Band: 802.11b; Duty Cycle: 1:1; Conv.F=4.16;
Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz; ; σ =1.80 mho/m; εr =40.00; ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃):21.7, Liquid temperature (℃): 21.5

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/802.11b Mid- Touch- Right /Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/802.11b Mid- Touch- Right /Zoom Scan: Measurement grid: dx=5mm,dy=5mm, dz=5mm

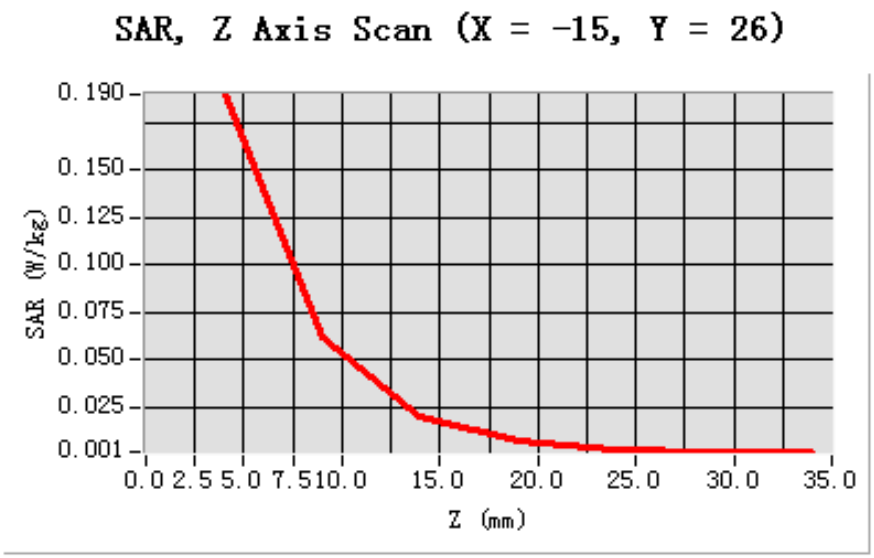
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	2450MHz
Channels	Middle
Signal	Crest factor: 1.0

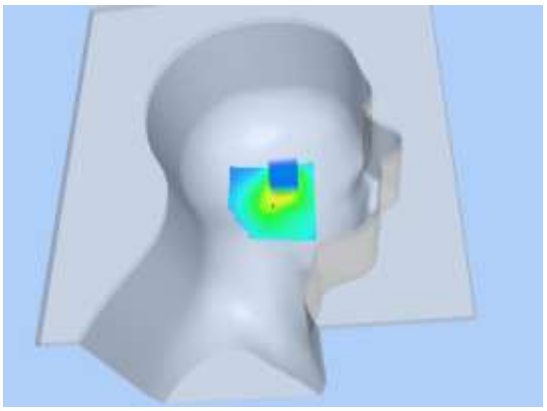
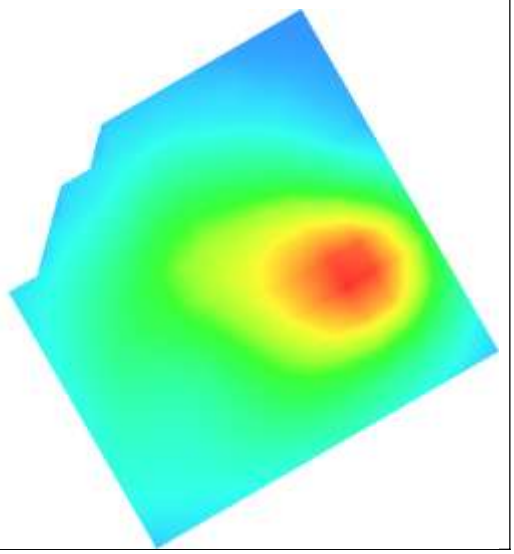
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-15.00, Y=26.00

SAR 10g (W/Kg)	0.074559
SAR 1g (W/Kg)	0.184269

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1901	0.0618	0.0199	0.0071	0.0026	0.0013



3D screen shot	Hot spot position
	

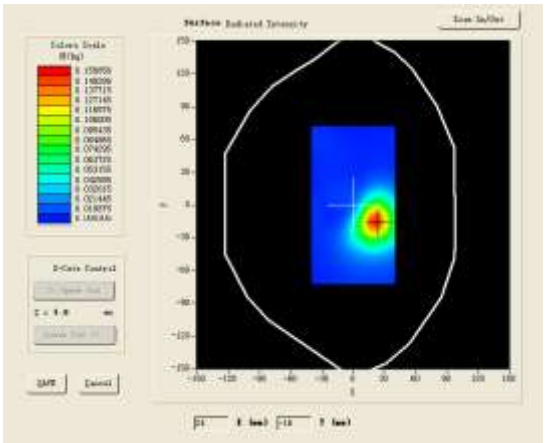
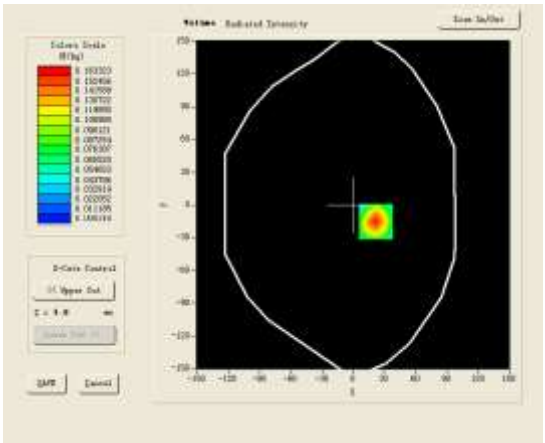
Test Laboratory: AGC Lab **Date:May 12,2015**
802.11b Mid-Body-Worn- Back (DTS)
DUT: PPNN; Type: MMNN

Communication System: Wi-Fi; Communication System Band: 802.11b; Duty Cycle: 1:1; Conv.F=4.07;
Frequency: 2437 MHz; Medium parameters used: f = 2450 MHz; σ =1.92 mho/m; εr =53.10; ρ= 1000 kg/m^3 ;
Phantom section: Flat Section
Ambient temperature (℃):21.7, Liquid temperature (℃): 21.7

SATIMO Configuration:
- Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN22/12 EP159
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM twin phantom
- Measurement SW: OpenSAR V4_02_01

Configuration/802.11b Mid- Body- Back /Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/802.11b Mid- Body- Back /Zoom Scan: Measurement grid: dx=5mm,dy=5mm, dz=5mm

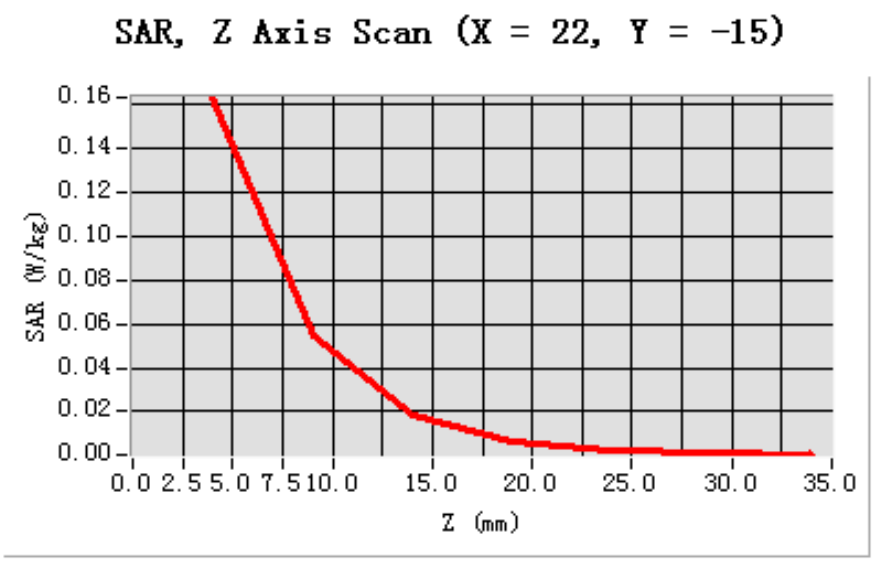
Area Scan	surf_sam_plan.txt
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	2450MHz
Channels	Middle
Signal	Crest factor: 1.0

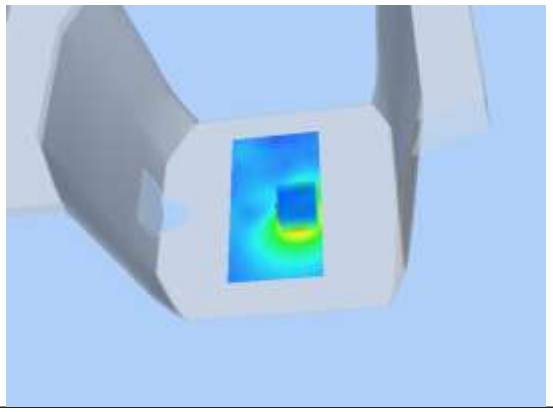
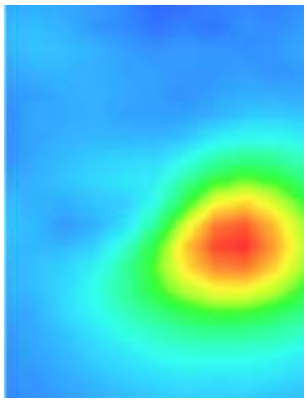
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=22.00, Y=-15.00

SAR 10g (W/Kg)	0.066500
SAR 1g (W/Kg)	0.159357

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1633	0.0549	0.0189	0.0067	0.0020	0.0009



3D screen shot	Hot spot position
	

Repeated SAR

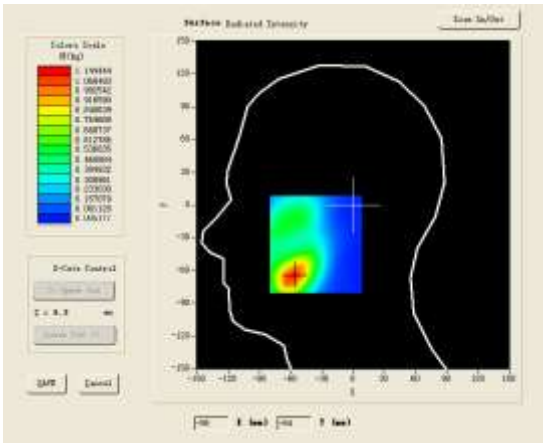
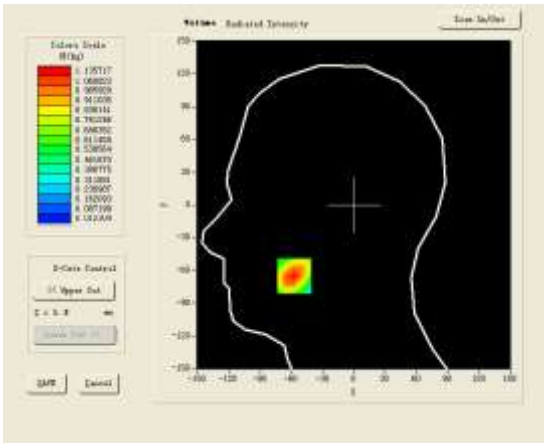
Test Laboratory: AGC Lab **Date: May 8,2015**
WCDMA Band Ⅱ Mid-Touch-Right (RMC)
DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: Band Ⅱ UTRA/FDD ;Duty Cycle:1:1; Conv.F=4.31; Frequency: 1880 MHz; Medium parameters used: f = 1900 MHz; σ= 1.38 mho/m; εr =40.67; ρ= 1000 kg/m³ ;
Phantom section: Right Section
Ambient temperature (℃): 22.0, Liquid temperature (℃): 21.5

SATIMO Configuration:
• Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
• Sensor-Surface: 4mm (Mechanical Surface Detection)
• Phantom: Flat Phantom; Type: Elliptical Phantom
• Measurement SW: OpenSAR V4_02_01

Configuration/WCDMA band Ⅱ Mid-Touch-Right/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/WCDMA band Ⅱ Mid-Touch-Right/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

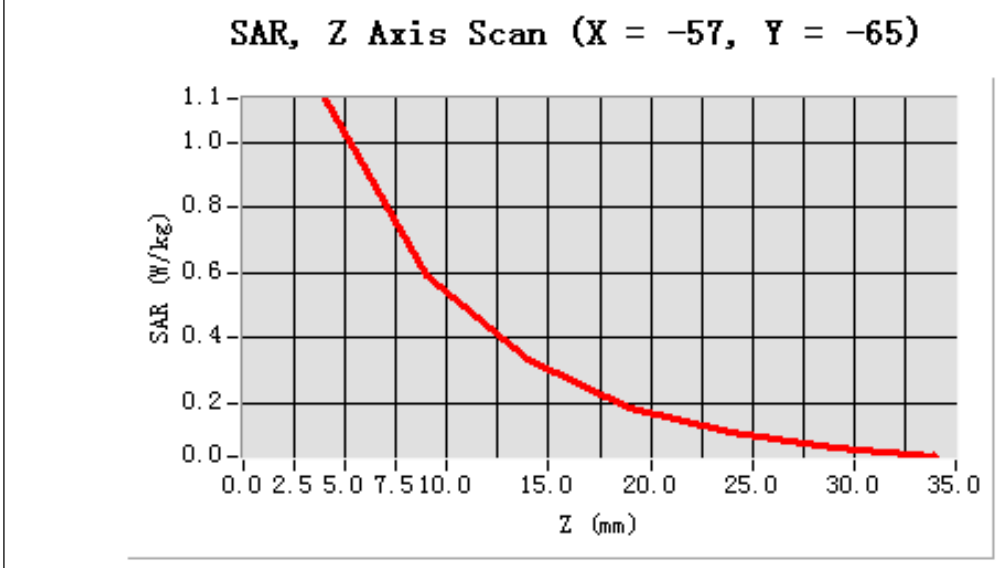
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Right head
Device Position	Cheek
Band	WCDMA band Ⅱ
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

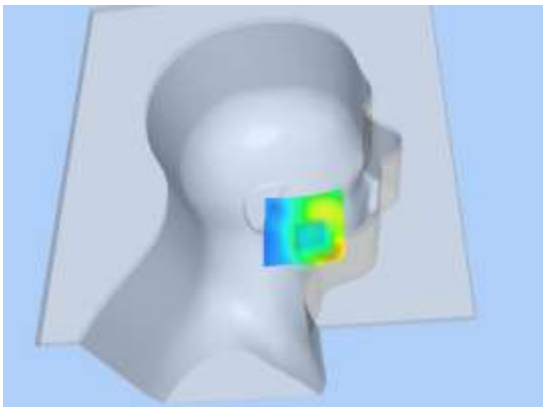
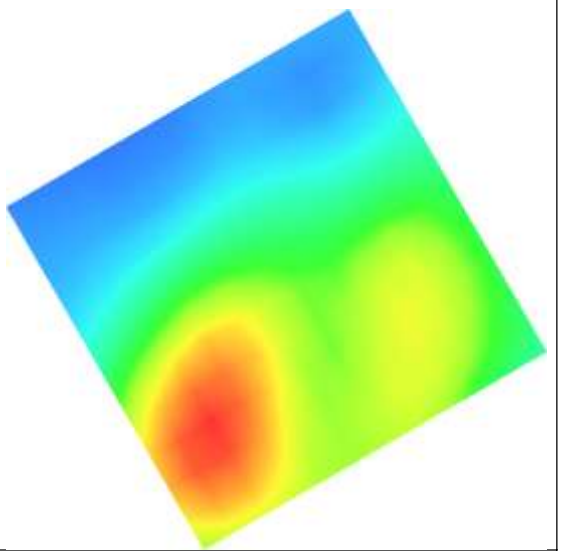
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-57.00, Y=-65.00

SAR 10g (W/Kg)	0.573201
SAR 1g (W/Kg)	1.091047

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.1347	0.5913	0.3289	0.1858	0.1065	0.0602



3D screen shot	Hot spot position
	

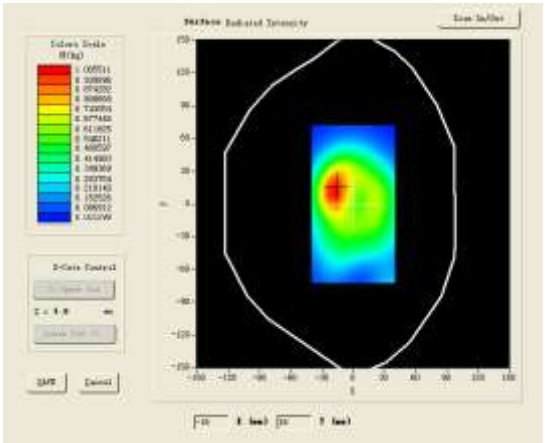
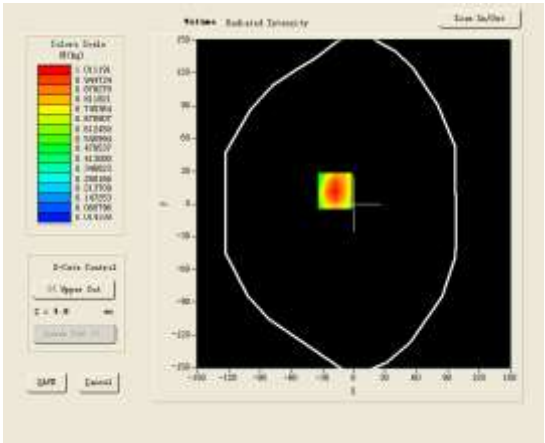
Test Laboratory: AGC Lab **Date: May 8,2015**
WCDMA Band Ⅱ High-Body-Towards Grounds (RMC 12.2kbps)
DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: Band Ⅱ UTRA/FDD ;Duty Cycle:1:1; Conv.F=4.17; Frequency: 1907.6 MHz; Medium parameters used: f = 1900 MHz; σ=1.53 mho/m; εr =53.06; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 22.0, Liquid temperature (℃): 21.7

SATIMO Configuration:
• Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
• Sensor-Surface: 4mm (Mechanical Surface Detection)
• Phantom: Flat Phantom; Type: Elliptical Phantom
• Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA band Ⅱ High -Body-back/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA band Ⅱ High -Body-back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

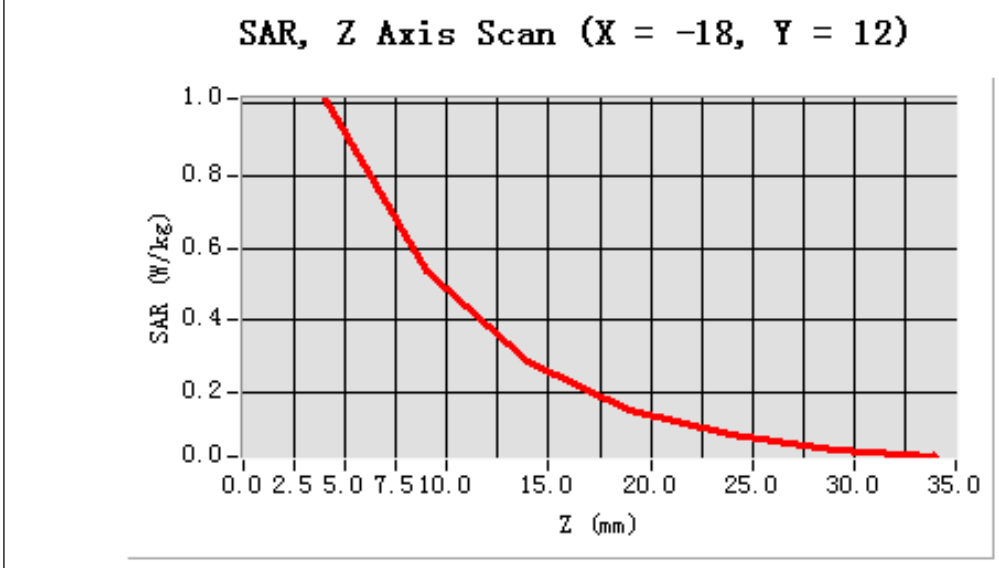
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	WCDMA band Ⅱ
Channels	High
Signal	CDMA (Crest factor: 1.0)

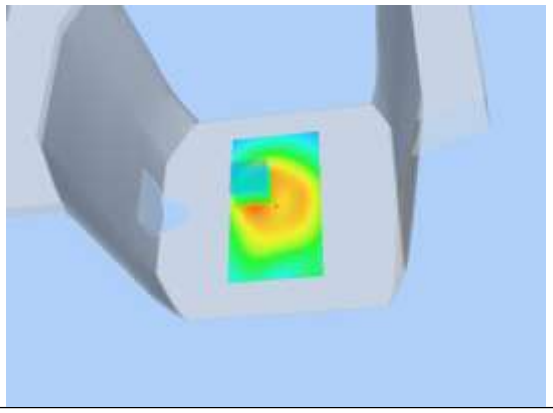
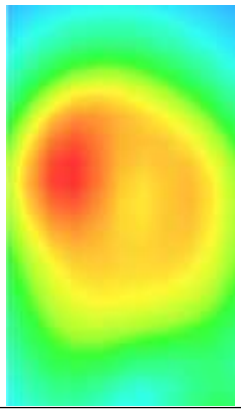
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-18.00, Y=12.00

SAR 10g (W/Kg)	0.520021
SAR 1g (W/Kg)	0.965217

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0108	0.5328	0.2888	0.1551	0.0845	0.0455



3D screen shot	Hot spot position
	

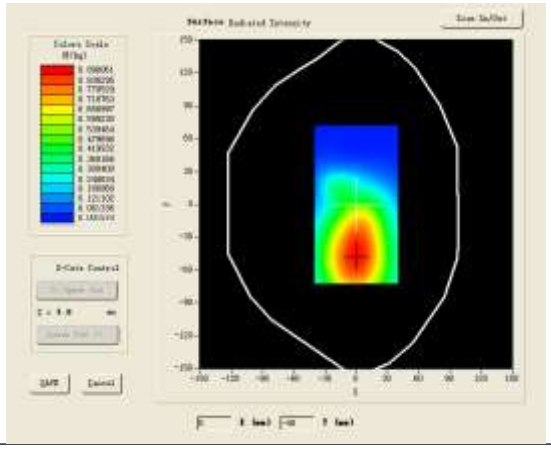
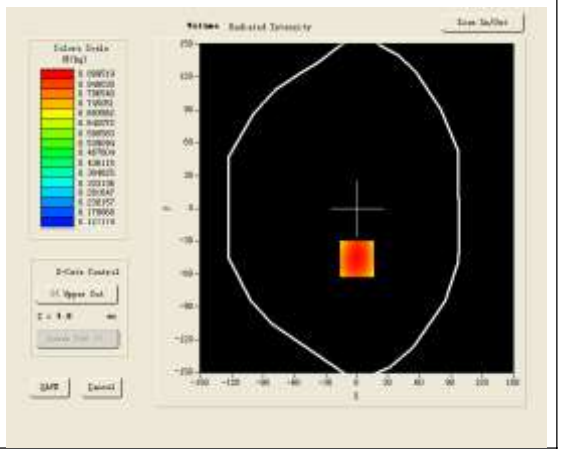
Test Laboratory: AGC Lab **Date: May 6,2015**
WCDMA Band Ⅴ Mid-Body-Towards Grounds (RMC)
DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: BAND Ⅴ UTRA/FDD; Duty Cycle:1: 1; Conv.F=5.33; Frequency: 836.6 MHz; Medium parameters used: f = 835MHz; σ=0.96 mho/m; εr =54.67; ρ= 1000 kg/m³ ;
Phantom section: Flat Section
Ambient temperature (℃): 21.2, Liquid temperature (℃): 21.0

SATIMO Configuration:
• Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 22/12 EP159
• Sensor-Surface: 4mm (Mechanical Surface Detection)
• Phantom: Flat Phantom; Type: Elliptical Phantom
• Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band Ⅴ Mid-Body-Back/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ WCDMA Band Ⅴ Mid-Body-Back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

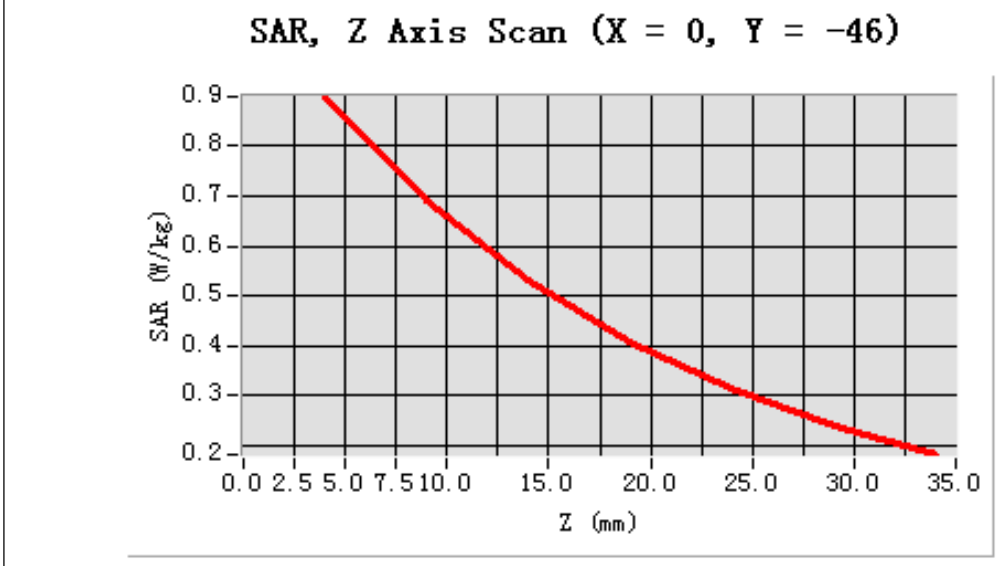
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Validation plane
Device Position	Body Back
Band	WCDMA Band Ⅴ
Channels	Middle
Signal	CDMA (Crest factor: 1.0)

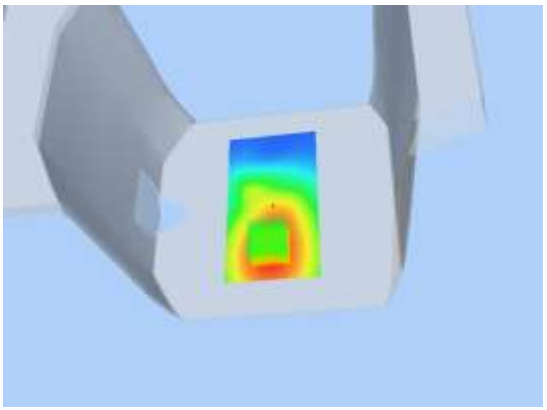
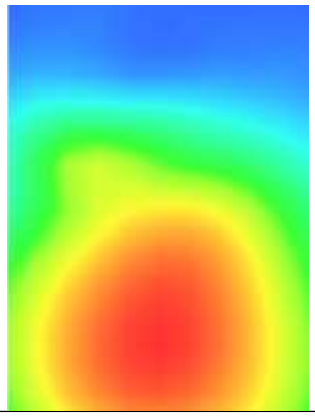
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-46.00

SAR 10g (W/Kg)	0.643571
SAR 1g (W/Kg)	0.873259

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8987	0.6924	0.5332	0.4101	0.3154	0.2391



3D screen shot	Hot spot position
	

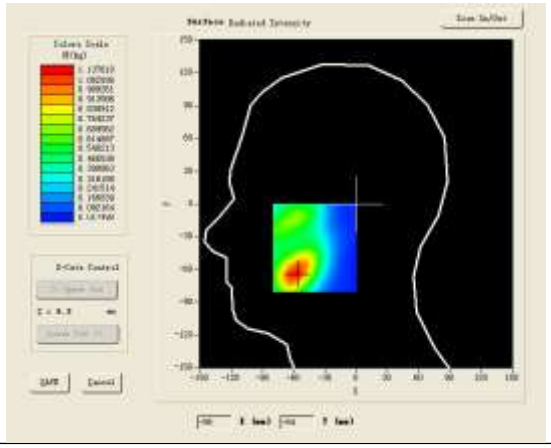
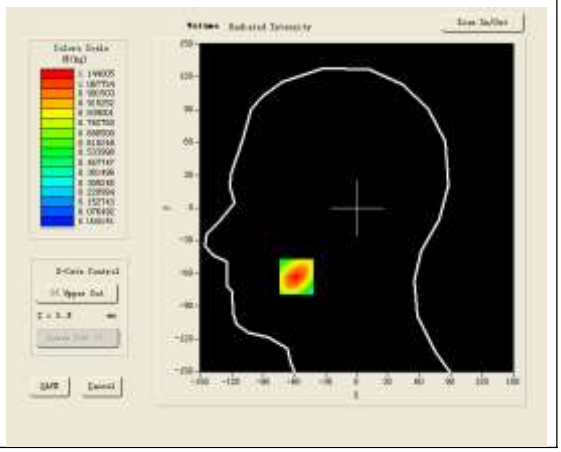
Test Laboratory: AGC Lab **Date: May 10,2015**
LTE Band Ⅳ High-Touch-Right (100RB #0)
DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: LTE Band Ⅳ; Duty Cycle:1:1; Conv.F=4.35; Frequency:1745MHz; Medium parameters used: f =1750 MHz; σ= 0.90 mho/m; εr =40.57; ρ= 1000 kg/m³; Phantom section: Right Section
Ambient temperature (℃): 22.5, Liquid temperature (℃): 22.1

SATIMO Configuration:
• Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN22/12 EP159
• Sensor-Surface: 4mm (Mechanical Surface Detection)
• Phantom: Flat Phantom; Type: Elliptical Phantom
• Measurement SW: OpenSAR V4_02_01

Configuration/ LTE Band ⅣHigh - Touch- Right /Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band ⅣHigh - Touch- Right /Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

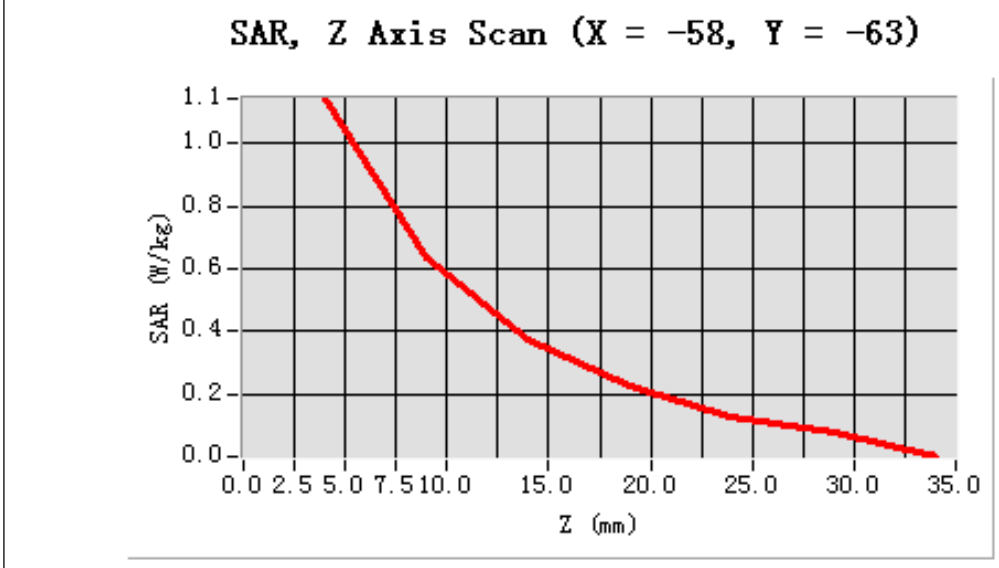
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Right head
Device Position	Cheek
Band	LTE Band Ⅳ
Channels	High
Signal	OFDM (Crest factor: 1.0)

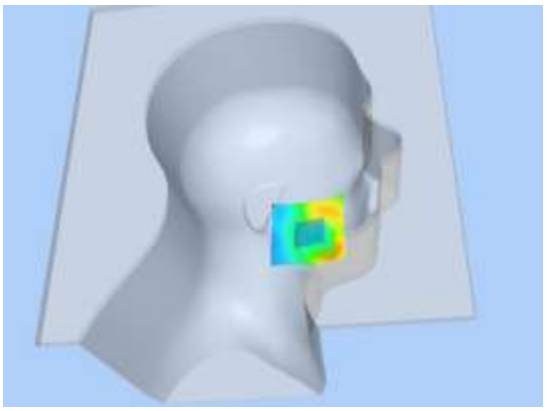
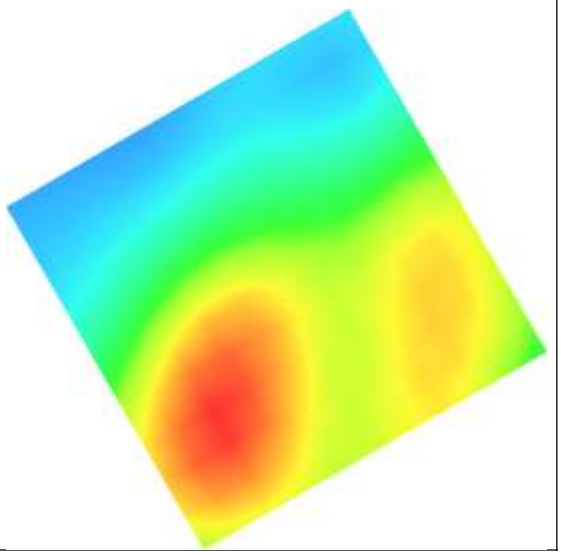
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-58.00, Y=-63.00

SAR 10g (W/Kg)	0.600017
SAR 1g (W/Kg)	1.088310

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.1434	0.6331	0.3727	0.2222	0.1300	0.0768



3D screen shot	Hot spot position
	

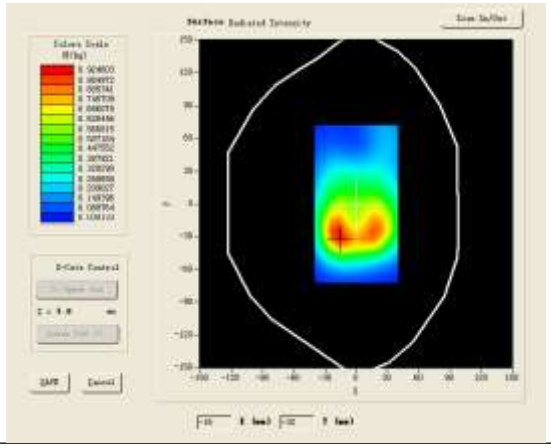
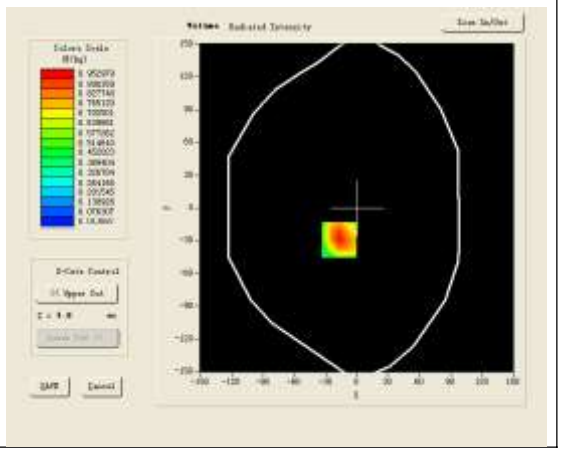
Test Laboratory: AGC Lab **Date: May 10,2015**
LTE Band Ⅳ High -Body-Front (1 RB #0)
DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: LTE Band Ⅳ; Duty Cycle:1:1; Conv.F=4.49; Frequency: 1745MHz; Medium parameters used: f = 1750 MHz; σ= 1.50 mho/m; εr =53.00; ρ= 1000 kg/m³ ; Phantom section: Flat Section
Ambient temperature (℃): 22.5, Liquid temperature (℃): 22.2

SATIMO Configuration:
• Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN22/12 EP159
• Sensor-Surface: 4mm (Mechanical Surface Detection)
• Phantom: Flat Phantom; Type: Elliptical Phantom
• Measurement SW: OpenSAR V4_02_01

Configuration/ LTE Band Ⅳ High -Body-Front/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band Ⅳ High -Body-Front/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

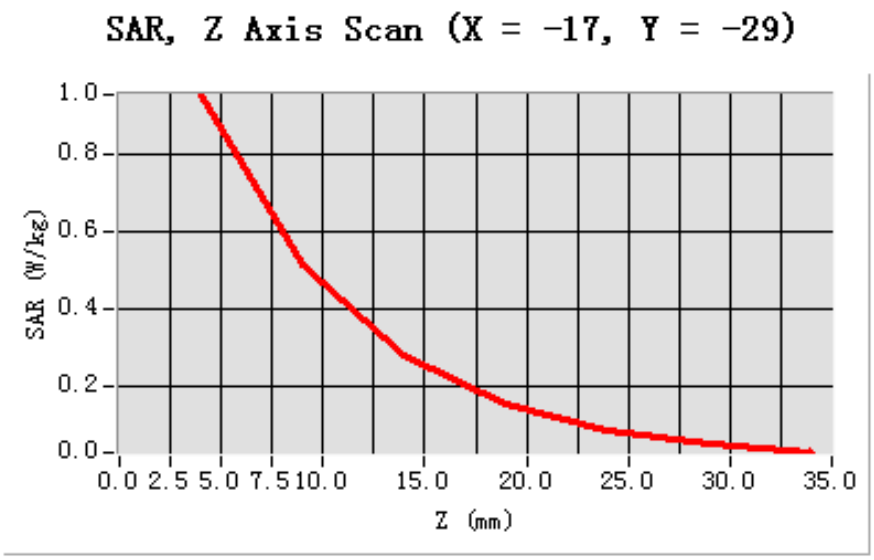
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body Front
Band	LTE Band Ⅳ
Channels	High
Signal	OFDM (Crest factor: 1.0)

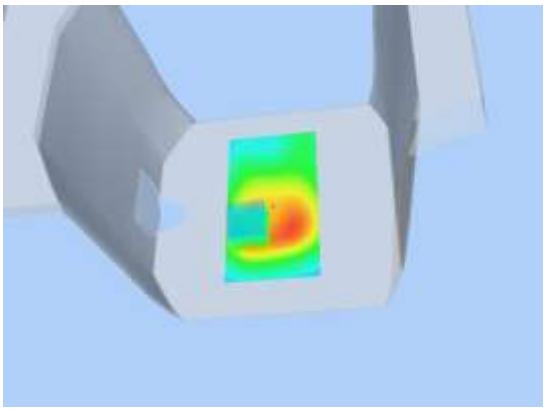
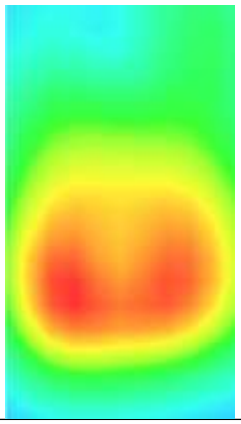
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-17.00, Y=-29.00

SAR 10g (W/Kg)	0.490478
SAR 1g (W/Kg)	0.908147

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9522	0.52287	0.2785	0.1526	0.0847	0.0477



3D screen shot	Hot spot position
	

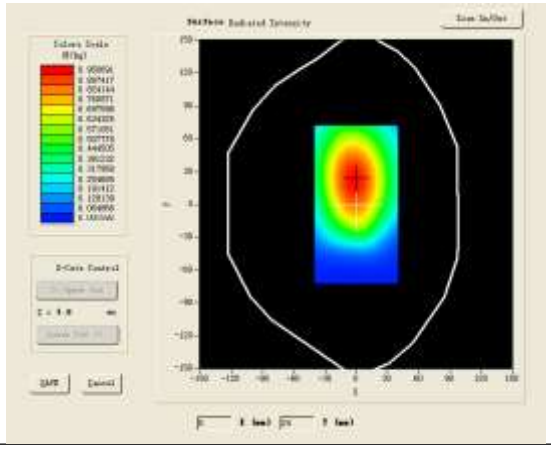
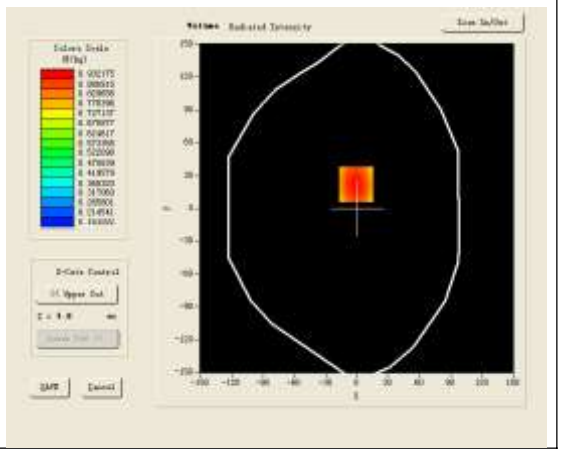
Test Laboratory: AGC Lab **Date: May 11,2015**
LTE Band XVII High-Body-Back (1 RB #0)
DUT: Mobile Phone ; Type: M4GLTE

Communication System: UMTS; Communication System Band: LTE Band XVII; Duty Cycle:1:1; Conv.F=4.43; Frequency: 711 MHz; Medium parameters used: f = 750 MHz; σ=0.97 mho/m; εr =54.18; ρ= 1000 kg/m³ ;
Phantom section: Flat Sectio
Ambient temperature (℃): 22.3, Liquid temperature (℃): 22.1

SATIMO Configuration:
• Probe: SSE5; Calibrated: 12/03/2014; Serial No.:SN 04/13 EP165
• Sensor-Surface: 4mm (Mechanical Surface Detection)
• Phantom: Flat Phantom; Type: Elliptical Phantom
• Measurement SW: OpenSAR V4_02_01

Configuration/ LTE Band XVII High -Body-back/Area Scan: Measurement grid: dx=8mm, dy=8mm
Configuration/ LTE Band XVII High -Body-back/Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5m;

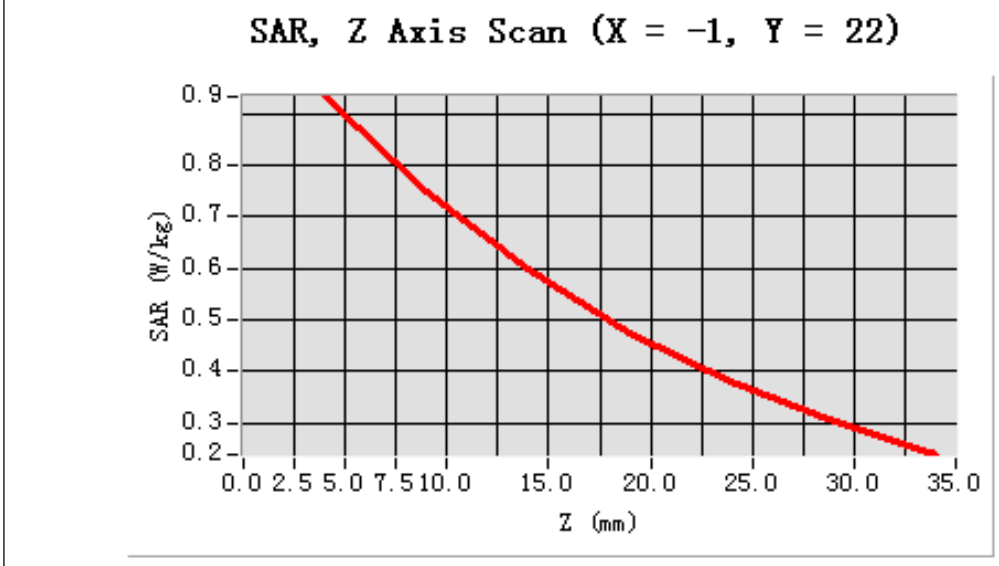
Area Scan	surf_sam_plan.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body Back
Band	LTE Band XVII
Channels	High
Signal	OFDM (Crest factor: 1.0)

SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=22.00

SAR 10g (W/Kg)	0.692871
SAR 1g (W/Kg)	0.903017

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9312	0.7457	0.5969	0.4745	0.3802	0.3024



3D screen shot	Hot spot position