
SAR Test Report



Report No.: AGC05U120402S1

FCC ID : C89GALAXYPRIME
PRODUCT DESIGNATION : 3G Mobile Phone
BRAND NAME : Ice Mobile
MODEL NAME : Galaxy Prime
CLIENT : Dynamics Hong Kong Limited
DATE OF ISSUE : May 30,2012
STANDARD(S) : FCC Oet65 Supplement C June 2001
: IEEE Std. 1528-2003,47CFR § 2.1093
REPORT VERSION : V1.0

Attestation of Global Compliance(Shenzhen) Co., Ltd.

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Test Report Certificate Mobile

Applicant Name	:	Dynamics Hong Kong Limited
Applicant Address	:	Room A4, 3/F, Friend's House, No.6A Carnarvon Road, Tsim Sha Tsui, Kowloon, Hong Kong
Manufacturer Name	:	Dynamics Hong Kong Limited
Manufacturer Address	:	Room A4, 3/F, Friend's House, No.6A Carnarvon Road, Tsim Sha Tsui, Kowloon, Hong Kong
Product Designation	:	3G Mobile Phone
Brand Name	:	Ice Mobile
Model Name	:	Galaxy Prime
EUT Voltage	:	DC3.7V by battery
Applicable Standard	:	FCC Oet65 Supplement C June 2001 IEEE Std. 1528-2003,47CFR § 2.1093
Test Date	:	May 28,2012
Test Results	:	MAX SAR MEASUREMENT(1g) Head:0.201 W/Kg Body:0.515 W/Kg (Scaling SAR=0.538 W/Kg)
Performed Lo3G MOBILE PHONE	:	Attestation of Global Compliance(Shenzhen) Co., Ltd. 1&2 F, No.2 Building, Huafeng No.1 Industrial Park, Gushu Community Xixiang Street, Bao'an District, Shenzhen, China

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1. General Information

1.1. EUT Description

General Information	
Product Designation	3G Mobile Phone
Test Model	Galaxy Prime
Hardware Version	MAUI.11AMD.W11.37.SP.V24
Software Version	INTEBOX_I7_MTK6573_B125 _ENGLISH_20120411
Device 3G MOBILE PHONE Ice Mobile	Portable
RF Exposure Environment	Uncontrolled
Antenna Type	Internal
GSM and GPRS	
Support Band	☒ GSM 850 ☒ PCS 1900 (U.S. Bands) ☒ GSM 900 ☒ DCS 1800 (Non-U.S. Bands)
GPRS Type	Class B
GPRS Class	Class 8,10 ,12(1Tx+4Rx, 2Tx+3Rx, 3Tx+2Rx, 4Tx+1Rx)
TX Frequency Range	GSM 850 : 824.2~848.8MHz; PCS 1900: 1850.2~1909.8MHz;
RX Frequency Range	GSM 850 : 869~894MHz PCS 1900: 1930~1990MHz
Release Version	R99
Type of modulation	GMSK for GSM/GPRS
Antenna Gain	1.0dBi
Max. Output Power (Avg. Burst Power)	GSM850: 32.64 dBm (32.68 dBm Peak Power) PCS1900:29.81 dBm (29.86 dBm Peak Power)
Max. Output Power (Radiated)	GSM850: 29.96 dBm- ERP PCS1900: 28.35dBm- EIRP
WCDMA	
Support Band	U.S. Bands: ☒ UMTS FDD Band II ☒ UMTS FDD Band V Non-U.S. Bands: ☒ UMTS FDD Band I ☐ UMTS FDD Band III ☐ UMTS FDD Band VIII
HS Type	HSPA(HSUPA/HSDPA)

TX Frequency Range	WCDMA FDD BAND II: 1852.4 -1907.6MHz WCDMA FDD BAND V: 826.4-846.6MHz
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	1.2dBi for GSM850 and UMTS BAND V 1.5dBi for PCS1900 and UMTS BAND II
Max. Output Power (Avg. Burst Power)	Band II: 23.37 dBm (23.41 dBm Peak Power) Band V:23.44dBm (23.47 dBm Peak Power)
Max. Output Power (Radiated)	Band II: 21.25dBm- ERP Band V: 21.57dBm- EIRP
Bluetooth	
Bluetooth Version	☐ V2.0 ☐ V2.1 ☐ V2.1+EDR ☐ V3.0 ☒ V3.0+EDR
Operation Frequency	2402~2480MHz
Type of modulation	☒ GFSK ☒ π/4-DQPSK ☒ 8-DPSK
Max. Output Power (Peak Conducted)	2.53 dBm(max) for GFSK modulation
Antenna Gain	1.2dBi
WIFI	
WIFI Specifi3G MOBILE PHONE	☐ 802.11a ☒ 802.11b ☒ 802.11g ☒ 802.11n(20) ☒ 802.11n(40)
Operation Frequency	2412~2462MHz
Max. Output Power	11b:11.58 dBm,11g:10.47 dBm,11n(20): 8.67dBm,11n(40):8.14dBm
Antenna Gain	Antenna (max): 1.2dBi
Accessories	
Battery	Brand name: Ice Mobile Model No. : Galaxy Prime Voltage and Capacitance: DC 3.7V/2200mAh
Adapter	Brand name: Ice Mobile Model No. : ASUC30e-050050 GQ07-050050-BGU Input: 100-240V, 50/60HZ / Output: 0.15A 5.0V 500mA
Earphone	Brand name: Ice Mobile Model No. : Galaxy Prime

Note: The sample used for testing is end product.

1.2. Test Procedure

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	EUT Communicate Mobile 3G MOBILE PHONE with CMU 200, and test them respectively at BAND V & PCS1900 bands

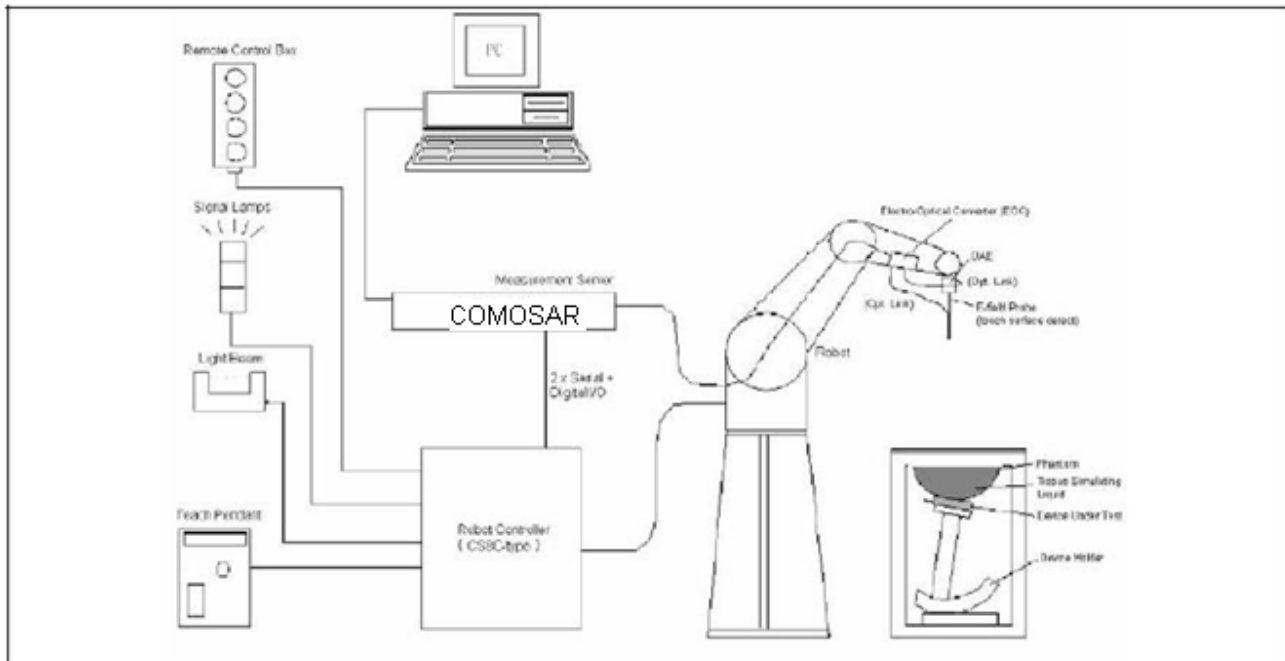
1.3. Test Environment

Ambient conditions in the laboratory:

Items	Required	Actual
Temperature (°C)	18-25	21± 2
Humidity (%RH)	30-70	55±2

2. SAR Measurement System

2.1. COMOSAR System Description



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

A standard high precision 6-axis robot with controller, teach pendant and software.

An arm extension for accommodating the data acquisition electronics (DAE).

A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital Communicate Mobile 3G MOBILE PHONE to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.

The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.

A computer running WinXP and the Opensar software.

Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.

The phantom, the device holder and other accessories according to the targeted measurement.

2.1.1. Applications 3G MOBILE PHONES

Predefined procedures and evaluations for automated compliance testing with all worldwide standards, e.g., IEEE 1528, OET 65, IEC 62209-1, IEC 62209-2, EN 50360, EN 50383 and others.

2.1.2. Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC appli3G MOBILE PHONES utilize a 10mm² step integral, with 1mm interpolation used to lo3G MOBILE PHONEe the peak SAR area used for zoom scan assessments.

When an Area Scan has measured all reachable points, it computes the field maxima 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 2 dB range is required in IEEE 1528-2003, EN 50361 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan).

2.1.3. Zoom Scan (Cube Scan Averaging)

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. A density of 1000 kg/m³ is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1 g cube is 10mm, with the side length of the 10 g cube 21,5mm.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test appli3G MOBILE PHONES utilize a physical step of 7x7x7 (5mmx5mmx5mm) providing a volume of 30mm in the X & Y axis, and 30mm in the Z axis.

2.1.4. Uncertainty of Inter-/Extrapolation and Averaging

In order to evaluate the uncertainty of the interpolation, extrapolation and averaged SAR calculation algorithms of the Post processor, COMOSAR allows the generation of measurement grids which are artificially predefined by analytically based test functions. Therefore, the grids of area scans and zoom scans can be filled with uncertainty test data, according to the SAR benchmark functions of IEEE 1528. The three analytical functions shown in equations as below are used to describe the possible range of the expected SAR distributions for the tested handsets. The field gradients are covered by the spatially flat distribution f1, the spatially steep distribution f3 and f2 accounts for H-field cancellation on the phantom/tissue surface.

$$f_1(x, y, z) = A e^{-\frac{z}{2a}} \cos^2 \left(\frac{\pi}{2} \frac{\sqrt{x'^2 + y'^2}}{5a} \right)$$

$$f_2(x, y, z) = A e^{-\frac{z}{a}} \frac{a^2}{a^2 + x'^2} \left(3 - e^{-\frac{2z}{a}} \right) \cos^2 \left(\frac{\pi}{2} \frac{y'}{3a} \right)$$

$$f_3(x, y, z) = A \frac{a^2}{\frac{a^2}{4} + x'^2 + y'^2} \left(e^{-\frac{2z}{a}} + \frac{a^2}{2(a + 2z)^2} \right)$$

2.2. COMOSAR E-Field Probe

The SAR measurement is conducted with the dissymmetric probe manufactured by SPEAG.

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.

SPEAG conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528, EN62209-1, IEC 62209, etc.) Under ISO17025. The calibration data are in Appendix D.

2.2.1. Isotropic E-Field Probe Specific for 3G MOBILE PHONE

Model	SSE5	
Manufacture	Satimo	
frequency	0.3 GHz-3 GHz Linearity:±0.2dB(300 MHz-3 GHz)	
Dynamic Range	0.01W/Kg-100W/Kg Linearity:±0.2dB	
Dimensions	Overall length:330mm Length of individual dipoles:4.5mm Maxmum external diameter:8mm Probe Tip external diameter:5mm Distance between dipoles/ probe extremity:2.7mm	
Appli3G MOBILE PHONE	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%.	

2.3 Robot

The COMOSAR system uses the high precision robots TX90 XL type out of the newer series 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 appli3G MOBILE PHONE:

- 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



2.4. 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.

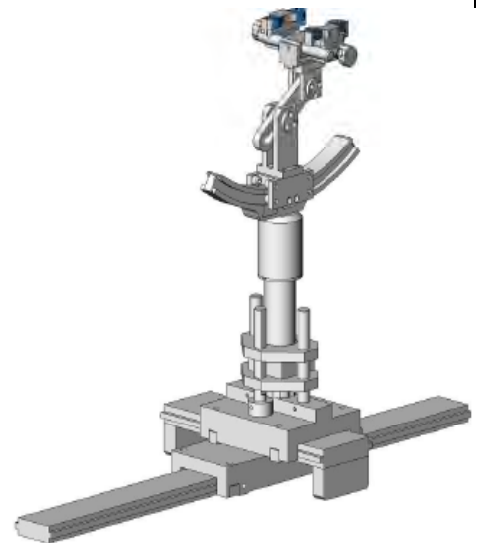


2.5. Device Holder

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 $\epsilon_r = 3$ and loss tangent $\delta = 0.02$. 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.



2.6. 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.

3. Tissue Simulating Liquid

3.1. The composition of the tissue simulating liquid

Ingredient	835MHz	835MHz	1900MHz	1900MHz
(% Weight)	Head	Body	Head	Body
Water	40.45	52.4	54.90	40.5
Salt	1.41	1.40	0.18	0.50
Sugar	57.6	45.0	0.00	58.0
HEC	0.40	1.00	0.00	0.50
Preventol	0.10	0.20	0.00	0.50
DGBE	0.00	0.00	44.92	0.00

3.2. Tissue Calibration Result

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

Head Tissue Stimulant Measurement				
Frequency (MHz)	Description	Dielectric Parameters		Tissue Temp [°C]
835MHz	Reference result ±5% window	ϵ_r 41.48 39.43-43.58	δ [s/m] 0.90 0.86-0.95	N/A
	May 28,2012	42.03	0.91	21

Body Tissue Stimulant Measurement				
Frequency (MHz)	Description	Dielectric Parameters		Tissue Temp [°C]
835MHz	Reference result ±5% window	ϵ_r 55.20 52.44-57.96	δ [s/m] 0.97 0.92-1.02	N/A
	May 28,2012	54.66	0.96	21

Head Tissue Stimulant Measurement				
Frequency (MHz)	Description	Dielectric Parameters		Tissue Temp [°C]
1900MHz	Reference result ±5% window	ϵ_r 40.00 38.00-42.00	δ [s/m] 1.40 1.33-1.47	N/A
	May 28,2012	40.12	1.41	21

Body Tissue Stimulant Measurement				
Frequency (MHz)	Description	Dielectric Parameters		Tissue Temp [°C]
1900MHz	Reference result ±5% window	ϵ_r 53.30 50.64-55.97	δ [s/m] 1.52 1.44-1.60	N/A
	May 28,2012	52.34	1.48	21

3.3. Tissue Dielectric Parameters for Head and Body Phantoms

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

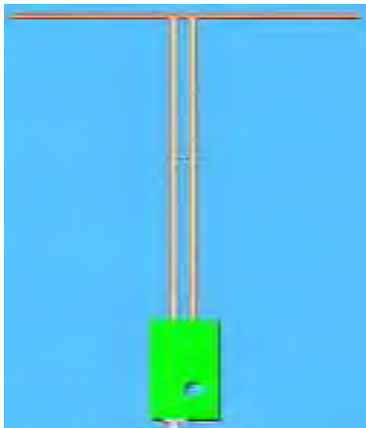
Target Frequency (MHz)	head		body	
	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

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

4. SAR Measurement Procedure

4.1. SAR System Validation

4.1.1. Validation Dipoles

	The dipoles used is based on the IEEE-1528 standard, and is complied with mechanical and electrical specific3G MOBILE PHONES in line with the requirements of both IEEE and FCC Supplement C. the table below provides details for the mechanical and electrical Specific3G MOBILE PHONES for the dipoles.
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Frequency	L (mm)	h (mm)	d (mm)
900 MHz	149.0	83.3	3.6
1900MHz	68	39.5	3.6

4.1.2. Validation Result

System Performance Check at 835 MHz &1900MHz for Head				
Validation Kit: SN 46/11DIP 0G900-185				
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp.[°C]
835 MHz	Reference result ± 10% window	9.56 8.604-10.516	6.22 5.598-6.842	N/A
	May 28,2012	9.370	5.806	21.0
Validation Kit: SN 46/11DIP 1G900-187				
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp.[°C]
1900 MHz	Reference result ± 10% window	39.7 35.73 to 43.67	20.5 18.45 to 22.55	N/A
	May 28,2012	43.18	20.68	21.0
Note: All SAR values are normalized to 1W forward power.				

4.2. SAR Measurement Procedure

The COMOSAR calculates SAR using the following equation,

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

σ : represents the simulated tissue conductivity

ρ : represents the tissue density

The EUT is set to transmit at the required power in line with product specific 3G MOBILE PHONE, at each frequency relating to the LOW, MID, and HIGH channel settings.

Pre-scans are made on the device to establish the 3G MOBILE PHONE for the transmitting antenna, using a large area scan in either air or tissue simulation fluid.

The EUT is placed against the Universal Phantom where the maximum area scan dimensions are larger than the physical size of the resonating antenna. When the scan size is not large enough to cover the peak SAR distribution, it is modified by either extending the area scan size in both the X and Y directions, or the device is shifted within the predefined area.

The area scan is then run to establish the peak SAR 3G MOBILE PHONE (interpolated resolution set at 1mm²) which is then used to orient the center of the zoom scan. The zoom scan is then executed and the 1g and 10g averages are derived from the zoom scan volume (interpolated resolution set at 1mm³).

When multiple peak SAR 3G MOBILE PHONES were found during the same configuration or test mode, Zoom scan shall be performed on each peak SAR 3G MOBILE PHONE, only the peak point with maximum SAR value will be reported for the configuration or test mode.

5. SAR Exposure Limits

SAR assessments have been made in line with the requirements of IEEE-1528, FCC Supplement C, and comply with ANSI/IEEE C95.1-1992 “Uncontrolled Environments” limits. These limits apply to a 3G MOBILE PHONE 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
Spatial Peak SAR (1g cube tissue for brain or body)	1.60 W/kg
Spatial Average SAR (whole body)	0.08 W/kg
Spatial Peak SAR (10g for hands, feet, ankles and wrist)	4.00 W/kg

6. Test Equipment List

Equipment description	Manufacturer/Model	Identifi3G MOBILE PHONE No.	Current calibration date	Next calibration date
SAR Probe	Satimo	SN_3511_EP132	12/09/2011	12/08/2012
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	12/09/2011	12/08/2012
Multimeter	Keithley 2000	1188656	12/09/2011	12/08/2012
Dipole	Satimo SID900	SN46/11 DIP 0G900-185	12/09/2011	12/08/2014
Dipole	Satimo SID1900	SN46/11 DIP 1G900-187	12/09/2011	12/08/2014
Amplifier	Aethercomm	SN 046	12/09/2011	12/08/2012
Power Meter	HP E4418A	US38261498	03/30/2012	03/29/2013
Network Analyzer	Rhode & Schwarz ZVA	SN100132	02/07/2012	02/06/2013

Note: Per KDB 50824 Dipole SAR Validation Verifi3G MOBILE PHONE, 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.

7. Measurement Uncertainty

Satimo Uncertainty									
Measurement uncertainty for 300 MHz to 3 GHz averaged over 1 gram / 10 gram.									
Error Description	Sec	Tol (±%)	Prob. Dist.	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g) (±%)	Std. Unc. (10g)(±%)	(Vi) Veff
Measurement System									
Probe Calibration	E.2.1	6	N	1	1	1	6	6	∞
Axial Isotropy	E.2.2	3	R		$(1-C_p)^{1/2}$	$(1-C_p)^{1/2}$	1.22474	1.22474	∞
Hemispherical Isotropy	E.2.2	5	R		$\sqrt{C_p}$	$\sqrt{C_p}$	2.04124	2.04124	∞
Boundary Effects	E.2.3	1	R		1	1	0.57735	0.57735	∞
Linearity	E.2.4	5	R		1	1	2.88675	2.88675	∞
System Detection Limits	E.2.5	1	R		1	1	0.57735	0.57735	∞
Readout Electronics	E.2.6	0.5	N	1	1	1	0.5	0.5	∞
Response Time	E.2.7	0.2	R		1	1	0.11547	0.11547	∞
Integration Time	E.2.8	2	R		1	1	1.1547	1.1547	∞
RF Ambient Noise	E.6.1	3	R		1	1	1.73205	1.73205	∞
Probe Positioner Mechanical Tolerance	E.6.2	2	R		1	1	1.1547	1.1547	∞
Probe Positioning with Respect to Phantom Shell	E.6.3	1	R		1	1	0.57735	0.57735	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	E.5.2	1.5	R		1	1	0.86603	0.86603	∞
Dipole									
Device Positioning	8,E.4.2	1	N		1	1	0.57735	0.57735	N-1
Power Drift	8.6.6.2	2	R		1	1	1.1547	1.1547	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1	4	R		1	1	2.3094	2.3094	∞
Liquid Conductivity (target)	E.3.2	5	R		0.64	0.43	1.84752	1.2413	∞
Liquid Conductivity (meas.)	E.3.3	2.5	N	1	0.64	0.43	1.6	1.075	∞
Liquid Permittivity (target)	E.3.2	3	R		0.6	0.49	1.03923	0.8487	∞
Liquid Permittivity (meas.)	E.3.3	2.5	N	1	0.6	0.49	1.5	1.225	M
Combined Standard Uncertainty			RSS				8.09272	7.9296	
Expanded Uncertainty (95%CONFIDENCE INTERVAL)			k				16.18544	15.8592	

8. Conducted Power Measurement

Mode	Frequency(MHz)	Peak Power	Avg. Burst Power	Duty cycle Factor(dB)	Frame Power(dBm)
Maximum Power					
GSM850	824.2	32.68	32.64	-9	23.64
	836.6	32.56	32.52	-9	23.52
	848.8	32.47	32.43	-9	23.43
GPRS850 (1 Slot)	824.2	32.57	32.55	-9	23.55
	836.6	32.48	32.43	-9	23.43
	848.8	32.42	32.35	-9	23.35
GPRS850 (2 Slot)	824.2	29.66	29.61	-6	23.61
	836.6	29.48	29.42	-6	23.42
	848.8	29.42	29.34	-6	23.34
GPRS850 (3 Slot)	824.2	28.01	27.96	-4.23	23.73
	836.6	27.98	27.92	-4.23	23.69
	848.8	27.91	27.85	-4.23	23.62
GPRS850 (4 Slot)	824.2	26.87	26.84	-3	23.84
	836.6	26.64	26.61	-3	23.61
	848.8	26.46	26.42	-3	23.42
PCS1900	1850.2	29.86	29.81	-9	20.81
	1880	29.78	29.74	-9	20.74
	1909.8	29.72	29.65	-9	20.65
GPRS1900 (1 Slot)	1850.2	29.75	29.68	-9	20.68
	1880	29.64	29.61	-9	20.61
	1909.8	29.54	29.51	-9	20.51
GPRS1900 (2 Slot)	1850.2	26.78	26.75	-6	20.75
	1880	26.63	26.61	-6	20.61
	1909.8	26.56	26.53	-6	20.53
GPRS850 (3 Slot)	1850.2	25.12	25.09	-4.23	20.86
	1880	24.99	24.96	-4.23	20.73
	1909.8	24.86	24.83	-4.23	20.6
GPRS850 (4 Slot)	1850.2	23.87	23.84	-3	20.84
	1880	23.78	23.74	-3	20.74
	1909.8	23.64	23.62	-3	20.62

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) – 4.23 dB

Frame Power = Max burst power (2 Up Slot) – 3 dB

UMTS BAND II

Mode	Frequency (MHz)	Peak Power	Avg. Burst Power
WCDMA 1900 RMC(12.2bps)	1852.4	23.41	23.37
	1880	23.34	23.31
	1907.6	23.21	23.18
WCDMA 1900 AMR	1852.4	23.31	23.28
	1880	23.24	23.21
	1907.6	23.18	23.14
HSPA Subtest 1	1852.4	22.78	22.74
	1880	22.65	22.61
	1907.6	22.63	22.59
HSPA Subtest 2	1852.4	22.56	22.52
	1880	22.51	22.47
	1907.6	22.45	22.39
HSPA Subtest 3	1852.4	22.61	22.56
	1880	22.54	22.49
	1907.6	22.51	22.47
HSPA Subtest 4	1852.4	22.47	22.43
	1880	22.43	22.38
	1907.6	22.37	22.34
HSPA Subtest 5	1852.4	22.54	22.51
	1880	22.48	22.42
	1907.6	22.45	22.41

UMTS BAND V

Mode	Frequency (MHz)	Peak Power	Avg. Burst Power
WCDMA 850 RMC	826.4	23.47	23.44
	835.0	23.42	23.35
	846.6	23.35	23.31
WCDMA 850 AMR	826.4	23.01	22.96
	835.0	22.94	22.89
	846.6	22.74	22.68
HSPA Subtest 1	826.4	22.86	22.81
	835.0	22.79	22.72
	846.6	22.71	22.63
HSPA Subtest 2	826.4	22.81	22.72
	835.0	22.73	22.64
	846.6	22.66	22.61
HSPA Subtest 3	826.4	22.76	22.71
	835.0	22.67	22.6
	846.6	22.61	22.53
HSPA Subtest 4	826.4	22.73	22.67
	835.0	22.61	22.53
	846.6	22.54	22.46
HSPA Subtest 5	826.4	22.68	22.62
	835.0	22.57	22.51
	846.6	22.46	22.39

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	$0 \leq CM \leq 3.5$	$MAX(CM-1,0)$
Note: $CM=1$ for $\beta_c/\beta_d=12/15$, $\beta_{hs}/\beta_c=24/15$. 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 compensate 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.

9. Test Results

9.1. SAR Test Results Summary

9.1.1. Test position and configuration

Head SAR was performed with the device configured in the positions according to IEEE1528, and Body SAR was performed with the device 15mm from the phantom. Body SAR was also performed with the headset attached and without.

9.1.2. Body SAR with Headset

Testing with the headset was performed at the position and channels that resulted in the highest body SAR. This testing was performed with GPRS transmitting with 2/3/4 uplink timeslots. This operation mode represents the maximum SAR situation, when downloading data via GPRS and listening to music by headset. SAR without the headset attached was significantly higher than with the headset, and also was verified several times and confirmed, so the final test data shown were the worst case without headset. In the Body SAR test result table, body-worn means display of device down, body-front means display of device up.

9.1.3. Operation Mode

This is a multi-slot class 12 device capable of 4 uplink timeslots. During the head SAR test, the device was transmitting with maximum 1 uplink timeslot; during the body SAR test, it was transmitting with maximum 4 uplink timeslots. Additionally, this device doesn't support dual transfer mode (DTM).

9.1.4. Co-located 3G MOBILE PHONE SAR

According to KDB 447498 and KDB 648474, due to the Max peak power for Bluetooth is 3.43dBm less than P_{ref} and the Max peak power for Wifi is less than 13.8dBm, the Maximum SAR for GSM part < 1.2W/Kg, thus, regardless the closest separation distance between the GSM antenna and Bluetooth Antenna (The distance between the GSM antenna and Bluetooth Antenna is less than 5cm; The Bluetooth and the Wifi share with the same antenna), stand-alone SAR and simultaneous transmission SAR is not required.

Other reference document: KDB 941225.

SAR MEASUREMENT									
Ambient Temperature (°C) : 21 ± 2						Relative Humidity (%): 55			
Liquid Temperature (°C) : 21 ± 2						Depth of Liquid (cm):>15			
Product: 3G MOBILE PHONE									
Test Mode: GSM850 with GMSK modulation									
Configuration			Antenna Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2 dB)	SAR (1g) (W/kg)	Limit (W/kg)
SIM	Position	Status		channel	MHz				
<1>	Left Head	Cheek	Fixed	128	824.2	23.64	--	--	1.6
				190	836.6	23.52	-0.03	0.114	1.6
				251	848.8	23.43	--	--	1.6
		Tilted	Fixed	128	824.2	23.64	--	--	1.6
				190	836.6	23.52	-0.05	0.113	1.6
				251	848.8	23.43	--	--	1.6
	Right Head	Cheek	Fixed	128	824.2	23.64	--	--	1.6
				190	836.6	23.52	-0.10	0.163	1.6
				251	848.8	23.43	--	--	1.6
		Tilted	Fixed	128	824.2	23.64	--	--	1.6
				190	836.6	23.52	-0.02	0.117	1.6
				251	848.8	23.43	--	--	1.6

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

SAR MEASUREMENT									
Ambient Temperature (°C) : 21 ± 2						Relative Humidity (%): 55			
Liquid Temperature (°C) : 21 ± 2						Depth of Liquid (cm):>15			
Product: 3G MOBILE PHONE									
Test Mode: GSM850 with GMSK modulation									
Configuration			Antenn a Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2 dB)	SAR (1g) (W/kg)	Limit (W/kg)
SIM	Position	Status		channel	MHz				
<1>	Body back	MS	Fixed	128	824.2	23.64	--	--	1.6
				190	836.6	23.52	-0.01	0.515	1.6
				251	848.8	23.43	--	--	1.6
		GPRS 2 TS	Fixed	128	824.2	23.61	--	--	1.6
				190	836.6	23.42	-0.05	0.203	1.6
				251	848.8	23.34	--	--	1.6
		GPRS 3 TS	Fixed	128	824.2	23.73	--	--	1.6
				190	836.6	23.69	-0.04	0.265	1.6
				251	848.8	23.62	--	--	1.6
		GPRS 4 TS	Fixed	128	824.2	23.84	--	--	1.6
				190	836.6	23.61	-0.03	0.270	1.6
				251	848.8	23.42	--	--	1.6
	Body Front	MS	Fixed	128	824.2	23.64	--	--	1.6
				190	836.6	23.52	-0.06	0.193	1.6
				251	848.8	23.43	--	--	1.6
		MS with Earphone	Fixed	128	824.2	23.64	--	--	1.6
				190	836.6	23.52	-0.02	0.357	1.6
				251	848.8	23.43	--	--	1.6

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Ambient Temperature (°C) : 21 ± 2

Relative Humidity (%): 55

Liquid Temperature (°C) : 21 ± 2

Depth of Liquid (cm):>15

Product: 3G MOBILE PHONE

Test Mode: WCDMA band V with QPSK modulation

Configuration			Antenna Position	Frequency		Avg.Burst Power (dBm)	Power Drift (± 0.2 dB)	SAR (1g) (W/kg)	Limit (W/kg)
SIM	Position	Status		channel	MHz				
<2>	Left Head	Cheek	Fixed	4132	826.4	23.44	--	--	1.6
				4182	835.0	23.35	-0.08	0.114	1.6
				4233	846.6	23.31	--	--	1.6
		Tilted	Fixed	4132	826.4	23.44	--	--	1.6
				4182	835.0	23.35	-0.07	0.113	1.6
				4233	846.6	23.31	--	--	1.6
	Right Head	Cheek	Fixed	4132	826.4	23.44	--	--	1.6
				4182	835.0	23.35	-0.10	0.166	1.6
				4233	846.6	23.31	--	--	1.6
		Tilted	Fixed	4132	826.4	23.44	--	--	1.6
				4182	835.0	23.35	-0.06	0.115	1.6
				4233	846.6	23.31	--	--	1.6

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Ambient Temperature (°C) : 21 ± 2

Relative Humidity (%): 55

Liquid Temperature (°C) : 21 ± 2

Depth of Liquid (cm):>15

Product: 3G MOBILE PHONE

Test Mode: WCDMA band II with QPSK modulation

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Ambient Temperature (°C) : 21 ± 2

Relative Humidity (%): 55

Liquid Temperature (°C) : 21 ± 2

Depth of Liquid (cm):>15

Product: 3G MOBILE PHONE

Test Mode: WCDMA band II with QPSK modulation

Configuration			Antenna Position	Frequency		Avg.Burst Power (dBm)	Power Drift ($\leq \pm 0.2$ dB)	SAR (1g) (W/kg)	Limit (W/kg)
SIM	Position	Status		channel	MHz				
<2>	Body	RMC (towards phantom)	Fixed	9262	1852.4	23.37	--	--	1.6
				9400	1880	23.31	-0.03	0.219	1.6
				9538	1907.6	23.18	--	--	1.6
		RMC (towards grounds)	Fixed	9262	1852.4	23.37	--	--	1.6
				9400	1880	23.31	-0.01	0.226	1.6
				9538	1907.6	23.18	--	--	1.6
		HSPA (towards grounds)	Fixed	9262	1852.4	22.74	--	--	1.6
				9400	1880	22.61	-0.04	0.217	1.6
				9538	1907.6	22.59	--	--	1.6
		RMC Earphone (towards grounds)	Fixed	9262	1852.4	23.37	--	--	1.6
				9400	1880	23.31	-0.02	0.222	1.6
				9538	1907.6	23.18	--	--	1.6

Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. refer to KDB 941225.

Appendix A. SAR System Validation Data

date: MAR. 20, 2012

Test Laboratory: AGC Lab

System Check Head 900 MHz**DUT: Dipole 900 MHz Type: SID 900**

Communication System CW; Communication System Band: D850(850.0 MHz); Duty Cycle: 1:1; ConvF=6.79

Frequency: 850 MHz; Medium parameters used: $f = 850$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.03$; $\rho = 1000$ kg/m³ ;

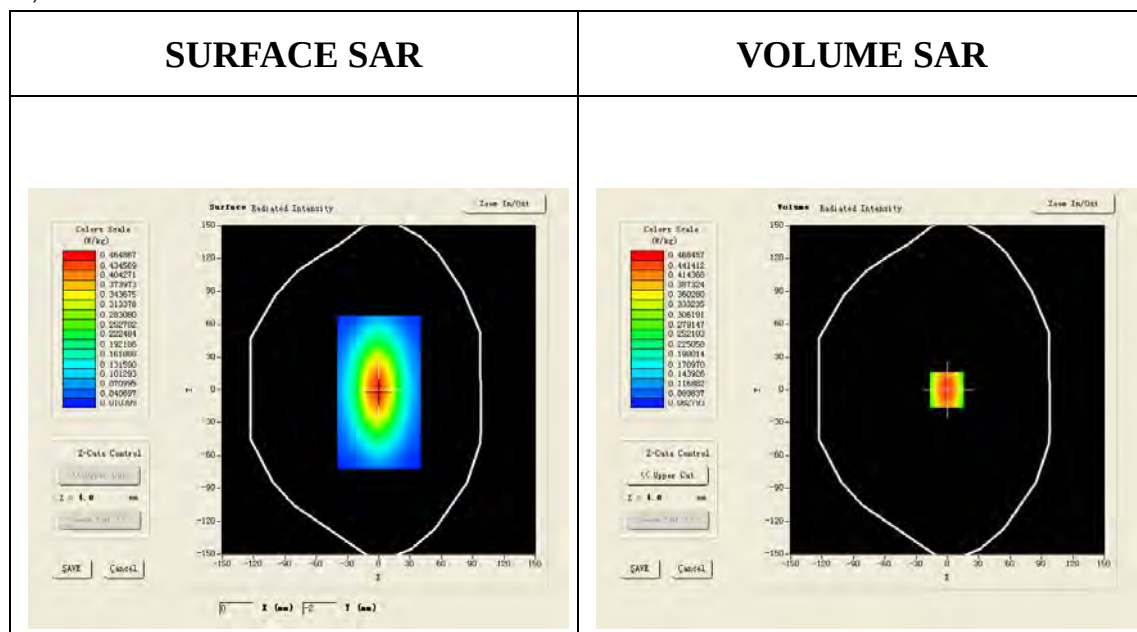
Phantom section: Flat Section ; Input Power=17dBm

Ambient temperature (°C): 21, Liquid temperature (°C): 21

Satimo Configuration:

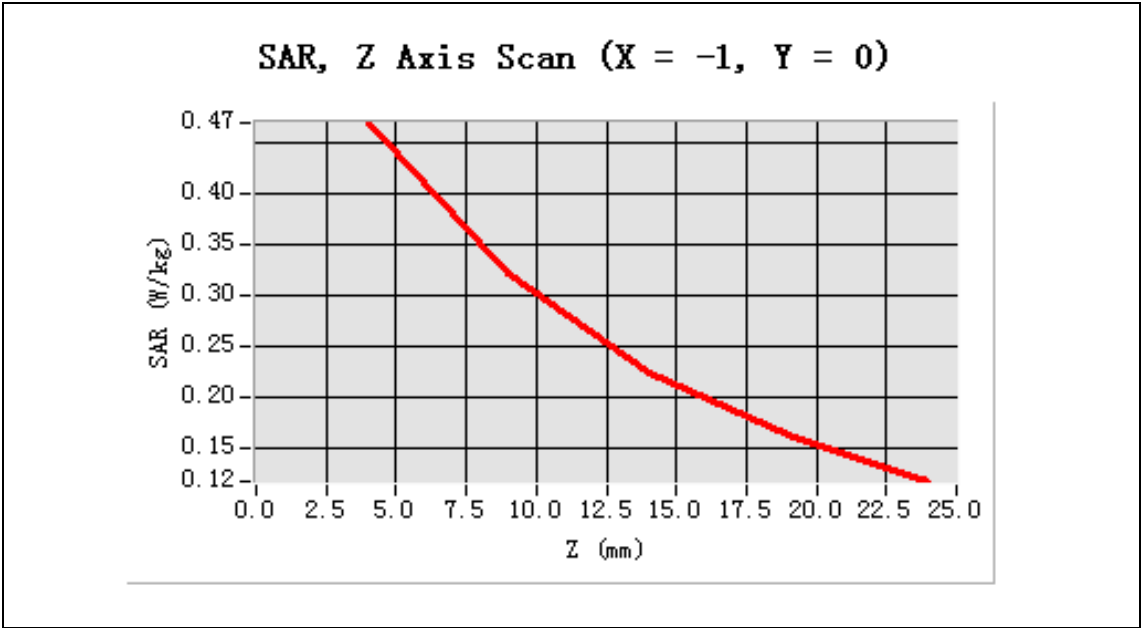
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/System Check GSM850 Head/Area Scan: Measurement grid: dx=8mm, dy=8mm**Configuration/System Check GSM850 Head/Zoom Scan :** Measurement grid: dx=8mm, dy=8mm, dz=5mm**Maximum location: X=-1.00, Y=0.00**

SAR 10g (W/Kg)	0.290322
SAR 1g (W/Kg)	0.444705

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.4685	0.3199	0.2233	0.1613



Test Laboratory: AGC Lab

date: MAR. 20, 2012

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;

ConvF=6.42

Frequency: 1900 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.12$; $\rho = 1000$ kg/m³ ;

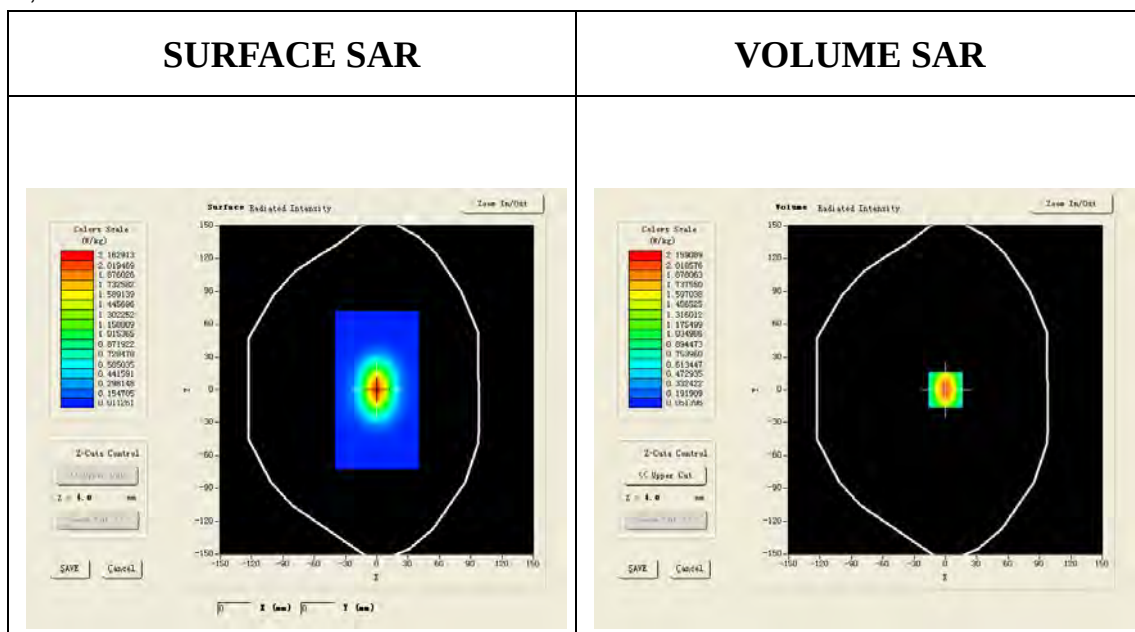
Phantom section: Flat Section ; Input Power=17dBm

Ambient temperature (°C): 21, Liquid temperature (°C): 21

Satimo Configuration:

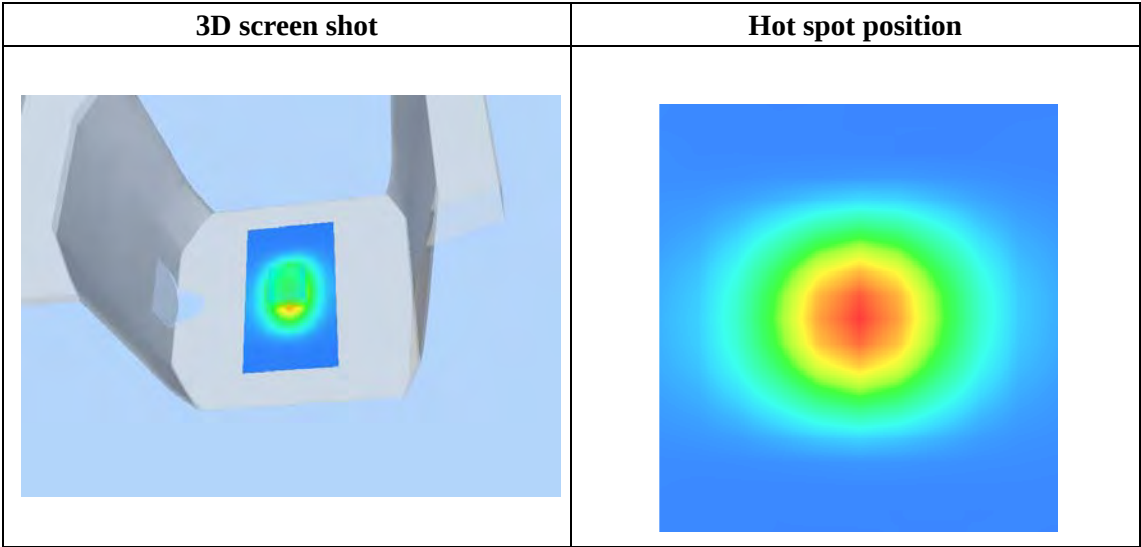
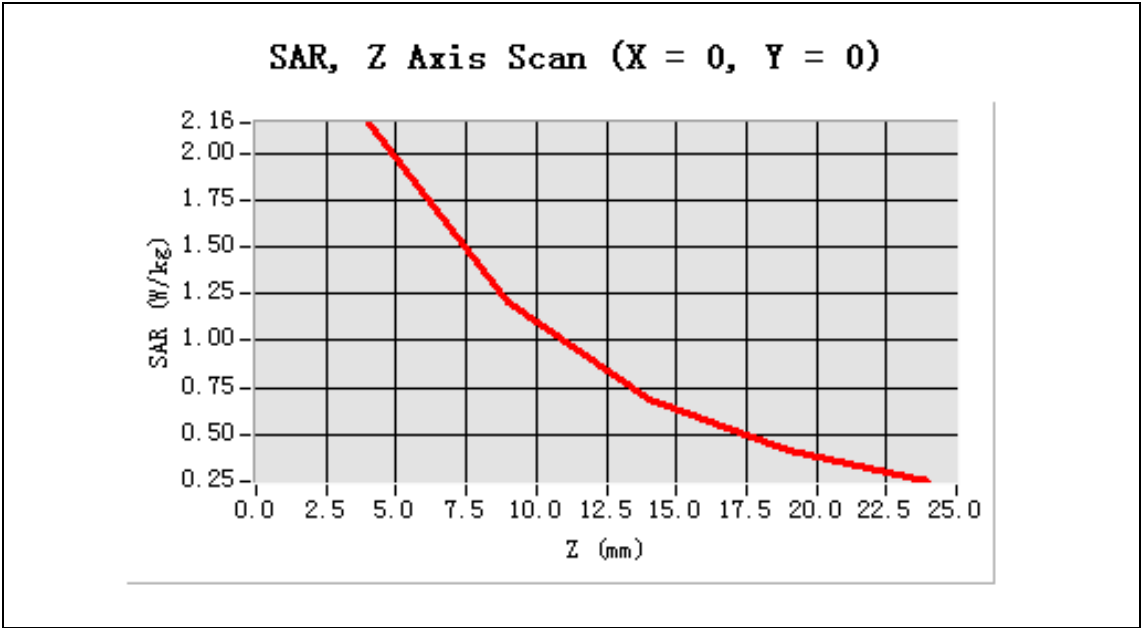
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/System Check PCS1900 Head/Area Scan: Measurement grid: dx=8mm, dy=8mm**Configuration/System Check PCS1900 Head/Zoom Scan:** Measurement grid: dx=8mm, dy=8mm, dz=5mm**Maximum location: X=0.00, Y=0.00**

SAR 10g (W/Kg)	1.033883
SAR 1g (W/Kg)	1.989748

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	2.1591	1.2094	0.6875	0.4141



Appendix B. SAR measurement Data

Test Laboratory: AGC Lab

date: MAR. 20, 2012

GSM 850 Middle-touch-Left

DUT: 3G Mobile Phone ; Type: GALAXY PRIME

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;

ConvF=6.79

Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.03$;

$\rho = 1000$ kg/m³ ; Phantom section: Left Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

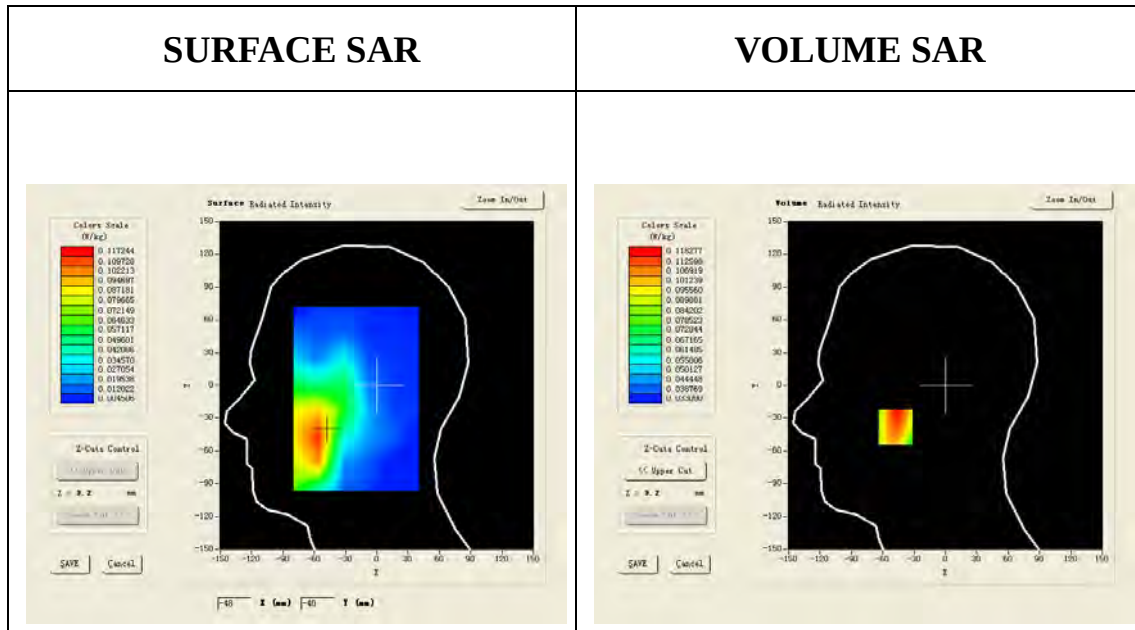
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM850 Mid Touch-Left/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/GSM850 Mid Touch-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

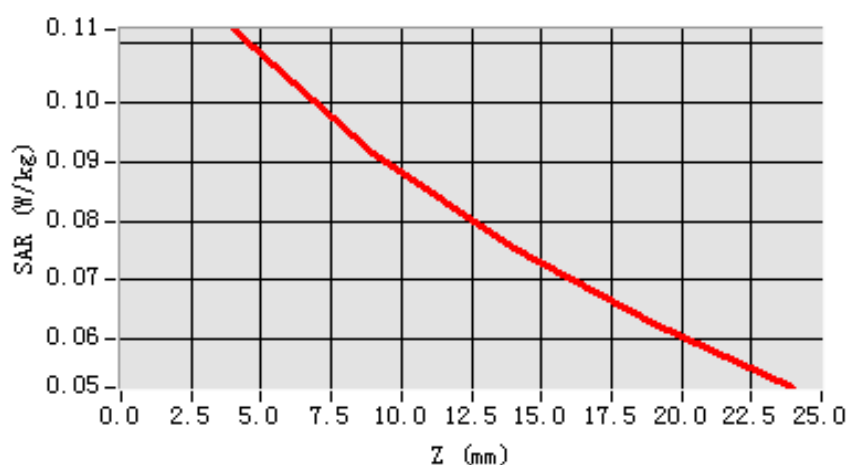


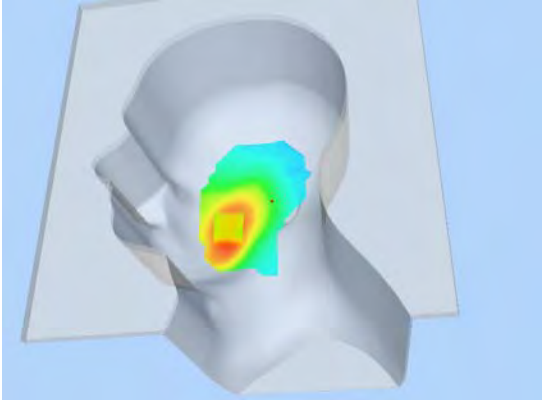
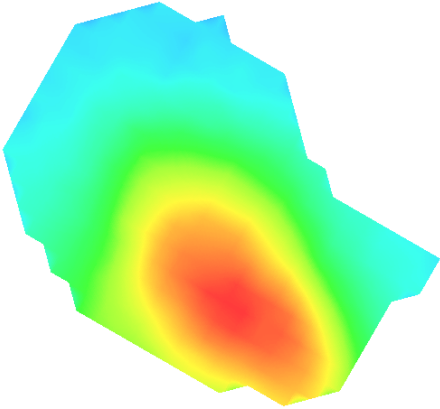
Maximum location: X=-48.00, Y=-38.00

SAR 10g (W/Kg)	0.087236
SAR 1g (W/Kg)	0.113724

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1123	0.0916	0.0754	0.0626

SAR, Z Axis Scan (X = -48, Y = -38)



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab

date:MAY 28,2012

GSM 850 Mid Tilt-left

DUT: 3G Mobile Phone ; Type: GALAXY PRIME

Communication System: Generic GSM; Communication System Band: GSM 850; Duty

Cycle: 1:8.3; ConvF=6.79;Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.03$;

$\rho = 1000$ kg/m³ ; Phantom section: Left Section

Ambient temperature (°C): 21.0, Liquid temperature(°C): 21.0

Satimo Configuration:

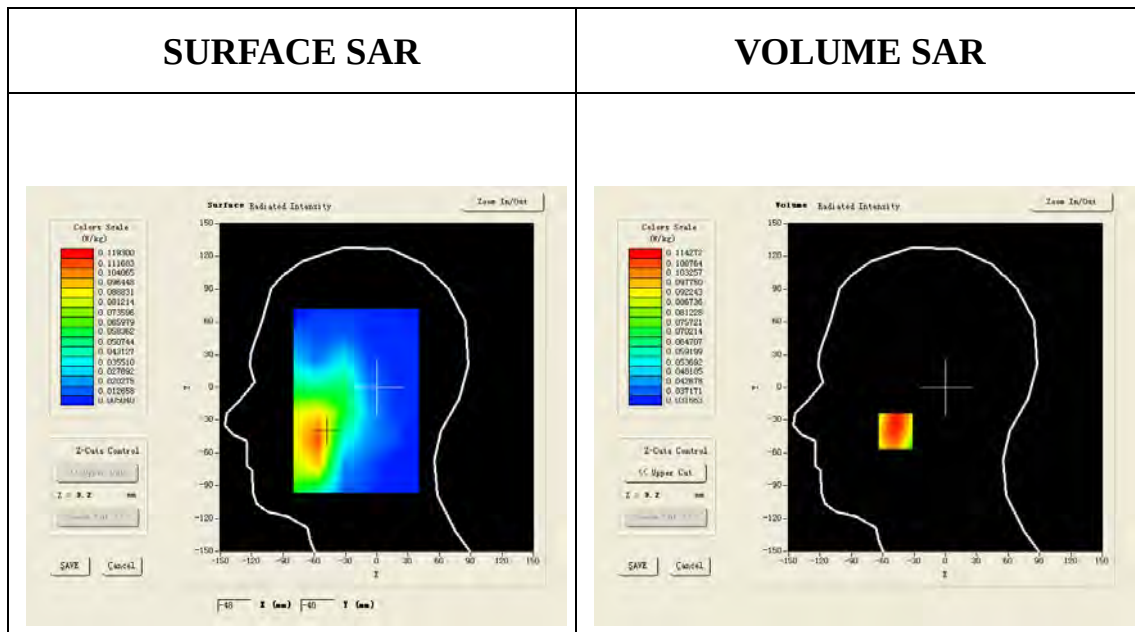
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM850 Mid Tilt-Left/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/GSM850 Mid Tilt-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

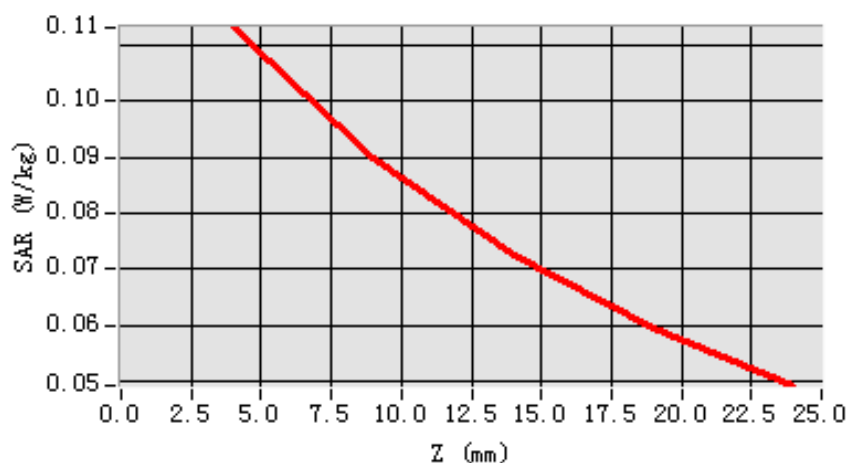


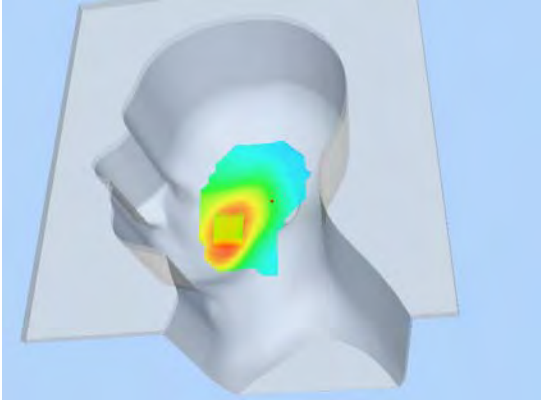
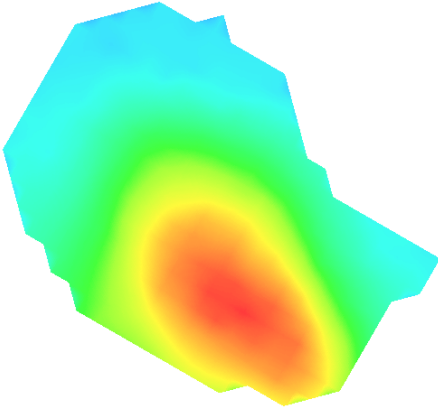
Maximum location: X=-48.00, Y=-40.00

SAR 10g (W/Kg)	0.084840
SAR 1g (W/Kg)	0.110640

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1130	0.0898	0.0725	0.0597

SAR, Z Axis Scan (X = -48, Y = -40)



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**date:MAY 28,2012****GSM 850 Middle touch-Right****DUT: 3G Mobile Phone ; Type: GALAXY PRIME**

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;
ConvF=6.79;

Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m;

$\epsilon_r = 42.03$; $\rho = 1000$ kg/m³ ; Phantom section: Right Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

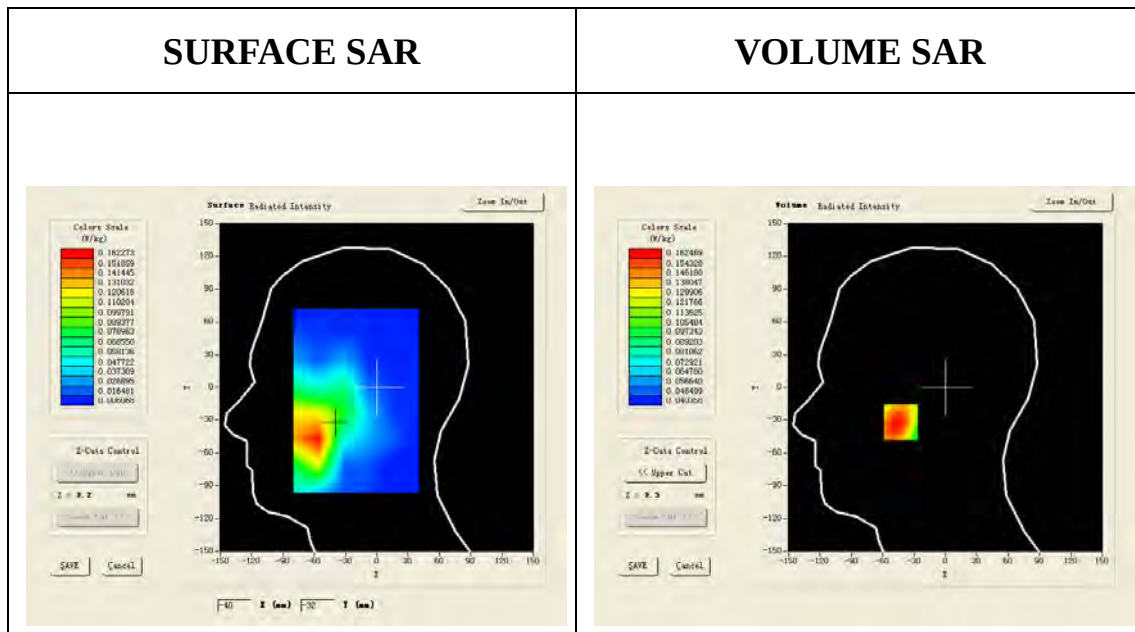
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM850 Mid Touch-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm

**Configuration/GSM850 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,Very fast
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

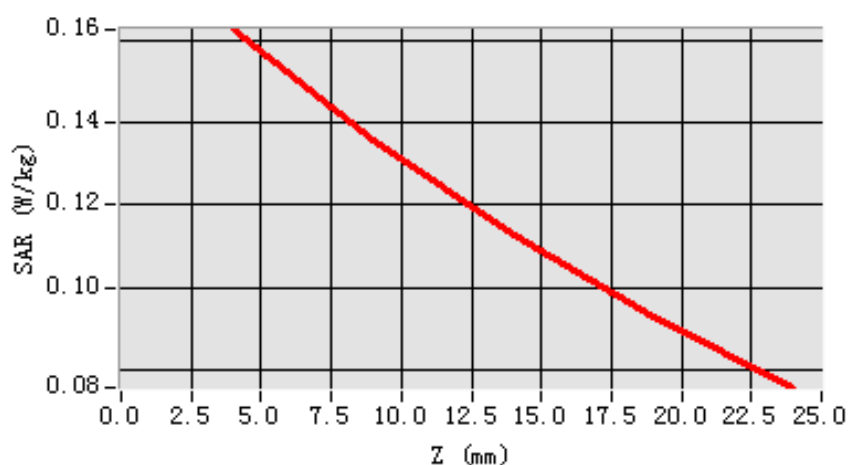


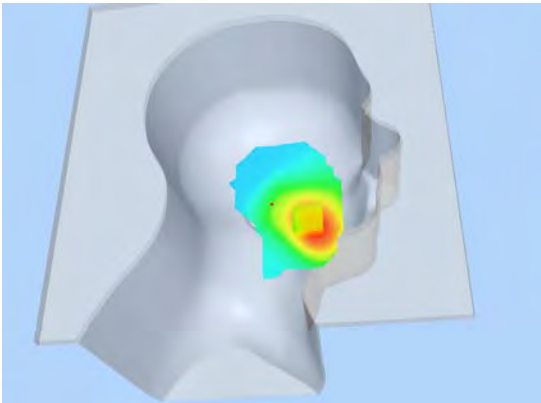
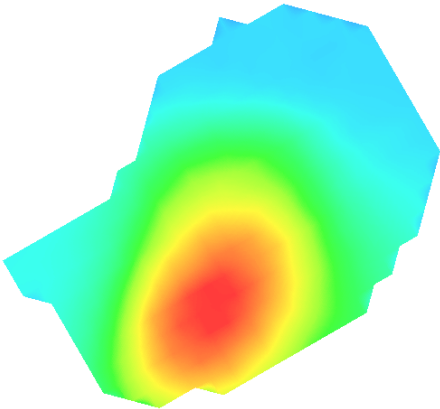
Maximum location: X=-43.00, Y=-32.00

SAR 10g (W/Kg)	0.123874
SAR 1g (W/Kg)	0.158956

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1625	0.1359	0.1130	0.0932

SAR, Z Axis Scan (X = -43, Y = -32)



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**date:MAY 28,2012****GSM 850 Mid-tilt-Right****DUT: 3G Mobile Phone ; Type: GALAXY PRIME**

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;
 ConvF=6.79;Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.03$; $\rho = 1000$ kg/m³ ; Phantom section: Right Section
 Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

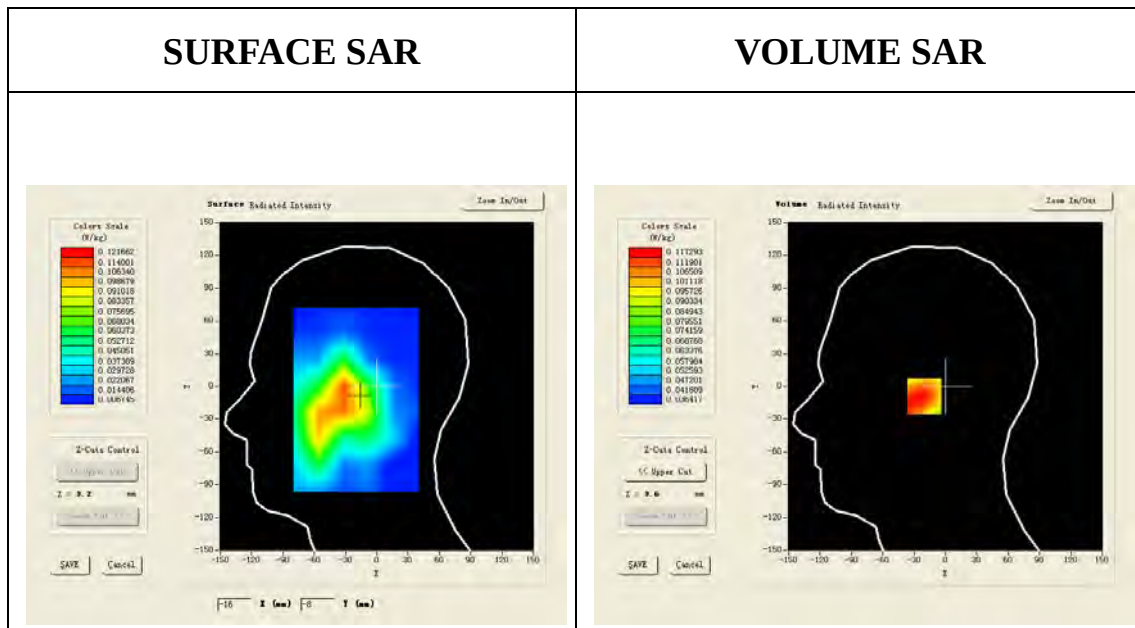
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM850 Mid Tilt-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm

**Configuration/GSM850 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,Very fast
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

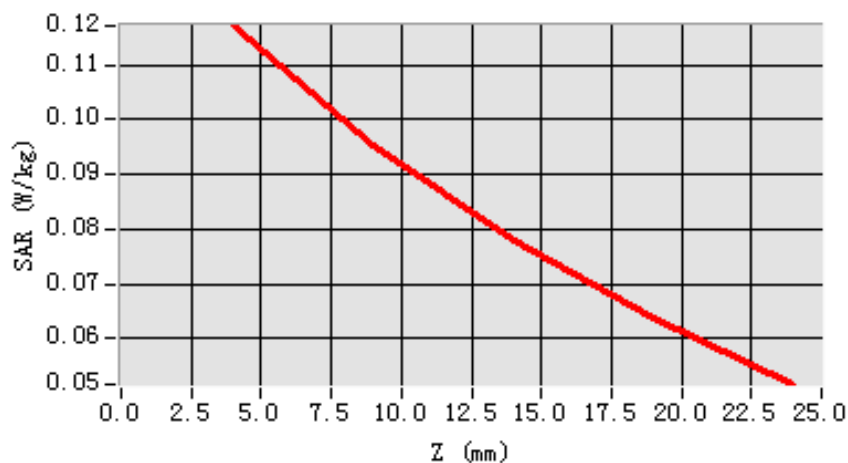


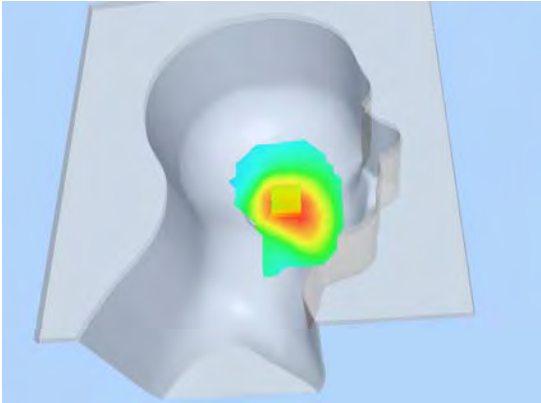
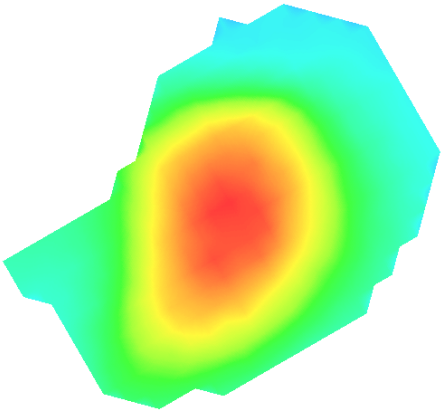
Maximum location: X=-16.00, Y=-9.00

SAR 10g (W/Kg)	0.089231
SAR 1g (W/Kg)	0.114337

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1171	0.0954	0.0779	0.0638

SAR, Z Axis Scan (X = -16, Y = -9)



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**date:MAY 28,2012****GSM 850 Mid-Body-Back****DUT: 3G Mobile Phone; Type: GALAXY PRIME**

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;
 ConvF=6.79;Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 54.66$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

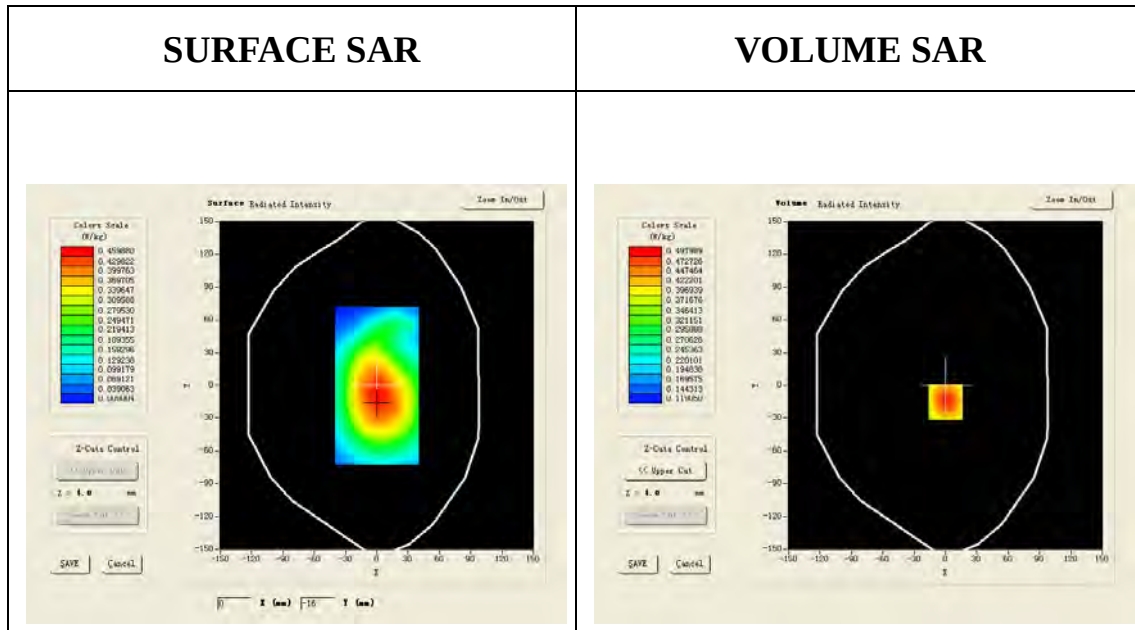
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM850 Mid Body-Back/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/GSM850 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

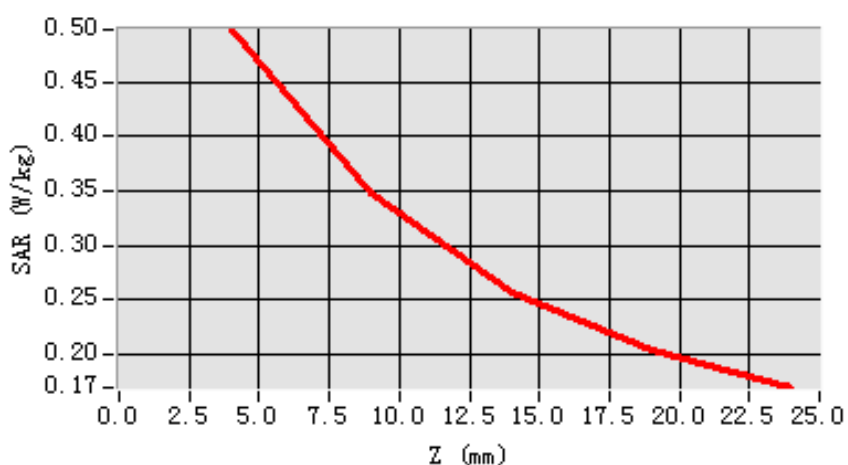


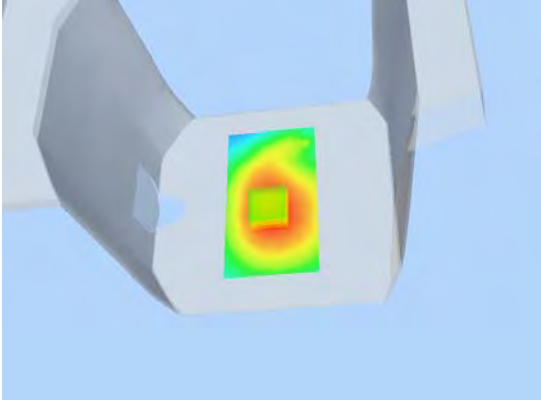
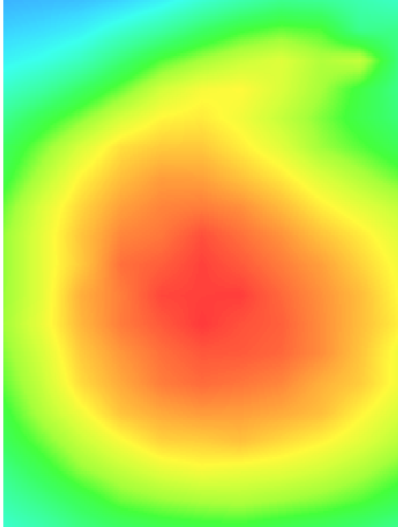
Maximum location: X=0.00, Y=-15.00

SAR 10g (W/Kg)	0.359948
SAR 1g (W/Kg)	0.514552

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.4980	0.3481	0.2572	0.2047

SAR, Z Axis Scan (X = 0, Y = -15)



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab

date:MAY 28,2012

GSM 850 Mid-body Back(2up)

DUT: 3G Mobile Phone; Type: GALAXY PRIME

Communication System: GPRS -2 Slot; Communication System Band: GSM850; Duty Cycle: 1:4.2 ;

ConvF=6.79;

Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 54.66$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

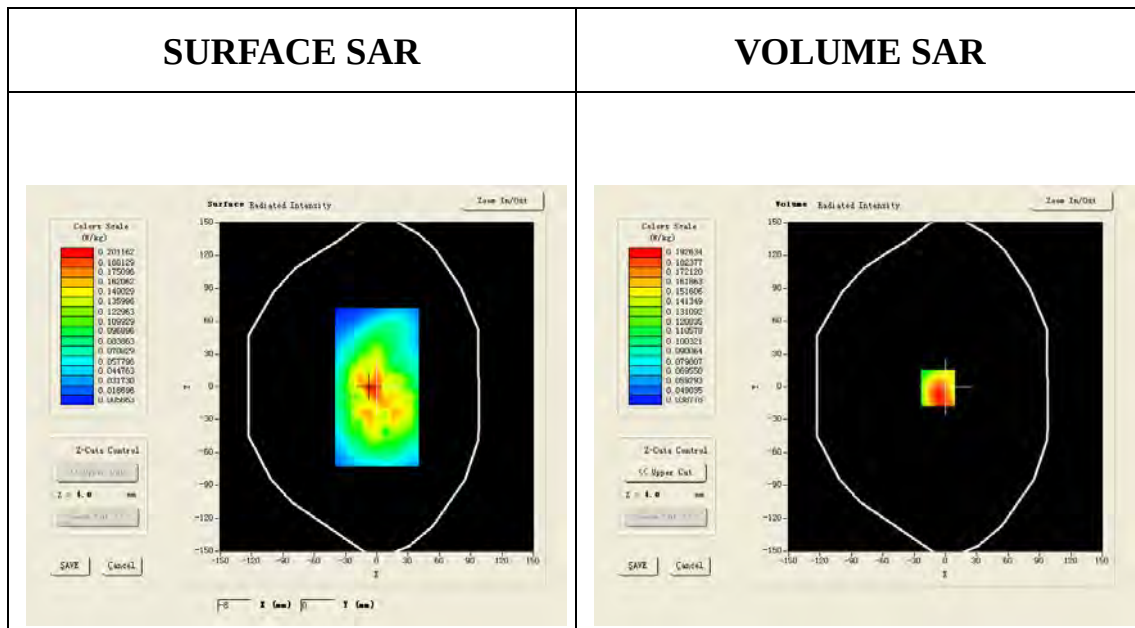
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GPRS850 Mid Body-Back/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

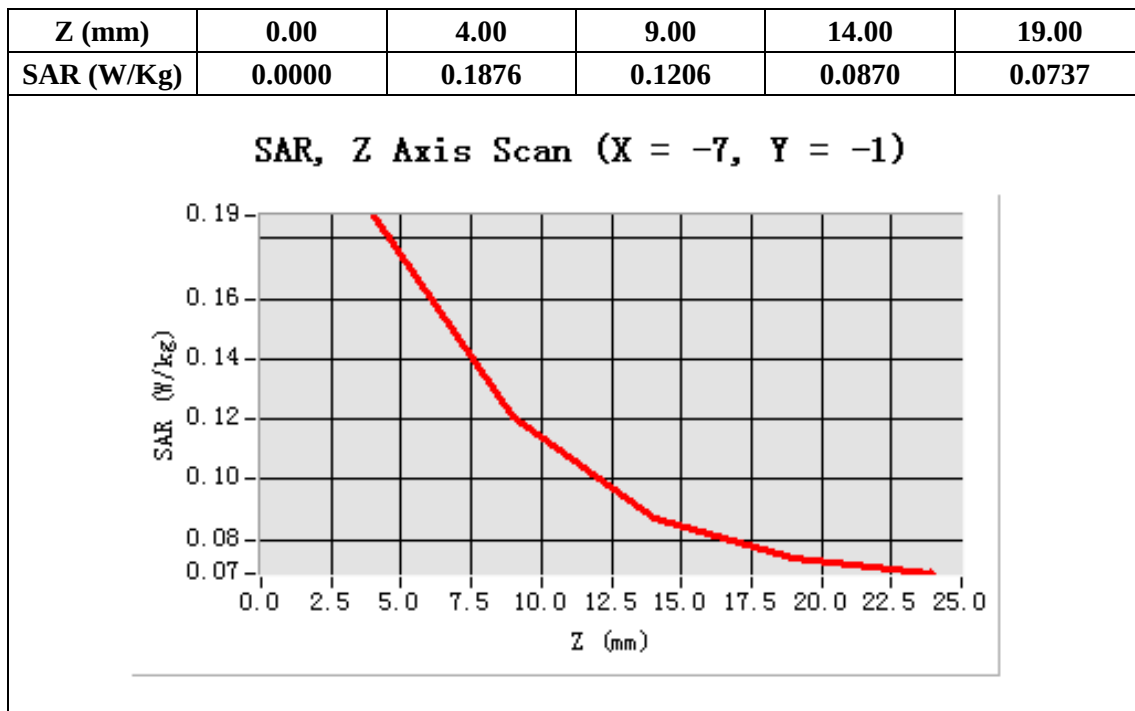
Configuration/GPRS850 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

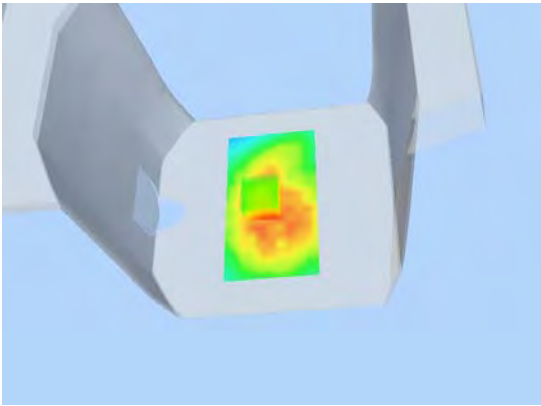
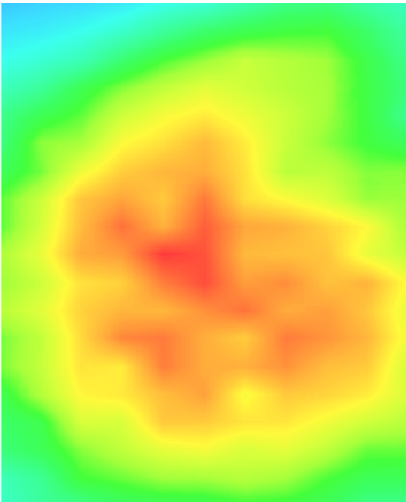
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 4.0)



Maximum location: X=-7.00, Y=-1.00

SAR 10g (W/Kg)	0.138353
SAR 1g (W/Kg)	0.202783



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**date:MAY 28,2012****GPRS 850 Mid-Body-back (3up)****DUT: 3G Mobile Phone; Type: GALAXY PRIME**

Communication System: GPRS -3 Slot; Communication System Band: GSM 850; Duty Cycle: 1:2.8 ;
ConvF=6.79;

Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 54.66$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

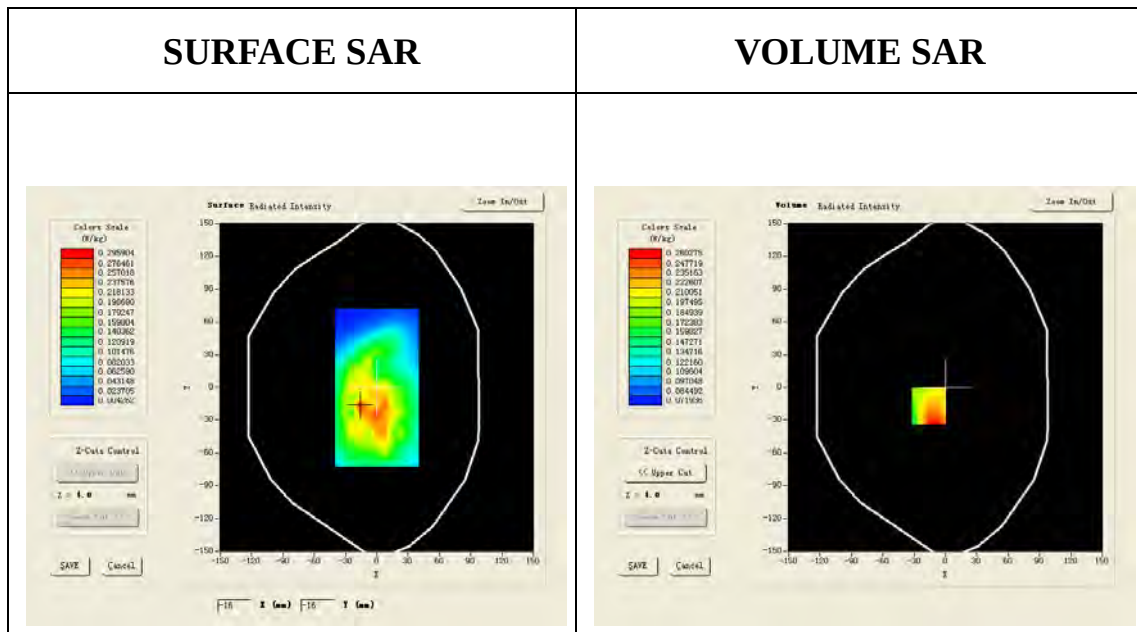
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GPRS850 Mid Body-Back/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/GPRS850 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor:2.7)

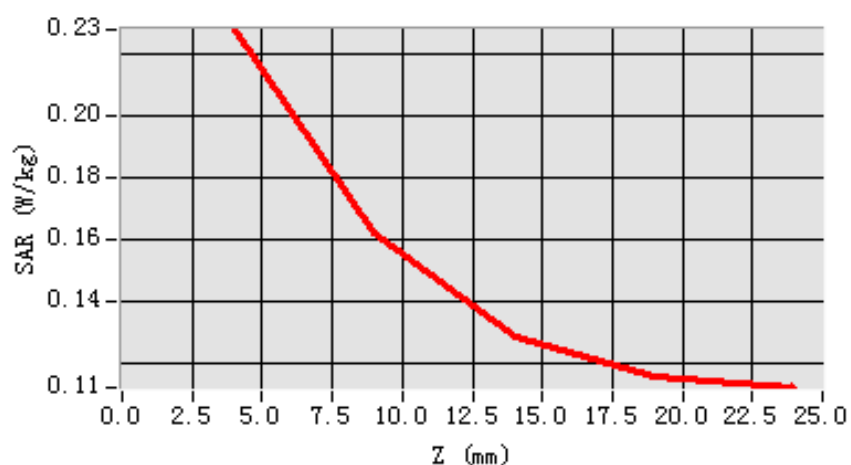


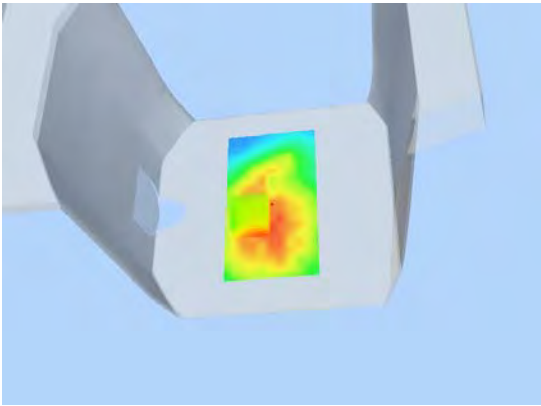
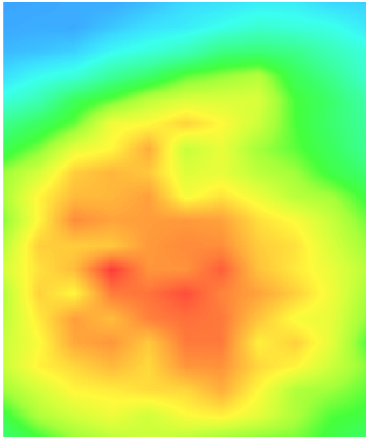
Maximum location: X=-16.00, Y=-17.00

SAR 10g (W/Kg)	0.198214
SAR 1g (W/Kg)	0.264855

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2281	0.1627	0.1290	0.1162

SAR, Z Axis Scan (X = -16, Y = -17)



3D screen shot	Hot spot position
 A 3D perspective view of a grey mechanical component, possibly a bracket or housing, against a light blue background. A rectangular area on the front face of the component is highlighted with a color-coded thermal map, showing a central red/orange hot spot transitioning to yellow and green towards the edges.	 A close-up, rectangular view of the thermal map shown in the 3D shot. It displays a complex, irregular shape with a core of bright red/orange, surrounded by yellow and green, indicating the spatial distribution of the heat source.

Test Laboratory: AGC Lab

date:MAY 28,2012

GPRS 850 Mid-body-Back (4up)

DUT: 3G Mobile Phone; Type: GALAXY PRIME

Communication System: GPRS -4 Slot; Communication System Band: GSM 850; Duty Cycle: 1:2.1 ;
ConvF=6.79;

Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 54.66$; $\rho = 1000$
kg/m³ ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

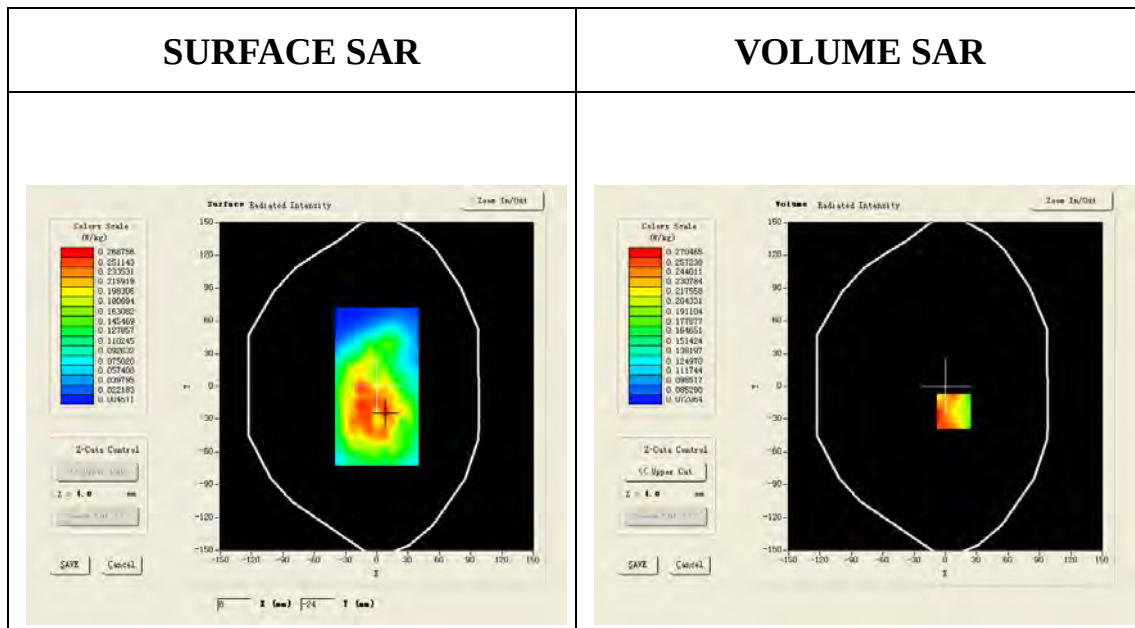
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GPRS850 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm

**Configuration/GPRS850 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,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 2.0)

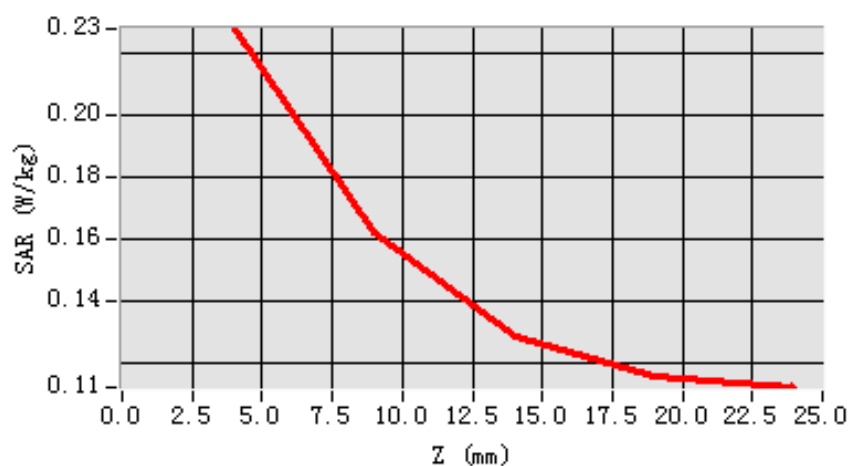


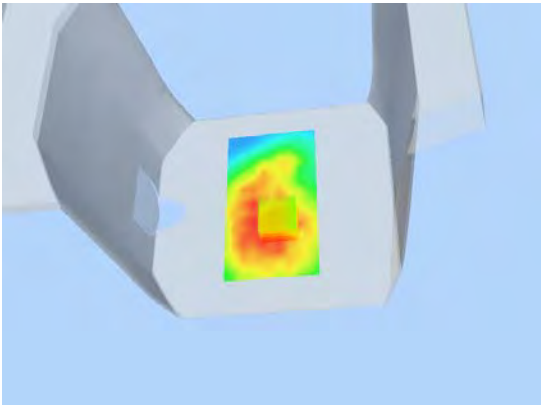
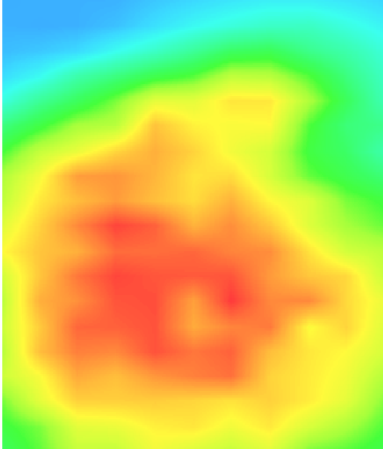
Maximum location: X=8.00, Y=-23.00

SAR 10g (W/Kg)	0.218576
SAR 1g (W/Kg)	0.269572

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2172	0.2241	0.1988	0.1508

SAR, Z Axis Scan (X = -16, Y = -17)



3D screen shot	Hot spot position
 A 3D perspective view of a grey mechanical component, possibly a bracket or housing, against a light blue background. A rectangular area on the front face of the component is highlighted with a color-coded overlay, showing a hot spot in red and yellow, transitioning to green and blue at the edges.	 A close-up, rectangular view of the hot spot area. It shows a color gradient from blue at the top and bottom edges to a bright red and yellow center, indicating the highest temperature or intensity. The shape is somewhat irregular, following the contours of the component's surface.

Test Laboratory: AGC Lab

date:MAY 28,2012

GSM 850 Mid-Body-Front

DUT: 3G Mobile Phone; Type: GALAXY PRIME

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;
ConvF=6.79;Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 54.66$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

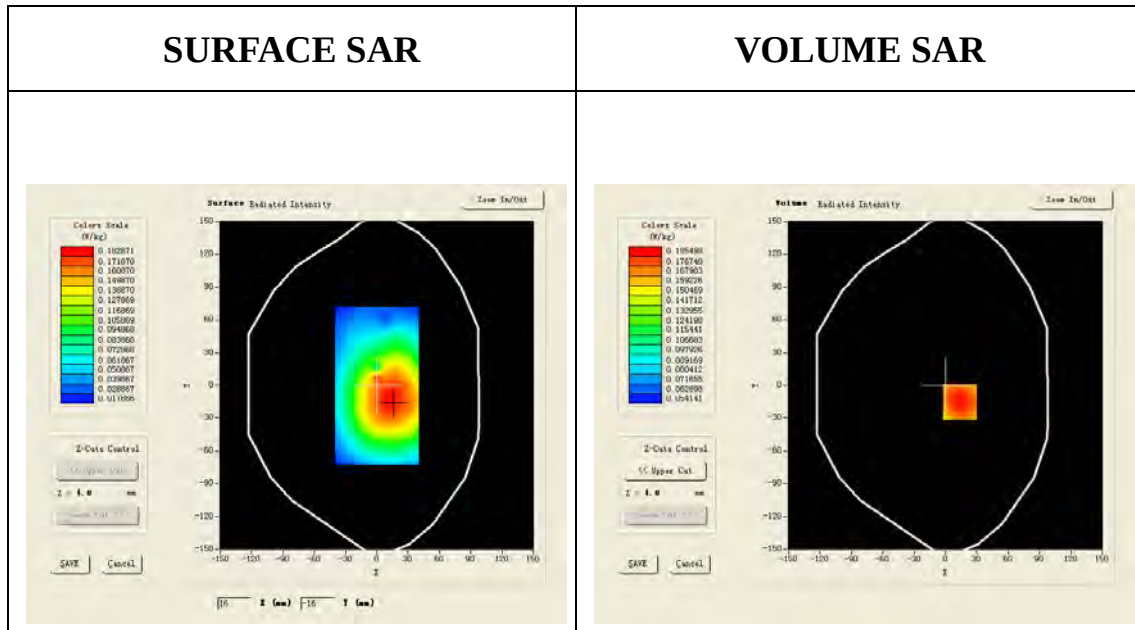
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM850 Mid Body- Front /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/GSM850 Mid Body- Front Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

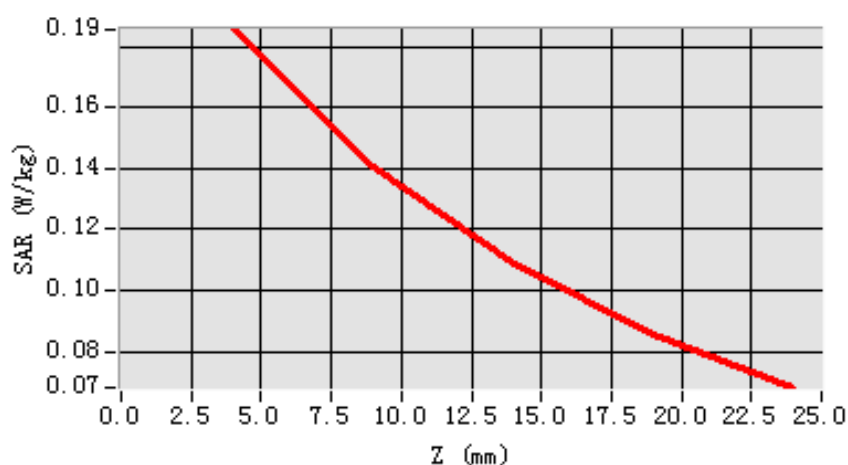


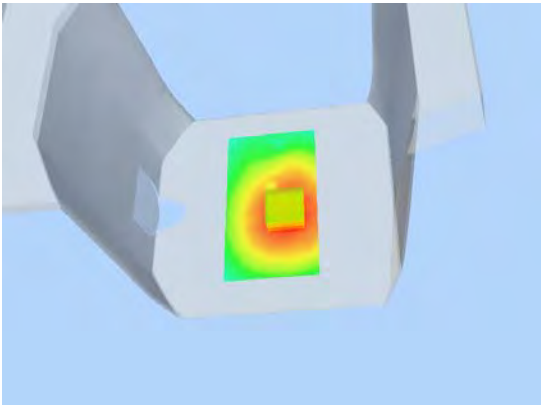
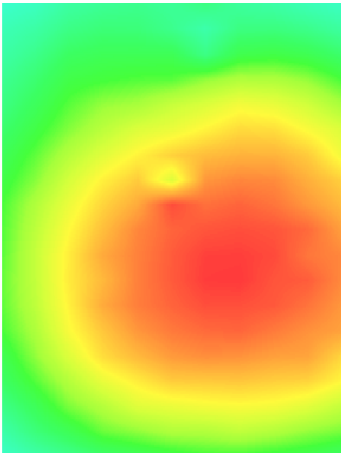
Maximum location: X=14.00, Y=-15.00

SAR 10g (W/Kg)	0.144179
SAR 1g (W/Kg)	0.193326

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1855	0.1403	0.1083	0.0857

SAR, Z Axis Scan (X = 14, Y = -15)



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab

date:MAY 28,2012

GSM 850 Mid-Body-Back(with earphone)

DUT: 3G Mobile Phone; Type: GALAXY PRIME

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;
ConvF=6.79;Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 54.66$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

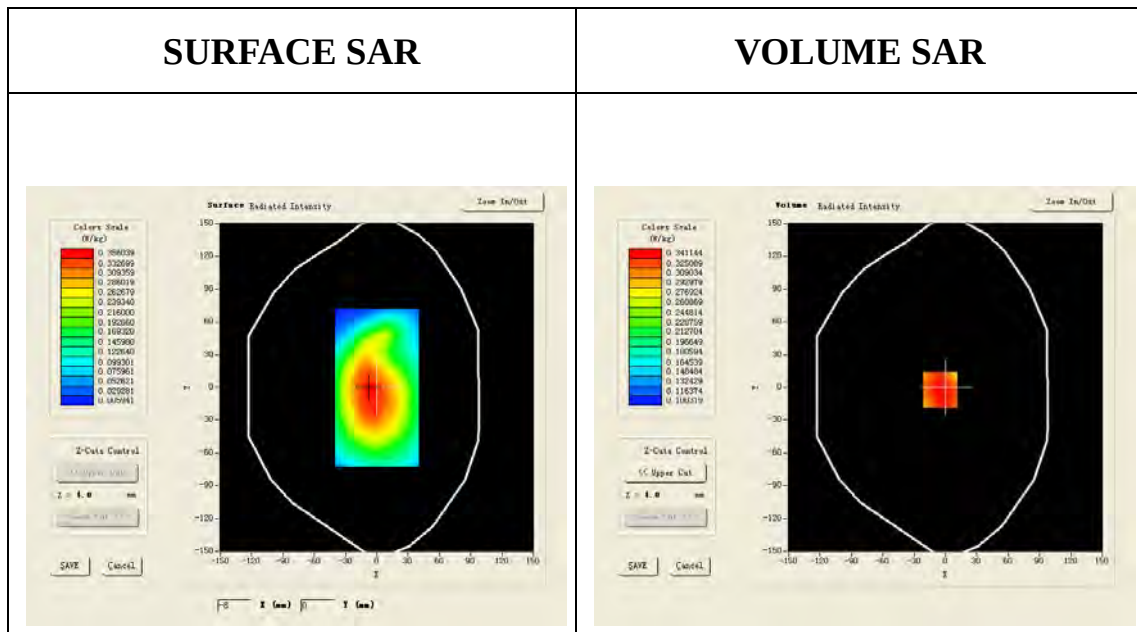
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM850 Mid Body-Back/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/GSM850 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

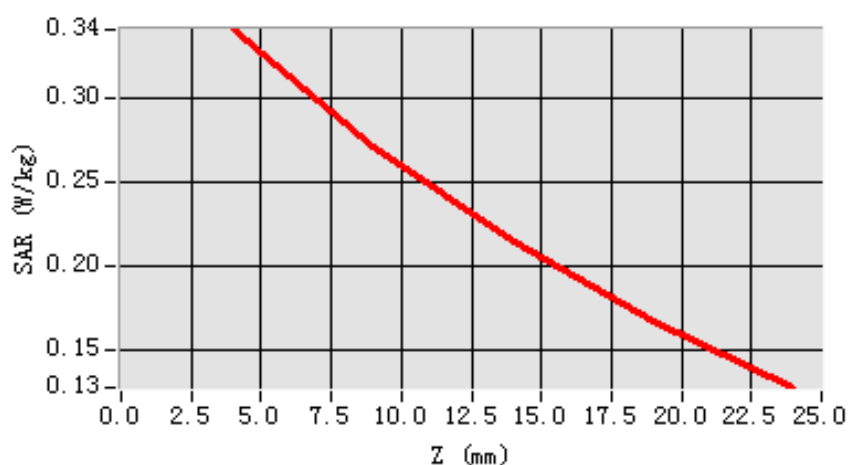


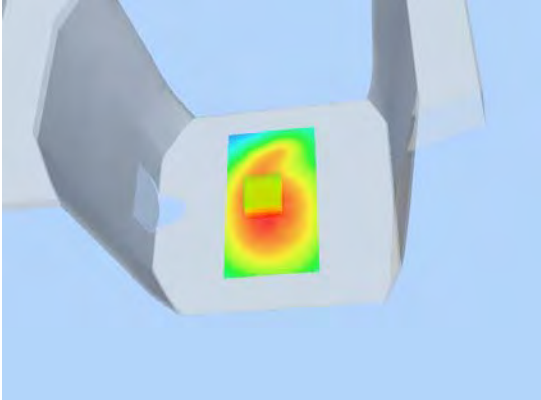
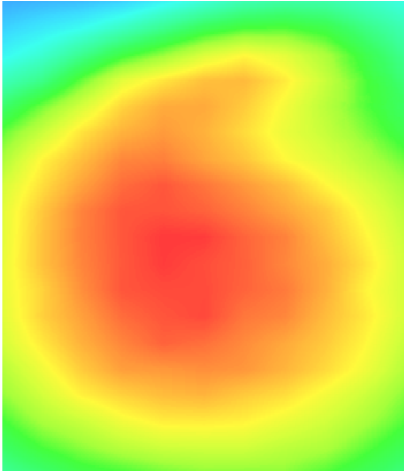
Maximum location: X=-5.00, Y=-2.00

SAR 10g (W/Kg)	0.273880
SAR 1g (W/Kg)	0.356940

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.3411	0.2713	0.2142	0.1674

SAR, Z Axis Scan (X = -5, Y = -2)



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**Date: MAY 28, 2012****WCDMA Band V Middle-touch-Left (RMC)****DUT: 3G MOBILE PHONE; Type: GALAXY PRIME**

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD ; DutyCycle: 1: 1;
Conv.F=6.79

Frequency: 835 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.03$;

$\rho = 1000$ kg/m³ ; Phantom section: Left Section

Ambient temperature (°C): 21, Liquid temperature (°C): 21

Satimo Configuration:

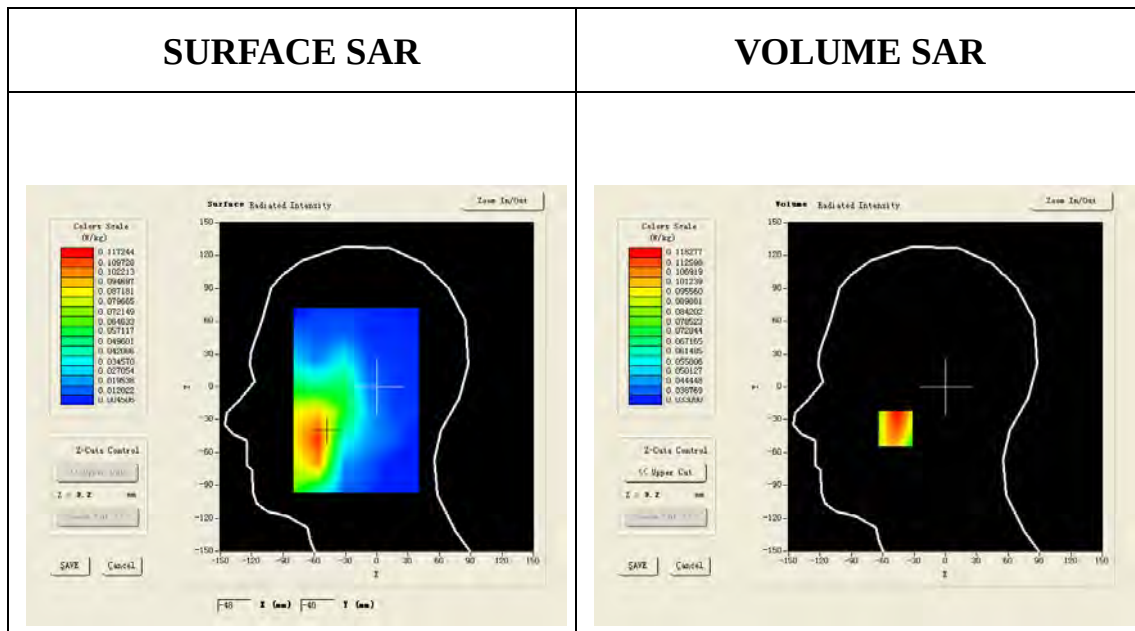
Probe: SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band V Mid Touch-Left/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

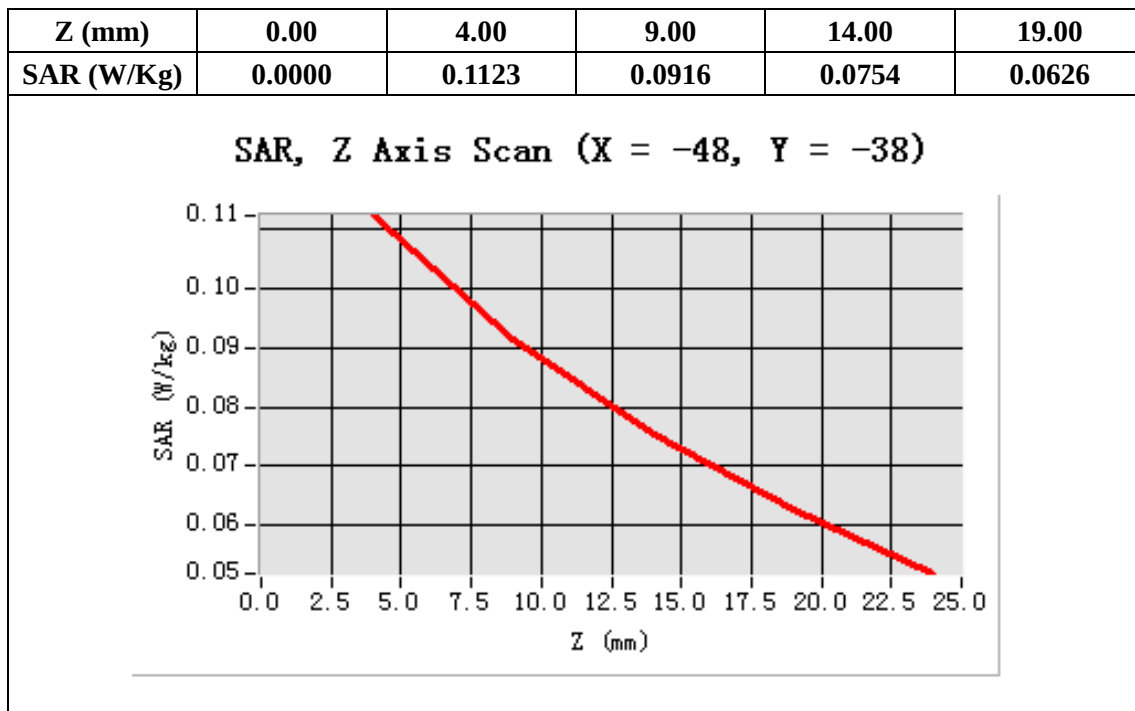
Configuration/ WCDMA Band V Mid Touch-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

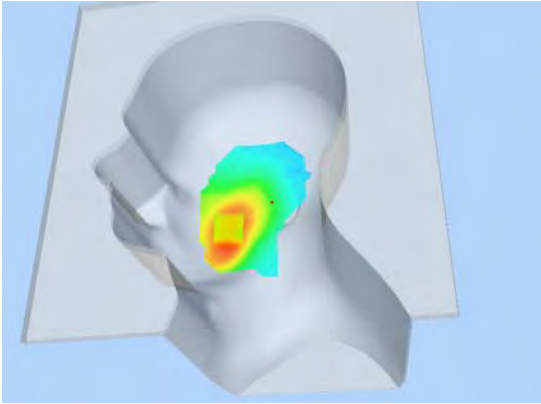
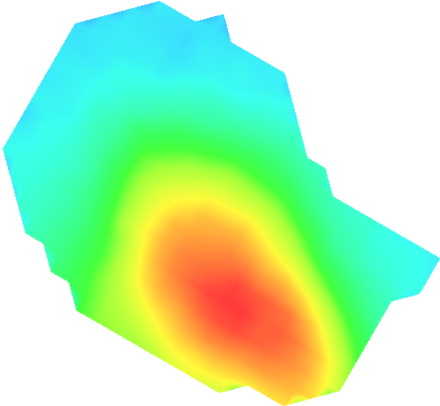
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7, dx=8mm dy=8mm dz=5mm, Very fast
Phantom	Left head
Device Position	Cheek
Band	WCDMA Band V
Channels	Middle
Signal	TDMA (Crest factor: 1.0)



Maximum location: X=-48.00, Y=-38.00

SAR 10g (W/Kg)	0.087236
SAR 1g (W/Kg)	0.113724



3D screen shot	Hot spot position
 A 3D model of a human head and neck, rendered in a light blue-grey color. The head is positioned in a three-quarter view, facing slightly to the left. A small, irregularly shaped area on the side of the head, near the ear, is highlighted with a color gradient from yellow to red, indicating a hot spot. The background is a solid light blue.	 A 2D map showing the hot spot position. The map is an irregular, roughly oval shape with a color gradient from yellow to red in the center, transitioning through green to cyan at the edges. The background is white.

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA Band V Mid Tilt-left (RMC)****DUT:3G MOBILE PHONE; Type: GALAXY PRIME**

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;
Conv.F=6.79

Frequency: 835 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.03$;

$\rho = 1000$ kg/m³ ; Phantom section: Left Section

Ambient temperature (°C): 21, Liquid temperature (°C): 21

Satimo Configuration:

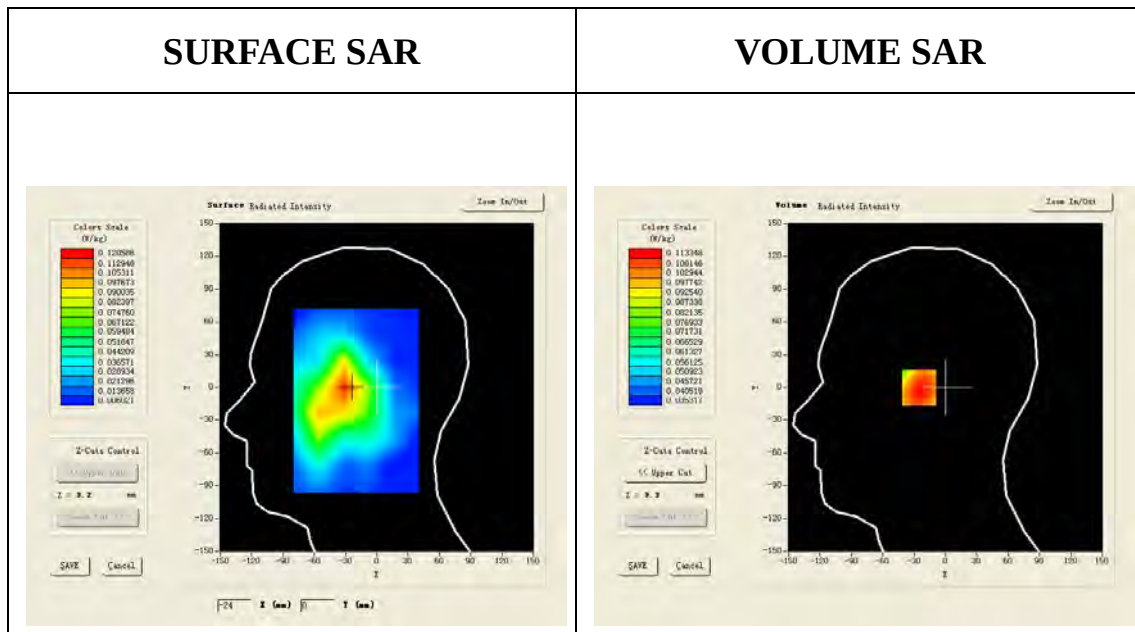
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band V Mid Tilt-Left/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

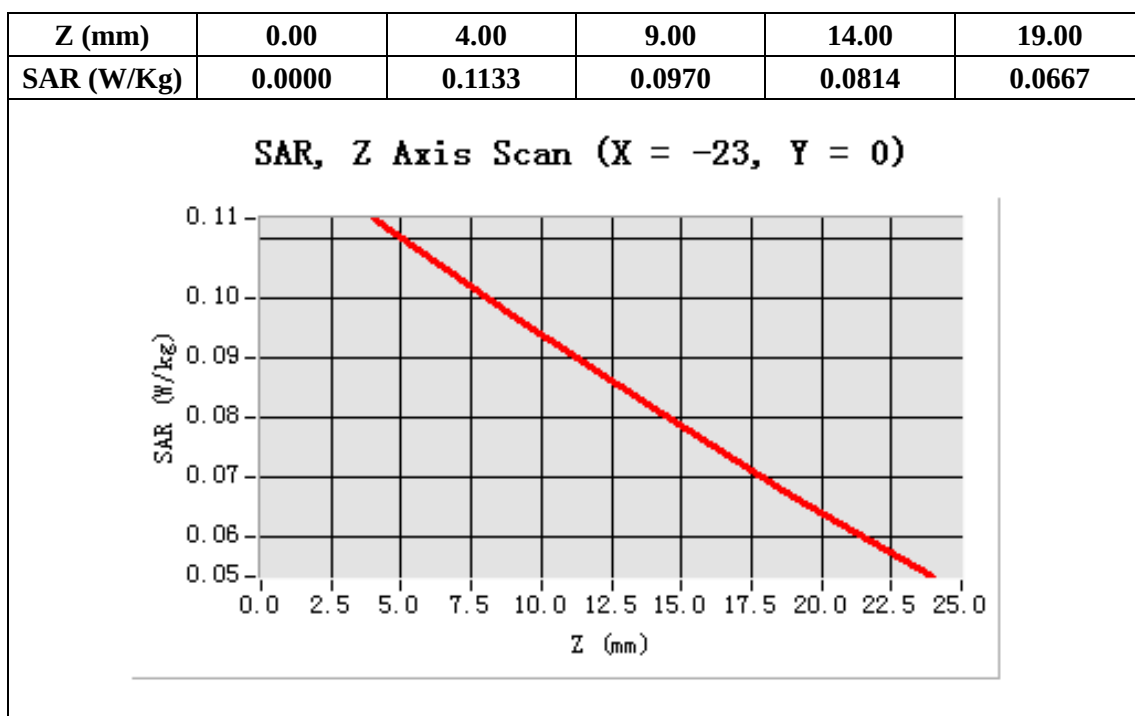
Configuration/ WCDMA Band V Mid Tilt-Left/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

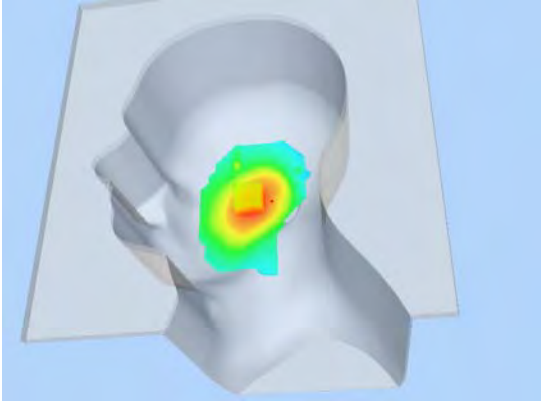
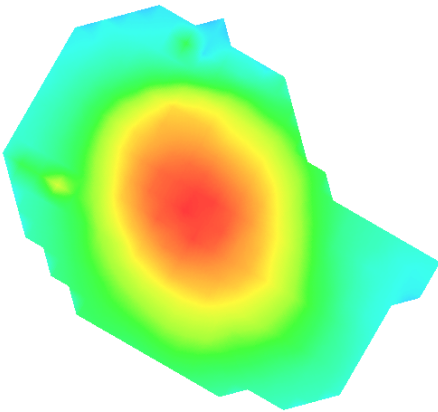
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Left head
Device Position	Tilt
Band	WCDMA Band V
Channels	Middle
Signal	TDMA (Crest factor: 1.0)



Maximum location: X=-23.00, Y=0.00

SAR 10g (W/Kg)	0.088629
SAR 1g (W/Kg)	0.110502



3D screen shot	Hot spot position
 A 3D model of a human head and neck, rendered in a light blue-grey color. The head is positioned on a light blue rectangular base. A hot spot is visible on the side of the head, indicated by a color gradient from green to yellow to red, with the red area being the most intense.	 A 2D map showing the hot spot position. The map is irregular in shape, with a central red area surrounded by yellow and green areas, indicating the intensity of the hot spot. The map is set against a light grey background.

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA Band V Middle touch-Right (RMC)****DUT:3G MOBILE PHONE; Type: GALAXY PRIME**

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;
Conv.F=6.79

Frequency: 835 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.03$;

$\rho = 1000$ kg/m³ ; Phantom section: Right Section

Ambient temperature (°C): 21, Liquid temperature (°C): 21

Satimo Configuration:

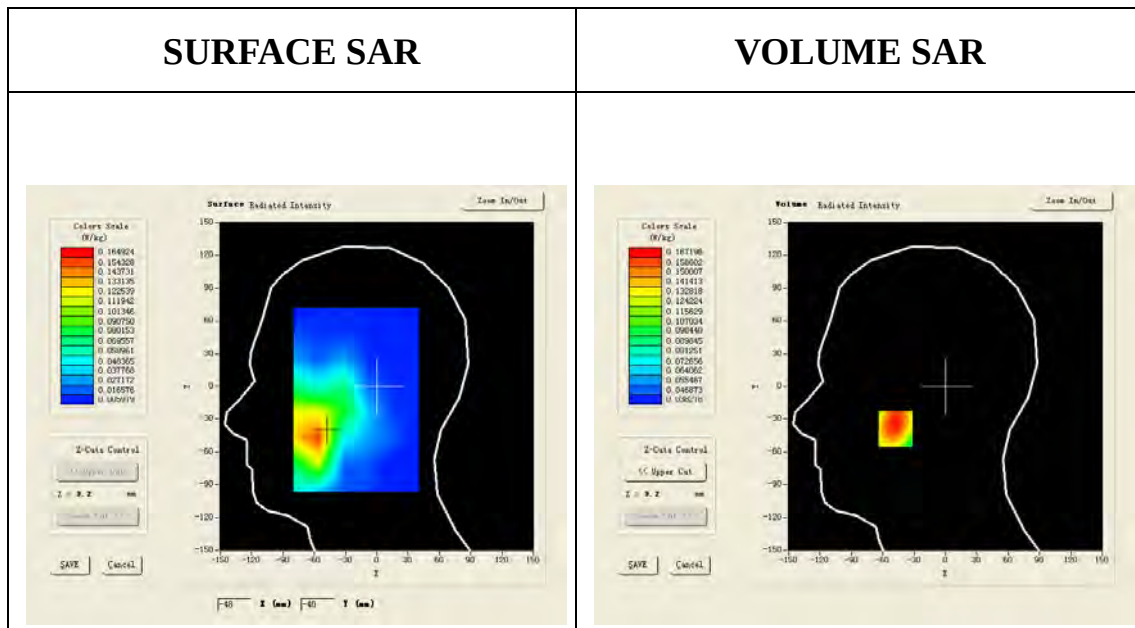
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band V Mid Touch-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm

Configuration/ WCDMA Band V 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,Very fast
Phantom	Right head
Device Position	Cheek
Band	WCDMA Band V
Channels	Middle
Signal	TDMA (Crest factor: 1.0)

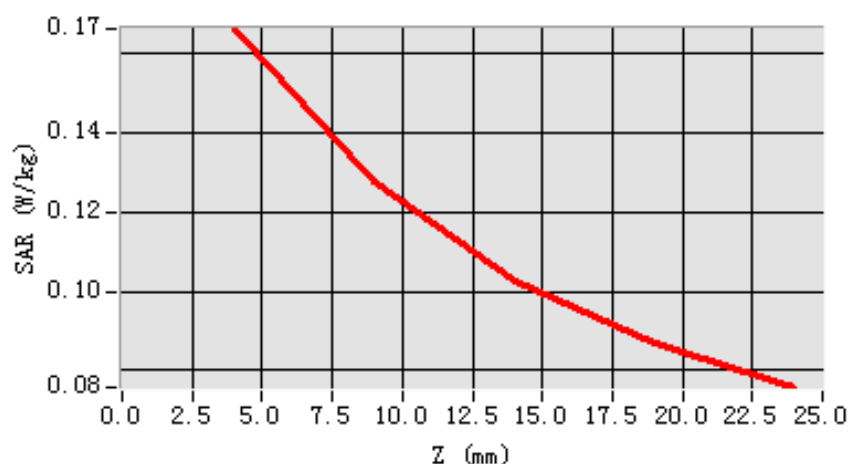


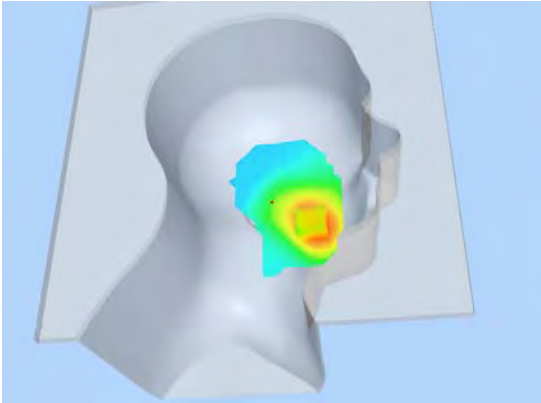
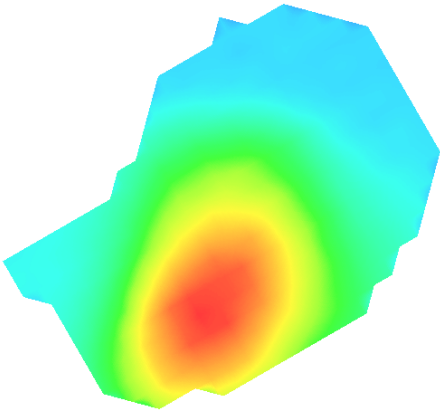
Maximum location: X=-48.00, Y=-39.00

SAR 10g (W/Kg)	0.123049
SAR 1g (W/Kg)	0.162481

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1660	0.1274	0.1023	0.0868

SAR, Z Axis Scan (X = -48, Y = -39)



3D screen shot	Hot spot position
 A 3D rendering of a human head model in profile, facing right. The head is light gray. A hot spot is visible on the nose, represented by a color gradient from blue (low intensity) to red (high intensity). The hot spot is centered on the bridge of the nose and extends slightly to the sides. The background is a light blue gradient.	 A 2D map showing the hot spot position. The map is irregularly shaped, representing the head's profile. It features a color gradient from blue (low intensity) to red (high intensity). The red area is concentrated in the center, representing the nose, and fades to blue towards the edges. The background is white.

Test Laboratory: AGC Lab

Date:MAY 28,2012

WCDMA Band V Mid-tilt-Right (RMC)

DUT:3G MOBILE PHONE; Type: GALAXY PRIME

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;
Conv.F=6.79

Frequency: 835 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.03$;

$\rho = 1000$ kg/m³ ; Phantom section:Right Section

Ambient temperature (°C): 21, Liquid temperature (°C): 21

Satimo Configuration:

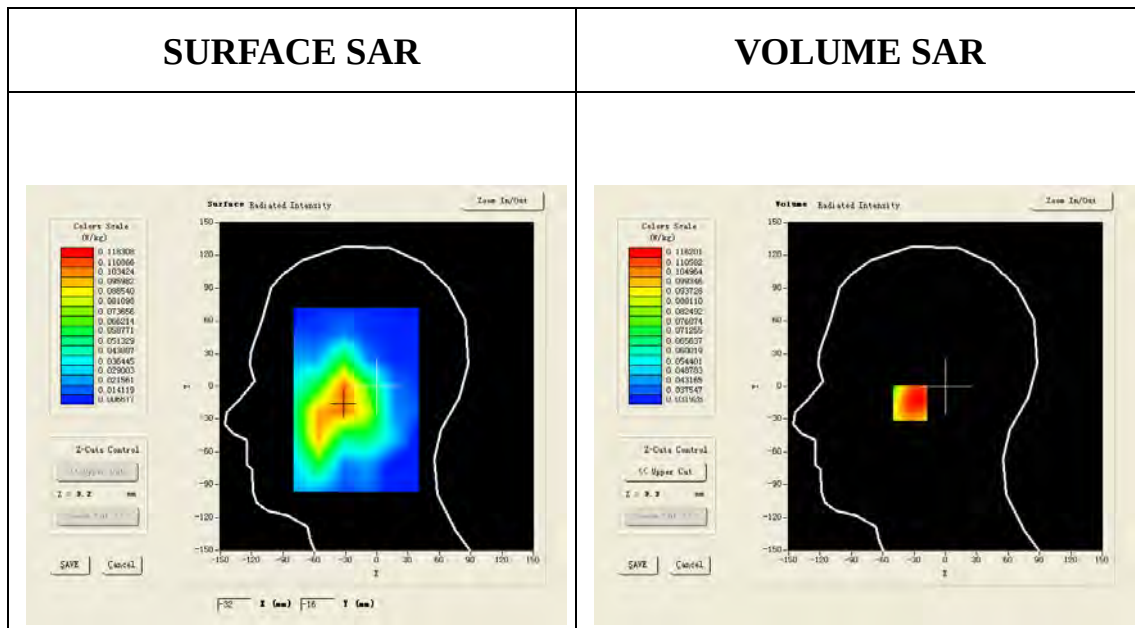
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band V Mid Tilt-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm

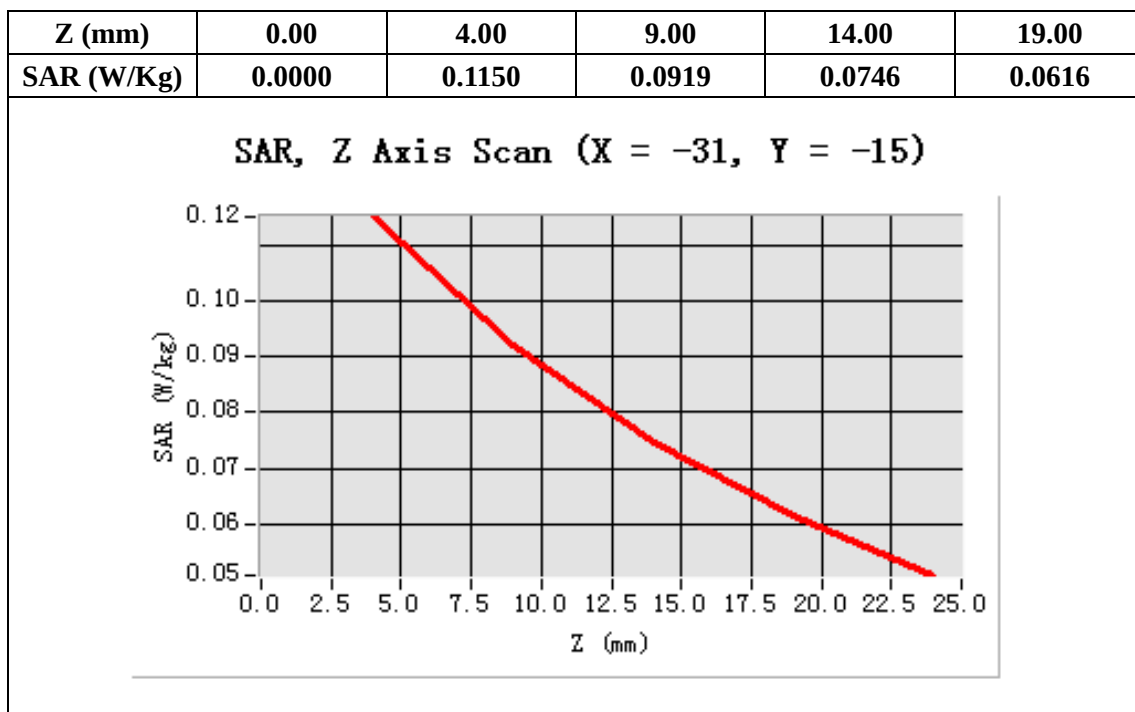
Configuration/ WCDMA Band V Mid Tilt-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

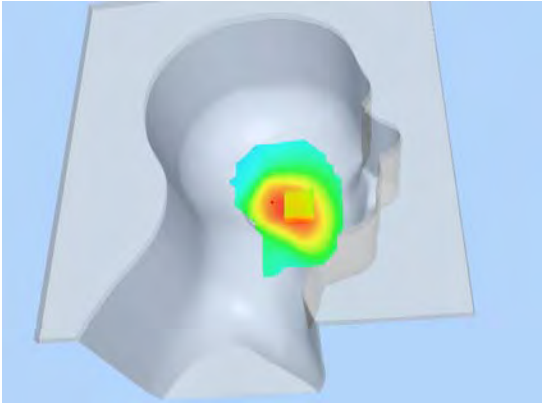
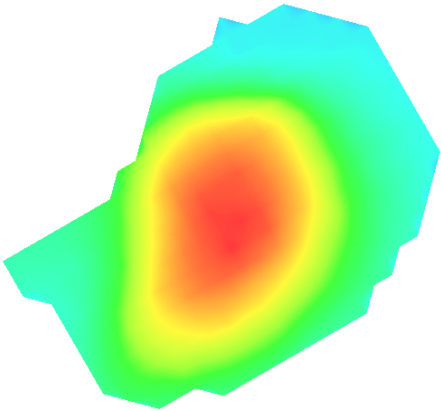
Area Scan	sam_direct_droit2_surf8mm.txt
Zoom Scan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Right head
Device Position	Tilt
Band	WCDMA Band V
Channels	Middle
Signal	TDMA (Crest factor: 1.0)



Maximum location: X=-31.00, Y=-15.00

SAR 10g (W/Kg)	0.088419
SAR 1g (W/Kg)	0.113434



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA Band V Mid-Body-Towards Phantom (RMC)****DUT:3G MOBILE PHONE; Type:GALAXY PRIME**

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;
Conv.F=6.79

Frequency: 835 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 54.66$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

Satimo Configuration:

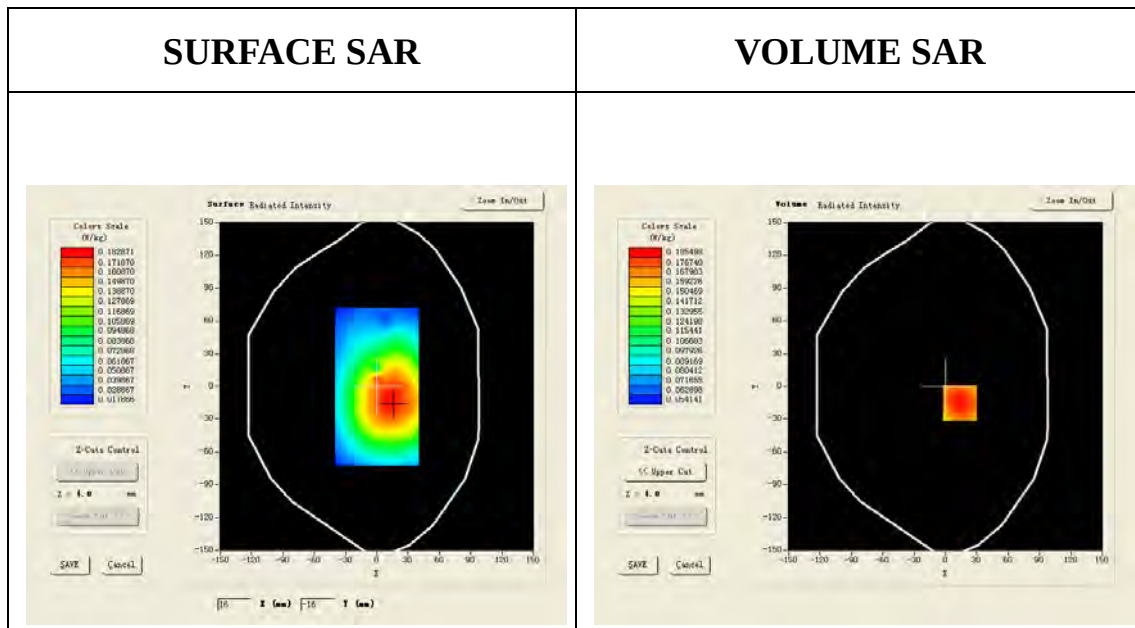
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band V Mid Body-Front/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/ WCDMA Band V Mid Body-Front/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

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

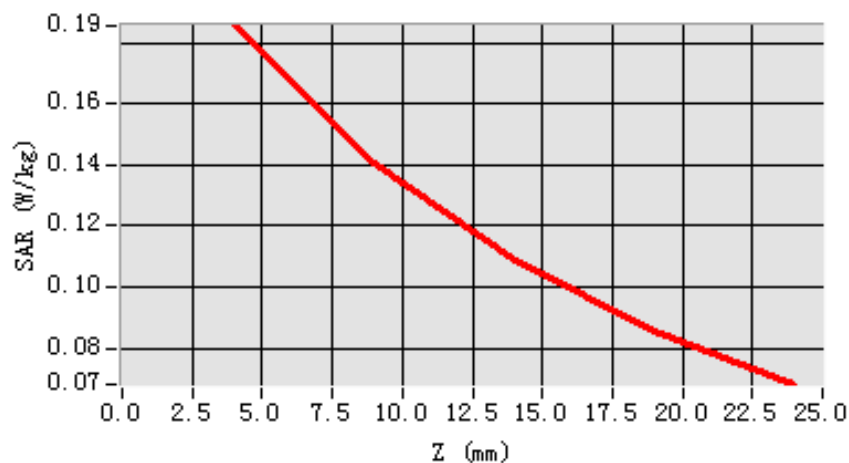


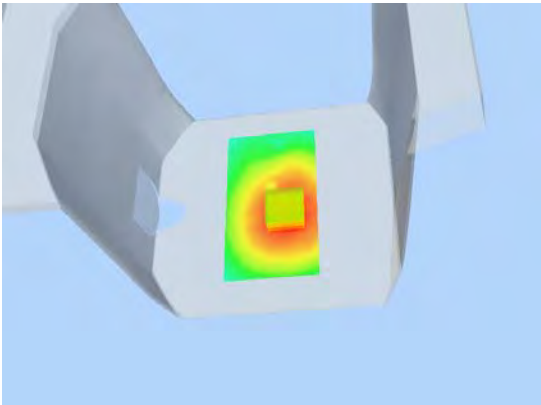
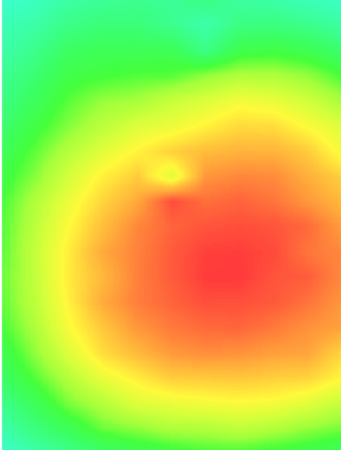
Maximum location: X=14.00, Y=-15.00

SAR 10g (W/Kg)	0.144179
SAR 1g (W/Kg)	0.193326

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1855	0.1403	0.1083	0.0857

SAR, Z Axis Scan (X = 14, Y = -15)



3D screen shot	Hot spot position
 A 3D perspective view of a grey mechanical component, possibly a bracket or housing, against a light blue background. A rectangular area on the front face of the component is highlighted with a color gradient overlay, ranging from green at the edges to red in the center, indicating a hot spot.	 A 2D rectangular color map showing a circular hot spot. The center of the map is red, transitioning through orange and yellow to green at the edges, representing a temperature distribution.

Test Laboratory: AGC Lab

Date:MAY 28,2012

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

DUT:3G MOBILE PHONE; Type:GALAXY PRIME

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;
Conv.F=6.79

Frequency: 835 MHz; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 54.66$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section

Ambient temperature ($^{\circ}\text{C}$):21, Liquid temperature ($^{\circ}\text{C}$):21

Satimo Configuration:

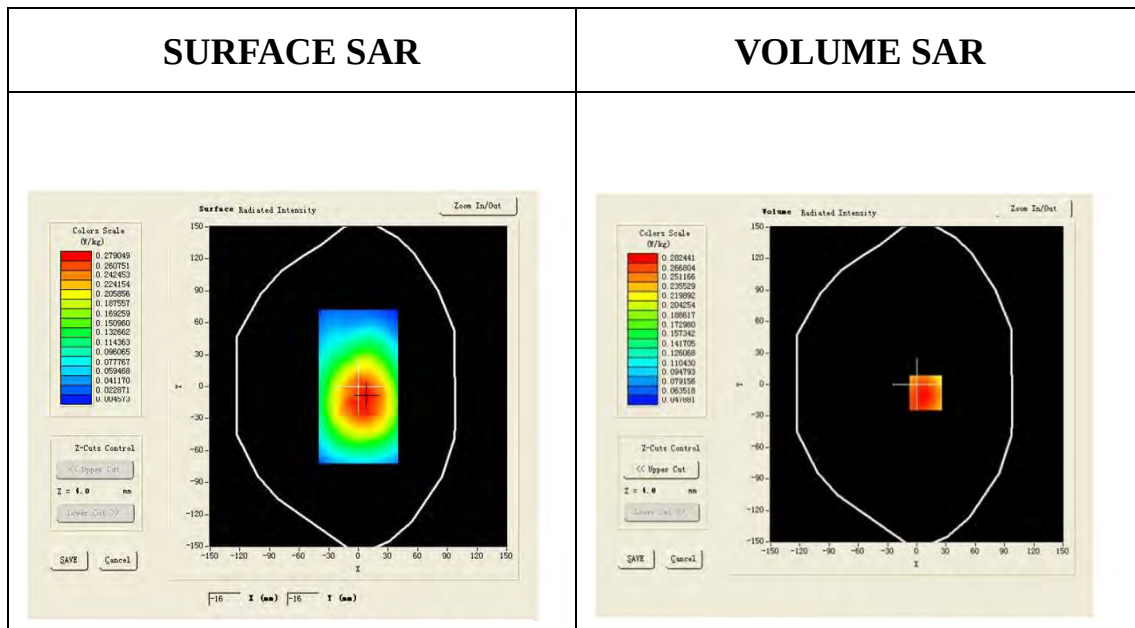
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band V Mid Body- Back /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/ WCDMA Band V Mid Body- Back /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

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

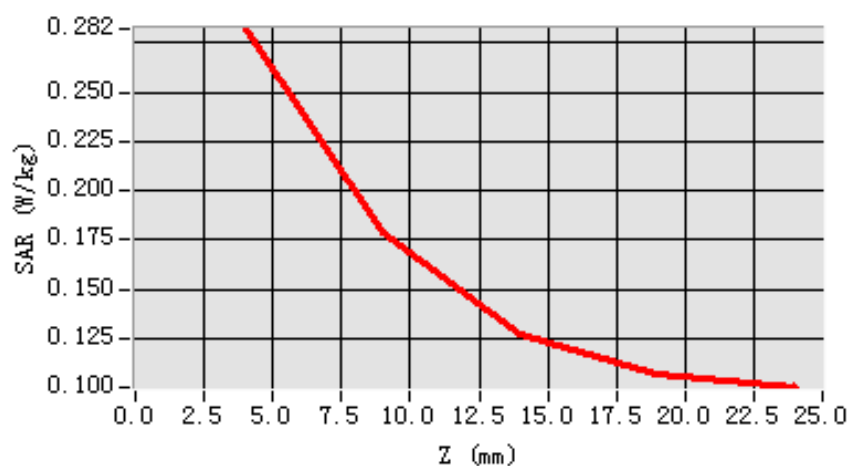


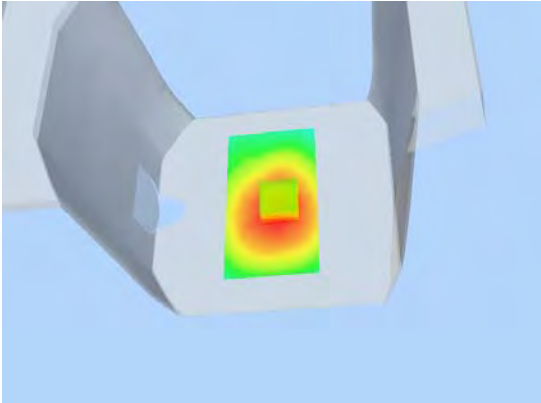
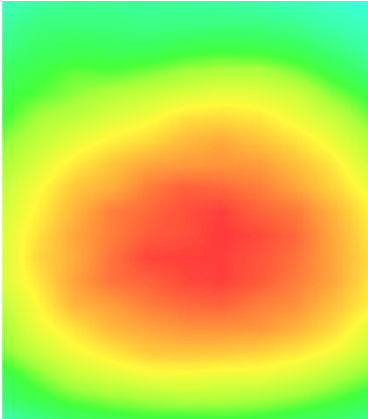
Maximum location: X=-16.00, Y=-16.00

SAR 10g (W/Kg)	0.209065
SAR 1g (W/Kg)	0.304317

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2822	0.1785	0.1272	0.1073

SAR, Z Axis Scan (X = -16, Y = -16)



3D screen shot	Hot spot position
 A 3D perspective view of a grey mechanical component against a light blue background. A rectangular area on the front face of the component is highlighted with a color gradient, indicating a hot spot. The gradient transitions from green at the edges to a bright yellow and red in the center, with a small red square at the very center.	 A 2D rectangular heatmap representing the hot spot position. It features a radial color gradient where the center is a solid red, surrounded by concentric rings of orange, yellow, and green, fading to a light green at the outer edges.

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA Band V Mid-body- Towards Grounds(HSDPA)****DUT:3G MOBILE PHONE; Type:GALAXY PRIME**

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;
Conv.F=6.79

Frequency: 835 MHz; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 54.66$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section

Ambient temperature ($^{\circ}\text{C}$):21, Liquid temperature ($^{\circ}\text{C}$):21

Satimo Configuration:

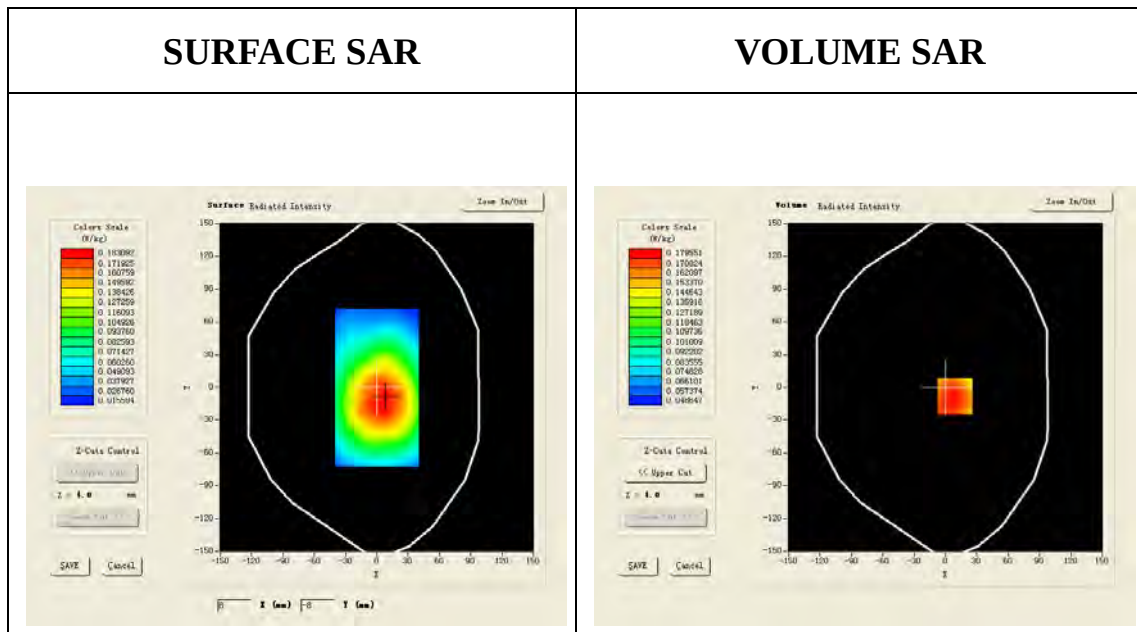
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band V Mid Body- Back /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/ WCDMA Band V Mid Body- Back /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

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

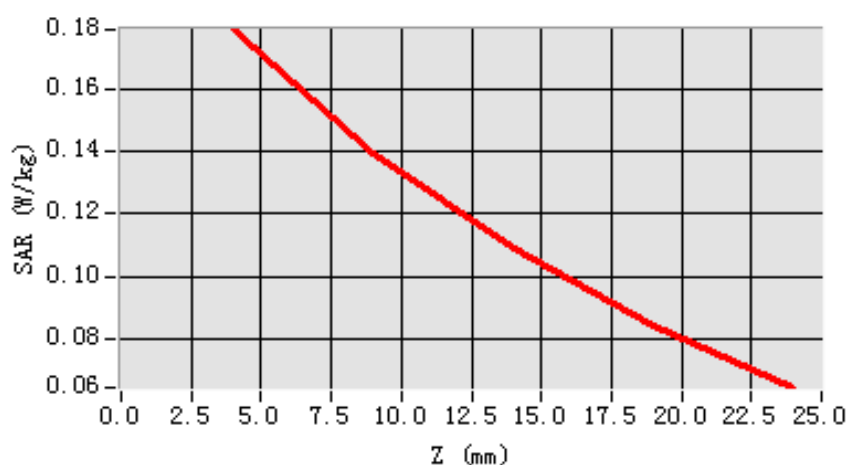


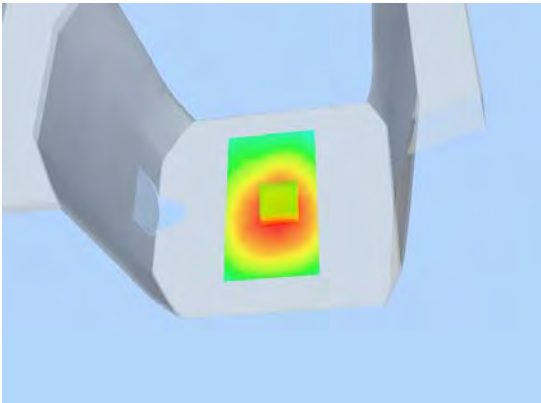
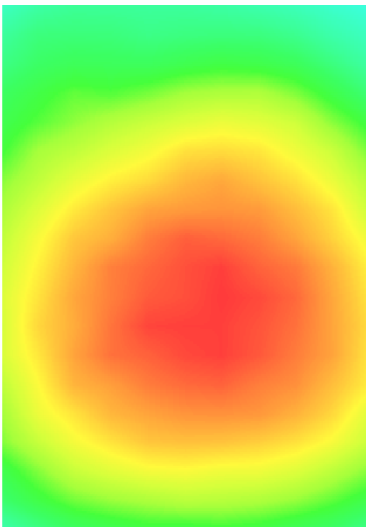
Maximum location: X=9.00, Y=-8.00

SAR 10g (W/Kg)	0.141020
SAR 1g (W/Kg)	0.187678

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1796	0.1399	0.1088	0.0843

SAR, Z Axis Scan (X = 9, Y = -8)



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab

Date:MAY 28,2012

WCDMA Band V Mid-body- Towards Grounds(with earphone)(RMC)

DUT:3G MOBILE PHONE; Type:GALAXY PRIME

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD ; DutyCycle:1: 1;
Conv.F=6.79

Frequency: 835 MHz; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 54.66$; $\rho = 1000 \text{ kg/m}^3$; Phantom section: Flat Section

Ambient temperature ($^{\circ}\text{C}$):21, Liquid temperature ($^{\circ}\text{C}$):21

Satimo Configuration:

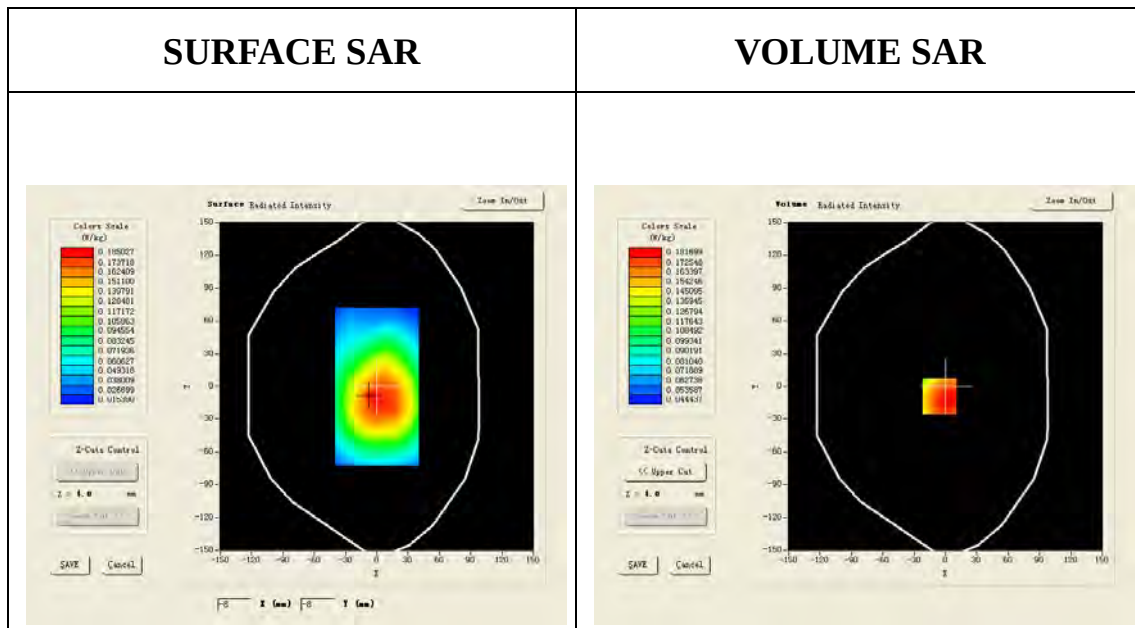
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band V Mid Body- Back /Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

Configuration/ WCDMA Band V Mid Body- Back /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

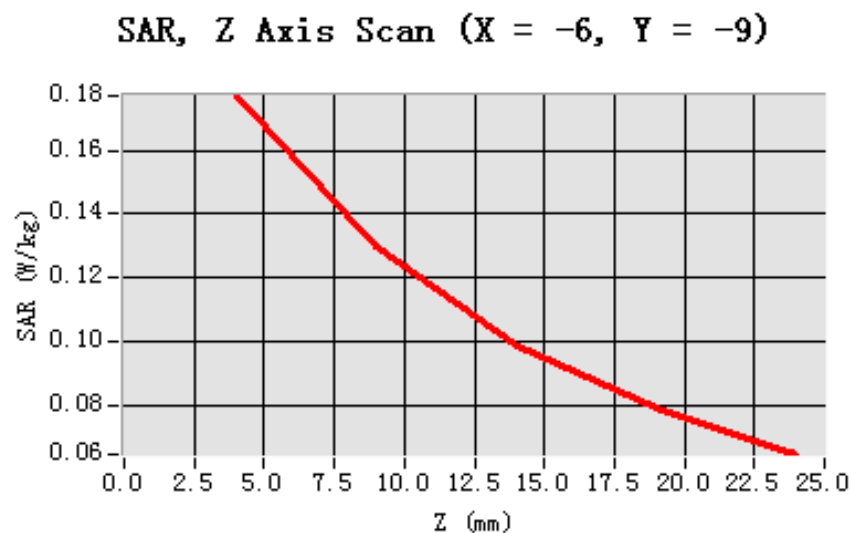
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body Back
Band	WCDMA Band V
Channels	Middle
Signal	TDMA (Crest factor: 1.0)

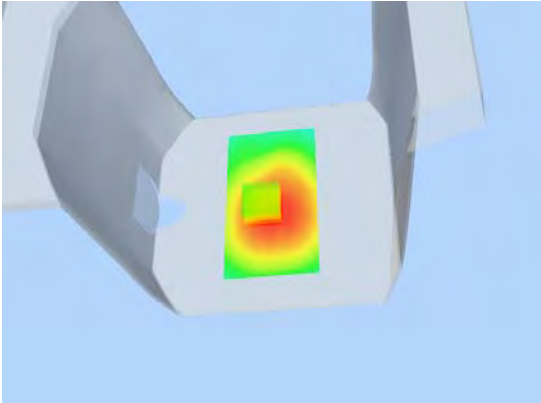
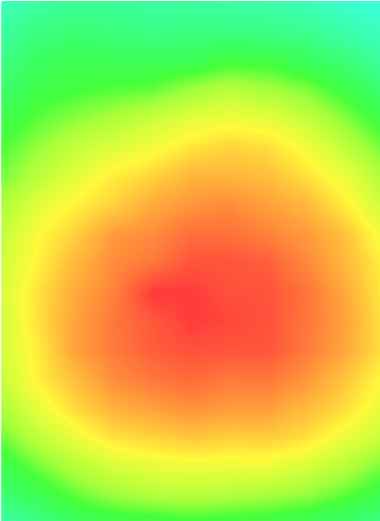


Maximum location: X=-6.00, Y=-9.00

SAR 10g (W/Kg)	0.141215
SAR 1g (W/Kg)	0.191116

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1771	0.1298	0.0988	0.0791



3D screen shot	Hot spot position
 A 3D CAD model of a mechanical part, possibly a bracket or housing, shown in a light blue color. A rectangular area on the front face of the part is highlighted with a color gradient overlay, indicating a hot spot. The gradient transitions from green at the edges to yellow and then to a small red square in the center, representing the highest temperature or intensity.	 A close-up, 2D view of the hot spot area. It shows a circular color gradient on a black background. The center is a bright red, transitioning through orange and yellow to a green outer ring, illustrating the spatial distribution of the hot spot.

Test Laboratory: AGC Lab

data: May 28,2012

PCS 1900 Mid-Touch Left

DUT: 3G Mobile Phone; Type: GALAXY PRIME

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
ConvF=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.12$;
 $\rho = 1000$ kg/m³ ; Phantom section: Left Section
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

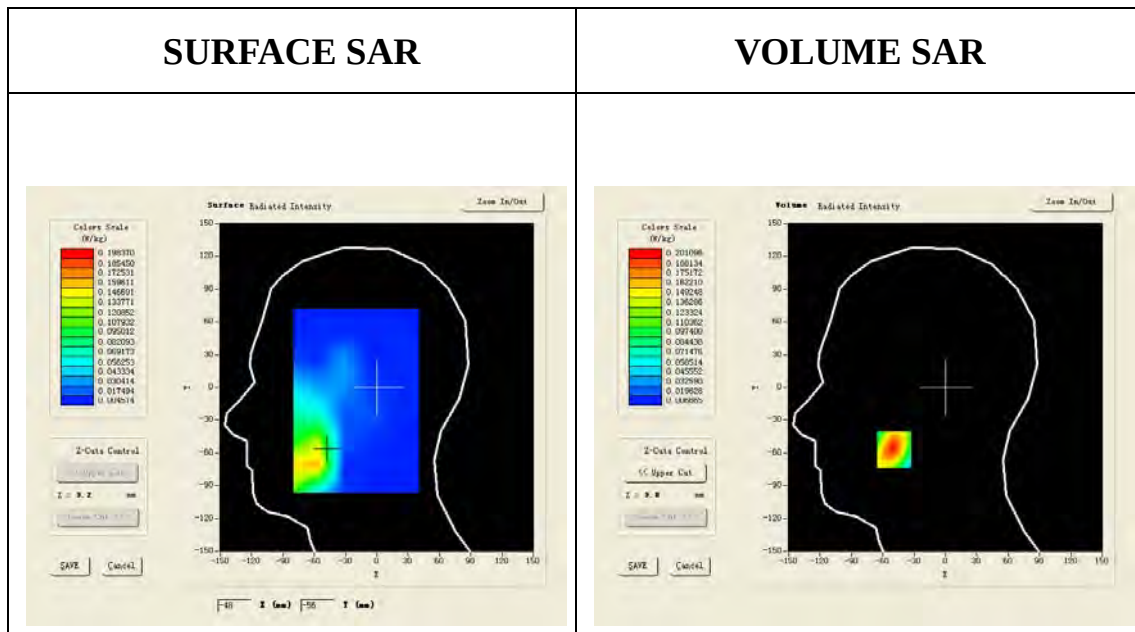
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Touch-Left/Area Scan: Measurement grid: dx=20mm, dy=20mm

**Configuration/PCS1900 Mid Touch-Left/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,Very fast
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

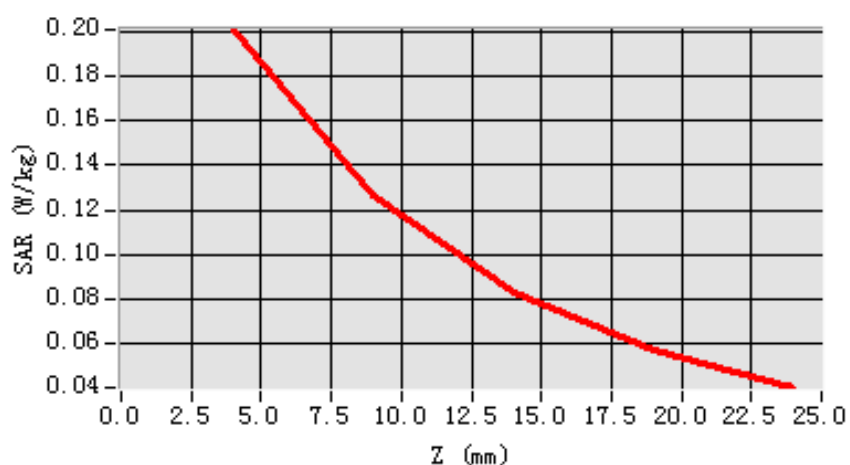


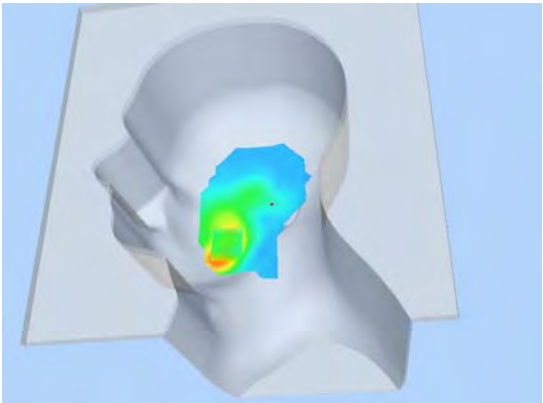
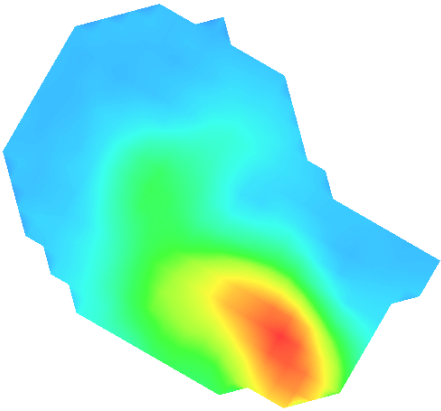
Maximum location: X=-49.00, Y=-57.00

SAR 10g (W/Kg)	0.113579
SAR 1g (W/Kg)	0.190351

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2011	0.1269	0.0826	0.0570

SAR, Z Axis Scan (X = -49, Y = -57)



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab

data: May 28,2012

PCS 1900 Mid-Tilt-Left

DUT: 3G Mobile Phone; Type: GALAXY PRIME

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
ConvF=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.12$; $\rho = 1000$ kg/m³ ; Phantom section: Left Section
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

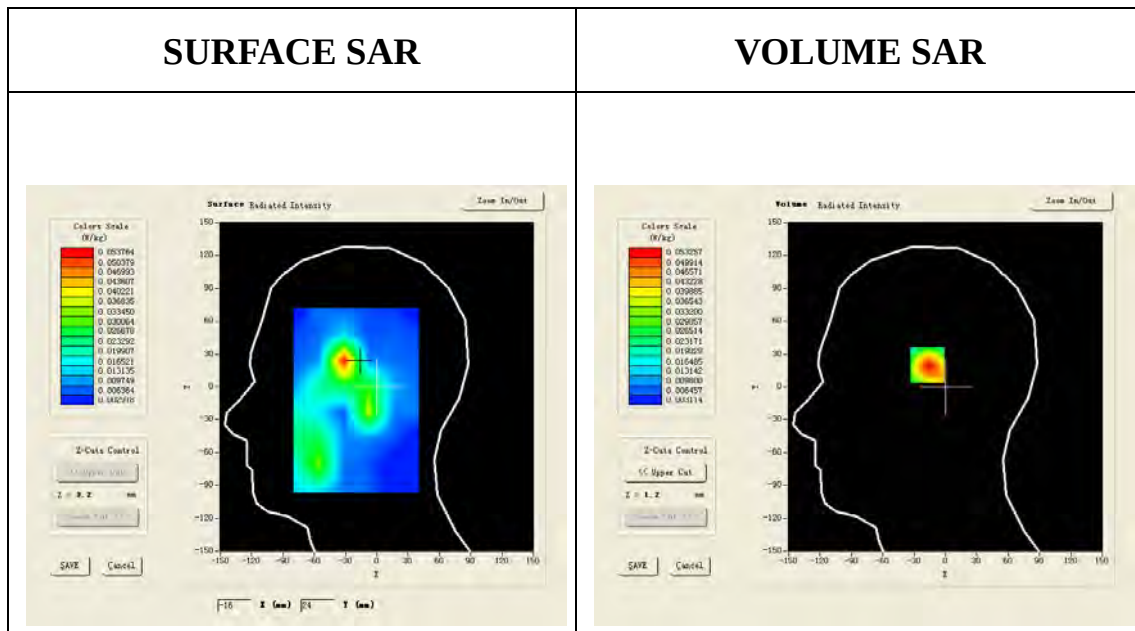
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Tilt-Left/Area Scan: Measurement grid: dx=20mm, dy=20mm

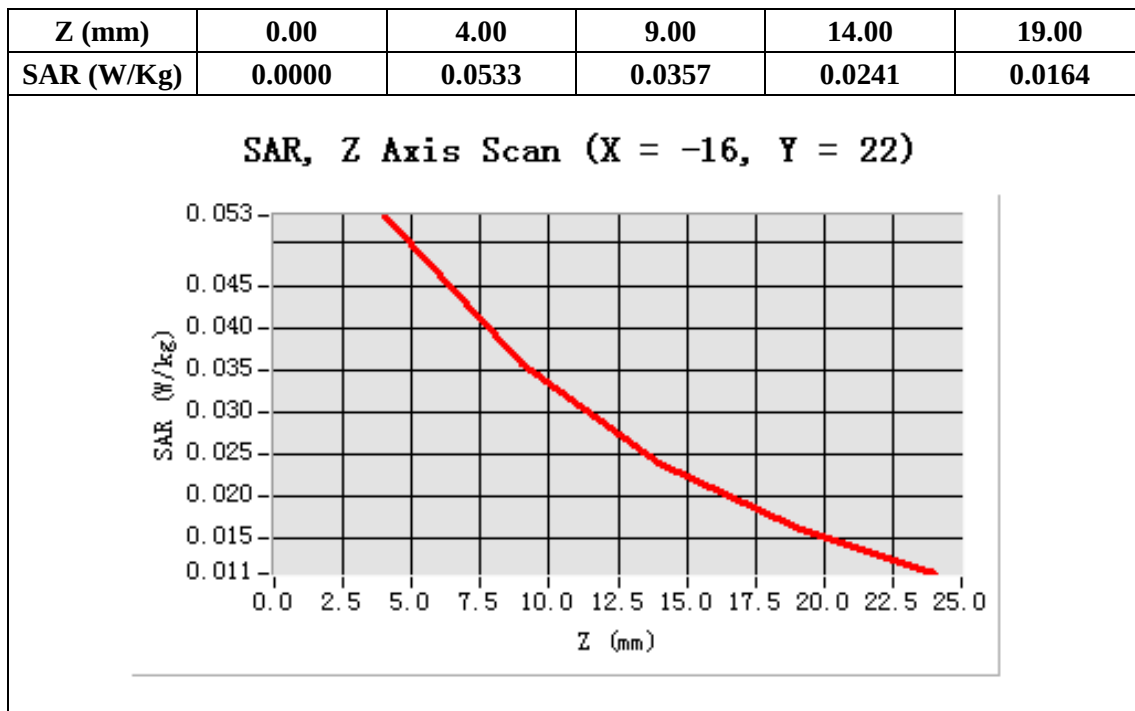
Configuration/PCS1900 Mid Tilt-Left/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

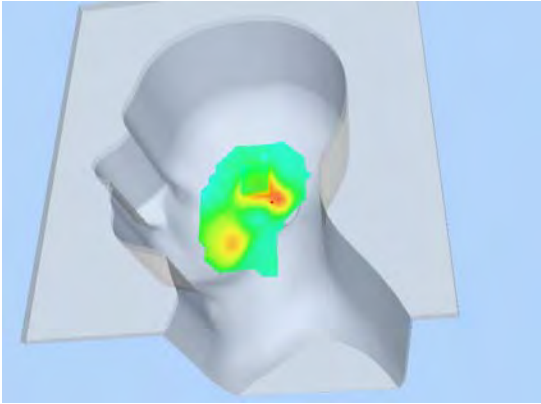
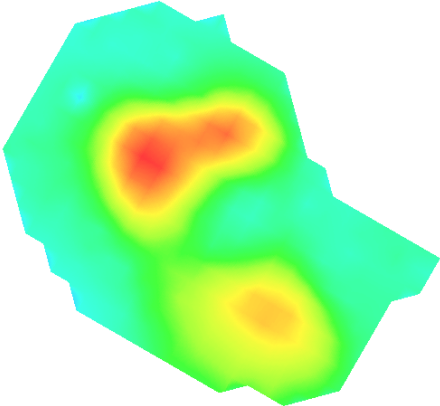
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=-16.00, Y=22.00

SAR 10g (W/Kg)	0.030962
SAR 1g (W/Kg)	0.050383



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab

data:May 28,2012

PCS 1900 Mid-Touch Right

DUT: 3G Mobile Phone; Type: GALAXY PRIME

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
ConvF=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.12$; $\rho = 1000$ kg/m³ ; Phantom section: Right Section
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

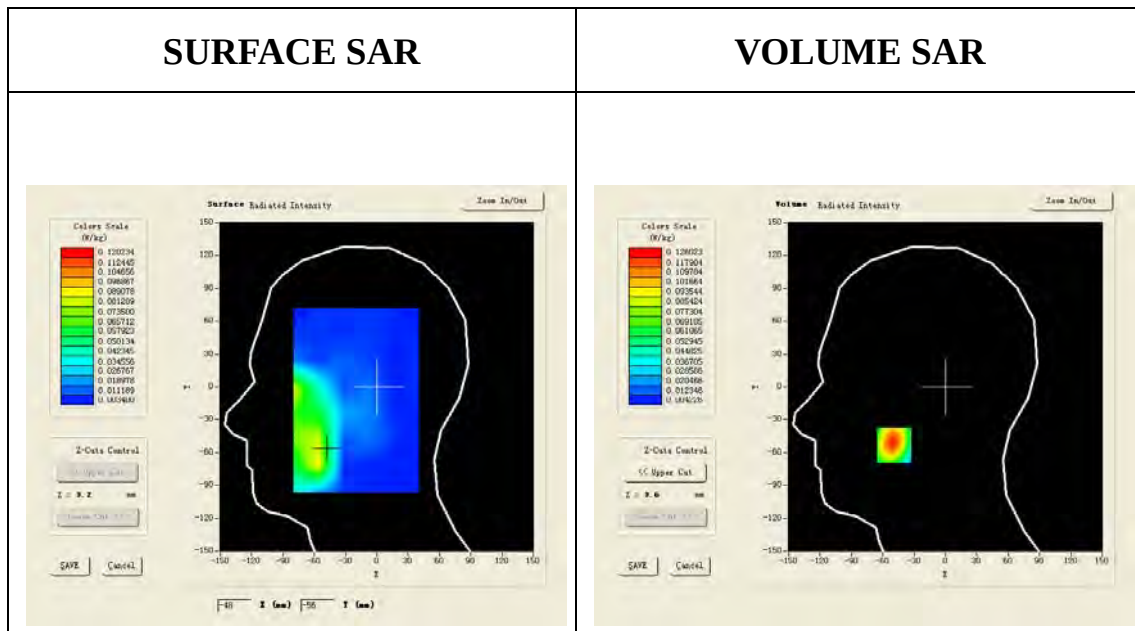
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Touch-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm

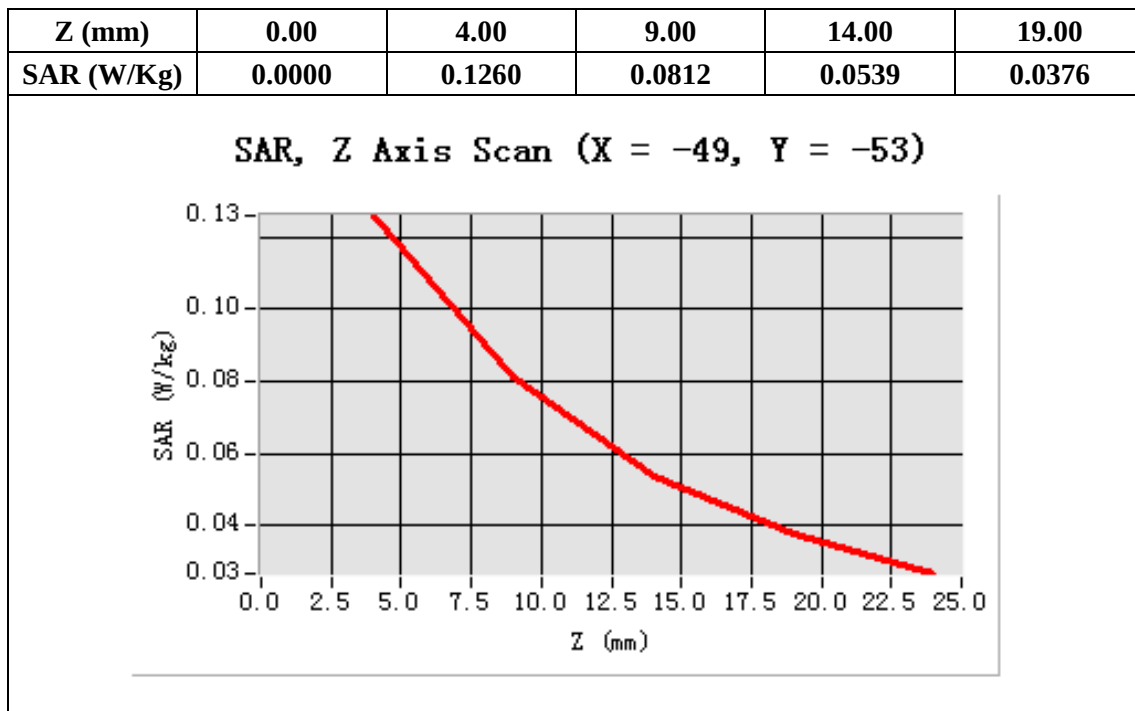
Configuration/PCS1900 Mid Touch-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

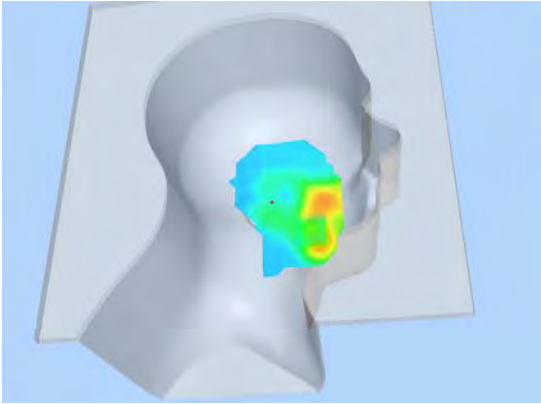
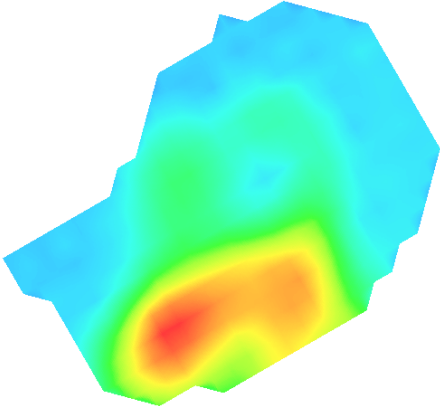
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=-49.00, Y=-53.00

SAR 10g (W/Kg)	0.071338
SAR 1g (W/Kg)	0.119486



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**data: May 28,2012****PCS 1900 Mid-Tilt Right****DUT: 3G Mobile Phone; Type: GALAXY PRIME**

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
 ConvF=6.42; Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.12$; $\rho = 1000$ kg/m³ ; Phantom section: Right Section
 Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

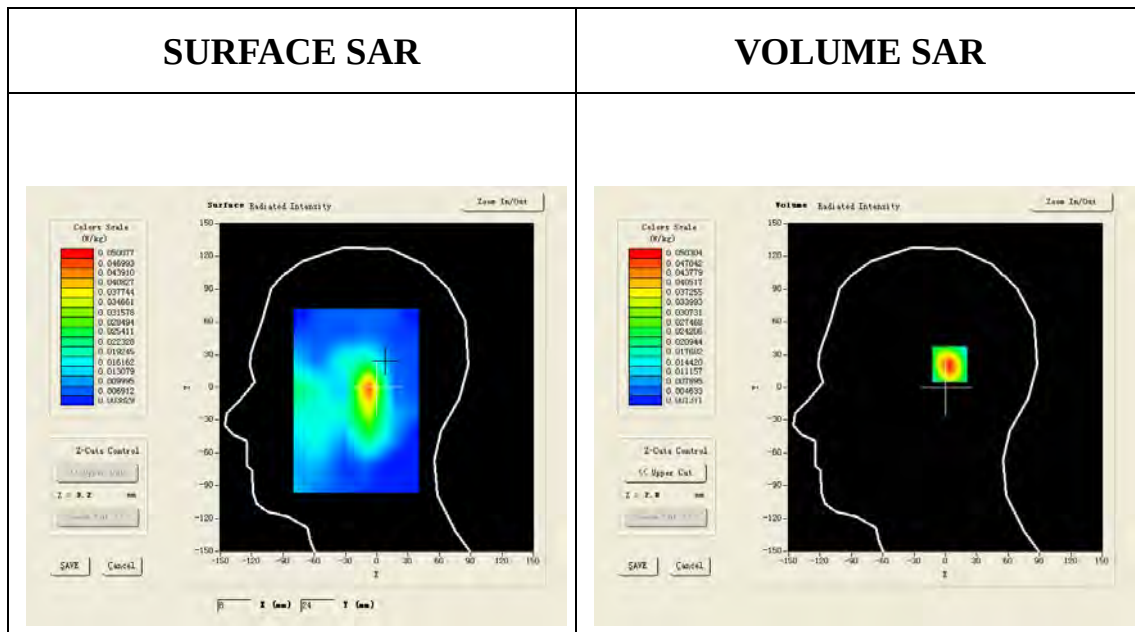
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Tilt-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm

**Configuration/PCS1900 Mid Tilt-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,Very fast
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

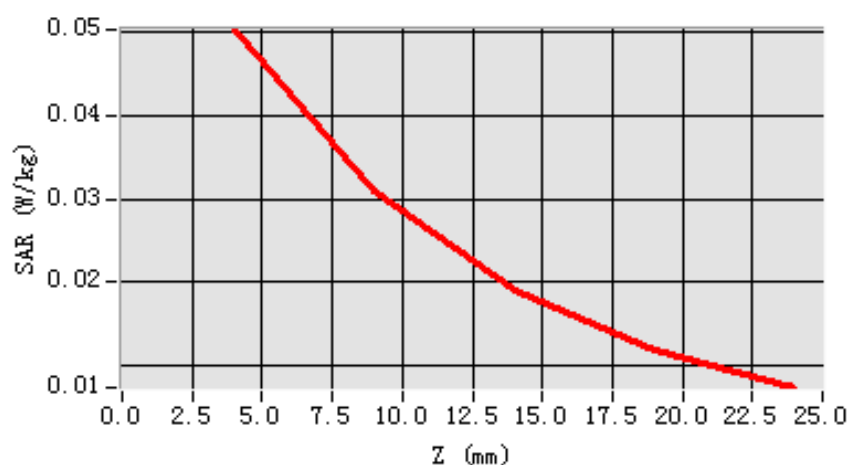


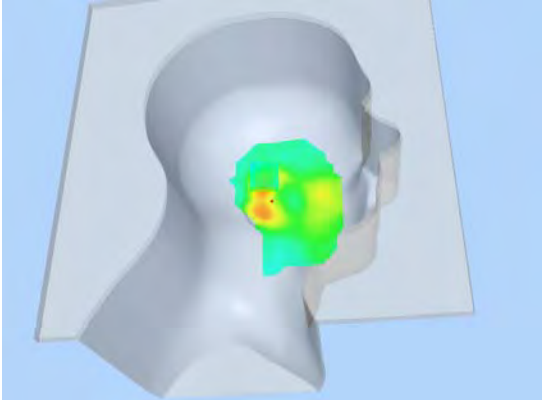
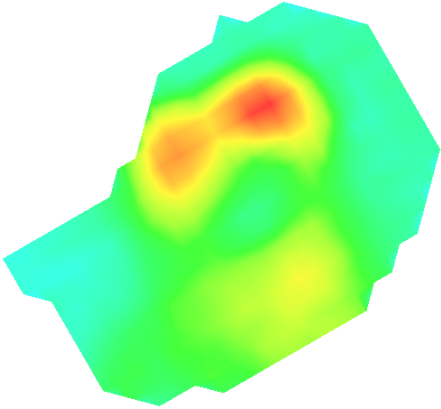
Maximum location: X=8.00, Y=22.00

SAR 10g (W/Kg)	0.025666
SAR 1g (W/Kg)	0.046731

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0503	0.0308	0.0190	0.0120

SAR, Z Axis Scan (X = 8, Y = 22)



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**data:May 28,2012****PCS 1900 Mid-Body Back****DUT: 3G Mobile Phone; Type: GALAXY PRIME**

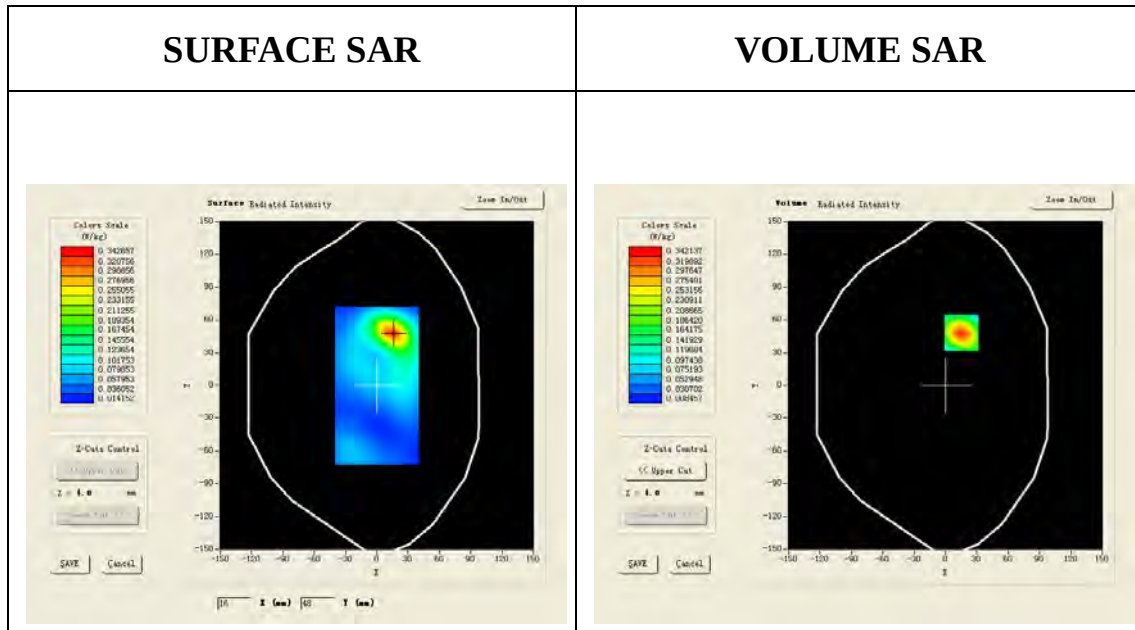
Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
ConvF=6.42; Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.34$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

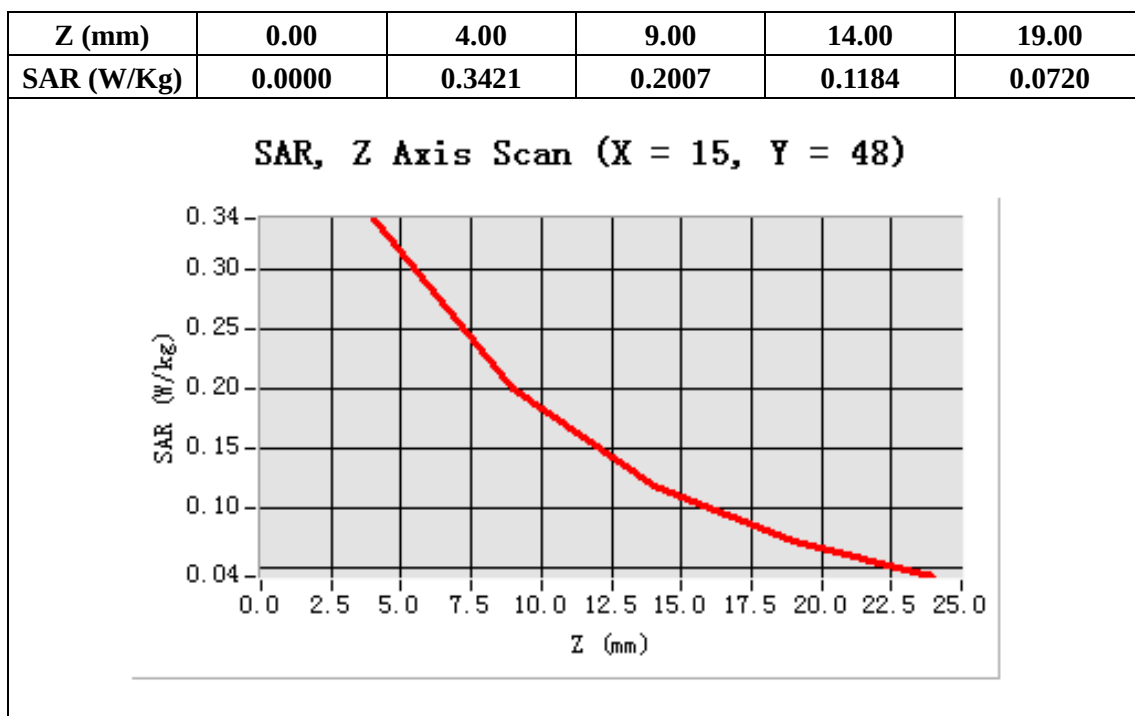
Configuration/PCS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm**Configuration/PCS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

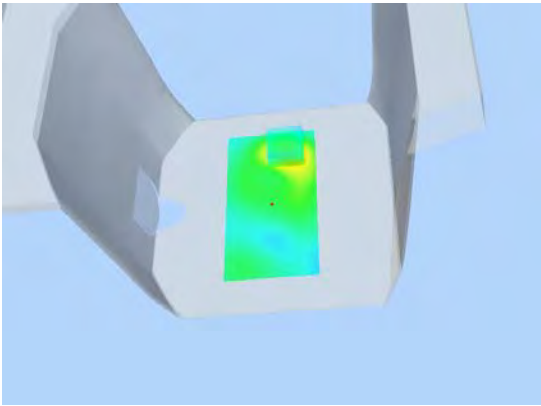
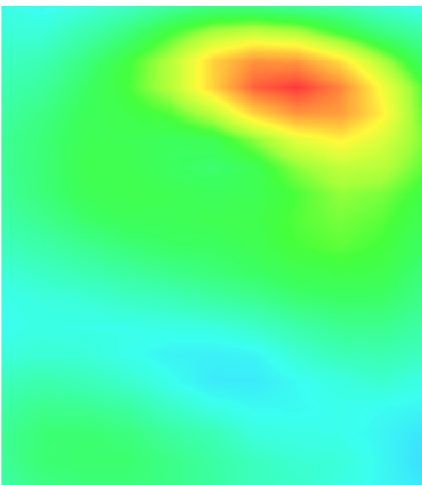
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=15.00, Y=48.00

SAR 10g (W/Kg)	0.183800
SAR 1g (W/Kg)	0.342538



3D screen shot	Hot spot position
 A 3D perspective view of a grey mechanical component, possibly a bracket or housing, against a light blue background. A rectangular area on the front face of the component is highlighted with a color map, showing a hot spot in red and yellow, transitioning to green and blue towards the edges.	 A 2D heatmap representing the hot spot position. The image shows a color gradient from blue (cooler) to red (hottest). A distinct, bright red and yellow oval-shaped region is located in the upper right quadrant, indicating the peak of the hot spot. The surrounding area transitions through green and cyan to blue.

Test Laboratory: AGC Lab**data: May 28,2012****PCS 1900 Mid-Body Back (2up)****DUT: 3G Mobile Phone; Type: GALAXY PRIME**

Communication System: GPRS-2 Slot; Communication System Band: PCS1900; Duty Cycle: 1:4.2 ;

ConvF=6.42;

Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.34$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

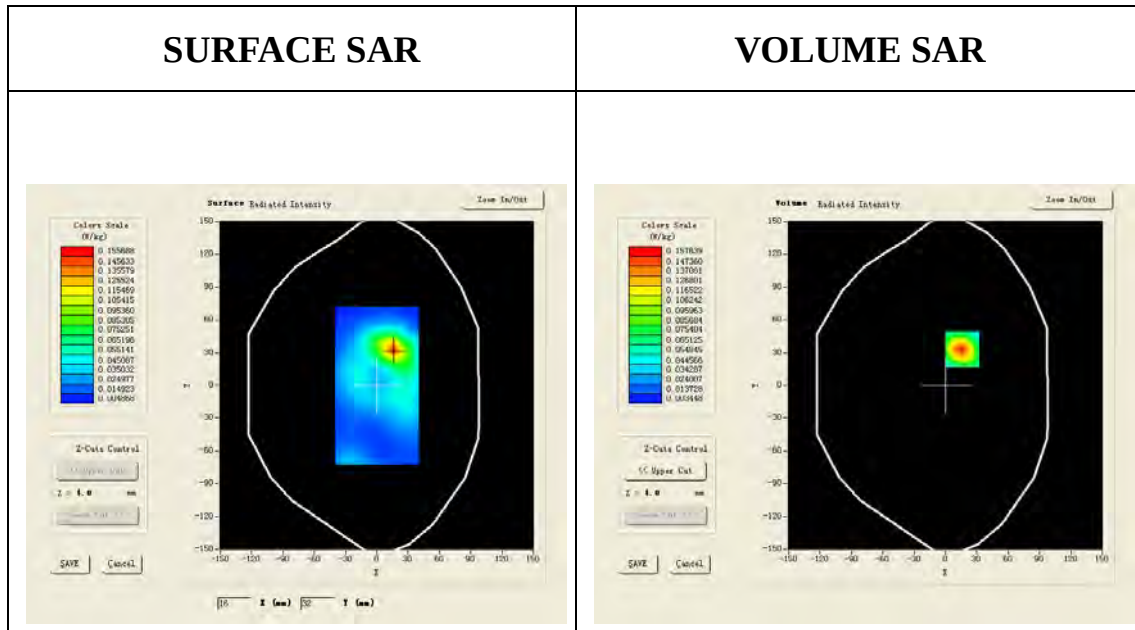
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

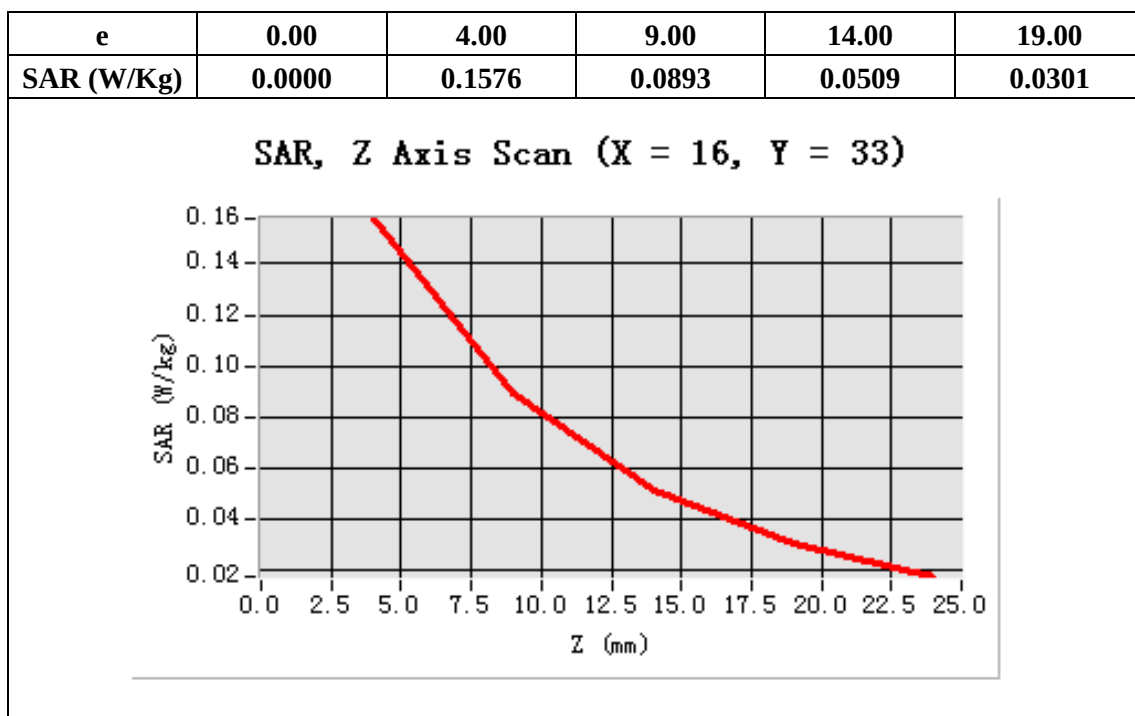
Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm**Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm,
dy=8mm, dz=5mm;**

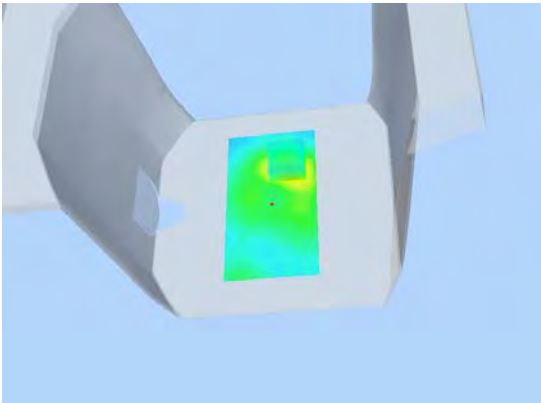
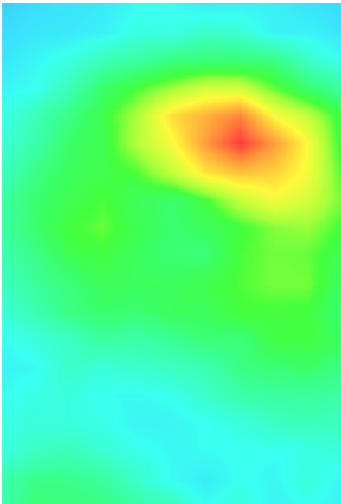
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 4.0)



Maximum location: X=16.00, Y=33.00

SAR 10g (W/Kg)	0.081145
SAR 1g (W/Kg)	0.157393



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**data:May 28,2012****PCS 1900 Mid-Body Back (3up)****DUT: 3G Mobile Phone; Type: GALAXY PRIME**

Communication System: GPRS-3 Slot; Communication System Band: PCS 1900; Duty Cycle:1:2.8 ;
ConvF=6.42;

Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.34$ $\rho = 1000$ kg/m³ ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

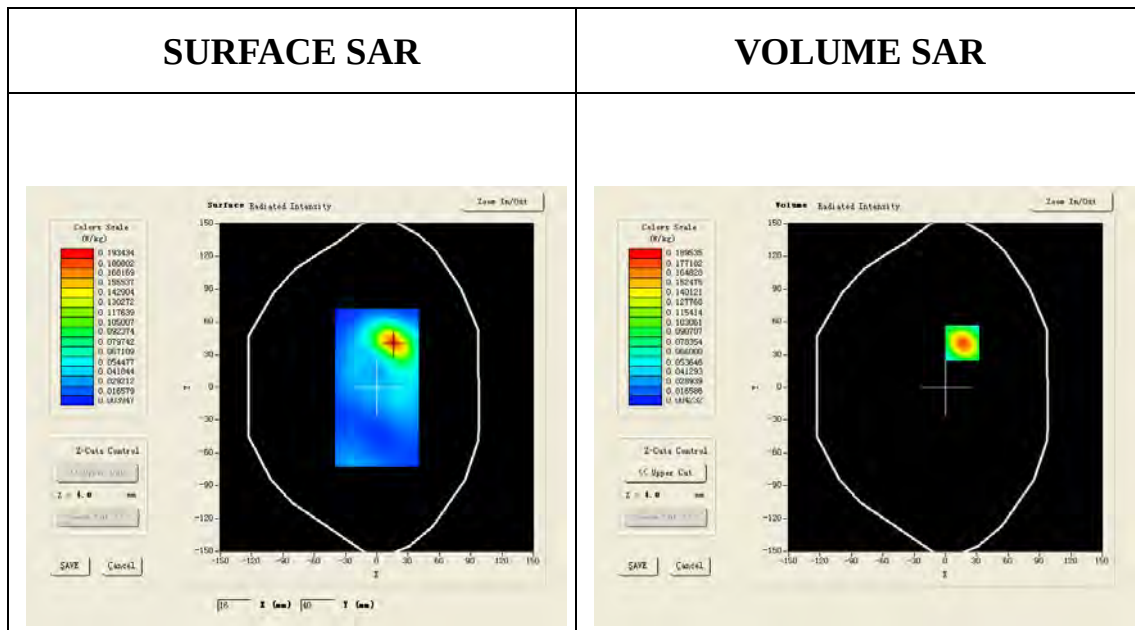
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm

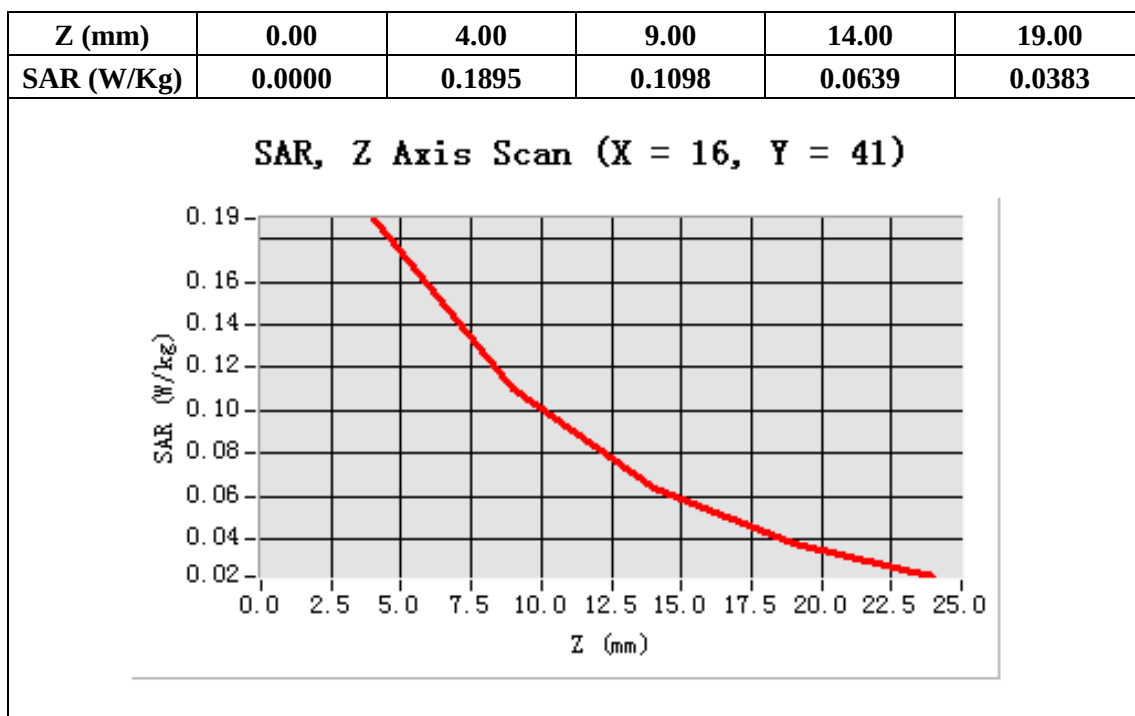
Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

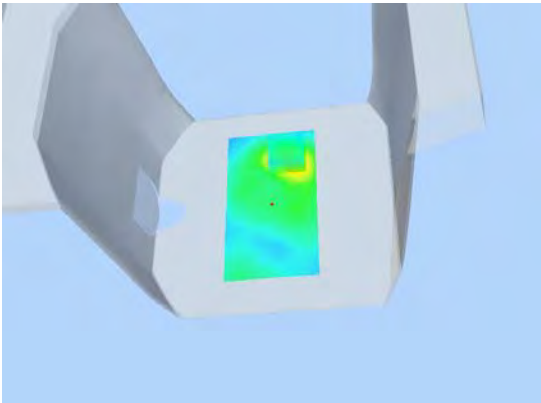
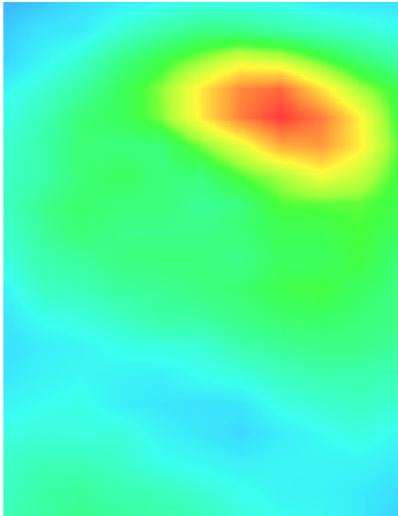
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 2.7)



Maximum location: X=16.00, Y=41.00

SAR 10g (W/Kg)	0.099255
SAR 1g (W/Kg)	0.189556



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**data:May 28,2012****PCS 1900 Mid-Body Back (4up)****DUT: 3G Mobile Phone; Type: GALAXY PRIME**

Communication System: GPRS-4 Slot; Communication System Band: PCS 1900; Duty Cycle:1:2.1 ;
 ConvF=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.34$; $\rho = 1000$

kg/m³ ; Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

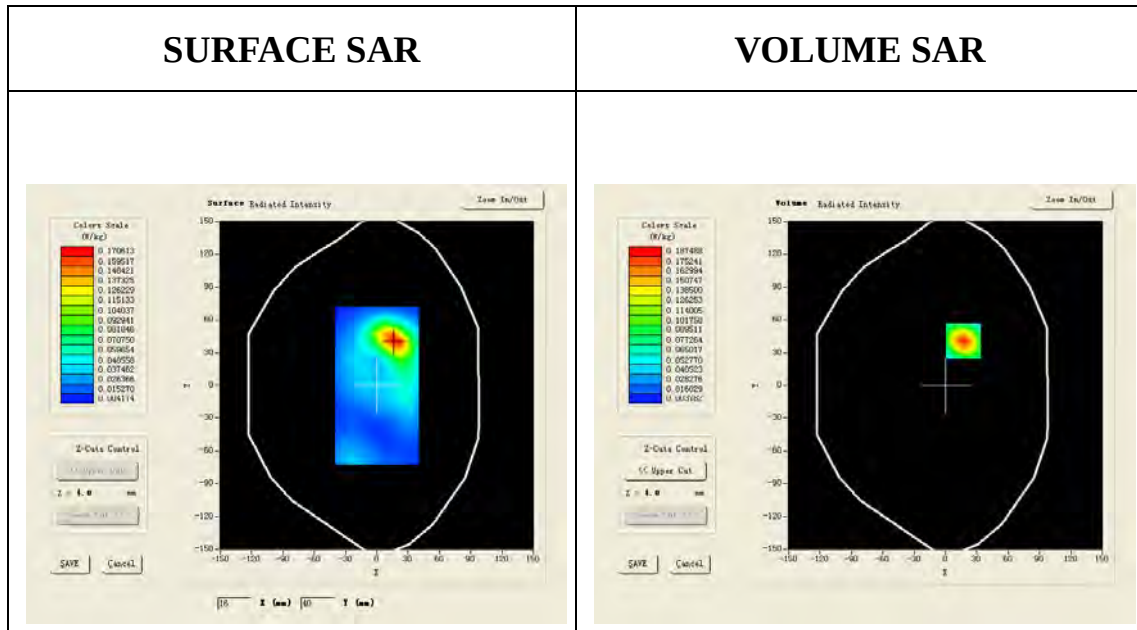
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm

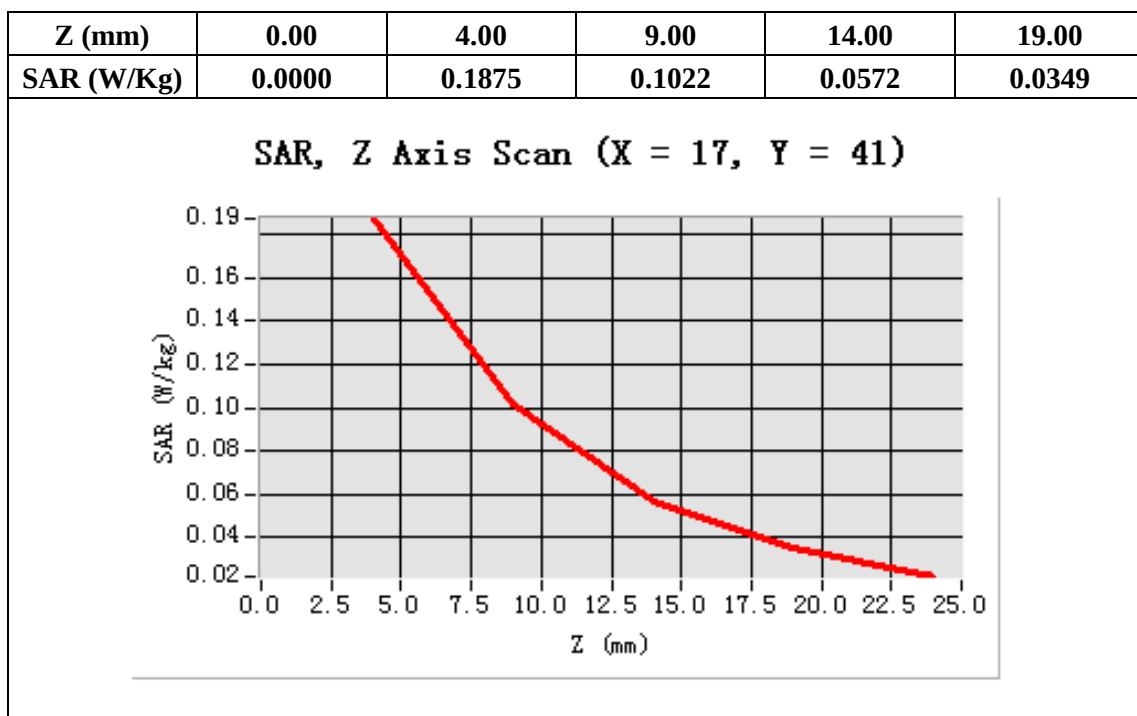
**Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm,
 dy=8mm, dz=5mm;**

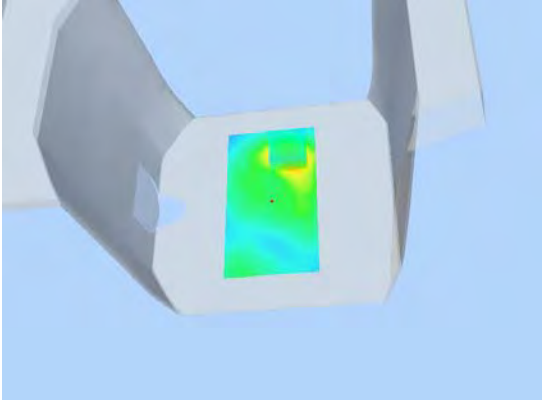
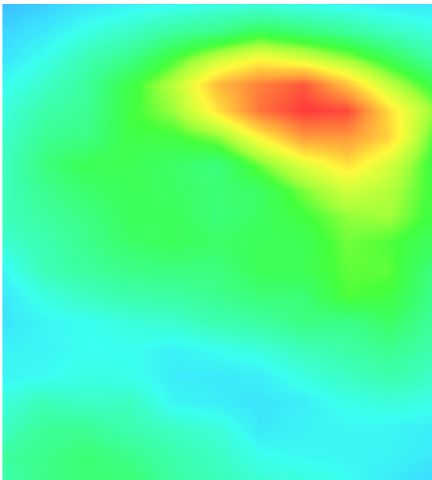
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 2.0)



Maximum location: X=17.00, Y=41.00

SAR 10g (W/Kg)	0.096375
SAR 1g (W/Kg)	0.187608



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**data:May 28,2012****PCS 1900 Mid-Body Front****DUT: 3G Mobile Phone; Type: GALAXY PRIME**

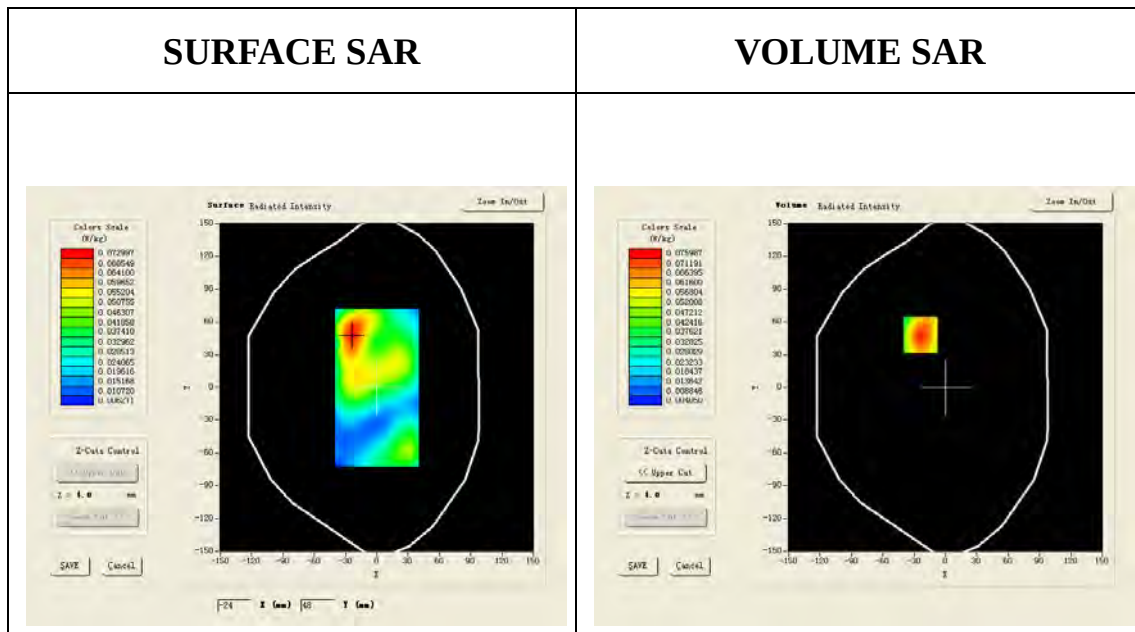
Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
ConvF=6.42; Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.34$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

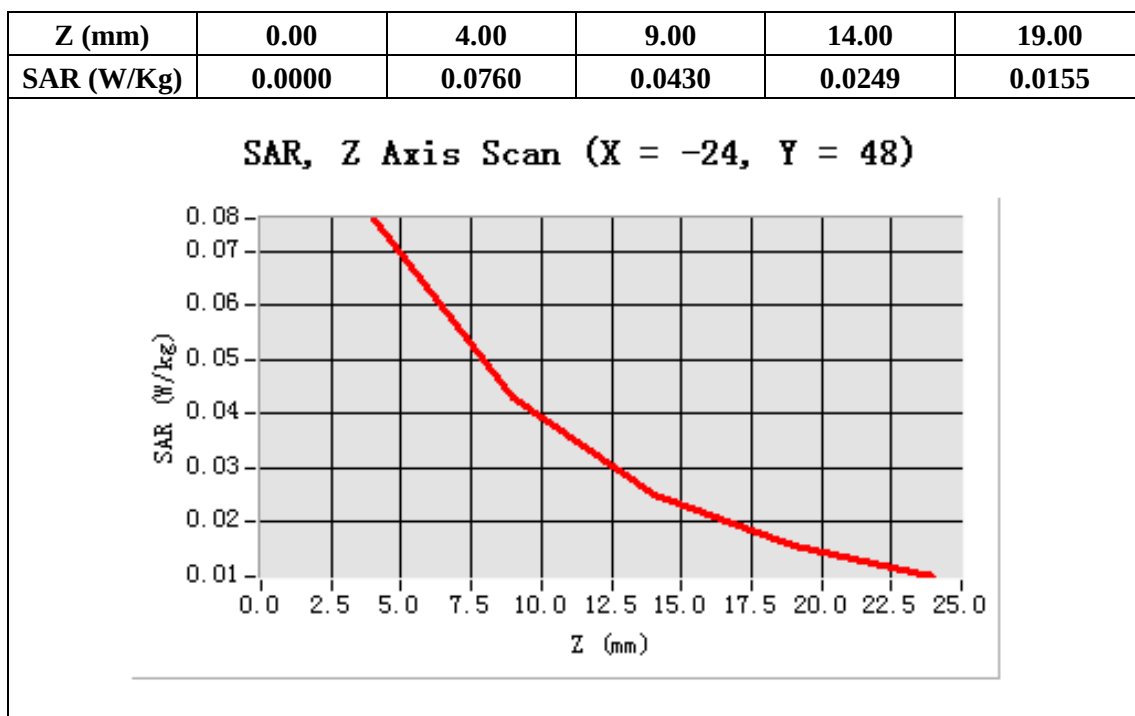
Configuration/PCS1900 Mid Body- Front /Area Scan: Measurement grid: dx=20mm, dy=20mm**Configuration/PCS1900 Mid Body- Front /Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

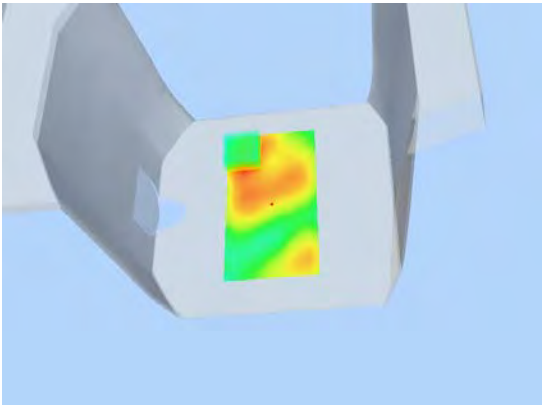
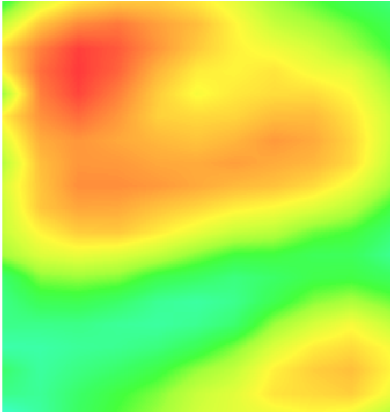
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=-24.00, Y=48.00

SAR 10g (W/Kg)	0.044864
SAR 1g (W/Kg)	0.078130



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**data:May 28,2012****PCS 1900 Mid-Body Back(with earphone)****DUT: 3G Mobile Phone; Type: GALAXY PRIME**

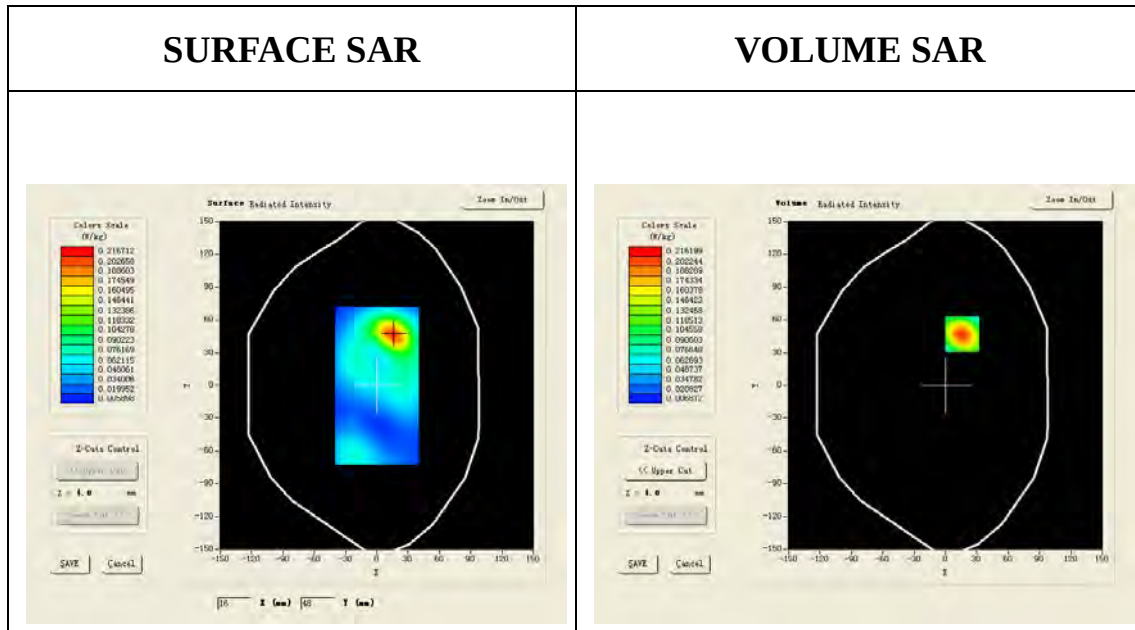
Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
ConvF=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.34$; $\rho = 1000$ kg/m³ ; Phantom section: Flat Section
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

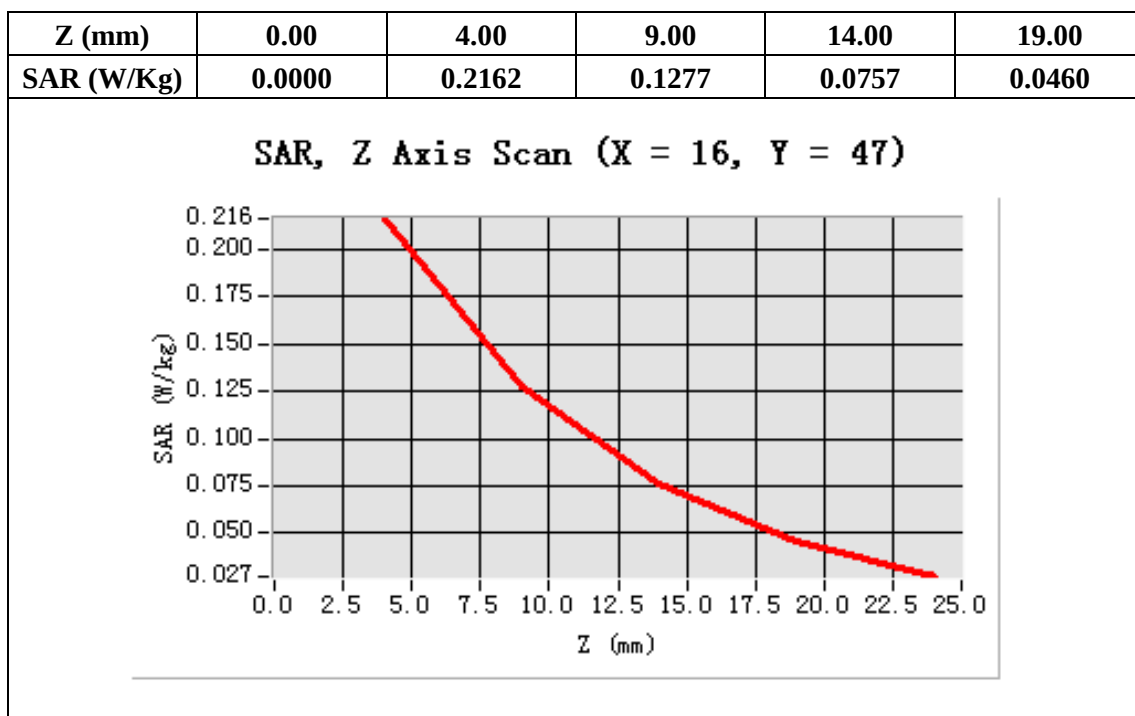
Configuration/PCS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm**Configuration/PCS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

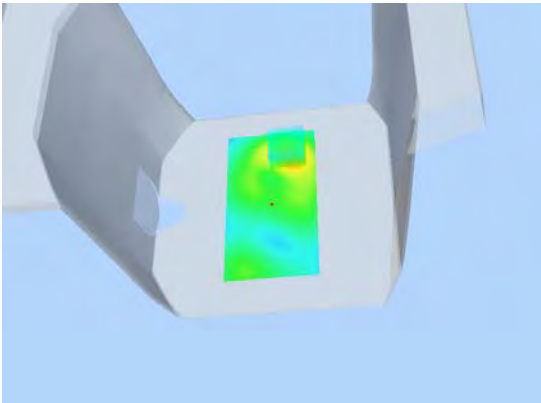
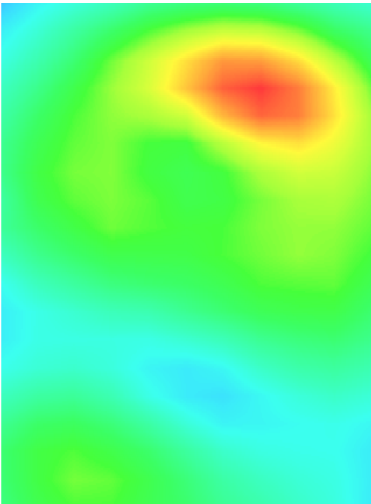
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=16.00, Y=47.00

SAR 10g (W/Kg)	0.119161
SAR 1g (W/Kg)	0.218247



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab

Date:MAY 28,2012

WCDMA Band II Mid-Touch Left (RMC)

DUT:3G MOBILE PHONE; Type:GALAXY PRIME

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty

Cycle:1:1;ConvF=6.42

Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.12$;

$\rho = 1000$ kg/m³ ; Phantom section: Left Section

Ambient temperature (°C):21, Liquid temperature (°C):21

Satimo Configuration:

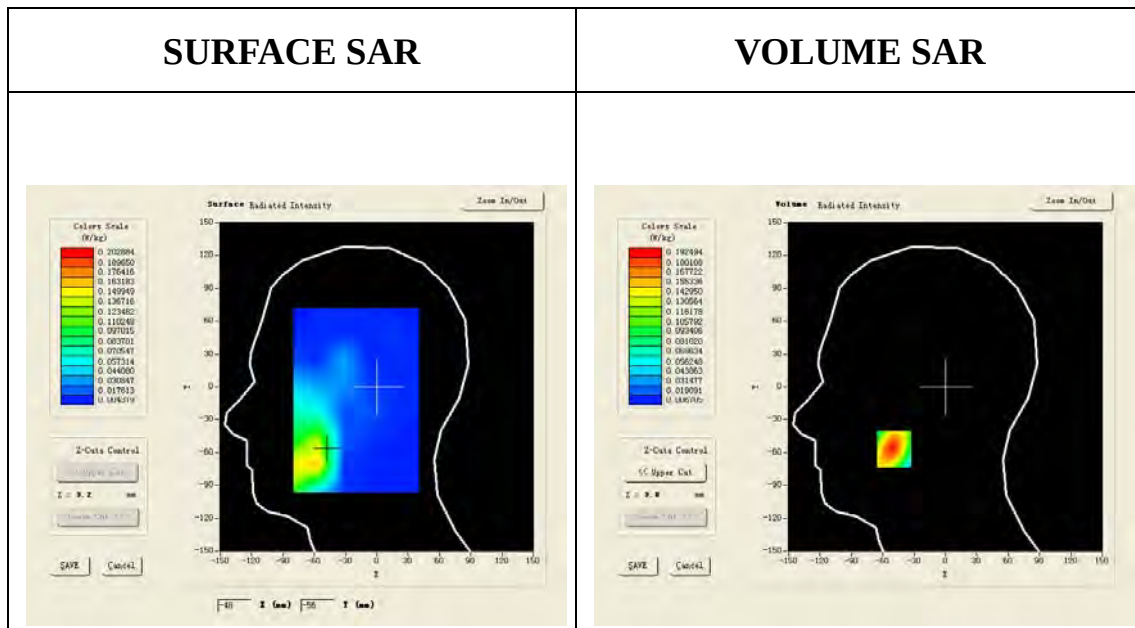
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band II Mid Touch-Left/Area Scan: Measurement grid: dx=20mm, dy=20mm

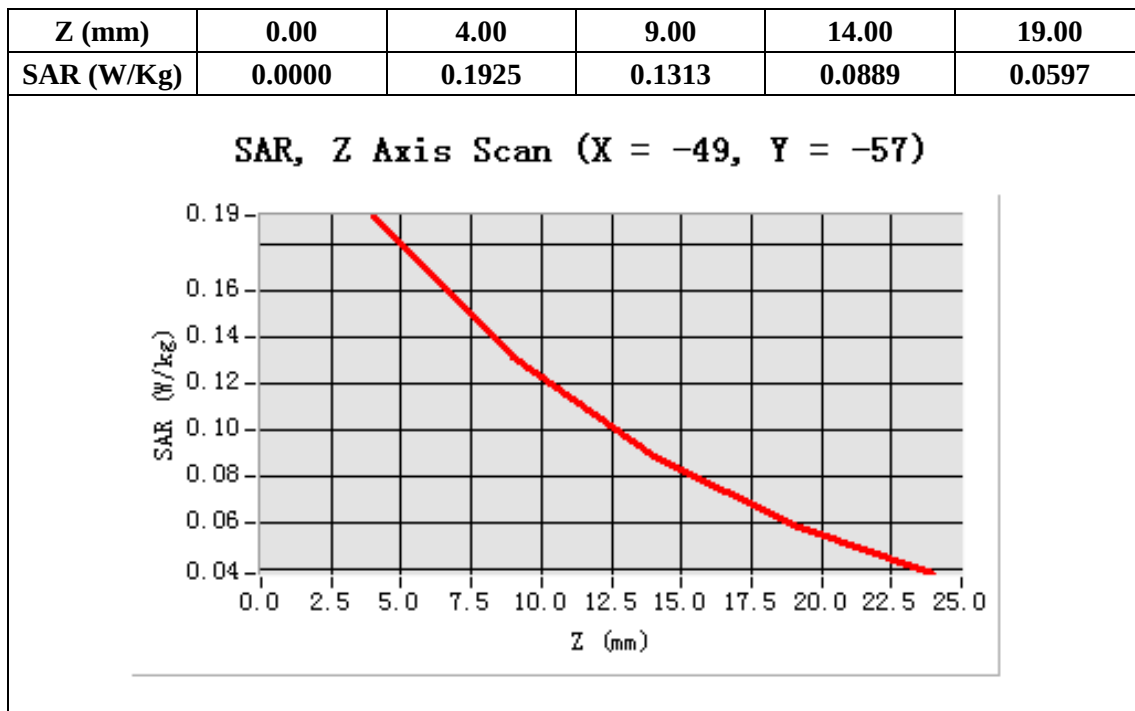
Configuration/ WCDMA Band II Mid Touch-Left/Zoom Scan: Measurement grid: dx=8mm,
dy=8mm, dz=5mm;

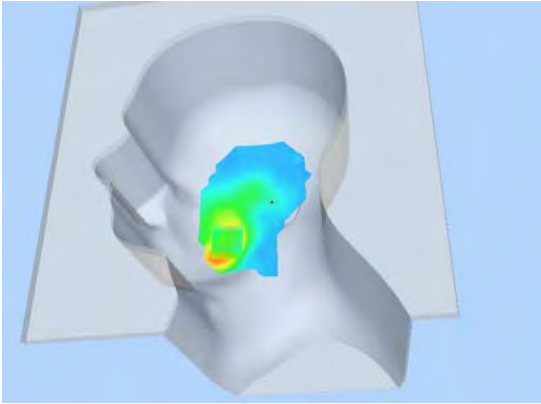
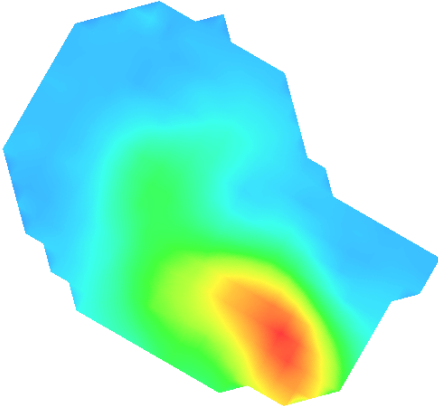
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Left head
Device Position	Cheek
Band	WCDMA Band II
Channels	Middle
Signal	TDMA (Crest factor: 1.0)



Maximum location: X=-49.00, Y=-57.00

SAR 10g (W/Kg)	0.112330
SAR 1g (W/Kg)	0.182376



3D screen shot	Hot spot position
 A 3D rendering of a human head model, viewed from the side. The head is light gray. A small, irregularly shaped area on the forehead is highlighted with a color gradient from blue to red, indicating a hot spot. The background is a light blue gradient.	 A 2D map showing the hot spot position. The map is irregularly shaped and filled with a color gradient from blue to red. The red area is located in the lower right portion of the map, indicating the highest intensity of the hot spot. The background is white.

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA Band II Mid-Tilt-Left (RMC)****DUT:3G MOBILE PHONE; Type:GALAXY PRIME**

C Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty

Cycle:1:1;ConvF=6.42

Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.12$; $\rho = 1000$ kg/m³ ; Phantom section: Left Section

Ambient temperature (°C):21, Liquid temperature (°C):21

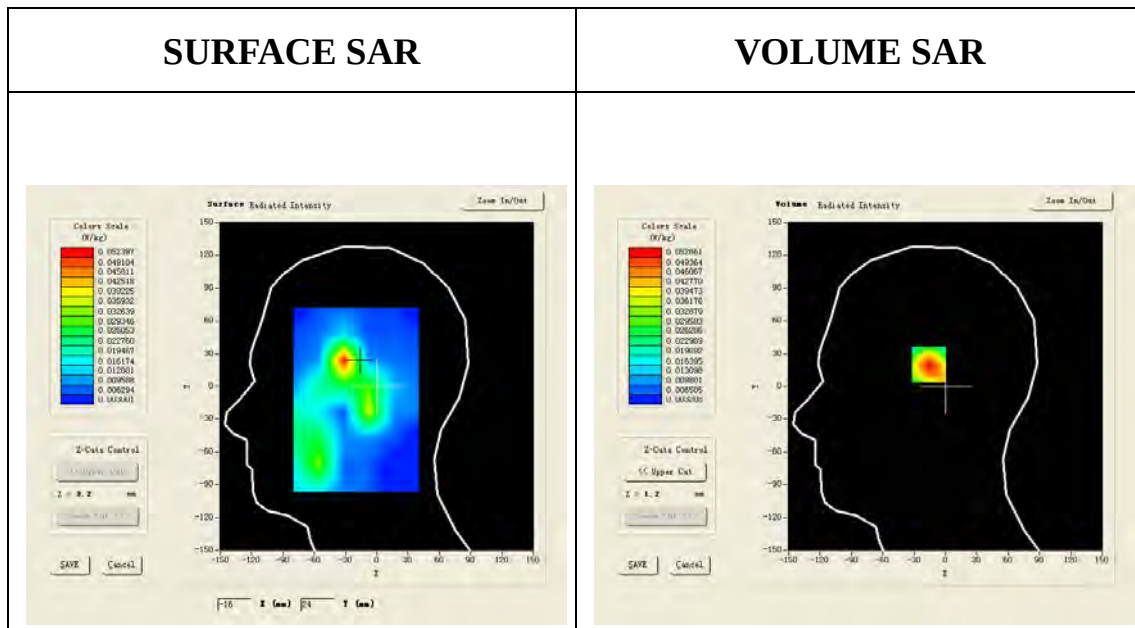
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA Band II Mid Tilt-Left/Area Scan: Measurement grid: dx=20mm, dy=20mm**Configuration/ WCDMA Band II Mid Tilt-Left/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,Very fast
Phantom	Left head
Device Position	Tilt
Band	WCDMA Band II
Channels	Middle
Signal	TDMA (Crest factor: 1.0)

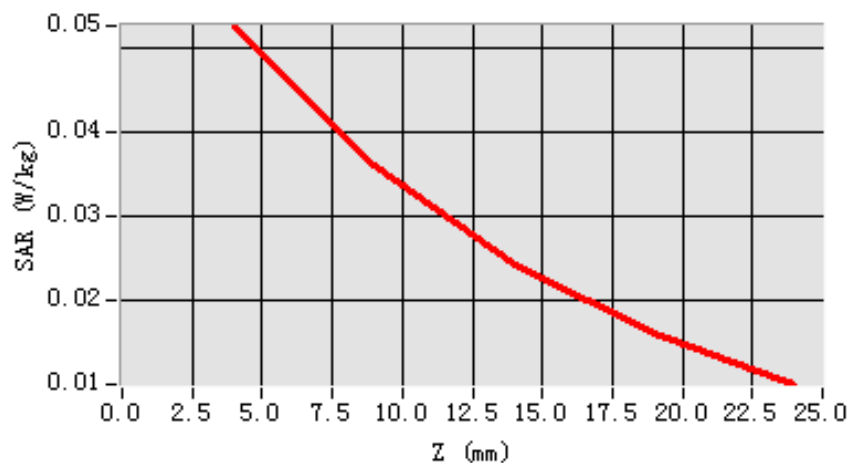


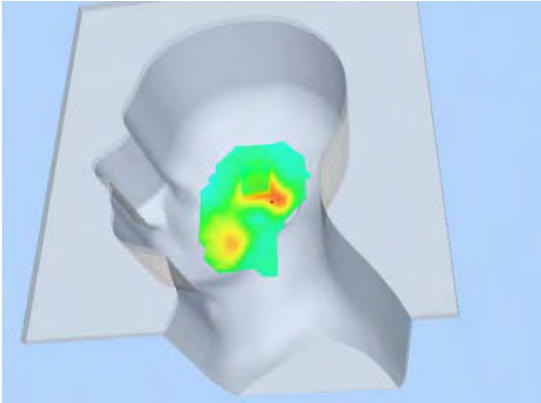
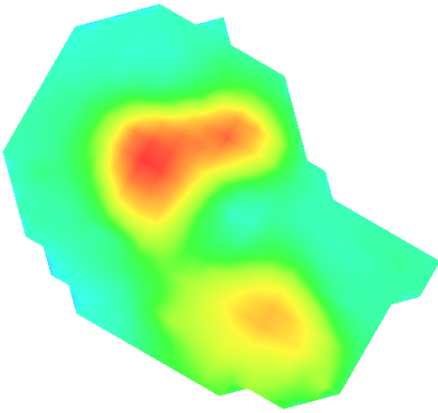
Maximum location: X=-15.00, Y=22.00

SAR 10g (W/Kg)	0.030543
SAR 1g (W/Kg)	0.049629

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0527	0.0360	0.0243	0.0160

SAR, Z Axis Scan (X = -15, Y = 22)



3D screen shot	Hot spot position
 A 3D rendering of a human head model, viewed from the side. The head is light blue. A green, yellow, and red hot spot is visible on the forehead area, indicating a high-intensity region. The hot spot is irregularly shaped and has a color gradient from green to red, with the red being the most intense.	 A 2D map showing the hot spot position. The map is irregularly shaped and has a color gradient from green to red, indicating the intensity of the hot spot. The red area is the most intense, followed by yellow and then green. The map is centered on the forehead area, corresponding to the hot spot in the 3D model.

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA band II Mid-Touch Right (RMC)****DUT:3G MOBILE PHONE; Type:GALAXY PRIME**

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty

Cycle:1:1;ConvF=6.42

Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.12$; $\rho = 1000$ kg/m³ ; Phantom section: Left Section

Ambient temperature (°C):21, Liquid temperature (°C):21

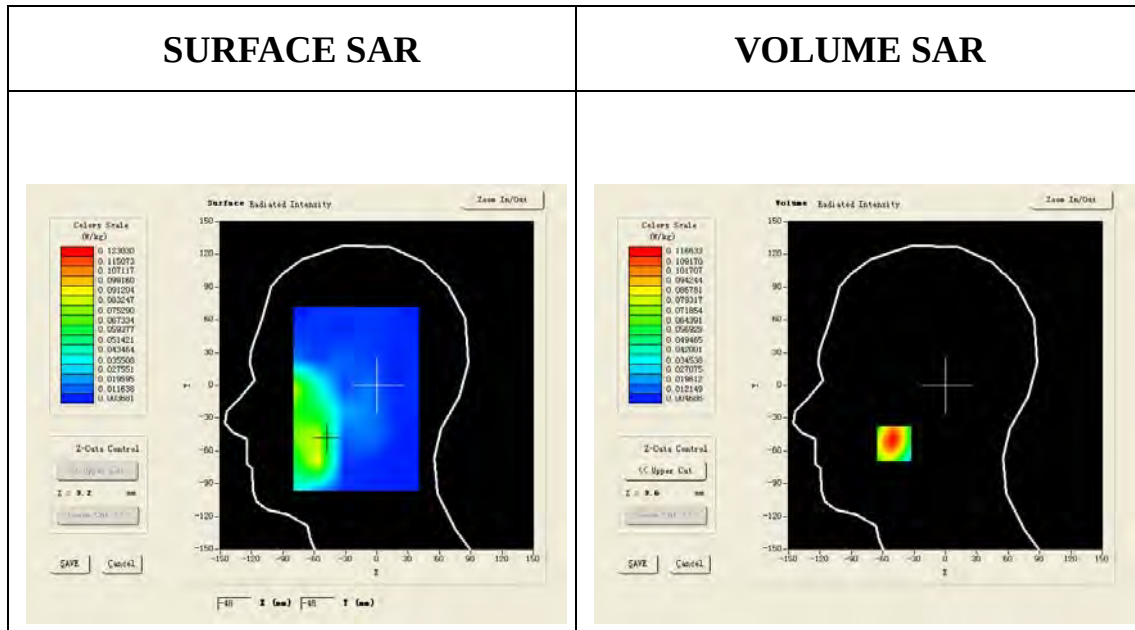
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

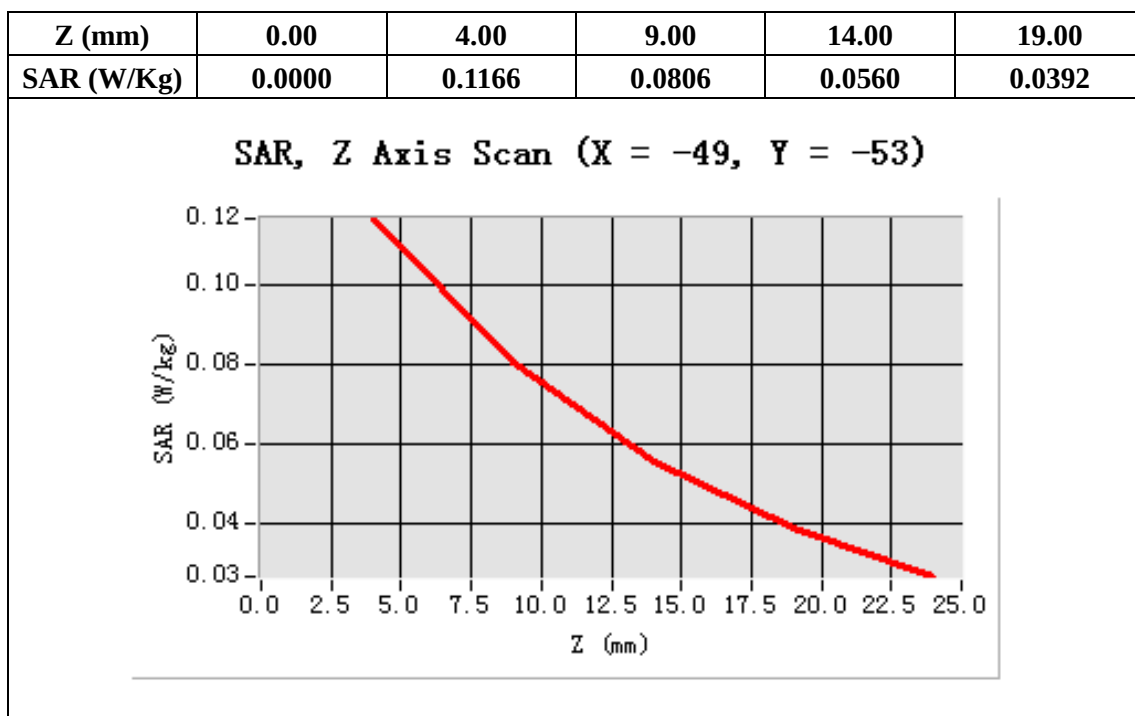
Configuration/ WCDMA band II Mid Touch-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm**Configuration/ WCDMA band II Touch-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

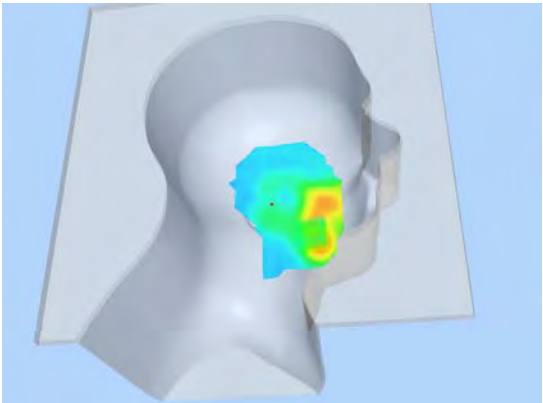
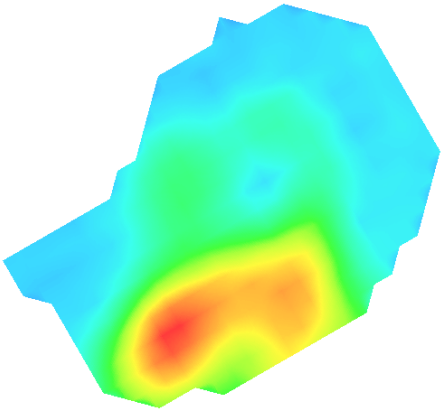
Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Right head
Device Position	Cheek
Band	WCDMA band II
Channels	Middle
Signal	TDMA (Crest factor: 1.0)



Maximum location: X=-49.00, Y=-53.00

SAR 10g (W/Kg)	0.070076
SAR 1g (W/Kg)	0.111521



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA band II Mid-Tilt Right <RMC>****DUT:3G MOBILE PHONE; Type:GALAXY PRIME**

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty

Cycle:1:1;ConvF=6.42

Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.12$; $\rho = 1000$ kg/m³ ; Phantom section: Left Section

Ambient temperature (°C):21, Liquid temperature (°C):21

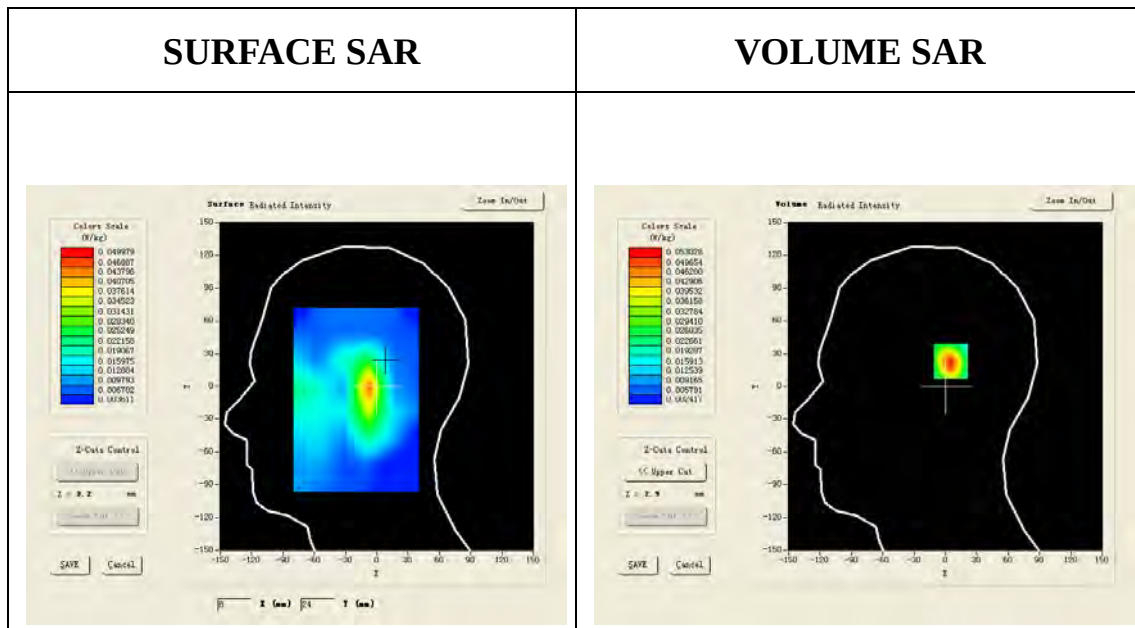
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Tilt-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm**Configuration/PCS1900 Mid Tilt-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,Very fast
Phantom	Right head
Device Position	Tilt
Band	WCDMA band II
Channels	Middle
Signal	TDMA (Crest factor: 1.0)

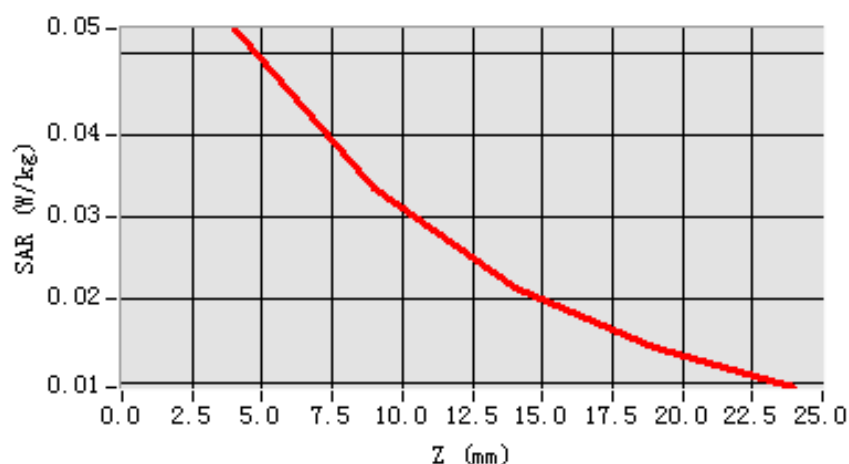


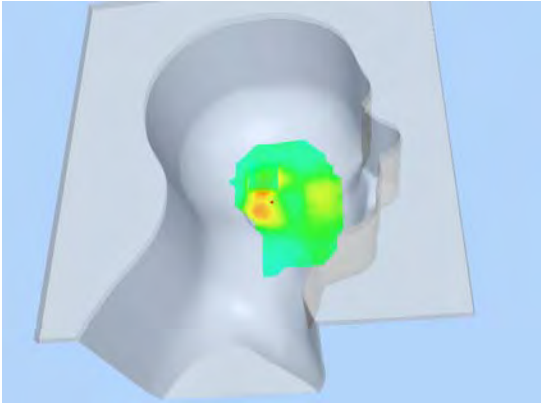
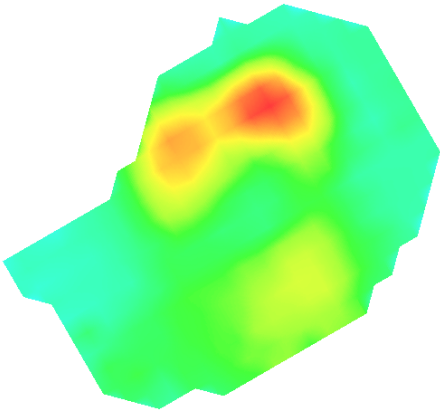
Maximum location: X=9.00, Y=23.00

SAR 10g (W/Kg)	0.027947
SAR 1g (W/Kg)	0.049339

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0530	0.0336	0.0216	0.0143

SAR, Z Axis Scan (X = 9, Y = 23)



3D screen shot	Hot spot position
 A 3D rendering of a human head model in profile, facing right. The head is light gray. A green, semi-transparent, irregularly shaped volume is overlaid on the face, representing a hot spot. The volume has a yellow and red core, indicating the highest intensity area. The background is a light blue gradient.	 A 2D visualization of the hot spot position. It shows a green, irregularly shaped area with a yellow and red core, representing the highest intensity region. The background is white.

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA band II Mid-Body-towards phantom (RMC)****DUT:3G MOBILE PHONE; Type:GALAXY PRIME**

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty

Cycle:1:1;ConvF=6.42

Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.34$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

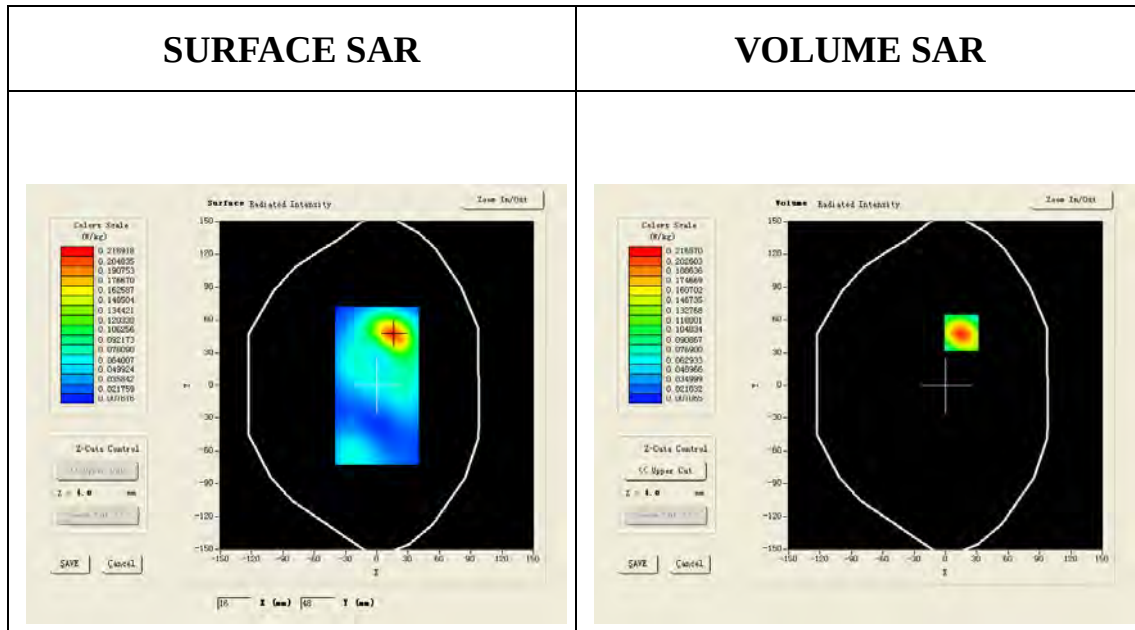
Satimo Configuration:

Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

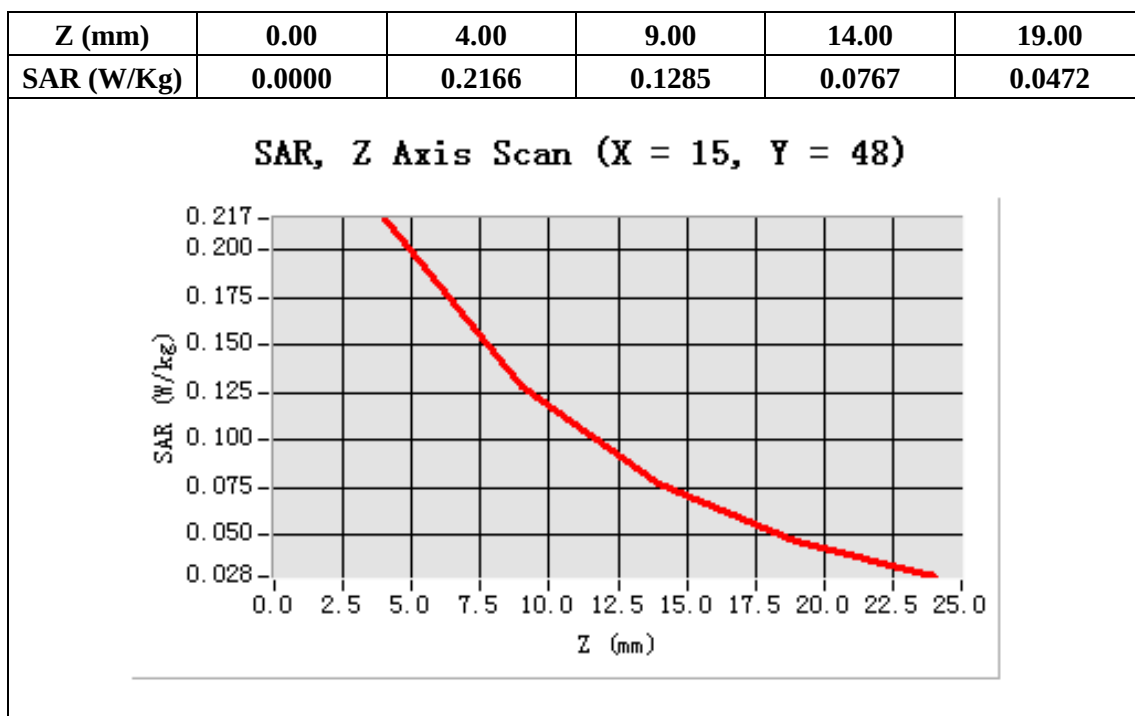
Configuration/ WCDMA band II Mid Body-Front/Area Scan: Measurement grid: dx=20mm, dy=20mm**Configuration/ WCDMA band II Mid Body-Front/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;**

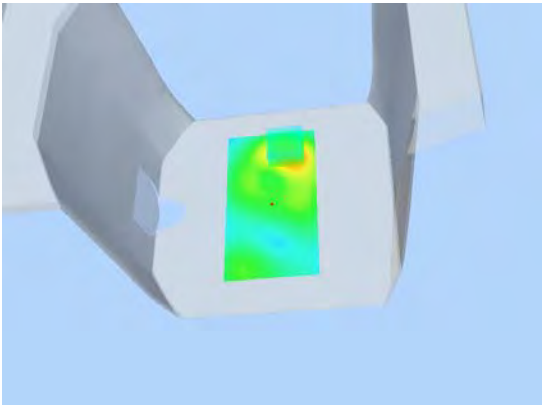
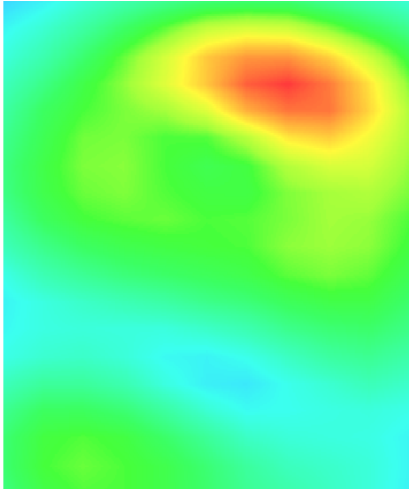
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body Front
Band	WCDMA band II
Channels	Middle
Signal	TDMA (Crest factor: 1.0)



Maximum location: X=15.00, Y=48.00

SAR 10g (W/Kg)	0.121125
SAR 1g (W/Kg)	0.219231



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA band II Mid-Body-towards ground (RMC)****DUT:3G MOBILE PHONE; Type:GALAXY PRIME**

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1;
convF=6.42

Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.34$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

Satimo Configuration:

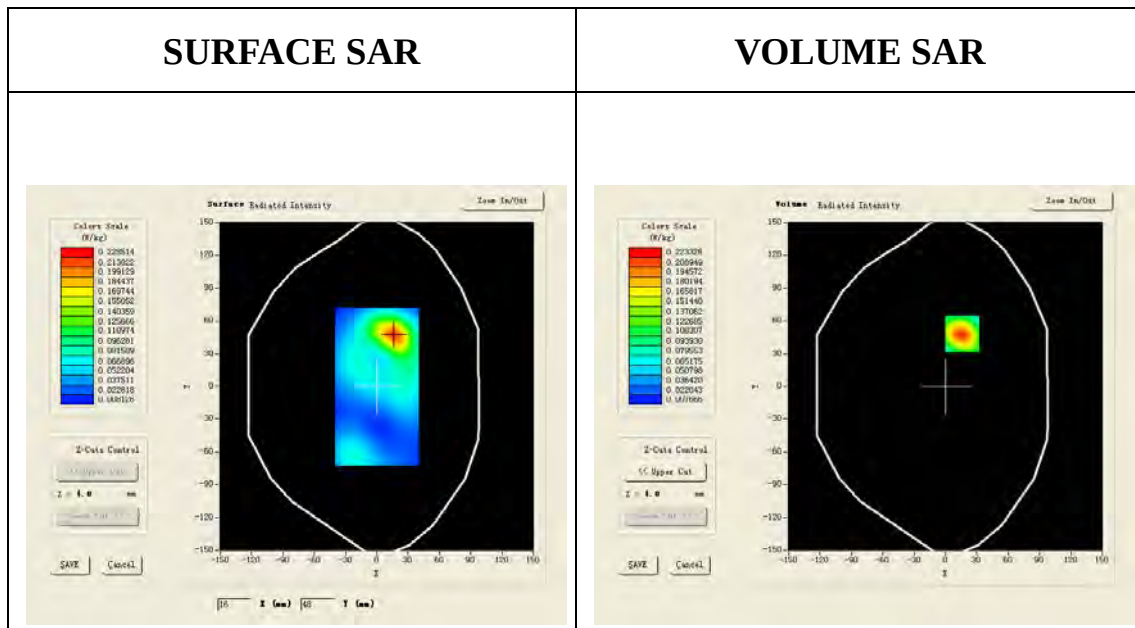
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA band II Mid Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm

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

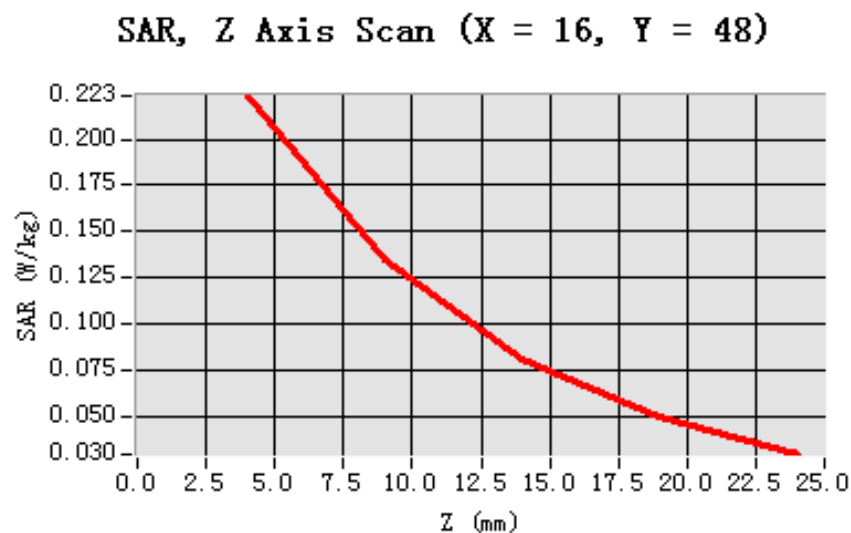
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body Back
Band	WCDMA band II
Channels	Middle
Signal	TDMA (Crest factor: 1.0)

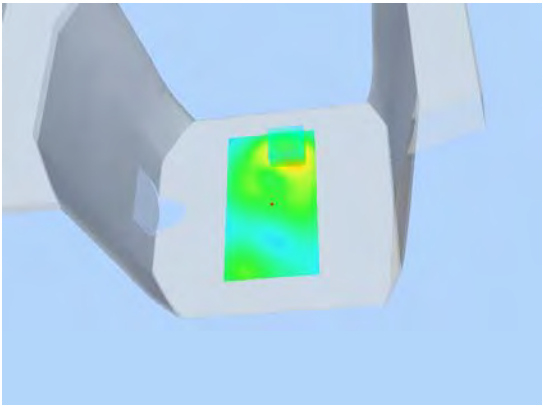
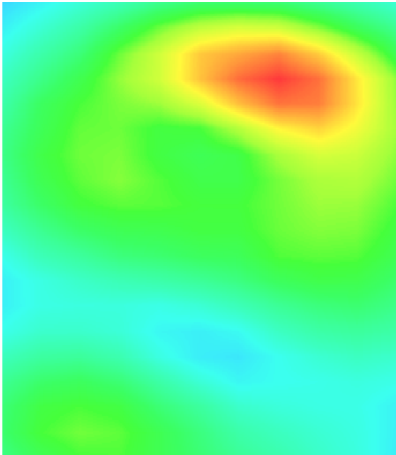


Maximum location: X=16.00, Y=48.00

SAR 10g (W/Kg)	0.124113
SAR 1g (W/Kg)	0.225614

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2233	0.1348	0.0815	0.0503



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA band II Mid-Body-towards ground (HSDPA)****DUT:3G MOBILE PHONE; Type:GALAXY PRIME**

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1;
convF=6.42

Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.34$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

Satimo Configuration:

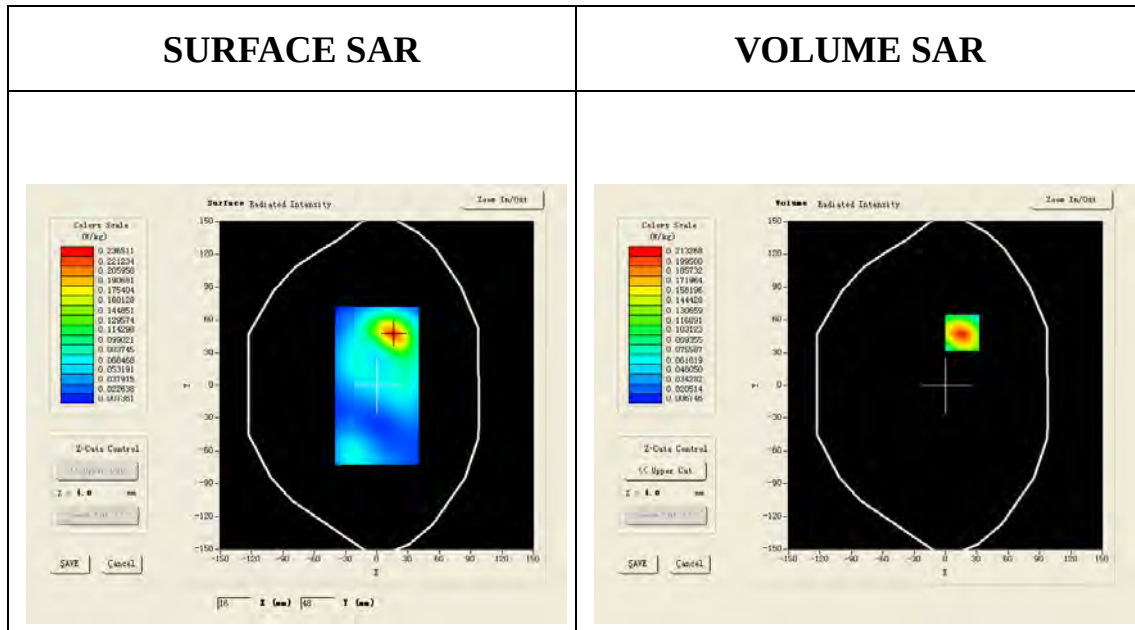
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA band II Mid Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm

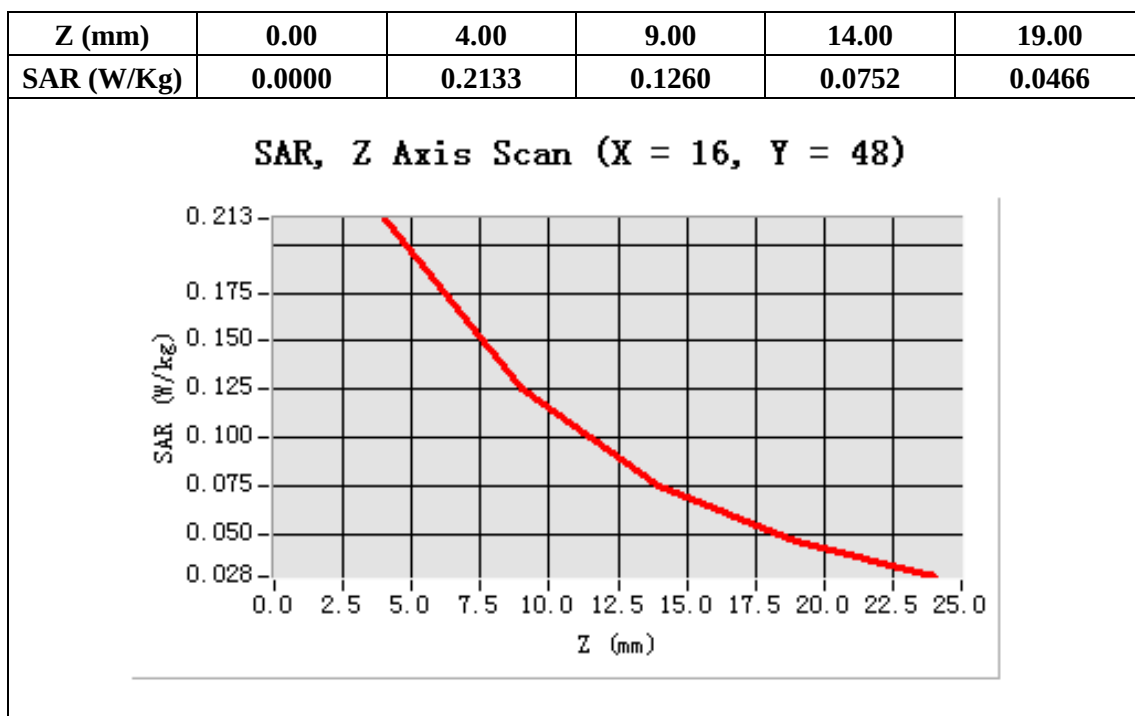
Configuration/ WCDMA band II Mid Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

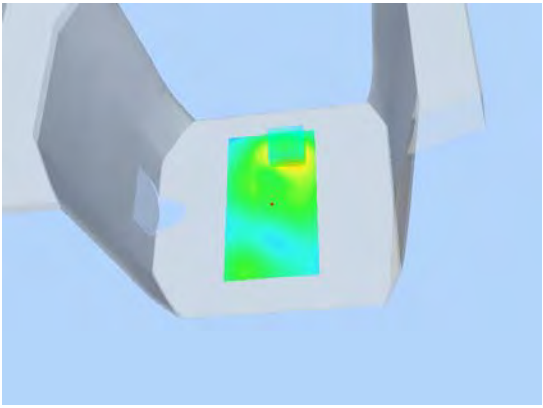
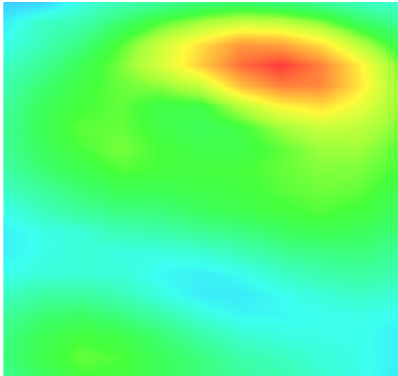
Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body Back
Band	WCDMA band II
Channels	Middle
Signal	TDMA (Crest factor: 1.0)



Maximum location: X=16.00, Y=48.00

SAR 10g (W/Kg)	0.119472
SAR 1g (W/Kg)	0.216514



3D screen shot	Hot spot position
	

Test Laboratory: AGC Lab**Date:MAY 28,2012****WCDMA band II Mid-Body-towards ground (RMC with earphone)****DUT:3G MOBILE PHONE; Type:GALAXY PRIME**

Communication System: GPRS-2 Slot; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1;
convF=6.42

Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.34$; $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C):21, Liquid temperature (°C):21

Satimo Configuration:

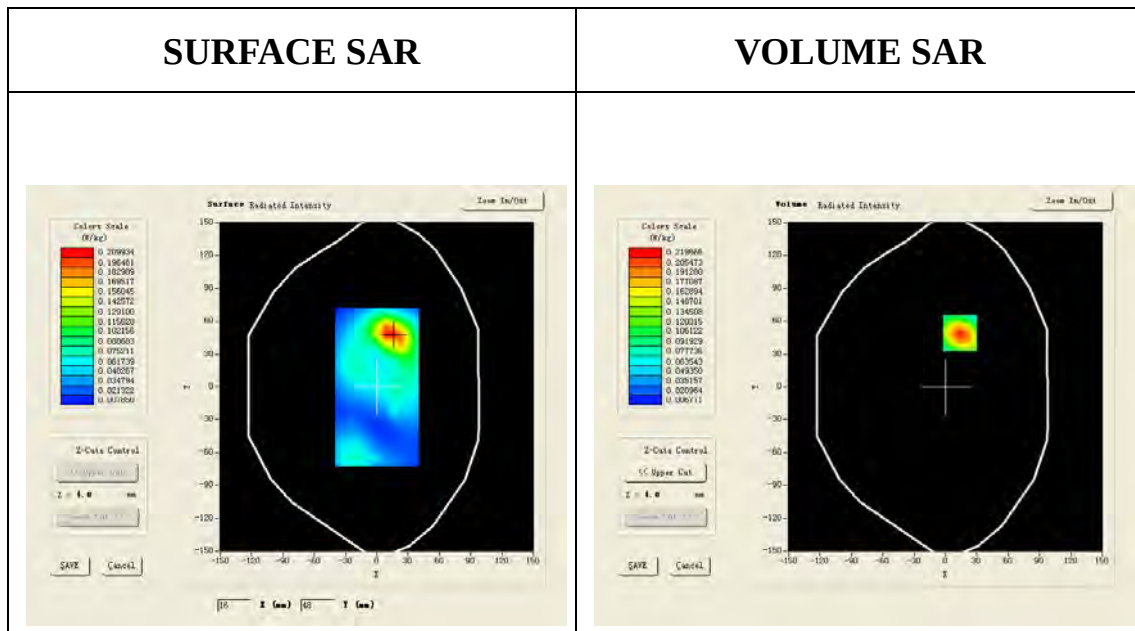
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/ WCDMA band II Mid Body-back/Area Scan: Measurement grid: dx=20mm, dy=20mm

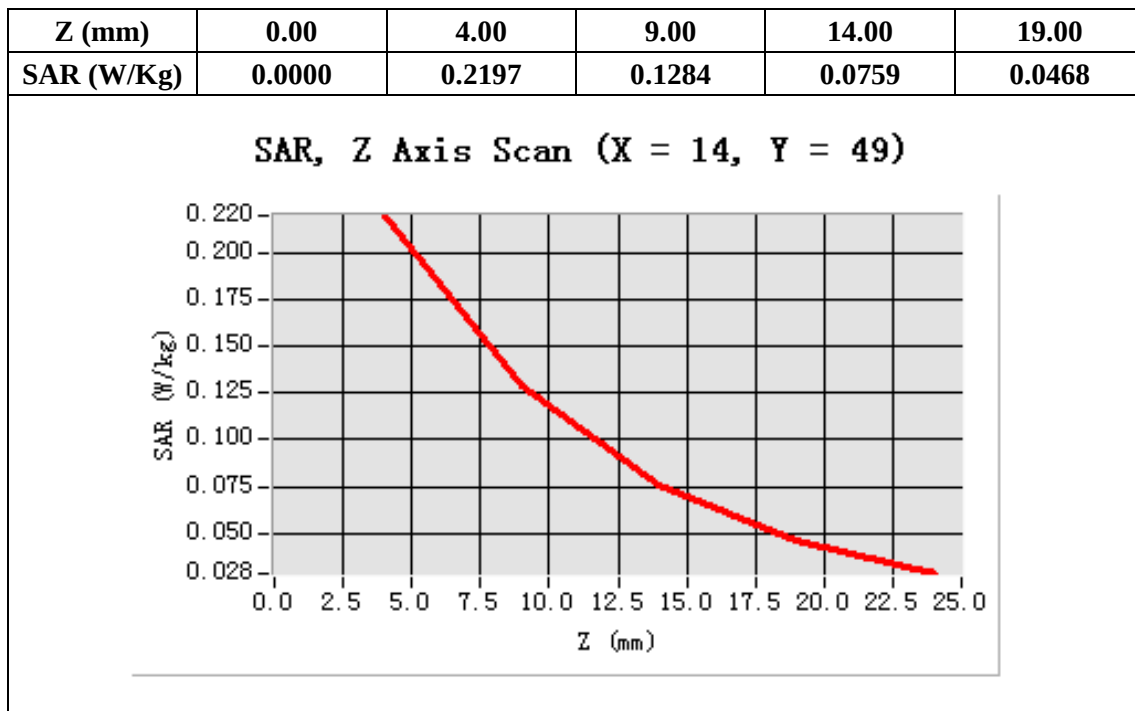
Configuration/ WCDMA band II Mid Body-back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

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



Maximum location: X=14.00, Y=49.00

SAR 10g (W/Kg)	0.121436
SAR 1g (W/Kg)	0.222348



3D screen shot	Hot spot position
