

SAR Test Report

Product Name : GSM Mobile Phone
Model No. : HUAWEI G6151
FCC ID : QISG6151

Applicant : Huawei Technologies Co., Ltd.
Address : Administration Building, Huawei Base, Bantian,
Longgang District, Shenzhen 518129

Date of Receipt : 14/09/2011
Date of Test : 19/09/2011~21/09/2011
Issued Date : 26/09/2011
Report No. : 119276R-HPUSP03V01
Report Version : V1.1-Draft

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Test Report Certification

Issued Date: 26/09/2011

Report No. : 119276R-HP-US-P03V01



Product Name : GSM Mobile Phone

Applicant : Huawei Technologies Co., Ltd.

Address : Administration Building, Huawei Base, Bantian, Longgang District, Shenzhen 518129

Manufacturer : Huawei Technologies Co., Ltd.

Address : Administration Building, Huawei Base, Bantian, Longgang District, Shenzhen 518129

Model No. : HUAWEI G6151

FCC ID : QISG6151

Brand Name : HUAWEI

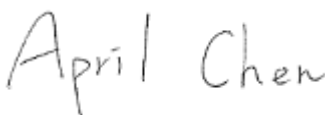
EUT Voltage : DC 3.7V

Applicable Standard : FCC Oet65 Supplement C June 2001
IEEE Std. 1528-2003,47CFR § 2.1093

Test Result : Max. SAR Measurement (1g)
GSM : Head: **1.090** W/kg; Body: **1.090** W/kg
Wi-Fi: Head: **0.051** W/kg; Body: **0.020** W/Kg

Performed Location : Quietek Corporation (Linkou Laboratory)
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1. General Information

1.1. EUT Description

Product Name	GSM Mobile Phone
Model No.	HUAWEI G6151
IMEI 1	869945000005385
IMEI 2	869945000011383
Hardware Version	NICOLE-V2.0
Software Version	G6151SSW.P00.M41.00.03
Device Category	Portable
RF Exposure Environment	Uncontrolled
Antenna Type	monopole
2G	
Support Band	GSM850/GSM900/DCS1800/PCS1900
GPRS Type	Class B
GPRS Class	Class 12
Tx Frequency Range	GSM 850: 824~849MHz PCS 1900: 1850~1910MHz
Rx Frequency Range	GSM 850: 869~894MHz PCS 1900: 1930~1990MHz
Release Version	R99
Type of modulation	GMSK for GSM/GPRS
Antenna Gain	-2.4dBi for GSM850 -2.2dBi for PCS1900
Bluetooth	
Bluetooth Frequency	2402~2480MHz
Bluetooth Version	V2.1 + EDR
Type of modulation	FHSS
Data Rate	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps (8DPSK)
Antenna Gain	-2dBi
Wi-Fi	
Wi-Fi Frequency	2412~2462MHz
Type of modulation	802.11b: CCK; 802.11g: OFDM
Data Rate	802.11b: 1/2/5.5/11 Mbps 802.11g: 6/9/12/18/24/36/48/54 Mbps
Antenna Gain	-2dBi

Components	
Headset Model Number	HT-1350002-22K001
Battery	Brand Name: HUAWEI M/N: HB5A3 Rated Voltage and Capacitance: 3.7V/1000mAh
Adapter	Brand Name: HUAWEI M/N: HS-050040U6 Input: 100-240V~50/60Hz 0.2A Output: 5VDC, 400mA
Max. Output Power (Avg. Burst Power)	GSM850: 32.69 dBm PCS1900: 30.40 dBm Wi-Fi: 10.18 dBm

Note : This mobile phone has GSM,WIFI & BT which can simultaneous transmission.

(Reference document: KDB 447498 and KDB 648474, KDB 248227)

1. Bluetooth output power is 8.23dBm.

(1) The power is less than Pref.

(2) 1.2cm away from GSM antenna.

(3) 4.6cm away from WLAN antenna.

Therefore, standalone SAR for Bluetooth is not required and other antennas which Max SAR value are < 1.2 W/kg, so simultaneous transmission is not required.

2. The closest separation between GSM antenna and Wi-Fi antenna is 4.3cm.

(1)Head Max SAR value and the sum of the 1-g SAR for WLAN & GSM.

Max 1-g SAR (W/kg)		Σ 1-g SAR (W/kg)
WLAN	GSM	
0.051	1.090	1.141

(2)Body SAR value and the sum of the 1-g SAR for WLAN & GSM.

Max 1-g SAR (W/kg)		Σ 1-g SAR (W/kg)
WLAN	GSM	
0.020	1.090	1.110

(3)Conclusion:

Simultaneous Transmission

WLAN & GSM

Require for Simultaneous Transmission SAR with Volume Scans

No (The sum of the 1-g SAR is < 1.6 W/kg)

3. This device can't support hot spot mode.

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 with CMU 200, and test them respectively at GSM 850 & PCS1900.

1.3. Test Environment

Ambient conditions in the laboratory:

Test Date: Sep. 19, 2011

Items	Required	Actual
Temperature (°C)	18-25	22.6± 2
Humidity (%RH)	30-70	53

Test Date: Sep. 20, 2011

Items	Required	Actual
Temperature (°C)	18-25	22.0± 2
Humidity (%RH)	30-70	53

Test Date: Sep. 21, 2011

Items	Required	Actual
Temperature (°C)	18-25	22.9± 2
Humidity (%RH)	30-70	51

Test Date: Sep. 21, 2011

Items	Required	Actual
Temperature (°C)	18-25	22.5± 2
Humidity (%RH)	30-70	50

Site Description:

Accredited by TAF
Accredited Number: 0914
Effective through: December 12, 2011

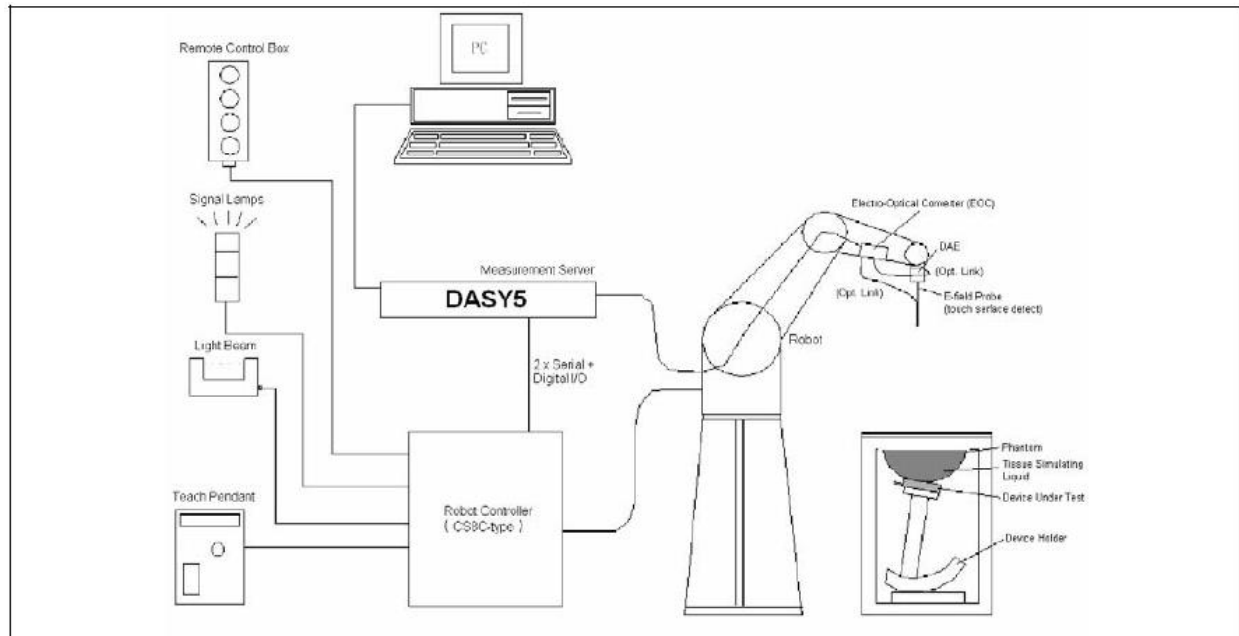


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2. SAR Measurement System

2.1. DASY5 System Description



The DASY5 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 communication 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 DASY5 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

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 applications utilize a 10mm^2 step integral, with 1mm interpolation used to locate 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/m^3 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 applications utilize a physical step of $7\times 7\times 7$ (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 Postprocessor, DASY5 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.

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

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

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

2.2. DASY5 E-Field Probe

The SAR measurement is conducted with the dosimetric probe manufactured by SPEAG. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric 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, EN 62209-1, IEC 62209, etc.) under ISO 17025. The calibration data are in Appendix D.

2.2.1. Isotropic E-Field Probe Specification

Model	EX3DV4	
Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 μ W/g to 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)	
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.	

2.3. Boundary Detection Unit and Probe Mounting Device

The DASY probes use a precise connector and an additional holder for the probe, consisting of a plastic tube and a flexible silicon ring to center the probe. The connector at the DAE is flexibly mounted and held in the default position with magnets and springs. Two switching systems in the connector mount detect frontal and lateral probe collisions and trigger the necessary software response.



2.4. DATA Acquisition Electronics (DAE) and Measurement Server

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit.

Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE4 is 200M Ohm; the inputs are symmetrical and floating. Common mode rejection is above 80dB.



The DASY5 measurement server is based on a PC/104 CPU board with a 400MHz intel ULV Celeron, 128MB chipdisk and 128MB RAM. The necessary circuits for communication with the DAE electronics box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY5 I/O board, which is directly connected to the PC/104 bus of the CPU board.



2.5. Robot

The DASY5 system uses the high precision robots TX90 XL type out of the newer series from Stäubli SA (France). For the 6-axis controller DASY5 system, the CS8C robot controller version from Stäubli is used.

The XL robot series have many features that are important for our application:

- High precision (repeatability 0.02 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)
- 6-axis controller



2.6. Light Beam Unit

The light beam switch allows automatic "tooling" of the probe. 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.



2.7. Device Holder

The DASY5 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 DASY5 device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon_r \approx 3$ 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.



2.8. 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 (% Weight)	835MHz Head	835MHz Body	1900MHz Head	1900MHz Body	2450MHz Head	2450MHz Body
Water	40.45	52.4	54.90	40.5	46.7	73.2
Salt	1.45	1.40	0.18	0.50	0.00	0.04
Sugar	57.6	45.0	0.00	58.0	0.00	0.00
HEC	0.40	1.00	0.00	0.50	0.00	0.00
Preventol	0.10	0.20	0.00	0.50	0.00	0.00
DGBE	0.00	0.00	44.92	0.00	53.3	26.7

3.2. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using APREL Dielectric Probe Kit and Anritsu MS4623B Vector Network Analyzer.

Head Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
835 MHz	Reference result ± 5% window	41.5 39.425 to 43.575	0.92 0.874 to 0.966	N/A
	21-09-2011	42.04	0.90	21.4

Body Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
835 MHz	Reference result ± 5% window	55.2 52.44 to 57.96	0.99 0.9405 to 1.0395	N/A
	20-09-2011	56.71	0.99	20.8

Head Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
1900 MHz	Reference result ± 5% window	40 38 to 42	1.4 1.33 to 1.47	N/A
	21-09-2011	40.98	1.41	21.1

Body Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [s/m]	
1900 MHz	Reference result ± 5% window	53.3 50.635 to 55.965	1.52 1.444 to 1.596	N/A
	20-09-2011	53.93	1.54	20.8

Head Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [S/m]	
2450MHz	Reference result ± 5% window	39.2 37.24 to 41.16	1.8 1.71 to 1.89	N/A
	19-09-2011	39.38	1.78	21.2

Body Tissue Simulant Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		ϵ_r	σ [S/m]	
2450MHz	Reference result ± 5% window	52.7 50.065 to 55.335	1.95 1.8525 to 2.0475	N/A
	20-09-2011	53.03	1.94	20.8

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.

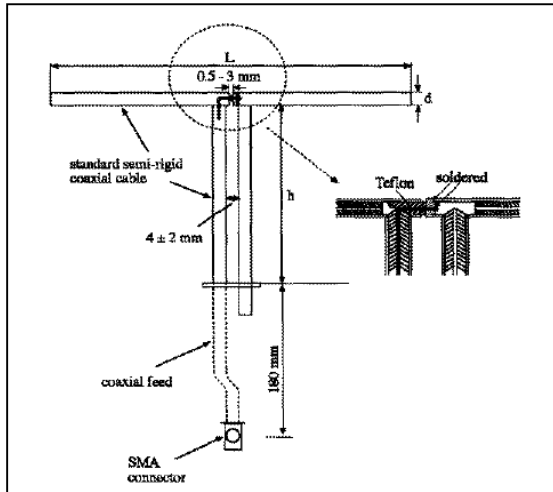
Target Frequency	Head		Body	
(MHz)	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	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 $\rho = 1000 \text{ kg/m}^3$)

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 specifications in line with the requirements of both IEEE and FCC Supplement C. the table below provides details for the mechanical and electrical specifications for the dipoles.

Frequency	L (mm)	h (mm)	d (mm)
835MHz	161.0	89.8	3.6
1900MHz	68.0	39.5	3.6
2450MHz	51.5	30.4	3.6

4.1.2. Validation Result

System Performance Check at 835MHz &1900MHz for Head				
Validation Kit: ASL-D-835				
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
835 MHz	Reference result ± 10% window	9.22 8.298 to 10.142	6.01 5.409 to 6.611	N/A
	21-09-2011	9.72	6.2	21.4
Validation Kit: ASL-D-1900				
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
1900 MHz	Reference result ± 10% window	38.4 34.56 to 42.24	19.9 17.91 to 21.89	N/A
	21-09-2011	41.6	20.32	21.1
Note: 1. The power level is used 250mW 2. All SAR values are normalized to 1W forward power.				
System Performance Check at 835MHz &1900MHz for Body				
Validation Kit: ASL-D-835				
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
835 MHz	Reference result ± 10% window	9.72 8.748 to 10.692	6.39 5.751 to 7.029	N/A
	20-09-2011	10.24	6.44	20.8
Validation Kit: ASL-D-1900				
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
1900 MHz	Reference result ± 10% window	40.5 36.45 to 44.55	21.7 19.53 to 23.87	N/A
	20-09-2011	38.44	20.2	20.8
Note: 1. The power level is used 250mW 2. All SAR values are normalized to 1W forward power.				

System Performance Check at 2450MHz for Head

Validation Dipole: D2450V2

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
2450 MHz	Reference result ± 10% window	52.3 47.07 to 57.53	24.5 22.05 to 26.95	N/A
	19-09-2011	50.4	22.72	21.2

System Performance Check at 2450MHz for Body

Validation Dipole: D2450V2

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
2450 MHz	Reference result ± 10% window	51.6 46.44 to 56.76	24.2 21.78 to 26.62	N/A
	20-09-2011	54.4	23.44	20.8

Note: 1. The power level is used 250mW

2. All SAR values are normalized to 1W forward power.

4.2. SAR Measurement Procedure

The DASY5 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 specification, at each frequency relating to the LOW, MID, and HIGH channel settings.

Pre-scans are made on the device to establish the location 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 location (interpolated resolution set at 1mm^2) 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 1mm^3).

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 location which is deemed as “Uncontrolled Environment” which can be described as a situation where the general public may be exposed to an RF source with no prior knowledge or control over their exposure.

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

Type Exposure	Uncontrolled Environment Limit
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

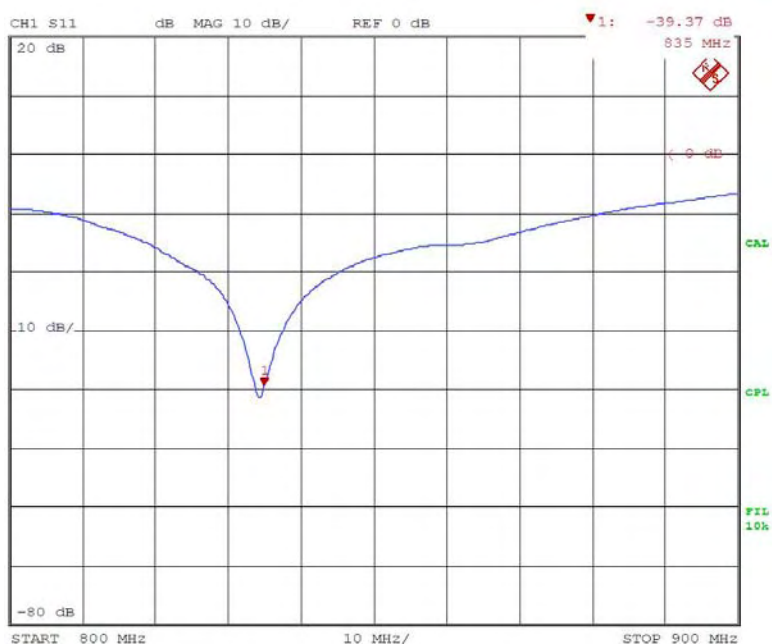
Instrument	Manufacturer	Model No.	Serial No.	Last Calibration	Next Calibration
Stäubli Robot TX60L	Stäubli	TX60L	F09/5BL1A1/A06	May. 2009	only once
Controller	Speag	CS8c	N/A	May. 2009	only once
Aprél Reference Dipole 835Mhz	Aprél	ALS-D-835	QTK-315	May. 2010	May. 2012
Aprél Reference Dipole 1900Mhz	Aprél	ALS-D-1900	QTK-318	May. 2010	May. 2012
Reference Dipole 2450Mhz	Speag	D2450V2	839	Mar. 2010	Mar. 2012
SAM Twin Phantom	Speag	QD000 P40 CA	Tp 1515	N/A	N/A
Device Holder	Speag	N/A	N/A	N/A	N/A
Data Acquisition Electronic	Speag	DAE4	1207	May. 2011	May. 2012
E-Field Probe	Speag	EX3DV4	3698	Jul. 2011	Jul. 2012
SAR Software	Speag	DASY52	Version 52.6.2	N/A	N/A
Aprél Dipole Spaccer	Aprél	ALS-DS-U	QTK-295	N/A	N/A
Power Amplifier	Mini-Circuit	ZHL-42	D051404-20	N/A	N/A
Directional Coupler	Agilent	778D-012	50550	N/A	N/A
Universal Radio Communication Tester	R&S	CMU 200	104846	May. 2011	May. 2012
Vector Network	Anritsu	MS4623B	992801	Jul. 2011	Jul. 2012
Signal Generator	Anritsu	MG3692A	042319	Jun. 2011	Jun. 2012
Power Meter	Anritsu	ML2487A	6K00001447	Nov. 2010	Nov. 2011
Wide Bandwidth Sensor	Anritsu	MA2491	034457	Nov. 2010	Nov. 2011

Note:

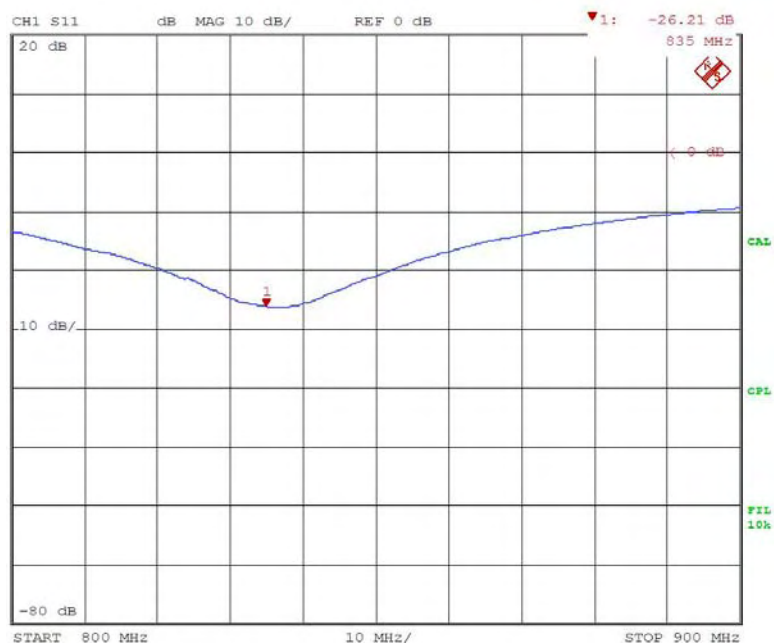
Per KDB 450824 D02 requirements for dipole calibration, the following are recommended FCC procedures for SAR dipole calibration.

1. After a dipole is damaged and properly repaired to meet required specifications
2. When the measured SAR deviates from the calibrated SAR value by more than 10% due to changes in physical, mechanical, electrical or other relevant dipole conditions;
3. When the most recent return-loss, measured at least annually, deviates by more than 20% from the previous measurement (i.e. 0.2 of the dB value) or not meeting the required -20 dB return-loss specification

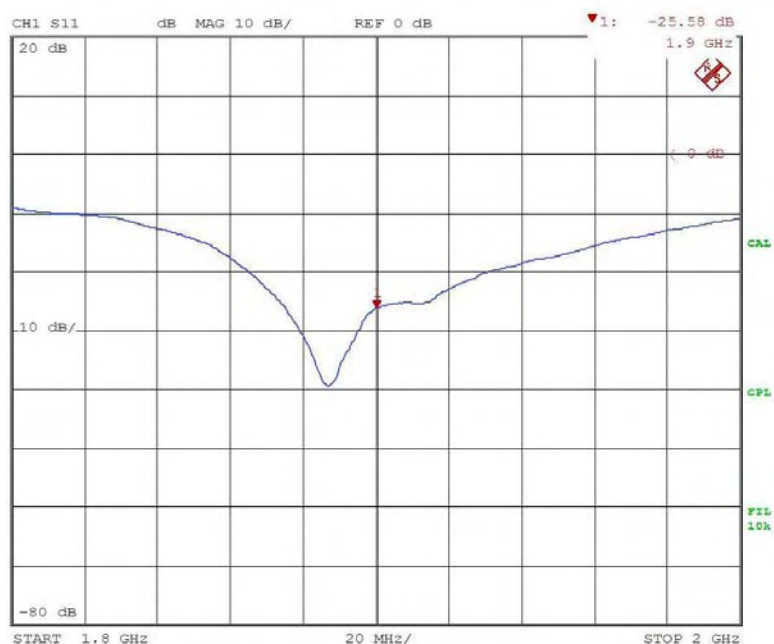
	Frequency	Tissue	Return loss	Limit	Verified Date
Calibration	835	Head	-40.3	Within 20%	2011.06.20
Measurement	835	Head	-39.37		



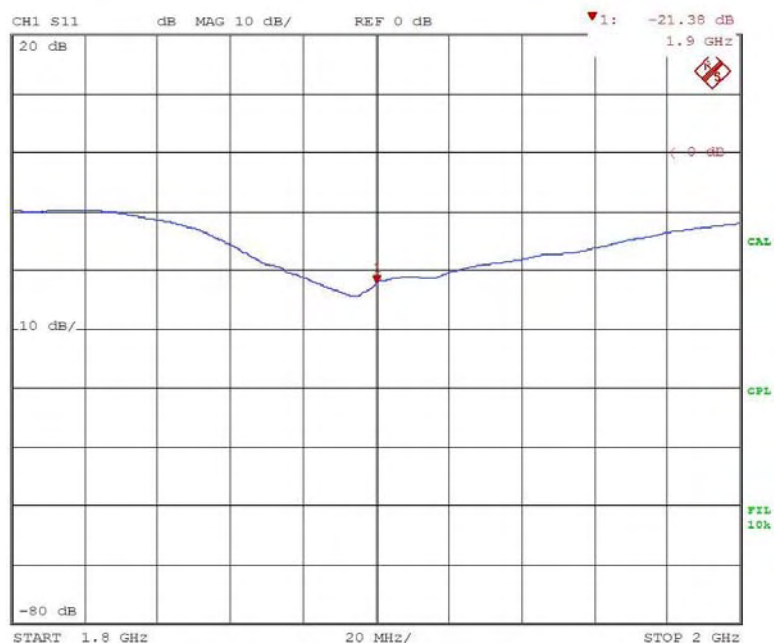
	Frequency	Tissue	Return loss	Limit	Verified Date
Calibration	835	Body	-24.8	Within 20%	2011.06.20
Measurement	835	Body	-26.21		



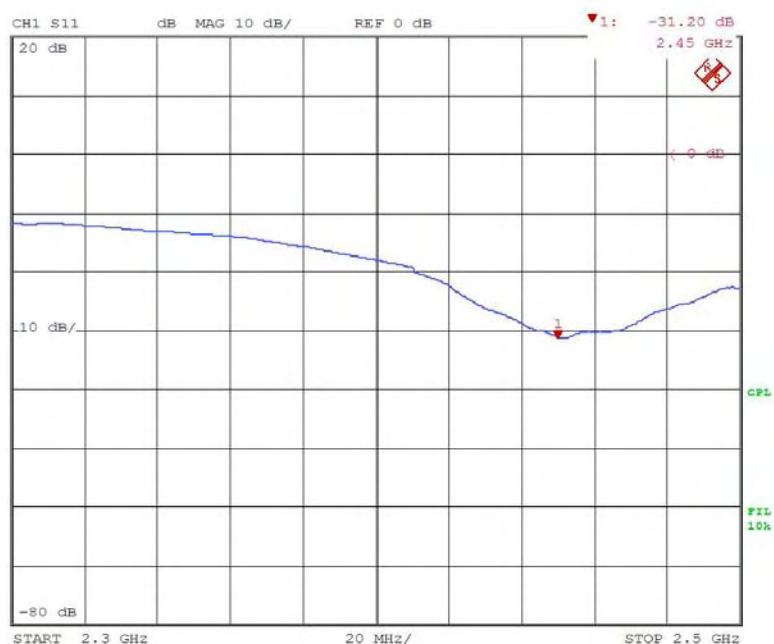
	Frequency	Tissue	Return loss	Limit	Verified Date
Calibration	1900	Head	-23.9	Within 20%	2011.06.20
Measurement	1900	Head	-25.58		



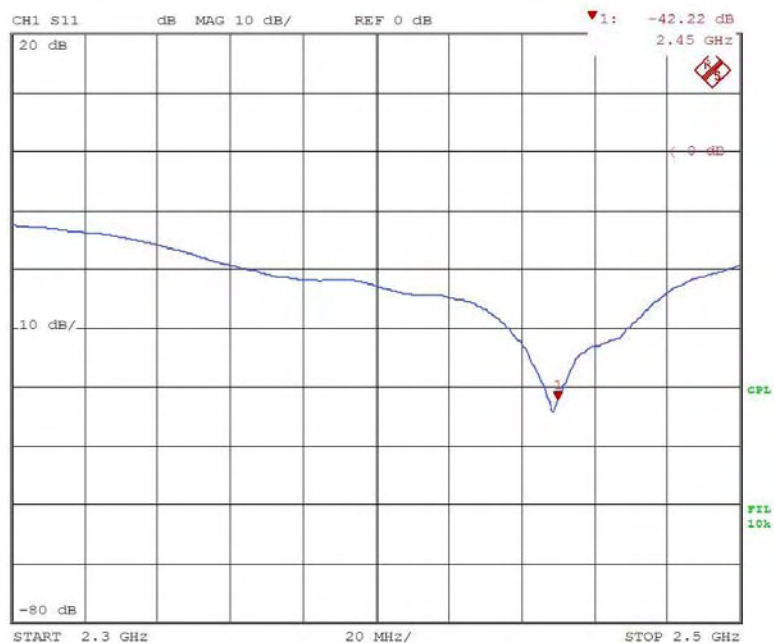
	Frequency	Tissue	Return loss	Limit	Verified Date
Calibration	1900	Body	-20.3	Within 20%	2011.06.20
Measurement	1900	Body	-21.38		



	Frequency	Tissue	Return loss	Limit	Verified Date
Calibration	2450	Head	-29.4	Within 20%	2011.06.20
Measurement	2450	Head	-31.2		

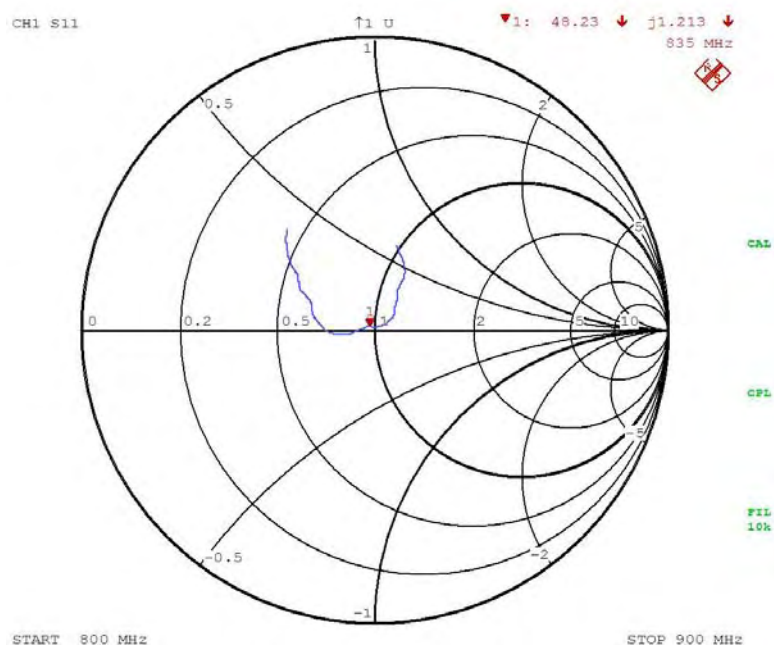


	Frequency	Tissue	Return loss	Limit	Verified Date
Calibration	2450	Body	-40.8	Within 20%	2011.06.20
Measurement	2450	Body	-42.22		

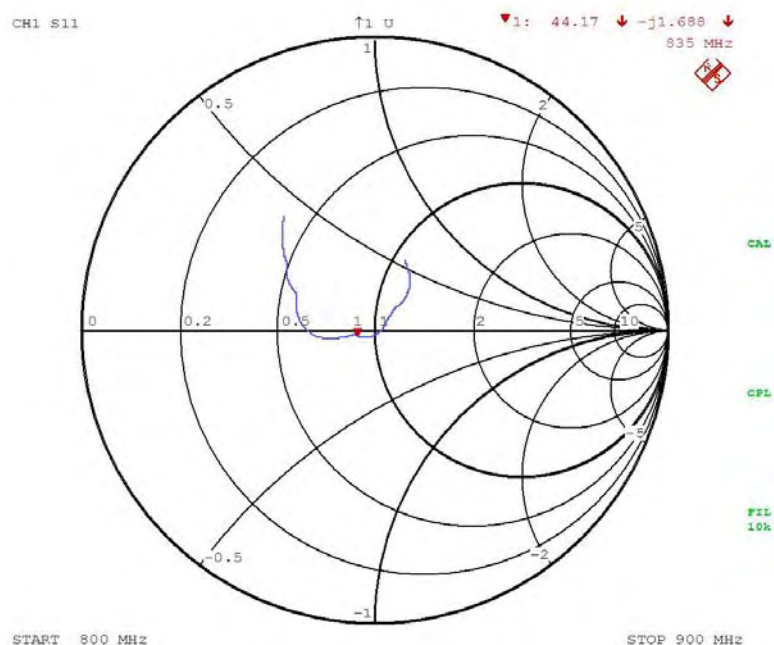


4. When the most recent measurement of the real or imaginary parts of the impedance, measured at least annually, deviates by more than 5 Ω from the previous measurement

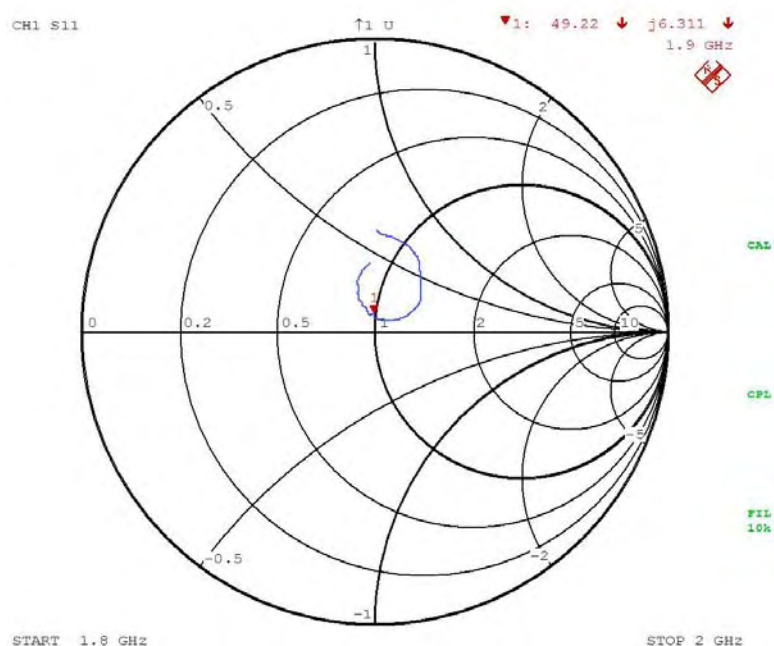
	Frequency	Tissue	Impedance	Limit	Verified Date
Calibration	835	Head	49.2	Within 5 Ω	2011.06.20
Measurement	835	Head	48.23		



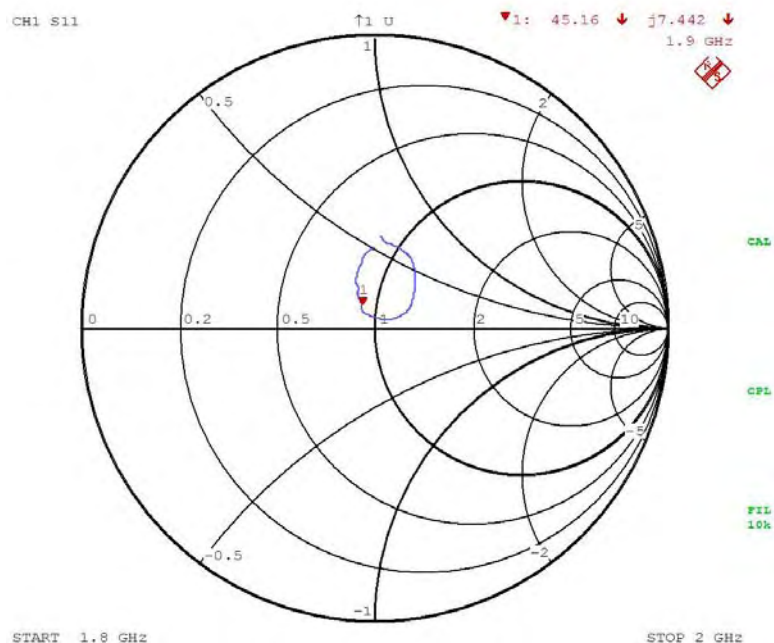
	Frequency	Tissue	Impedance	Limit	Verified Date
Calibration	835	Body	44.8	Within 5Ω	2011.06.20
Measurement	835	Body	44.17		



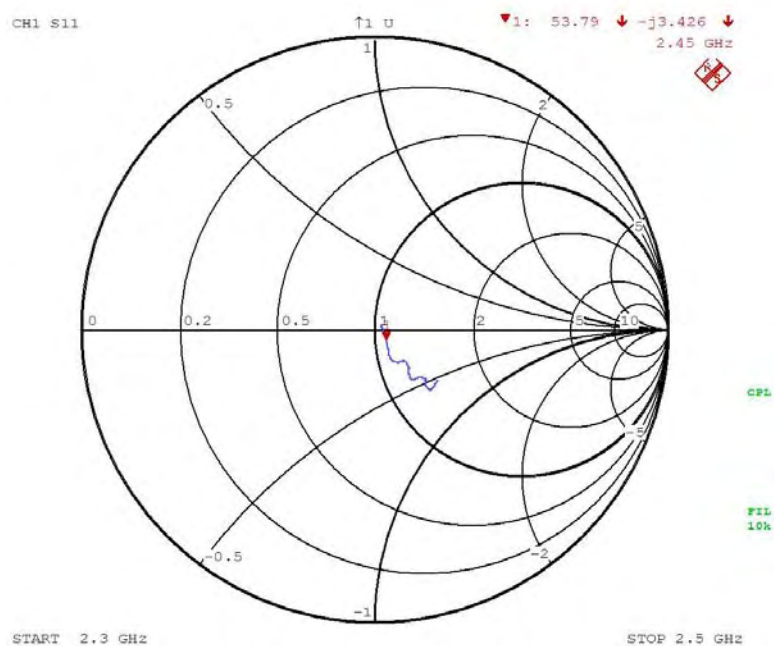
	Frequency	Tissue	Impedance	Limit	Verified Date
Calibration	1900	Head	49.2	Within 5Ω	2011.06.20
Measurement	1900	Head	49.22		



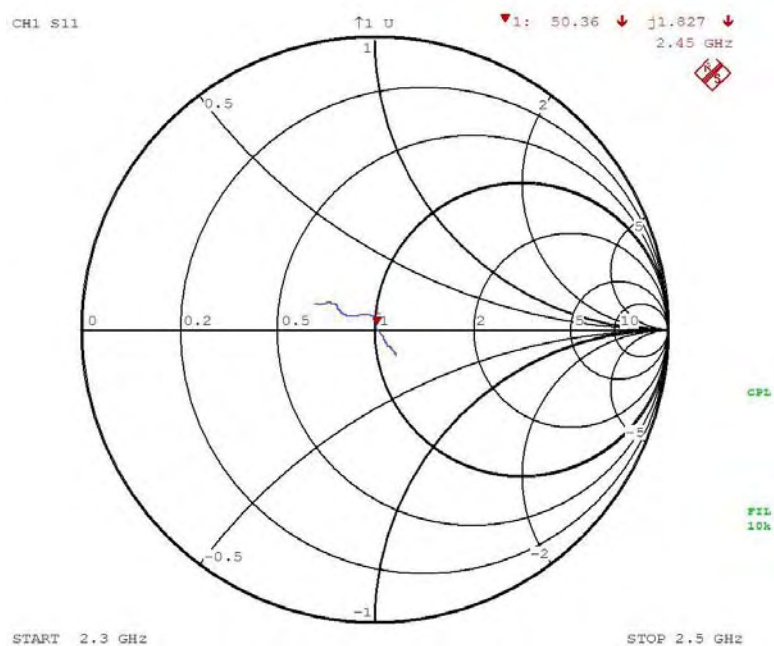
	Frequency	Tissue	Impedance	Limit	Verified Date
Calibration	1900	Body	45.2	Within 5Ω	2011.06.20
Measurement	1900	Body	45.16		



	Frequency	Tissue	Impedance	Limit	Verified Date
Calibration	2450	Head	53.5	Within 5Ω	2011.06.20
Measurement	2450	Head	53.79		



	Frequency	Tissue	Impedance	Limit	Verified Date
Calibration	2450	Body	50Ω	Within 5Ω	2011.06.20
Measurement	2450	Body	50.36Ω		



7. Measurement Uncertainty

DASY5 Uncertainty								
Measurement uncertainty for 300 MHz to 3 GHz averaged over 1 gram / 10 gram.								
Error Description	Uncert. value	Prob. Dist.	Div.	(ci) 1g	(ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(vi) V _{eff}
Measurement System								
Probe Calibration	±6.0%	N	1	1	1	±6.0%	±6.0%	∞
Axial Isotropy	±4.7%	R	$\sqrt{3}$	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	$\sqrt{3}$	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effects	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Linearity	±4.7%	R	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.4%	R	$\sqrt{3}$	1	1	±0.2%	±0.2%	∞
Probe Positioning	±2.9%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Max. SAR Eval.	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Test Sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Phantom and Setup								
Phantom Uncertainty	±4.0%	R	$\sqrt{3}$	1	1	±2.3%	±2.3%	∞
Liquid Conductivity (target)	±5.0%	R	$\sqrt{3}$	0.64	0.43	±1.8%	±1.2%	∞
Liquid Conductivity (meas.)	±2.5%	N	1	0.64	0.43	±1.6%	±1.1%	∞
Liquid Permittivity (target)	±5.0%	R	$\sqrt{3}$	0.6	0.49	±1.7%	±1.4%	∞
Liquid Permittivity (meas.)	±2.5%	N	1	0.6	0.49	±1.5%	±1.2%	∞
Combined Std. Uncertainty						±10.9%	±10.7%	387
Expanded STD Uncertainty						±21.9%	±21.4%	

8. Conducted Power Measurement

GSM Power

Mode	Frequency (MHz)	Avg. Burst Power (dBm)	Duty Cycle Factor (dB)	Frame Power (dBm)
Maximum Power <SIM 1>				
GSM850	824.2	32.69	-9	23.69
	836.4	32.67	-9	23.67
	848.8	32.66	-9	23.66
PCS1900	1850.2	30.17	-9	21.17
	1880.0	30.40	-9	21.4
	1909.8	30.30	-9	21.3
GPRS850(2 Slot)	824.2	31.97	-6	25.97
	836.4	31.91	-6	25.91
	848.8	31.83	-6	25.83
GPRS850(3 Slot)	824.2	29.94	-4.25	25.69
	836.4	29.90	-4.25	25.65
	848.8	29.83	-4.25	25.58
GPRS850(4 Slot)	824.2	29.18	-3	26.18
	836.4	29.09	-3	26.09
	848.8	29.03	-3	26.03
GPRS1900(2 Slot)	1850.2	28.57	-6	22.57
	1880.0	28.92	-6	22.92
	1909.8	28.65	-6	22.65
GPRS1900(3 Slot)	1850.2	26.51	-4.25	22.26
	1880.0	26.96	-4.25	22.71
	1909.8	26.70	-4.25	22.45
GPRS1900(4 Slot)	1850.2	25.45	-3	22.45
	1880.0	25.81	-3	22.81
	1909.8	25.67	-3	22.67
Maximum Power <SIM 2>				
GSM850	836.4	32.65	-9	23.65
PCS1900	1880.0	30.14	-9	21.14

WLAN output power

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Peak Power (dBm)	Average Power (dBm)
802.11b	11	01	2412	15.82	10.18
		06	2437	15.72	10.04
		11	2462	15.58	9.82
802.11g	54	01	2412	15.51	8.01
		06	2437	15.40	7.84
		11	2462	15.19	7.64

Note : According to the KDB 248227. SAR is not required for 802.11g channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11b channels.

9. Test Results

9.1. SAR Test Results Summary

SAR MEASUREMENT						
Ambient Temperature (°C) : 22.9 ±2				Relative Humidity (%) : 51		
Liquid Temperature (°C) : 21.4 ±2				Depth of Liquid (cm):>15		
Product: GSM Mobile Phone						
Test Mode: GSM850 <SIM 1>						
Test Position Head	Antenna Position	Frequency		Conducted Power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
Left-Cheek	Fixed	128	824.2	32.69	0.621	1.6
Left-Cheek	Fixed	189	836.4	32.67	0.727	1.6
Left-Cheek	Fixed	251	848.8	32.66	0.881	1.6
Left-Tilt	Fixed	189	836.4	32.67	0.411	1.6
Right-Cheek	Fixed	128	824.2	32.69	0.582	1.6
Right-Cheek	Fixed	189	836.4	32.67	0.727	1.6
Right-Cheek	Fixed	251	848.8	32.66	0.816	1.6
Right-Tilt	Fixed	189	836.4	32.67	0.435	1.6
Test Mode: GSM850 <SIM 2>						
Left-Cheek	Fixed	189	836.4	32.65	0.725	1.6
Note: (1)when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 447498.						

SAR MEASUREMENT						
Ambient Temperature (°C) : 22.0 ±2				Relative Humidity (%): 53		
Liquid Temperature (°C) : 20.8 ±2				Depth of Liquid (cm):>15		
Product: GSM Mobile Phone						
Test Mode: GSM850 Voice						
Test Position Body	Antenna Position	Frequency		Conducted Power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
Body-worn	Fixed	189	836.4	32.67	0.813	1.6
Test Mode: GPRS850 2slot						
Body-worn	Fixed	128	824.2	31.97	0.737	1.6
Body-worn	Fixed	189	836.4	31.91	1.090	1.6
Body-worn	Fixed	251	848.8	31.83	1.030	1.6
Body-front	Fixed	189	836.4	31.91	0.498	1.6
Body-worn (With Headset)	Fixed	189	836.4	31.91	0.574	1.6
Test Mode: GPRS850 3slot						
Body-worn	Fixed	189	836.4	29.90	0.913	1.6
Test Mode: GPRS850 4slot						
Body-worn	Fixed	189	836.4	29.09	0.904	1.6
Note: (1)when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 447498.						
(2) Body SAR was performed with the device 15mm from the phantom						

SAR MEASUREMENT						
Ambient Temperature (°C) : 22.5 ±2				Relative Humidity (%): 50		
Liquid Temperature (°C) : 21.1 ±2				Depth of Liquid (cm):>15		
Product: GSM Mobile Phone						
Test Mode: PCS1900 <SIM 1>						
Test Position Head	Antenna Position	Frequency		Conducted Power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
Left-Cheek	Fixed	512	1850.2	30.17	0.779	1.6
Left-Cheek	Fixed	661	1880.0	30.40	0.748	1.6
Left-Cheek	Fixed	810	1909.8	30.30	0.667	1.6
Left-Tilt	Fixed	661	1880.0	30.40	0.195	1.6
Right-Cheek	Fixed	512	1850.2	30.17	1.090	1.6
Right-Cheek	Fixed	661	1880.0	30.40	1.080	1.6
Right-Cheek	Fixed	810	1909.8	30.30	1.030	1.6
Right-Tilt	Fixed	661	1880.0	30.40	0.196	1.6
Test Mode: PCS1900 <SIM 2>						
Left-Cheek	Fixed	661	1880.0	30.40	0.731	1.6
Note: when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 447498.						

SAR MEASUREMENT						
Ambient Temperature (°C) : 22.0 ±2				Relative Humidity (%): 53		
Liquid Temperature (°C) : 20.8 ±2				Depth of Liquid (cm):>15		
Product: GSM Mobile Phone						
Test Mode: PCS1900 Voice						
Test Position Body	Antenna Position	Frequency		Conducted Power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
Body-worn	Fixed	661	1880.0	30.40	0.382	1.6
Test Mode: GPRS1900 2slot						
Body-worn	Fixed	512	1850.2	28.57	0.555	1.6
Body-worn	Fixed	661	1880.0	28.92	0.595	1.6
Body-worn	Fixed	810	1909.8	28.65	0.619	1.6
Body-front	Fixed	661	1880.0	28.92	0.538	1.6
Body-worn (With Headset)	Fixed	661	1880.0	28.92	0.513	1.6
Test Mode: GPRS1900 3slot						
Body-worn	Fixed	661	1880.0	26.96	0.560	1.6
Test Mode: GPRS1900 4slot						
Body-worn	Fixed	661	1880.0	25.81	0.582	1.6
Note: (1)when the 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional, refer to KDB 447498.						
(2) Body SAR was performed with the device 15mm from the phantom						

SAR MEASUREMENT						
Ambient Temperature (°C): 22.6 ±2				Relative Humidity (%): 53		
Liquid Temperature (°C): 21.2 ±2				Depth of Liquid (cm):>15		
Product: GSM Mobile Phone						
Test Mode: 802.11b						
Test Position Head	Antenna Position	Frequency		Conducted Power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
Left-Cheek	Fixed	1	2412	10.18	0.051	1.6
Left-Cheek	Fixed	6	2437	10.04	*	1.6
Left-Cheek	Fixed	11	2462	9.82	*	1.6
Left-Tilt	Fixed	1	2412	10.18	0.026	1.6
Right-Cheek	Fixed	1	2412	10.18	0.026	1.6
Right-Cheek	Fixed	6	2437	10.04	*	1.6
Right-Cheek	Fixed	11	2462	9.82	*	1.6
Right-Tilt	Fixed	1	2412	10.18	0.024	1.6
Note: When the SAR procedures require multiple channels to be tested and the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required, refer to KDB 447498.						

SAR MEASUREMENT						
Ambient Temperature (°C): 22.0 ± 2				Relative Humidity (%): 53		
Liquid Temperature (°C): 20.8 ± 2				Depth of Liquid (cm):>15		
Product: GSM Mobile Phone						
Test Mode: 802.11b						
Test Position Body	Antenna Position	Frequency		Conducted Power (dBm)	SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz			
Body-worn	Fixed	1	2412	10.18	0.020	1.6
Body-worn	Fixed	6	2437	10.04	*	1.6
Body-worn	Fixed	11	2462	9.82	*	1.6
Body-front	Fixed	1	2412	10.18	0.017	1.6
Note: (1)When the SAR procedures require multiple channels to be tested and the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required, refer to KDB 447498.						
(2) Body SAR was performed with the device 15mm from the phantom						

Appendix A. SAR System Validation Data

Test Laboratory: QuieTek

Date/Time: 2011/9/21

SystemPerformanceCheck-835MHz_Head

DUT: Dipole 835 MHz; Type: ALS-D-835-S-2

Communication System: CW; Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.9 \text{ mho/m}$; $\epsilon_r = 42.04$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature ($^{\circ}\text{C}$) : 22.9, Liquid Temperature ($^{\circ}\text{C}$) : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.4, 8.4, 8.4); Calibrated: 2011/7/28
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/835MHz_Head/Area Scan (7x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.917 mW/g

Configuration/835MHz_Head/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

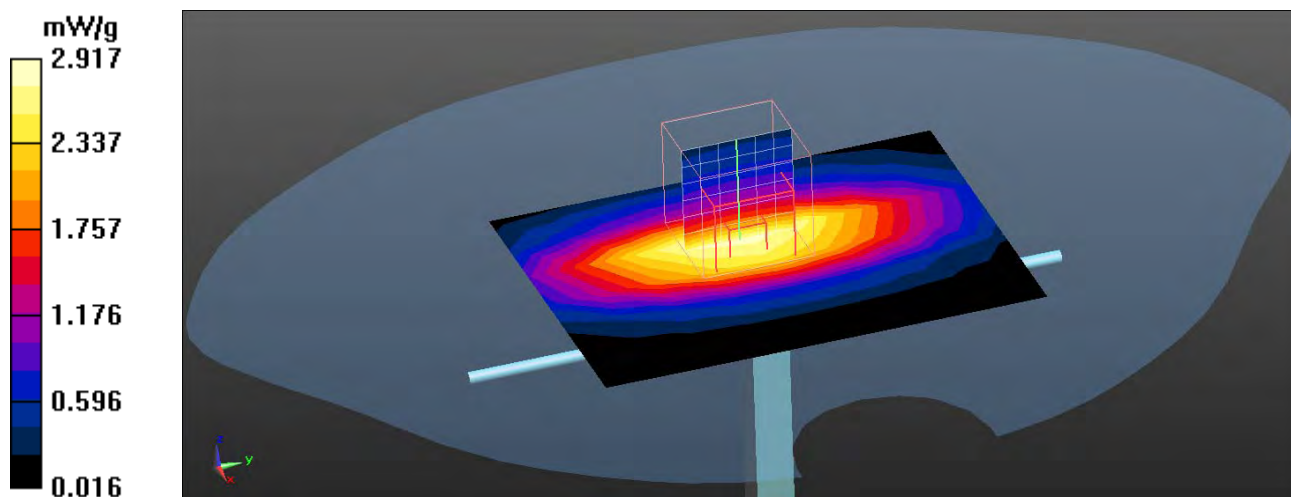
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 58.557 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.861 W/kg

SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.55 mW/g

Maximum value of SAR (measured) = 2.846 mW/g



Test Laboratory: QuieTek

Date/Time: 2011/9/20

SystemPerformanceCheck-835MHz_Body

DUT: Dipole 835 MHz; Type: ALS-D-835-S-2

Communication System: CW; Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 56.71$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature ($^{\circ}\text{C}$) : 22.0, Liquid Temperature ($^{\circ}\text{C}$) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.59, 8.59, 8.59); Calibrated: 2011/7/28
- Sensor-Surface: 2mm (Mechanical Surface Detection),
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/835MHz_Body/Area Scan (7x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 3.131 mW/g

Configuration/835MHz_Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

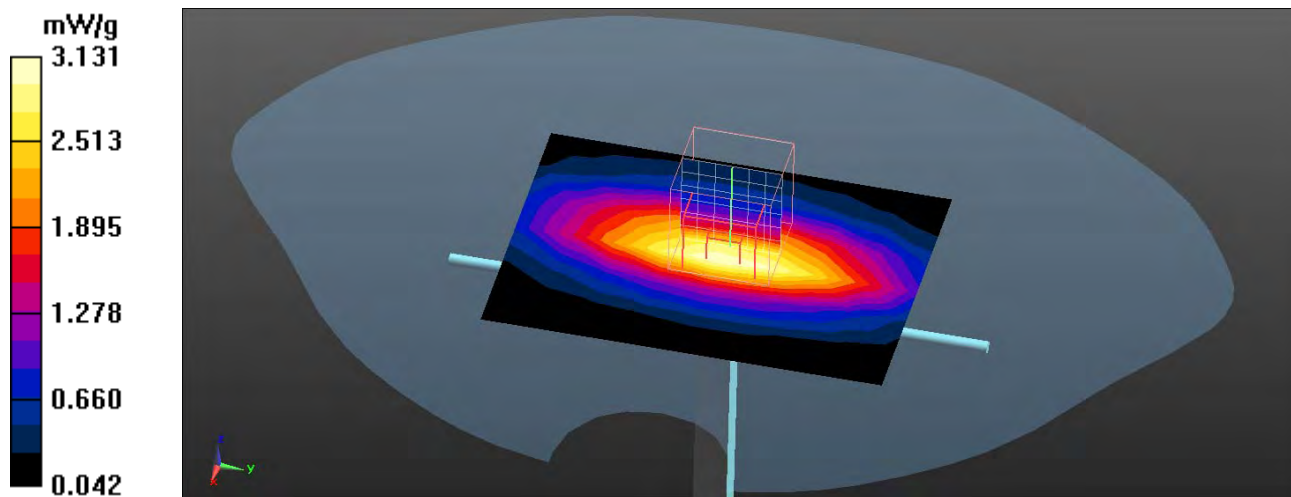
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.242 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 4.051 W/kg

SAR(1 g) = 2.56 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.907 mW/g



Test Laboratory: QuieTek

Date/Time: 2011/9/21

System Performance Check_1900MHz-Head

DUT: Dipole 1900 MHz; Type: ALS-D-1900-S-2

Communication System: CW; Frequency: 1900 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 40.98$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.5, Liquid Temperature (°C) : 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.18, 7.18, 7.18); Calibrated: 2011/7/28
- Sensor-Surface: 2mm (Mechanical Surface Detection),
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/1900MHz_Head/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.699 mW/g

Configuration/1900MHz_Head/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

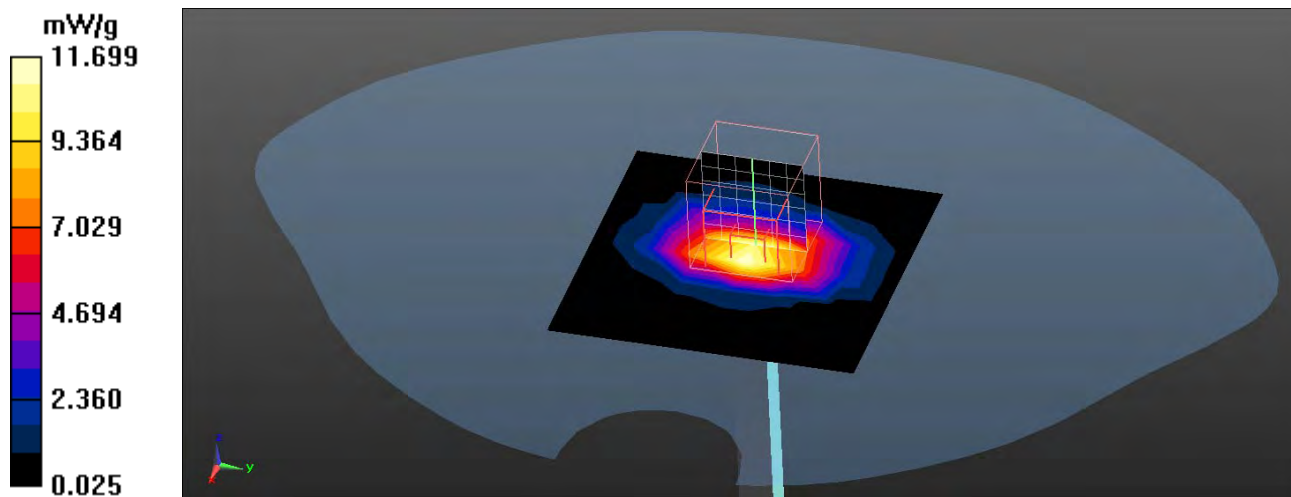
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 108.6 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 20.231W/kg

SAR(1 g) = 10.4 mW/g; SAR(10 g) = 5.08 mW/g

Maximum value of SAR (measured) = 11.535mW/g



Test Laboratory: QuieTek

Date/Time: 2011/9/20

System Performance Check_1900MHz-Body

DUT: Dipole 1900 MHz; Type: ALS-D-1900-S-2

Communication System: CW; Frequency: 1900 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.93$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.74, 6.74, 6.74); Calibrated: 2011/7/28
- Sensor-Surface: 2mm (Mechanical Surface Detection),
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/1900MHz_Body/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.944 mW/g

Configuration/1900MHz_Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

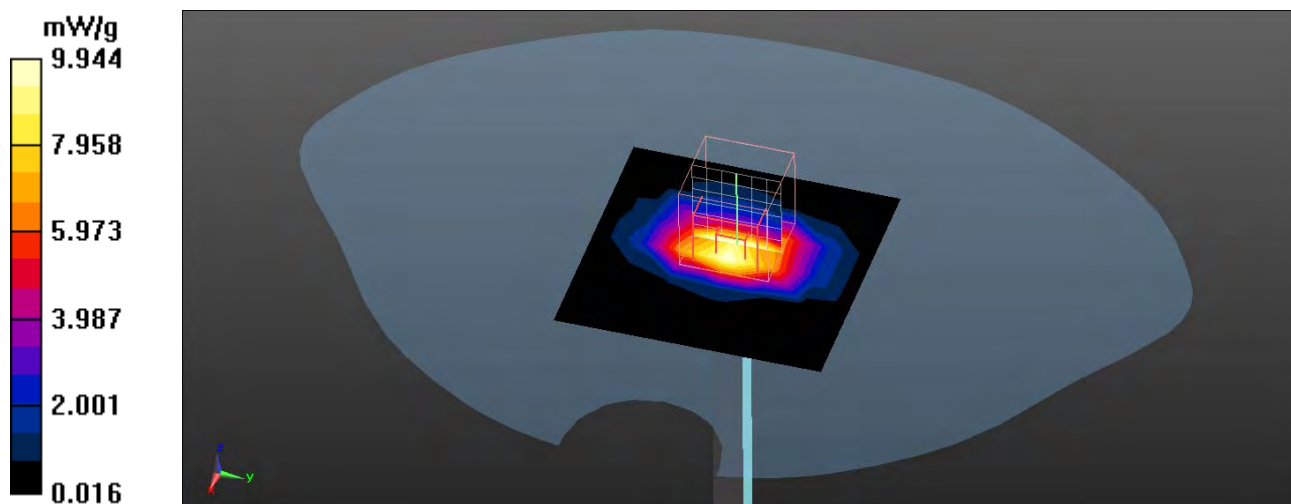
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 96.74 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 18.121 W/kg

SAR(1 g) = 9.61 mW/g; SAR(10 g) = 5.05 mW/g

Maximum value of SAR (measured) = 10.166 mW/g



Test Laboratory: QuieTek

Date/Time: 2011/9/19

System Performance Check_2450MHz-Head

DUT: Dipole 2450 MHz; Type: D2450V2

Communication System: CW; Frequency: 2450 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.78$ mho/m; $\epsilon_r = 39.38$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.6, Liquid Temperature (°C) : 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.51, 6.51, 6.51); Calibrated: 2011/7/28
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/2450MHz_Head/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 18.273 mW/g

Configuration/2450MHz_Head/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

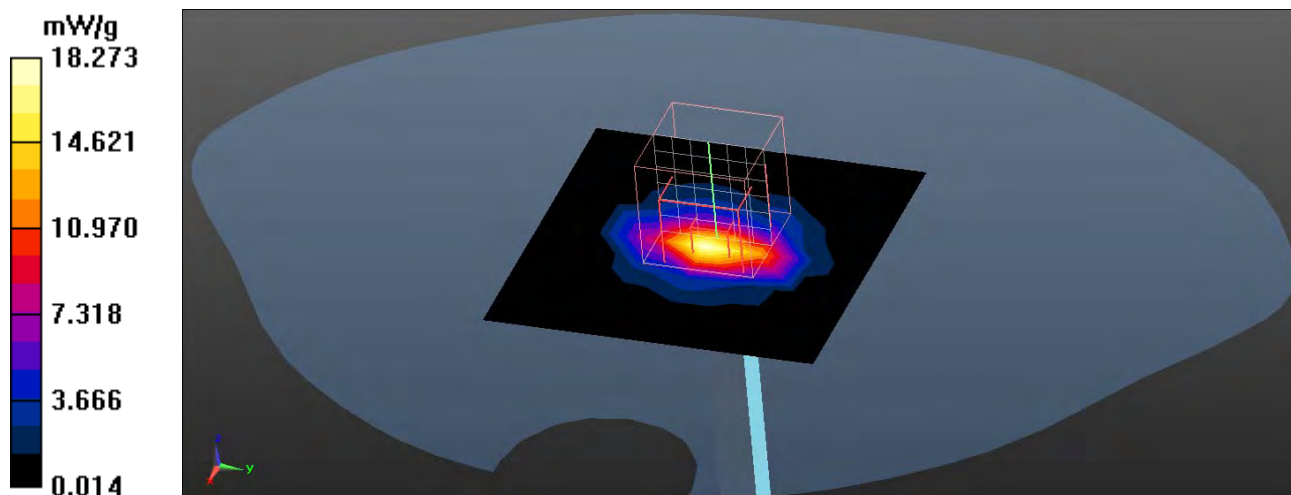
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 102.3 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 26.634 W/kg

SAR(1 g) = 12.6 mW/g; SAR(10 g) = 5.68 mW/g

Maximum value of SAR (measured) = 15.927 mW/g



Test Laboratory: QuieTek

Date/Time: 2011/9/20

System Performance Check_2450MHz-Body

DUT: Dipole 2450 MHz; Type: D2450V2

Communication System: CW; Frequency: 2450 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 53.03$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.6, 6.6, 6.6); Calibrated: 2011/7/28
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/2450MHz_Body/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 16.993 mW/g

Configuration/2450MHz_Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

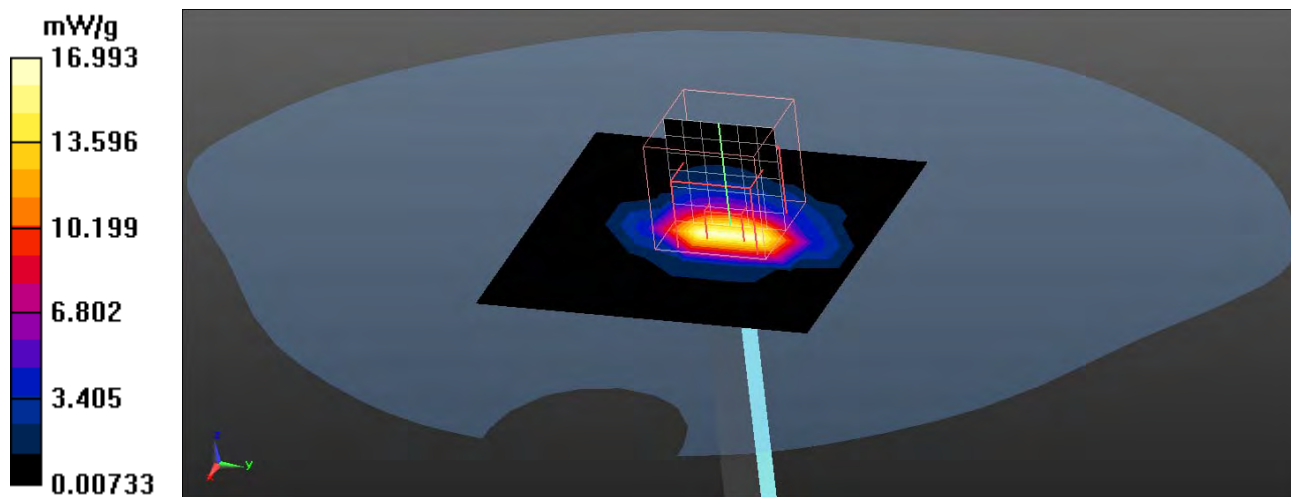
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 100.9 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 29.008 W/kg

SAR(1 g) = 13.6 mW/g; SAR(10 g) = 5.86 mW/g

Maximum value of SAR (measured) = 14.955 mW/g



Appendix B. SAR measurement Data

Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 850_Left-Cheek_SIM1_128

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz; Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 42.88$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature (°C) : 22.9, Liquid Temperature (°C) : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.4, 8.4, 8.4); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.640 mW/g

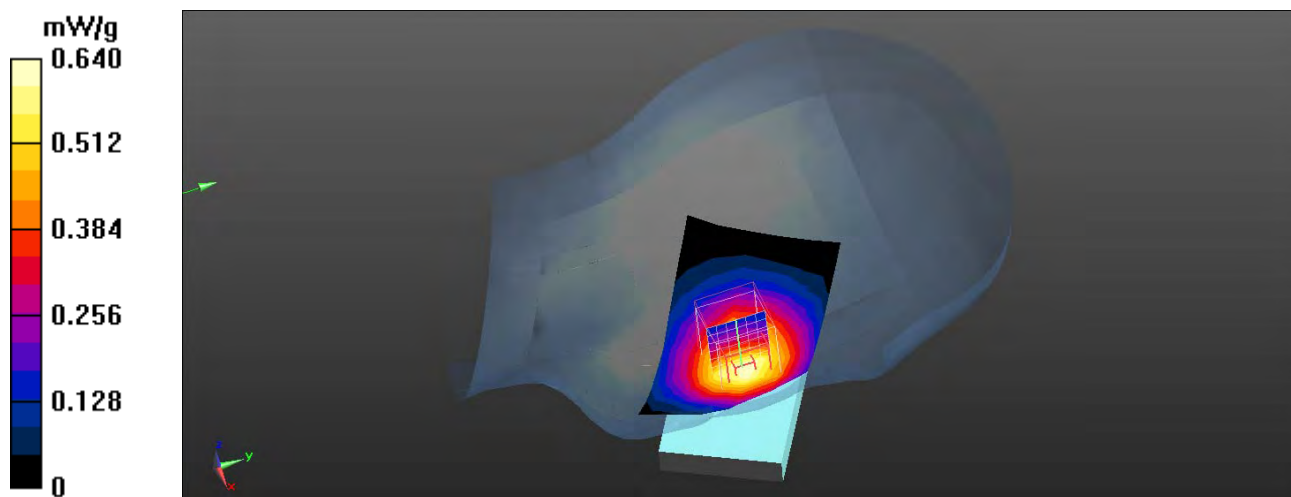
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.734 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.779 W/kg

SAR(1 g) = 0.621 mW/g; SAR(10 g) = 0.465 mW/g

Maximum value of SAR (measured) = 0.656 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 850_Left-Cheek_SIM1_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz; Frequency: 836.4 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 41.96$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature (°C) : 22.9, Liquid Temperature (°C) : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.4, 8.4, 8.4); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.743 mW/g

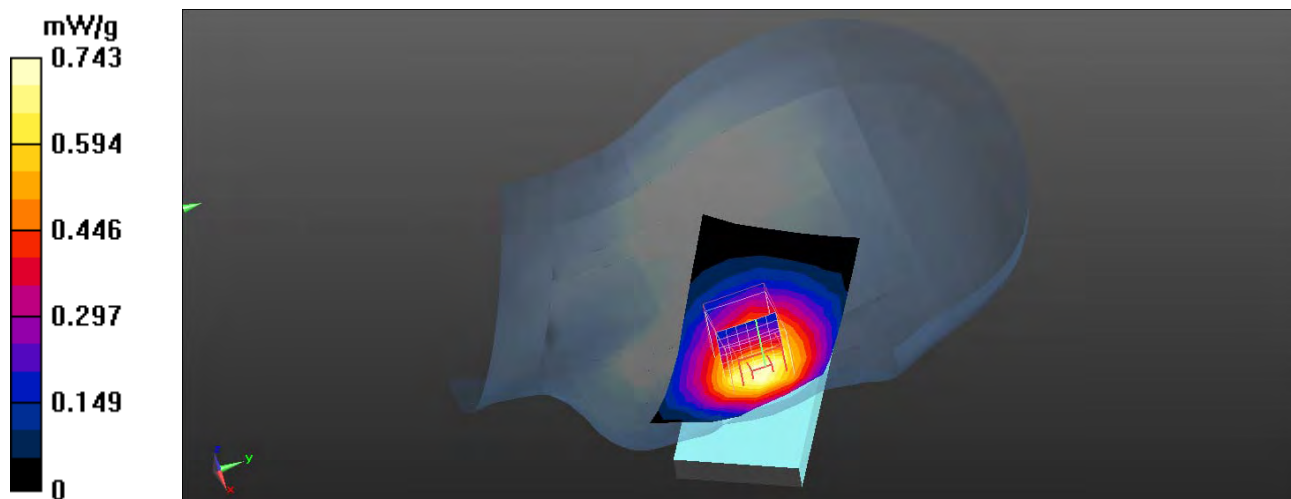
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.740 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.909 W/kg

SAR(1 g) = 0.727 mW/g; SAR(10 g) = 0.545 mW/g

Maximum value of SAR (measured) = 0.763 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 850_Left-Cheek_SIM1_251

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz; Frequency: 848.8 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 848.8$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 41.13$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature (°C) : 22.9, Liquid Temperature (°C) : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.4, 8.4, 8.4); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.896 mW/g

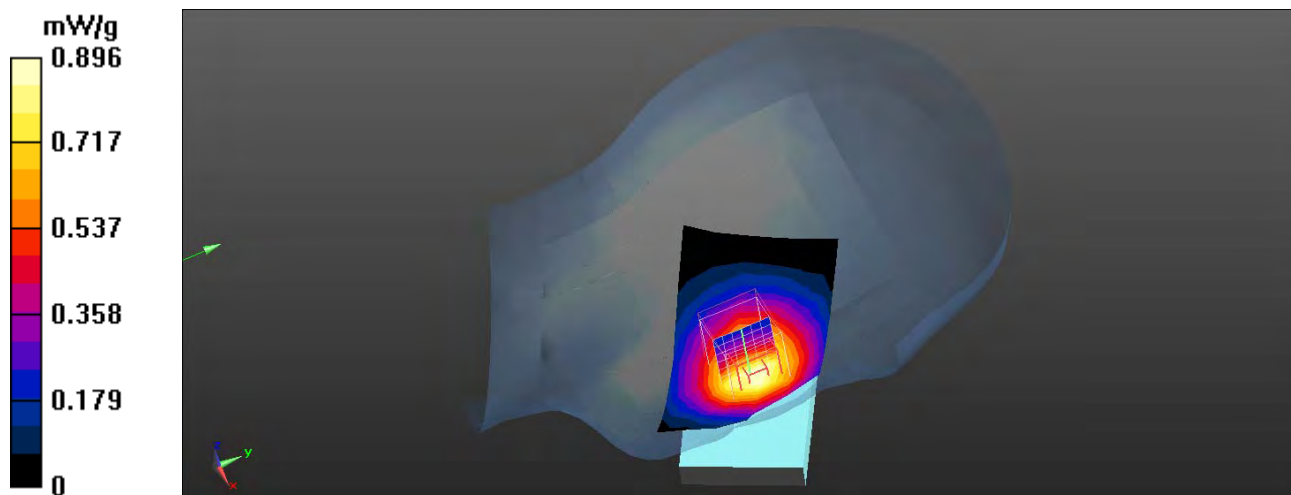
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.659 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.115 W/kg

SAR(1 g) = 0.881 mW/g; SAR(10 g) = 0.656 mW/g

Maximum value of SAR (measured) = 0.928 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 850_Left-Tilt_SIM1_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz; Frequency: 836.4 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 41.96$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature (°C) : 22.9, Liquid Temperature (°C) : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.4, 8.4, 8.4); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.421 mW/g

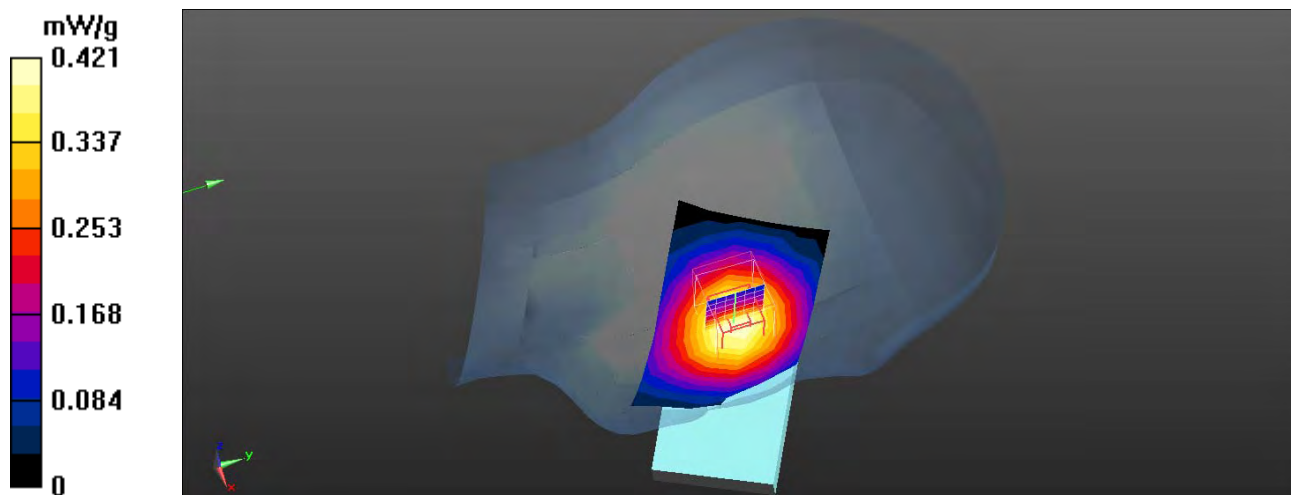
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.385 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.516 W/kg

SAR(1 g) = 0.411 mW/g; SAR(10 g) = 0.309 mW/g

Maximum value of SAR (measured) = 0.432 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 850_Right-Cheek_SIM1_128

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz; Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 42.88$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature (°C) : 22.9, Liquid Temperature (°C) : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.4, 8.4, 8.4); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.599 mW/g

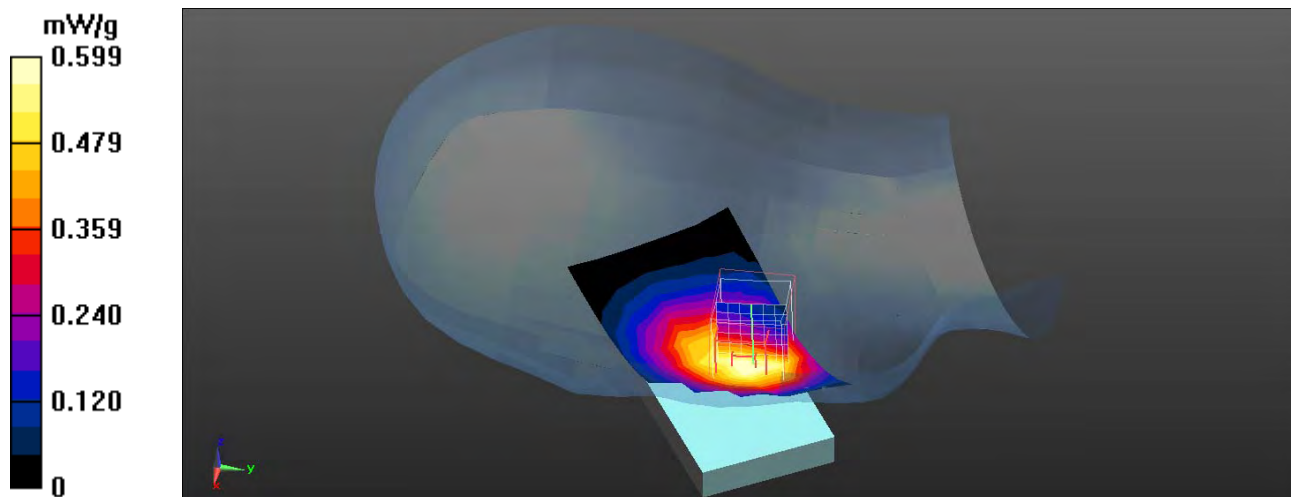
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.986 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.826 W/kg

SAR(1 g) = 0.582 mW/g; SAR(10 g) = 0.416 mW/g

Maximum value of SAR (measured) = 0.615 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 850_Right-Cheek_SIM1_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz; Frequency: 836.4 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 41.96$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature (°C) : 22.9, Liquid Temperature (°C) : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.4, 8.4, 8.4); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.747 mW/g

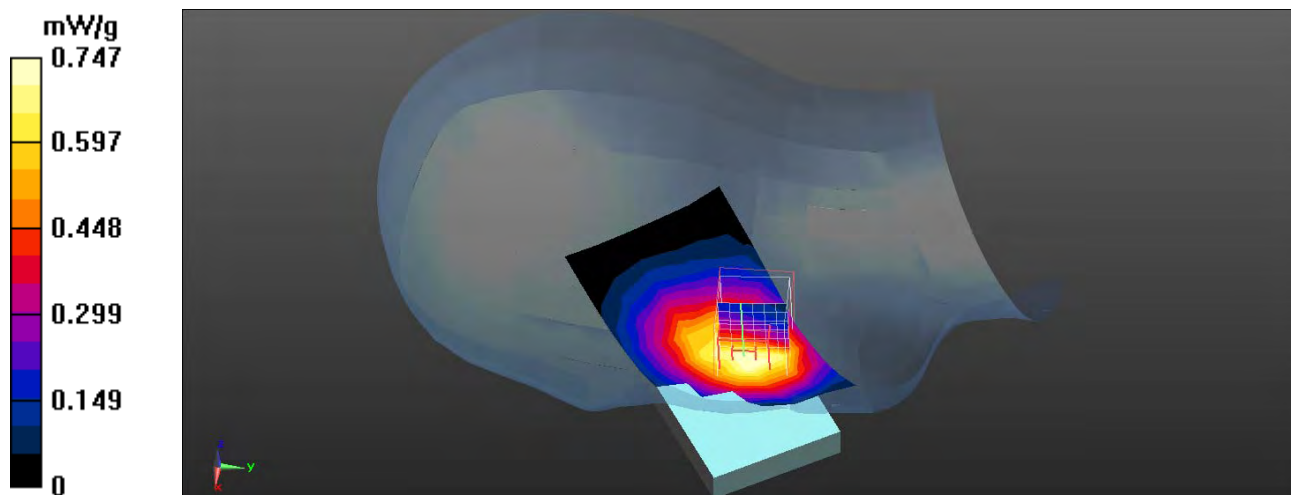
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.066 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.019 W/kg

SAR(1 g) = 0.727 mW/g; SAR(10 g) = 0.519 mW/g

Maximum value of SAR (measured) = 0.772 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 850_Right-Cheek_SIM1_251

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz; Frequency: 848.8 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 848.8$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 41.13$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature (°C) : 22.9, Liquid Temperature (°C) : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.4, 8.4, 8.4); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.840 mW/g

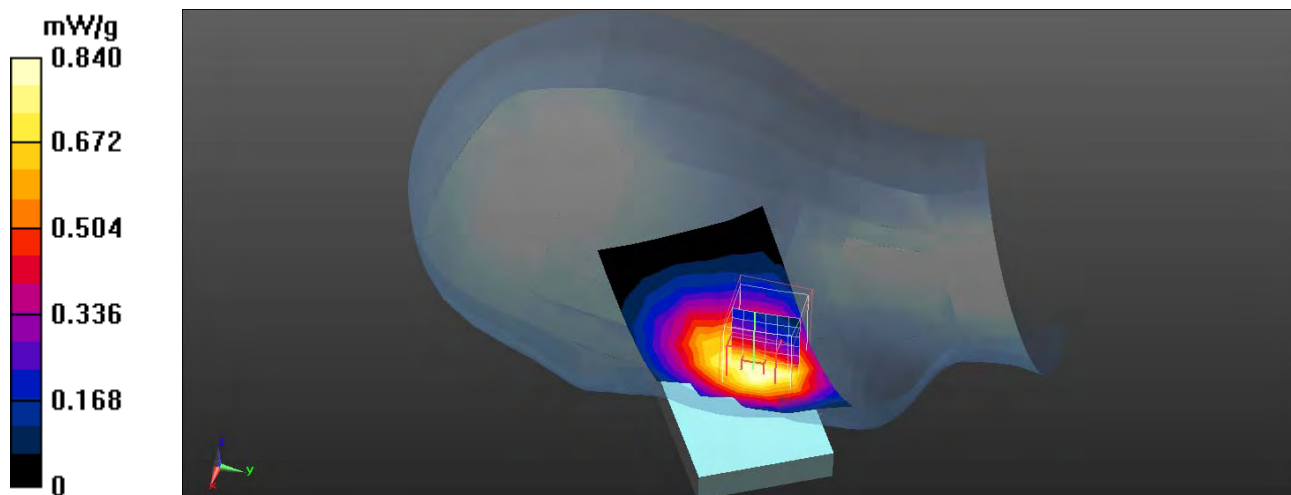
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.529 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.139 W/kg

SAR(1 g) = 0.816 mW/g; SAR(10 g) = 0.581 mW/g

Maximum value of SAR (measured) = 0.862 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 850_Right-Tilt_SIM1_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz; Frequency: 836.4 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 41.96$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature (°C) : 22.9, Liquid Temperature (°C) : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.4, 8.4, 8.4); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.450 mW/g

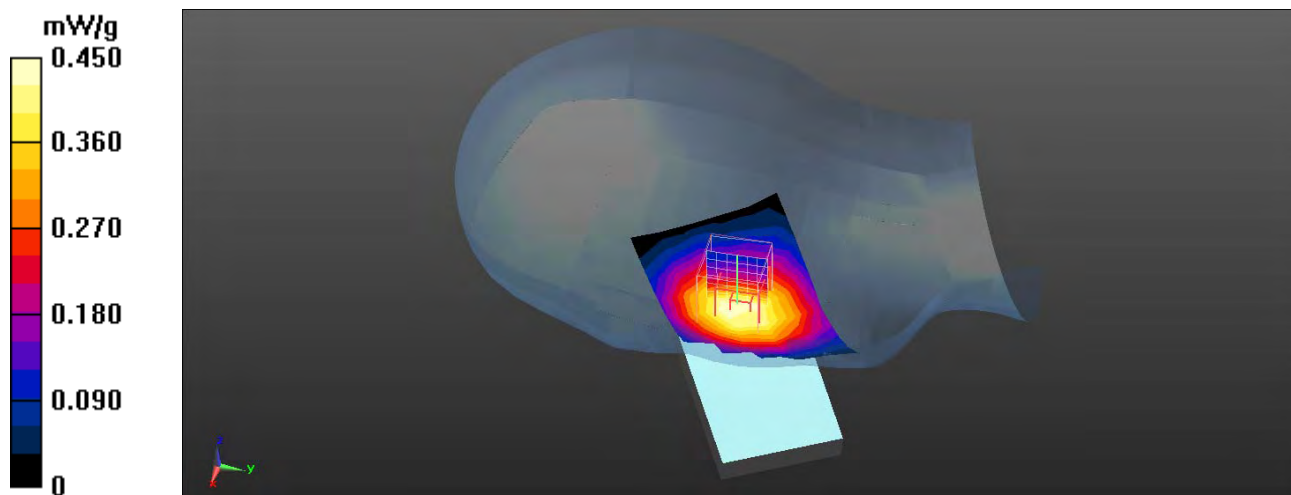
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.053 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.551 W/kg

SAR(1 g) = 0.435 mW/g; SAR(10 g) = 0.324 mW/g

Maximum value of SAR (measured) = 0.458 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 850_Left-Cheek_SIM2_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz; Frequency: 836.4 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 41.96$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature (°C) : 22.9, Liquid Temperature (°C) : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.4, 8.4, 8.4); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.763 mW/g

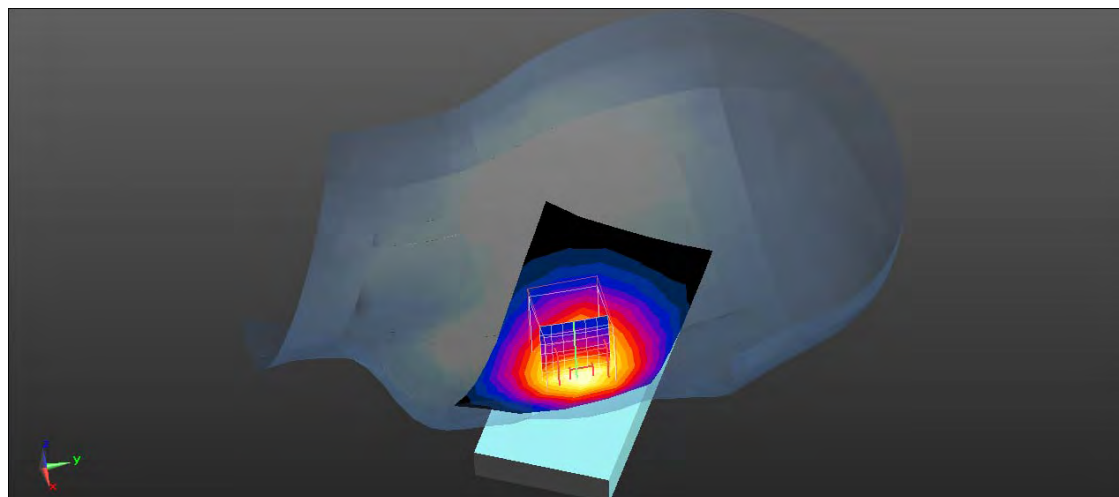
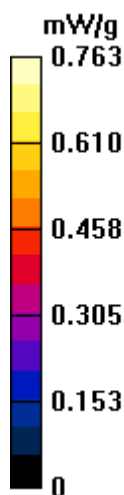
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.842 V/m; Power Drift = -0.12 dB

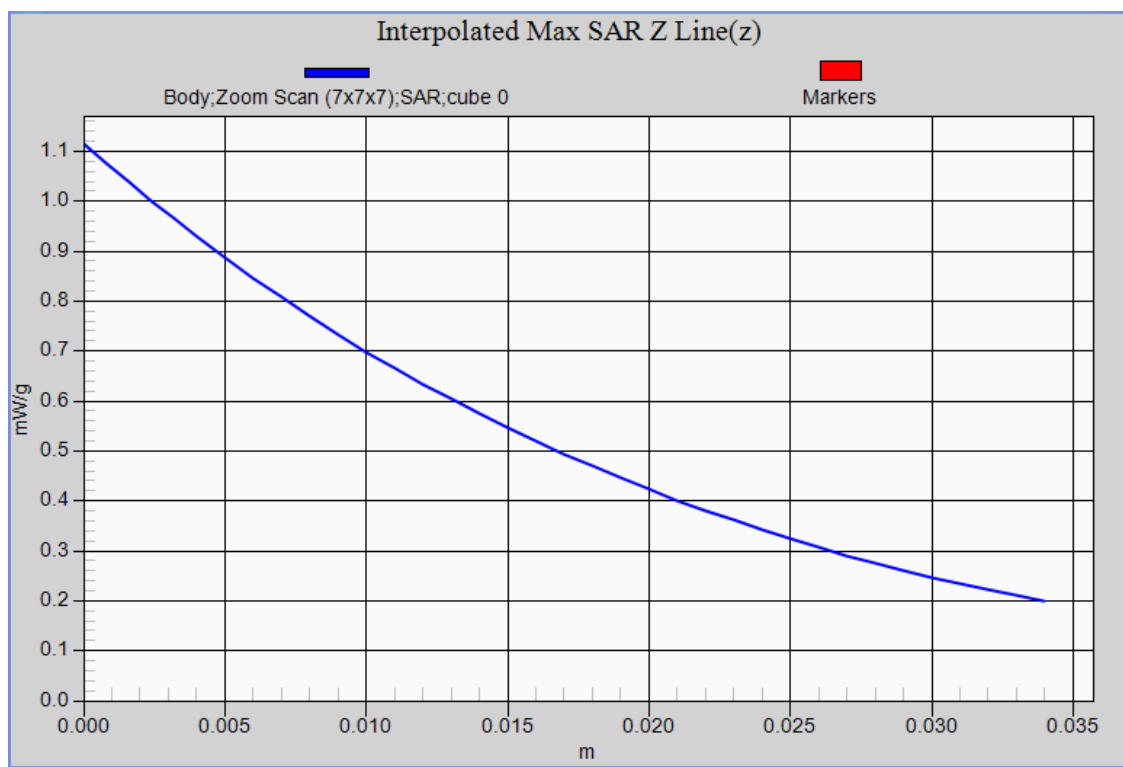
Peak SAR (extrapolated) = 0.904 W/kg

SAR(1 g) = 0.725 mW/g; SAR(10 g) = 0.542 mW/g

Maximum value of SAR (measured) = 0.761 mW/g



GSM 850 EUT Left-Cheek (SIM1) Z-Axis plot
Channel: 251



Test Laboratory: Quietek

Date/Time: 2011/9/20

GSM850_Body-Worn_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz; Frequency: 836.4 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 836.4$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 56.63$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.59, 8.59, 8.59); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.809 mW/g

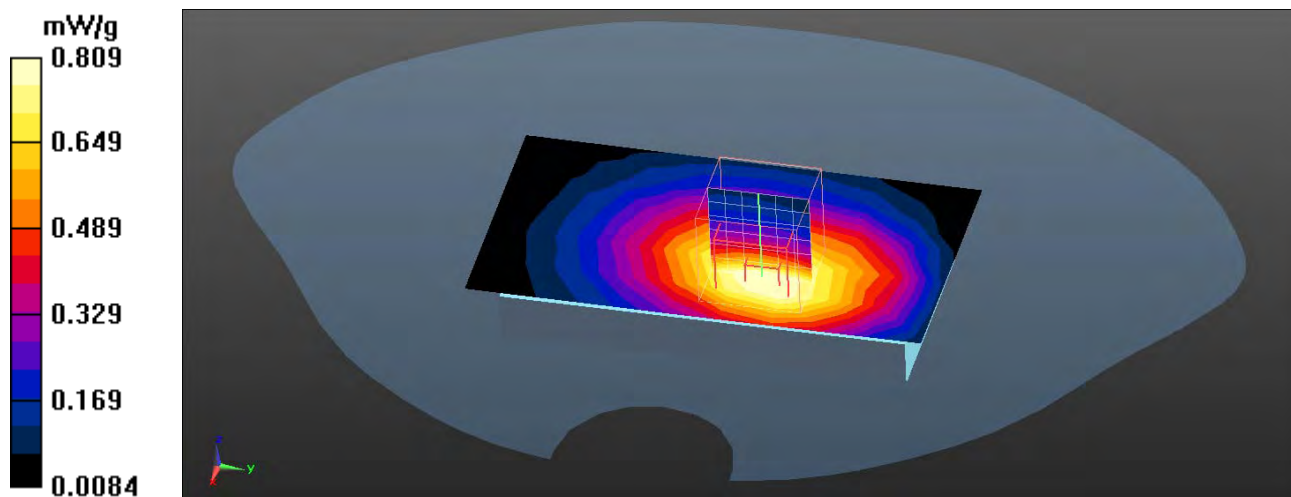
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 25.726 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.180 W/kg

SAR(1 g) = 0.813 mW/g; SAR(10 g) = 0.546 mW/g

Maximum value of SAR (measured) = 0.870 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS 850_Body-Worn_2slot_128

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz_GPRS&EGPRS-2 Slot; Frequency: 824.2 MHz; Communication System PAR: 6.128 dB

Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.98$ mho/m; $\epsilon_r = 57.11$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.59, 8.59, 8.59); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.755 mW/g

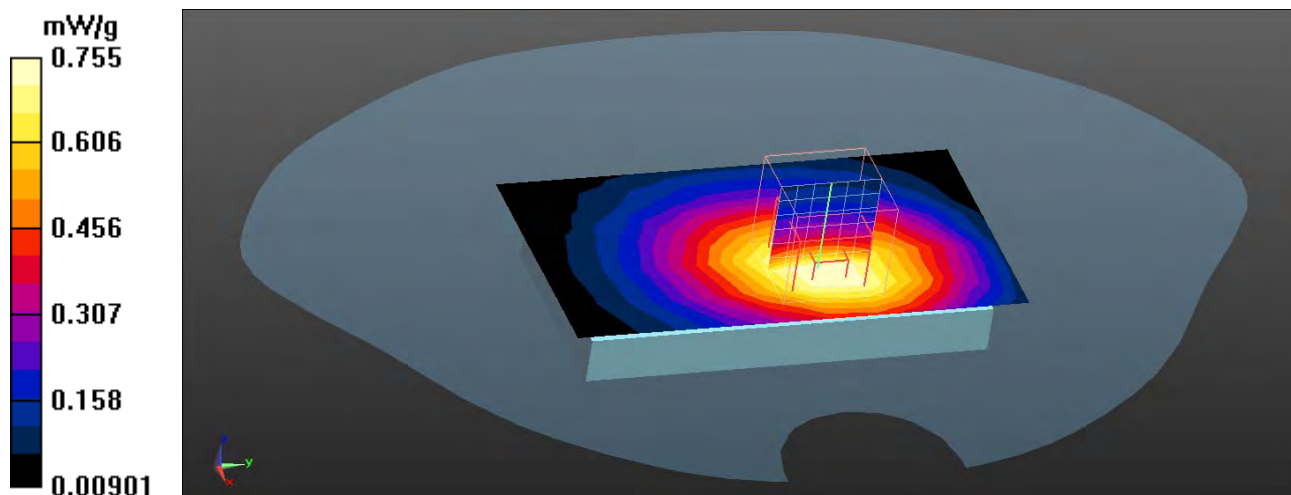
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 25.366 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.058 W/kg

SAR(1 g) = 0.737 mW/g; SAR(10 g) = 0.506 mW/g

Maximum value of SAR (measured) = 0.783 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS 850_Body-Worn_2slot_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz_GPRS&EGPRS-2 Slot; Frequency: 836.4 MHz; Communication System PAR: 6.128 dB

Medium parameters used: $f = 836.4 \text{ MHz}$; $\sigma = 1.01 \text{ mho/m}$; $\epsilon_r = 56.63$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature ($^{\circ}\text{C}$) : 22.0, Liquid Temperature ($^{\circ}\text{C}$) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.59, 8.59, 8.59); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.187 mW/g

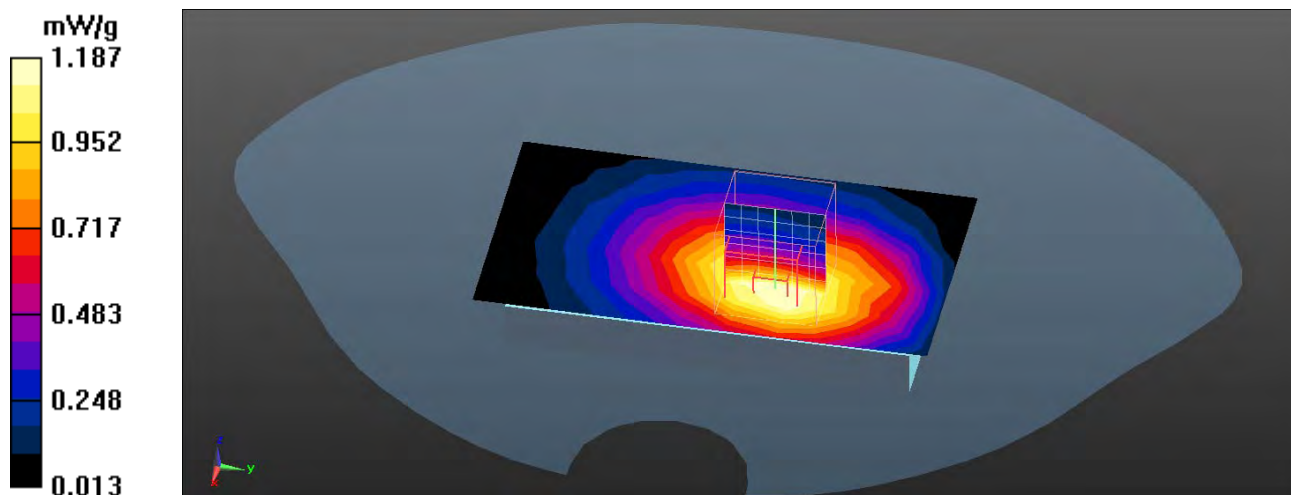
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 30.051 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 1.752 W/kg

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.801 mW/g

Maximum value of SAR (measured) = 1.275 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS 850_Body-Worn_2slot_251

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz_GPRS&EGPRS-2 Slot; Frequency: 848.8 MHz; Communication System PAR: 6.128 dB

Medium parameters used: $f = 848.8 \text{ MHz}$; $\sigma = 1.02 \text{ mho/m}$; $\epsilon_r = 55.98$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature ($^{\circ}\text{C}$) : 22.0, Liquid Temperature ($^{\circ}\text{C}$) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.59, 8.59, 8.59); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.071 mW/g

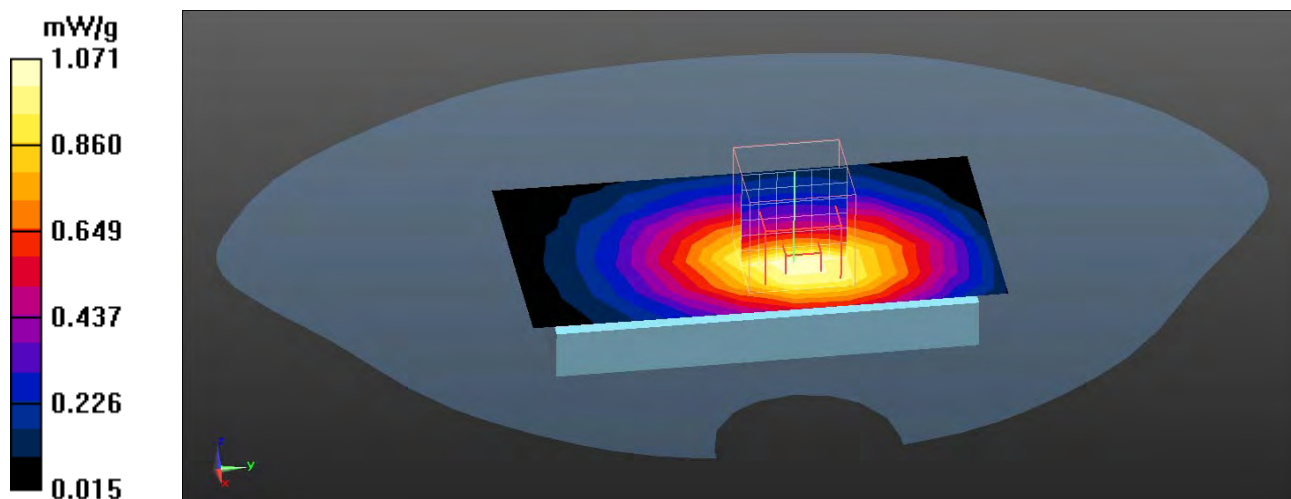
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.861 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.460 W/kg

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.708 mW/g

Maximum value of SAR (measured) = 1.100 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS 850_Body-Front_2slot_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz_GPRS&EGPRS-2 Slot; Frequency: 836.4 MHz; Communication System PAR: 6.128 dB

Medium parameters used: $f = 836.4$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 56.63$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.59, 8.59, 8.59); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.517 mW/g

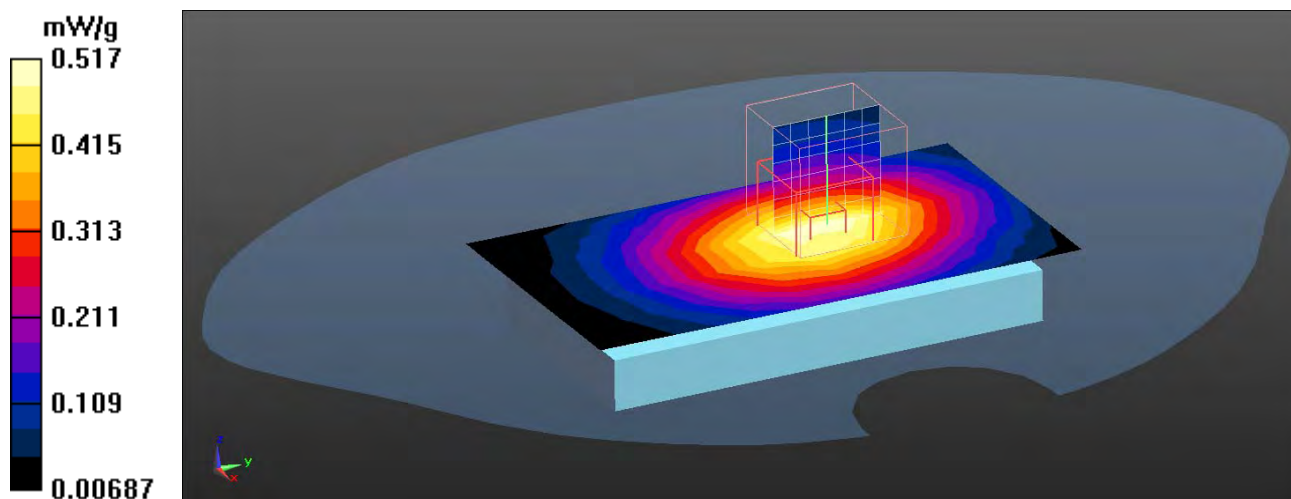
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.066 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.687 W/kg

SAR(1 g) = 0.498 mW/g; SAR(10 g) = 0.350 mW/g

Maximum value of SAR (measured) = 0.526 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS 850_Body-Worn(With Headset)_2slot_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz_GPRS&EGPRS-2 Slot; Frequency: 836.4 MHz; Communication System PAR: 6.128 dB

Medium parameters used: $f = 836.4$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 56.63$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.59, 8.59, 8.59); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.604 mW/g

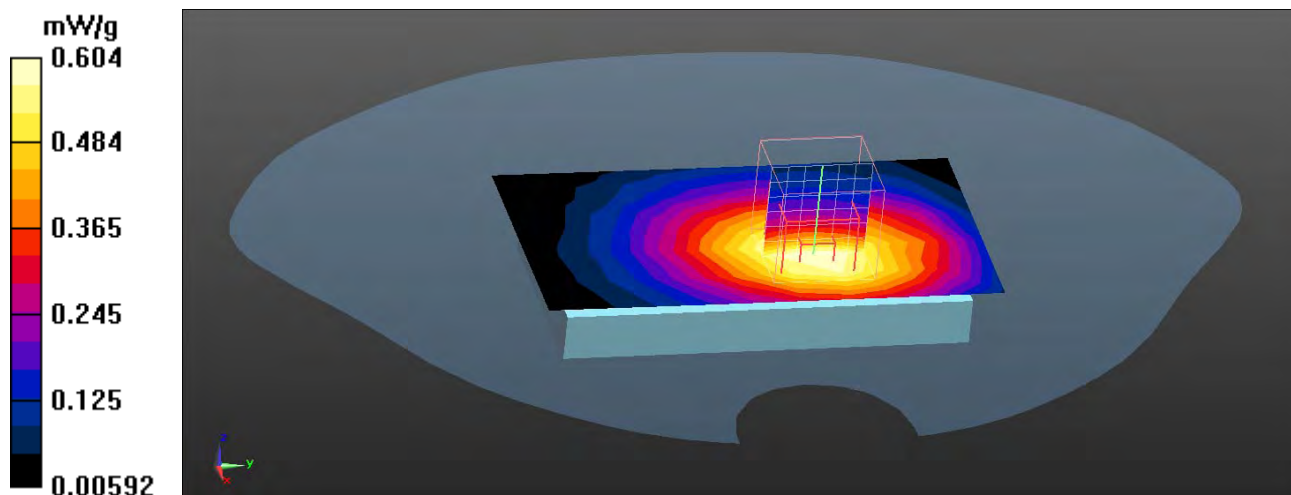
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.488 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 0.811 W/kg

SAR(1 g) = 0.574 mW/g; SAR(10 g) = 0.394 mW/g

Maximum value of SAR (measured) = 0.610 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS 850_Body-Worn_3slot_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz_GPRS&EGPRS-3 Slot; Frequency: 836.4 MHz; Communication System PAR: 4.314 dB

Medium parameters used: $f = 836.4$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 56.63$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.59, 8.59, 8.59); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.965 mW/g

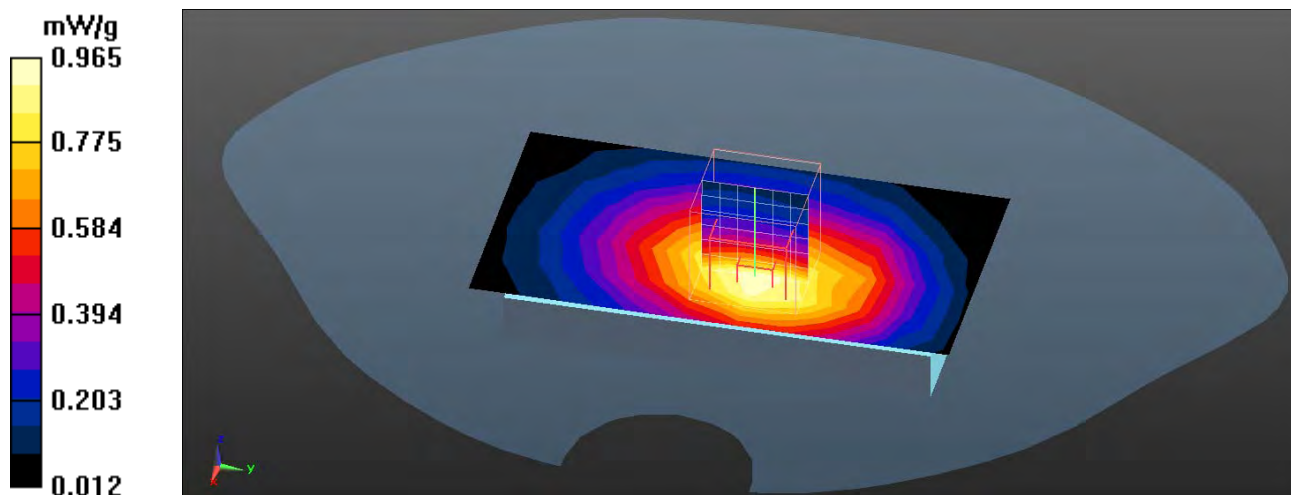
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 29.179 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 1.297 W/kg

SAR(1 g) = 0.913 mW/g; SAR(10 g) = 0.623 mW/g

Maximum value of SAR (measured) = 0.971 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS 850_Body-Worn_4slot_189

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC GSM_850MHz_GPRS&EGPRS-4 Slot; Frequency: 836.4 MHz; Communication System PAR: 3.01 dB

Medium parameters used: $f = 836.4$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 56.63$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(8.59, 8.59, 8.59); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.907 mW/g

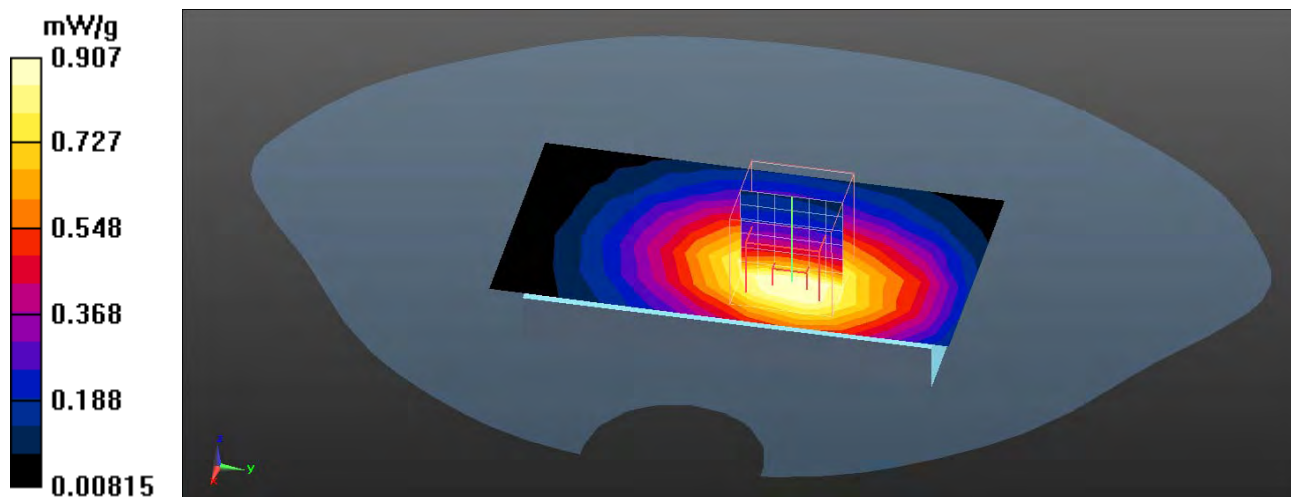
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.743 V/m; Power Drift = -0.19 dB

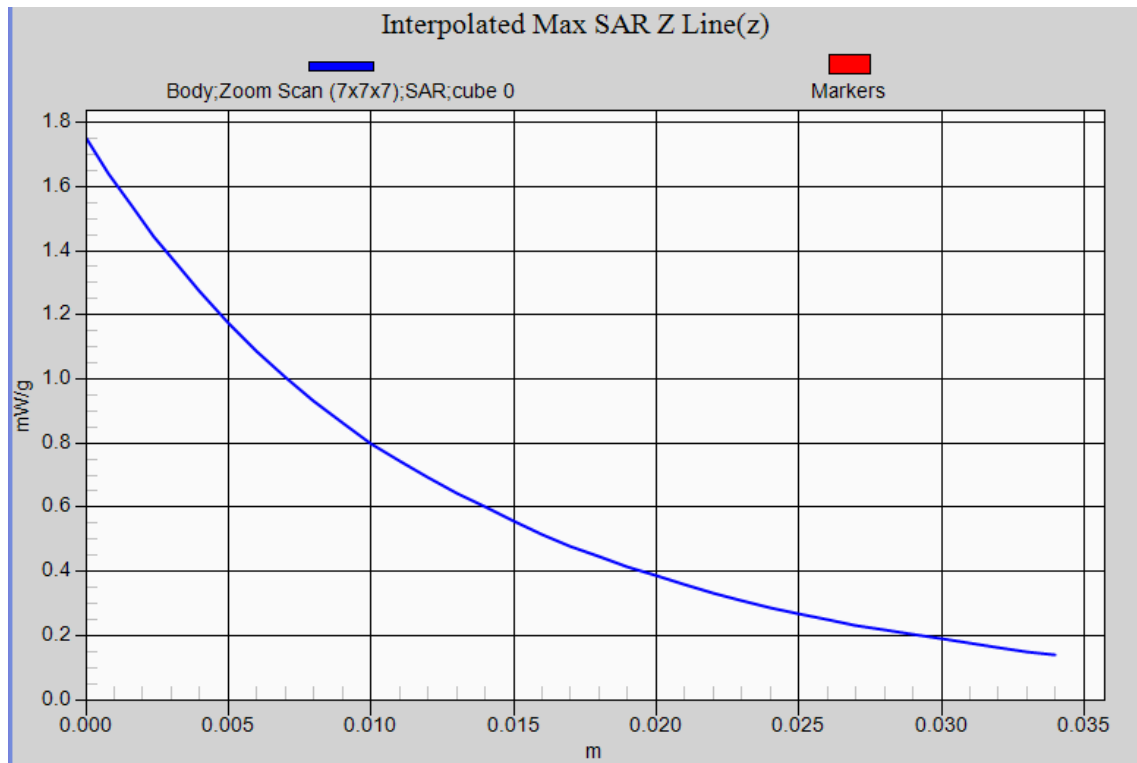
Peak SAR (extrapolated) = 1.289 W/kg

SAR(1 g) = 0.904 mW/g; SAR(10 g) = 0.623 mW/g

Maximum value of SAR (measured) = 0.960 mW/g



GPRS 850 EUT Body-worn (2slot) Z-Axis plot
Channel: 189



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 1900_Left-Cheek_SIM1_512

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz; Frequency: 1850.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature (°C) : 22.5, Liquid Temperature (°C) : 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.18, 7.18, 7.18); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.758 mW/g

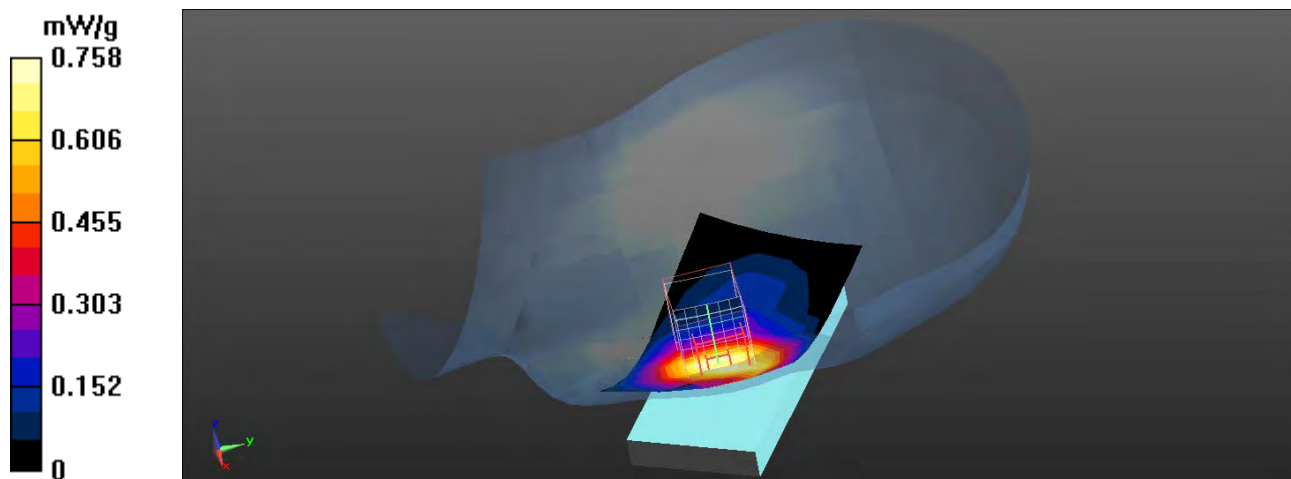
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.494 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.147 W/kg

SAR(1 g) = 0.779 mW/g; SAR(10 g) = 0.480 mW/g

Maximum value of SAR (measured) = 0.855 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 1900_Left-Cheek_SIM1_661

DUT: MOBILE PHONE; Type: G6151

Communication System: FCC PCS_1900MHz; Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.39 \text{ mho/m}$; $\epsilon_r = 41.29$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Ambient Temperature ($^{\circ}\text{C}$) : 22.5, Liquid Temperature ($^{\circ}\text{C}$) : 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.18, 7.18, 7.18); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.756 mW/g

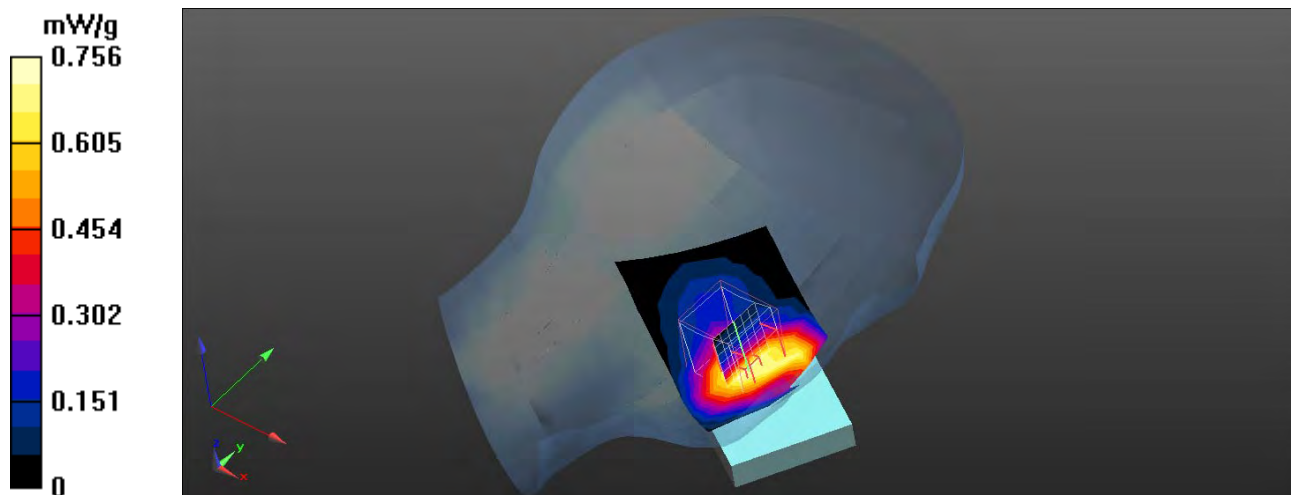
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.762 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.103 W/kg

SAR(1 g) = 0.748 mW/g; SAR(10 g) = 0.467 mW/g

Maximum value of SAR (measured) = 0.809 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 1900_Left-Cheek_SIM1_810

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz; Frequency: 1909.8 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.43 \text{ mho/m}$; $\epsilon_r = 40.86$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Ambient Temperature ($^{\circ}\text{C}$) : 22.5, Liquid Temperature ($^{\circ}\text{C}$) : 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.18, 7.18, 7.18); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.670 mW/g

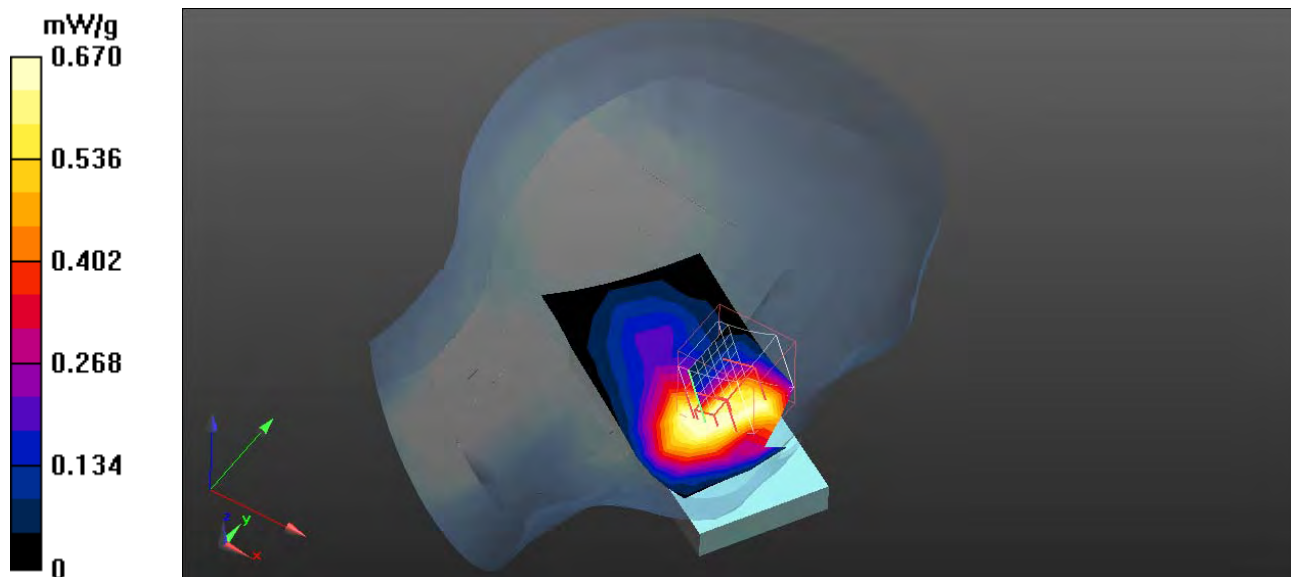
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.832 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 1.030 W/kg

SAR(1 g) = 0.667 mW/g; SAR(10 g) = 0.418 mW/g

Maximum value of SAR (measured) = 0.722 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 1900_Left-Tilt_SIM1_661

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz; Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.39 \text{ mho/m}$; $\epsilon_r = 41.29$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Ambient Temperature ($^{\circ}\text{C}$) : 22.5, Liquid Temperature ($^{\circ}\text{C}$) : 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.18, 7.18, 7.18); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.192 mW/g

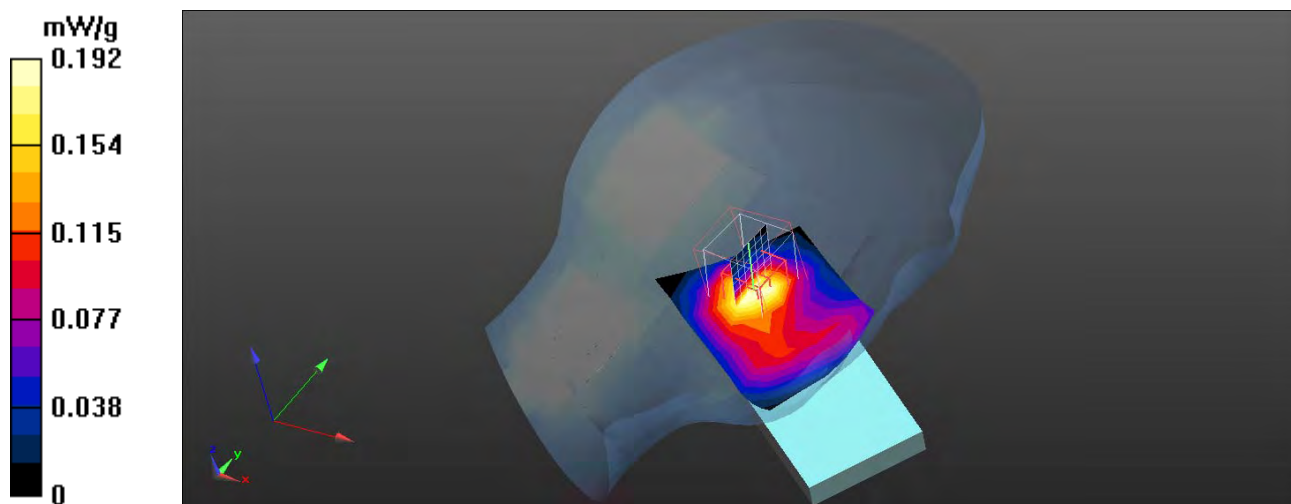
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.808 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.313 W/kg

SAR(1 g) = 0.195 mW/g; SAR(10 g) = 0.115 mW/g

Maximum value of SAR (measured) = 0.214 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 1900_Right-Cheek_SIM1_512

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz; Frequency: 1850.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature (°C) : 22.5, Liquid Temperature (°C) : 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.18, 7.18, 7.18); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.198 mW/g

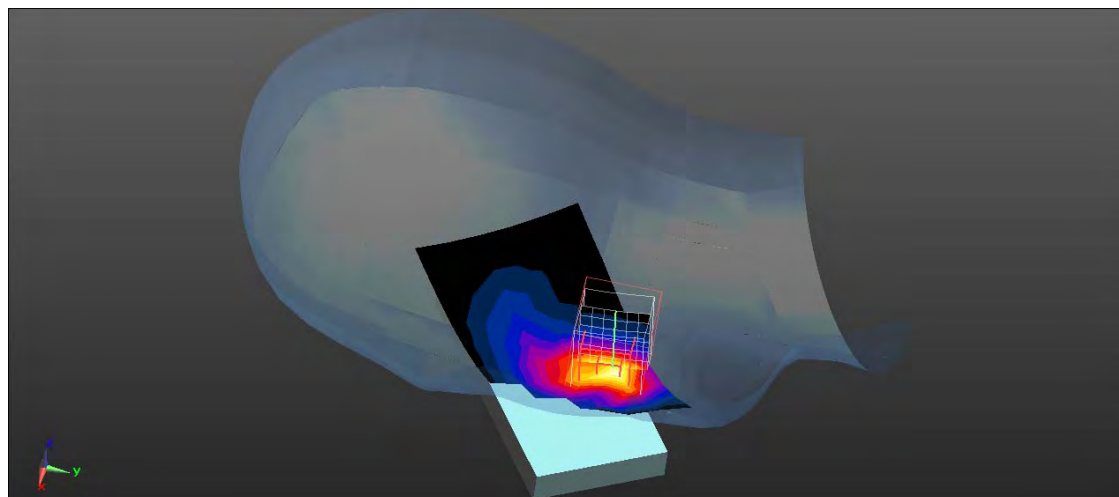
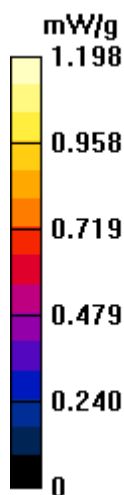
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.358 V/m; Power Drift = 0.0004 dB

Peak SAR (extrapolated) = 1.732 W/kg

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.624 mW/g

Maximum value of SAR (measured) = 1.179 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 1900_Right-Cheek_SIM1_661

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz; Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 41.29$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature (°C) : 22.5, Liquid Temperature (°C) : 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.18, 7.18, 7.18); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.204 mW/g

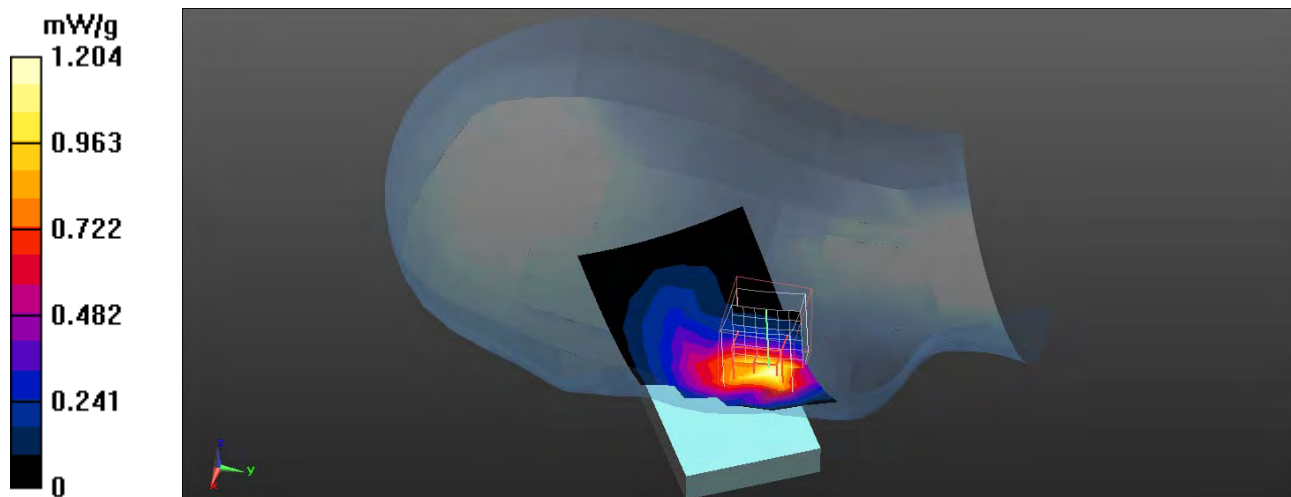
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.522 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.768 W/kg

SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.617 mW/g

Maximum value of SAR (measured) = 1.187 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 1900_Right-Cheek_SIM1_810

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz; Frequency: 1909.8 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1909.8$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 40.86$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature (°C) : 22.5, Liquid Temperature (°C) : 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.18, 7.18, 7.18); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.143 mW/g

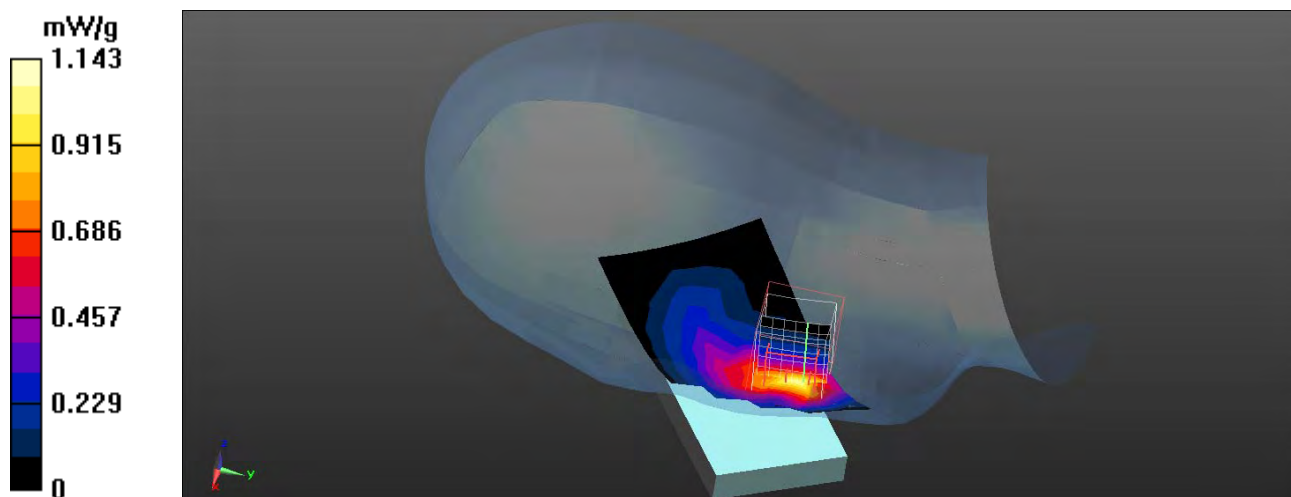
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.359 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.731 W/kg

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.569 mW/g

Maximum value of SAR (measured) = 1.122 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 1900_Right-Tilt_SIM1_661

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz; Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 41.29$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature (°C) : 22.5, Liquid Temperature (°C) : 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.18, 7.18, 7.18); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.205 mW/g

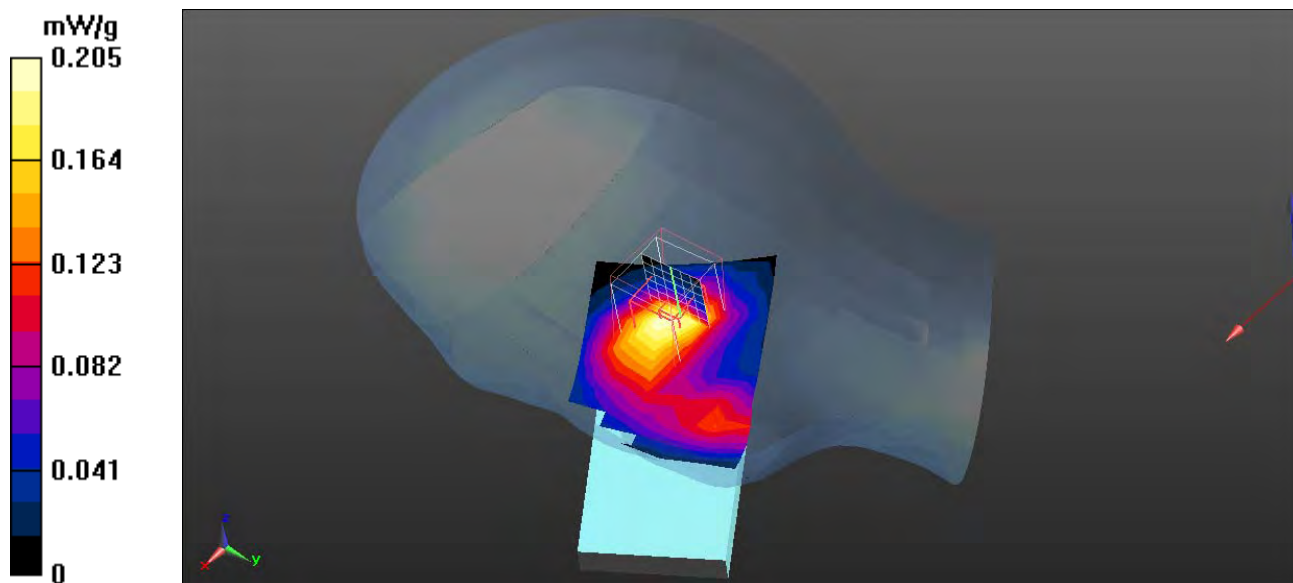
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.045 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.308 W/kg

SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.118 mW/g

Maximum value of SAR (measured) = 0.212 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/21

GSM 1900_Left-Cheek_SIM2_661

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz; Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.39 \text{ mho/m}$; $\epsilon_r = 41.29$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Ambient Temperature ($^{\circ}\text{C}$) : 22.5, Liquid Temperature ($^{\circ}\text{C}$) : 21.1

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.18, 7.18, 7.18); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.738 mW/g

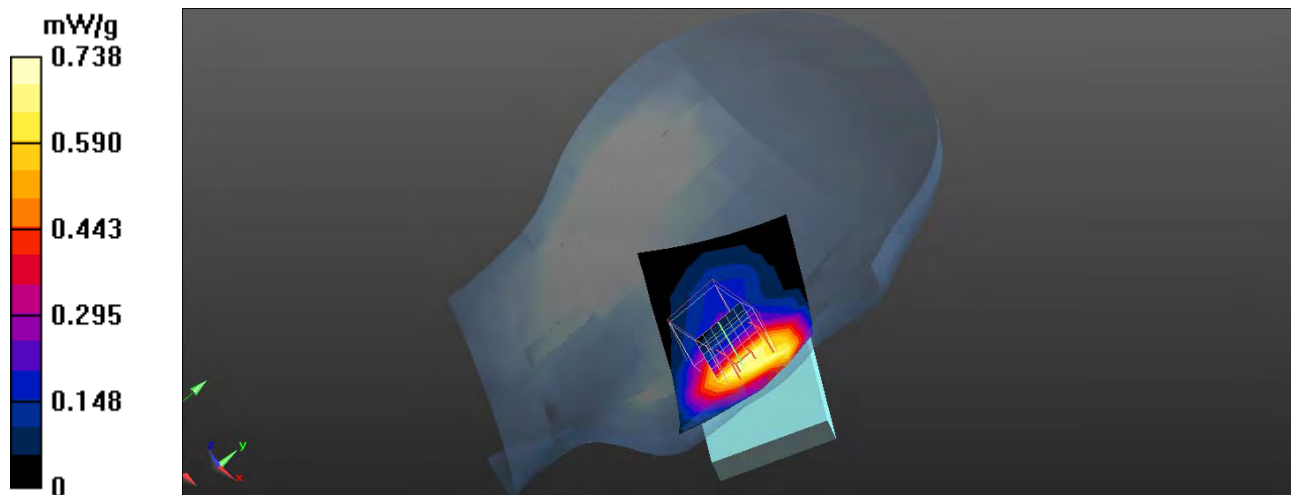
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.911 V/m; Power Drift = -0.11 dB

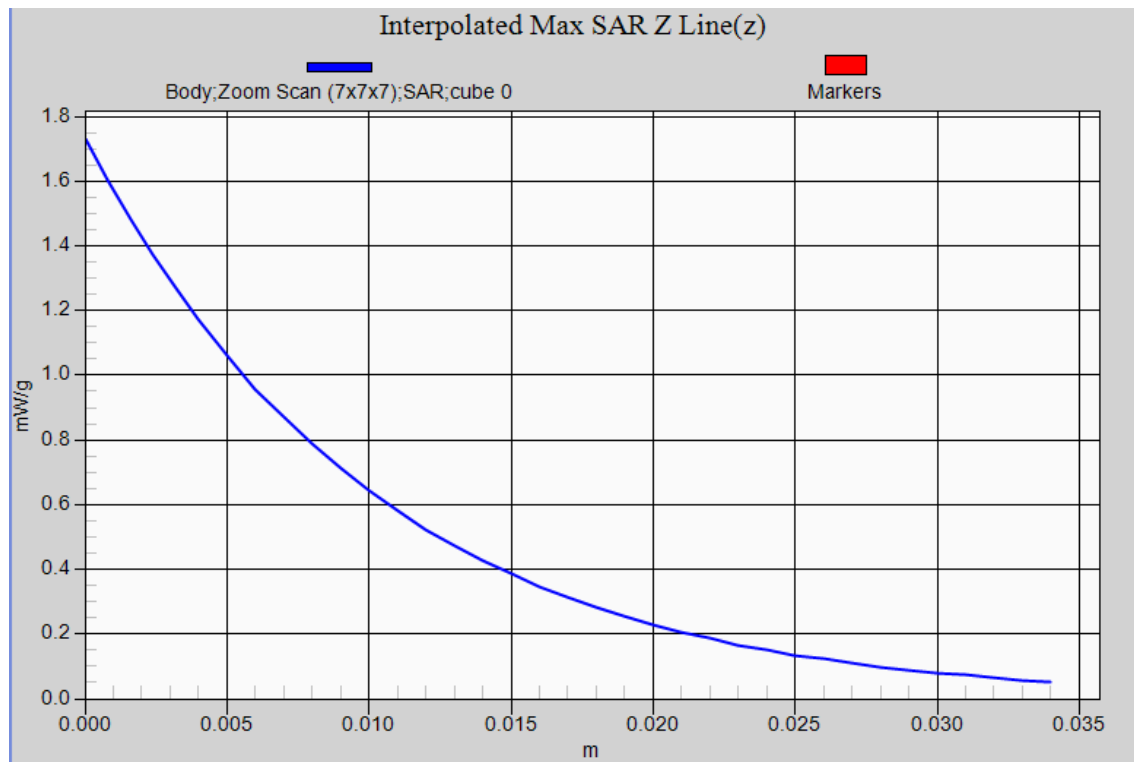
Peak SAR (extrapolated) = 1.076 W/kg

SAR(1 g) = 0.731 mW/g; SAR(10 g) = 0.458 mW/g

Maximum value of SAR (measured) = 0.796 mW/g



GSM 1900 EUT Right-Cheek (SIM1) Z-Axis plot
Channel: 512



Test Laboratory: Quietek

Date/Time: 2011/9/20

GSM1900_Body-Worn_661

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz; Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.51 \text{ mho/m}$; $\epsilon_r = 54.34$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature ($^{\circ}\text{C}$) : 22.0, Liquid Temperature ($^{\circ}\text{C}$) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.74, 6.74, 6.74); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.406 mW/g

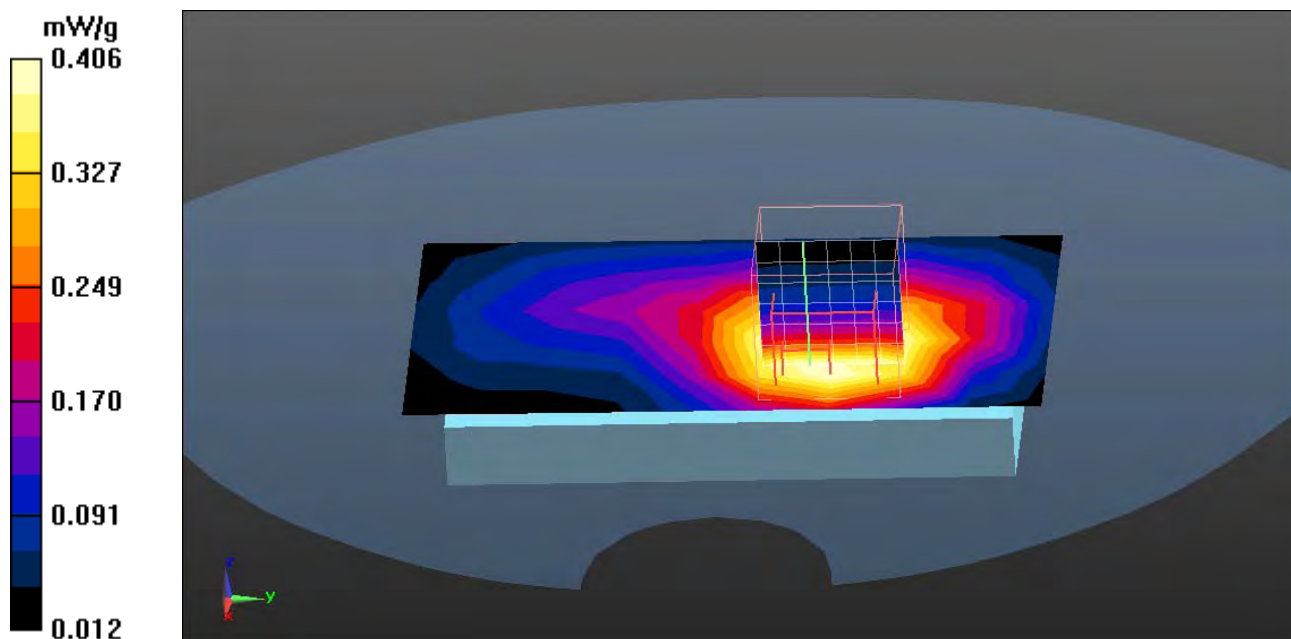
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.890 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.620 W/kg

SAR(1 g) = 0.382 mW/g; SAR(10 g) = 0.238 mW/g

Maximum value of SAR (measured) = 0.407 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS1900_Body-Worn_2slot_512

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz_GPRS&EGPRS-2 Slot; Frequency: 1850.2 MHz; Communication System PAR: 6.128 dB

Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 54.73$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.74, 6.74, 6.74); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.577 mW/g

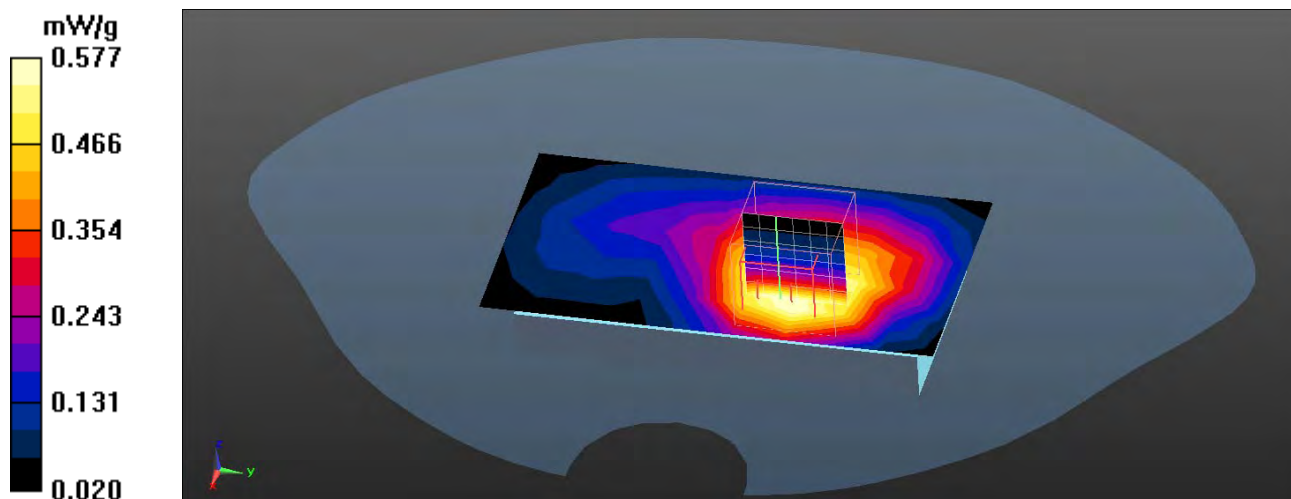
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.455 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.908 W/kg

SAR(1 g) = 0.555 mW/g; SAR(10 g) = 0.344 mW/g

Maximum value of SAR (measured) = 0.597 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS1900_Body-Worn_2slot_661

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz_GPRS&EGPRS-2 Slot; Frequency: 1880 MHz; Communication System PAR: 6.128 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 54.34$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.74, 6.74, 6.74); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.625 mW/g

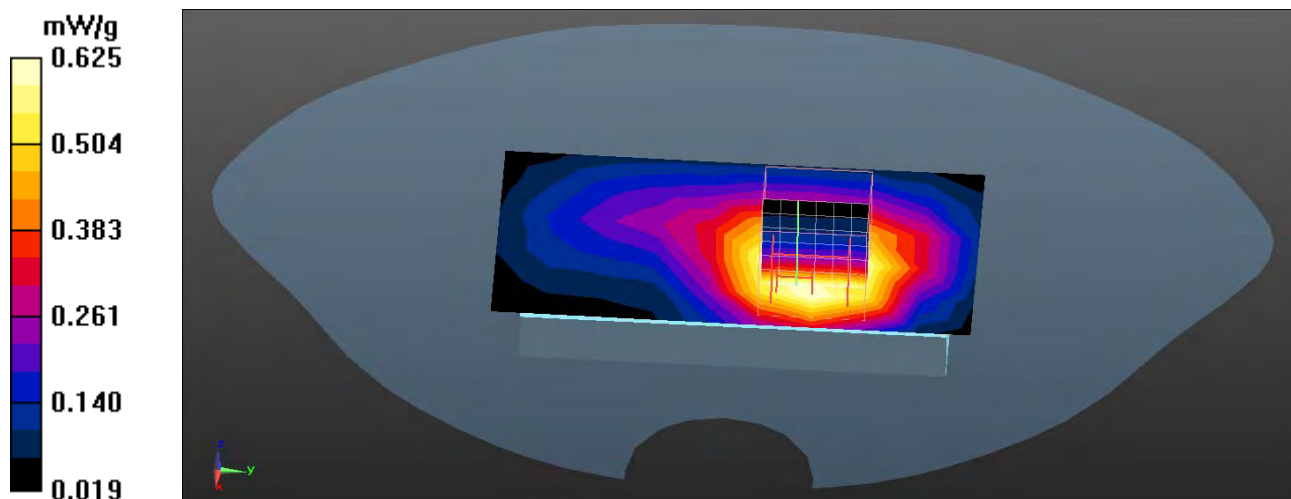
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.125 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.979 W/kg

SAR(1 g) = 0.595 mW/g; SAR(10 g) = 0.370 mW/g

Maximum value of SAR (measured) = 0.641 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS1900_Body-Worn_2slot_810

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz_GPRS&EGPRS-2 Slot; Frequency: 1909.8 MHz; Communication System PAR: 6.128 dB

Medium parameters used: $f = 1909.8 \text{ MHz}$; $\sigma = 1.55 \text{ mho/m}$; $\epsilon_r = 53.87$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature ($^{\circ}\text{C}$) : 22.0, Liquid Temperature ($^{\circ}\text{C}$) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.74, 6.74, 6.74); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.657 mW/g

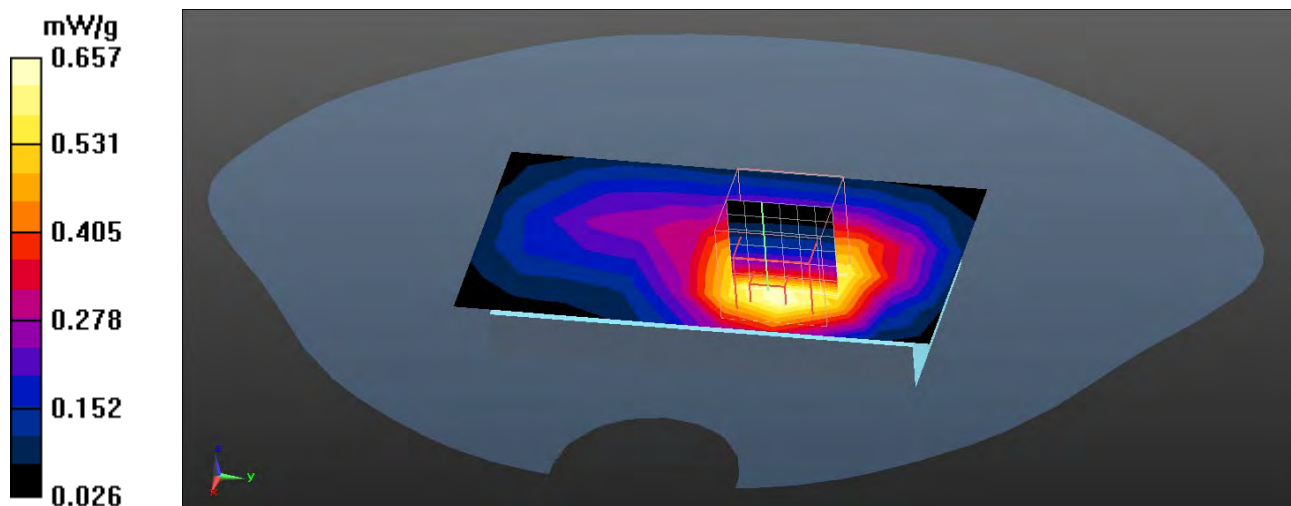
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.531 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.030 W/kg

SAR(1 g) = 0.619 mW/g; SAR(10 g) = 0.382 mW/g

Maximum value of SAR (measured) = 0.663 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS1900_Body-Front_2slot_661

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz_GPRS&EGPRS-2 Slot; Frequency: 1880 MHz; Communication System PAR: 6.128 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 54.34$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.74, 6.74, 6.74); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.568 mW/g

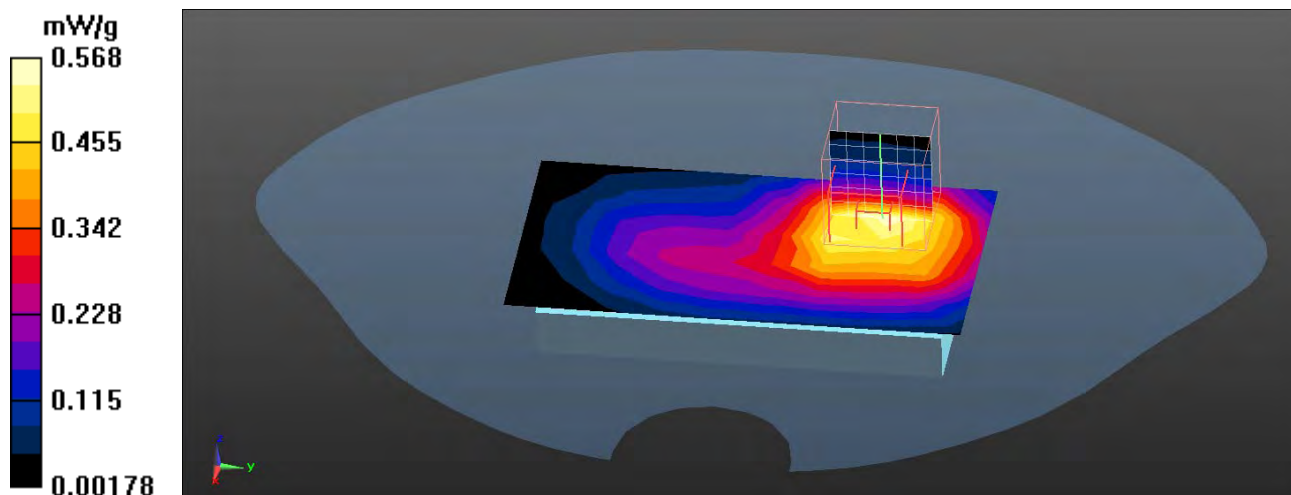
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.860 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.883 W/kg

SAR(1 g) = 0.538 mW/g; SAR(10 g) = 0.328 mW/g

Maximum value of SAR (measured) = 0.582 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS1900_Body-Worn(With Headset)_2slot_661

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz_GPRS&EGPRS-2 Slot; Frequency: 1880 MHz; Communication System PAR: 6.128 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 54.34$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.74, 6.74, 6.74); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.553 mW/g

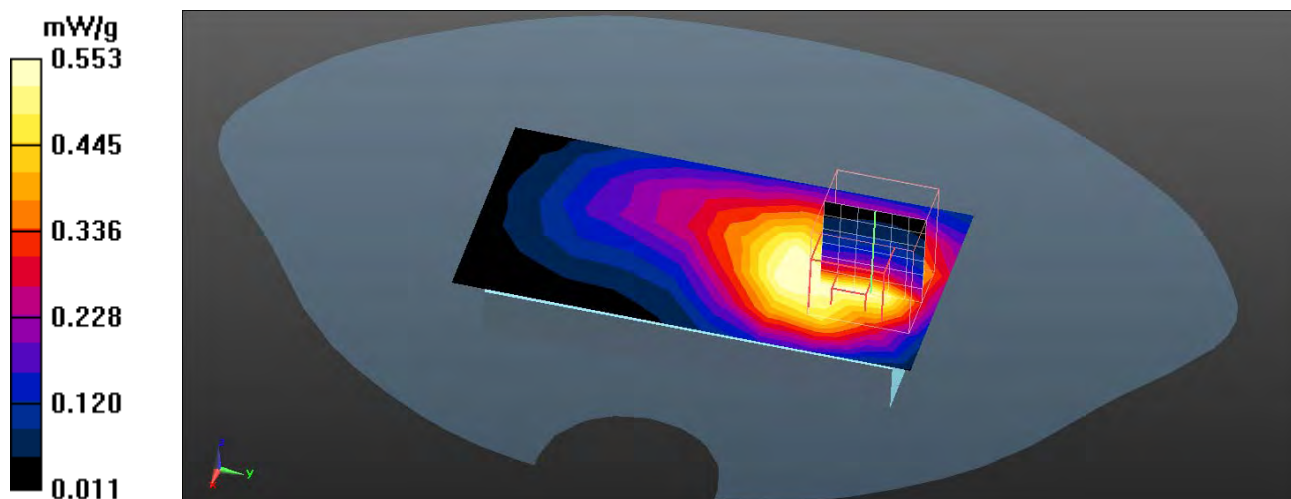
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.875 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.836 W/kg

SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.320 mW/g

Maximum value of SAR (measured) = 0.552 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

GPRS1900_Body-Worn_3slot_661

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz_GPRS&EGPRS-3 Slot; Frequency: 1880 MHz; Communication System PAR: 4.314 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 54.34$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.74, 6.74, 6.74); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.587 mW/g

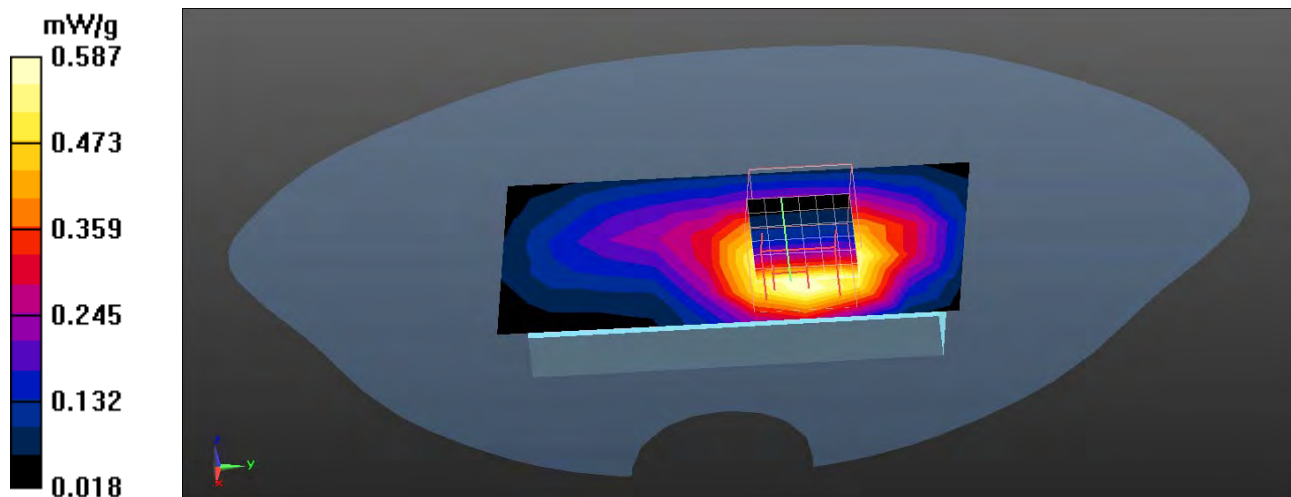
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.574 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.922 W/kg

SAR(1 g) = 0.560 mW/g; SAR(10 g) = 0.348 mW/g

Maximum value of SAR (measured) = 0.604 mW/g



Test Laboratory: Quietek
2011/9/20

Date/Time:

GPRS1900_Body-Worn_4slot_661

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: FCC PCS_1900MHz_GPRS&EGPRS-4 Slot; Frequency: 1880 MHz; Communication System PAR: 3.01 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 54.34$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.74, 6.74, 6.74); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.614 mW/g

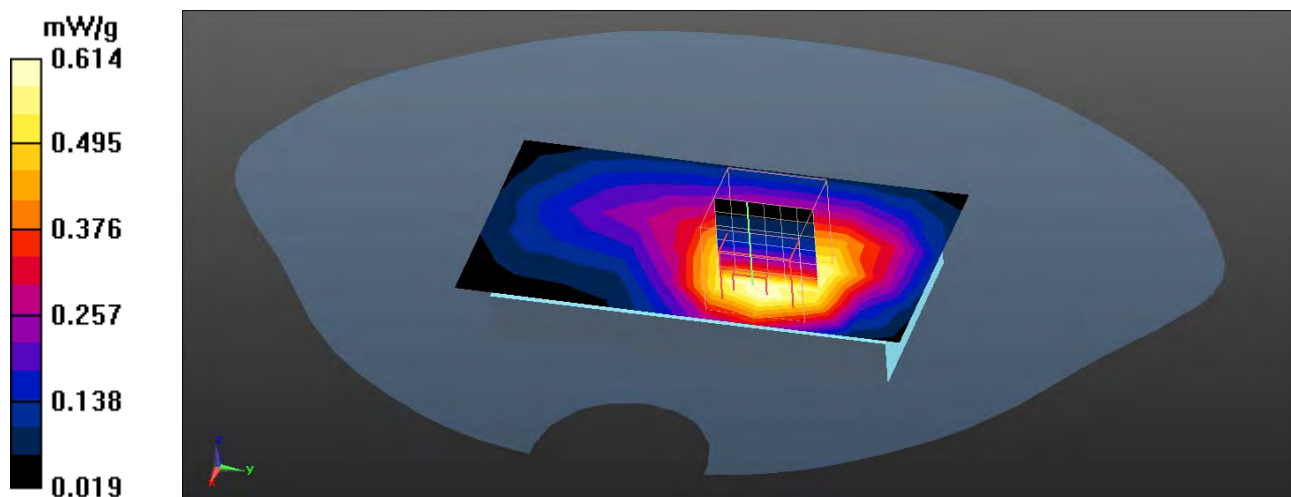
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.853 V/m; Power Drift = -0.01 dB

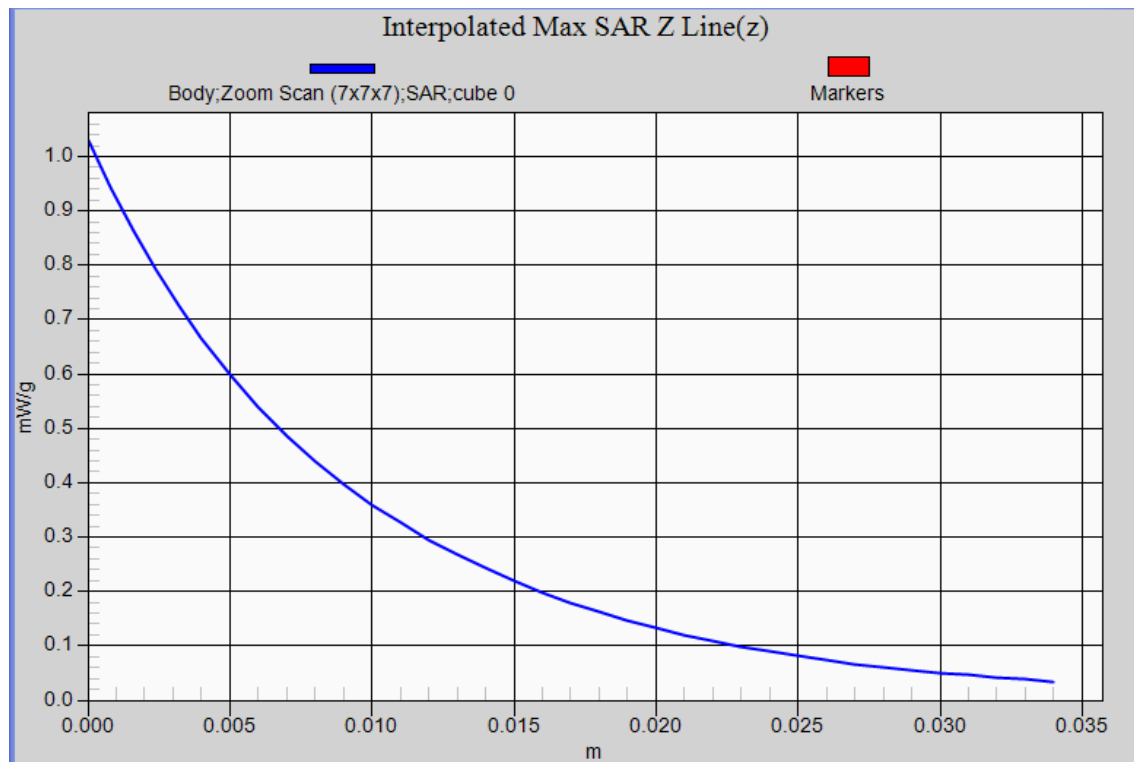
Peak SAR (extrapolated) = 0.965 W/kg

SAR(1 g) = 0.582 mW/g; SAR(10 g) = 0.363 mW/g

Maximum value of SAR (measured) = 0.629 mW/g



GPRS 1900 EUT Body-worn (2slot) Z-Axis plot
Channel: 810



Test Laboratory: Quietek

Date/Time: 2011/9/19

802.11b Left-Cheek_CH1

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: WLAN2.4G; Frequency: 2412 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.73$ mho/m; $\epsilon_r = 40.73$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature (°C) : 22.6, Liquid Temperature (°C) : 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.51, 6.51, 6.51); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.050 mW/g

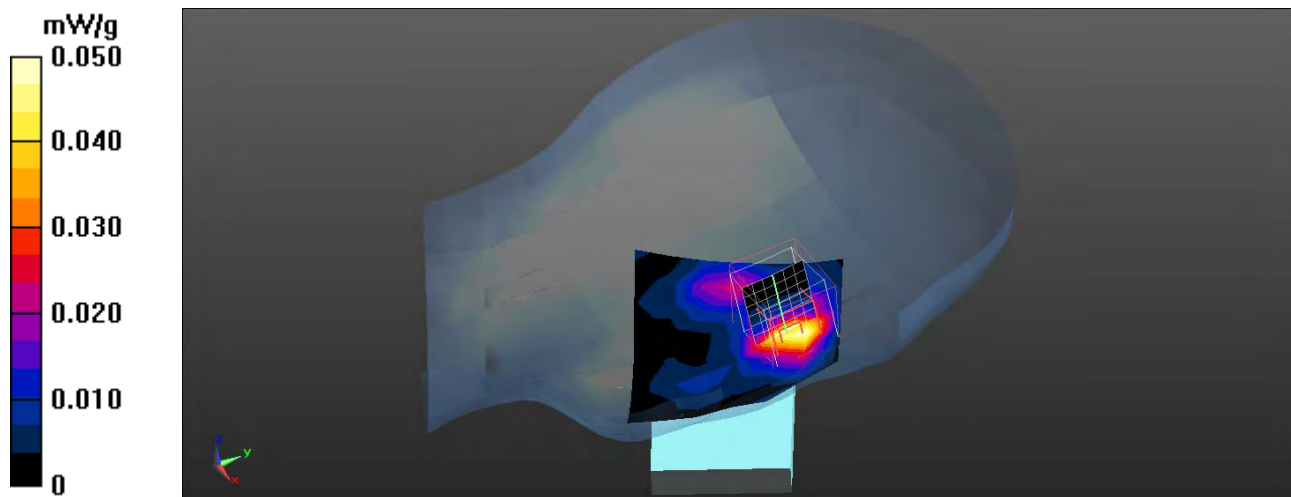
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:
dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.834 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.121 W/kg

SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.021 mW/g

Maximum value of SAR (measured) = 0.059 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/19

802.11b Left-Tilt_CH1

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: WLAN2.4G; Frequency: 2412 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.73$ mho/m; $\epsilon_r = 40.73$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Ambient Temperature (°C) : 22.6, Liquid Temperature (°C) : 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.51, 6.51, 6.51); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.028 mW/g

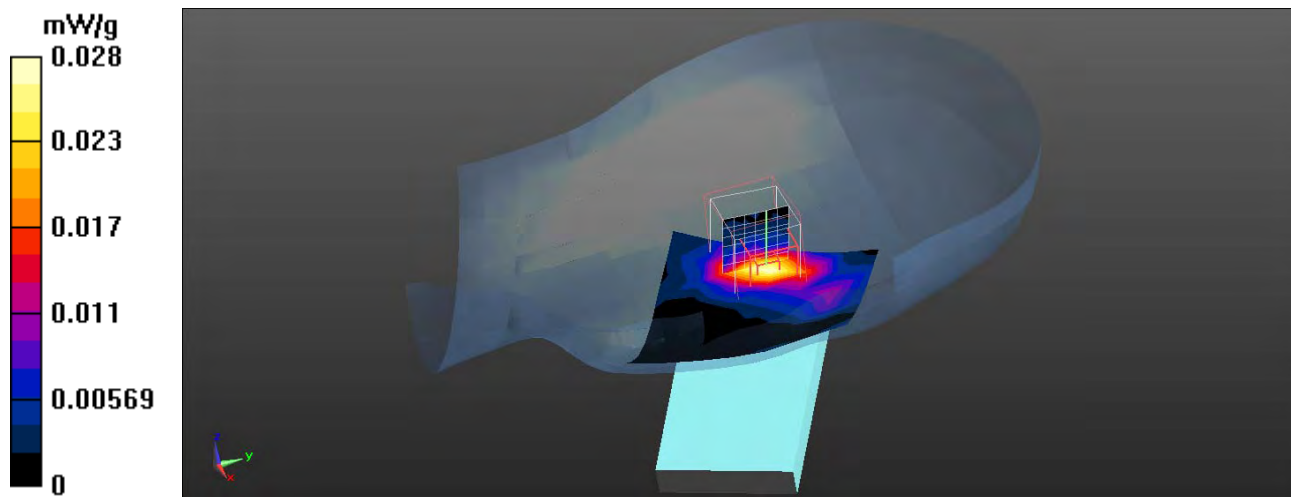
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:
dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.151 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.046 W/kg

SAR(1 g) = 0.026 mW/g; SAR(10 g) = 0.014 mW/g

Maximum value of SAR (measured) = 0.039 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/19

802.11b Right-Cheek_CH1

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: WLAN2.4G; Frequency: 2412 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.73$ mho/m; $\epsilon_r = 40.73$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature (°C) : 22.6, Liquid Temperature (°C) : 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.51, 6.51, 6.51); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.029 mW/g

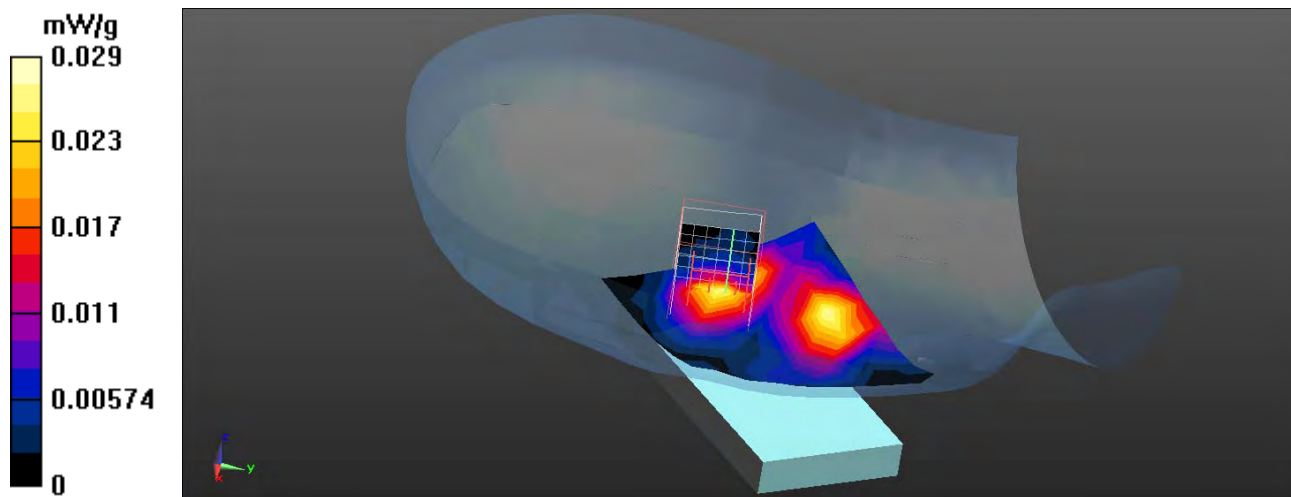
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:
dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.672 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.045 W/kg

SAR(1 g) = 0.026 mW/g; SAR(10 g) = 0.014 mW/g

Maximum value of SAR (measured) = 0.031 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/19

802.11b Right-Tilt_CH1

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: WLAN2.4G; Frequency: 2412 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.73$ mho/m; $\epsilon_r = 40.73$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Ambient Temperature (°C) : 22.6, Liquid Temperature (°C) : 21.2

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.51, 6.51, 6.51); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with right table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.031 mW/g

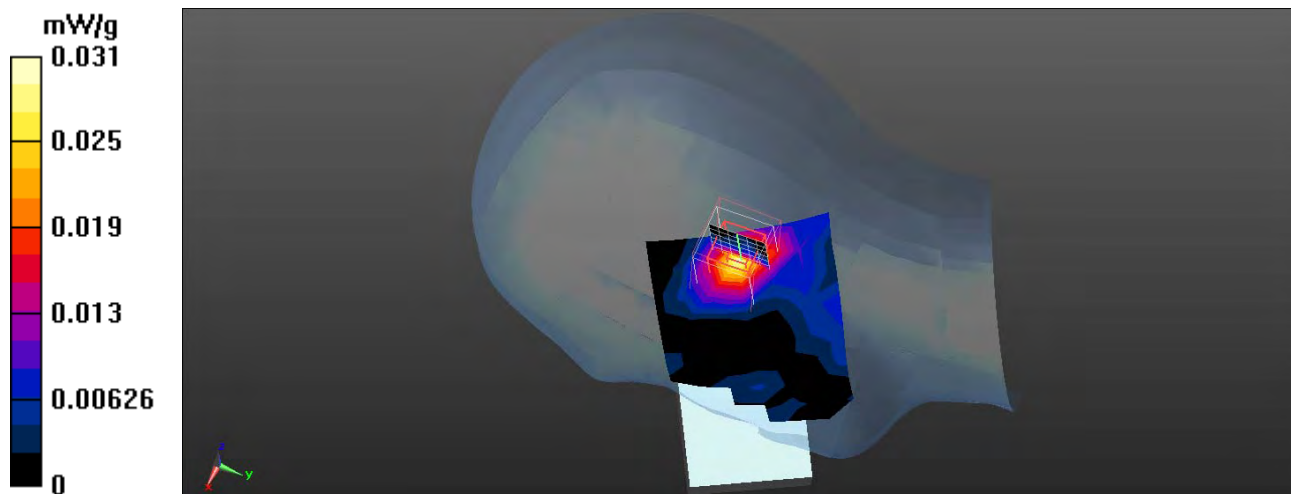
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:
dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.832 V/m; Power Drift = 0.17 dB

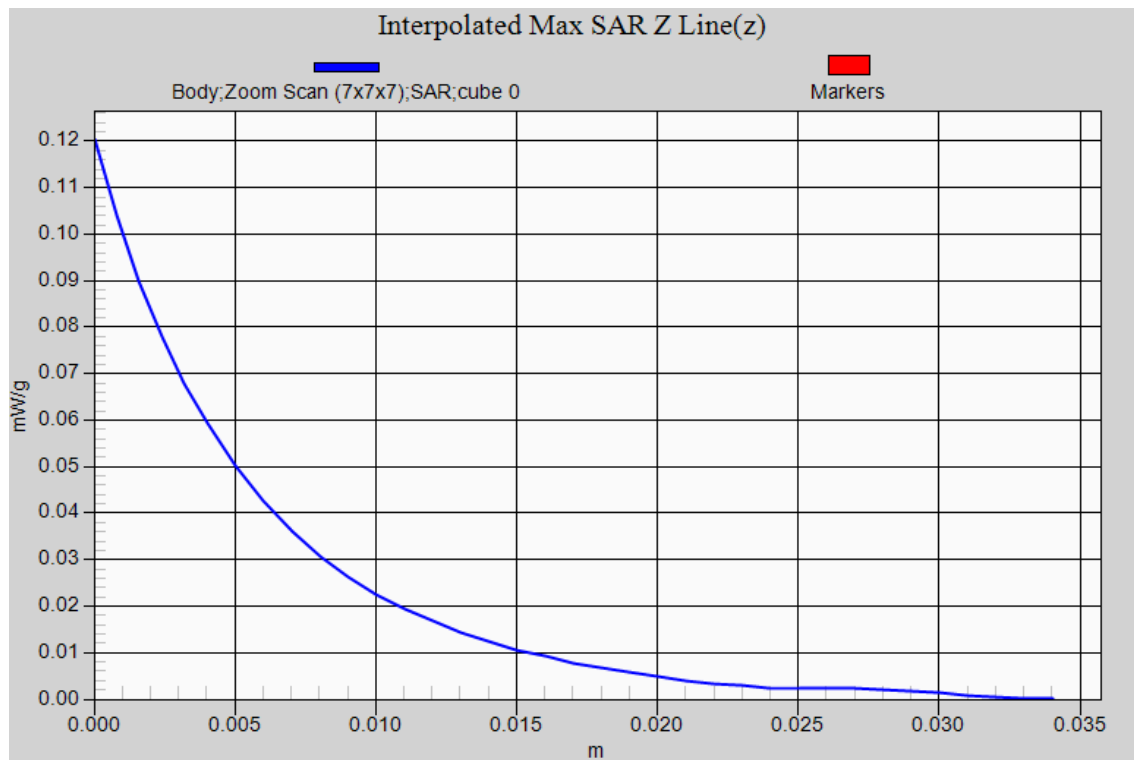
Peak SAR (extrapolated) = 0.054 W/kg

SAR(1 g) = 0.024 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.033 mW/g



802.11b - Antenna Main 2.4GHz, EUT Left-Cheek Z-Axis plot
Channel: 1



Test Laboratory: Quietek

Date/Time: 2011/9/20

802.11b Body-Worn_CH1

DUT: MOBILE PHONE; HUAWEI G6151

Communication System: WLAN2.4G; Frequency: 2412 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 54.62$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.6, 6.6, 6.6); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.021 mW/g

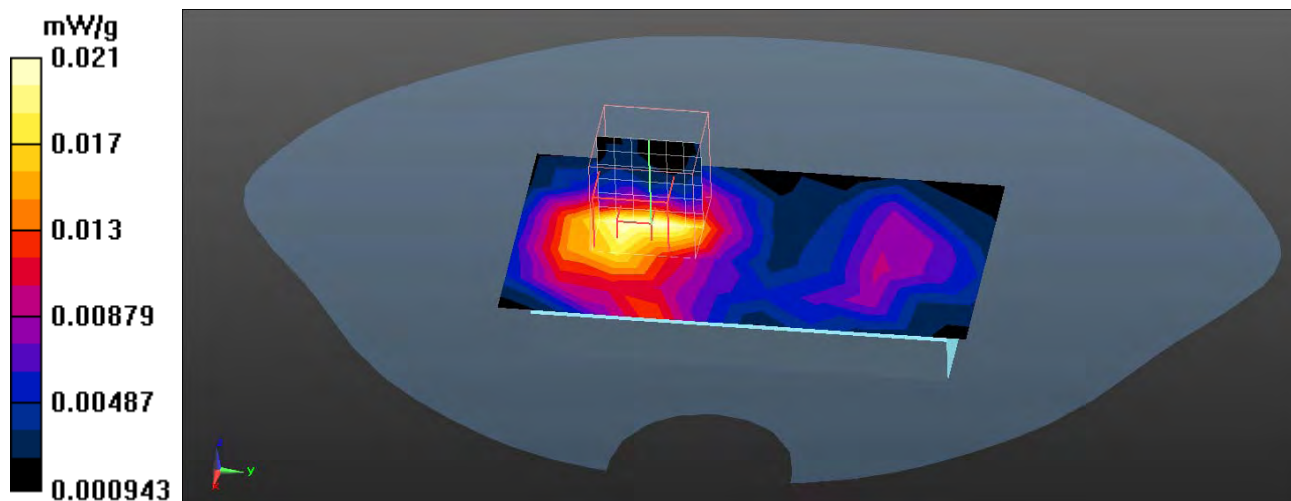
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.545 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.038 W/kg

SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.022 mW/g



Test Laboratory: Quietek

Date/Time: 2011/9/20

802.11b Body-Front_CH1

DUT: MOBILE PHONE; Type: G6151

Communication System: WLAN2.4G; Frequency: 2412 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 54.62$ $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature (°C) : 22.0, Liquid Temperature (°C) : 20.8

DASY5 Configuration:

- Probe: EX3DV4 - SN3698; ConvF(6.6, 6.6, 6.6); Calibrated: 2011/7/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2011/5/19
- Phantom: SAM with left table; Type: SAM
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Configuration/Body/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.019 mW/g

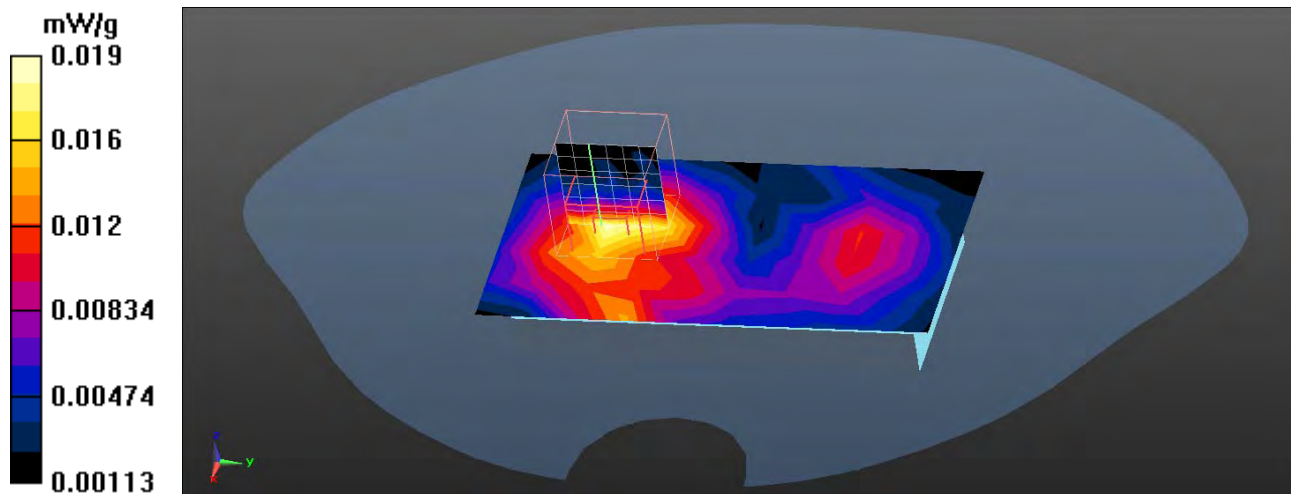
Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.624 V/m; Power Drift = 0.13 dB

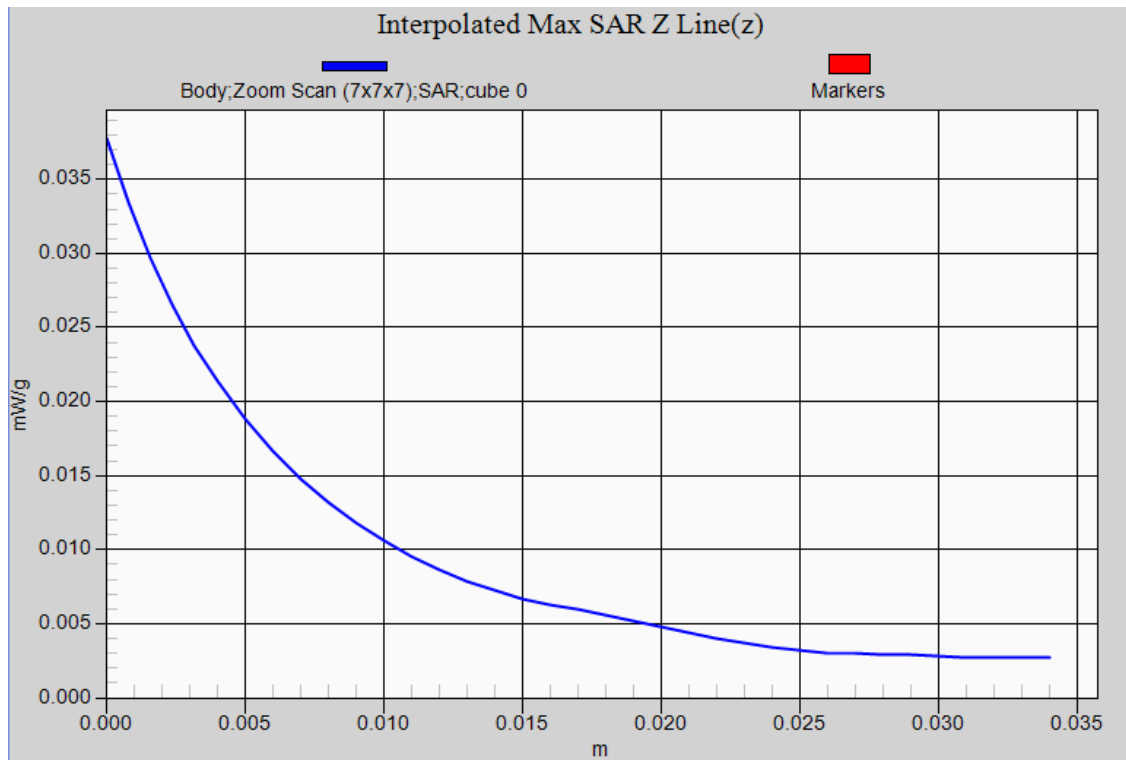
Peak SAR (extrapolated) = 0.030 W/kg

SAR(1 g) = 0.017 mW/g; SAR(10 g) = 0.010 mW/g

Maximum value of SAR (measured) = 0.021 mW/g



802.11b - Antenna Main 2.4GHz, EUT Body-worn Z-Axis plot
Channel: 1



Appendix D. Probe Calibration Data

Appendix E. Dipole Calibration Data

Appendix F. DAE Calibration Data



Appendix D. Probe Calibration Data

Object: EX3DV4- SN 3698