

FCC SAR Test Report

Report No. : SA111121C23

Applicant : Gemtek Technology Co., Ltd.

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Product : WiMAX Smart Phone

FCC ID : MXF-WIXHSM-100

Brand : Gemtek

Model No. : WIXHSM-100

Standards : FCC 47 CFR Part 2 (2.1093) / IEEE C95.1:1991 / IEEE 1528:2003
FCC OET Bulletin 65 Supplement C (Edition 01-01)
KDB 248227 D01 v01r02 / KDB 615223 D01 v01 / KDB 648474 D01 v01r05
KDB 941225 D01 v02 / KDB 941225 D03 v01 / KDB 941225 D06 v01

Date of Testing : Dec. 13, 2011 ~ Feb. 23, 2012

CERTIFICATION: The above equipment have been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch - Taiwan HwaYa Lab**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report.

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Release Control Record

Issue No.	Reason for Change	Date Issued
R01	Original release	Feb. 23, 2012



1. Summary of Maximum SAR Value

Mode / Band	Test Position	SAR-1g (W/kg)
GSM850	Head	0.237
	Body (Hotspot, 1 cm Gap)	1.060
	Body (Body Worn, 1 cm Gap)	0.403
GSM1900	Head	0.532
	Body (Hotspot, 1 cm Gap)	0.953
	Body (Body Worn, 1 cm Gap)	0.479
WCDMA Band II	Head	0.888
	Body (Hotspot, 1 cm Gap)	0.902
	Body (Body Worn, 1 cm Gap)	0.902
WCDMA Band V	Head	0.306
	Body (Hotspot, 1 cm Gap)	0.642
	Body (Body Worn, 1 cm Gap)	0.642
WLAN	Head	0.040
	Body (Hotspot, 1 cm Gap)	0.103
	Body (Body Worn, 1 cm Gap)	0.103
WiMAX	Head	0.227
	Body (Hotspot, 1 cm Gap)	0.420
	Body (Body Worn, 1 cm Gap)	0.420
Bluetooth	Head	N/A
	Body (Hotspot, 1 cm Gap)	N/A
	Body (Body Worn, 1 cm Gap)	N/A

Note:

The SAR limit (**1.6 W/kg**) for general population/uncontrolled exposure is specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1991.

2. Description of Equipment Under Test

DUT Type	WiMAX SMART Phone
FCC ID	MXF-WIXHSM-100
Brand Name	Gemtek
Model Name	WIXHSM-100
IMEI Code	358916040017639
Tx Frequency Bands (Unit: MHz)	GSM850 : 824 ~ 849 GSM1900 : 1850 ~ 1910 WCDMA Band II : 1850 ~ 1910 WCDMA Band V : 824 ~ 849 WLAN : 2400 ~ 2483.5 Bluetooth : 2400 ~ 2483.5 WiMAX : 2496 ~ 2690
Uplink Modulations	GSM & GPRS : GMSK EDGE : 8PSK WCDMA : BPSK 802.11b : DSSS 802.11g/n : OFDM Bluetooth : GFSK WiMAX : QPSK, 16QAM
Maximum AVG Conducted Power (Unit: dBm)	GSM850 : 31.74 GSM1900 : 29.70 WCDMA Band II : 22.89 WCDMA Band V : 22.87 802.11b : 11.23 802.11g : 15.53 802.11n HT20 : 15.63 802.11n HT40 : 13.53 Bluetooth : 9.04 WiMAX : 24.00
Antenna Type	PIFA Antenna
DUT Stage	Production Unit

Note:

1. The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.
2. This device does not support DTM (Dual Transfer Mode) capability.

List of Accessory:

AC Adapter 1	Brand Name	DVE
	Model Name	DSC-5PFC-05 FUS 050100 DSC-5PFC-05 FUS 052100 (For Marketing different)
	Power Rating	I/P:100-240Vac, 50-60Hz, 0.2A; O/P: 5Vdc, 1A
AC Adapter 2	Brand Name	SPPS Travel Charger
	Model Name	LFS0501000D-A8S
	Power Rating	I/P:100-240Vac, 50-60Hz O/P:5Vdc, 1000mA
Battery	Brand Name	Skypower
	Model Name	GT-1920
	Power Rating	3.7Vdc, 1920mAh
	Type	Li-ion
Earphone	Signal Line Type	1.3 meter non-shielded cable without ferrite core
USB Cable	Signal Line Type	1.2 meter shielded cable without ferrite core

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Description	Parameter		Comment
FCC ID	MXF-WIXHSM-100		Identify all related FCC ID
Radio Service	Part 27 Subpart M		Rule parts
Transmit Frequency Range (MHz)	5MHz BW : 2498.5 MHz to 2687.5 MHz 10MHz BW : 2501.0 MHz to 2685.0 MHz		System parameter
System/Channel Bandwidth (MHz)	5 MHz	10 MHz	System parameter
System Profile	Revision 1.7.0		Defined by WiMAX Forum
Modulation Schemes	QPSK, 16QAM		Identify all applicable UL modulations
Sampling Factor	28/25		System parameter
Sampling Frequency (MHz)	5.6 MHz	11.2 MHz	(F _s)
Sample Time (ns)	178.57 ns	89.29 ns	(1/F _s)
FFT Size (N _{FFT})	512	1024	(N _{FFT})
Sub-Carrier Spacing (kHz)	10.94 kHz		(Δf)
Useful Symbol Time (μs)	91.4286 μs		(T _b =1/Δf)
Guard Time (μs)	11.4286 μs		(T _g =T _b /cp); cp = cyclic prefix
OFDMA Symbol Time (μs)	102.857 μs		(T _s =T _b +T _g)
Frame Size (ms)	5 ms		System parameter
TTG + RTG (μs or number of symbols)	165.72 μs		Idle time, system parameter
Number of DL OFDMA Symbols per Frame	29		Identify the allowed & maximum symbols, including both traffic & control symbols
Number of UL OFDMA Symbols per Frame	18		
DL:UL Symbol Ratios	29:18		For determining UL duty factor
Power Class (dBm)	Power Class 2, 23.0±1.0 dBm		Identify power class and tolerance
Wave1 / Wave2	Wave2: Two antennas for Tx/Rx diversity. ANT1 and ANT2 cannot transmit simultaneously.		Describe antenna diversity info and MIMO requirements separately
UL Zone Types (FUSC, PUSC, OFUSC, OPUSC, AMC, TUSC1, TUSC2)	PUSC mode only for current FW.		Describe separately the symbol and sub-carrier/sub-channel structures applicable to each zone type
Maximum Number of UL Sub-Carriers	Pilot Sub-Carriers=136 Data Sub-Carriers=272	Pilot Sub-Carriers=280 Data Sub-Carriers=560	Identify the allowed and tested / to be tested parameters; include separate explanations on the types of control symbols and how the power levels are determined
Measured UL Burst Maximum Average Conducted Power	24.00 dBm		
UL Control Symbol Configuration	3 PUSC symbols (used for ranging, CQICH and ACK/NACK)		
UL Control Symbol Maximum Conducted Average Power	73.88 mW	35.88 mW	
UL Burst Peak-to-Average (Conducted) Power Ratio (PAPR)	PAPR is between 5.76 ~ 6.83 dB		Identify the expected range and measured/tested PAR; explain separately the methods used / to be used to address SAR probe calibration and measurement error issues
Frame Averaged UL Transmission Duty Factor (%)	UL Data Symbols x Symbol Time / Frame Size = 15 x 102.857 us / 5000 us = 30.8 % Crest Factor = 1 / Duty Cycle = 3.24 This CF was used for SAR evaluation.		Show calculations separately and explain how the applicable CF (<i>crest factor</i>) used / to be use in the SAR measurements is derived and how the control symbols are accounted for

3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

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

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

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

SAR is expressed in units of Watts per kilogram (W/kg)

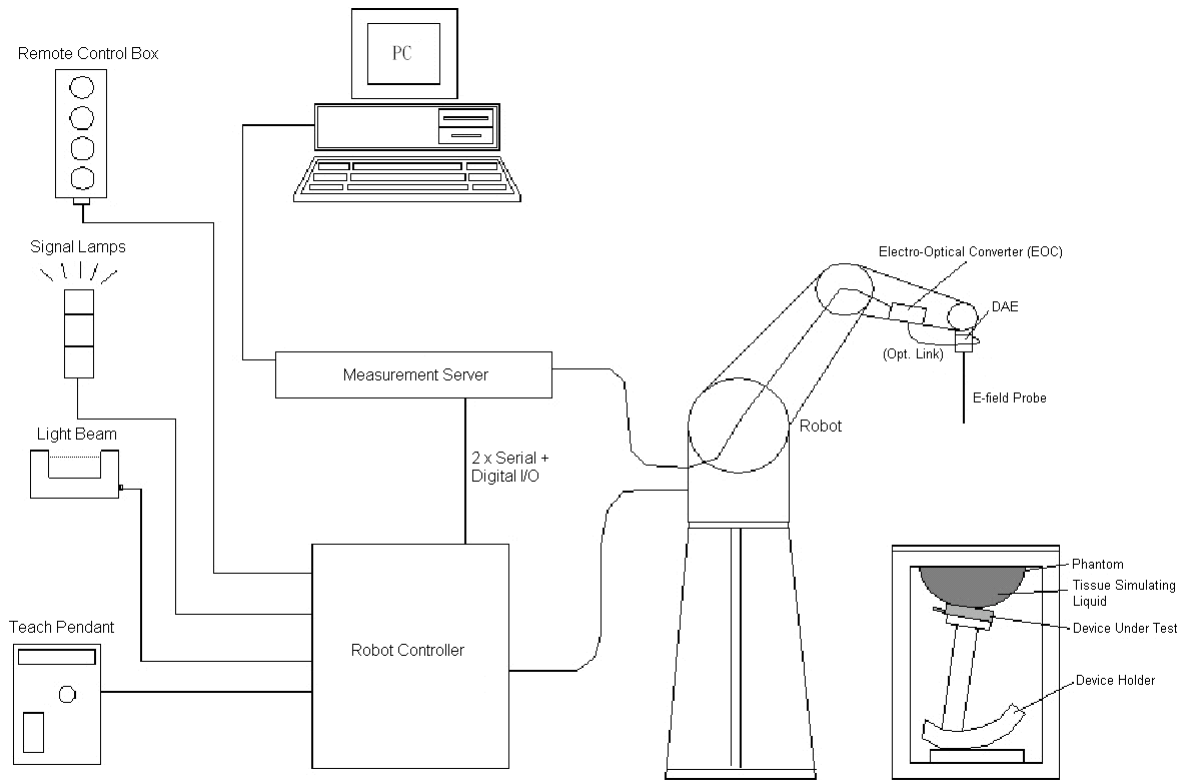
SAR measurement can be related to the electrical field in the tissue by

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

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

3.2 SPEAG DASY System

DASY system consists of high precision robot, probe alignment sensor, phantom, robot controller, controlled measurement server and near-field probe. The robot includes six axes that can move to the precision position of the DASY4/5 software defined. The DASY software can define the area that is detected by the probe. The robot is connected to controlled box. Controlled measurement server is connected to the controlled robot box. The DAE includes amplifier, signal multiplexing, AD converter, offset measurement and surface detection. It is connected to the Electro-optical coupler (ECO). The ECO performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC.


Fig-3.1 DASY System Setup
3.2.1 Robot

The DASY system uses the high precision robots from Stäubli SA (France). For the 6-axis controller system, the robot controller version (DASY4: CS7MB; DASY5: CS8c) from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability ± 0.035 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)



Fig-3.2 DASY4


Fig-3.3 DASY5

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3.2.2 Probes

The SAR measurement is conducted with the dosimetric probe. 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.

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	
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: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	


Model	ES3DV3	
Construction	Symmetrical design with triangular core. Interleaved sensors. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).	
Frequency	10 MHz to 4 GHz Linearity: ± 0.2 dB	
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	5 μ W/g to 100 mW/g Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm	

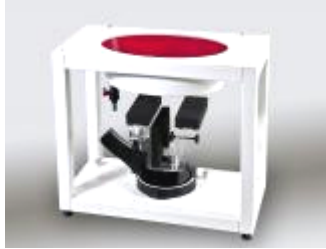
3.2.3 Data Acquisition Electronics (DAE)

Model	DAE3, DAE4	
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY4/5 embedded system (fully remote controlled). Two step probe touch detector for mechanical surface detection and emergency robot stop.	
Measurement Range	-100 to +300 mV (16 bit resolution and two range settings: 4mV, 400mV)	
Input Offset Voltage	< 5 μ V (with auto zero)	
Input Bias Current	< 50 fA	
Dimensions	60 x 60 x 68 mm	

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3.2.4 Phantoms


Model	Twin SAM	
Construction	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.	
Material	Vinylester, glass fiber reinforced (VE-GF)	
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)	
Dimensions	Length: 1000 mm Width: 500 mm Height: adjustable feet	
Filling Volume	approx. 25 liters	

Model	ELI	
Construction	Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.	
Material	Vinylester, glass fiber reinforced (VE-GF)	
Shell Thickness	2.0 ± 0.2 mm (bottom plate)	
Dimensions	Major axis: 600 mm Minor axis: 400 mm	
Filling Volume	approx. 30 liters	


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3.2.5 Device Holder

Model	Mounting Device	
Construction	In combination with the Twin SAM Phantom or ELI4, the Mounting Device enables the rotation of the mounted transmitter device in spherical coordinates. Rotation point is the ear opening point. Transmitter devices can be easily and accurately positioned according to IEC, IEEE, FCC or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat).	
Material	POM	

Model	Laptop Extensions Kit	
Construction	Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.). It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner.	
Material	POM, Acrylic glass, Foam	

3.2.6 System Validation Dipoles

Model	D-Serial	
Construction	Symmetrical dipole with 1/4 balun. Enables measurement of feed point impedance with NWA. Matched for use near flat phantoms filled with tissue simulating solutions.	
Frequency	750 MHz to 5800 MHz	
Return Loss	> 20 dB	
Power Capability	> 100 W (f < 1GHz), > 40 W (f > 1GHz)	

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3.2.7 Tissue Simulating Liquids

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5% are listed in below table.

The dielectric properties of the tissue simulating liquids were verified prior to the SAR evaluation using an Agilent 85070D Dielectric Probe Kit and an Agilent Network Analyzer.

Table-3.1 Targets of Tissue Simulating Liquid

Frequency (MHz)	Target Permittivity	Range of $\pm 5\%$	Target Conductivity	Range of $\pm 5\%$
For Head				
750	41.9	39.8 ~ 44.0	0.89	0.85 ~ 0.93
835	41.5	39.4 ~ 43.6	0.90	0.86 ~ 0.95
900	41.5	39.4 ~ 43.6	0.97	0.92 ~ 1.02
1450	40.5	38.5 ~ 42.5	1.20	1.14 ~ 1.26
1640	40.3	38.3 ~ 42.3	1.29	1.23 ~ 1.35
1750	40.1	38.1 ~ 42.1	1.37	1.30 ~ 1.44
1800	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
1900	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2000	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2300	39.5	37.5 ~ 41.5	1.67	1.59 ~ 1.75
2450	39.2	37.2 ~ 41.2	1.80	1.71 ~ 1.89
2600	39.0	37.1 ~ 41.0	1.96	1.86 ~ 2.06
For Body				
750	55.5	52.7 ~ 58.3	0.96	0.91 ~ 1.01
835	55.2	52.4 ~ 58.0	0.97	0.92 ~ 1.02
900	55.0	52.3 ~ 57.8	1.05	1.00 ~ 1.10
1450	54.0	51.3 ~ 56.7	1.30	1.24 ~ 1.37
1640	53.8	51.1 ~ 56.5	1.40	1.33 ~ 1.47
1750	53.4	50.7 ~ 56.1	1.49	1.42 ~ 1.56
1800	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
1900	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
2000	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
2300	52.9	50.3 ~ 55.5	1.81	1.72 ~ 1.90
2450	52.7	50.1 ~ 55.3	1.95	1.85 ~ 2.05
2600	52.5	49.9 ~ 55.1	2.16	2.05 ~ 2.27



The following table gives the recipes for tissue simulating liquids.

Table-3.2 Recipes of Tissue Simulating Liquid

Tissue Type	Bactericide	DGBE	HEC	NaCl	Sucrose	Triton X-100	Water	Diethylene Glycol Mono-hexylether
H750	0.2	-	0.2	1.5	56.0	-	42.1	-
H835	0.2	-	0.2	1.5	57.0	-	41.1	-
H900	0.2	-	0.2	1.4	58.0	-	40.2	-
H1450	-	43.3	-	0.6	-	-	56.1	-
H1640	-	45.8	-	0.5	-	-	53.7	-
H1750	-	47.0	-	0.4	-	-	52.6	-
H1800	-	44.5	-	0.3	-	-	55.2	-
H1900	-	44.5	-	0.2	-	-	55.3	-
H2000	-	44.5	-	0.1	-	-	55.4	-
H2300	-	44.9	-	0.1	-	-	55.0	-
H2450	-	45.0	-	0.1	-	-	54.9	-
H2600	-	45.1	-	0.1	-	-	54.8	-
B750	0.2	-	0.2	0.8	48.8	-	50.0	-
B835	0.2	-	0.2	0.9	48.5	-	50.2	-
B900	0.2	-	0.2	0.9	48.2	-	50.5	-
B1450	-	34.0	-	0.3	-	-	65.7	-
B1640	-	32.5	-	0.3	-	-	67.2	-
B1750	-	31.0	-	0.2	-	-	68.8	-
B1800	-	29.5	-	0.4	-	-	70.1	-
B1900	-	29.5	-	0.3	-	-	70.2	-
B2000	-	30.0	-	0.2	-	-	69.8	-
B2300	-	31.0	-	0.1	-	-	68.9	-
B2450	-	31.4	-	0.1	-	-	68.5	-
B2600	-	31.8	-	0.1	-	-	68.1	-

3.3 SAR System Verification

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

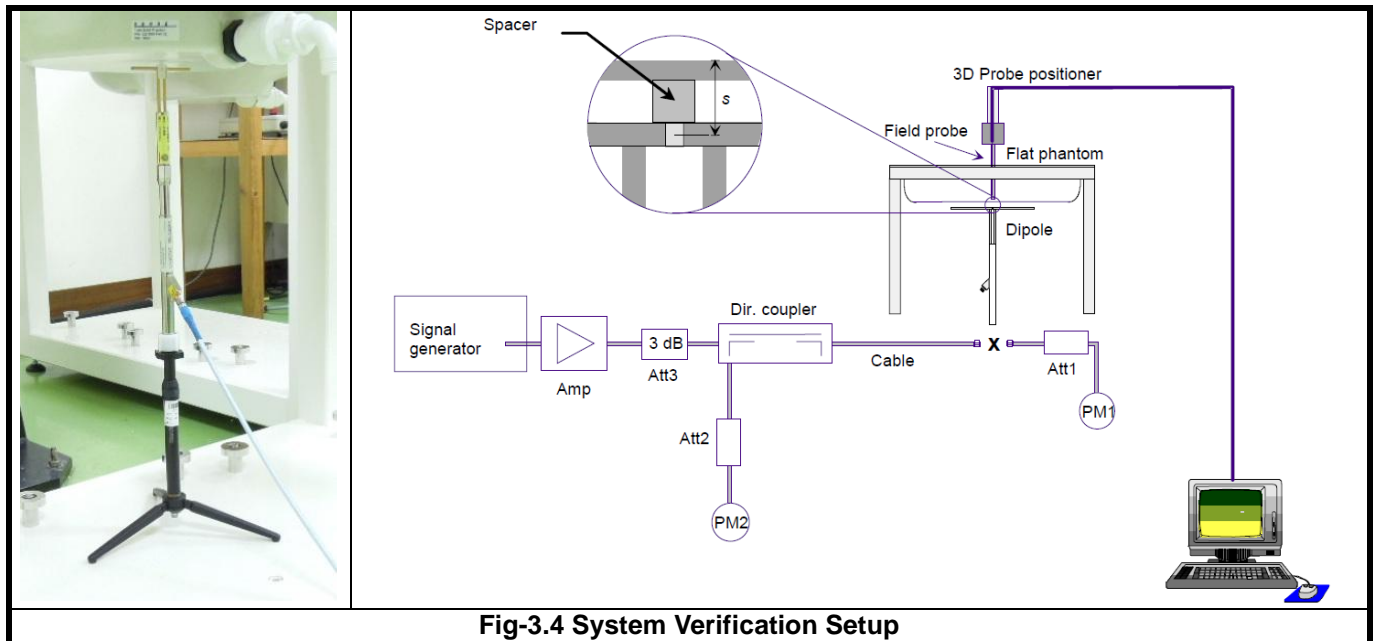


Fig-3.4 System Verification Setup

The validation dipole is placed beneath the flat phantom with the specific spacer in place. The distance spacer is touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The power meter PM1 measures the forward power at the location of the system check dipole connector. The signal generator is adjusted for the desired forward power (250 mW is used for 700 MHz to 3 GHz, 100 mW is used for 3.5 GHz to 6 GHz) at the dipole connector and the power meter PM2 is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter PM2.

After system check testing, the SAR result will be normalized to 1W forward input power and compared with the reference SAR value derived from validation dipole certificate report. The deviation of system check should be within 10 %.

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3.4 SAR Measurement Procedure

According to the SAR test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

The SAR measurement procedures for each of test conditions are as follows:

- (a) Make EUT to transmit maximum output power
- (b) Measure conducted output power through RF cable
- (c) Place the EUT in the specific position of phantom
- (d) Perform SAR testing steps on the DASYS system
- (e) Record the SAR value

3.4.1 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan measures 5x5x7 points with step size 8, 8 and 5 mm for below 3 GHz, and 7x7x9 points with step size 4, 4 and 2.5 mm for above 5 GHz. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

3.4.2 Volume Scan Procedure

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the DUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

3.4.3 Power Drift Monitoring

All SAR testing is under the DUT install full charged battery and transmit maximum output power. In DASYS measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of DUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drift more than 5%, the SAR will be retested.

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3.4.4 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

3.4.5 SAR Averaged Methods

In DASY, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

4. SAR Measurement Evaluation

4.1 EUT Configuration and Setting

For WWAN SAR testing, the EUT was linked and controlled by base station emulator. Communication between the EUT and the emulator was established by air link. The distance between the EUT and the communicating antenna of the emulator is larger than 50 cm and the output power radiated from the emulator antenna is at least 30 dB smaller than the output power of DUT. The EUT was set from the emulator to radiate maximum output power during SAR testing.

For WLAN SAR testing, the EUT has installed WLAN engineering testing software which can provide continuous transmitting RF signal. This RF signal utilized in SAR measurement has almost 100% duty cycle. The data rates for WLAN SAR testing were set in lowest data rate as 1 Mbps for 802.11b, 6 Mbps for 802.11g, and MCS0 for 802.11n per KDB 248227.

For WiMAX SAR testing, the EUT has installed WiMAX engineering software which can control EUT to transmit at specific channel bandwidth, modulation type, coding rate, power level and frequency without signal generator. The test mode instructs the EUT to transmit for 15 symbols in the UL data zone. This UL transmission is repeated every 5 milliseconds. The TX power of the EUT is set to maximum power. As mentioned above that all 15 symbols (no control symbols plus and 15 data symbols) were all transmitted at full power.

The device and its system are both transmitting using only PUSC zone type. This enables multiple users to transmit simultaneously within the system. FUSC, AMC and other zone types are not used by the test device for uplink transmission. The maximum DL:UL symbol ratio can be determined according to the PUSC requirements. The system transmit an odd number of symbols using DL-PUSC consisting of even multiples of traffics and control symbols plus one symbol for the preamble. Multiples of three symbols are transmitted by the device using UL-PUSC. The OFDMA symbol time allows up to 48 downlink and uplink symbols in each 5 ms frame. TTG and RTG are also included in each frame as DL/UL transmission gaps; therefore, the system can only allow 47 or less symbols per frame

FCC SAR Test Report

PUSC zone type

For the 10 MHz bandwidth, it has 35 sub-channels structured from 1024 subcarriers per OFDMA symbol and each sub-channel is spanned over 3 OFDMA symbols and consists of 72 subcarriers including 48 data and 24 pilot subcarriers. For each symbol, there are 184 guard subcarriers, leaving 840 available subcarriers for transmission. For the 5 MHz bandwidth, it contains 17 sub-channels using 512 subcarriers including 104 guard subcarriers per symbol and leaving 408 available subcarriers for transmission.

The control channels may occupy up to 5 slots during normal operation. A slot is a sub-channel with the duration of 3 symbols. There are a total of 35 (17) slots in the 10 MHz (5 MHz) channel configuration. The maximum power for each control symbol has been determined to be 35.88 (5/35 of 251.19 mW) for 10MHz and 73.88 (5/17 of 251.19 mW) for 5MHz. A maximum of two simultaneous CQICH reports are possible, which can occupy up to 2 slots. A maximum of three slots can be used for HARQ ACK/NAK by the five possible DL HARQ bursts in the previous DL frame. The 5 ACK/NAK bits each occupies $\frac{1}{2}$ a slot. These 5 slots correspond to 5/35 (5/17) of the total number of uplink slots. When the device is transmitting at its maximum rated power of 24.0 dBm (251.19 mW), the output power for these control channels is 35.88 (5/35 of 251.19 mW) for 10MHz and 73.88 (5/17 of 251.19 mW) for 5MHz. Due to the limitation of the test mode software which cannot control the device to output typical control symbols (3 symbols with 5 slots occupied). The EUT was programmed to output full power at 24.0 dBm per symbol and this represents the max worst case power which a transmitted symbol can get (no matter it is data symbol or control symbol, the 24.0 dBm is the max output power that this device can output). Since max output power was used during the SAR test, we concluded that no further SAR scaling up is required after the SAR measurement.

The up-link sub-frame is triggered by an Allocation Start Time contained in the information of UL-MAP. This information specifies the starting times of the Uplink and Downlink frames. In any UL sub-frame, the duty factor and bandwidth information is used to ensure optimal system operation. In the real usage, the data burst power will be adjusted according to the signal strength of the communication.

FCC SAR Test Report

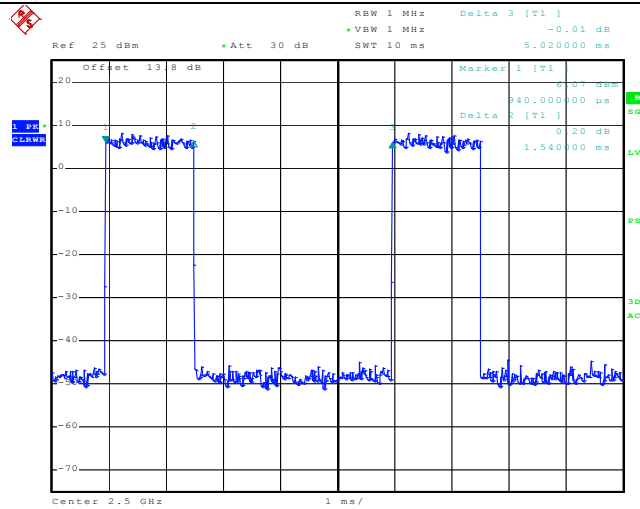
Theoretical duty cycle is

$$\begin{aligned} & \text{UL Data Symbols} \times \text{Symbol Time} / \text{Frame Size} \\ & = 15 \times 102.857 \text{ us} / 5000 \text{ us} \\ & = 30.8 \% \end{aligned}$$

Crest Factor = 1 / Duty Cycle = 3.24
This CF was used for SAR evaluation.

The WiMAX time domain waveform used for SAR testing is shown as below.

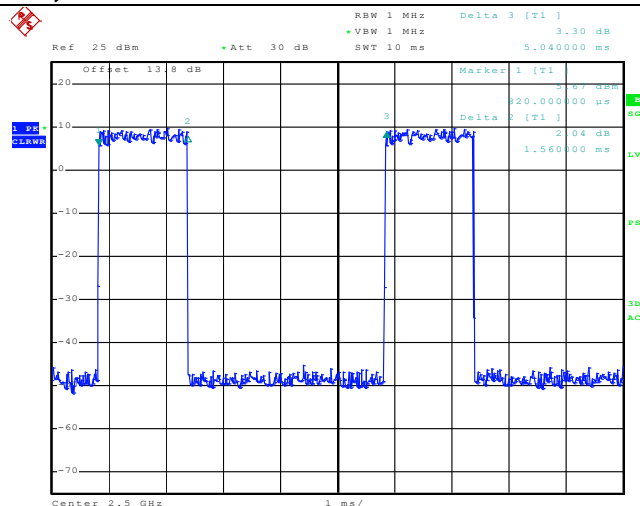
PUSC, QPSK, BW 5MHz, 2595.0 MHz



Frame Length
= Mark 3 – Mark 1 = 5 ms

UL Data Symbols (15 symbols)
= Mark 2 – Mark 1 = 1.54 ms
Duty Cycle
= 15 symbols UL time / Frame Length x 100%
= 1.54 / 5 x 100% = 30.8 %

PUSC, 16QAM, BW 5MHz, 2595.0 MHz

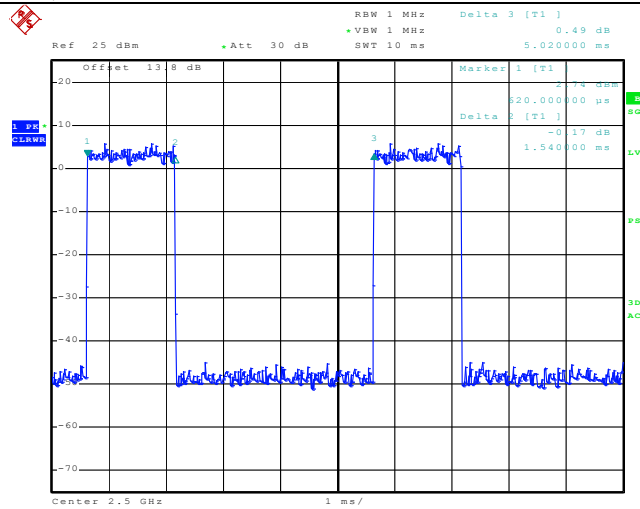


Frame Length
= Mark 3 – Mark 1 = 5 ms

UL Data Symbols (15 symbols)
= Mark 2 – Mark 1 = 1.56 ms
Duty Cycle
= 15 symbols UL time / Frame Length x 100%
= 1.56 / 5 x 100% = 31.2 %

FCC SAR Test Report

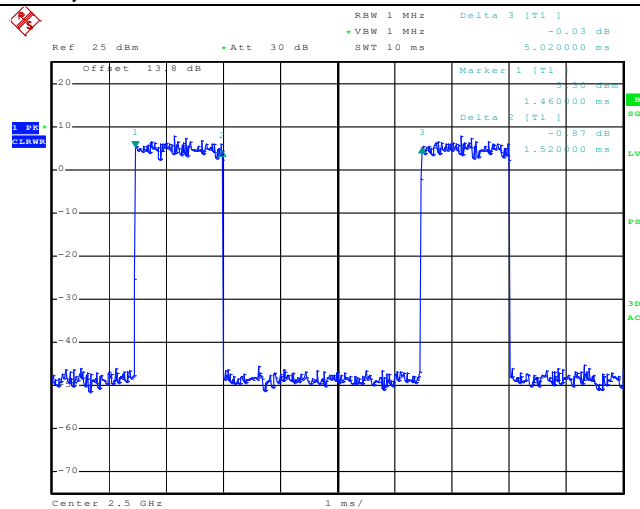
PUSC, QPSK, BW 10MHz, 2595.0 MHz



Frame Length
 = Mark 3 – Mark 1 = 5 ms

UL Data Symbols (15 symbols)
 = Mark 2 – Mark 1 = 1.54 ms
Duty Cycle
 = 15 symbols UL time / Frame Length x 100%
 = 1.54 / 5 x 100% = 30.8 %

PUSC, 16QAM, BW 10MHz, 2595.0 MHz



Frame Length
 = Mark 3 – Mark 1 = 5 ms

UL Data Symbols (15 symbols)
 = Mark 2 – Mark 1 = 1.52 ms
Duty Cycle
 = 15 symbols UL time / Frame Length x 100%
 = 1.52 / 5 x 100% = 30.4 %

FCC SAR Test Report

Scaling Factor

The testing was done at DL:UL symbol ratio, 29:18 as this is the maximum achievable ratio for the product. The 18 indicates the number of uplink symbols. Inside the uplink, 15 of the symbols are used for data, and 3 of the symbols are used for sending control information to the network. During the testing, the control symbols contained no information, so did not contribute to the total energy transmitted. To compensate for the maximum energy which may be presented in the 3 control symbols, following scheme is used for the up scaling.

<Scaling Factor for 5MHz BW>

This device is power class 2 device and the maximum power tolerance is 23.0 ± 1.0 dBm.

The maximum rated output power of 5M BW is 24.00 dBm (251.19 mW).

Maximum power in 5M control traffic is 73.88 mW (5/17 of 251.19 mW).

Scaling Factor = $(3 * 73.88 + 15 * 251.19) / (15 * \text{max. measured power of the channel tested})$

= $3989.49 / (15 * \text{max. measured power of the channel tested})$

For WiMAX Antenna 1

Zone Type	Modulation	Coding Rate	Frequency (MHz)	Average Power for Ant-1 (Main Antenna)		Scaling Factor
				(dBm)	(mW)	
PUSC	QPSK (BW 5MHz)	1/2	2498.5	23.02	200.45	1.33
			2593.0	23.95	248.31	1.07
			2687.5	23.51	224.39	1.19
		3/4	2498.5	22.83	191.87	1.39
			2593.0	23.77	238.23	1.12
			2687.5	23.34	215.77	1.23
	16QAM (BW 5MHz)	1/2	2498.5	23.41	219.28	1.21
			2593.0	23.75	237.14	1.12
			2687.5	23.27	212.32	1.25
		3/4	2498.5	23.48	222.84	1.19
			2593.0	23.79	239.33	1.11
			2687.5	23.38	217.77	1.22

For WiMAX Antenna 2

Zone Type	Modulation	Coding Rate	Frequency (MHz)	Average Power for Ant-2 (Aux. Antenna)		Scaling Factor
				(dBm)	(mW)	
PUSC	QPSK (BW 5MHz)	1/2	2498.5	23.46	221.82	1.20
			2593.0	24.00	251.19	1.06
			2687.5	23.71	234.96	1.13
		3/4	2498.5	23.30	213.80	1.24
			2593.0	23.98	250.03	1.06
			2687.5	23.53	225.42	1.18
	16QAM (BW 5MHz)	1/2	2498.5	23.31	214.29	1.24
			2593.0	23.94	247.74	1.07
			2687.5	23.57	227.51	1.17
		3/4	2498.5	23.39	218.27	1.22
			2593.0	23.98	250.03	1.06
			2687.5	23.61	229.61	1.16

FCC SAR Test Report

<Scaling Factor for 10MHz BW>

This device is power class 2 device and the maximum power tolerance is 23.0 ± 1.0 dBm.

The maximum rated output power of 10M BW is 24.00 dBm (251.19 mW).

Maximum power in 10M control traffic is 35.88 mW (5/35 of 251.19 mW).

Scaling Factor = $(3 * 35.88 + 15 * 251.19) / (15 * \text{max. measured power of the channel tested})$
 = $3875.49 / (15 * \text{max. measured power of the channel tested})$

For WiMAX Antenna 1

Zone Type	Modulation	Coding Rate	Frequency (MHz)	Average Power for Ant-1 (Main Antenna)		Scaling Factor
				(dBm)	(mW)	
PUSC	QPSK (BW 10MHz)	1/2	2501.0	23.32	214.78	1.20
			2593.0	23.56	226.99	1.14
			2685.0	23.29	213.30	1.21
		3/4	2501.0	23.40	218.78	1.18
			2593.0	23.46	221.97	1.16
			2685.0	23.46	221.82	1.16
	16QAM (BW 10MHz)	1/2	2501.0	23.41	219.28	1.18
			2593.0	23.52	224.91	1.15
			2685.0	23.33	215.28	1.20
		3/4	2501.0	23.38	217.77	1.19
			2593.0	23.34	215.77	1.20
			2685.0	23.36	216.77	1.19

For WiMAX Antenna 2

Zone Type	Modulation	Coding Rate	Frequency (MHz)	Average Power for Ant-2 (Aux. Antenna)		Scaling Factor
				(dBm)	(mW)	
PUSC	QPSK (BW 10MHz)	1/2	2501.0	23.23	210.38	1.23
			2593.0	23.97	249.46	1.04
			2685.0	23.56	226.99	1.14
		3/4	2501.0	23.33	215.28	1.20
			2593.0	23.77	238.23	1.08
			2685.0	23.65	231.74	1.11
	16QAM (BW 10MHz)	1/2	2501.0	23.34	215.77	1.20
			2593.0	23.87	243.78	1.06
			2685.0	23.70	234.42	1.10
		3/4	2501.0	23.35	216.27	1.19
			2593.0	23.88	244.34	1.06
			2685.0	23.72	235.50	1.10

<Scaling Up SAR>

Calculating used follow scheme for scale up SAR.

Scaled SAR = Measured SAR * Scaling Factor

4.2 EUT Testing Position

This DUT was tested in **Right Cheek, Right Tilted, Left Cheek, Left Tilted, Front Face, Rear Face, Left Side, Right Side, Top Side**, and **Bottom Side** positions as illustrated below:

1. Define two imaginary lines on the handset

- (a) The vertical centerline passes through two points on the front side of the handset - the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.
- (b) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
- (c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.

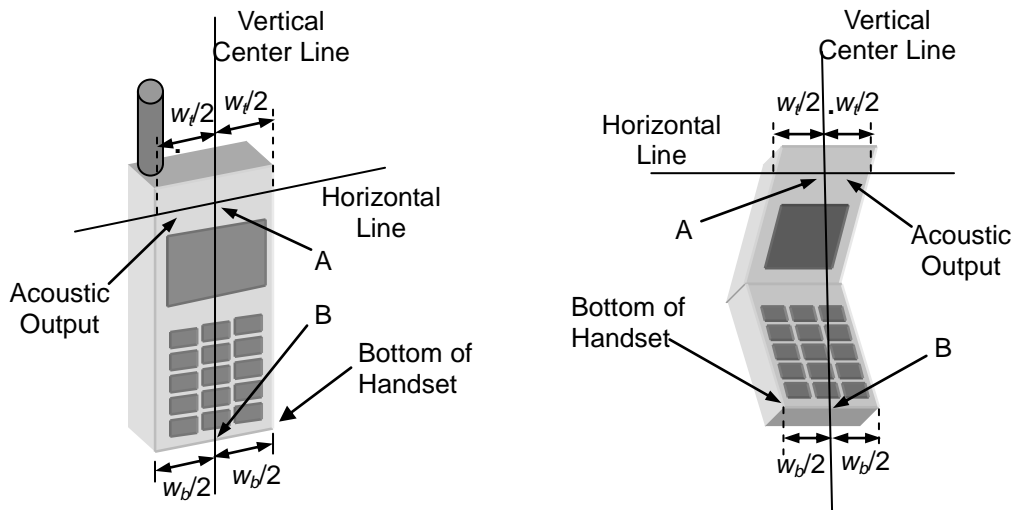


Fig-4.1 Illustration for Handset Vertical and Horizontal Reference Lines

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2. Cheek Position

- (a) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- (b) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost (see Fig-4.2).

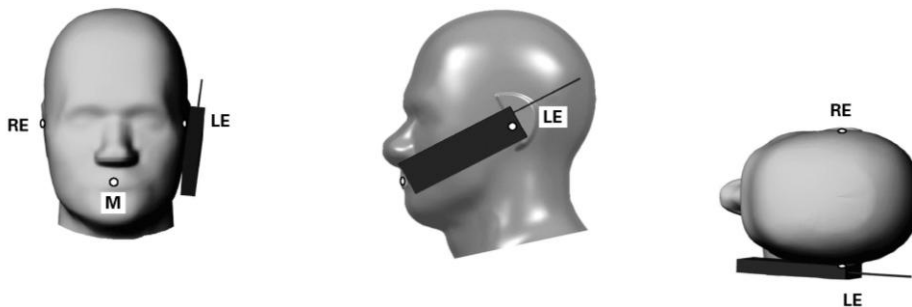


Fig-4.2 Illustration for Cheek Position

3. Tilted Position

- (a) To position the device in the “cheek” position described above.
- (b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost (see Fig-4.3).

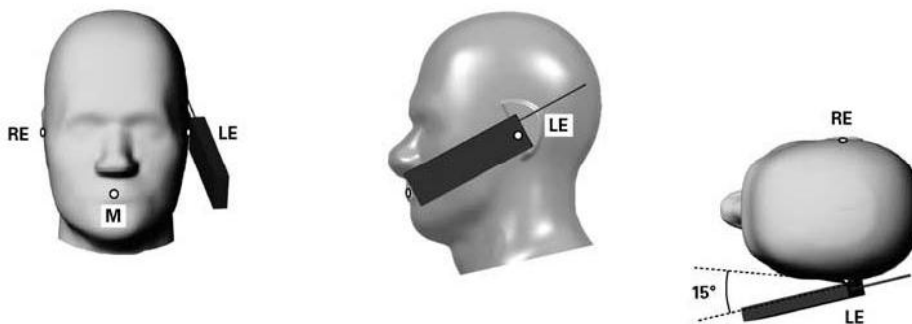


Fig-4.3 Illustration for Tilted Position

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4. Body Worn Position

- (a) To position the EUT parallel to the phantom surface.
- (b) To adjust the EUT parallel to the flat phantom.
- (c) To adjust the distance between the EUT surface and the flat phantom to 1 cm.

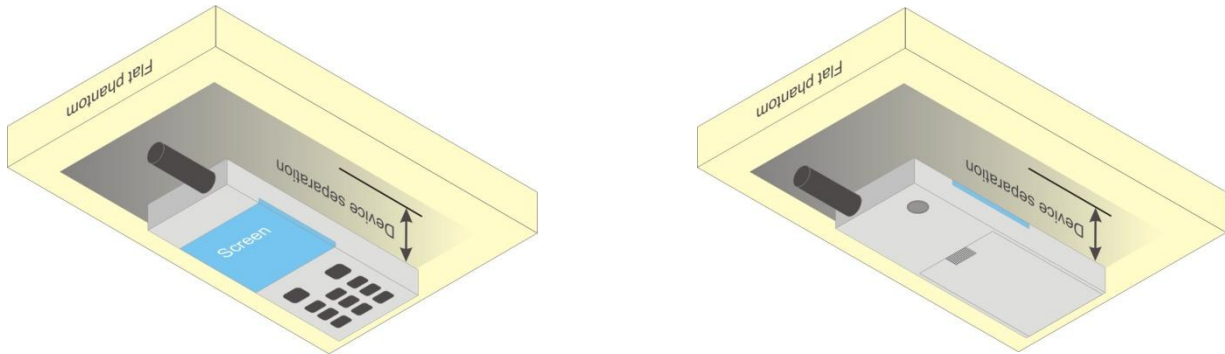


Fig-4.4 Illustration for Body Worn Position

Since the SAR is required for antenna located within 25mm from edge, SAR testing for each antenna is listed as below.

WWAN : Front Face, Rear Face, Left Side, Right Side, Bottom Side

WLAN : Front Face, Rear Face, Right Side, Top Side

WiMAX : Front Face, Rear Face, Left Side, Top Side

4.3 Tissue Verification

The measuring results for tissue simulating liquid are shown as below.

Tissue Type	Frequency (MHz)	Liquid Temp. (°C)	Measured Conductivity (σ)	Measured Permittivity (ϵ_r)	Target Conductivity (σ)	Target Permittivity (ϵ_r)	Conductivity Deviation (%)	Permittivity Deviation (%)	Test Date
H835	835	21.6	0.878	42.245	0.90	41.5	-2.44	1.80	Dec. 15, 2011
H835	835	21.5	0.920	43.000	0.90	41.5	2.22	3.61	Dec. 24, 2011
B835	835	21.8	0.972	53.950	0.97	55.2	0.21	-2.26	Dec. 16, 2011
B835	835	21.7	0.998	55.500	0.97	55.2	2.89	0.54	Dec. 23, 2011
B835	835	21.1	0.998	55.600	0.97	55.2	2.89	0.72	Dec. 26, 2011
B835	835	20.9	0.994	54.98	0.97	55.2	2.47	-0.40	Feb. 23, 2012
H1900	1900	21.8	1.437	39.802	1.40	40.0	2.64	-0.50	Dec. 16, 2011
B1900	1900	21.6	1.554	53.047	1.52	53.3	2.24	-0.47	Dec. 13, 2011
B1900	1900	21.0	1.547	52.392	1.52	53.3	1.78	-1.70	Feb. 23, 2012
H2450	2450	20.7	1.84	38.6	1.80	39.2	2.22	-1.53	Jan. 03, 2012
B2450	2450	20.9	2.02	53.9	1.95	52.7	3.59	2.28	Jan. 03, 2012
H2600	2600	21.0	1.980	38.300	1.96	39.0	1.02	-1.79	Dec. 30, 2011
B2600	2600	21.1	2.210	51.100	2.16	52.5	2.31	-2.67	Dec. 29, 2011

Note:

The dielectric properties of the tissue simulating liquid must be measured within 24 hours before the SAR testing and within $\pm 5\%$ of the target values. Liquid temperature during the SAR testing must be within $\pm 2^\circ\text{C}$.



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4.4 System Verification

The measuring results for system check are shown as below.

Test Date	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
Dec. 15, 2011	835	9.65	2.35	9.40	-2.59	4d021	3590	861
Dec. 24, 2011	835	9.65	2.42	9.68	0.31	4d021	3280	579
Dec. 16, 2011	835	10.10	2.58	10.32	2.18	4d021	3800	579
Dec. 23, 2011	835	10.10	2.51	10.04	-0.59	4d021	3280	579
Dec. 26, 2011	835	10.10	2.65	10.60	4.95	4d021	3800	1277
Feb. 23, 2012	835	10.10	2.58	10.32	2.18	4d021	3650	861
Dec. 16, 2011	1900	40.90	10.30	41.20	0.73	5d022	3590	861
Dec. 13, 2011	1900	40.90	10.50	42.00	2.69	5d022	3800	579
Feb. 23, 2012	1900	38.90	9.82	39.28	0.98	5d036	3650	861
Jan. 03, 2012	2450	54.80	13.40	53.60	-2.19	716	3650	579
Jan. 03, 2012	2450	53.30	12.30	49.20	-7.69	716	3650	579
Dec. 30, 2011	2600	58.90	14.60	58.40	-0.85	1003	3650	579
Dec. 29, 2011	2600	58.10	14.40	57.60	-0.86	1003	3650	579

Note:

Comparing to the reference SAR value provided by SPEAG, the validation data should be within its specification of 10 %. The result indicates the system check can meet the variation criterion and the plots can be referred to Appendix A of this report.



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4.5 Conducted Power Results

The measuring conducted power (Unit: dBm) are shown as below.

Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
Frequency (MHz)	824.2	836.4	848.8	1850.2	1880.0	1909.8
Maximum Burst-Averaged Output Power						
GSM (GMSK, 1 slot)	31.74	31.04	31.04	29.43	29.70	29.69
GPRS 8 (GMSK, 1 slot)	31.73	31.03	31.04	29.44	29.70	29.70
GPRS 10 (GMSK, 2 slot)	31.71	31.00	31.01	28.69	28.95	28.96
GPRS 12 (GMSK, 4 slot)	27.72	26.86	26.86	26.40	26.66	26.67
EDGE 8 (8PSK, 1 slot)	25.68	25.69	25.71	26.45	26.71	26.72
EDGE 10 (8PSK, 2 slot)	24.82	24.56	24.89	26.43	26.69	26.69
EDGE 12 (8PSK, 4 slot)	21.42	21.47	21.53	26.40	26.65	26.65
Maximum Frame-Averaged Output Power						
GSM (GMSK, 1 slot)	22.74	22.04	22.04	20.43	20.70	20.69
GPRS 8 (GMSK, 1 slot)	22.73	22.03	22.04	20.44	20.70	20.70
GPRS 10 (GMSK, 2 slot)	25.71	25.00	25.01	22.69	22.95	22.96
GPRS 12 (GMSK, 4 slot)	24.72	23.86	23.86	23.40	23.66	23.67
EDGE 8 (8PSK, 1 slot)	16.68	16.69	16.71	17.45	17.71	17.72
EDGE 10 (8PSK, 2 slot)	18.82	18.56	18.89	20.43	20.69	20.69
EDGE 12 (8PSK, 4 slot)	18.42	18.47	18.53	23.40	23.65	23.65

Note: Body SAR testing for GSM/GPRS/EDGE was performed on the maximum frame-averaged power mode.

Band	WCDMA Band II			WCDMA Band V		
Channel	9262	9400	9538	4132	4182	4233
Frequency (MHz)	1852.4	1880.0	1907.6	826.4	836.4	846.6
RMC 12.2K	22.84	22.83	22.75	22.89	22.85	22.73
HSDPA Subtest-1	22.83	22.87	22.73	22.88	22.89	22.80
HSDPA Subtest-2	21.79	21.83	21.70	21.85	21.82	21.81
HSDPA Subtest-3	21.37	21.37	21.22	21.38	21.34	21.36
HSDPA Subtest-4	21.28	21.32	21.17	21.33	21.32	21.35
HSUPA Subtest-1	20.85	20.95	20.75	20.89	20.86	20.80
HSUPA Subtest-2	19.87	19.92	19.80	19.91	19.89	19.82
HSUPA Subtest-3	20.37	20.42	20.31	20.40	20.36	20.32
HSUPA Subtest-4	20.86	20.98	20.78	20.88	20.86	20.80
HSUPA Subtest-5	22.34	22.36	22.25	22.35	22.34	22.28

Band	802.11b			802.11g		
Channel	1	6	11	1	6	11
Frequency (MHz)	2412	2437	2462	2412	2437	2462
Average Power	9.83	10.53	11.23	15.34	15.53	14.94

Band	802.11n (HT20)			802.11n (HT40)		
Channel	1	6	11	3	6	9
Frequency (MHz)	2412	2437	2462	2422	2437	2452
Average Power	15.63	15.42	15.34	13.53	13.40	13.13



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A D T

Modulation	Coding Rate	Frequency (MHz)	WiMAX Antenna-1			WiMAX Antenna-2		
			Peak Power	Average Power	PAPR	Peak Power	Average Power	PAPR
QPSK (BW 5MHz)	1/2	2498.5	29.82	23.02	6.26	30.31	23.46	6.49
		2593.0	30.21	23.95	5.81	30.18	24.00	5.78
		2687.5	30.34	23.51	6.37	30.16	23.71	6.02
	3/4	2498.5	29.72	22.83	6.61	30.19	23.30	6.51
		2593.0	30.17	23.77	6.10	30.19	23.98	5.82
		2687.5	30.30	23.34	6.59	30.13	23.53	6.19
16QAM (BW 5MHz)	1/2	2498.5	30.13	23.41	6.38	30.28	23.31	6.60
		2593.0	30.19	23.75	6.13	30.27	23.94	5.87
		2687.5	30.30	23.27	6.70	30.19	23.57	6.31
	3/4	2498.5	30.05	23.48	6.28	30.19	23.39	6.49
		2593.0	30.16	23.79	6.02	30.17	23.98	5.76
		2687.5	30.28	23.38	6.55	30.15	23.61	6.07
QPSK (BW 10MHz)	1/2	2501.0	30.31	23.32	6.54	30.46	23.23	6.83
		2593.0	30.25	23.56	6.19	30.23	23.97	6.11
		2685.0	30.27	23.29	6.57	30.11	23.56	6.28
	3/4	2501.0	30.19	23.40	6.32	30.37	23.33	6.64
		2593.0	30.20	23.46	6.07	30.21	23.77	5.79
		2685.0	30.29	23.46	6.48	30.13	23.65	6.01
16QAM (BW 10MHz)	1/2	2501.0	30.26	23.41	6.38	30.31	23.34	6.74
		2593.0	30.20	23.52	6.15	30.24	23.87	6.01
		2685.0	30.32	23.33	6.56	30.19	23.70	6.11
	3/4	2501.0	30.37	23.38	6.43	30.56	23.35	6.82
		2593.0	30.27	23.34	6.16	30.27	23.88	5.82
		2685.0	30.30	23.36	6.40	30.17	23.72	6.01

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4.6 SAR Testing Results

4.6.1 SAR Results for Head

Plot No.	Band	Mode	Test Position	Channel	SAR-1g (W/kg)
83	GSM850	GSM	Right Cheek	128	0.202
84	GSM850	GSM	Right Tilted	128	0.115
85	GSM850	GSM	Left Cheek	128	0.237
86	GSM850	GSM	Left Tilted	128	0.127
12	GSM1900	GSM	Right Cheek	661	0.314
13	GSM1900	GSM	Right Tilted	661	0.19
14	GSM1900	GSM	Left Cheek	661	0.532
15	GSM1900	GSM	Left Tilted	661	0.15
23	WCDMA V	RMC 12.2K	Right Cheek	4132	0.272
24	WCDMA V	RMC 12.2K	Right Tilted	4132	0.139
25	WCDMA V	RMC 12.2K	Left Cheek	4132	0.306
26	WCDMA V	RMC 12.2K	Left Tilted	4132	0.153
34	WCDMA II	RMC 12.2K	Right Cheek	9262	0.513
35	WCDMA II	RMC 12.2K	Right Tilted	9262	0.304
36	WCDMA II	RMC 12.2K	Left Cheek	9262	0.885
37	WCDMA II	RMC 12.2K	Left Tilted	9262	0.248
54	WCDMA II	RMC 12.2K	Left Cheek	9400	0.888
55	WCDMA II	RMC 12.2K	Left Cheek	9538	0.727
100	802.11n	HT20	Right Cheek	1	0.031
101	802.11n	HT20	Right Tilted	1	0.017
102	802.11n	HT20	Left Cheek	1	0.04
103	802.11n	HT20	Left Tilted	1	0.024

Note: Since the maximum power of 802.11b is less than 60/f and the maximum power of 802.11g/n is larger than 60/f and 802.11n power is larger than 802.11g, we perform WLAN SAR testing on the 802.11n mode.

Plot No.	Band	Mode	Test Position	Frequency (MHz)	Ant Status	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
201	WiMAX	QPSK1/2 5M	Right Cheek	2593	1	0.093	1.07	0.100
202	WiMAX	QPSK1/2 5M	Right Tilted	2593	1	0.078	1.07	0.083
203	WiMAX	QPSK1/2 5M	Left Cheek	2593	1	0.057	1.07	0.061
204	WiMAX	QPSK1/2 5M	Left Tilted	2593	1	0.042	1.07	0.045
205	WiMAX	QPSK1/2 10M	Right Cheek	2593	1	0.173	1.14	0.197
206	WiMAX	QPSK1/2 10M	Right Tilted	2593	1	0.127	1.14	0.145
207	WiMAX	QPSK1/2 10M	Left Cheek	2593	1	0.057	1.14	0.065
208	WiMAX	QPSK1/2 10M	Left Tilted	2593	1	0.04	1.14	0.046
209	WiMAX	QPSK1/2 5M	Right Cheek	2593	2	0.041	1.06	0.043
210	WiMAX	QPSK1/2 5M	Right Tilted	2593	2	0.041	1.06	0.043
211	WiMAX	QPSK1/2 5M	Left Cheek	2593	2	0.027	1.06	0.029
212	WiMAX	QPSK1/2 5M	Left Tilted	2593	2	0.027	1.06	0.029
213	WiMAX	QPSK1/2 10M	Right Cheek	2593	2	0.218	1.04	0.227
214	WiMAX	QPSK1/2 10M	Right Tilted	2593	2	0.13	1.04	0.135
215	WiMAX	QPSK1/2 10M	Left Cheek	2593	2	0.113	1.04	0.118
216	WiMAX	QPSK1/2 10M	Left Tilted	2593	2	0.158	1.04	0.164

Note: SAR for WiMAX 16QAM is not required because its maximum power is less than 1/4 dB higher than QPSK and QPSK SAR is less than 0.8 W/kg per 2010 TCB workshop.



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4.6.2 SAR Results for Body

<Hotspot Mode>

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Channel	SAR-1g (W/kg)
87	GSM850	GPRS 10	Front Face	1	128	0.635
88	GSM850	GPRS 10	Rear Face	1	128	1.06
89	GSM850	GPRS 10	Left Side	1	128	0.527
90	GSM850	GPRS 10	Right Side	1	128	0.548
92	GSM850	GPRS 10	Bottom Side	1	128	0.106
98	GSM850	GPRS 10	Rear Face	1	189	0.941
99	GSM850	GPRS 10	Rear Face	1	251	0.993
16	GSM1900	GPRS 12	Front Face	1	810	0.826
17	GSM1900	GPRS 12	Rear Face	1	810	0.896
18	GSM1900	GPRS 12	Left Side	1	810	0.273
19	GSM1900	GPRS 12	Right Side	1	810	0.257
21	GSM1900	GPRS 12	Bottom Side	1	810	0.568
46	GSM1900	GPRS 12	Front Face	1	512	0.926
47	GSM1900	GPRS 12	Front Face	1	661	0.953
48	GSM1900	GPRS 12	Rear Face	1	512	0.935
49	GSM1900	GPRS 12	Rear Face	1	661	0.922
27	WCDMA V	RMC 12.2K	Front Face	1	4132	0.377
28	WCDMA V	RMC 12.2K	Rear Face	1	4132	0.642
29	WCDMA V	RMC 12.2K	Left Side	1	4132	0.336
30	WCDMA V	RMC 12.2K	Right Side	1	4132	0.332
32	WCDMA V	RMC 12.2K	Bottom Side	1	4132	0.06
38	WCDMA II	RMC 12.2K	Front Face	1	9262	0.858
39	WCDMA II	RMC 12.2K	Rear Face	1	9262	0.832
40	WCDMA II	RMC 12.2K	Left Side	1	9262	0.337
41	WCDMA II	RMC 12.2K	Right Side	1	9262	0.236
43	WCDMA II	RMC 12.2K	Bottom Side	1	9262	0.389
50	WCDMA II	RMC 12.2K	Front Face	1	9400	0.885
51	WCDMA II	RMC 12.2K	Front Face	1	9538	0.652
52	WCDMA II	RMC 12.2K	Rear Face	1	9400	0.902
53	WCDMA II	RMC 12.2K	Rear Face	1	9538	0.762
104	802.11n	HT20	Front Face	1	1	0.014
105	802.11n	HT20	Rear Face	1	1	0.103
107	802.11n	HT20	Right Side	1	1	0.078
108	802.11n	HT20	Top Side	1	1	0.00872

Note: Since the maximum power of 802.11b is less than 60/f and the maximum power of 802.11g/n is larger than 60/f and 802.11n power is larger than 802.11g, we perform WLAN SAR testing on the 802.11n mode.



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Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Frequency (MHz)	Ant Status	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
217	WiMAX	QPSK1/2 5M	Front Face	1	2593	1	0.07	1.07	0.075
218	WiMAX	QPSK1/2 5M	Rear Face	1	2593	1	0.351	1.07	0.376
219	WiMAX	QPSK1/2 5M	Left Side	1	2593	1	0.283	1.07	0.303
220	WiMAX	QPSK1/2 5M	Top Side	1	2593	1	0.085	1.07	0.091
222	WiMAX	QPSK1/2 10M	Front Face	1	2593	1	0.077	1.14	0.088
223	WiMAX	QPSK1/2 10M	Rear Face	1	2593	1	0.368	1.14	0.420
224	WiMAX	QPSK1/2 10M	Left Side	1	2593	1	0.276	1.14	0.315
225	WiMAX	QPSK1/2 10M	Top Side	1	2593	1	0.096	1.14	0.109
227	WiMAX	QPSK1/2 5M	Front Face	1	2593	2	0.077	1.06	0.082
228	WiMAX	QPSK1/2 5M	Rear Face	1	2593	2	0.234	1.06	0.248
229	WiMAX	QPSK1/2 5M	Left Side	1	2593	2	0.088	1.06	0.093
230	WiMAX	QPSK1/2 5M	Top Side	1	2593	2	0.137	1.06	0.145
232	WiMAX	QPSK1/2 10M	Front Face	1	2593	2	0.085	1.04	0.088
233	WiMAX	QPSK1/2 10M	Rear Face	1	2593	2	0.171	1.04	0.178
234	WiMAX	QPSK1/2 10M	Left Side	1	2593	2	0.071	1.04	0.074
235	WiMAX	QPSK1/2 10M	Top Side	1	2593	2	0.126	1.04	0.131

Note: SAR for WiMAX 16QAM is not required because its maximum power is less than 1/4 dB higher than QPSK and QPSK SAR is less than 0.8 W/kg per 2010 TCB workshop.



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<Body Worn Mode>

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Channel	Earphone	SAR-1g (W/kg)
121	GSM850	GSM	Front Face	1	128	w/	0.279
122	GSM850	GSM	Rear Face	1	128	w/	0.403
123	GSM1900	GSM	Front Face	1	661	w/	0.463
124	GSM1900	GSM	Rear Face	1	661	w/	0.479
27	WCDMA V	RMC 12.2K	Front Face	1	4132	w/o	0.377
28	WCDMA V	RMC 12.2K	Rear Face	1	4132	w/o	0.642
33	WCDMA V	RMC 12.2K	Rear Face	1	4132	w/	0.233
38	WCDMA II	RMC 12.2K	Front Face	1	9262	w/o	0.858
39	WCDMA II	RMC 12.2K	Rear Face	1	9262	w/o	0.832
44	WCDMA II	RMC 12.2K	Front Face	1	9262	w/	0.798
50	WCDMA II	RMC 12.2K	Front Face	1	9400	w/o	0.885
51	WCDMA II	RMC 12.2K	Front Face	1	9538	w/o	0.652
52	WCDMA II	RMC 12.2K	Rear Face	1	9400	w/o	0.902
53	WCDMA II	RMC 12.2K	Rear Face	1	9538	w/o	0.762
104	802.11n	HT20	Front Face	1	1	w/o	0.014
105	802.11n	HT20	Rear Face	1	1	w/o	0.103
110	802.11n	HT20	Rear Face	1	1	w/	0.101

Note: Since the maximum power of 802.11b is less than 60/f and the maximum power of 802.11g/n is larger than 60/f and 802.11n power is larger than 802.11g, we perform WLAN SAR testing on the 802.11n mode.

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Frequency (MHz)	Ant Status	Ear- phone	Measured SAR-1g (W/kg)	Scaling Factor	Scaled SAR-1g (W/kg)
217	WiMAX	QPSK1/2_5M	Front Face	1	2593	1	w/o	0.07	1.07	0.075
218	WiMAX	QPSK1/2_5M	Rear Face	1	2593	1	w/o	0.351	1.07	0.376
221	WiMAX	QPSK1/2_5M	Rear Face	1	2593	1	w/	0.293	1.07	0.314
222	WiMAX	QPSK1/2_10M	Front Face	1	2593	1	w/o	0.077	1.14	0.088
223	WiMAX	QPSK1/2_10M	Rear Face	1	2593	1	w/o	0.368	1.14	0.420
226	WiMAX	QPSK1/2_10M	Rear Face	1	2593	1	w/	0.361	1.14	0.412
227	WiMAX	QPSK1/2_5M	Front Face	1	2593	2	w/o	0.077	1.06	0.082
228	WiMAX	QPSK1/2_5M	Rear Face	1	2593	2	w/o	0.234	1.06	0.248
231	WiMAX	QPSK1/2_5M	Rear Face	1	2593	2	w/	0.205	1.06	0.217
232	WiMAX	QPSK1/2_10M	Front Face	1	2593	2	w/o	0.085	1.04	0.088
233	WiMAX	QPSK1/2_10M	Rear Face	1	2593	2	w/o	0.171	1.04	0.178
236	WiMAX	QPSK1/2_10M	Rear Face	1	2593	2	w/	0.17	1.04	0.177

Note: SAR for WiMAX 16QAM is not required because its maximum power is less than 1/4 dB higher than QPSK and QPSK SAR is less than 0.8 W/kg per 2010 TCB workshop.

Test Engineer : Isaac Liao

FCC SAR Test Report

<WiMAX Linearity Response Check>

Setup and Calculation Procedure

Set up the DUT in the position of the worst SAR, i.e. Rear Face of DUT, and keep the separation distance as 1.0 cm. The channel of maximum SAR for each Modulation/Bandwidth is chosen for single point peak SAR testing. Using the same setup as complete 1g SAR and set the device to transmit at specified power and check by Anritus wideband power meter.

The reference line is based on the SAR at the power of 15 mW, and the proportional SARs of its multiples of 15 mW. The measured SAR at different multiple power of 15 mW is also plotted. The deviation is the difference between the reference line and the measured SAR.

The example for QPSK 1/2, BW 5M, 2593.0MHz is as below:

Base value = SAR measured at power of 15 mW = 0.03

2nd point (31 mW) = SAR value of $0.03 * (31 / 15) = 0.06$

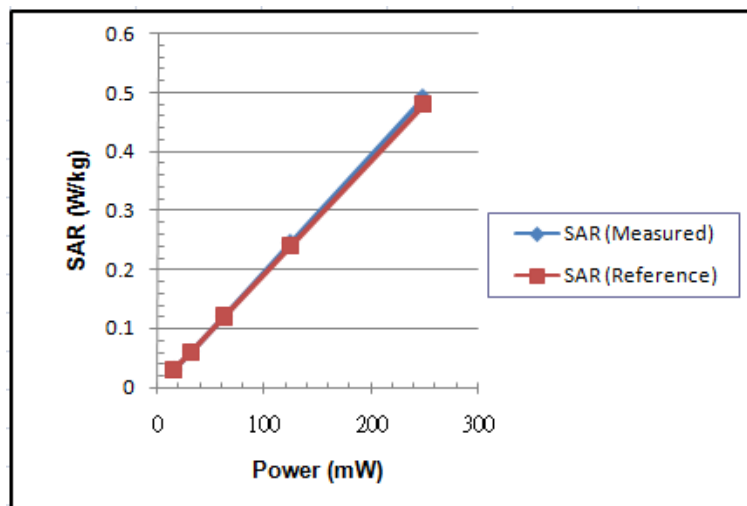
3rd point (62 mW) = SAR value of $0.03 * (62 / 15) = 0.12$

4th point (124 mW) = SAR value of $0.03 * (124 / 15) = 0.24$

5th point (248 mW) = SAR value of $0.03 * (248 / 15) = 0.48$

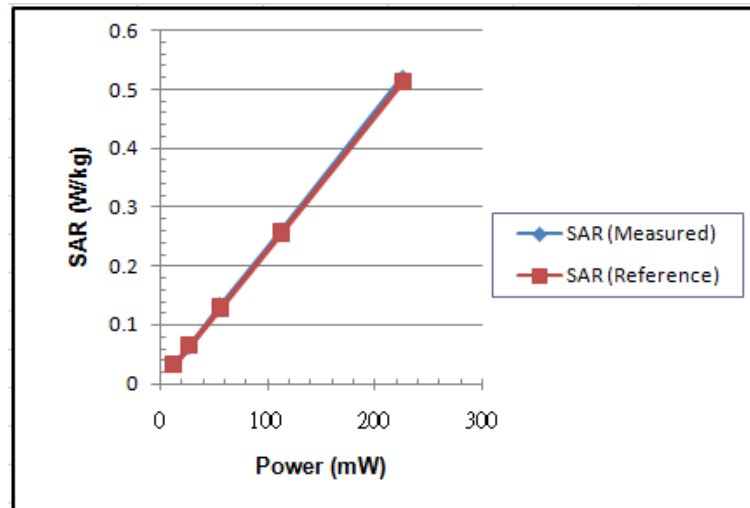
For QPSK, 1/2, BW 5M, 2593.0MHz, Rear Face, WiMAX Ant-1, Configuration #115

Average Power (mW)	15	31	62	124	248
Single Point SAR (W/kg)	0.03	0.06	0.121	0.246	0.493
Reference Line (W/kg)	0.03	0.06	0.12	0.24	0.48
Deviation (%)	0.00%	0.00%	0.83%	2.50%	2.71%



For QPSK, 1/2, BW 10M, 2593.0MHz, Rear Face, WiMAX Ant-1, Configuration #122

Average Power (mW)	14	28	57	114	227
Single Point SAR (W/kg)	0.032	0.063	0.132	0.26	0.52
Reference Line (W/kg)	0.032	0.064	0.128	0.256	0.512
Deviation (%)	0.00%	-1.56%	3.13%	1.56%	1.56%



Conclusion

From the above test results, the SAR probe can measure SAR correctly under high PAPR of OFDM/OFDMA, and the pretest SAR is not underestimated.

<WiMAX Compare with Different Scan Resolution>

Retest the maximum raw 1g SAR with the same DUT setting on the different scan resolution. The test results are shown as below.

Scan Resolution (mm)	Measured SAR_{1g} (W/kg)
5.0	0.368
2.5	0.359

Conclusion

From the above test results, the different scan resolution has no significant change.



FCC SAR Test Report

4.6.3 Simultaneous Multi-band Transmission Evaluation

<Simultaneous Transmission Configuration 1>

Position (Head)	GSM850 (Voice)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Right Cheek	0.202	0.031	0.227	0.46
Right Tilted	0.115	0.017	0.145	0.277
Left Cheek	0.237	0.04	0.118	0.395
Left Tilted	0.127	0.024	0.164	0.315
Position (Hotspot)	GSM850 (Data)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Front Face	0.635	0.014	0.088	0.737
Rear Face	1.06	0.103	0.42	1.583
Left Side	0.527	0	0.315	0.842
Right Side	0.548	0.078	0	0.626
Top Side	0	0.00872	0.145	0.15372
Bottom Side	0.106	0	0	0.106
Position (Body Worn)	GSM850 (Voice)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Front Face	0.279	0.014	0.088	0.381
Rear Face	0.403	0.103	0.42	0.926

<Simultaneous Transmission Configuration 2>

Position (Head)	GSM1900 (Voice)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Right Cheek	0.314	0.031	0.227	0.572
Right Tilted	0.19	0.017	0.145	0.352
Left Cheek	0.532	0.04	0.118	0.69
Left Tilted	0.15	0.024	0.164	0.338
Position (Hotspot)	GSM1900 (Data)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Front Face	0.953	0.014	0.088	1.055
Rear Face	0.935	0.103	0.42	1.458
Left Side	0.273	0	0.315	0.588
Right Side	0.257	0.078	0	0.335
Top Side	0	0.00872	0.145	0.15372
Bottom Side	0.568	0	0	0.568
Position (Body Worn)	GSM1900 (Voice)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Front Face	0.463	0.014	0.088	0.565
Rear Face	0.479	0.103	0.42	1.002



<Simultaneous Transmission Configuration 3>

Position (Head)	WCDMA V (Voice)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Right Cheek	0.272	0.031	0.227	0.53
Right Tilted	0.139	0.017	0.145	0.301
Left Cheek	0.306	0.04	0.118	0.464
Left Tilted	0.153	0.024	0.164	0.341
Position (Hotspot)	WCDMA V (Data)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Front Face	0.377	0.014	0.088	0.479
Rear Face	0.642	0.103	0.42	1.165
Left Side	0.336	0	0.315	0.651
Right Side	0.332	0.078	0	0.41
Top Side	0	0.00872	0.145	0.15372
Bottom Side	0.06	0	0	0.06
Position (Body Worn)	WCDMA V (Voice)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Front Face	0.377	0.014	0.088	0.479
Rear Face	0.642	0.103	0.42	1.165

<Simultaneous Transmission Configuration 4>

Position (Head)	WCDMA II (Voice)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Right Cheek	0.513	0.031	0.227	0.771
Right Tilted	0.304	0.017	0.145	0.466
Left Cheek	0.888	0.04	0.118	1.046
Left Tilted	0.248	0.024	0.164	0.436
Position (Hotspot)	WCDMA II (Data)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Front Face	0.885	0.014	0.088	0.987
Rear Face	0.902	0.103	0.42	1.425
Left Side	0.337	0	0.315	0.652
Right Side	0.236	0.078	0	0.314
Top Side	0	0.00872	0.145	0.15372
Bottom Side	0.389	0	0	0.389
Position (Body Worn)	WCDMA II (Voice)	802.11b/g/n (Data)	WiMAX (Data)	Max. SAR Summation
Front Face	0.885	0.014	0.088	0.987
Rear Face	0.902	0.103	0.42	1.425

Summary:

According to KDB 648474, the simultaneous transmission SAR for WWAN/WLAN/WiMAX was not required, because the SAR summation is less than 1.6 W/kg. Bluetooth standalone SAR is not required because its maximum power is less than P_{Ref} and SAR for other antenna is less than 1.2 W/kg. WLAN and Bluetooth is share the same antenna and they cannot transmit simultaneously.

**5. Calibration of Test Equipment**

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
Dosimetric E-Field Probe	SPEAG	ES3DV3	3280	Nov. 29, 2011	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3590	Feb. 25, 2011	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3650	Oct. 26, 2011	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3800	Aug. 05, 2011	Annual
System Validation Kit	SPEAG	D835V2	4d021	Mar. 23, 2011	Annual
System Validation Kit	SPEAG	D1900V2	5d022	Jan. 26, 2011	Annual
System Validation Kit	SPEAG	D1900V2	5d036	Jan. 26, 2012	Annual
System Validation Kit	SPEAG	D2450V2	716	Jan. 26, 2011	Annual
System Validation Kit	SPEAG	D2600V2	1003	Jan. 27, 2011	Annual
Data Acquisition Electronics	SPEAG	DAE3	579	Sep. 23, 2011	Annual
Data Acquisition Electronics	SPEAG	DAE4	861	Aug. 29, 2011	Annual
Data Acquisition Electronics	SPEAG	DAE4	1277	Jul. 29, 2011	Annual
SAM Phantom	SPEAG	QD 000 P40	N/A	N/A	N/A
ELI Phantom	SPEAG	QD OVA 001B	N/A	N/A	N/A
Radio Communication Tester	Agilent	E5515C	MY50266628	Sep. 26, 2011	Biennial
ENA Series Network Analyzer	Agilent	E5071C	MY46104190	Apr. 15, 2011	Annual
Signal Generator	Agilent	E8257C	MY43320668	Dec. 20, 2011	Annual
Power Meter	Anritsu	ML2487A	6K00001571	May 25, 2011	Annual
Power Sensor	Anritsu	MA2491A	030954	May 25, 2011	Annual
Dielectric Probe Kit	Agilent	85070D	N/A	N/A	N/A
Thermometer	YFE	YF-160A	110600361	Feb. 21, 2012	Annual

6. Measurement Uncertainty

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Standard Uncertainty (1g)	Vi
Measurement System						
Probe Calibration	6.0	Normal	1	1	± 6.0 %	∞
Axial Isotropy	4.7	Rectangular	√3	0.7	± 1.9 %	∞
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	± 3.9 %	∞
Boundary Effects	1.0	Rectangular	√3	1	± 0.6 %	∞
Linearity	4.7	Rectangular	√3	1	± 2.7 %	∞
System Detection Limits	1.0	Rectangular	√3	1	± 0.6 %	∞
Readout Electronics	0.6	Normal	1	1	± 0.6 %	∞
Response Time	0.0	Rectangular	√3	1	± 0.0 %	∞
Integration Time	1.7	Rectangular	√3	1	± 1.0 %	∞
RF Ambient Noise	3.0	Rectangular	√3	1	± 1.7 %	∞
RF Ambient Reflections	3.0	Rectangular	√3	1	± 1.7 %	∞
Probe Positioner	0.5	Rectangular	√3	1	± 0.3 %	∞
Probe Positioning	2.9	Rectangular	√3	1	± 1.7 %	∞
Max. SAR Eval.	2.3	Rectangular	√3	1	± 1.3 %	∞
Test Sample Related						
Device Positioning	3.9	Normal	1	1	± 3.9 %	31
Device Holder	2.7	Normal	1	1	± 2.7 %	19
Power Drift	5.0	Rectangular	√3	1	± 2.9 %	∞
Phantom and Setup						
Phantom Uncertainty	4.0	Rectangular	√3	1	± 2.3 %	∞
Liquid Conductivity (Target)	5.0	Rectangular	√3	0.64	± 1.8 %	∞
Liquid Conductivity (Meas.)	5.0	Normal	1	0.64	± 3.2 %	29
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	± 1.7 %	∞
Liquid Permittivity (Meas.)	5.0	Normal	1	0.6	± 3.0 %	29
Combined Standard Uncertainty					± 11.7 %	
Expanded Uncertainty (K=2)					± 23.4 %	

Uncertainty budget for frequency range 300 MHz to 3 GHz



7. Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation and authorization certificates of our laboratories obtained from approval agencies can be downloaded from our web site. If you have any comments, please feel free to contact us at the following:

Taiwan HwaYa EMC/RF/Safety/Telecom Lab:

Add: No. 19, Hwa Ya 2nd Rd, Wen Hwa Vil., Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

Tel: 886-3-318-3232

Fax: 886-3-318-5050

Taiwan LinKo EMC/RF Lab:

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Taiwan HsinChu EMC/RF Lab:

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Tel: 886-3-593-5343

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The road map of all our labs can be found in our web site also.

---END---



Appendix A. SAR Plots of System Verification

The plots for system verification are shown as follows.

System Check_H835_111215

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: H835_1215 Medium parameters used: $f = 835$ MHz; $\sigma = 0.878$ mho/m; $\epsilon_r = 42.245$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 3.029 mW/g

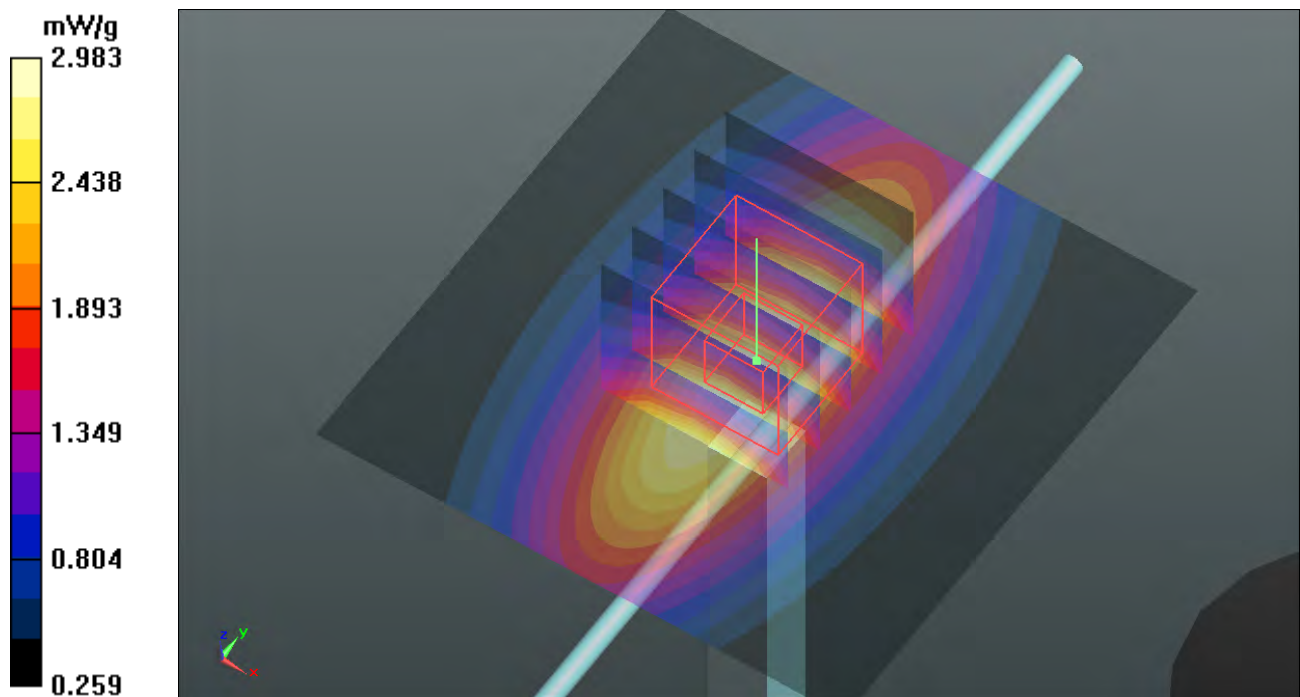
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 56.270 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.533 W/kg

SAR(1 g) = 2.35 mW/g; SAR(10 g) = 1.54 mW/g

Maximum value of SAR (measured) = 2.983 mW/g



System Check_H835_111224

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: H835_1224 Medium parameters used: $f = 835$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 43$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.09, 6.09, 6.09); Calibrated: 2011/11/29
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 3.04 mW/g

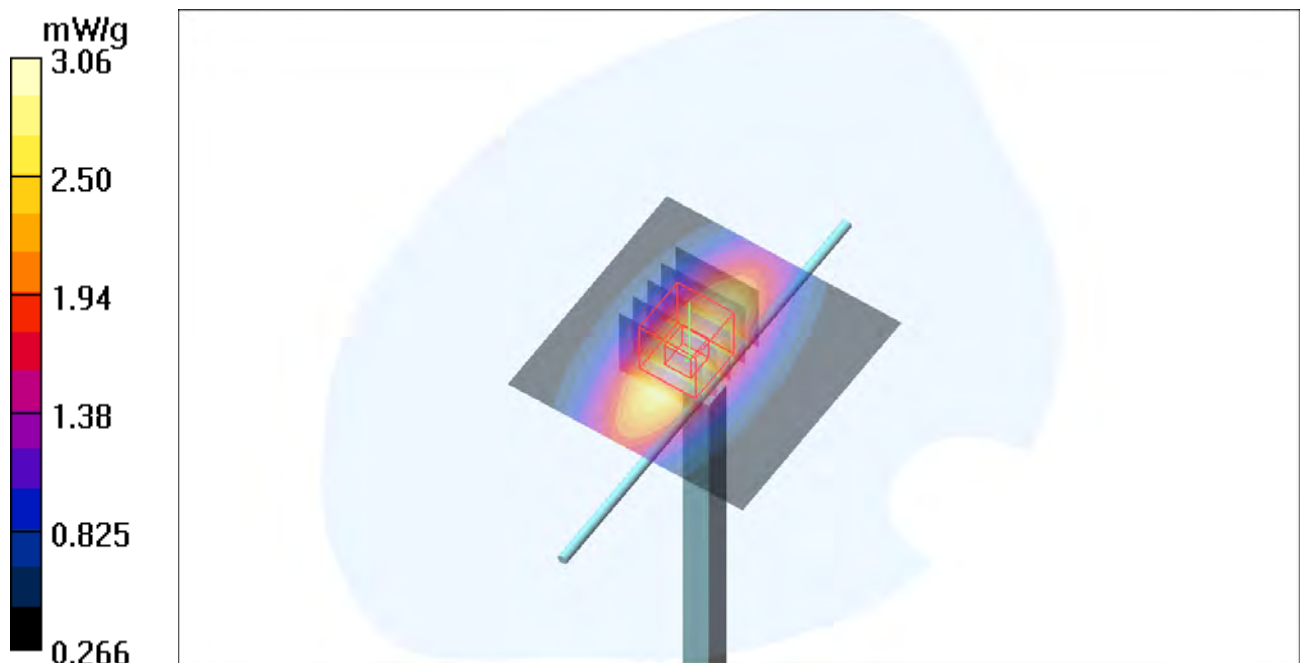
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.5 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 3.59 W/kg

SAR(1 g) = 2.42 mW/g; SAR(10 g) = 1.6 mW/g

Maximum value of SAR (measured) = 3.06 mW/g



System Check_B835_111216

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: B835_1216 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.972 \text{ mho/m}$; $\epsilon_r = 53.95$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $22.7 \text{ }^\circ\text{C}$; Liquid Temperature : $21.8 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(8.94, 8.94, 8.94); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Rj cpvqo <UCO 'Rj cpvqo aHtqpV{r g<UCO =Ugtkn"VR/36: 7
- O gcuwtgo gpvUY <F CUJ 74."Xgtukqp"7408"*4="UGO ECF "Z "Xgtukqp"36060"*5856+

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 3.255 mW/g

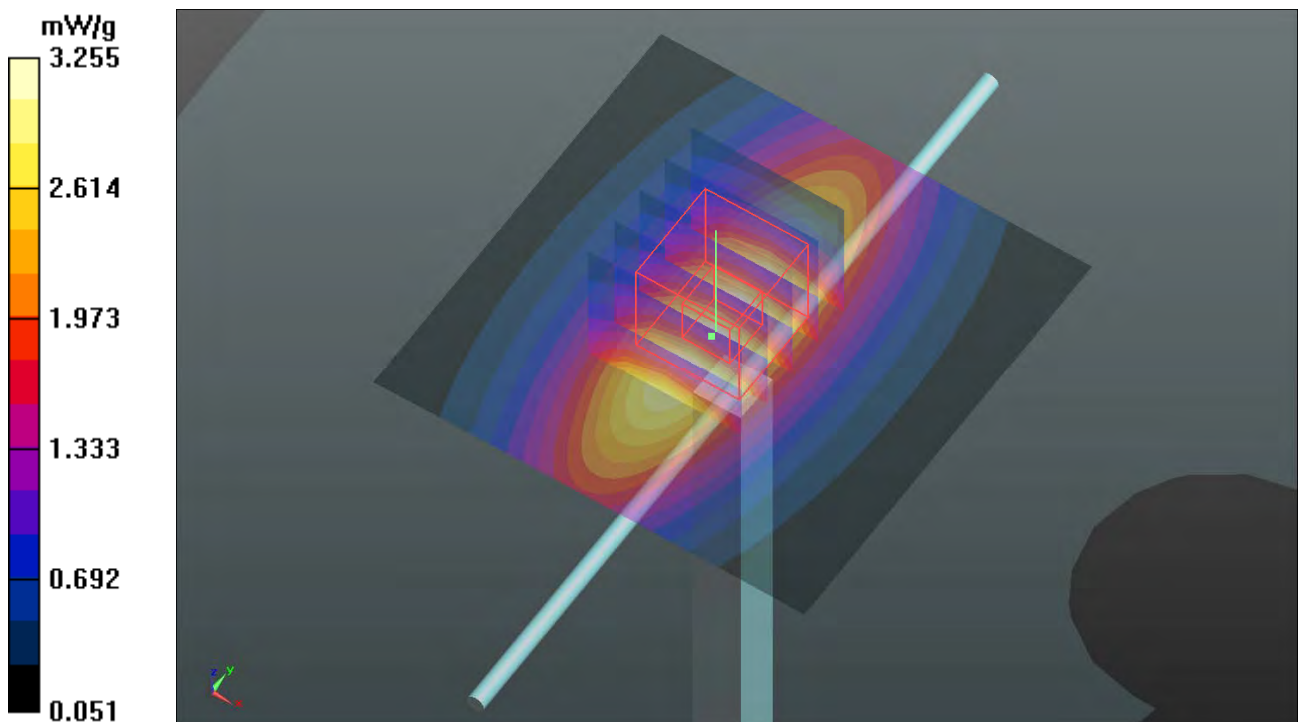
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 56.003 V/m ; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.7670

SAR(1 g) = 2.58 mW/g ; SAR(10 g) = 1.71 mW/g

Maximum value of SAR (measured) = 3.248 mW/g



System Check_B835_111223

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: B835_1223 Medium parameters used: $f = 835$ MHz; $\sigma = 0.998$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.7 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.08, 6.08, 6.08); Calibrated: 2011/11/29
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 3.16 mW/g

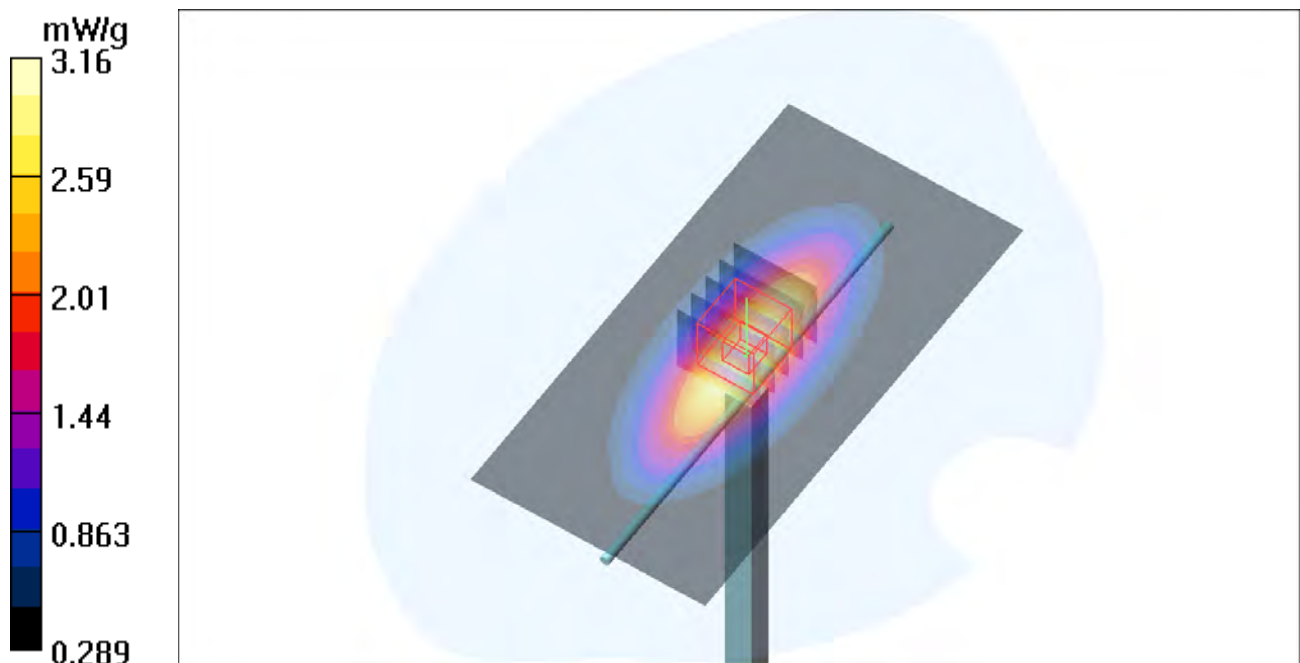
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.6 V/m; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 3.69 W/kg

SAR(1 g) = 2.51 mW/g; SAR(10 g) = 1.66 mW/g

Maximum value of SAR (measured) = 3.16 mW/g



System Check_B835_111226

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: B835_1226 Medium parameters used: $f = 835$ MHz; $\sigma = 0.998$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.3 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(8.94, 8.94, 8.94); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 3.34 mW/g

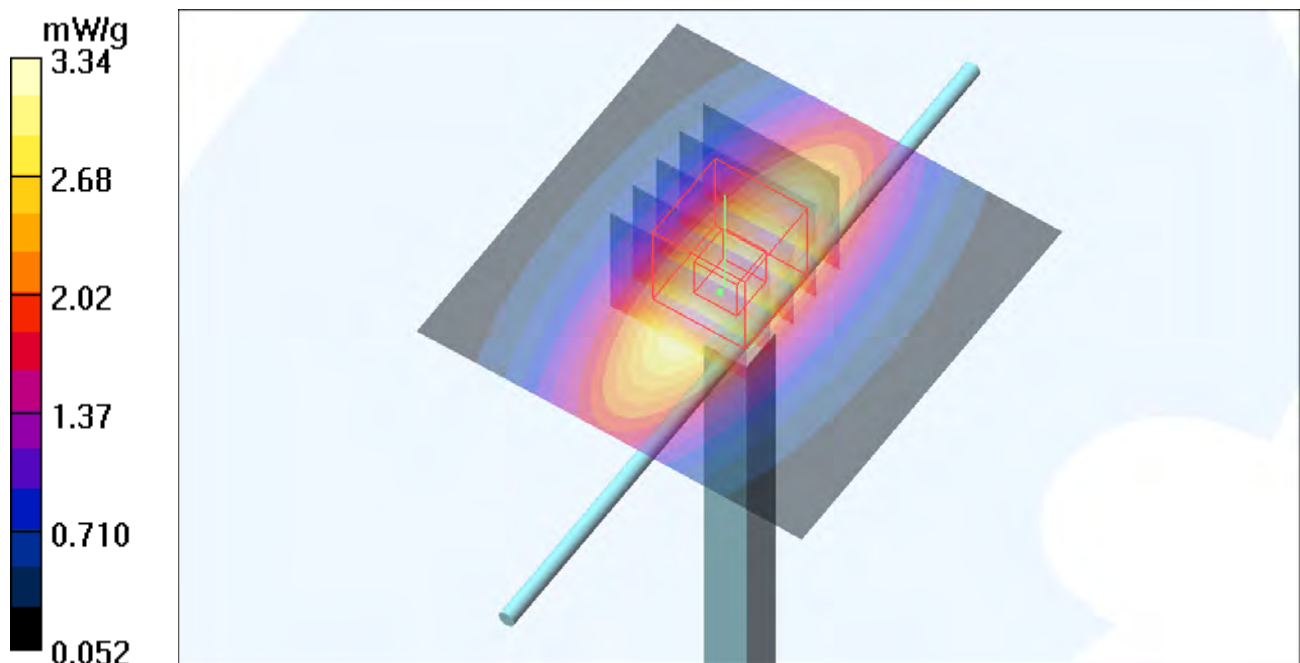
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 56.0 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 3.86 W/kg

SAR(1 g) = 2.65 mW/g; SAR(10 g) = 1.75 mW/g

Maximum value of SAR (measured) = 3.33 mW/g



System Check_B835_120223

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: B835_0223 Medium parameters used: $f = 835$ MHz; $\sigma = 0.994$ mho/m; $\epsilon_r = 54.98$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.12, 9.12, 9.12); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Pin=250mW/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 3.249 mW/g

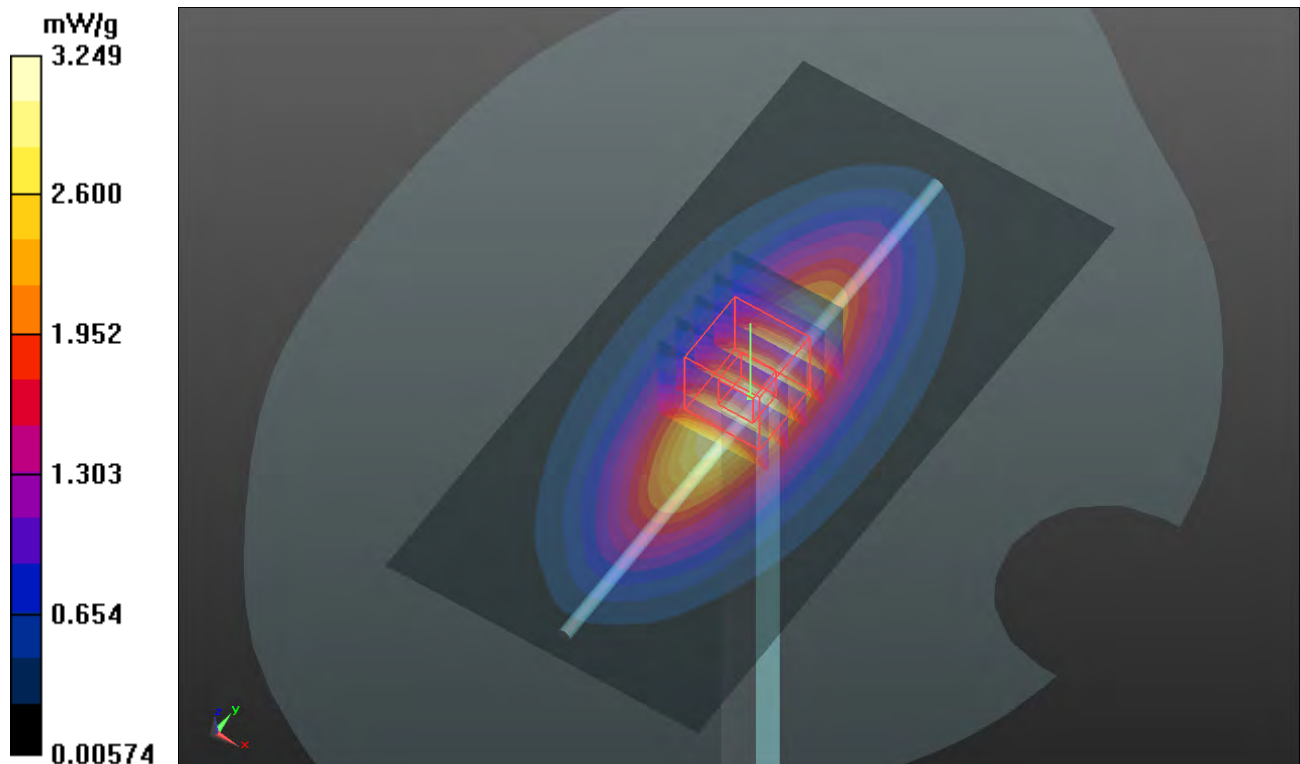
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 55.489 V/m; Power Drift = -0.0046 dB

Peak SAR (extrapolated) = 3.7850

SAR(1 g) = 2.58 mW/g; SAR(10 g) = 1.71 mW/g

Maximum value of SAR (measured) = 3.246 mW/g



System Check_H1900_111216

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d022

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: H1900_1216 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.437$ mho/m; $\epsilon_r = 39.802$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 15.606 mW/g

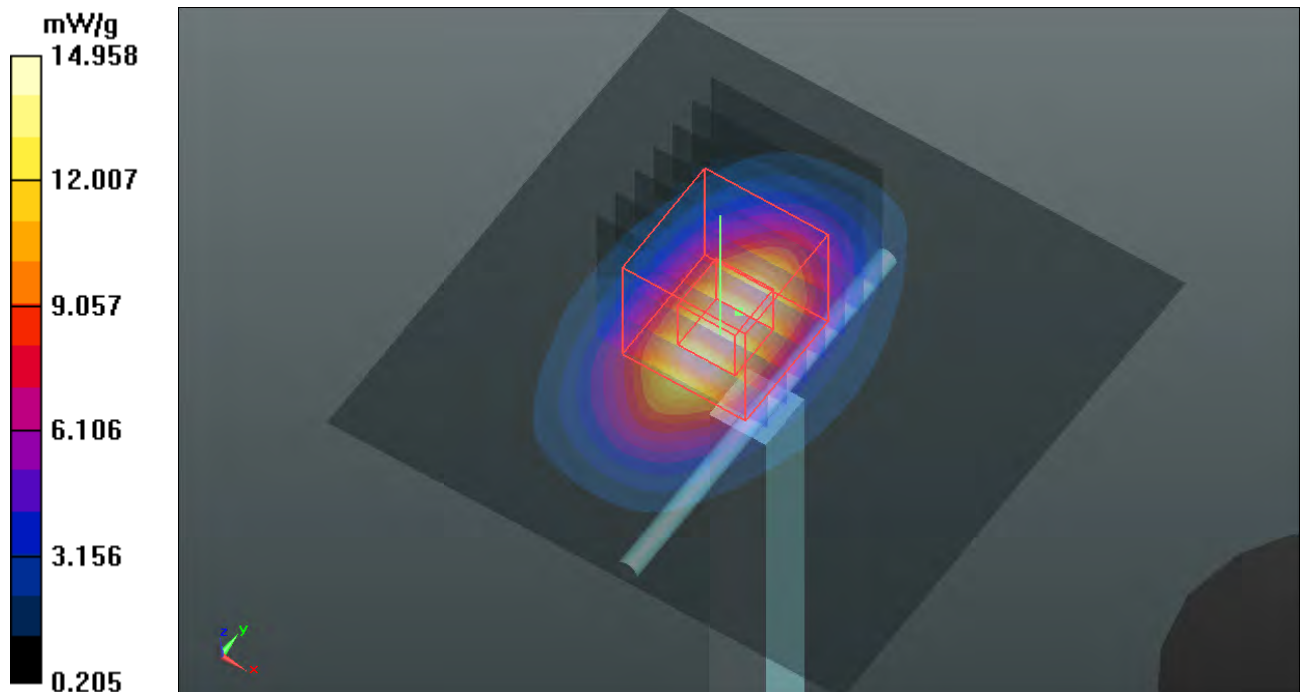
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 89.938 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 19.435 W/kg

SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.32 mW/g

Maximum value of SAR (measured) = 14.958 mW/g



System Check_B1900_111213

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d022

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.554$ mho/m; $\epsilon_r = 53.047$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 15.340 mW/g

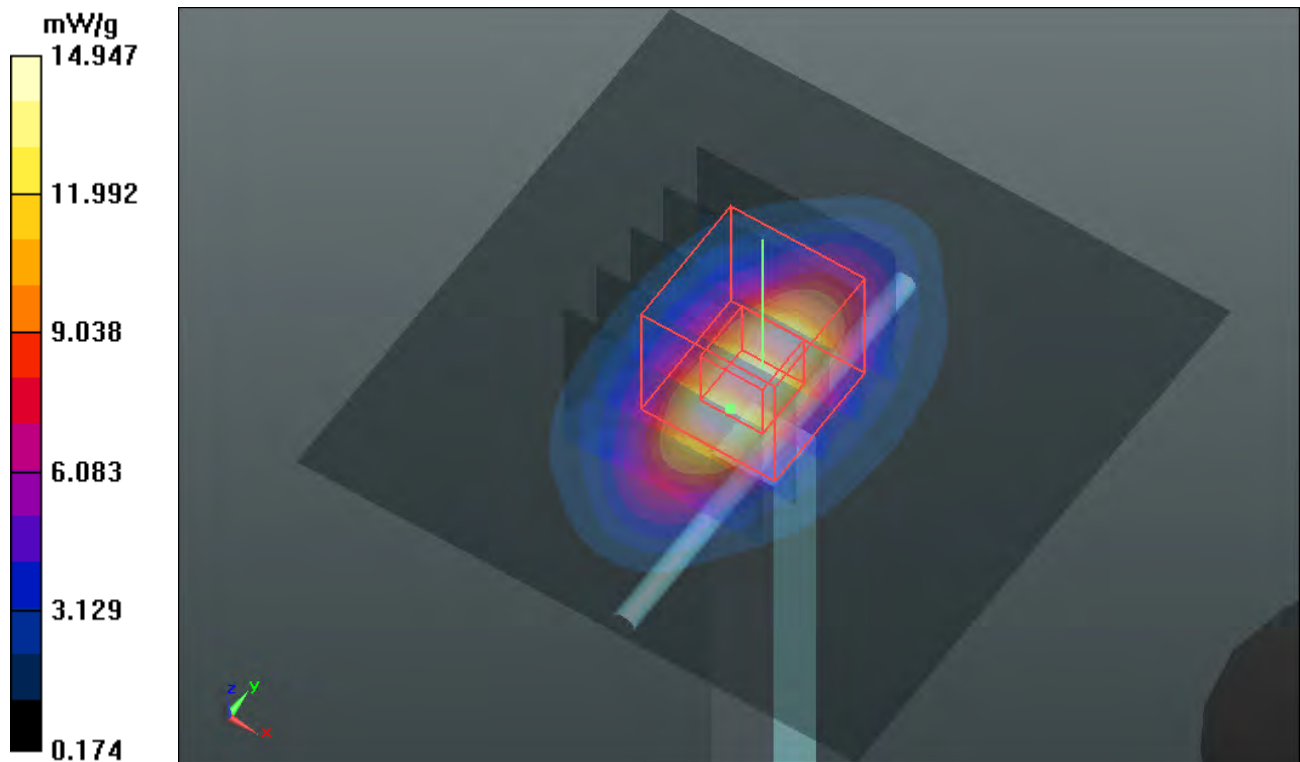
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 99.047 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 19.225 W/kg

SAR(1 g) = 10.5 mW/g; SAR(10 g) = 5.38 mW/g

Maximum value of SAR (measured) = 14.947 mW/g



System Check_B1900_120223

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: B1900_0223 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.547$ mho/m; $\epsilon_r = 52.392$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.46, 7.46, 7.46); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 14.412 mW/g

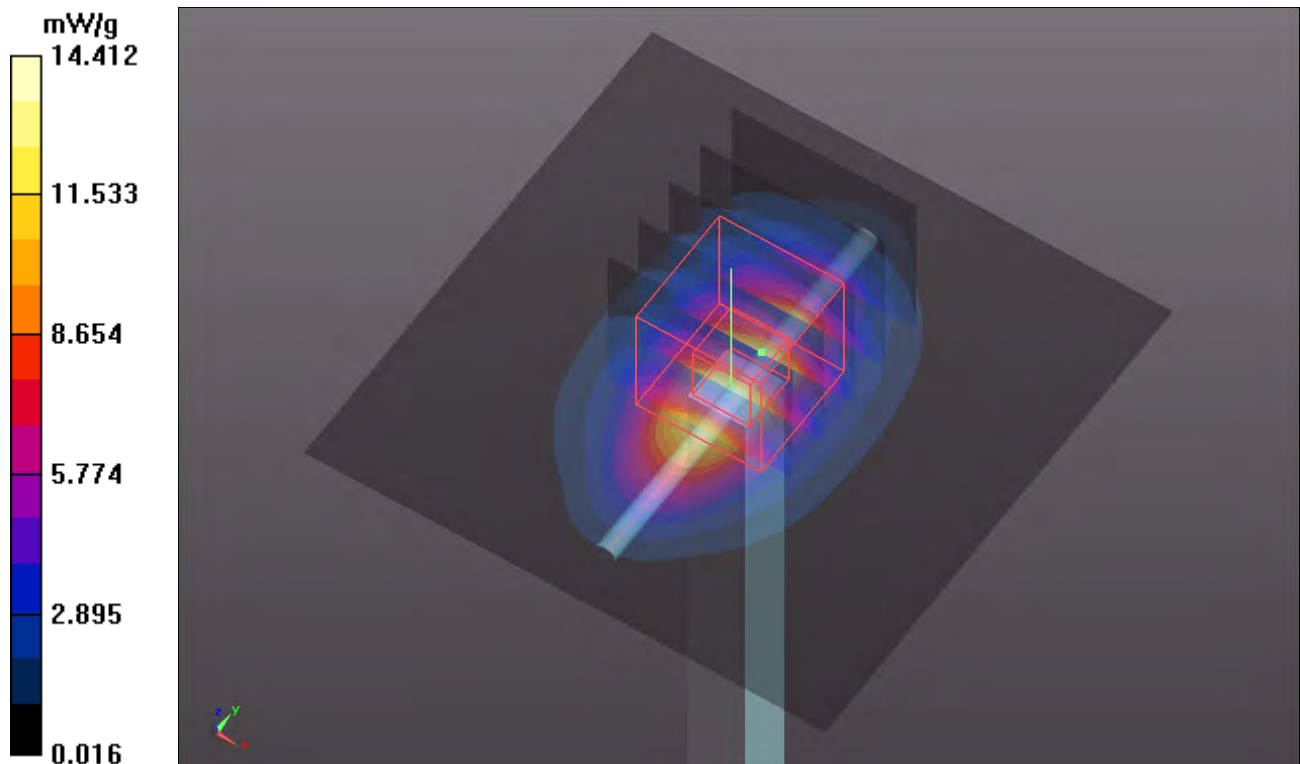
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 97.885 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 18.0440

SAR(1 g) = 9.82 mW/g; SAR(10 g) = 5.06 mW/g

Maximum value of SAR (measured) = 14.129 mW/g



System Check_H2450_120103

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 716

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H2450_0103 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.84$ mho/m; $\epsilon_r = 38.6$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C ; Liquid Temperature : 20.7 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.8, 6.8, 6.8); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 22.6 mW/g

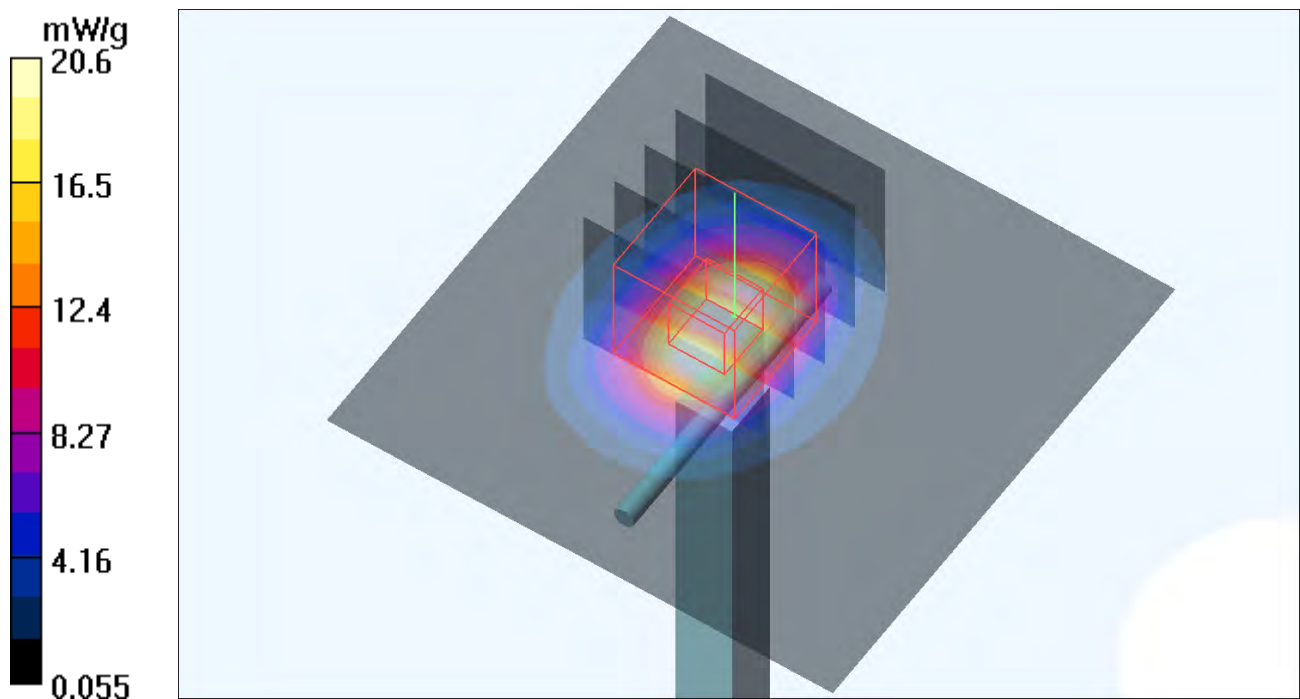
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 107.4 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 30.0 W/kg

SAR(1 g) = 13.4 mW/g; SAR(10 g) = 6.1 mW/g

Maximum value of SAR (measured) = 20.6 mW/g



System Check_B2450_120103

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 716

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: B2450_0103 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.7 °C ; Liquid Temperature : 20.9 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 19.3 mW/g

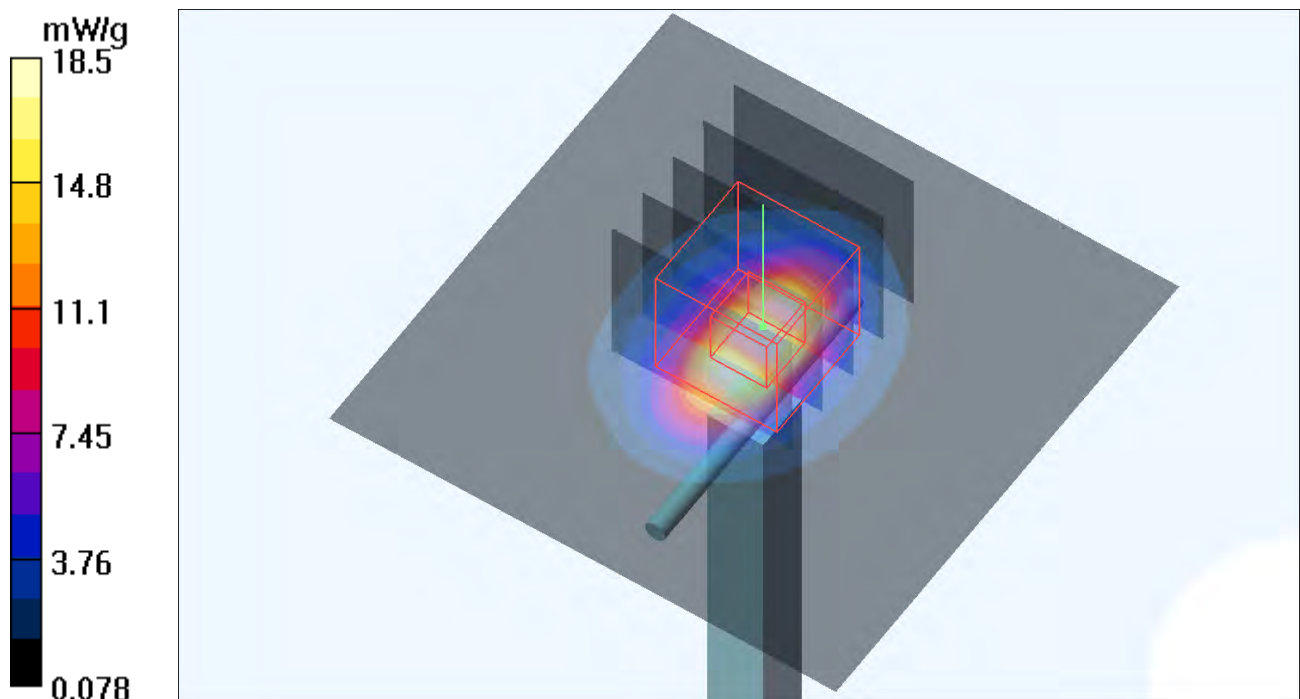
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 97.7 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 25.3 W/kg

SAR(1 g) = 12.3 mW/g; SAR(10 g) = 5.66 mW/g

Maximum value of SAR (measured) = 18.5 mW/g



System Check_H2600_111230

DUT: Dipole 2600 MHz; Type: D2600V2; SN: 1003

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: H2600_1230 Medium parameters used: $f = 2600$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 23.1 mW/g

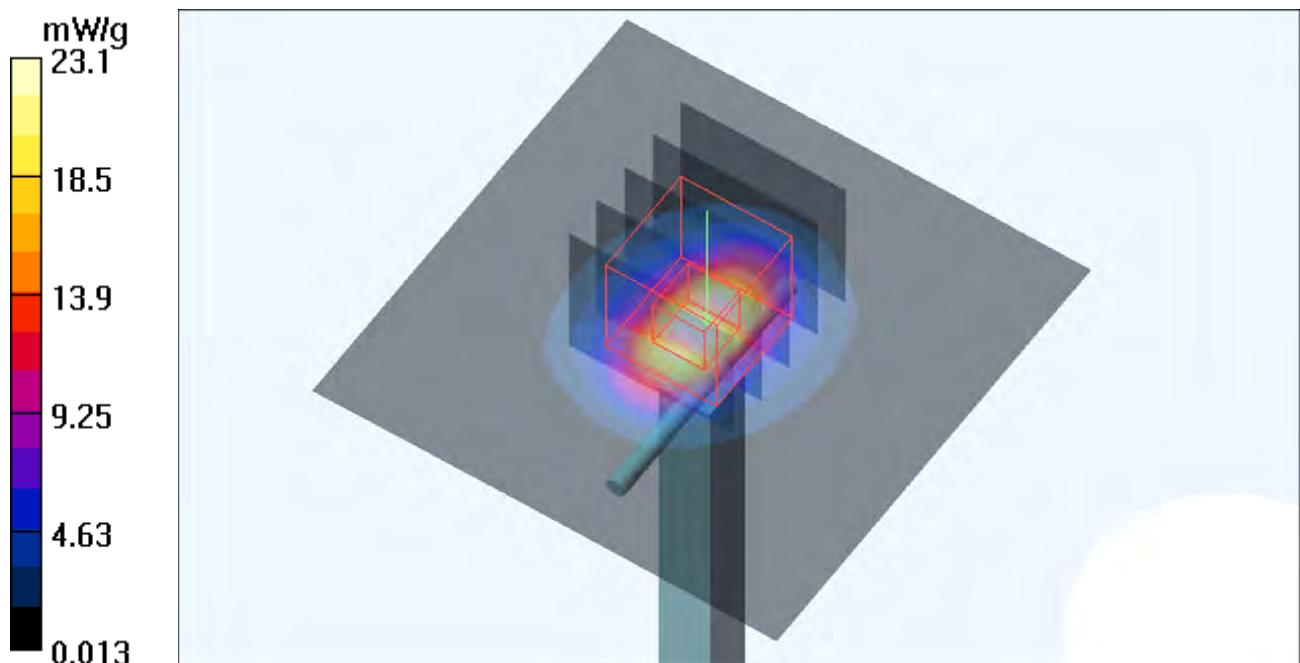
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 110.7 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 32.3 W/kg

SAR(1 g) = 14.6 mW/g; SAR(10 g) = 6.41 mW/g

Maximum value of SAR (measured) = 22.9 mW/g



System Check_B2600_111229

DUT: Dipole 2600 MHz; Type: D2600V2; SN: 1003

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: B2600_1229 Medium parameters used: $f = 2600$ MHz; $\sigma = 2.21$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 22.9 mW/g

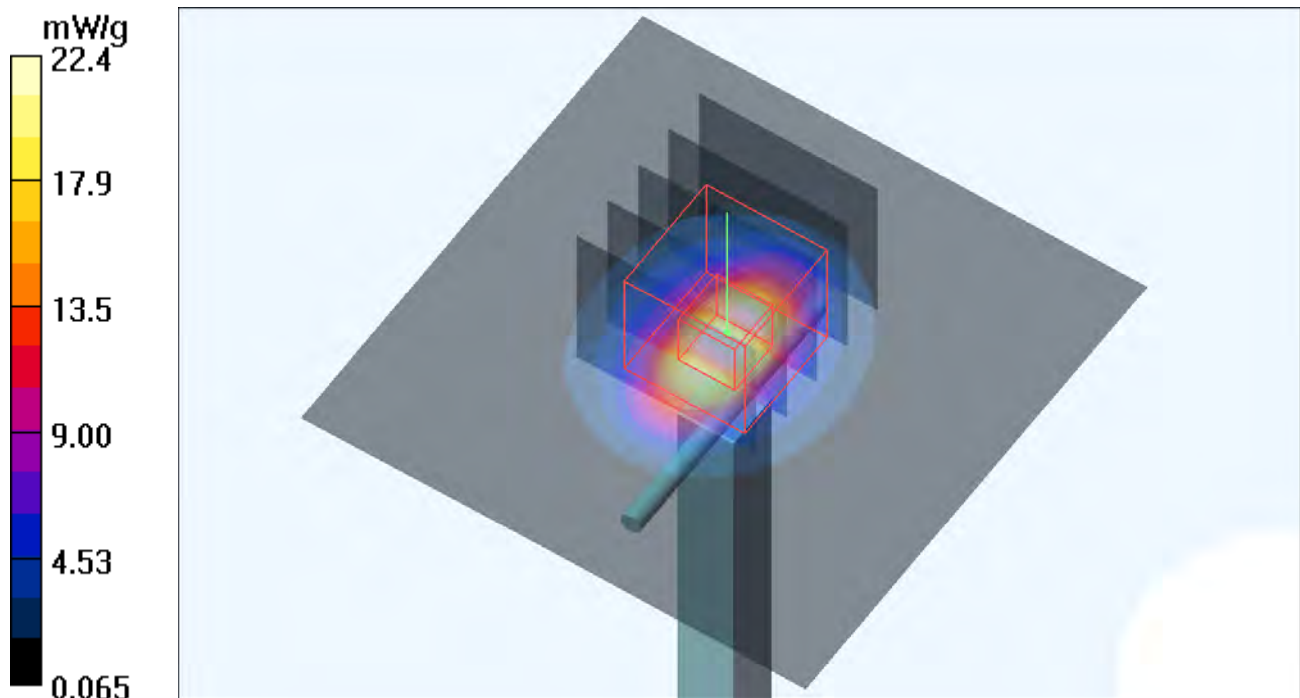
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 102.3 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 31.5 W/kg

SAR(1 g) = 14.4 mW/g; SAR(10 g) = 6.34 mW/g

Maximum value of SAR (measured) = 22.4 mW/g





Appendix B. SAR Plots of SAR Measurement

The plots for SAR measurement are shown as follows.

P83 GSM850_Right Cheek_Ch128

DUT: 111121C23

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: H835_1224 Medium parameters used : $f = 824.2$ MHz; $\sigma = 0.907$ mho/m; $\epsilon_r =$

43.1 ; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.09, 6.09, 6.09); Calibrated: 2011/11/29

- Sensor-Surface: 3mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch128/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.241 mW/g

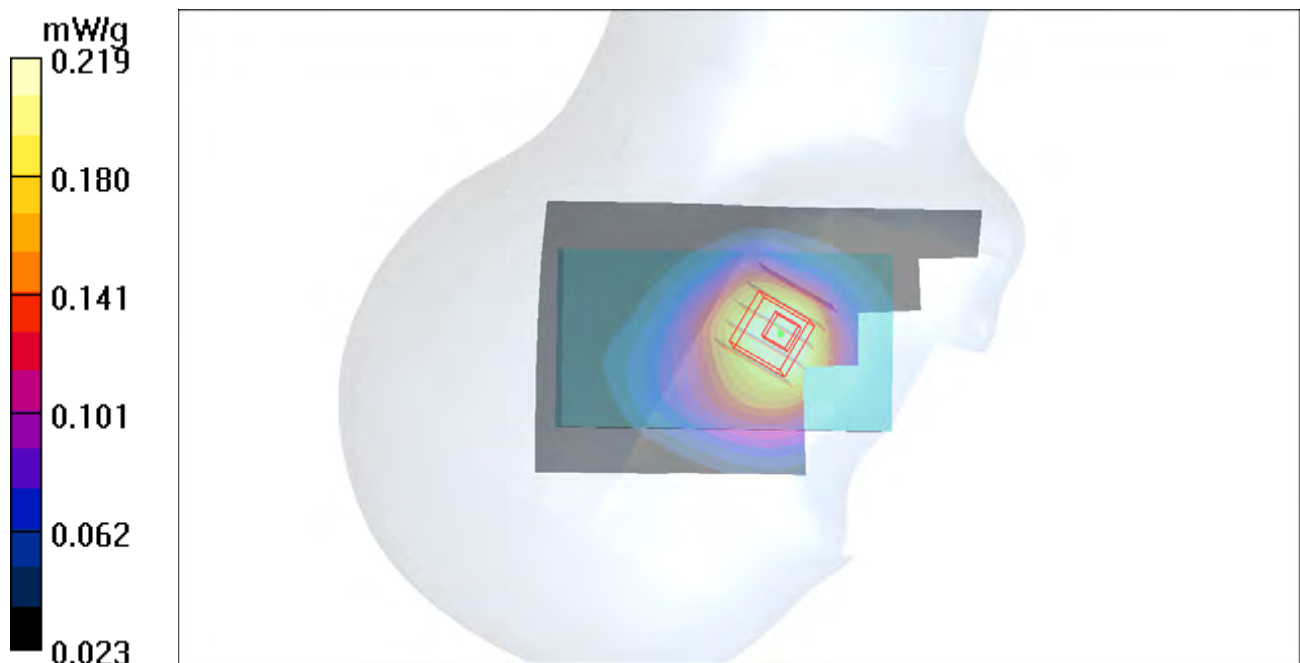
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.01 V/m; Power Drift = 0.163 dB

Peak SAR (extrapolated) = 0.243 W/kg

SAR(1 g) = 0.202 mW/g; SAR(10 g) = 0.156 mW/g

Maximum value of SAR (measured) = 0.219 mW/g



P84 GSM850_Right Tilted_Ch128

DUT: 111121C23

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: H835_1224 Medium parameters used : $f = 824.2$ MHz; $\sigma = 0.907$ mho/m; $\epsilon_r =$

43.1; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.09, 6.09, 6.09); Calibrated: 2011/11/29
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch128/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.125 mW/g

Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.36 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.141 W/kg

SAR(1 g) = 0.115 mW/g; SAR(10 g) = 0.091 mW/g

Maximum value of SAR (measured) = 0.123 mW/g

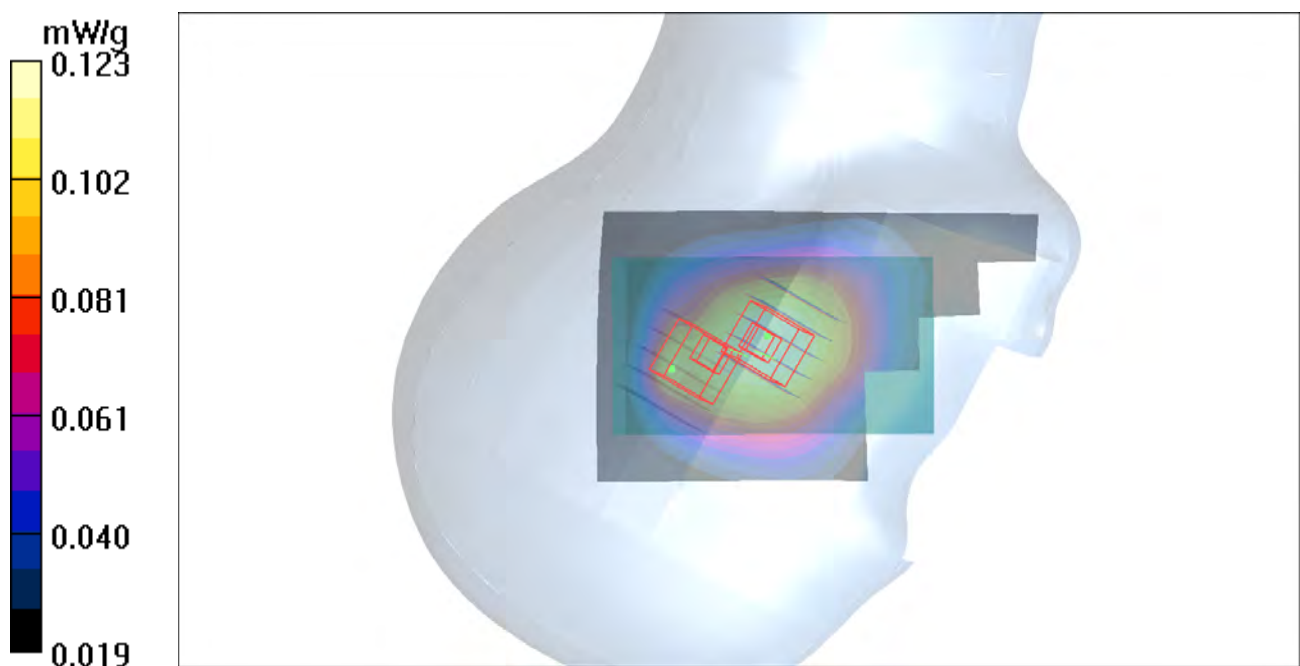
Ch128/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.36 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.132 W/kg

SAR(1 g) = 0.096 mW/g; SAR(10 g) = 0.064 mW/g

Maximum value of SAR (measured) = 0.116 mW/g



P85 GSM850_Left Cheek_Ch128

DUT: 111121C23

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: H835_1224 Medium parameters used : $f = 824.2$ MHz; $\sigma = 0.907$ mho/m; $\epsilon_r =$

43.1; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.09, 6.09, 6.09); Calibrated: 2011/11/29
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch128/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.268 mW/g

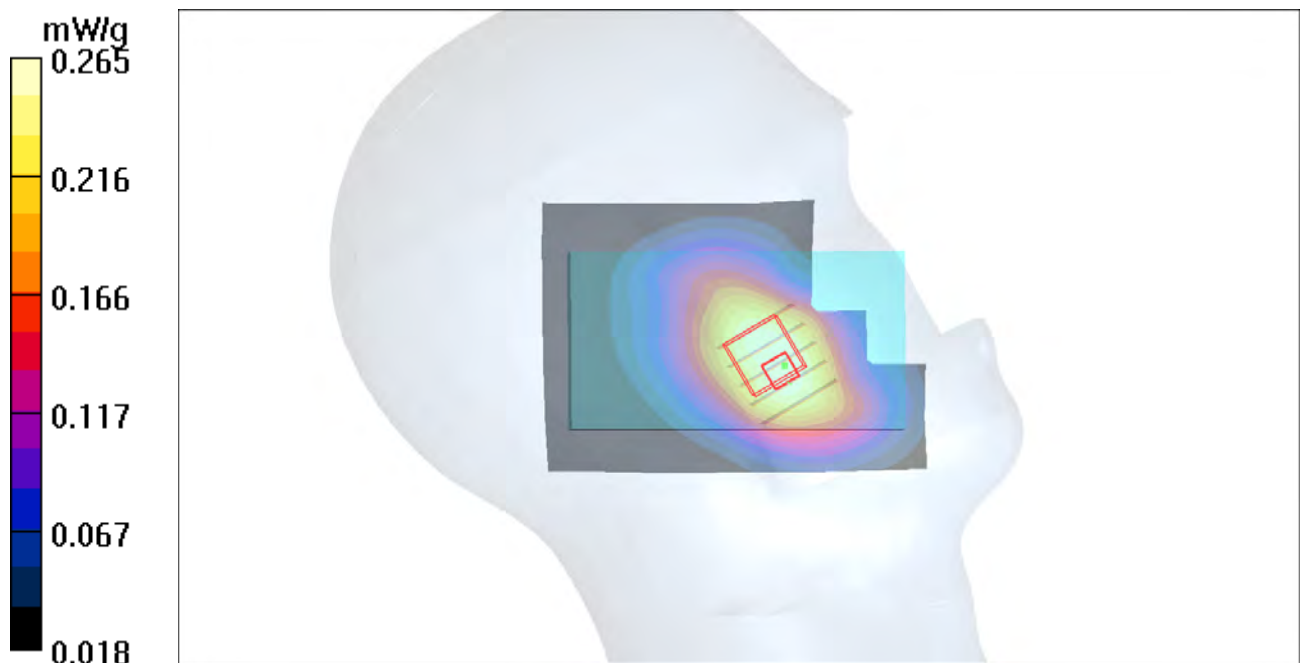
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.21 V/m; Power Drift = -0.143 dB

Peak SAR (extrapolated) = 0.329 W/kg

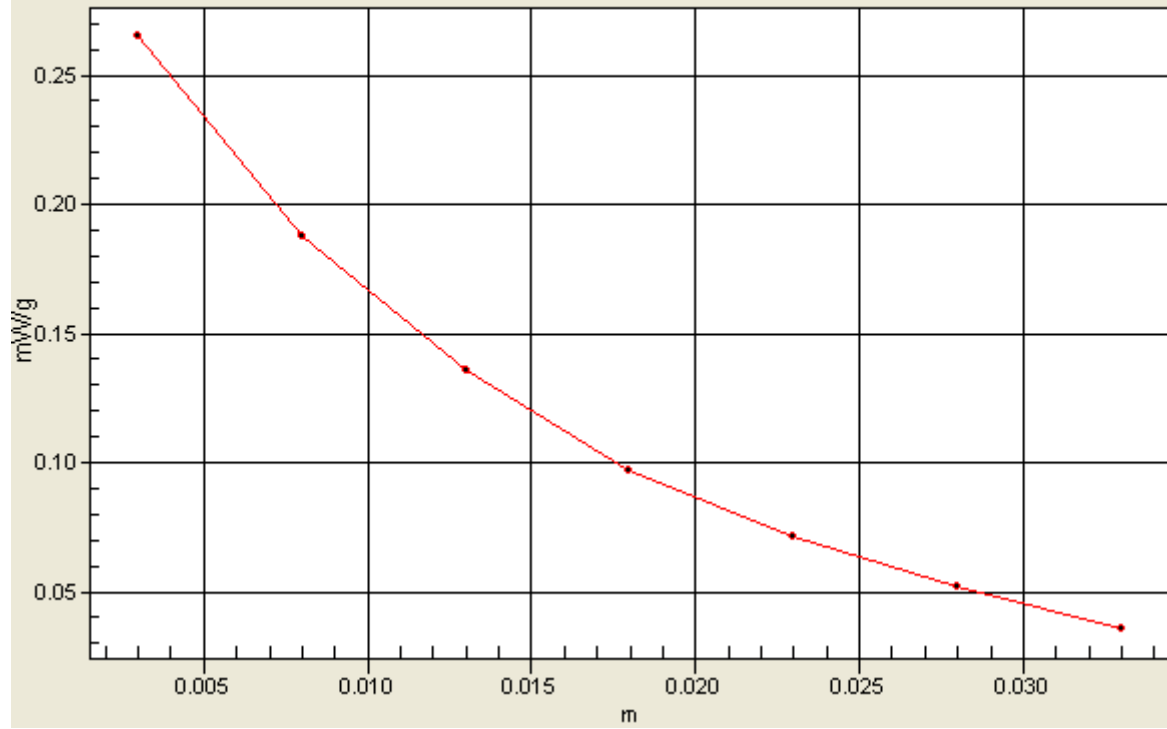
SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.175 mW/g

Maximum value of SAR (measured) = 0.265 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=2, Y=1



P86 GSM850_Left Tilted_Ch128

DUT: 111121C23

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: H835_1224 Medium parameters used : $f = 824.2$ MHz; $\sigma = 0.907$ mho/m; $\epsilon_r =$

43.1; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.09, 6.09, 6.09); Calibrated: 2011/11/29

- Sensor-Surface: 3mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch128/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.139 mW/g

Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.82 V/m; Power Drift = 0.030 dB

Peak SAR (extrapolated) = 0.155 W/kg

SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.099 mW/g

Maximum value of SAR (measured) = 0.137 mW/g

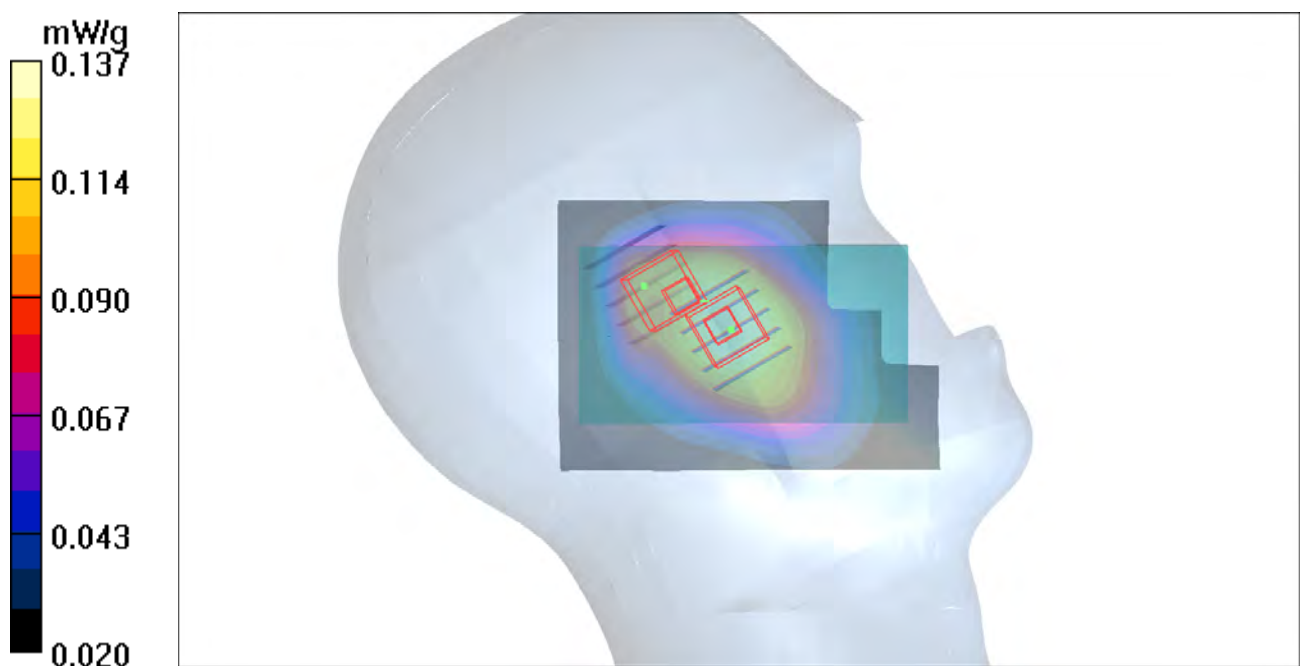
Ch128/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.82 V/m; Power Drift = 0.030 dB

Peak SAR (extrapolated) = 0.147 W/kg

SAR(1 g) = 0.105 mW/g; SAR(10 g) = 0.068 mW/g

Maximum value of SAR (measured) = 0.129 mW/g



P12 GSM1900_Right Cheek_Ch661

DUT: 111215C10

Communication System: Generic GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium: H1900_1216 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.418$ mho/m; $\epsilon_r = 39.892$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.3 °C ; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch661/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.403 mW/g

Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.199 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.495 W/kg

SAR(1 g) = 0.314 mW/g; SAR(10 g) = 0.191 mW/g

Maximum value of SAR (measured) = 0.400 mW/g

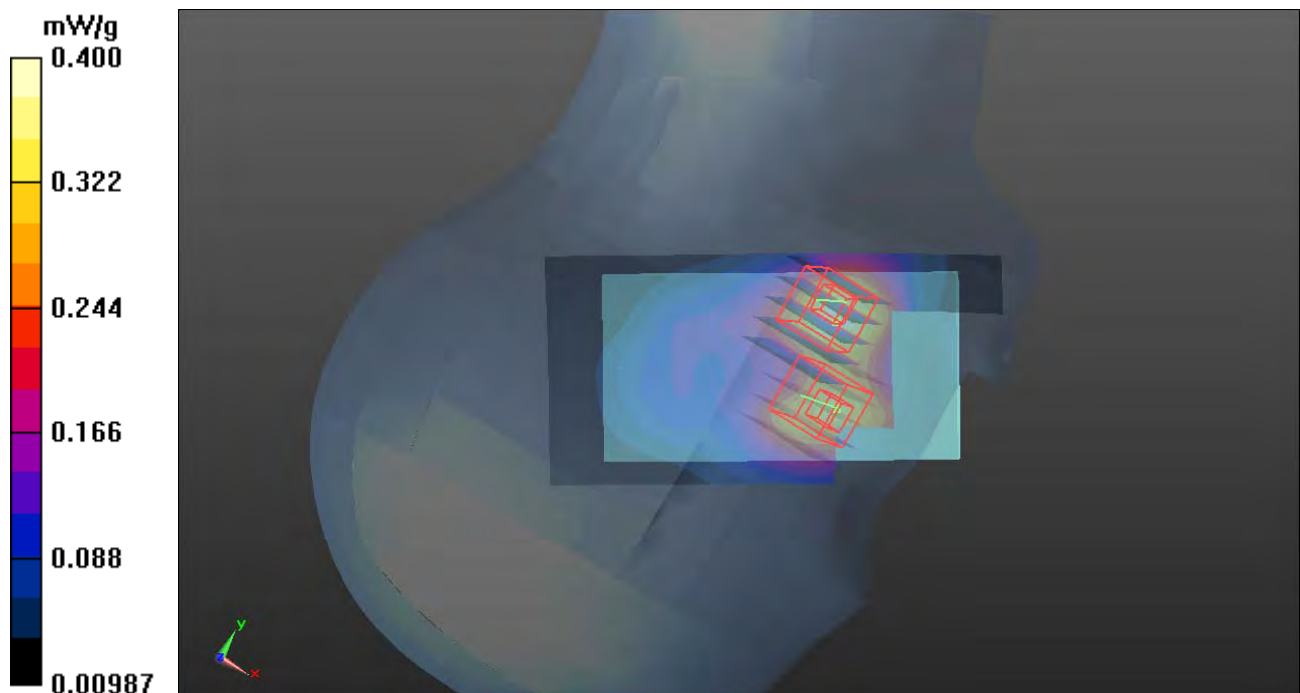
Ch661/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.199 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.382 W/kg

SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.166 mW/g

Maximum value of SAR (measured) = 0.321 mW/g



P13 GSM1900_Right Tilted_Ch661

DUT: 111215C10

Communication System: Generic GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium: H1900_1216 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.418$ mho/m; $\epsilon_r = 39.892$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.3 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch661/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.221 mW/g

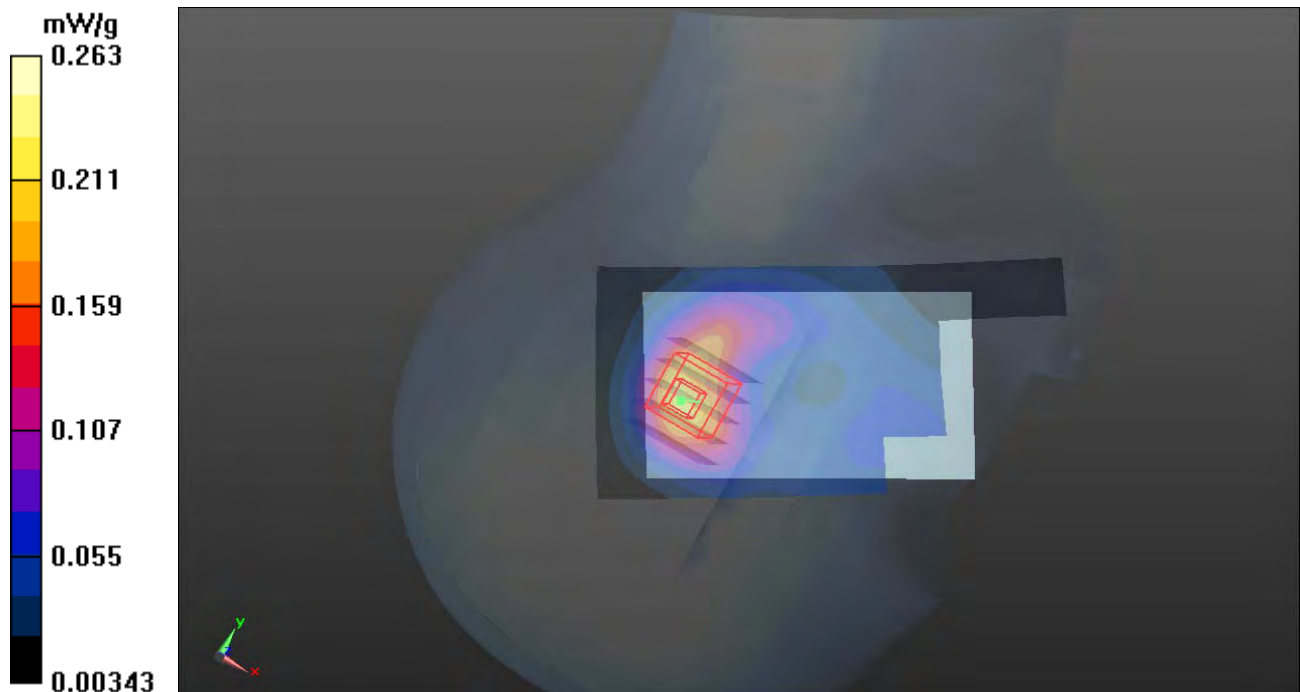
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.426 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.321 W/kg

SAR(1 g) = 0.190 mW/g; SAR(10 g) = 0.107 mW/g

Maximum value of SAR (measured) = 0.263 mW/g



P14 GSM1900_Left Cheek_Ch661

DUT: 111215C10

Communication System: Generic GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium: H1900_1216 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.418$ mho/m; $\epsilon_r = 39.892$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch661/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.715 mW/g

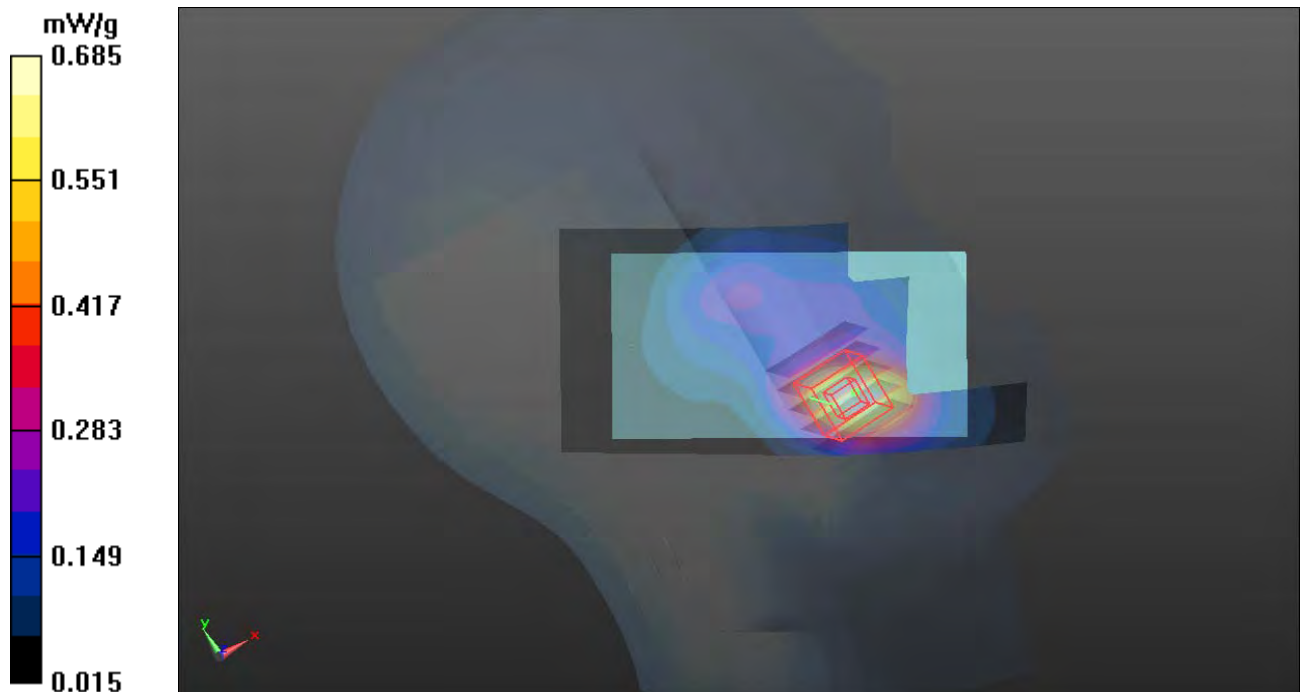
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.096 V/m; Power Drift = 0.121 dB

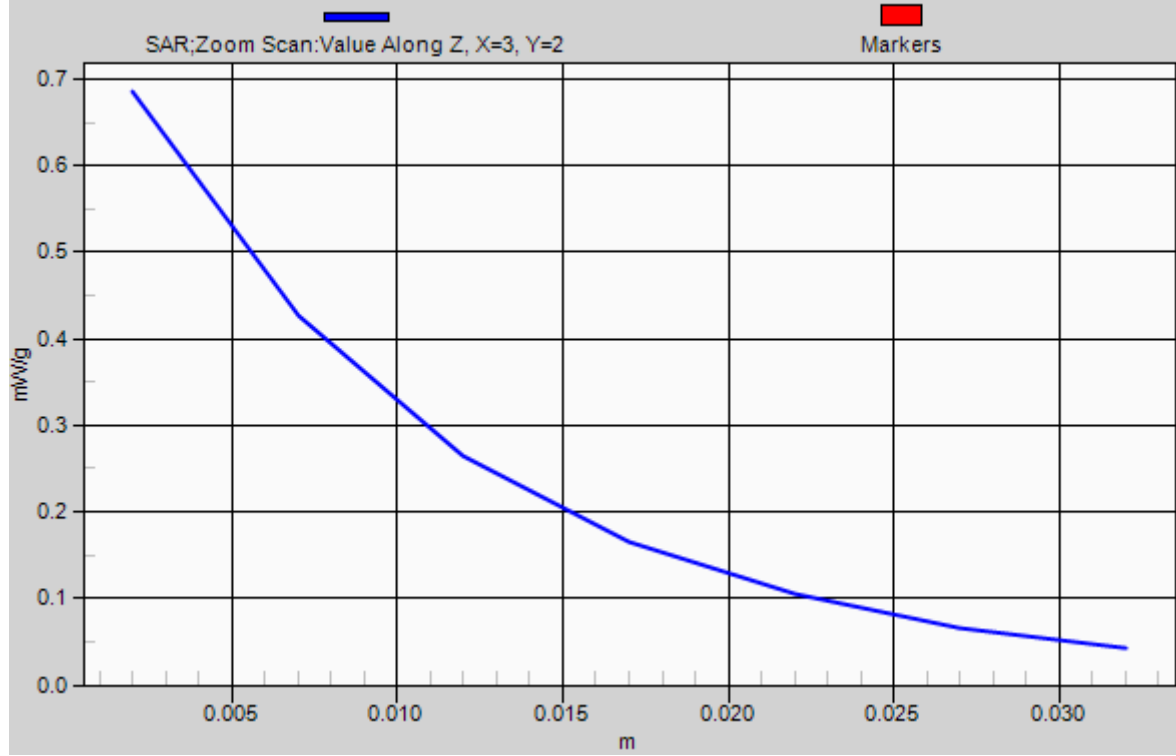
Peak SAR (extrapolated) = 0.857 W/kg

SAR(1 g) = 0.532 mW/g; SAR(10 g) = 0.311 mW/g

Maximum value of SAR (measured) = 0.685 mW/g



1g/10g Averaged SAR



P15 GSM1900_Left Tilted_Ch661

DUT: 111215C10

Communication System: Generic GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium: H1900_1216 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.418$ mho/m; $\epsilon_r = 39.892$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch661/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.221 mW/g

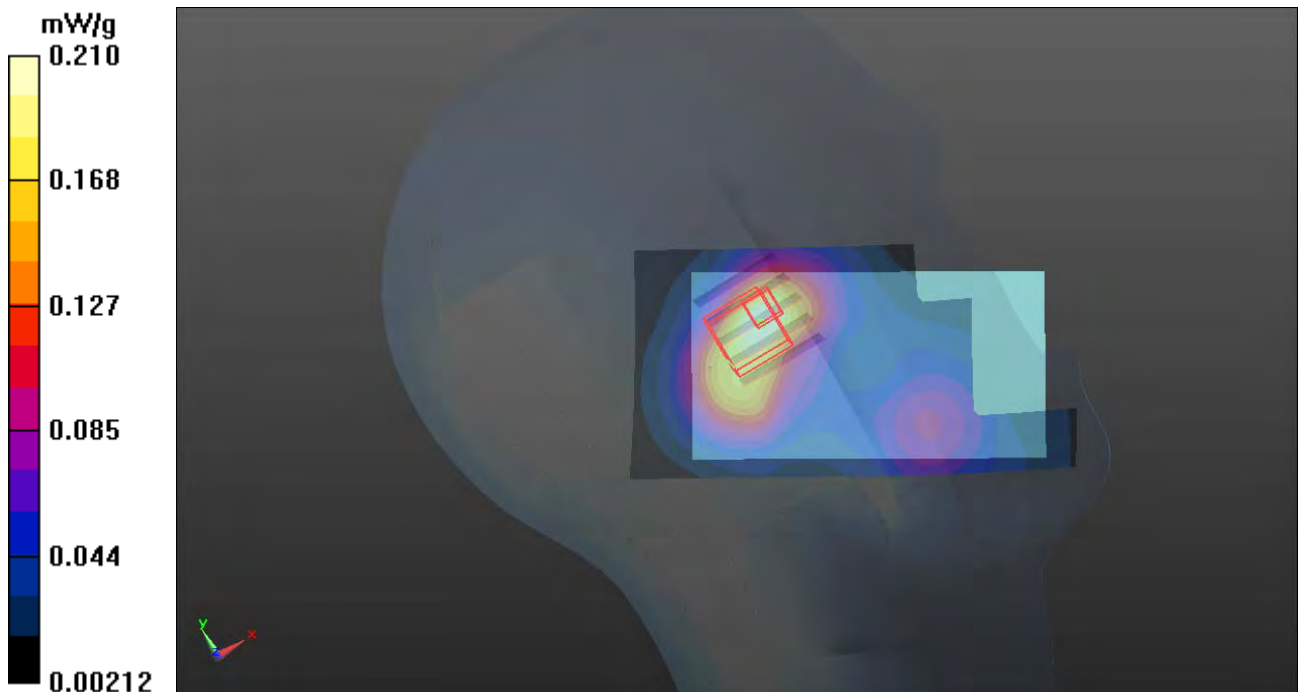
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.856 V/m; Power Drift = -0.116 dB

Peak SAR (extrapolated) = 0.254 W/kg

SAR(1 g) = 0.150 mW/g; SAR(10 g) = 0.094 mW/g

Maximum value of SAR (measured) = 0.210 mW/g



P23 WCDMA V_RMC12.2K_Right Cheek_Ch4132

DUT: 111215C10

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: H835_1215 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.87$ mho/m; $\epsilon_r = 42.353$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.3 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch4132/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.319 mW/g

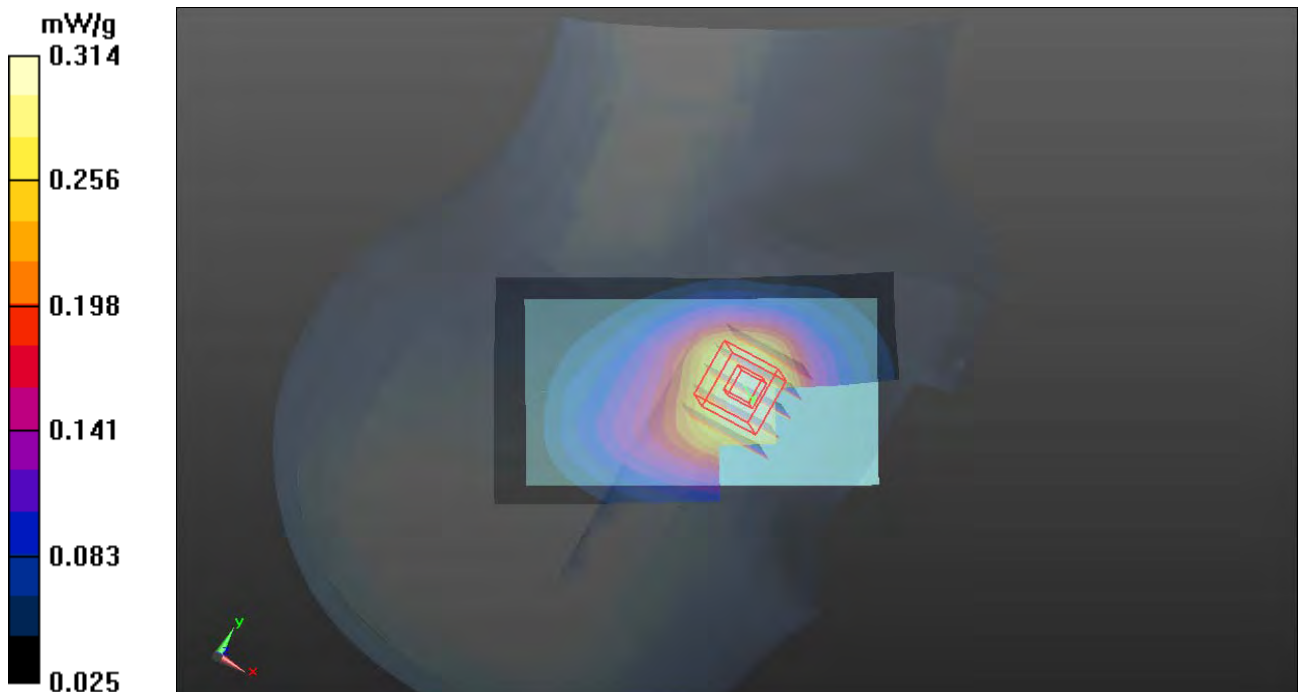
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.525 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.350 W/kg

SAR(1 g) = 0.272 mW/g; SAR(10 g) = 0.203 mW/g

Maximum value of SAR (measured) = 0.314 mW/g



P24 WCDMA V_RMC12.2K_Right Tilted_Ch4132

DUT: 111215C10

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: H835_1215 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.87$ mho/m; $\epsilon_r = 42.353$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch4132/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.161 mW/g

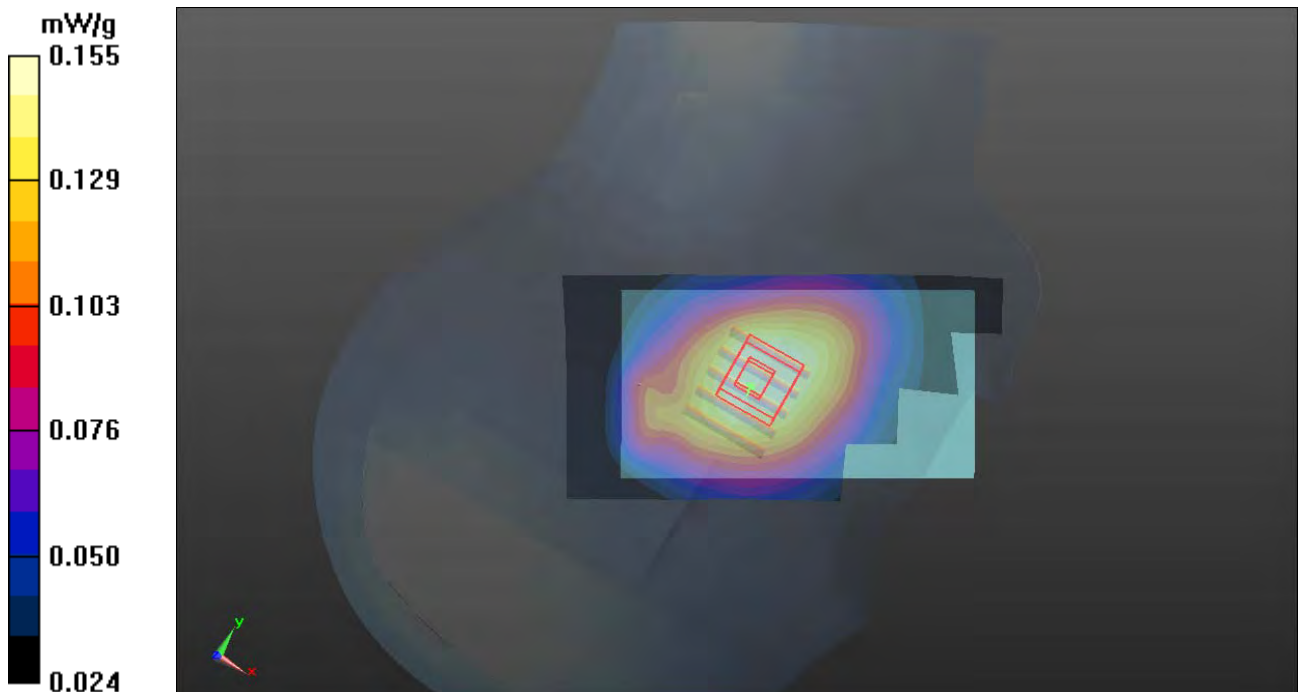
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.263 V/m; Power Drift = 0.065 dB

Peak SAR (extrapolated) = 0.168 W/kg

SAR(1 g) = 0.139 mW/g; SAR(10 g) = 0.110 mW/g

Maximum value of SAR (measured) = 0.155 mW/g



P25 WCDMA V_RMC12.2K_Left Cheek_Ch4132

DUT: 111215C10

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: H835_1215 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.87$ mho/m; $\epsilon_r = 42.353$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch4132/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.395 mW/g

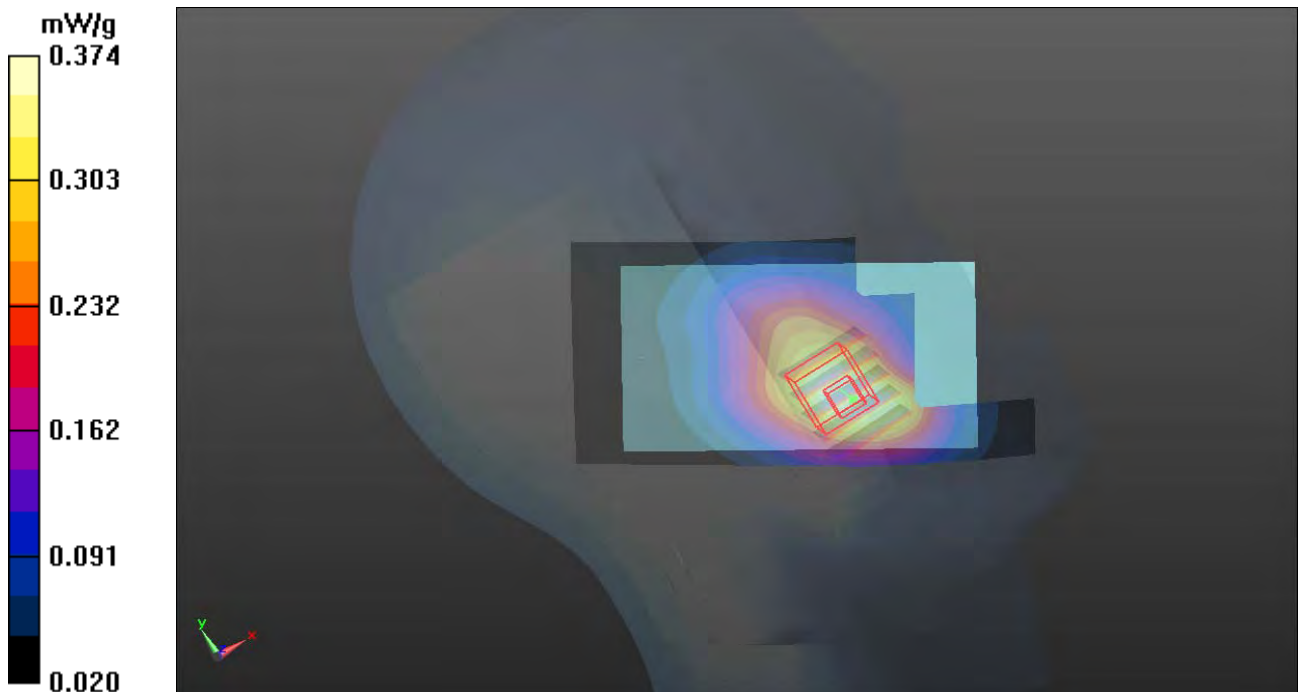
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.406 V/m; Power Drift = -0.07 dB

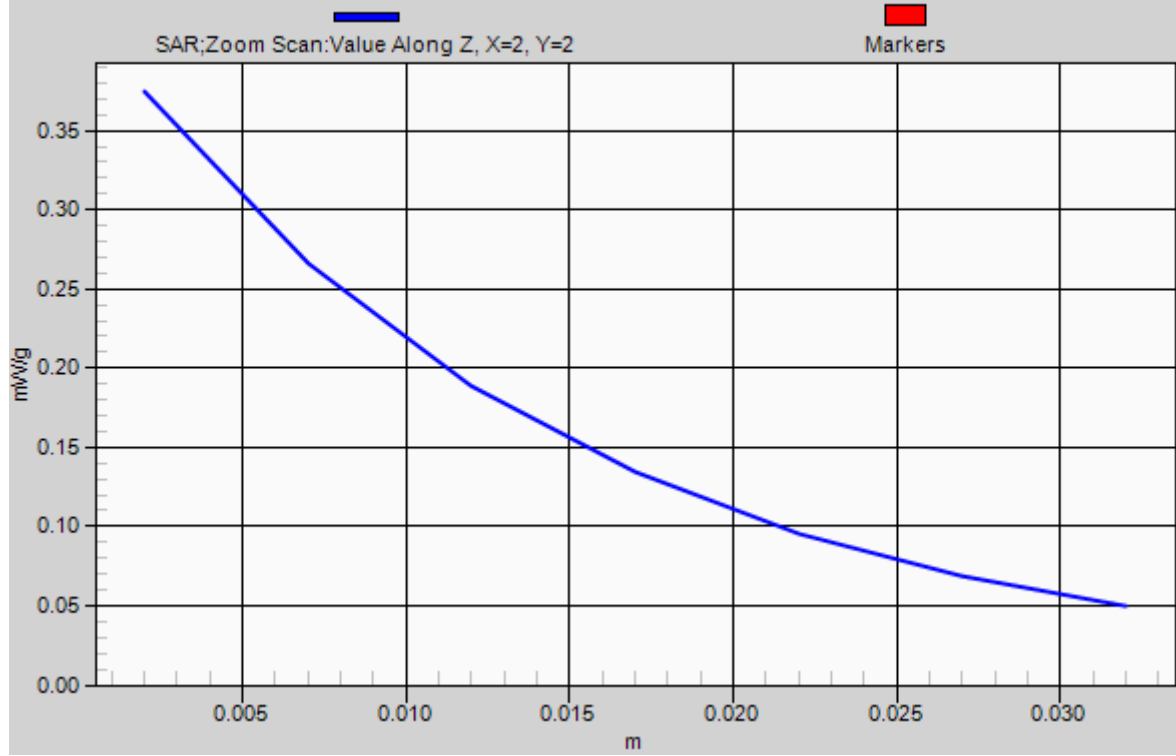
Peak SAR (extrapolated) = 0.437 W/kg

SAR(1 g) = 0.306 mW/g; SAR(10 g) = 0.217 mW/g

Maximum value of SAR (measured) = 0.374 mW/g



1g/10g Averaged SAR



P26 WCDMA V_RMC12.2K_Left Tilted_Ch4132

DUT: 111215C10

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: H835_1215 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.87$ mho/m; $\epsilon_r = 42.353$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(10.21, 10.21, 10.21); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch4132/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.174 mW/g

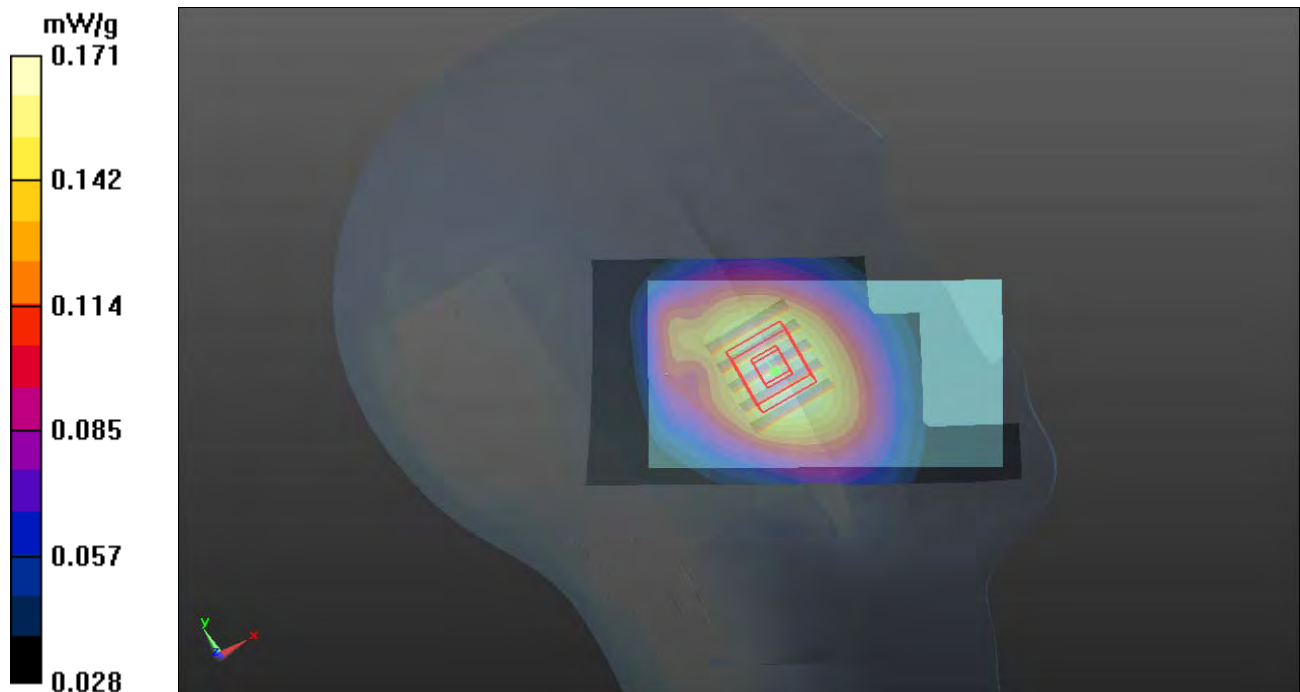
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.292 V/m; Power Drift = -0.0044 dB

Peak SAR (extrapolated) = 0.185 W/kg

SAR(1 g) = 0.153 mW/g; SAR(10 g) = 0.120 mW/g

Maximum value of SAR (measured) = 0.171 mW/g



P34 WCDMA II_RMC12.2K_Right Cheek_Ch9262

DUT: 111215C10

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: H1900_1216 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40.03$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9262/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.635 mW/g

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.688 V/m; Power Drift = -0.124 dB

Peak SAR (extrapolated) = 0.814 W/kg

SAR(1 g) = 0.513 mW/g; SAR(10 g) = 0.311 mW/g

Maximum value of SAR (measured) = 0.654 mW/g

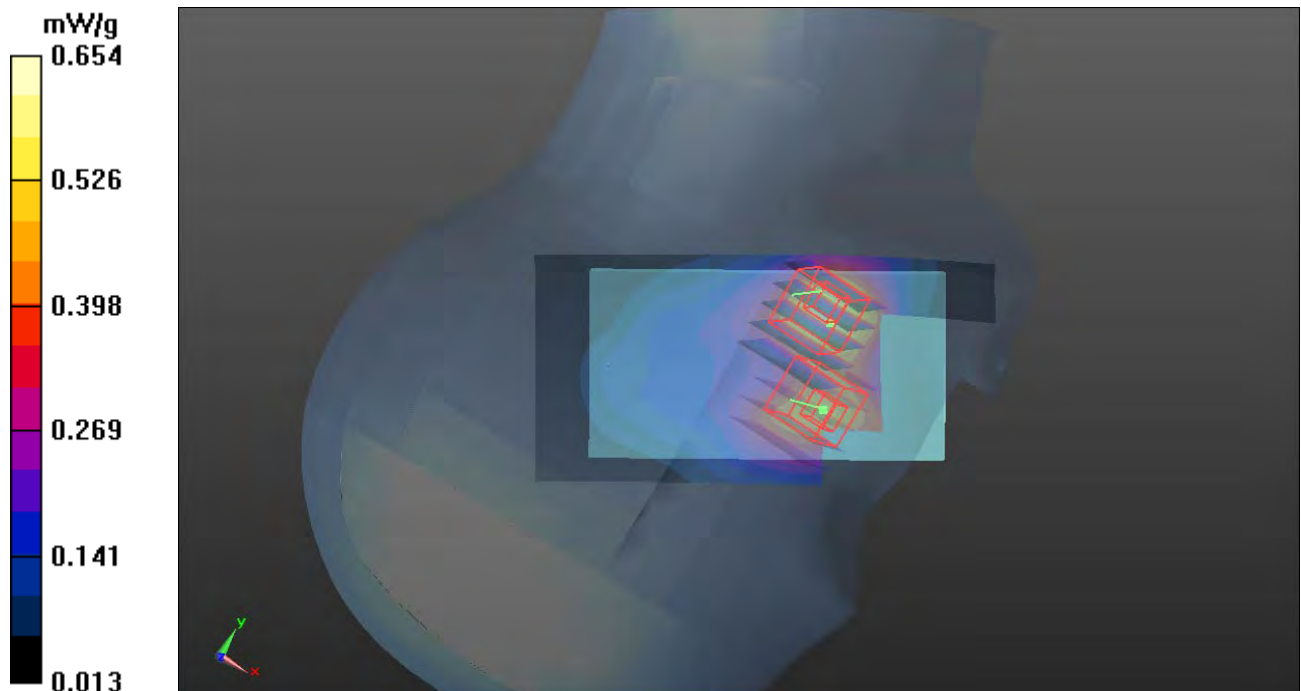
Ch9262/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.688 V/m; Power Drift = -0.124 dB

Peak SAR (extrapolated) = 0.563 W/kg

SAR(1 g) = 0.378 mW/g; SAR(10 g) = 0.243 mW/g

Maximum value of SAR (measured) = 0.470 mW/g



P35 WCDMA II_RMC12.2K_Right Tilted_Ch9262

DUT: 111215C10

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: H1900_1216 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40.03$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9262/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.366 mW/g

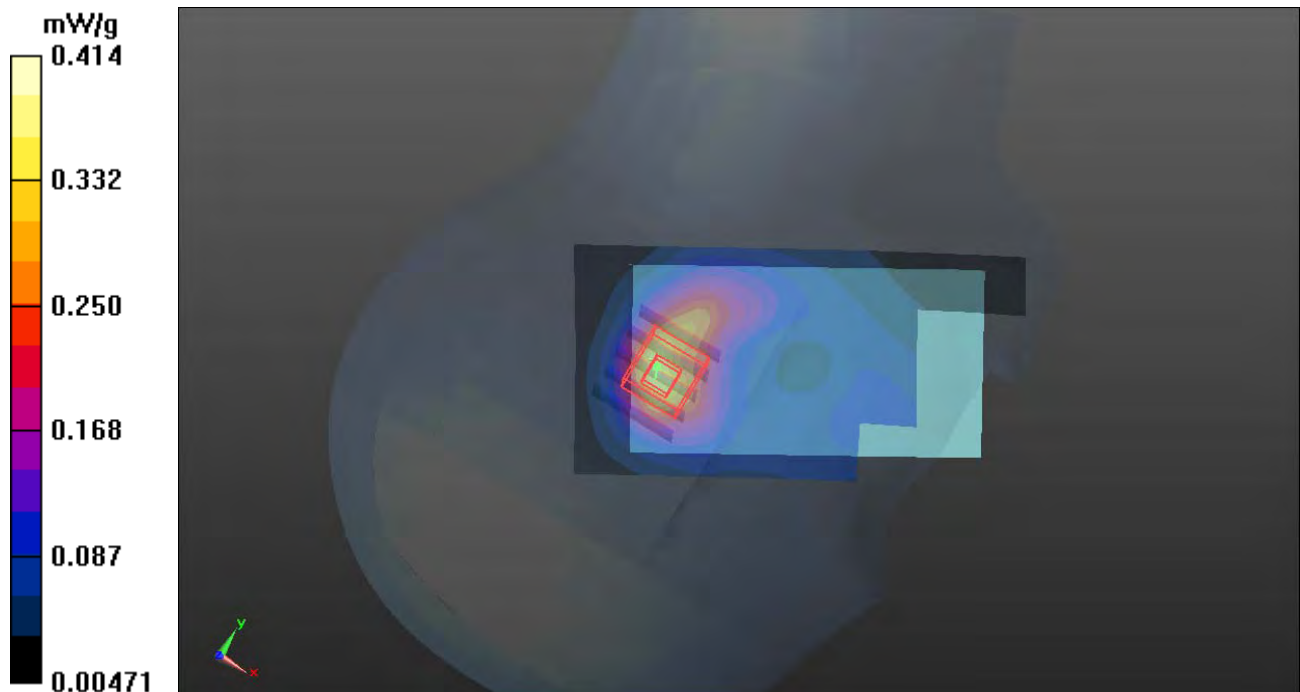
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.458 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.511 W/kg

SAR(1 g) = 0.304 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.414 mW/g



P36 WCDMA II_RMC12.2K_Left Cheek_Ch9262

DUT: 111215C10

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: H1900_1216 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40.03$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9262/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.202 mW/g

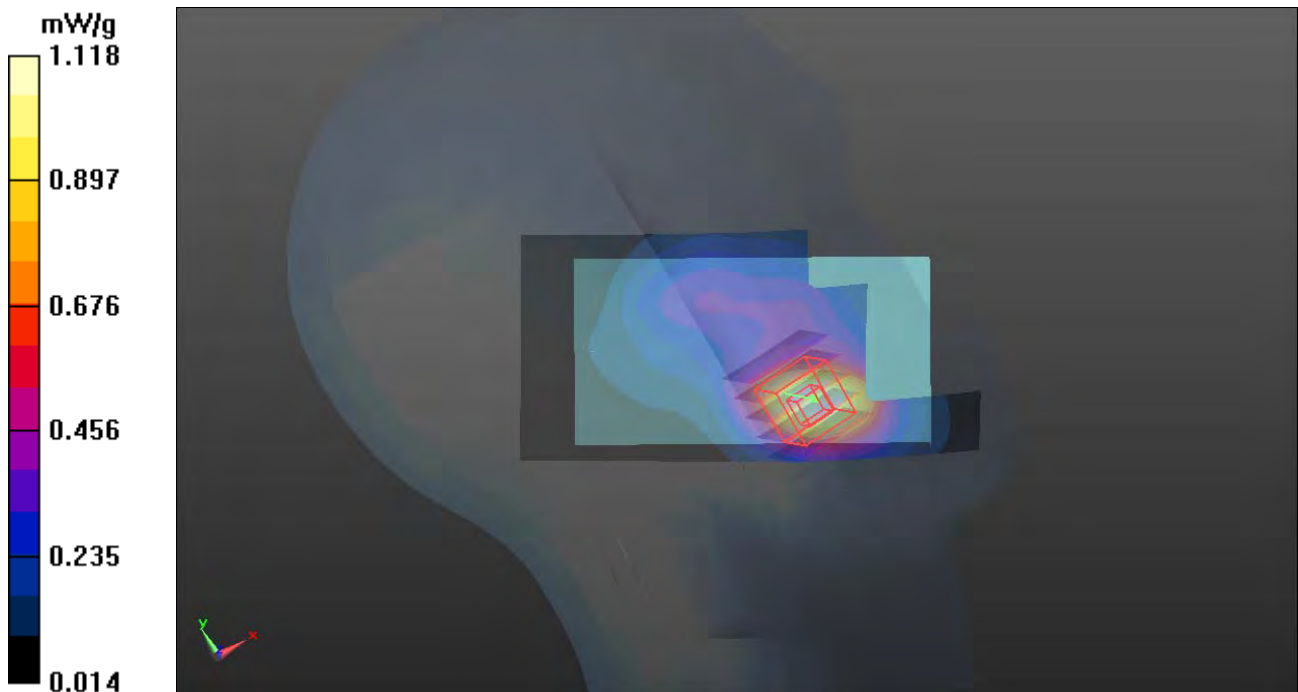
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.698 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.410 W/kg

SAR(1 g) = 0.885 mW/g; SAR(10 g) = 0.523 mW/g

Maximum value of SAR (measured) = 1.118 mW/g



P37 WCDMA II_RMC12.2K_Left Tilted_Ch9262

DUT: 111215C10

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: H1900_1216 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40.03$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9262/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.361 mW/g

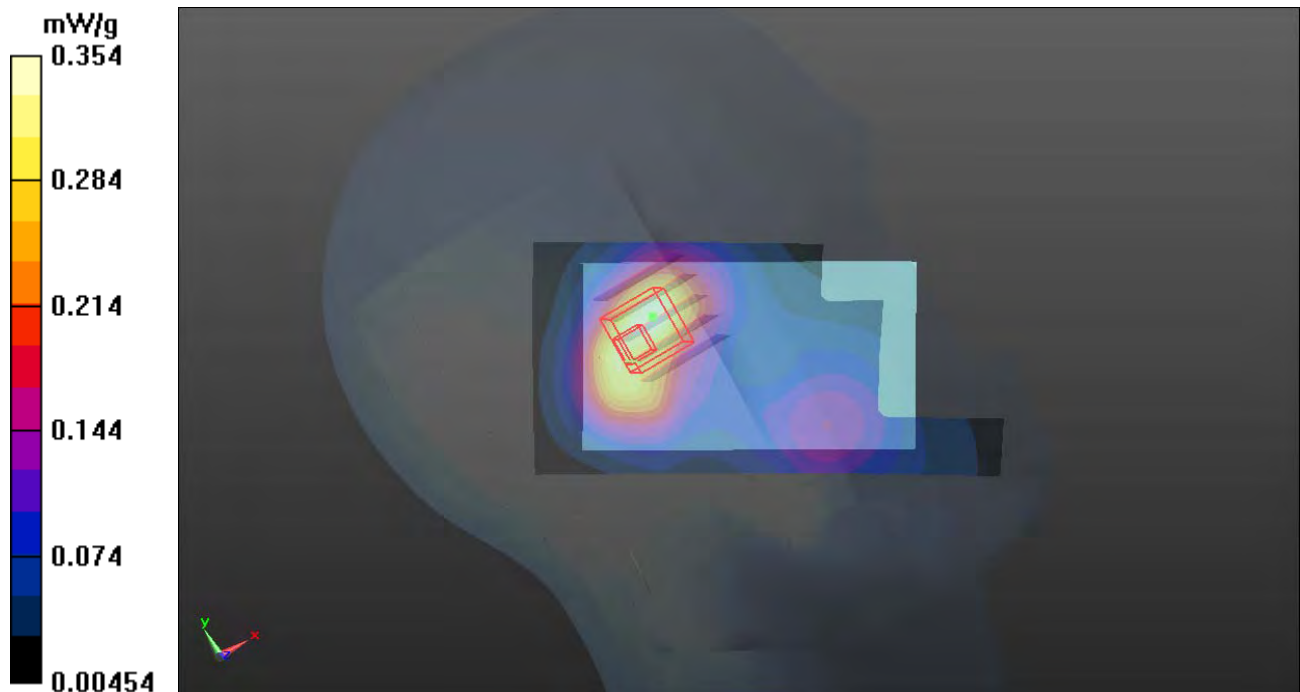
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.174 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 0.424 W/kg

SAR(1 g) = 0.248 mW/g; SAR(10 g) = 0.159 mW/g

Maximum value of SAR (measured) = 0.354 mW/g



P54 WCDMA II_RMC12.2K_Left Cheek_Ch9400

DUT: 111215C10

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: H1900_1216 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.418$ mho/m; $\epsilon_r = 39.892$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9400/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.194 mW/g

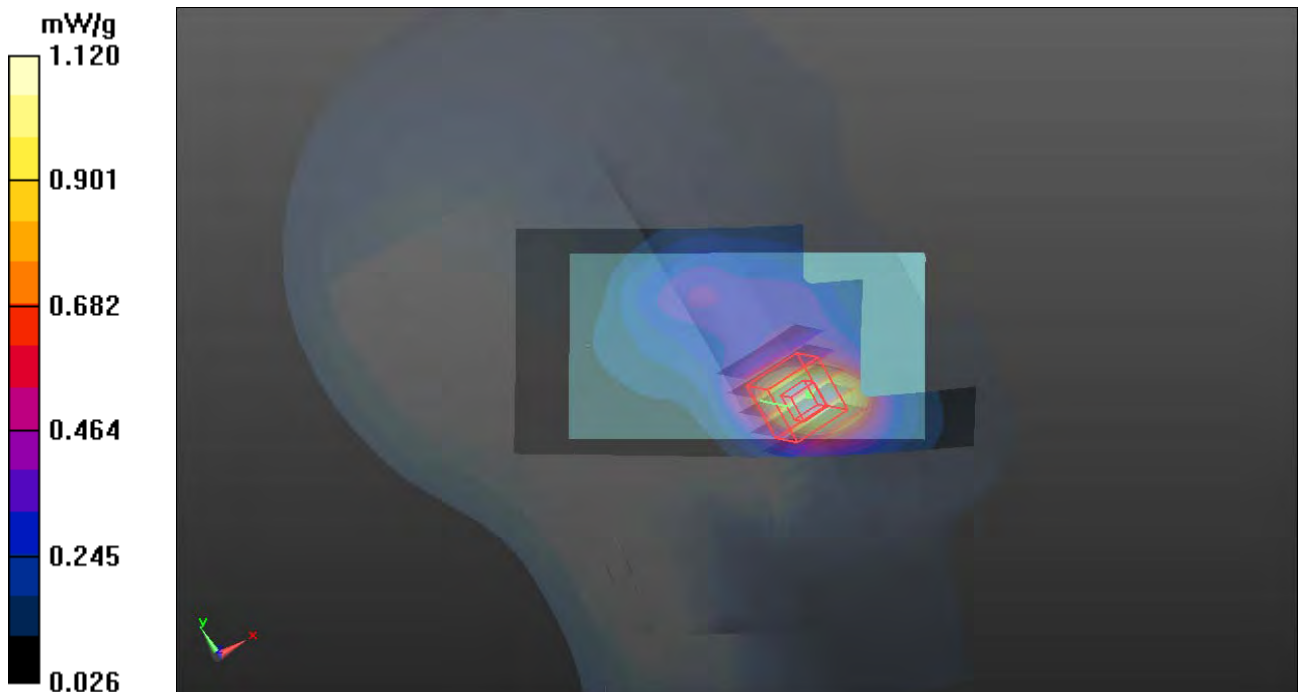
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.420 V/m; Power Drift = 0.19 dB

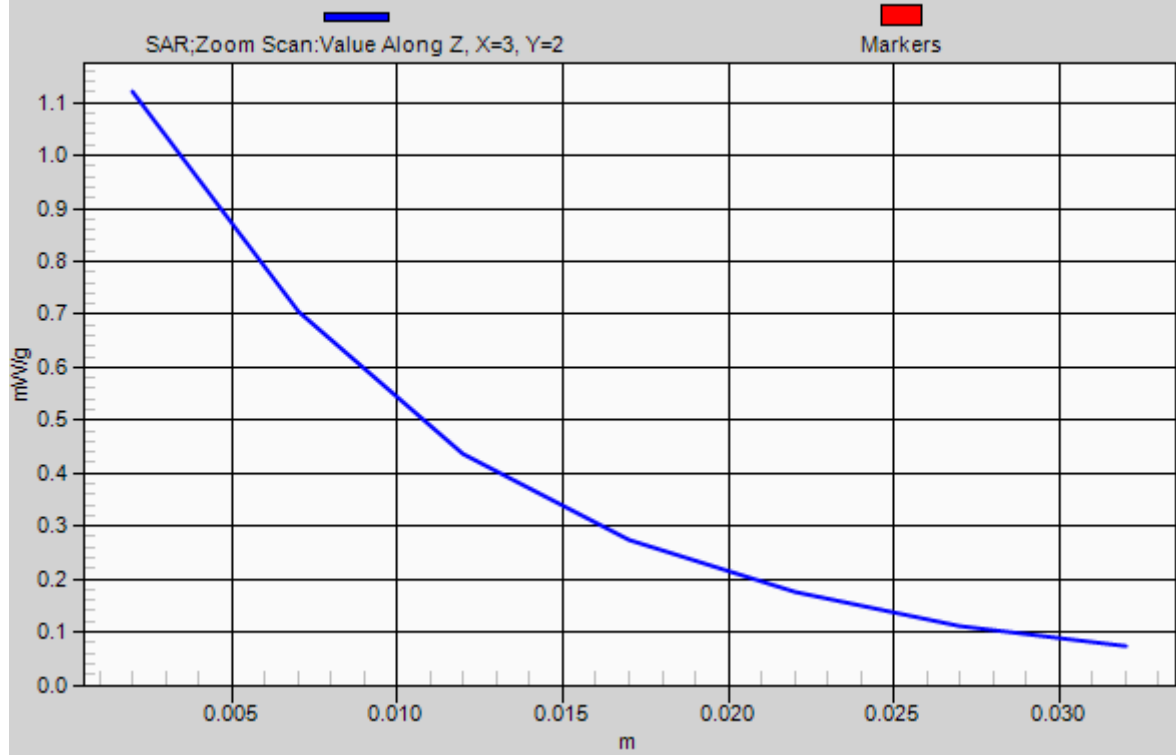
Peak SAR (extrapolated) = 1.420 W/kg

SAR(1 g) = 0.888 mW/g; SAR(10 g) = 0.521 mW/g

Maximum value of SAR (measured) = 1.120 mW/g



1g/10g Averaged SAR



P55 WCDMA II_RMC12.2K_Left Cheek_Ch9538

DUT: 111215C10

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: H1900_1216 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.445$ mho/m; $\epsilon_r = 39.77$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(8.45, 8.45, 8.45); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9538/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.974 mW/g

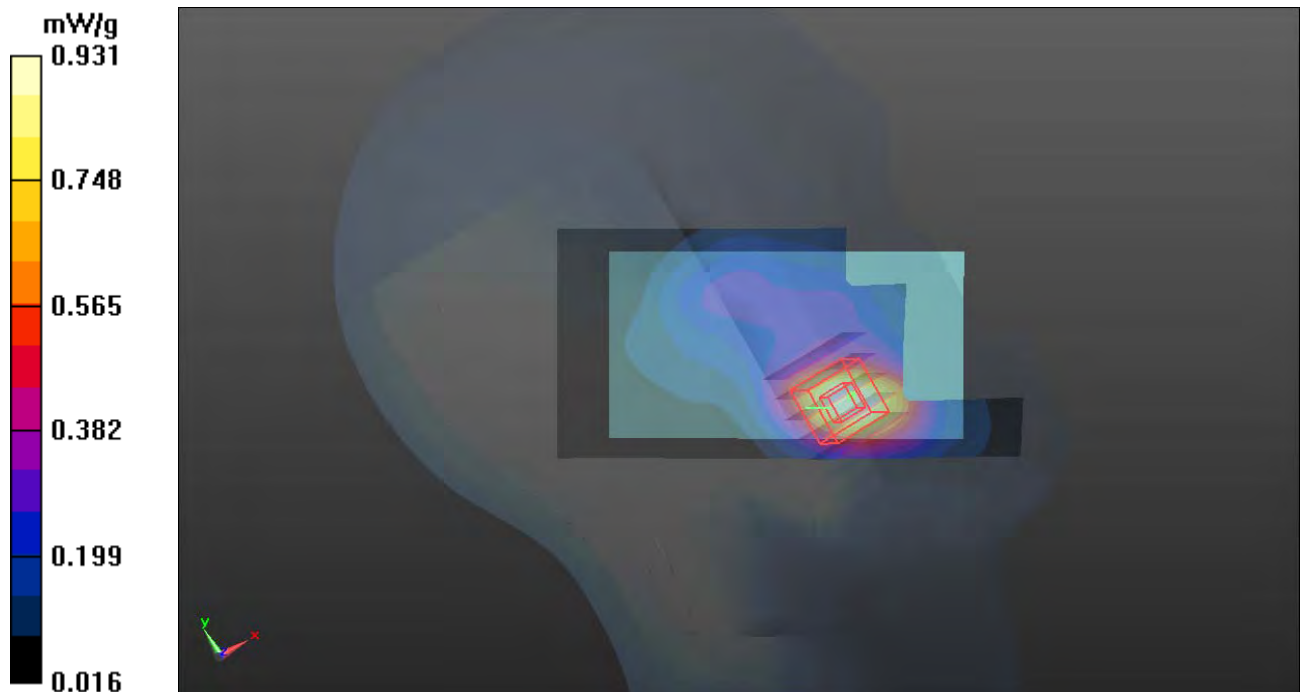
Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.025 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.176 W/kg

SAR(1 g) = 0.727 mW/g; SAR(10 g) = 0.424 mW/g

Maximum value of SAR (measured) = 0.931 mW/g



P87 GSM850_GPRS10_Front Face_1cm_Ch128

DUT: 111121C23

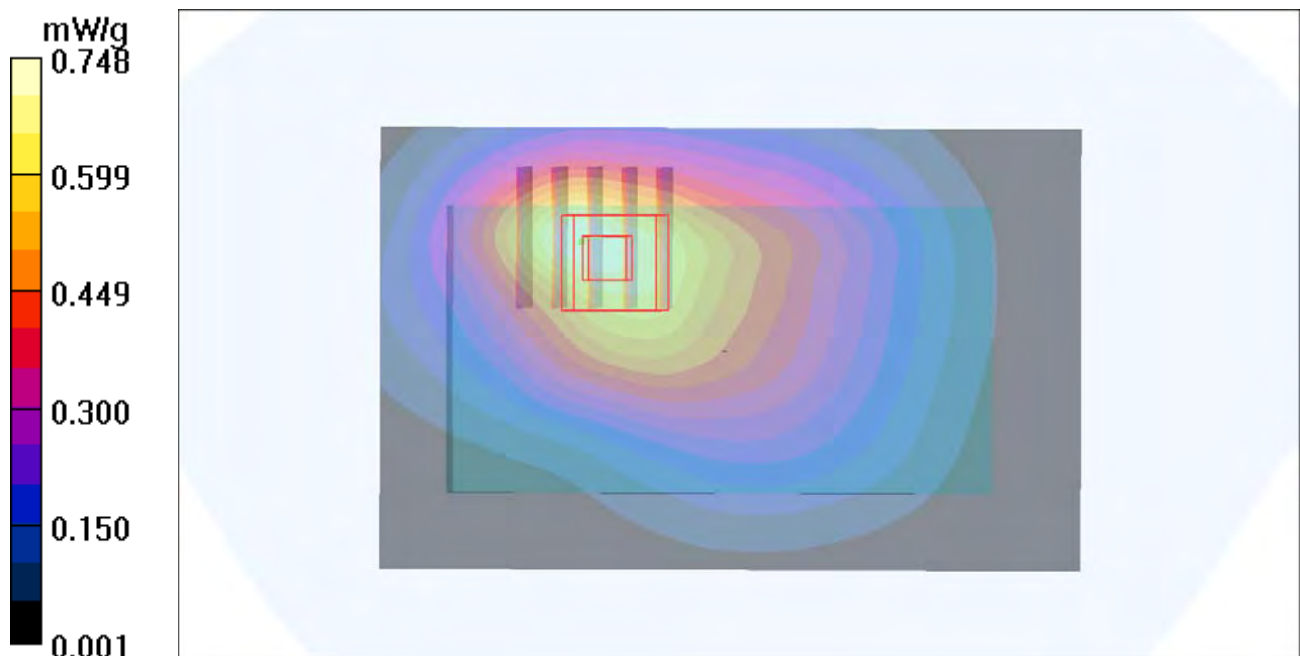
Communication System: GSM850 GPRS10; Frequency: 824.2 MHz; Duty Cycle: 1:4
Medium: B835_1223 Medium parameters used : $f = 824.2$ MHz; $\sigma = 0.983$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.7 °C; Liquid Temperature : 21.7 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.08, 6.08, 6.08); Calibrated: 2011/11/29
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch128/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.748 mW/g

Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.4 V/m; Power Drift = 0.034 dB
Peak SAR (extrapolated) = 0.970 W/kg
SAR(1 g) = 0.635 mW/g; SAR(10 g) = 0.433 mW/g
Maximum value of SAR (measured) = 0.722 mW/g



P88 GSM850_GPRS10_Rear Face_1cm_Ch128

DUT: 11121C23

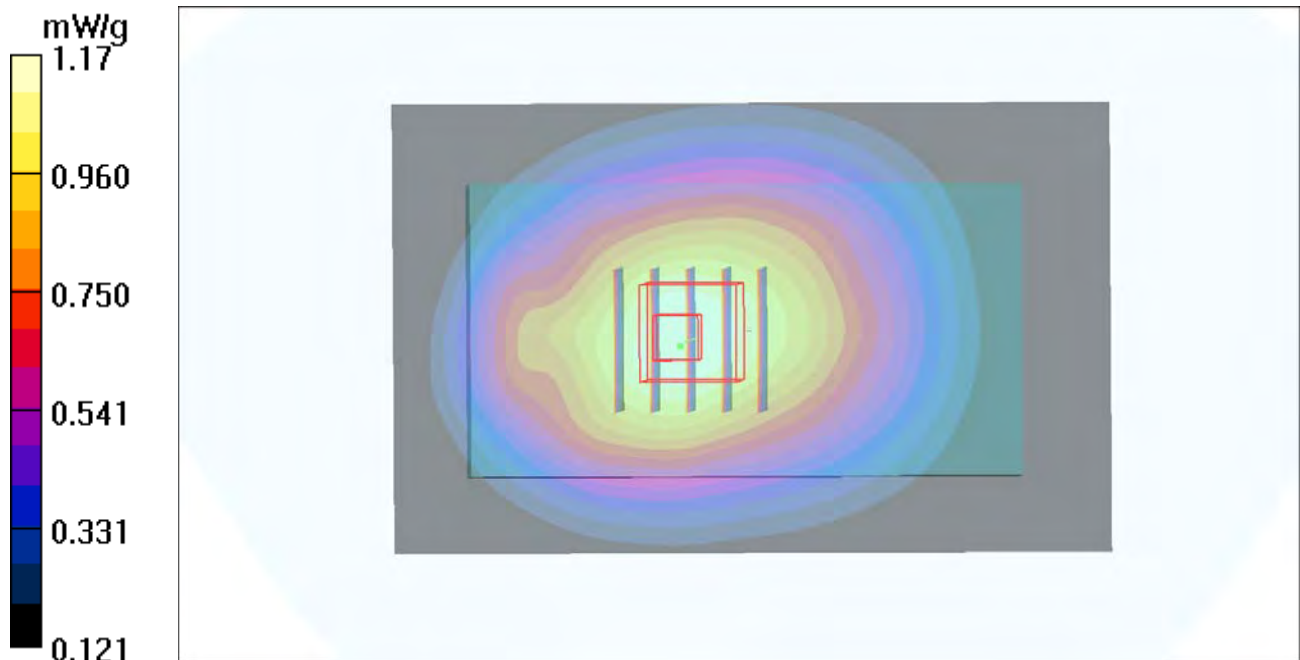
Communication System: GSM850 GPRS10; Frequency: 824.2 MHz; Duty Cycle: 1:4
 Medium: B835_1223 Medium parameters used : $f = 824.2$ MHz; $\sigma = 0.983$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³
 Ambient Temperature : 22.8 °C; Liquid Temperature : 21.7 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.08, 6.08, 6.08); Calibrated: 2011/11/29
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

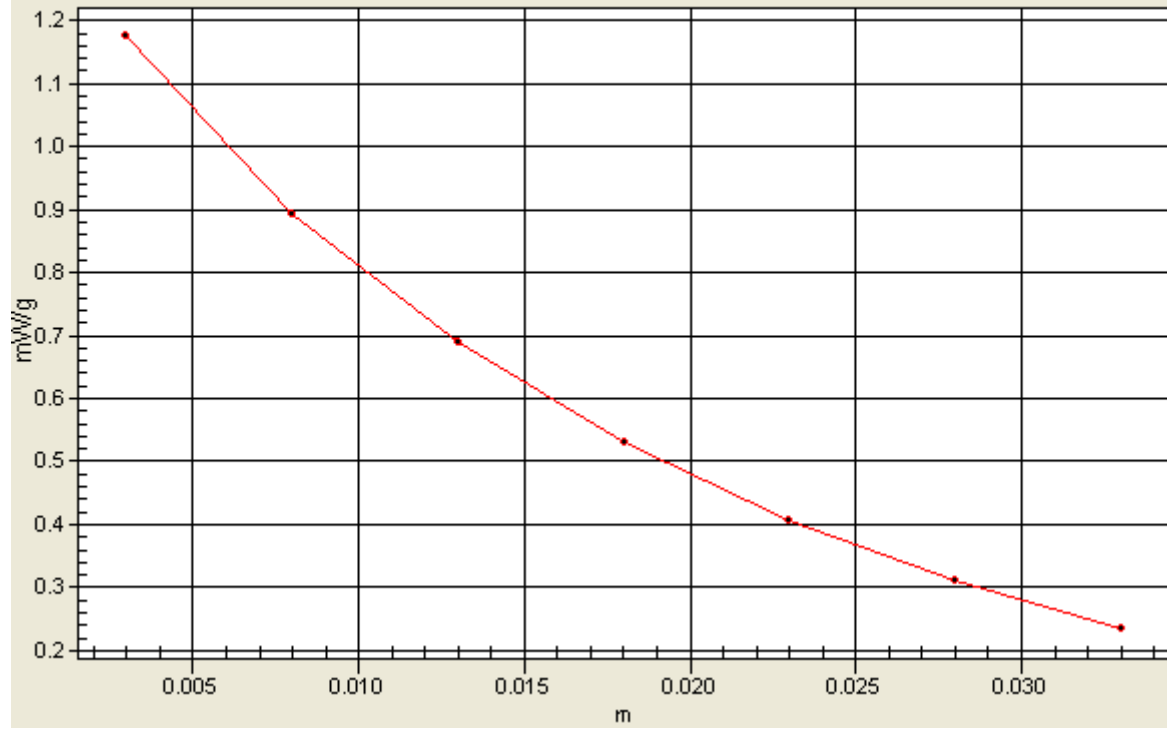
Ch128/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm
 Maximum value of SAR (interpolated) = 1.20 mW/g

Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 33.4 V/m; Power Drift = -0.009 dB
 Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.788 mW/g
 Maximum value of SAR (measured) = 1.17 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=2, Y=2



P89 GSM850_GPRS10_Left Side_1cm_Ch128

DUT: 111121C23

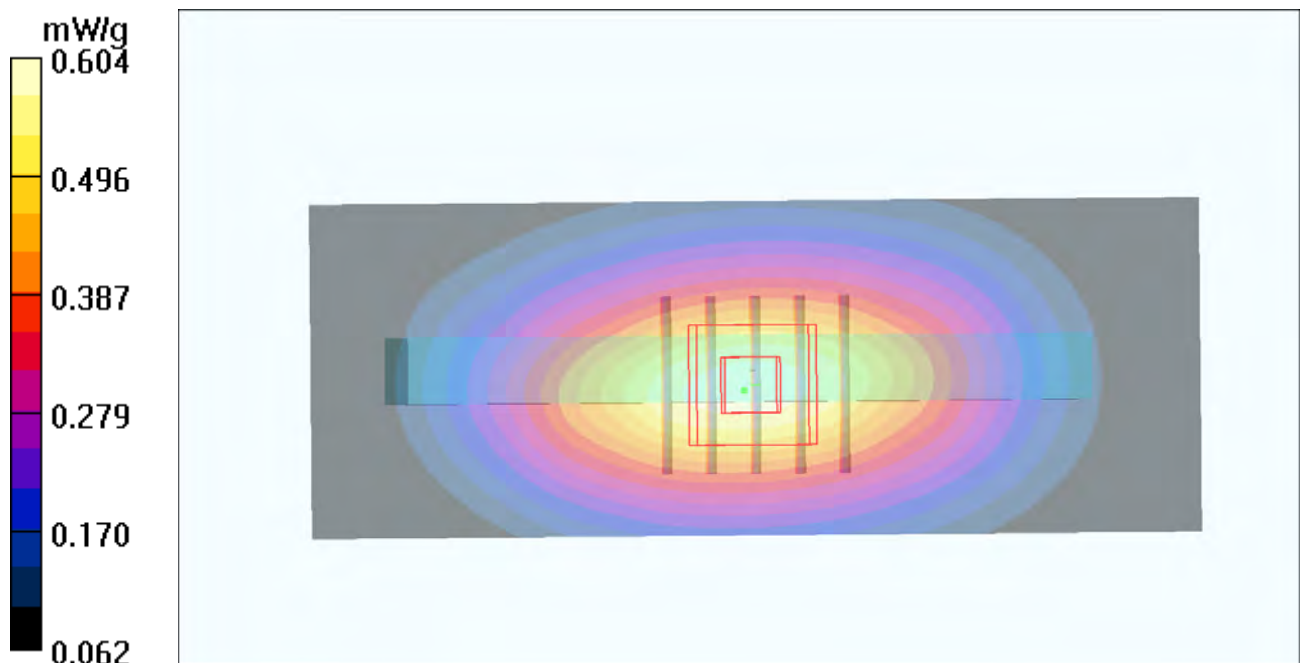
Communication System: GSM850 GPRS10; Frequency: 824.2 MHz; Duty Cycle: 1:4
Medium: B835_1223 Medium parameters used : $f = 824.2$ MHz; $\sigma = 0.983$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.8 °C; Liquid Temperature : 21.7 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.08, 6.08, 6.08); Calibrated: 2011/11/29
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch128/Area Scan (31x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.595 mW/g

Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.1 V/m; Power Drift = -0.003 dB
Peak SAR (extrapolated) = 0.779 W/kg
SAR(1 g) = 0.527 mW/g; SAR(10 g) = 0.360 mW/g
Maximum value of SAR (measured) = 0.604 mW/g



P90 GSM850_GPRS10_Right Side_1cm_Ch128

DUT: 111121C23

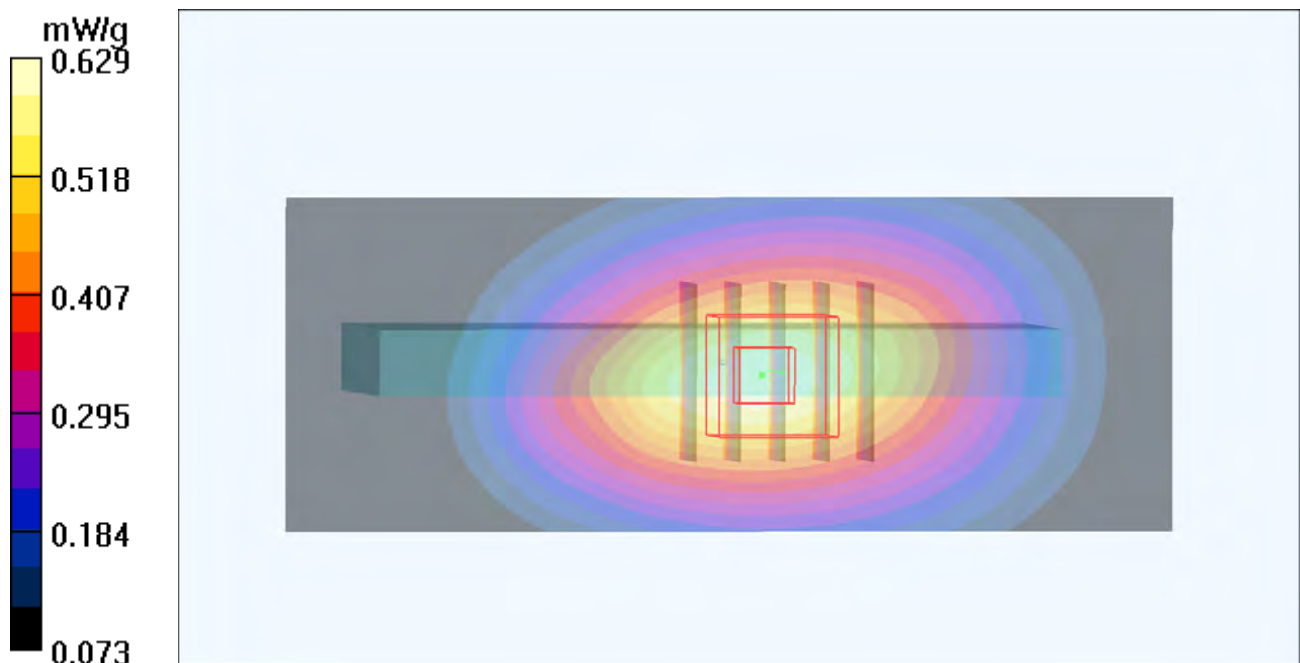
Communication System: GSM850 GPRS10; Frequency: 824.2 MHz; Duty Cycle: 1:4
Medium: B835_1223 Medium parameters used : $f = 824.2$ MHz; $\sigma = 0.983$ mho/m; $\epsilon_r = 55.6$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.8 °C ; Liquid Temperature : 21.7 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.08, 6.08, 6.08); Calibrated: 2011/11/29
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch128/Area Scan (31x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.619 mW/g

Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.5 V/m; Power Drift = -0.018 dB
Peak SAR (extrapolated) = 0.802 W/kg
SAR(1 g) = 0.548 mW/g; SAR(10 g) = 0.377 mW/g
Maximum value of SAR (measured) = 0.629 mW/g



P92 GSM850_GPRS10_Bottom Side_1cm_Ch128

DUT: 111121C23

Communication System: GSM850 GPRS10; Frequency: 824.2 MHz; Duty Cycle: 1:4
Medium: B835_1223 Medium parameters used : $f = 824.2$ MHz; $\sigma = 0.983$ mho/m; $\epsilon_r =$

55.6 ; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.7 °C

DASY4 Configuration:

- Probe: ES3DV3 - SN3280; ConvF(6.08, 6.08, 6.08); Calibrated: 2011/11/29
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch128/Area Scan (41x61x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.124 mW/g

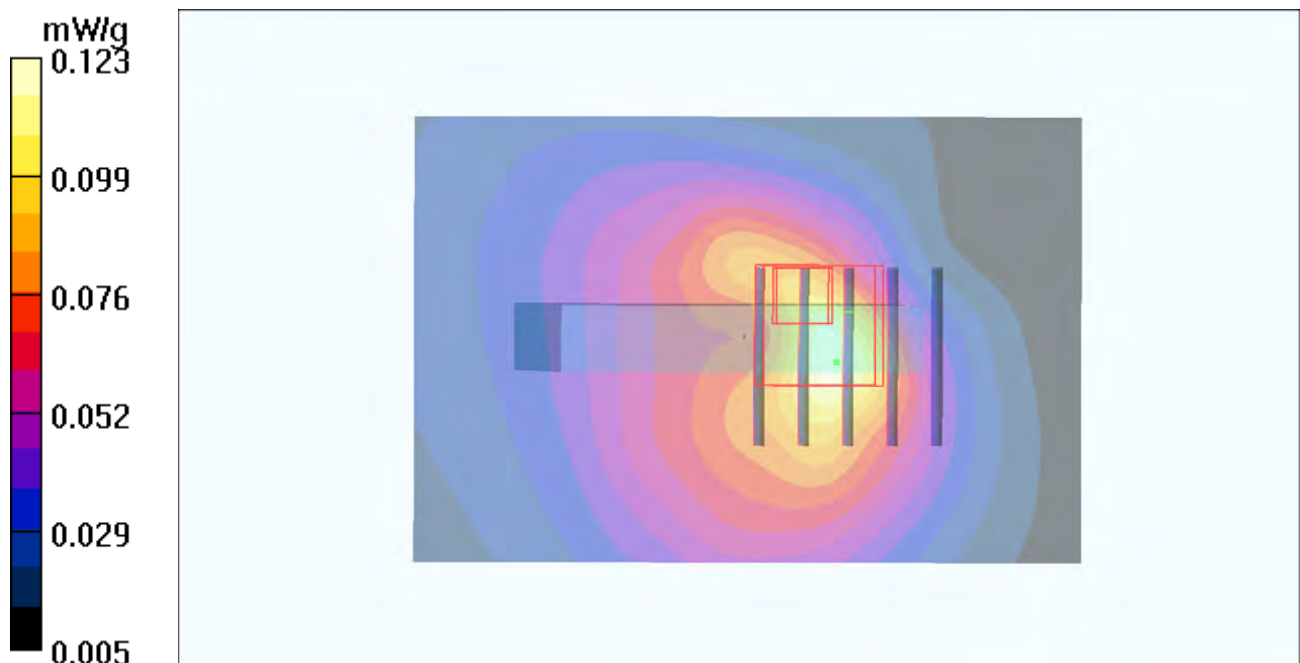
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.50 V/m; Power Drift = 0.123 dB

Peak SAR (extrapolated) = 0.193 W/kg

SAR(1 g) = 0.106 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.123 mW/g



P98 GSM850_GPRS10_Rear Face_1cm_Ch189

DUT: 111121C23

Communication System: GSM850 GPRS10; Frequency: 836.4 MHz; Duty Cycle: 1:4
Medium: B835_1226 Medium parameters used : $f = 836.4$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 55.5$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.2 °C ; Liquid Temperature : 21.1 °C

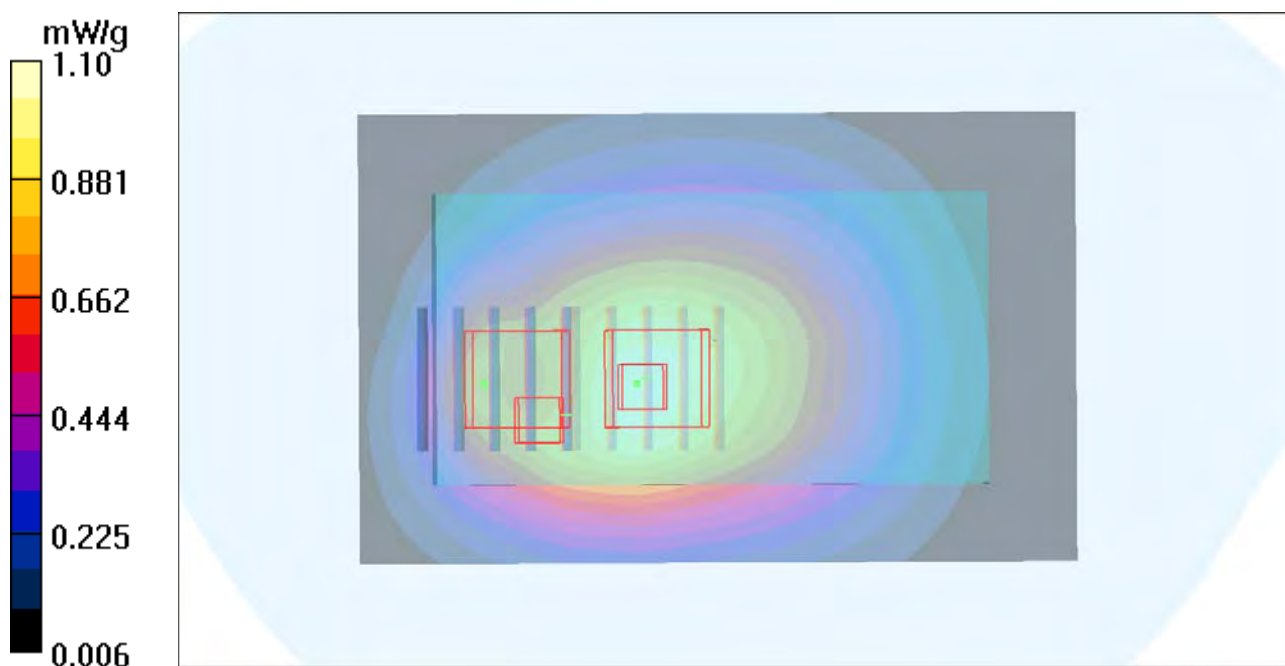
DASY4 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(8.94, 8.94, 8.94); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch189/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.10 mW/g

Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.4 V/m; Power Drift = -0.138 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.941 mW/g; SAR(10 g) = 0.697 mW/g
Maximum value of SAR (measured) = 1.09 mW/g

Ch189/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.4 V/m; Power Drift = -0.138 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.627 mW/g; SAR(10 g) = 0.407 mW/g
Maximum value of SAR (measured) = 0.908 mW/g



P99 GSM850_GPRS10_Rear Face_1cm_Ch251

DUT: 111121C23

Communication System: GSM850 GPRS10; Frequency: 848.8 MHz; Duty Cycle: 1:4

Medium: B835_1226 Medium parameters used: $f = 849$ MHz; $\sigma = 1.02$ mho/m; $\epsilon_r = 55.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.3 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(8.94, 8.94, 8.94); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch251/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.17 mW/g

Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 31.8 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.993 mW/g; SAR(10 g) = 0.735 mW/g

Maximum value of SAR (measured) = 1.15 mW/g

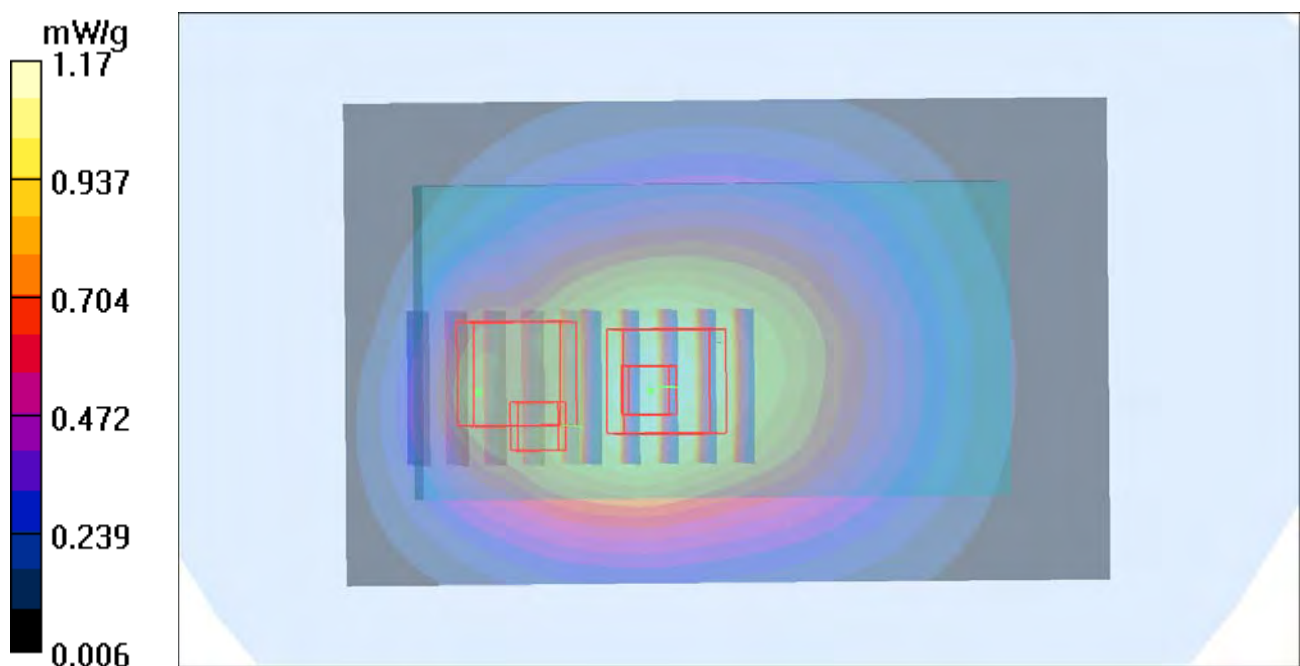
Ch251/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 31.8 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.636 mW/g; SAR(10 g) = 0.419 mW/g

Maximum value of SAR (measured) = 0.931 mW/g



P121 GSM850_Front Face_1cm_Ch128

DUT: 11121C23

Communication System: GSM; Frequency: 824.2 MHz; Duty Cycle: 1:8.30042

Medium: B835_0223 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.979$ mho/m; $\epsilon_r =$

55.101 ; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.12, 9.12, 9.12); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch128/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.347 mW/g

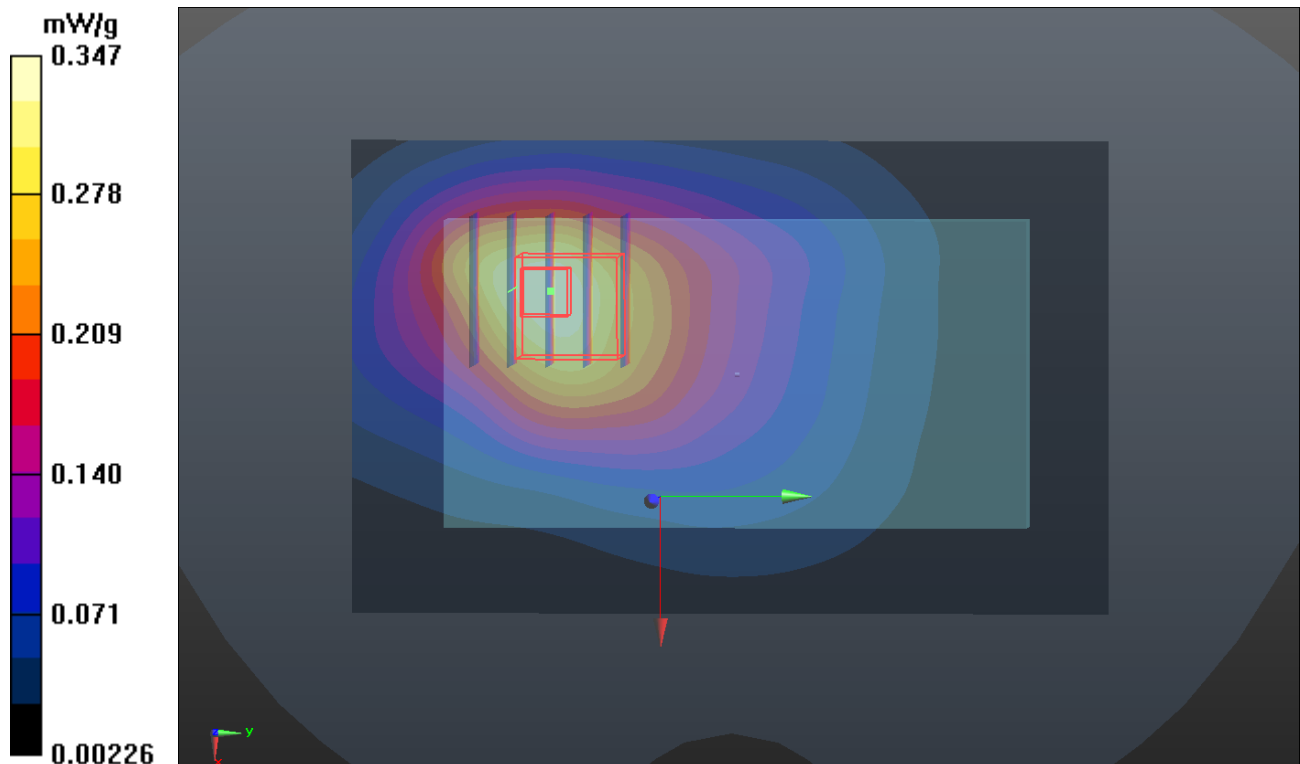
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.730 V/m; Power Drift = -0.0088 dB

Peak SAR (extrapolated) = 0.4350

SAR(1 g) = 0.279 mW/g; SAR(10 g) = 0.184 mW/g

Maximum value of SAR (measured) = 0.352 mW/g



P122 GSM850_Rear Face_1cm_Ch128

DUT: 11121C23

Communication System: GSM; Frequency: 824.2 MHz; Duty Cycle: 1:8.30042

Medium: B835_0223 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.979$ mho/m; $\epsilon_r =$

55.101 ; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.12, 9.12, 9.12); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch128/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.478 mW/g

Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.818 V/m; Power Drift = 0.0079 dB

Peak SAR (extrapolated) = 0.5640

SAR(1 g) = 0.403 mW/g; SAR(10 g) = 0.287 mW/g

Maximum value of SAR (measured) = 0.480 mW/g

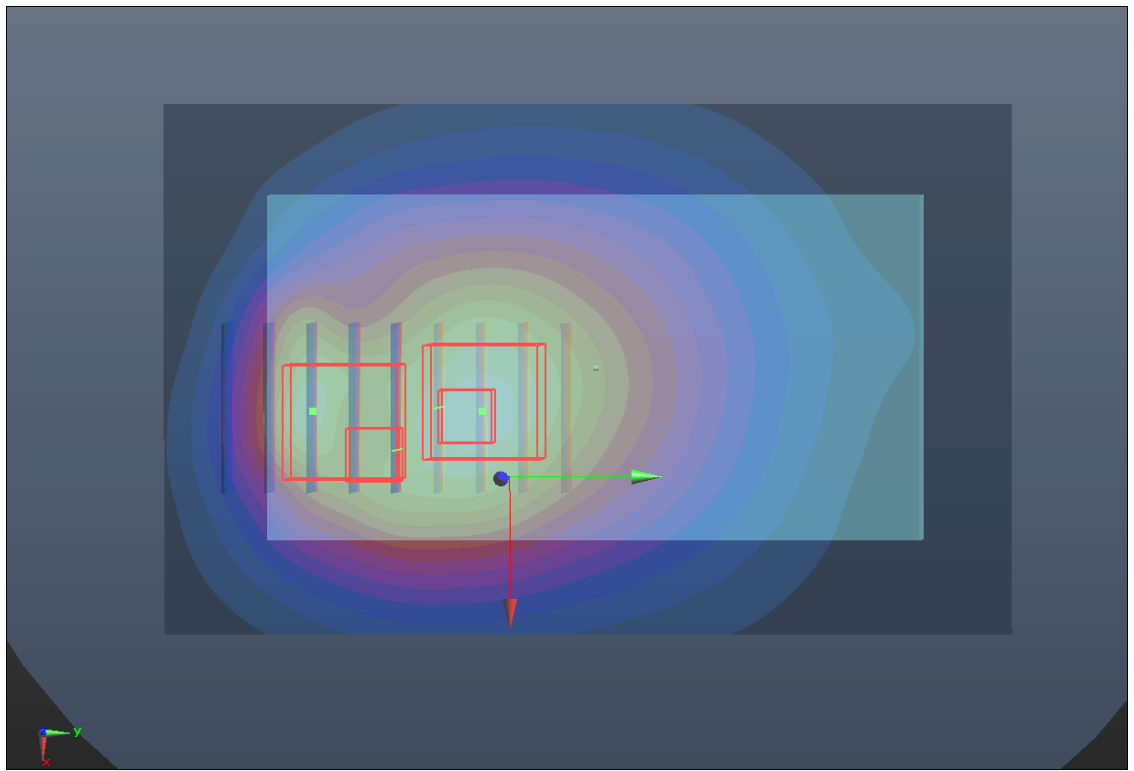
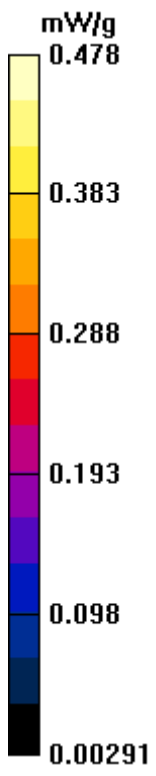
Ch128/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.818 V/m; Power Drift = 0.0079 dB

Peak SAR (extrapolated) = 0.5160

SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.204 mW/g

Maximum value of SAR (measured) = 0.438 mW/g



P16 GSM1900_GPRS 12_Front Face_1cm_Ch810

DUT: 111121C23

Communication System: GPRS12; Frequency: 1909.8 MHz; Duty Cycle: 1:1.99986

Medium: B1900_1213 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.564$ mho/m; $\epsilon_r = 53.012$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch810/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.220 mW/g

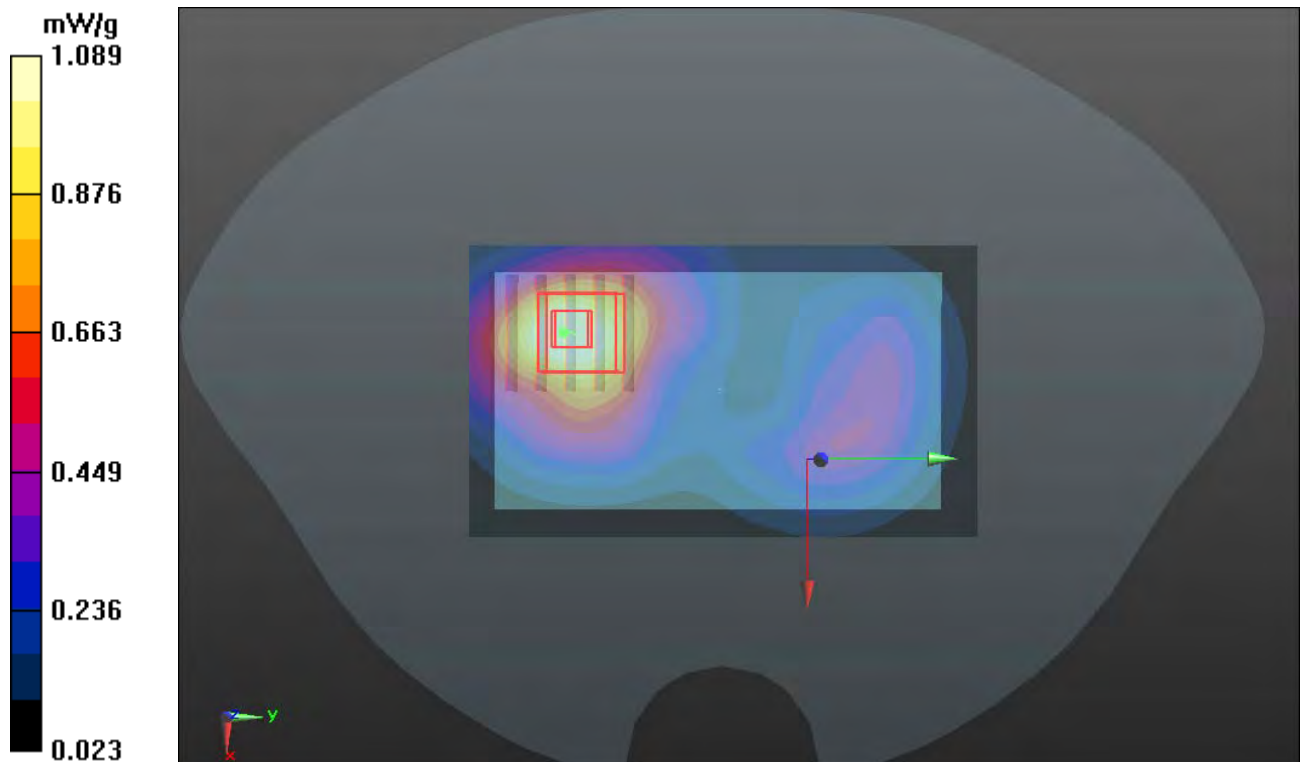
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.477 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.336 W/kg

SAR(1 g) = 0.826 mW/g; SAR(10 g) = 0.503 mW/g

Maximum value of SAR (measured) = 1.089 mW/g



P17 GSM1900_GPRS 12_Rear Face_1cm_Ch810

DUT: 111121C23

Communication System: GPRS12; Frequency: 1909.8 MHz; Duty Cycle: 1:1.99986

Medium: B1900_1213 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.564$ mho/m; $\epsilon_r = 53.012$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch810/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.302 mW/g

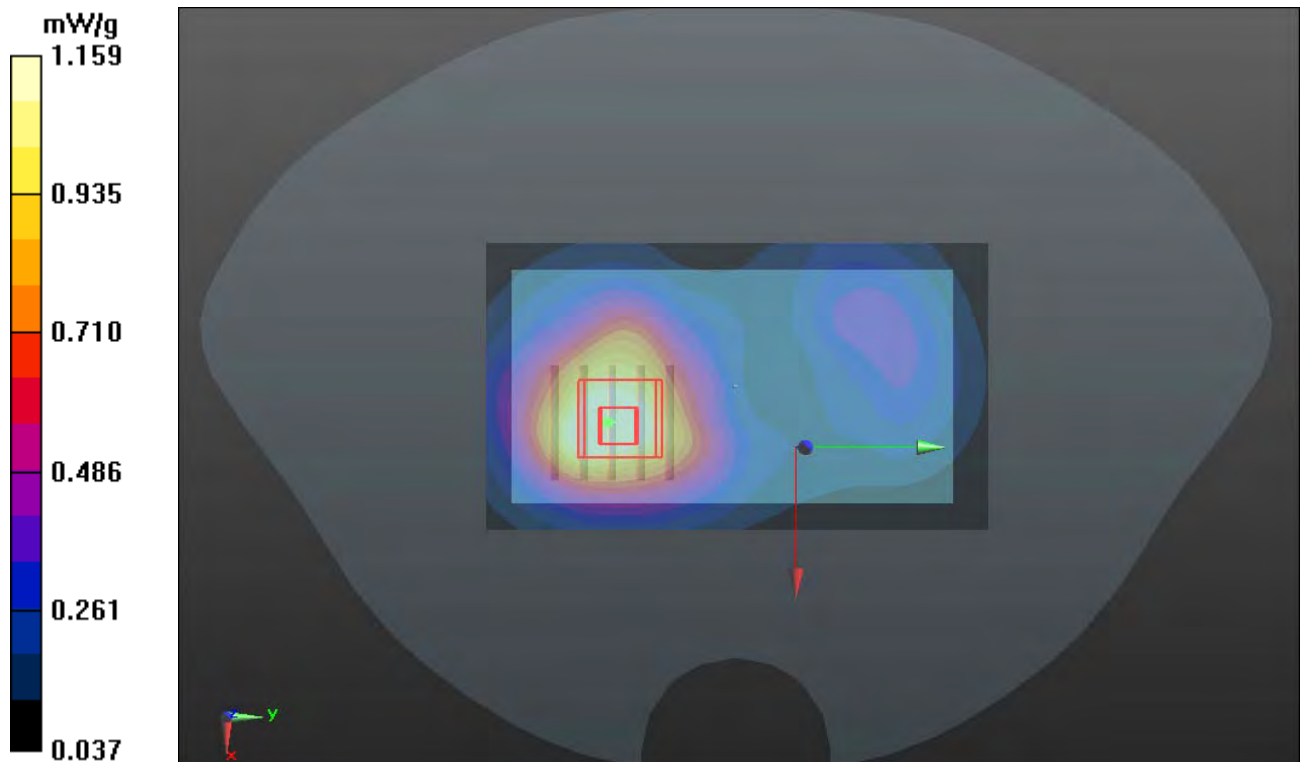
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.212 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 1.397 W/kg

SAR(1 g) = 0.896 mW/g; SAR(10 g) = 0.556 mW/g

Maximum value of SAR (measured) = 1.159 mW/g



P18 GSM1900_GPRS 12_Left Side_1cm_Ch810

DUT: 111121C23

Communication System: GPRS12; Frequency: 1909.8 MHz; Duty Cycle: 1:1.99986

Medium: B1900_1213 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.564$ mho/m; $\epsilon_r = 53.012$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch810/Area Scan (31x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.348 mW/g

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.706 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.453 W/kg

SAR(1 g) = 0.273 mW/g; SAR(10 g) = 0.160 mW/g

Maximum value of SAR (measured) = 0.369 mW/g

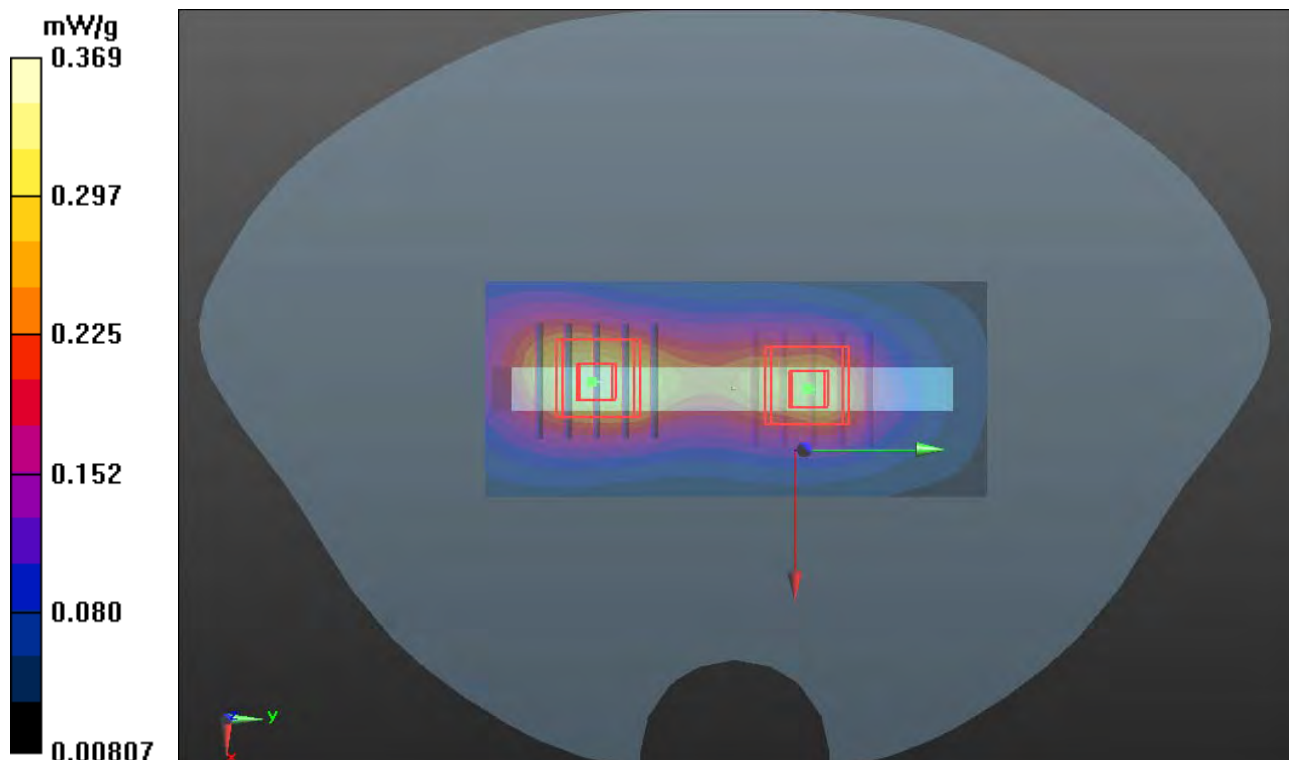
Ch810/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.706 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.374 W/kg

SAR(1 g) = 0.228 mW/g; SAR(10 g) = 0.136 mW/g

Maximum value of SAR (measured) = 0.306 mW/g



P19 GSM1900_GPRS 12_Right Side_1cm_Ch810

DUT: 111121C23

Communication System: GPRS12; Frequency: 1909.8 MHz; Duty Cycle: 1:1.99986

Medium: B1900_1213 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.564$ mho/m; $\epsilon_r = 53.012$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.3 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch810/Area Scan (31x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.341 mW/g

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.713 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.421 W/kg

SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.345 mW/g

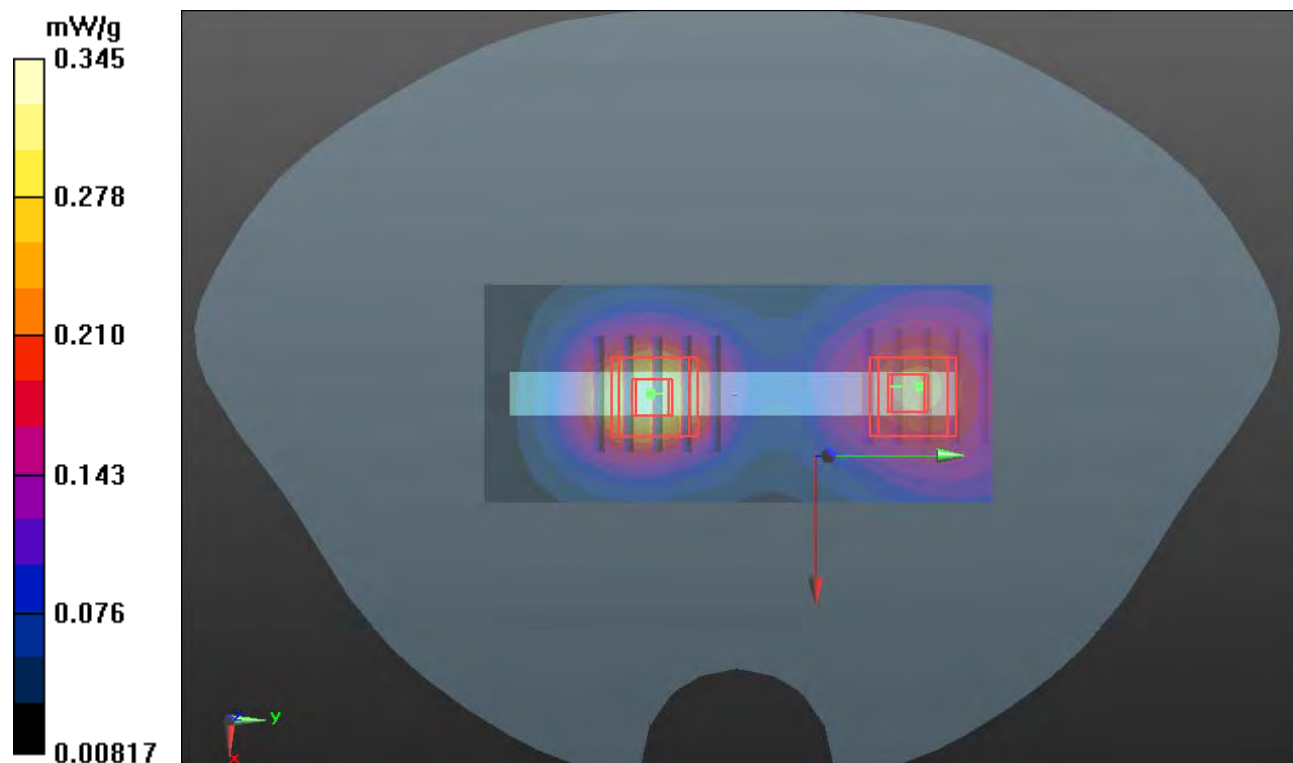
Ch810/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.713 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.334 W/kg

SAR(1 g) = 0.189 mW/g; SAR(10 g) = 0.112 mW/g

Maximum value of SAR (measured) = 0.245 mW/g



P21 GSM1900_GPRS 12_Bottom Side_1cm_Ch810

DUT: 111121C23

Communication System: GPRS12; Frequency: 1909.8 MHz; Duty Cycle: 1:1.99986

Medium: B1900_1213 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.564$ mho/m; $\epsilon_r = 53.012$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch810/Area Scan (41x61x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.697 mW/g

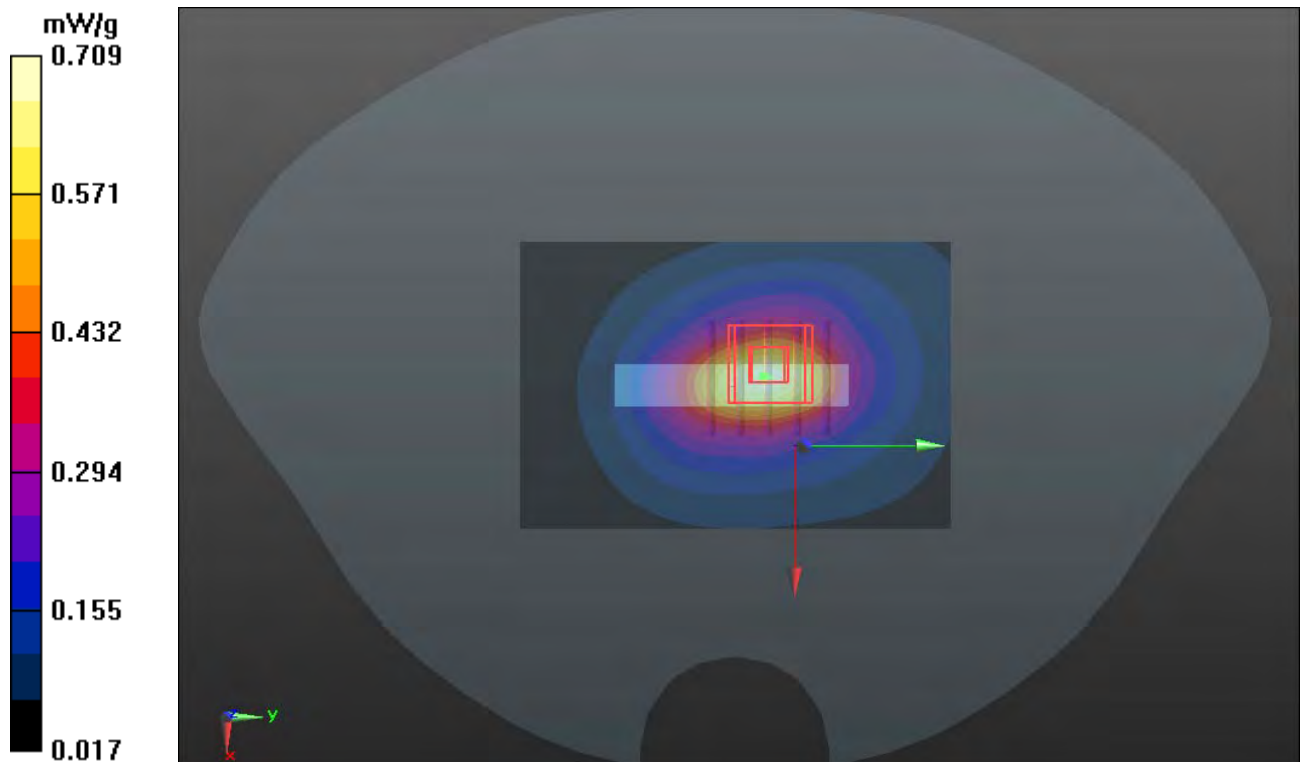
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.602 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.938 W/kg

SAR(1 g) = 0.568 mW/g; SAR(10 g) = 0.317 mW/g

Maximum value of SAR (measured) = 0.709 mW/g



P46 GSM1900_GPRS 12_Front Face_1cm_Ch512

DUT: 111121C23

Communication System: GPRS12; Frequency: 1850.2 MHz; Duty Cycle: 1:1.99986

Medium: B1900_1213 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.499$ mho/m; $\epsilon_r = 53.251$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch512/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.403 mW/g

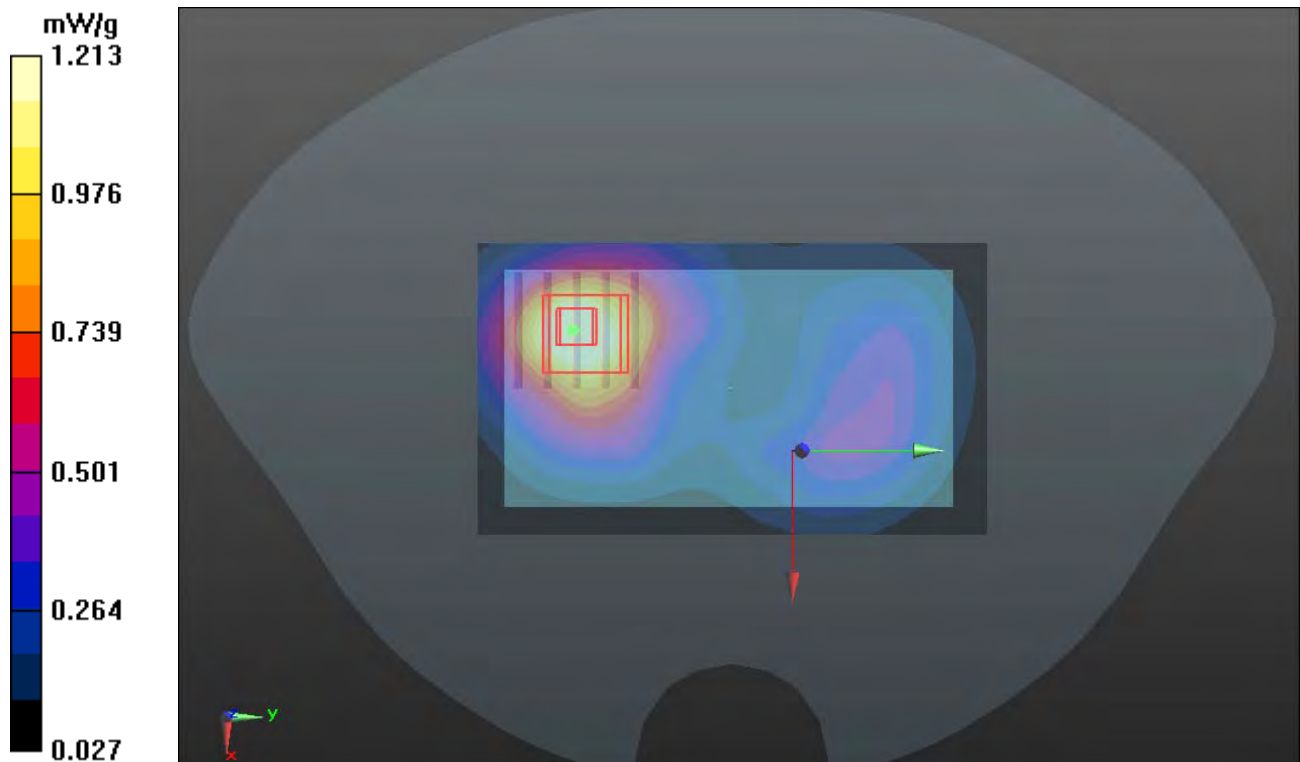
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.978 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.487 W/kg

SAR(1 g) = 0.926 mW/g; SAR(10 g) = 0.569 mW/g

Maximum value of SAR (measured) = 1.213 mW/g



P47 GSM1900_GPRS 12_Front Face_1cm_Ch661

DUT: 111121C23

Communication System: GPRS12; Frequency: 1880 MHz; Duty Cycle: 1:1.99986

Medium: B1900_1213 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.532$ mho/m; $\epsilon_r = 53.124$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch661/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.429 mW/g

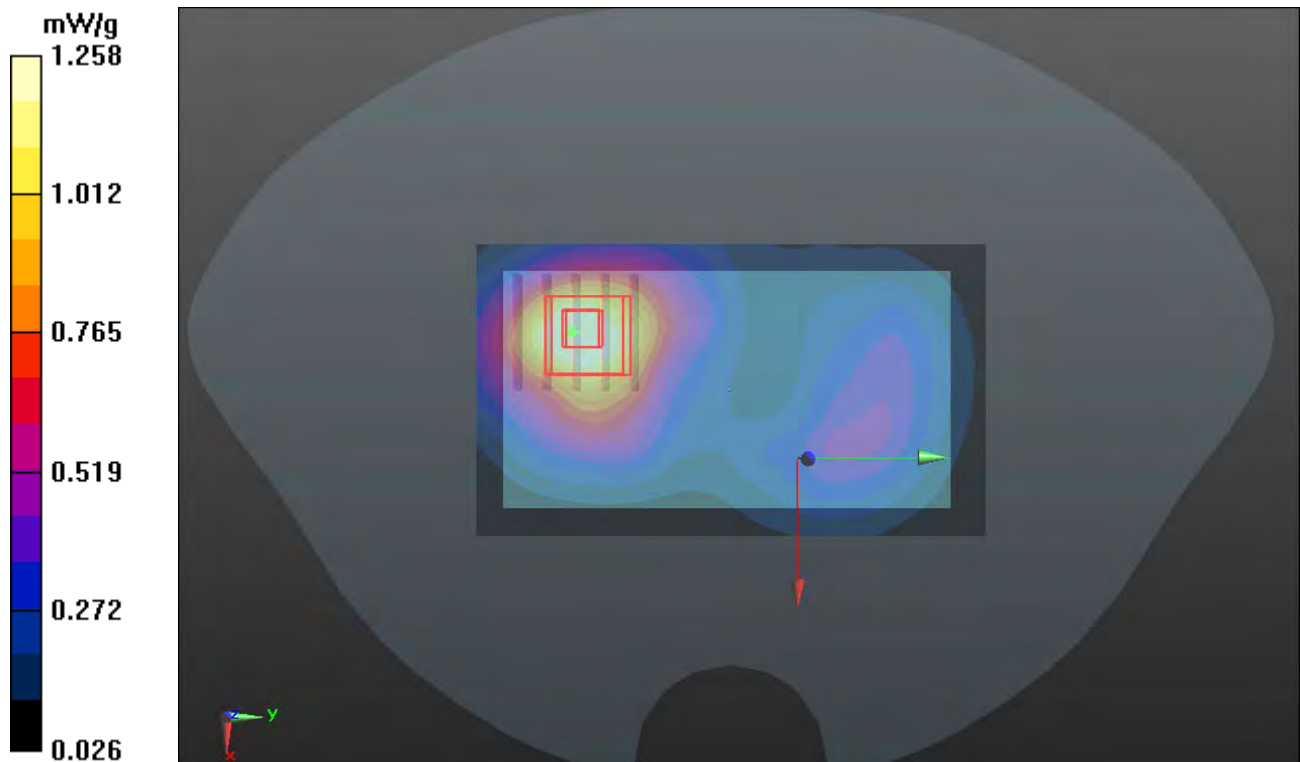
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.364 V/m; Power Drift = -0.04 dB

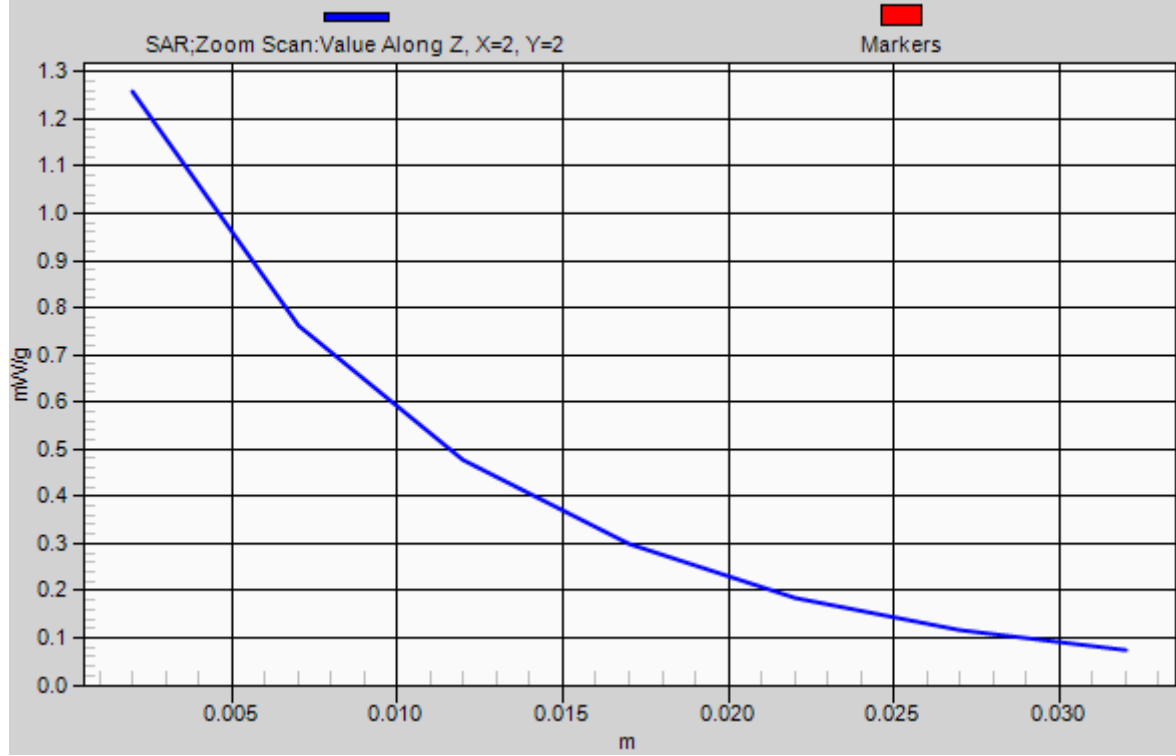
Peak SAR (extrapolated) = 1.545 W/kg

SAR(1 g) = 0.953 mW/g; SAR(10 g) = 0.583 mW/g

Maximum value of SAR (measured) = 1.258 mW/g



1g/10g Averaged SAR



P48 GSM1900_GPRS 12_Rear Face_1cm_Ch512

DUT: 111121C23

Communication System: GPRS12; Frequency: 1850.2 MHz; Duty Cycle: 1:1.99986

Medium: B1900_1213 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.499$ mho/m; $\epsilon_r = 53.251$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch512/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.307 mW/g

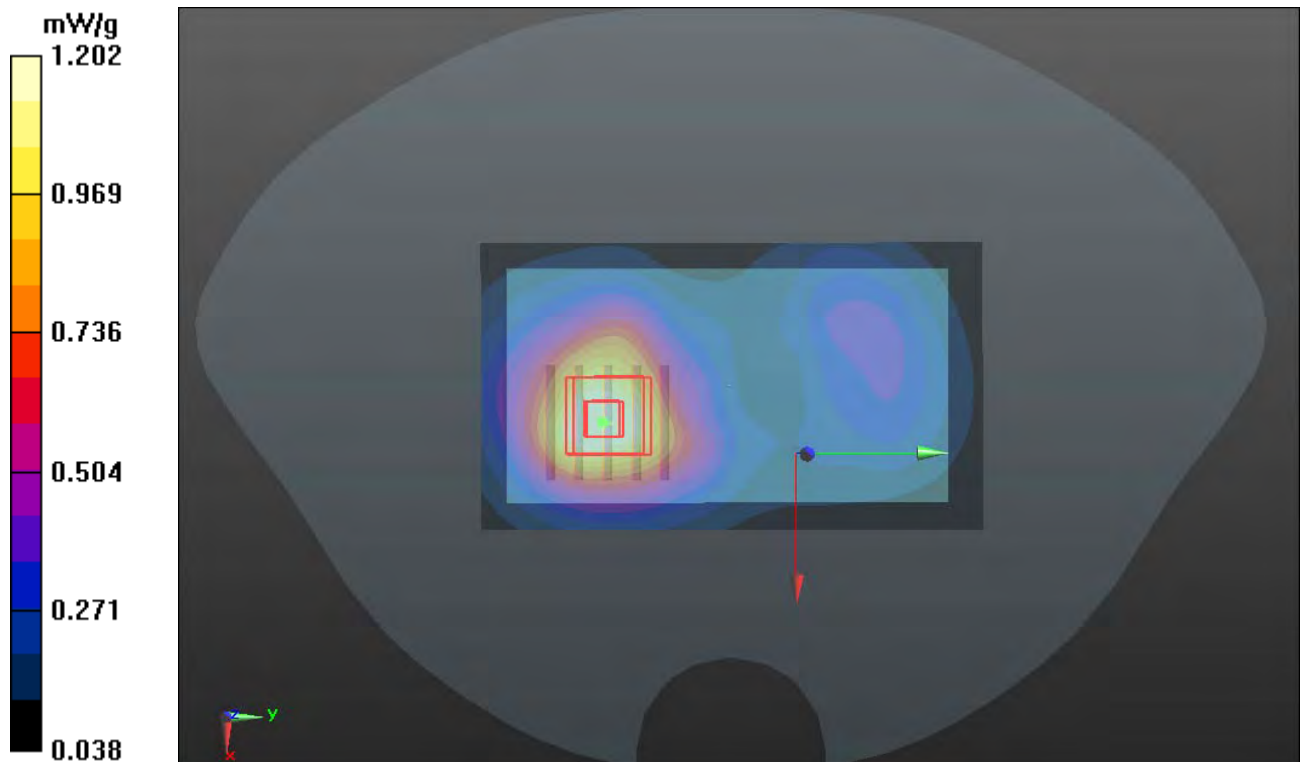
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.394 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 1.438 W/kg

SAR(1 g) = 0.935 mW/g; SAR(10 g) = 0.582 mW/g

Maximum value of SAR (measured) = 1.202 mW/g



P49 GSM1900_GPRS 12_Rear Face_1cm_Ch661

DUT: 111121C23

Communication System: GPRS12; Frequency: 1880 MHz; Duty Cycle: 1:1.99986

Medium: B1900_1213 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.532$ mho/m; $\epsilon_r = 53.124$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch661/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.308 mW/g

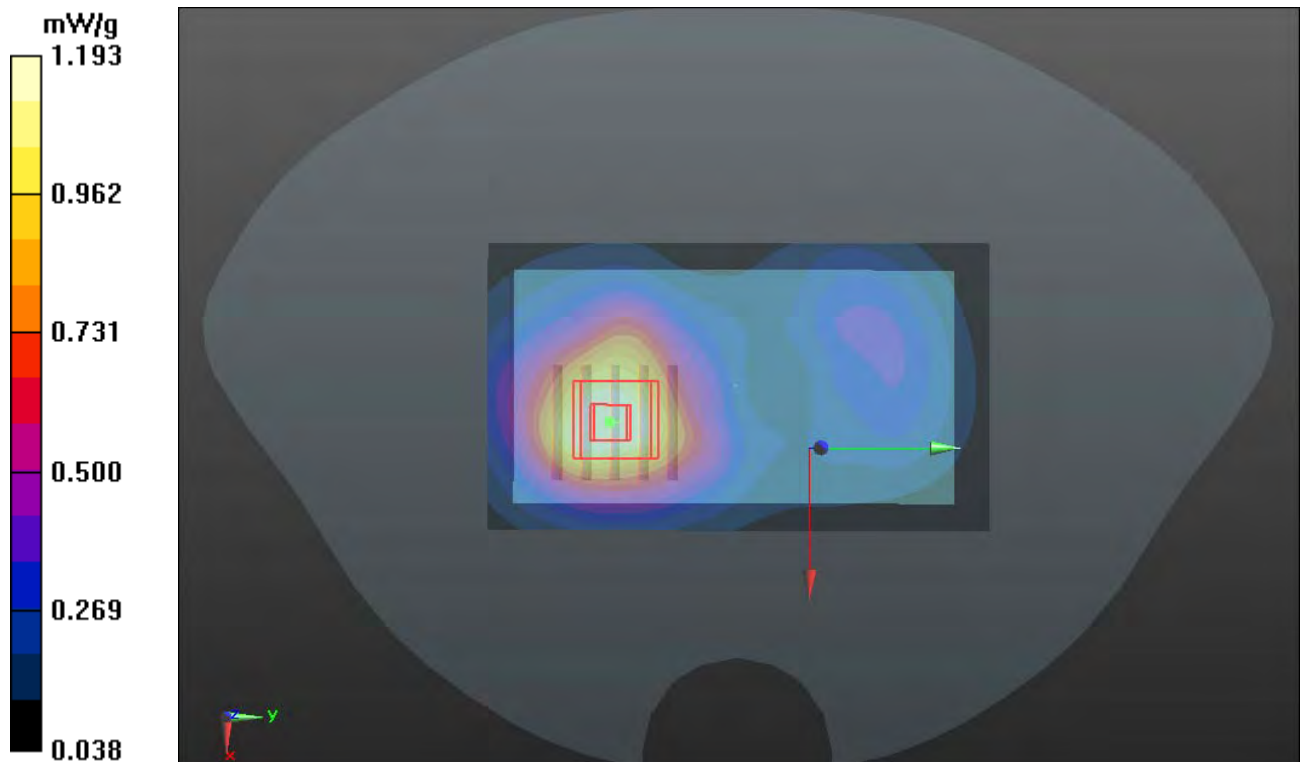
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.882 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.440 W/kg

SAR(1 g) = 0.922 mW/g; SAR(10 g) = 0.573 mW/g

Maximum value of SAR (measured) = 1.193 mW/g



P123 GSM1900_Front Face_1cm_Ch661

DUT: 11121C23

Communication System: GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium: B1900_0223 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 52.456$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.46, 7.46, 7.46); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch661/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.613 mW/g

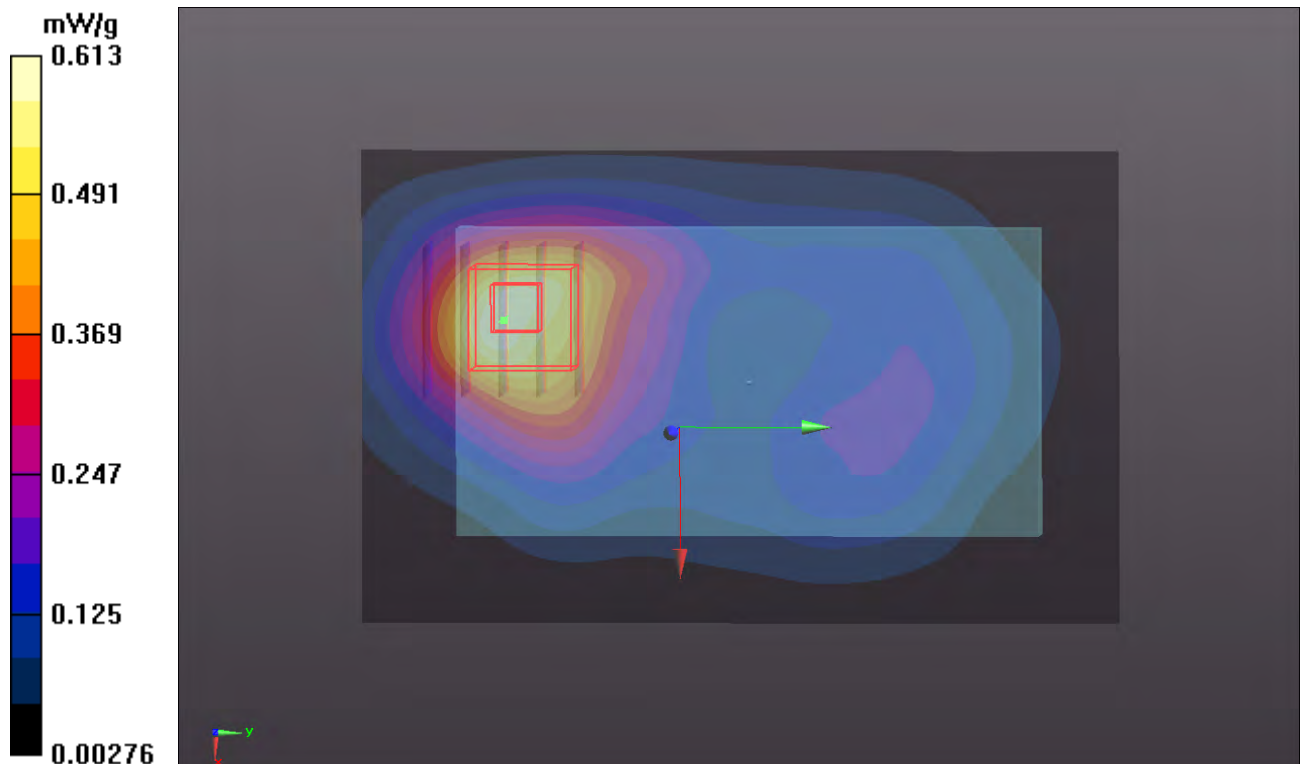
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.246 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.7510

SAR(1 g) = 0.463 mW/g; SAR(10 g) = 0.279 mW/g

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



P124 GSM1900_Rear Face_1cm_Ch661

DUT: 11121C23

Communication System: GSM; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium: B1900_0223 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 52.456$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.46, 7.46, 7.46); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch661/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.645 mW/g

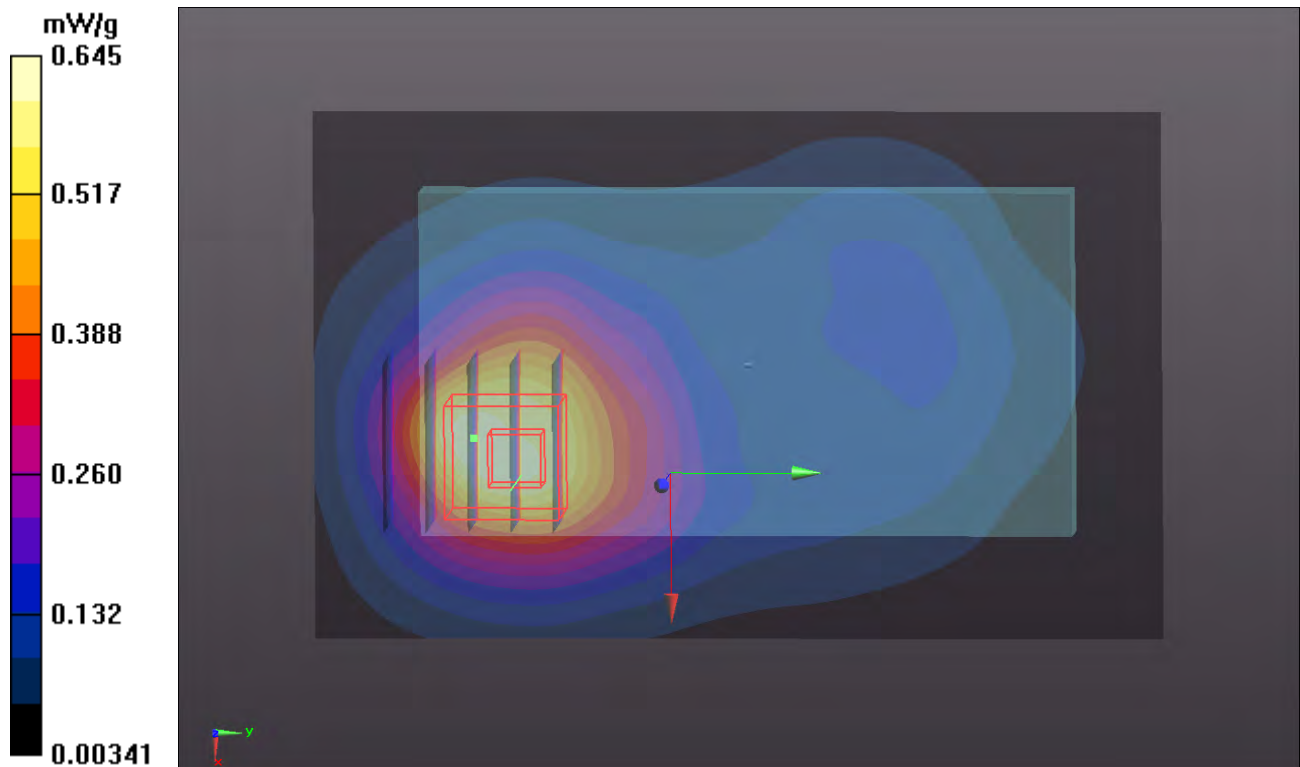
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.656 V/m; Power Drift = 0.0086 dB

Peak SAR (extrapolated) = 0.7600

SAR(1 g) = 0.479 mW/g; SAR(10 g) = 0.293 mW/g

Maximum value of SAR (measured) = 0.606 mW/g



P27 WCDMA V_RMC12.2K_Front Face_1cm_Ch4132

DUT: 111216C23

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: B835_1216 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.963$ mho/m; $\epsilon_r = 54.036$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.3 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(8.94, 8.94, 8.94); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch4132/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.468 mW/g

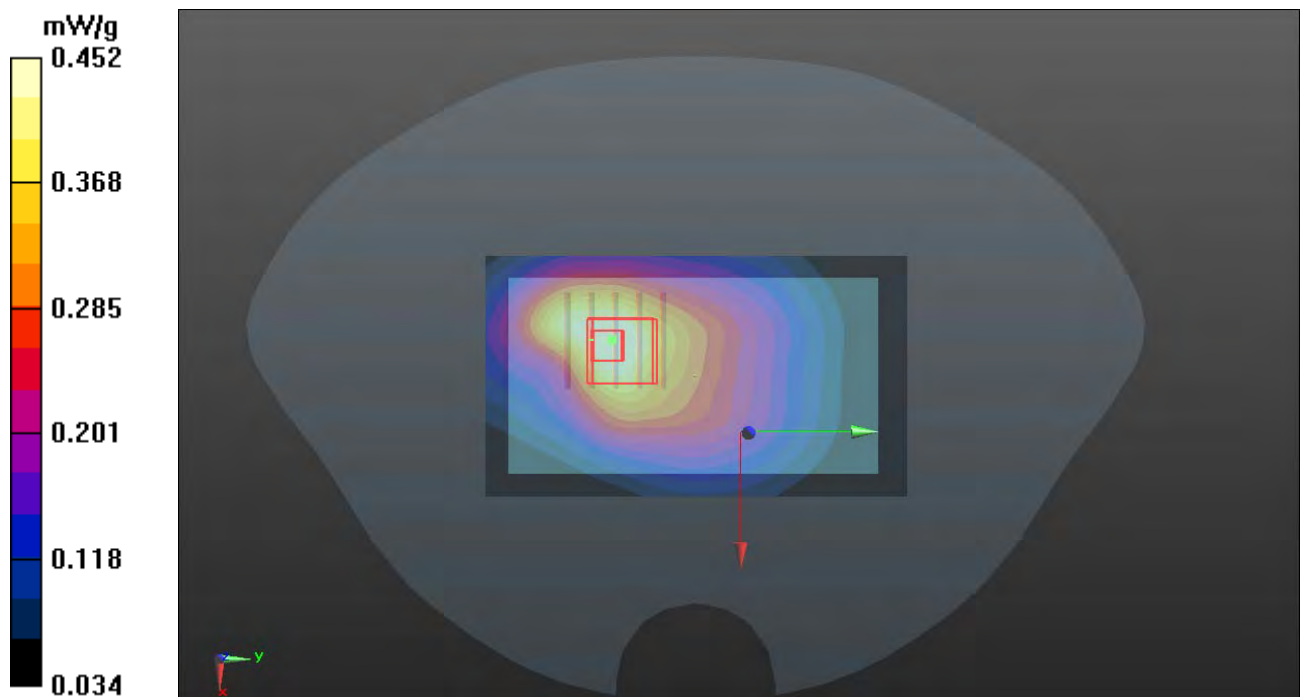
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.849 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.530 W/kg

SAR(1 g) = 0.377 mW/g; SAR(10 g) = 0.267 mW/g

Maximum value of SAR (measured) = 0.452 mW/g



P28 WCDMA V_RMC 12.2k_Rear Face_1cm_Ch4132

DUT: 111216C23

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: B835_1216 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.963$ mho/m; $\epsilon_r = 54.036$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(8.94, 8.94, 8.94); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch4132/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.730 mW/g

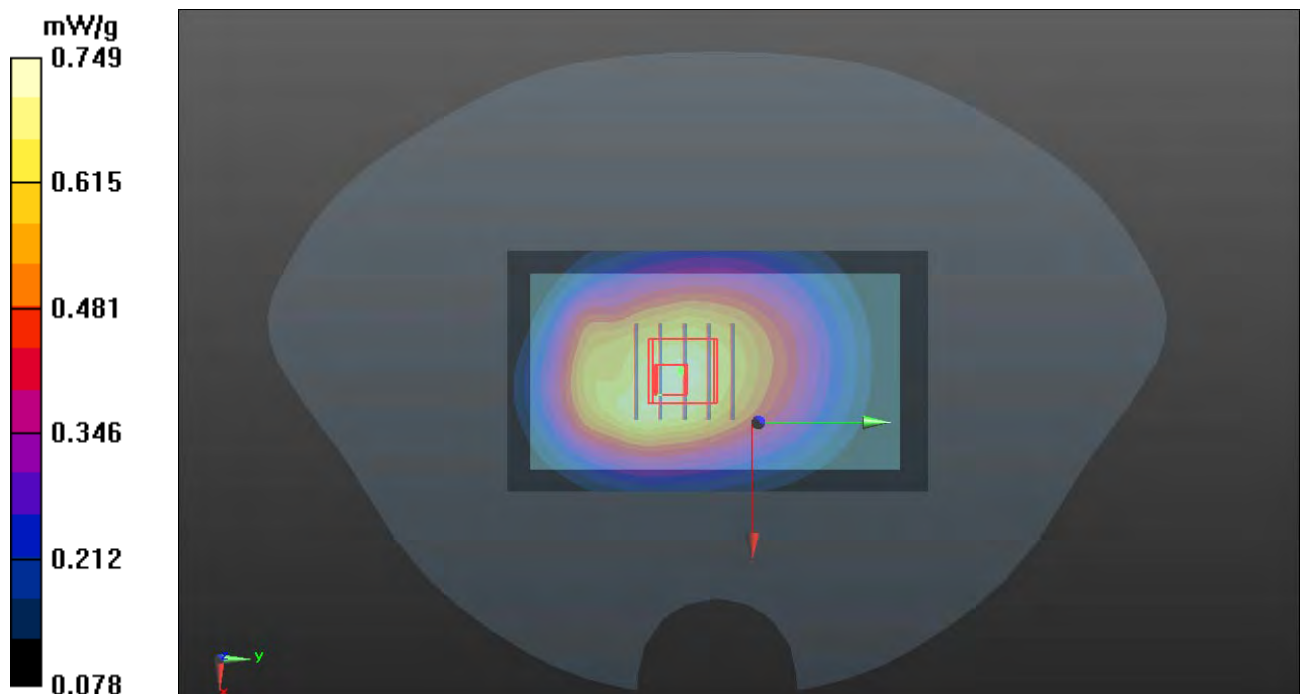
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.877 V/m; Power Drift = 0.0027 dB

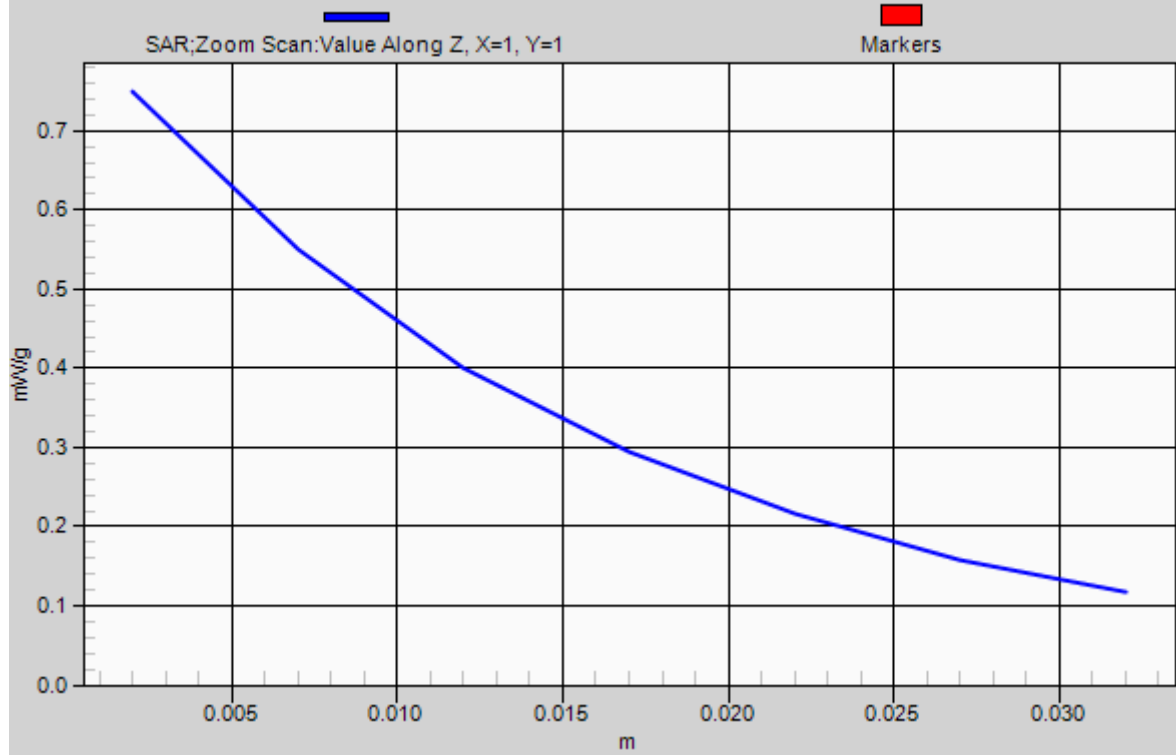
Peak SAR (extrapolated) = 0.848 W/kg

SAR(1 g) = 0.642 mW/g; SAR(10 g) = 0.472 mW/g

Maximum value of SAR (measured) = 0.749 mW/g



1g/10g Averaged SAR



P29 WCDMA V_RMC12.2K_Left Side_1cm_4132

DUT: 111216C23

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: B835_1216 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.963$ mho/m; $\epsilon_r = 54.036$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(8.94, 8.94, 8.94); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch4132/Area Scan (31x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.400 mW/g

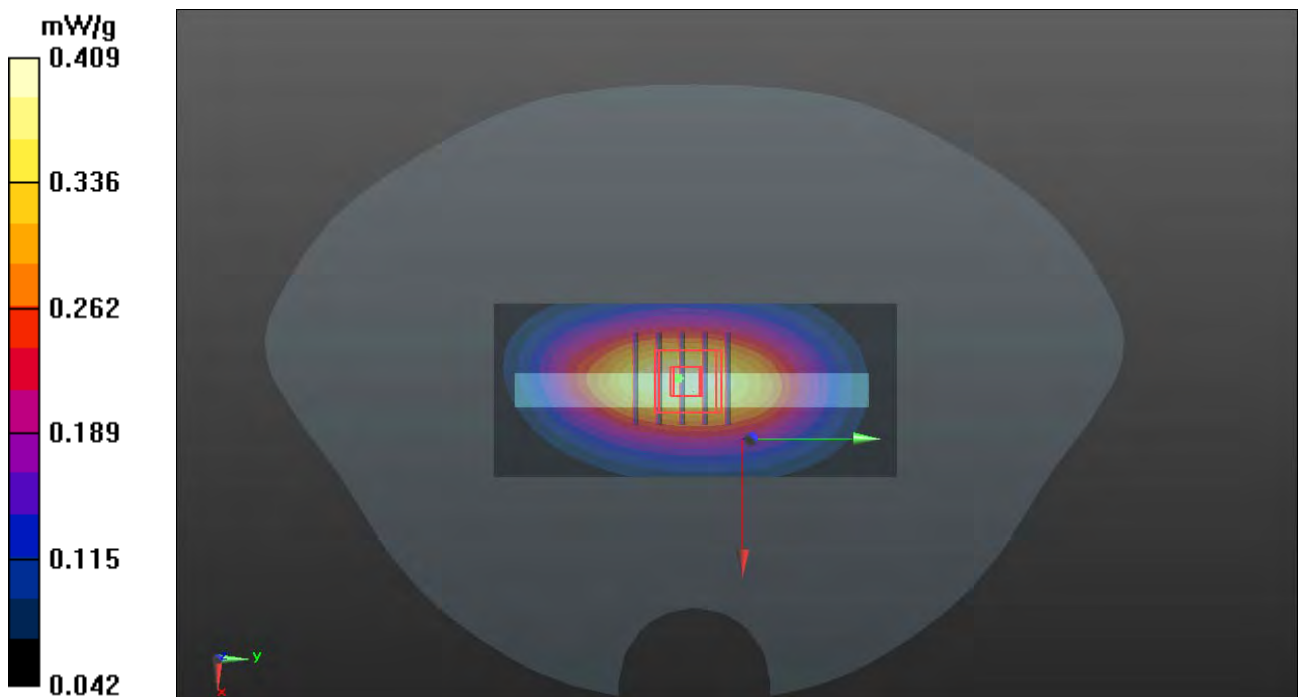
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.016 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.472 W/kg

SAR(1 g) = 0.336 mW/g; SAR(10 g) = 0.232 mW/g

Maximum value of SAR (measured) = 0.409 mW/g



P30 WCDMA V_RMC 12.2k_Right Side_1cm_Ch4132

DUT: 111216C23

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: B835_1216 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.963$ mho/m; $\epsilon_r = 54.036$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1°C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(8.94, 8.94, 8.94); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch4132/Area Scan (31x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.400 mW/g

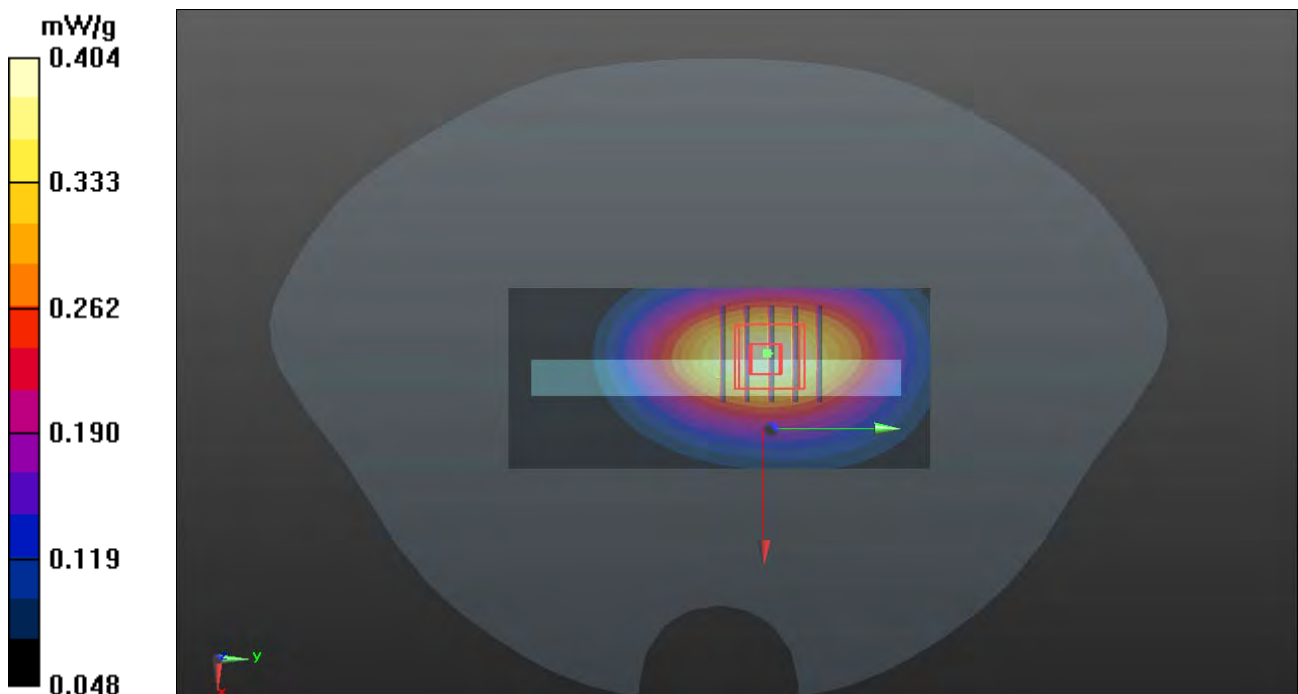
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.374 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.466 W/kg

SAR(1 g) = 0.332 mW/g; SAR(10 g) = 0.231 mW/g

Maximum value of SAR (measured) = 0.404 mW/g



P32 WCDMA V_RMC 12.2k_Bottom Side_1cm_Ch4132

DUT: 111216C23

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: B835_1216 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.963$ mho/m; $\epsilon_r = 54.036$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(8.94, 8.94, 8.94); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch4132/Area Scan (41x61x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.067 mW/g

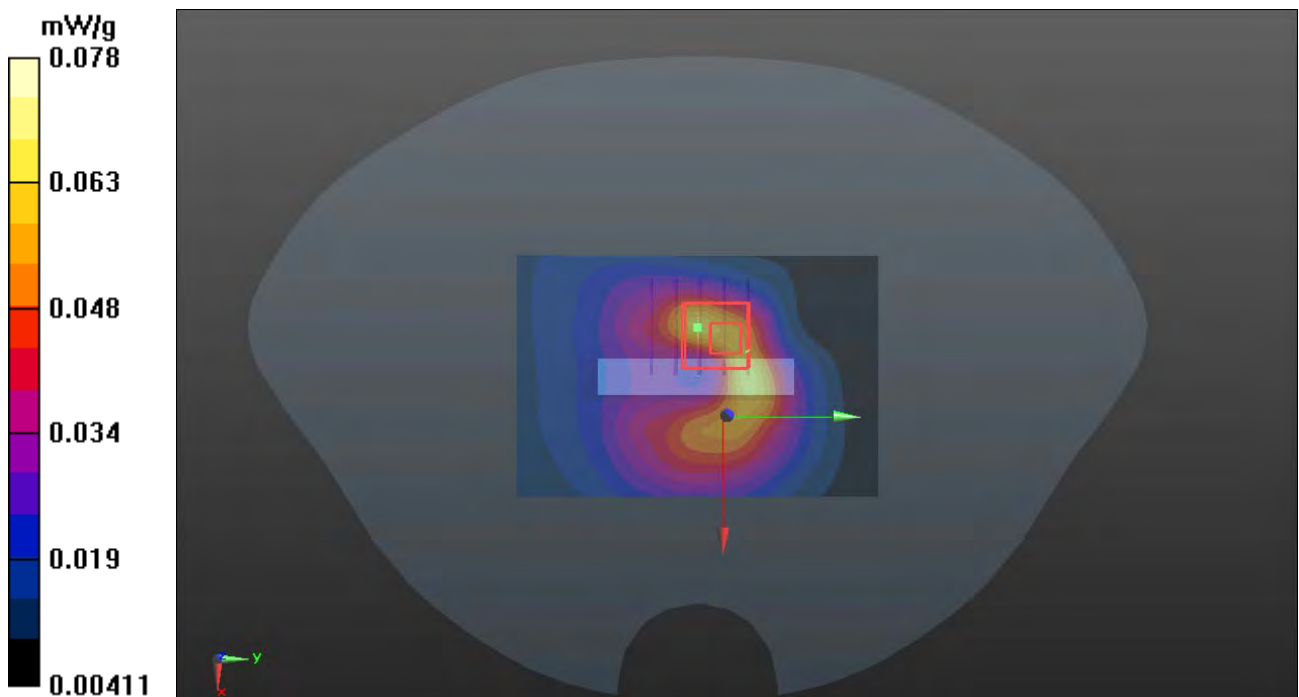
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.448 V/m; Power Drift = 0.21 dB

Peak SAR (extrapolated) = 0.102 W/kg

SAR(1 g) = 0.060 mW/g; SAR(10 g) = 0.035 mW/g

Maximum value of SAR (measured) = 0.078 mW/g



P33 WCDMA V_RMC 12.2k_Rear Face_1cm_Ch4132V

DUT: 111216C23

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: B835_1216 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.963$ mho/m; $\epsilon_r = 54.036$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.8 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(8.94, 8.94, 8.94); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch4132/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.326 mW/g

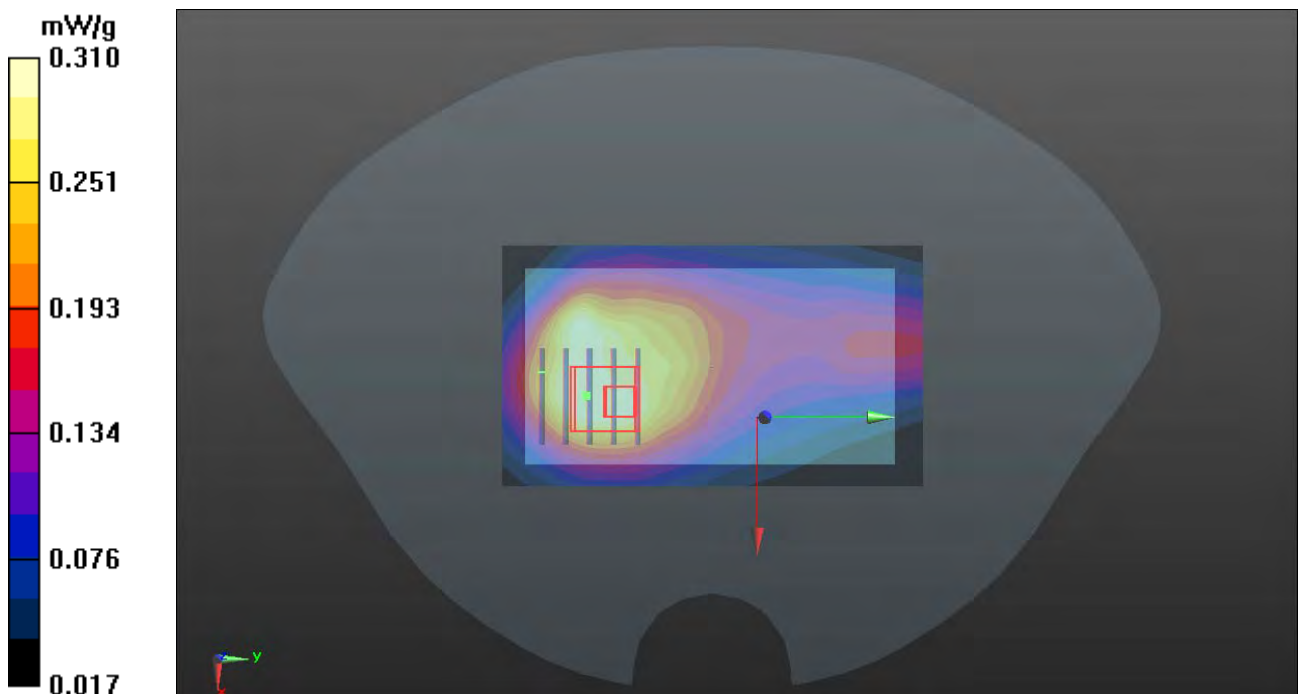
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.237 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.381 W/kg

SAR(1 g) = 0.233 mW/g; SAR(10 g) = 0.144 mW/g

Maximum value of SAR (measured) = 0.310 mW/g



P38 WCDMA II_RMC 12.2k_Front Face_1cm_Ch9262

DUT: 111121C23

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.502$ mho/m; $\epsilon_r = 53.24$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9262/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.287 mW/g

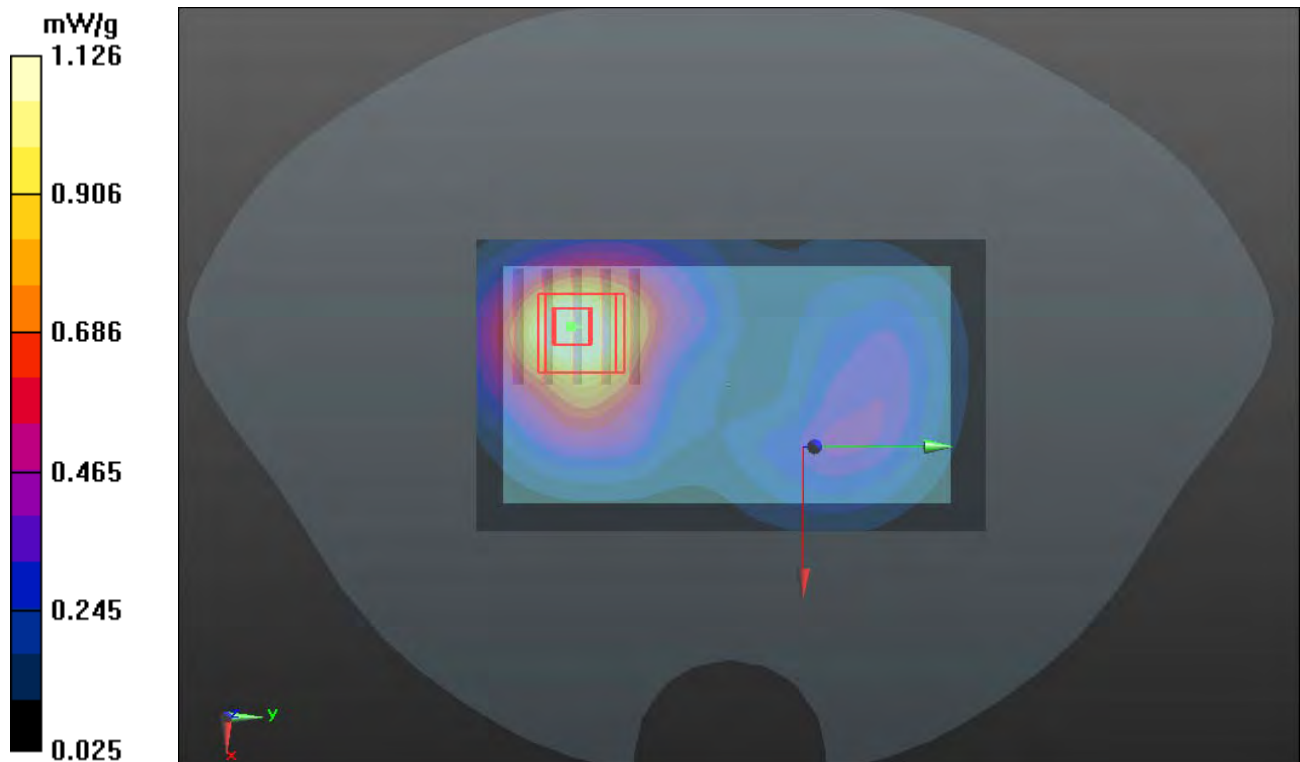
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.579 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.380 W/kg

SAR(1 g) = 0.858 mW/g; SAR(10 g) = 0.526 mW/g

Maximum value of SAR (measured) = 1.126 mW/g



P39 WCDMA II_RMC 12.2k_Rear Face_1cm_Ch9262

DUT: 111121C23

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.502$ mho/m; $\epsilon_r = 53.24$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9262/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.155 mW/g

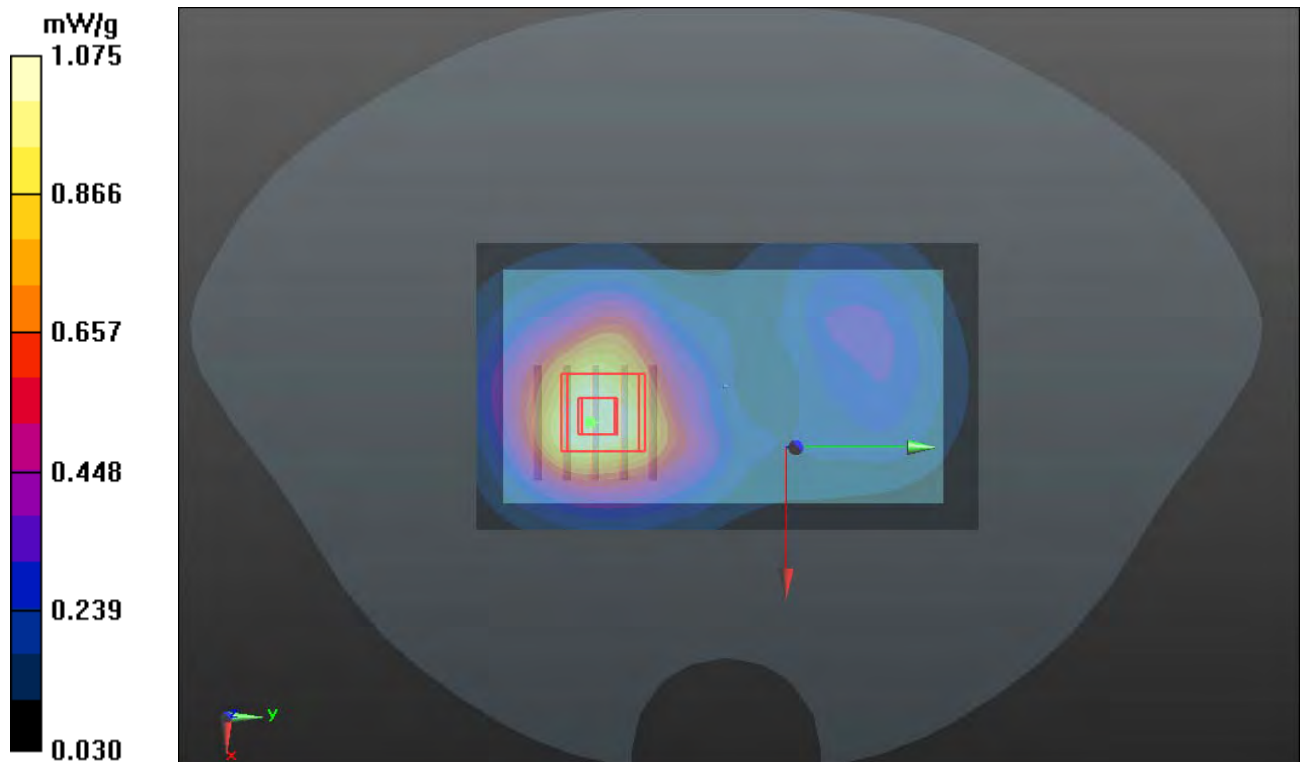
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.996 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.298 W/kg

SAR(1 g) = 0.832 mW/g; SAR(10 g) = 0.517 mW/g

Maximum value of SAR (measured) = 1.075 mW/g



P40 WCDMA II_RMC 12.2k_Left Side_1cm_Ch9262

DUT: 111121C23

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.502$ mho/m; $\epsilon_r = 53.24$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9262/Area Scan (31x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.442 mW/g

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.390 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.546 W/kg

SAR(1 g) = 0.337 mW/g; SAR(10 g) = 0.201 mW/g

Maximum value of SAR (measured) = 0.447 mW/g

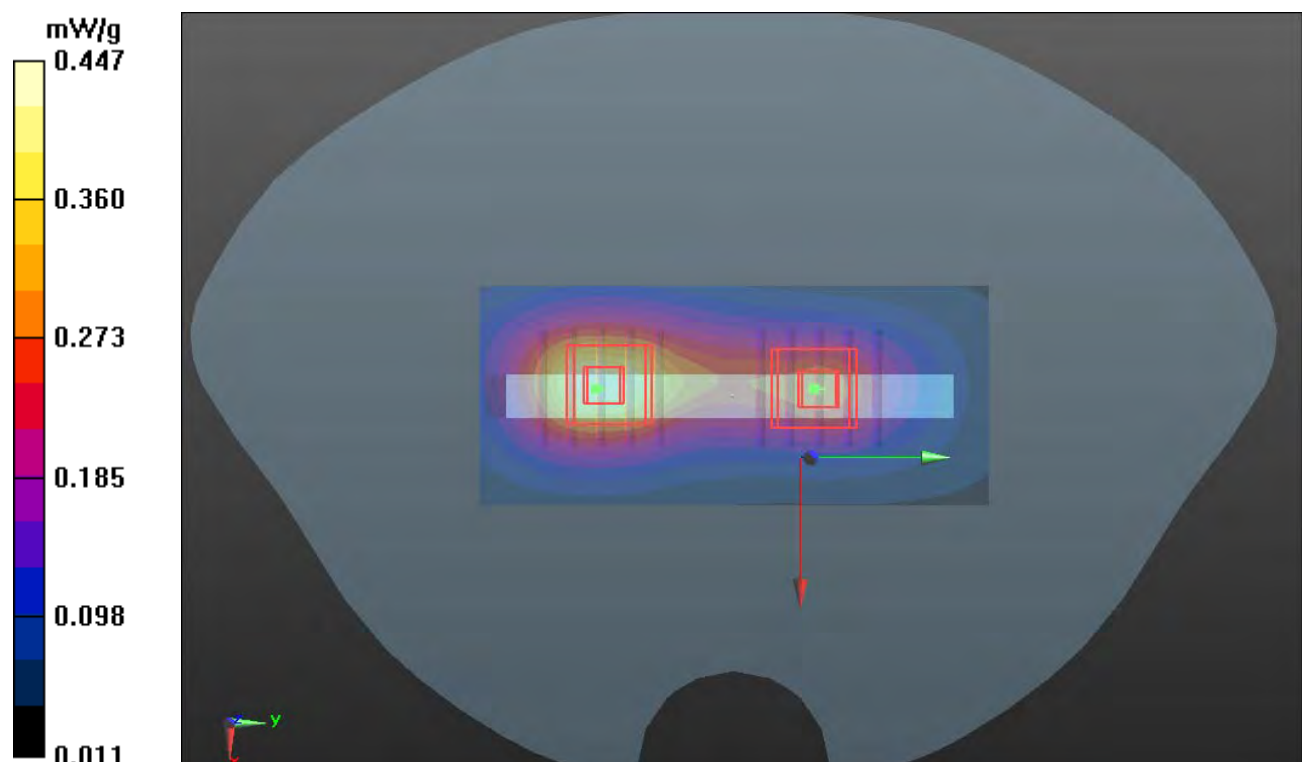
Ch9262/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.390 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.377 W/kg

SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.143 mW/g

Maximum value of SAR (measured) = 0.311 mW/g



P41 WCDMA II_RMC 12.2k_Right Side_1cm_Ch9262

DUT: 111121C23

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.502$ mho/m; $\epsilon_r = 53.24$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.3 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9262/Area Scan (31x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.309 mW/g

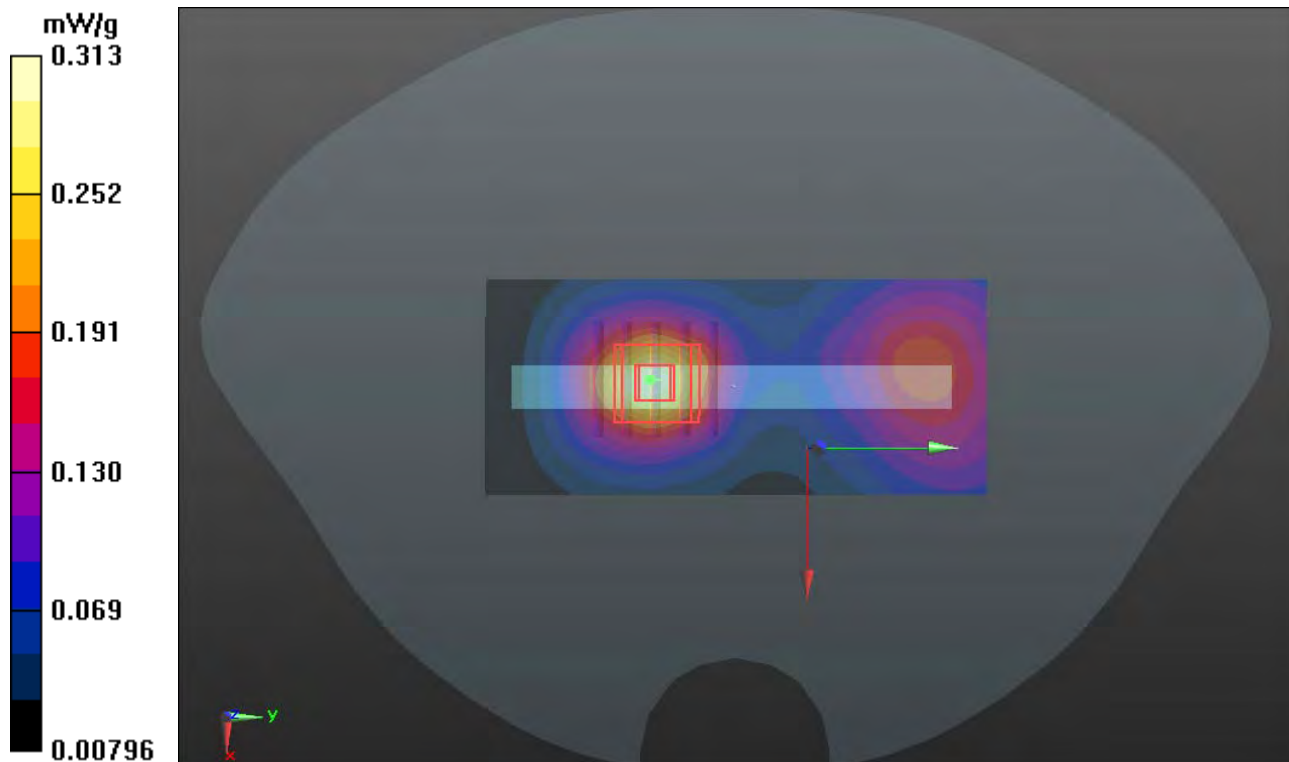
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.966 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.381 W/kg

SAR(1 g) = 0.236 mW/g; SAR(10 g) = 0.138 mW/g

Maximum value of SAR (measured) = 0.313 mW/g



P43 WCDMA II_RMC 12.2k_Bottom Side_1cm_Ch9262

DUT: 111121C23

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used : $f = 1852.4$ MHz; $\sigma = 1.502$ mho/m; $\epsilon_r = 53.24$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9262/Area Scan (41x61x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.443 mW/g

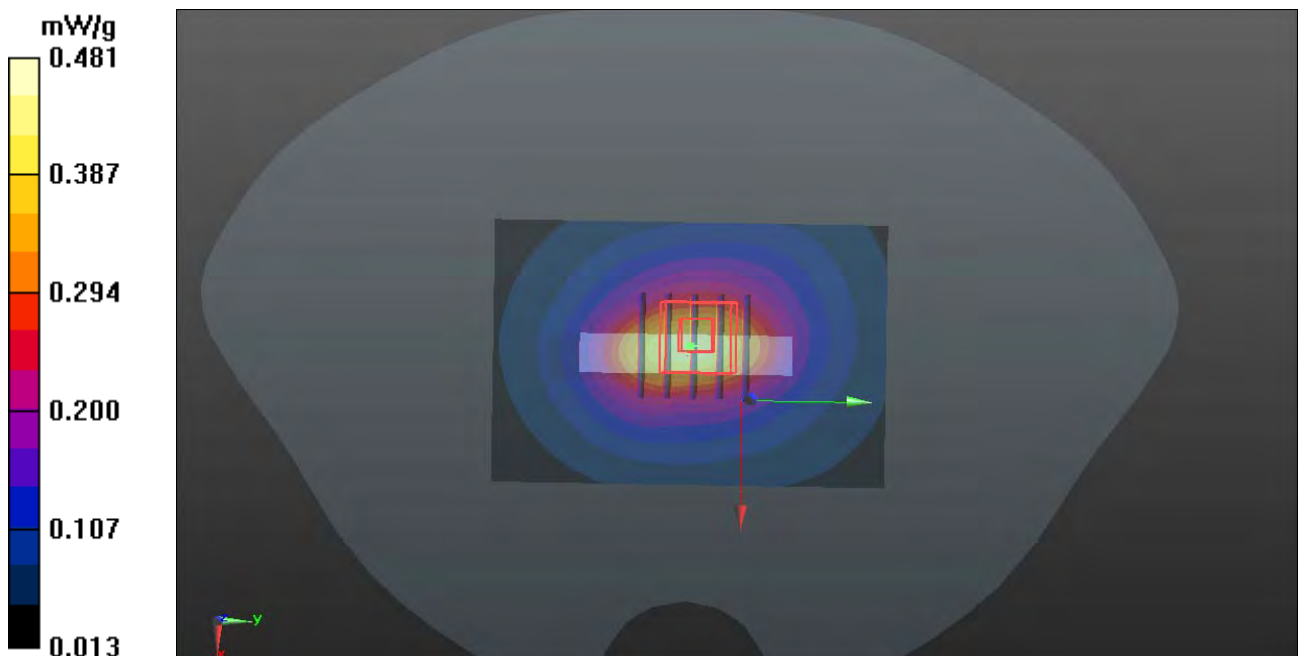
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.399 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.625 W/kg

SAR(1 g) = 0.389 mW/g; SAR(10 g) = 0.224 mW/g

Maximum value of SAR (measured) = 0.481 mW/g



P44 WCDMA II_RMC 12.2k_Front Face_1cm_Ch9262V

DUT: 111121C23

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used : $f = 1852.4$ MHz; $\sigma = 1.502$ mho/m; $\epsilon_r = 53.24$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9262/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.226 mW/g

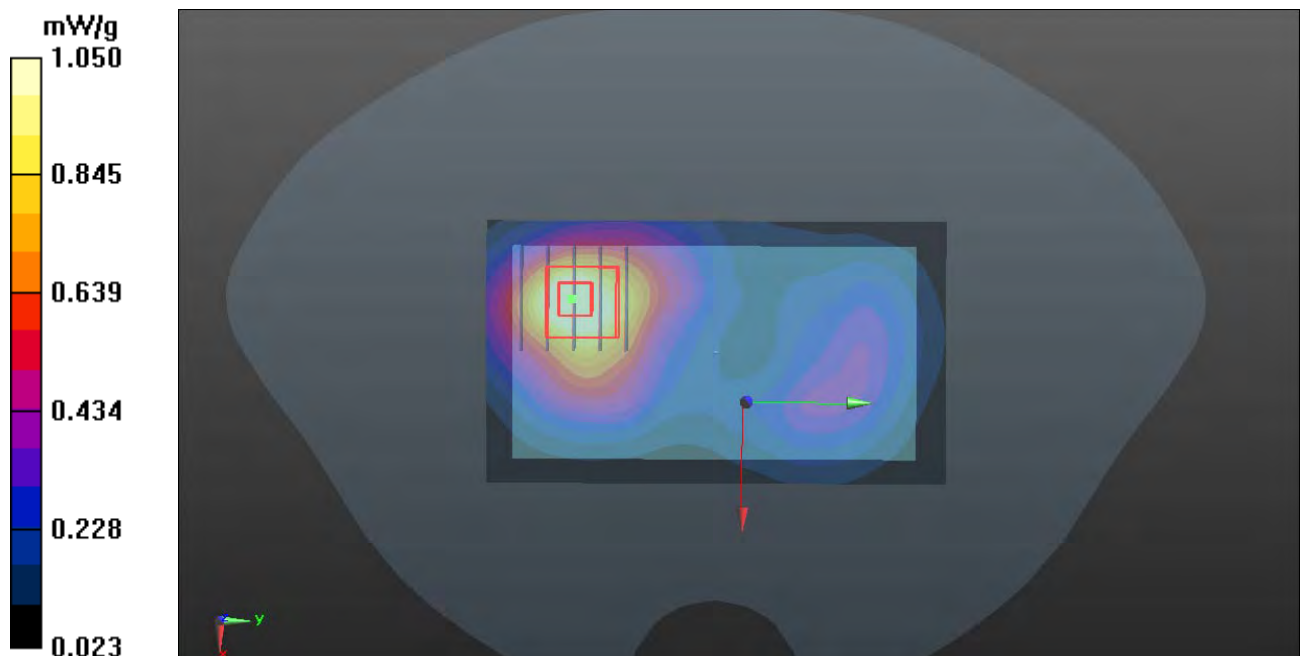
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.103 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.284 W/kg

SAR(1 g) = 0.798 mW/g; SAR(10 g) = 0.493 mW/g

Maximum value of SAR (measured) = 1.050 mW/g



P50 WCDMA II_RMC 12.2k_Front Face_1cm_Ch9400

DUT: 111121C23

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.532$ mho/m; $\epsilon_r = 53.124$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9400/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.294 mW/g

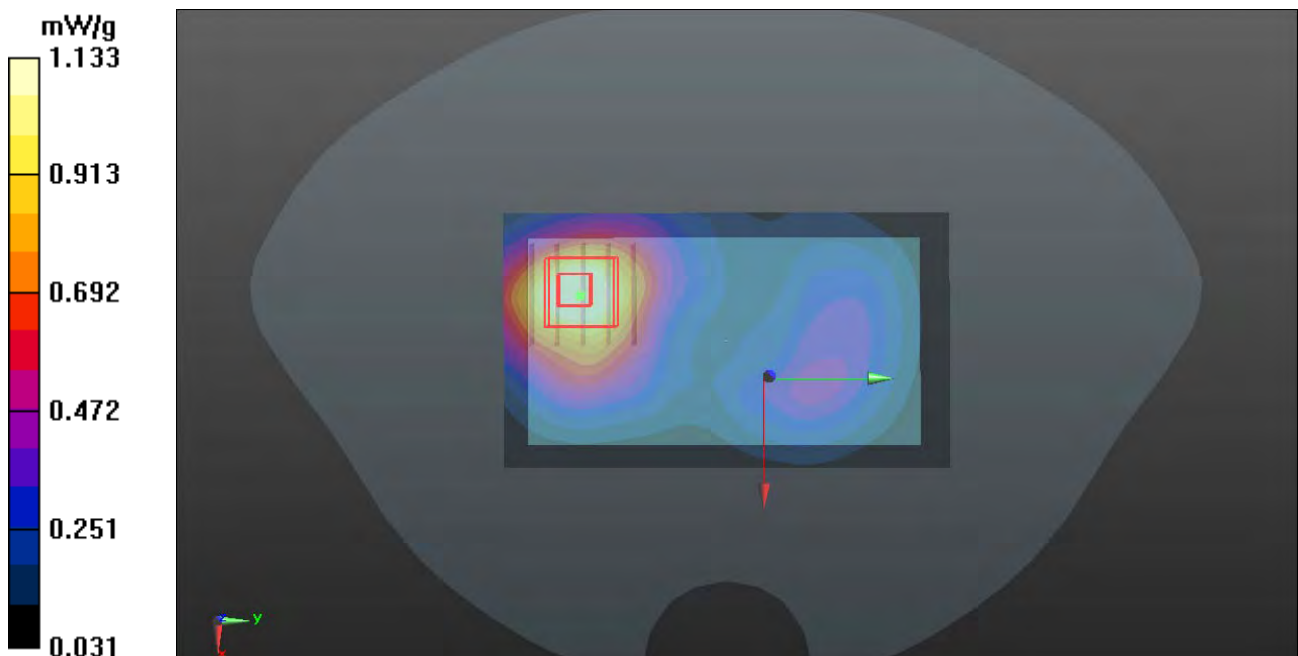
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.585 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.432 W/kg

SAR(1 g) = 0.885 mW/g; SAR(10 g) = 0.541 mW/g

Maximum value of SAR (measured) = 1.133 mW/g



P51 WCDMA II_RMC 12.2k_Front Face_1cm_Ch9538

DUT: 111121C23

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.562$ mho/m; $\epsilon_r = 53.017$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9538/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.946 mW/g

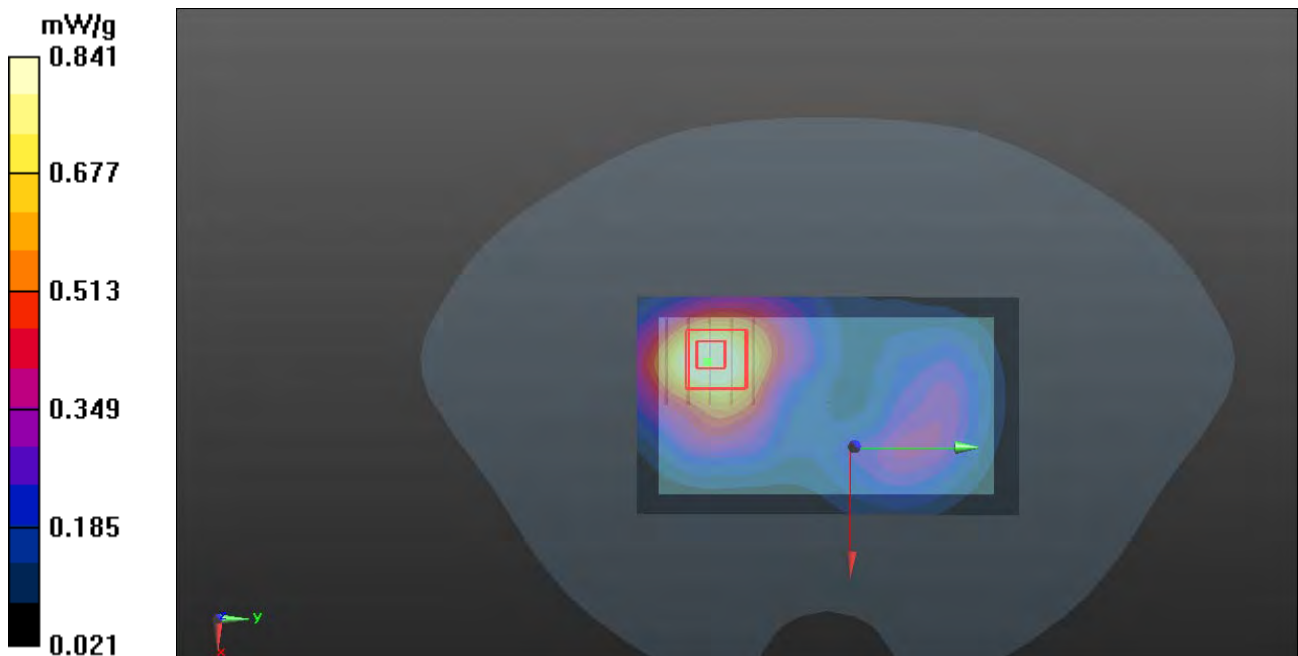
Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.373 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.056 W/kg

SAR(1 g) = 0.652 mW/g; SAR(10 g) = 0.399 mW/g

Maximum value of SAR (measured) = 0.841 mW/g



P52 WCDMA II_RMC 12.2k_Rear Face_1cm_Ch9400

DUT: 111121C23

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.532$ mho/m; $\epsilon_r = 53.124$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9400/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.274 mW/g

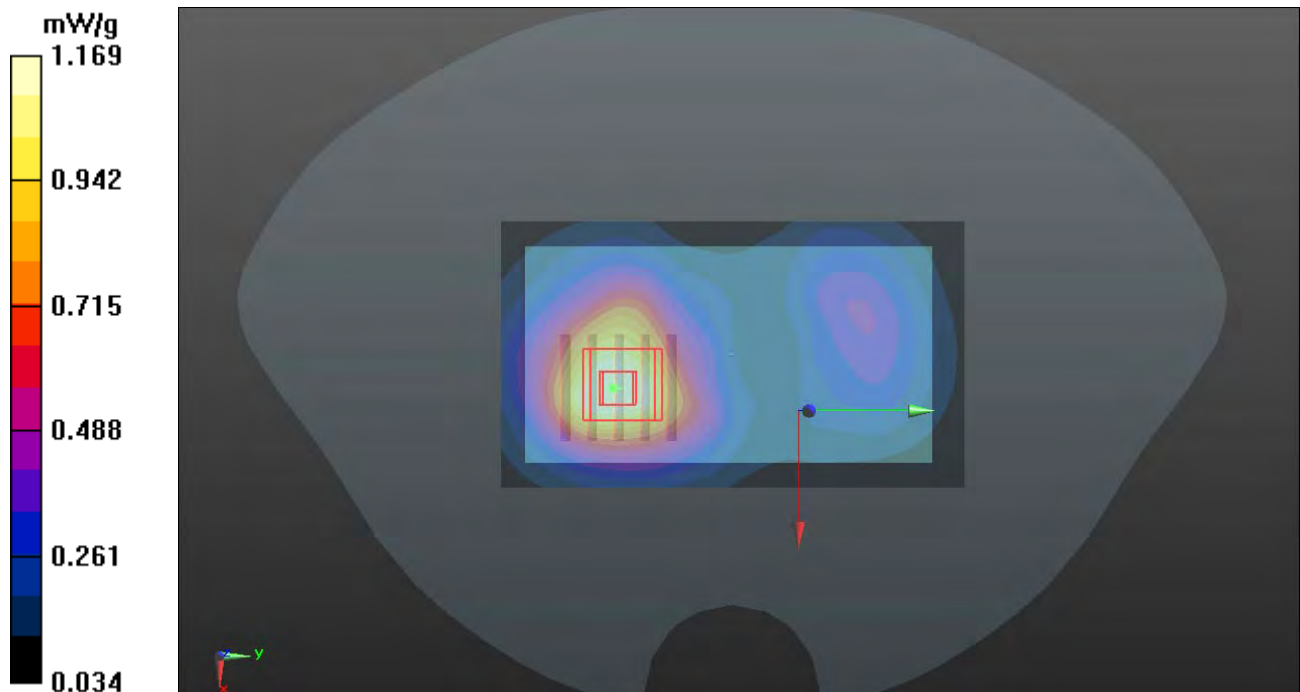
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.911 V/m; Power Drift = -0.05 dB

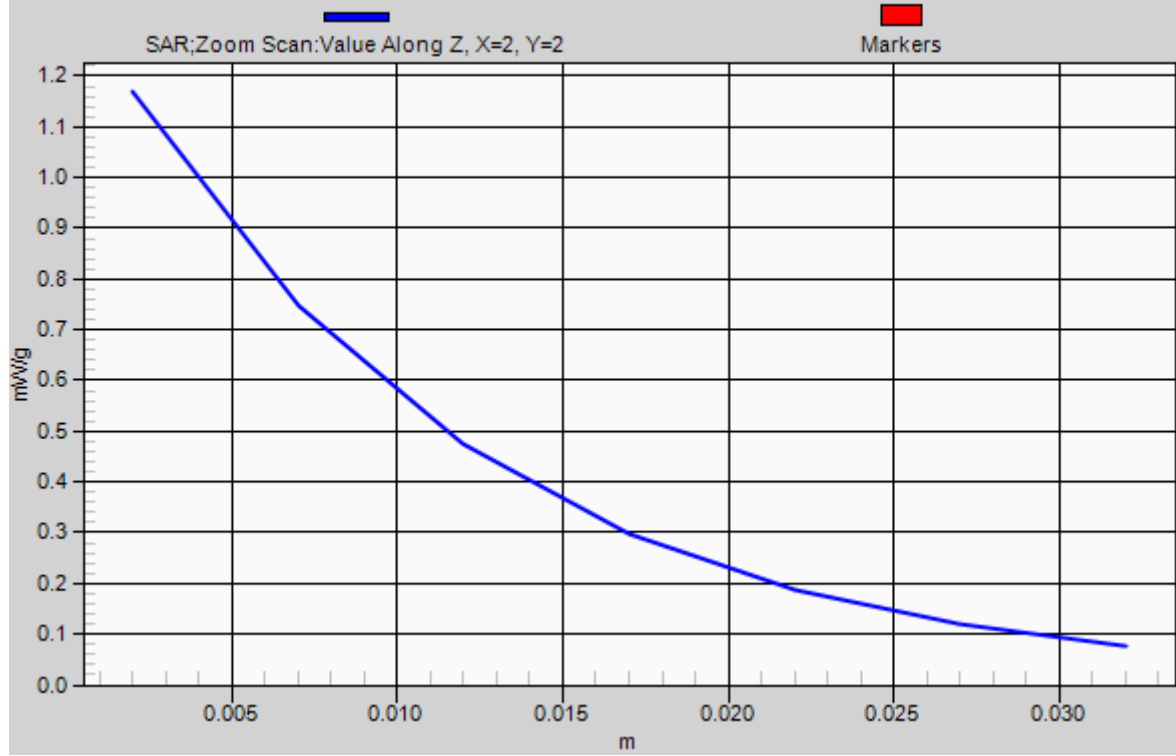
Peak SAR (extrapolated) = 1.417 W/kg

SAR(1 g) = 0.902 mW/g; SAR(10 g) = 0.557 mW/g

Maximum value of SAR (measured) = 1.169 mW/g



1g/10g Averaged SAR



P53 WCDMA II_RMC 12.2k_Rear Face_1cm_Ch9538

DUT: 111121C23

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: B1900_1213 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.562$ mho/m; $\epsilon_r = 53.017$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3800; ConvF(6.97, 6.97, 6.97); Calibrated: 2011/08/05
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Front; Type: SAM; Serial: TP-1485
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

Ch9538/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 1.094 mW/g

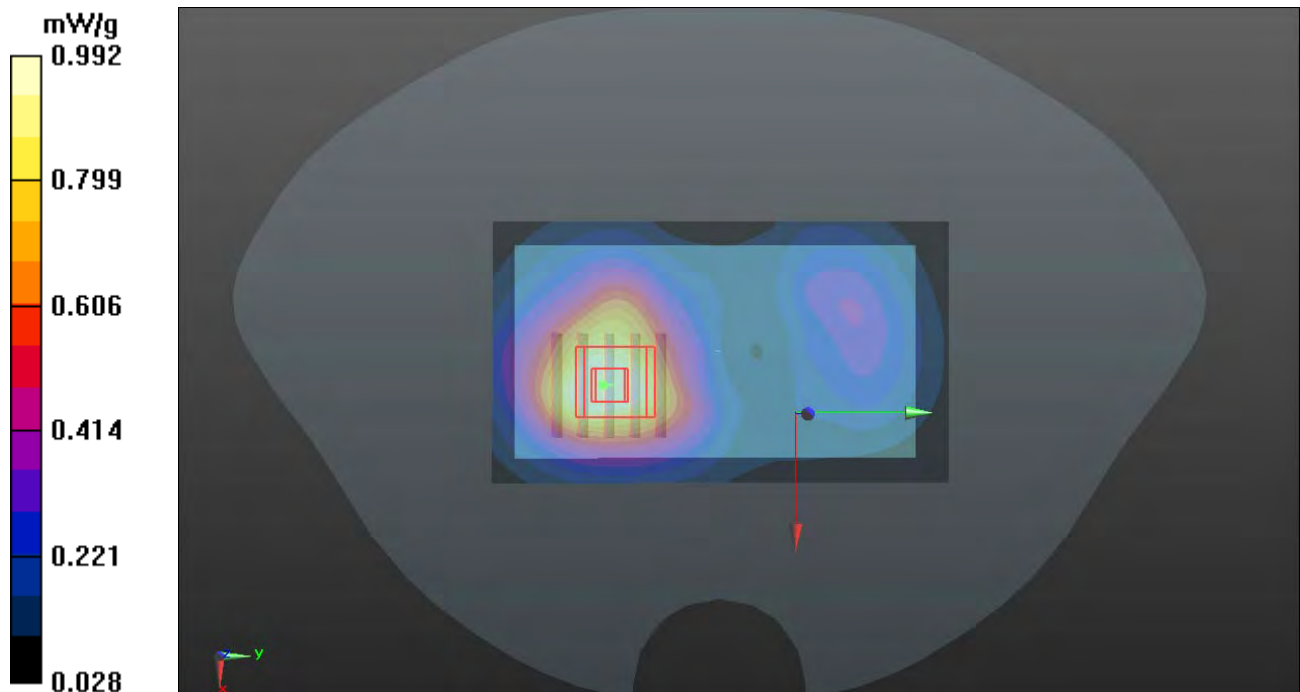
Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.337 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.205 W/kg

SAR(1 g) = 0.762 mW/g; SAR(10 g) = 0.471 mW/g

Maximum value of SAR (measured) = 0.992 mW/g



P100 802.11n_HT20_Right Cheek_Ch01

DUT: 111121C23

Communication System: 802.11n_20MHz; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: H2450_0103 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.8$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.7 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.8, 6.8, 6.8); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch01/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.067 mW/g

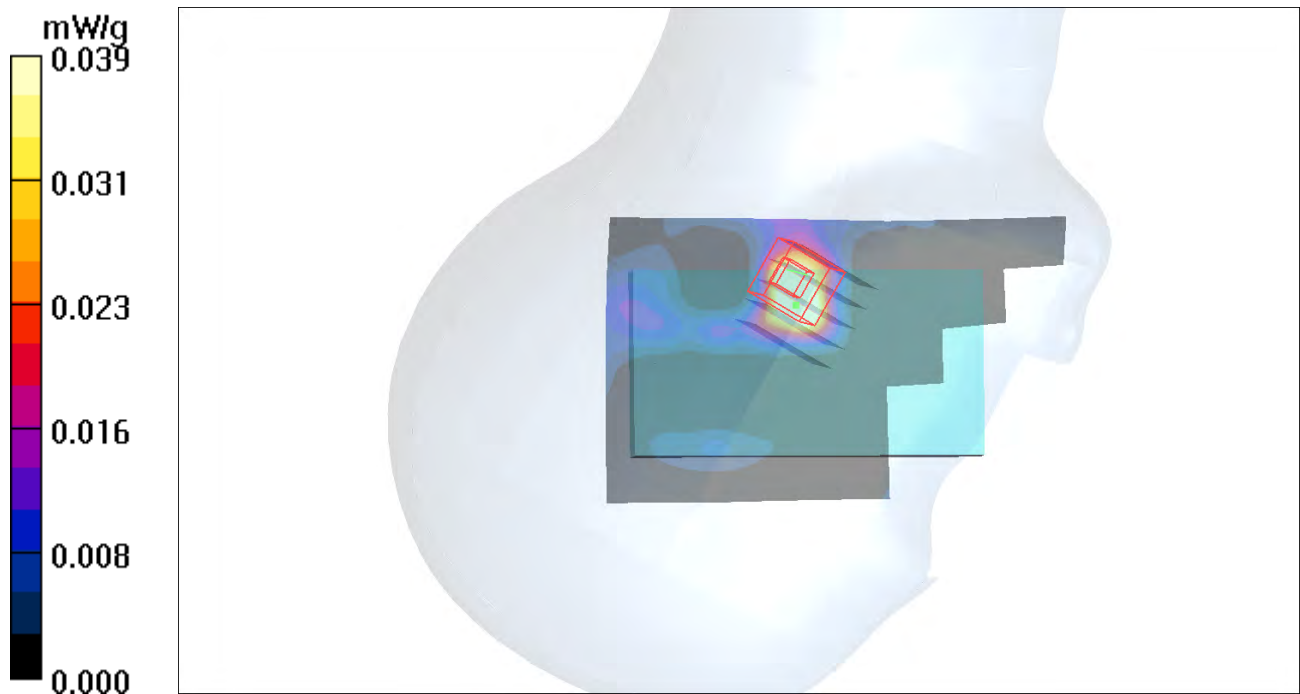
Ch01/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.72 V/m; Power Drift = 0.144 dB

Peak SAR (extrapolated) = 0.068 W/kg

SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.015 mW/g

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



P101 802.11n_HT20_Right Tilted_Ch01

DUT: 111121C23

Communication System: 802.11n_20MHz; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: H2450_0103 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.8$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.7 °C; Liquid Temperature : 20.7 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.8, 6.8, 6.8); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch01/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.030 mW/g

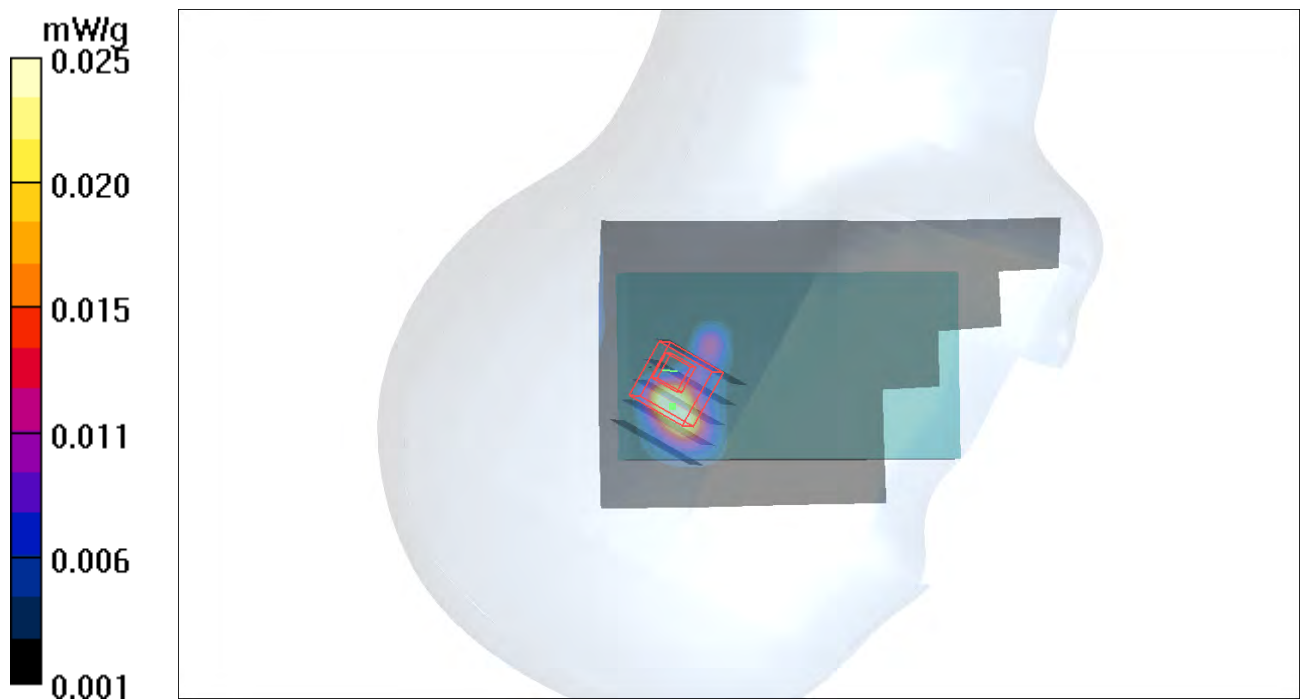
Ch01/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.34 V/m; Power Drift = 0.163 dB

Peak SAR (extrapolated) = 0.043 W/kg

SAR(1 g) = 0.017 mW/g; SAR(10 g) = 0.0087 mW/g

Maximum value of SAR (measured) = 0.025 mW/g



P102 802.11n_HT20_Left Cheek_Ch01

DUT: 111121C23

Communication System: 802.11n_20MHz; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: H2450_0103 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.8$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C ; Liquid Temperature : 20.7 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.8, 6.8, 6.8); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch01/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.072 mW/g

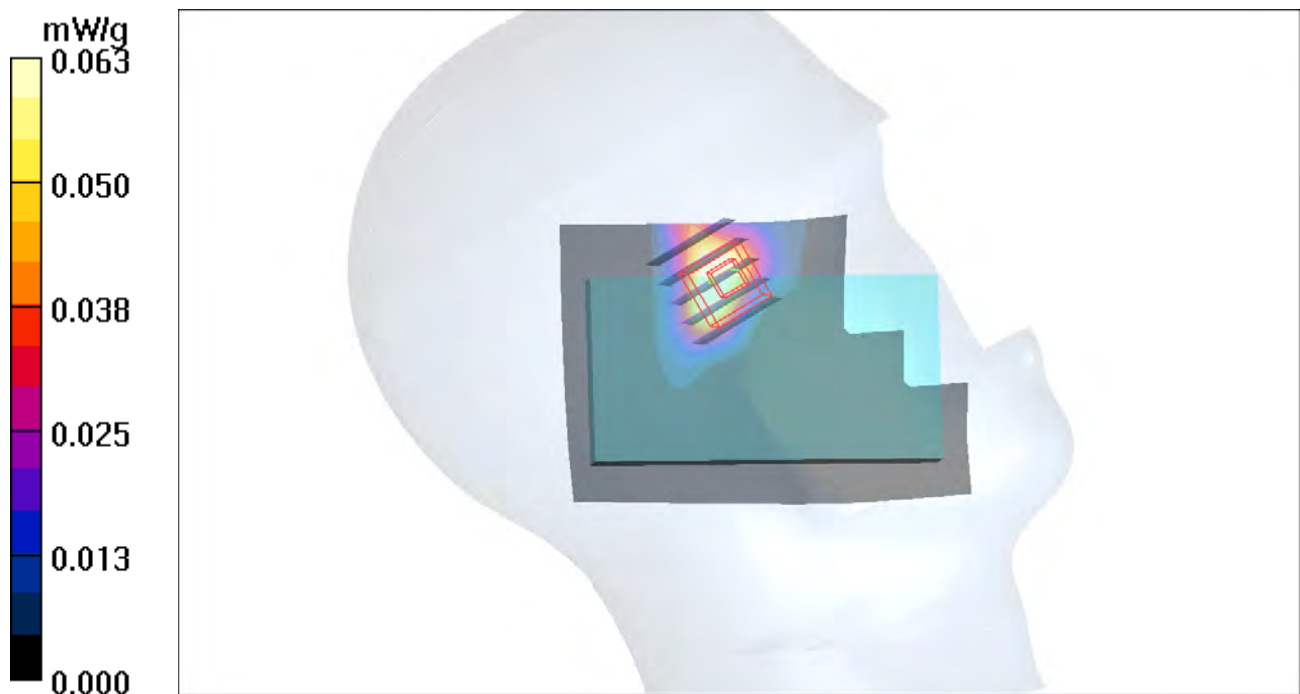
Ch01/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.21 V/m; Power Drift = 0.041 dB

Peak SAR (extrapolated) = 0.088 W/kg

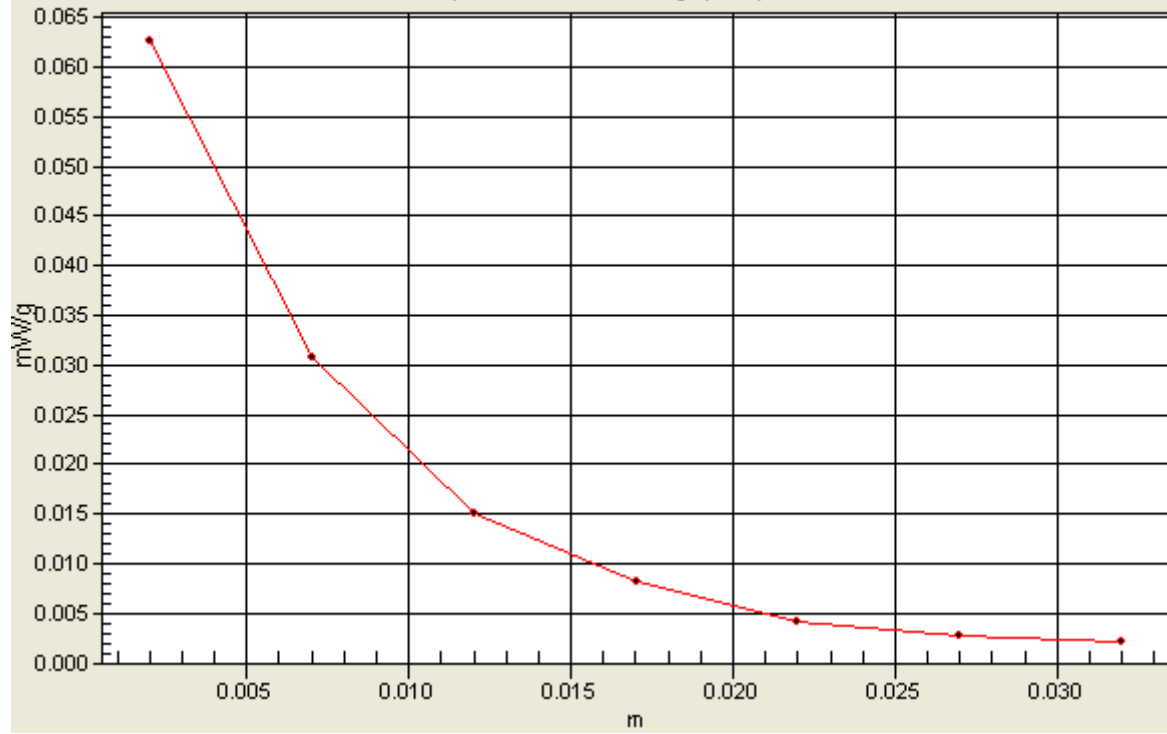
SAR(1 g) = 0.040 mW/g; SAR(10 g) = 0.019 mW/g

Maximum value of SAR (measured) = 0.063 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=1, Y=2



P103 802.11n_HT20_Left Tilted_Ch01

DUT: 111121C23

Communication System: 802.11n_20MHz; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: H2450_0103 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.8$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.7 °C; Liquid Temperature : 20.7 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.8, 6.8, 6.8); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch01/Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.068 mW/g

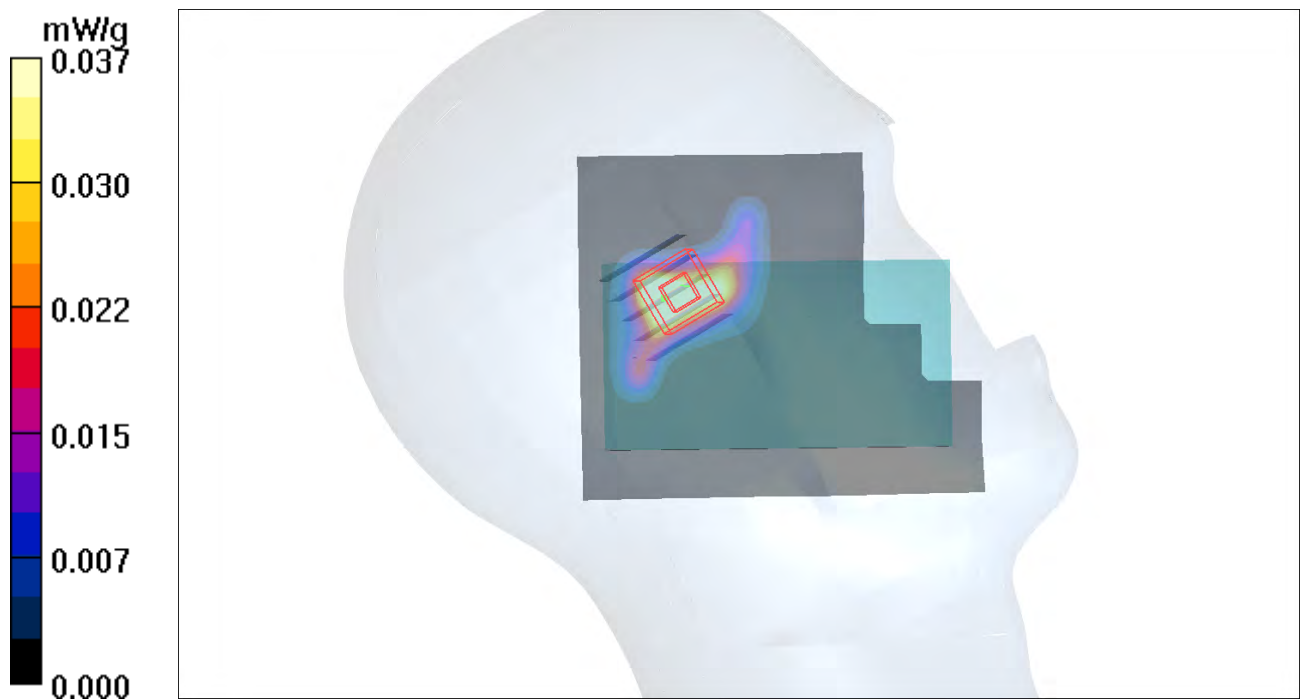
Ch01/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.72 V/m; Power Drift = 0.198 dB

Peak SAR (extrapolated) = 0.045 W/kg

SAR(1 g) = 0.024 mW/g; SAR(10 g) = 0.010 mW/g

Maximum value of SAR (measured) = 0.037 mW/g



P104 802.11n_HT20_Front Face_1cm_Ch01

DUT: 111121C23

Communication System: 802.11n_20MHz; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: B2450_0103 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.7 °C ; Liquid Temperature : 20.9 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch01/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

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

Ch01/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.21 V/m; Power Drift = 0.129 dB

Peak SAR (extrapolated) = 0.028 W/kg

SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.00814 mW/g

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

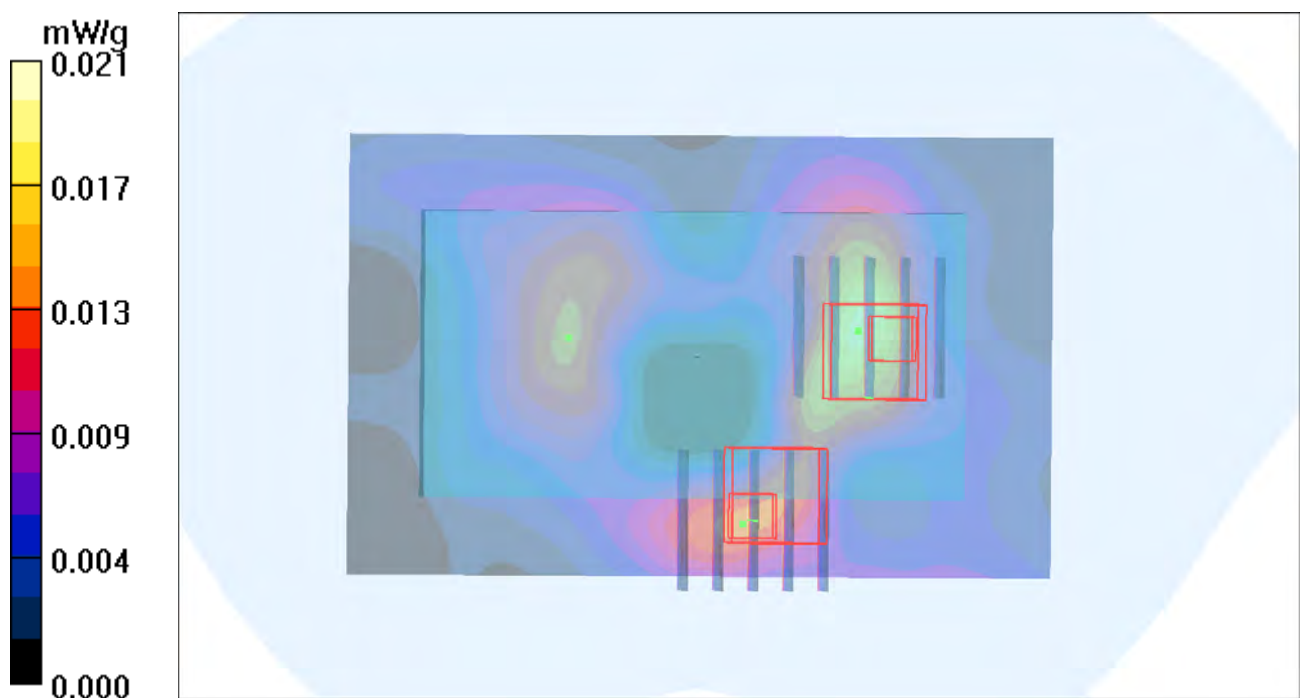
Ch01/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.21 V/m; Power Drift = 0.129 dB

Peak SAR (extrapolated) = 0.050 W/kg

SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.00727 mW/g

Maximum value of SAR (measured) = 0.020 mW/g



P105 802.11n_HT20_Rear Face_1cm_Ch01

DUT: 11121C23

Communication System: 802.11n_20MHz; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: B2450_0103 Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.96 \text{ mho/m}$; $\epsilon_r = 54$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $21.6 \text{ }^\circ\text{C}$; Liquid Temperature : $20.9 \text{ }^\circ\text{C}$

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch01/Area Scan (51x81x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

Maximum value of SAR (interpolated) = 0.159 mW/g

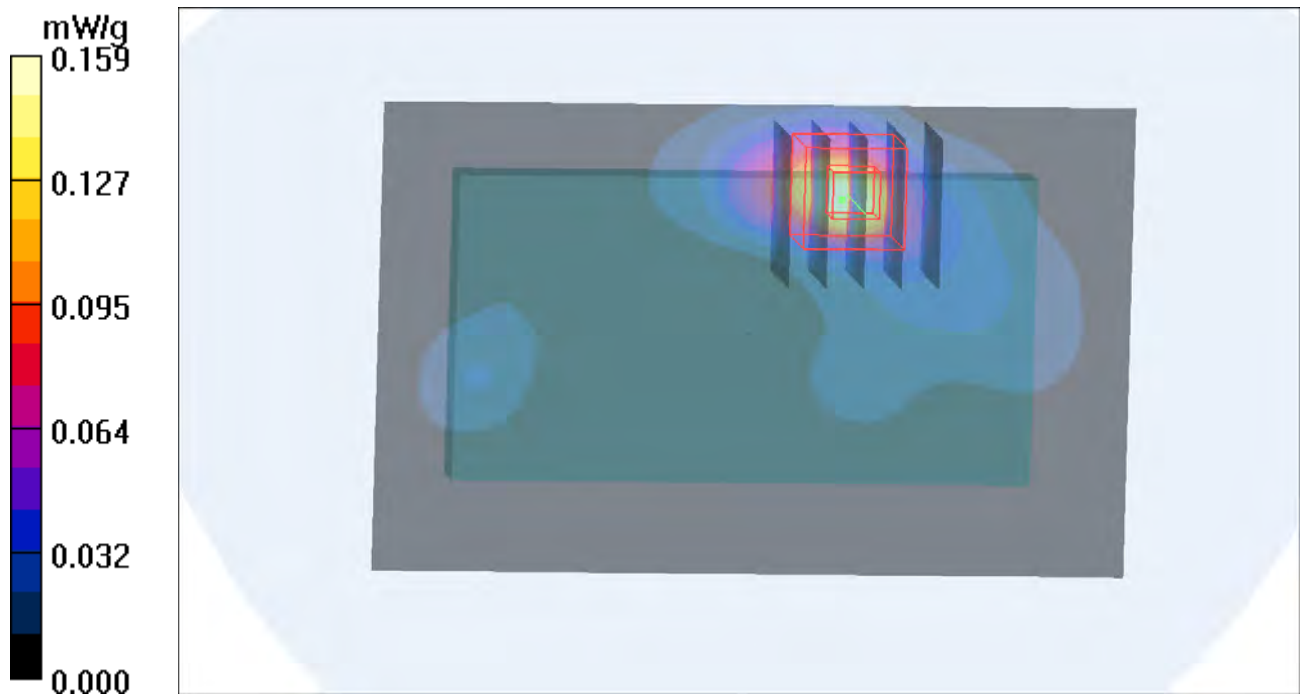
Ch01/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 1.32 V/m ; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 0.216 W/kg

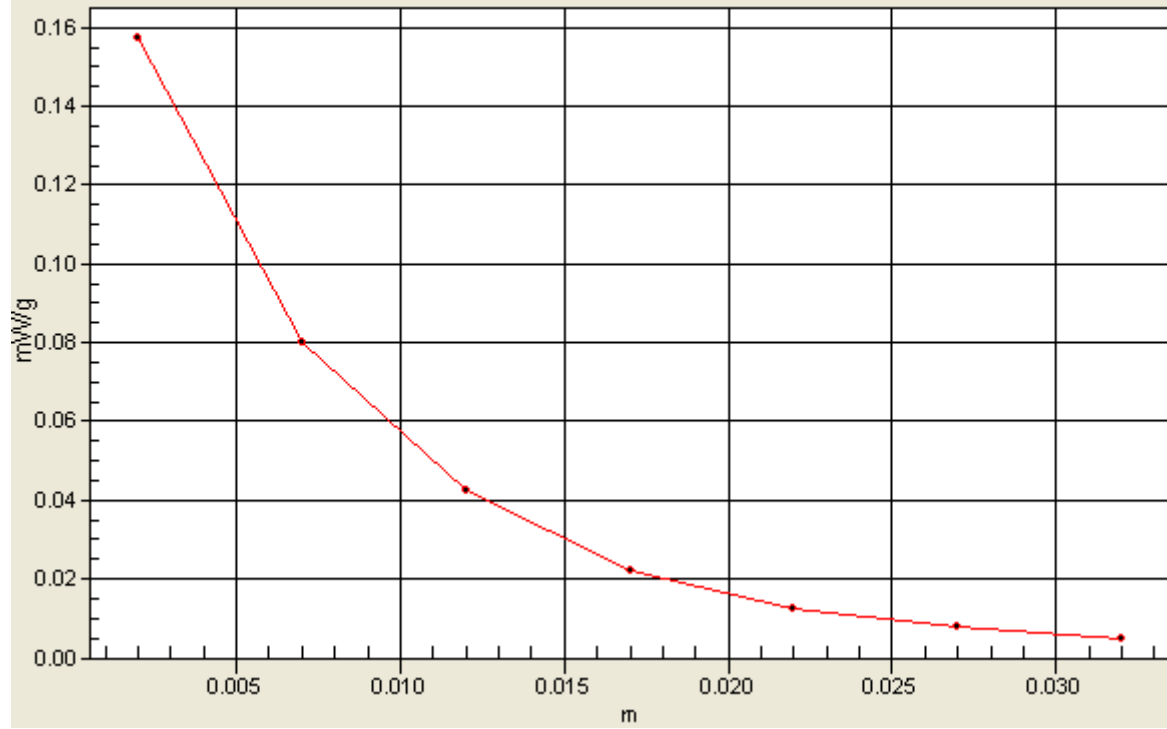
SAR(1 g) = 0.103 mW/g ; SAR(10 g) = 0.047 mW/g

Maximum value of SAR (measured) = 0.158 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=2, Y=2



P107 802.11n_HT20_Right Side_1cm_Ch01

DUT: 111121C23

Communication System: 802.11n_20MHz; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: B2450_0103 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.5 °C; Liquid Temperature : 20.9 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch01/Area Scan (31x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.112 mW/g

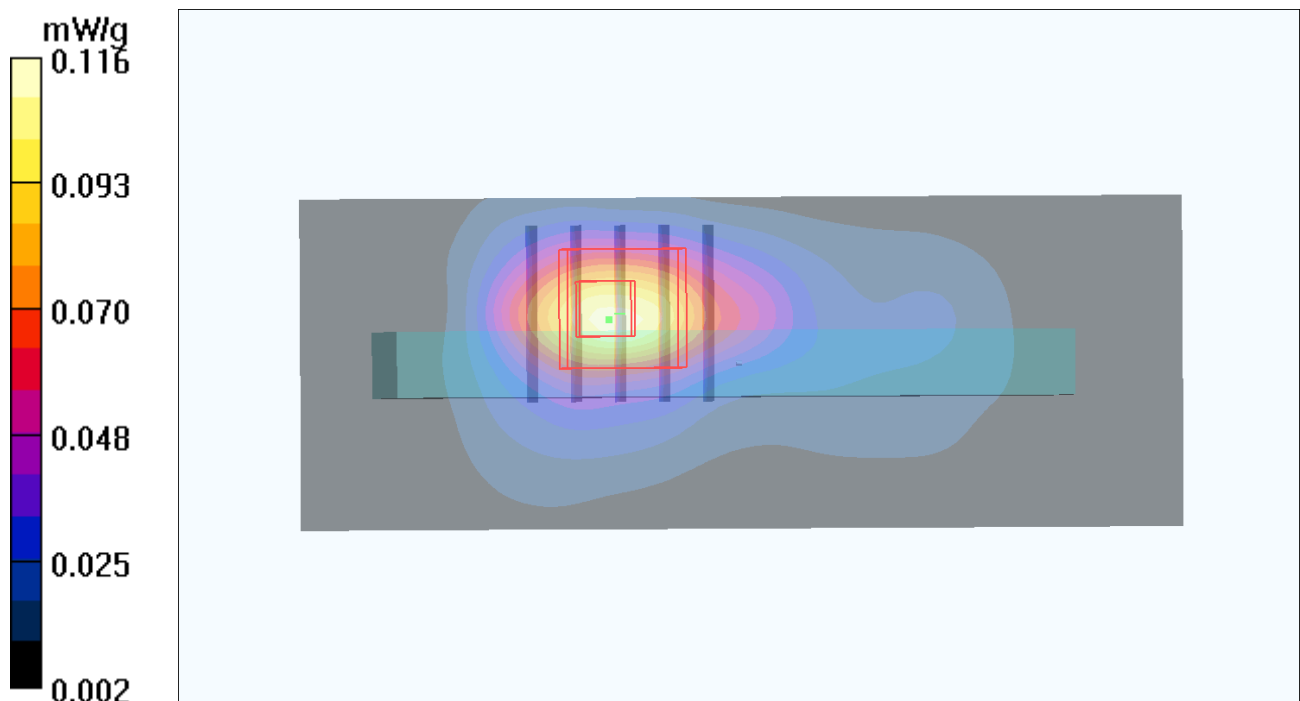
Ch01/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.97 V/m; Power Drift = -0.083 dB

Peak SAR (extrapolated) = 0.159 W/kg

SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.038 mW/g

Maximum value of SAR (measured) = 0.116 mW/g



P108 802.11n_HT20_Top Side_1cm_Ch01

DUT: 111121C23

Communication System: 802.11n_20MHz; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: B2450_0103 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.5 °C; Liquid Temperature : 20.9 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch01/Area Scan (31x51x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.013 mW/g

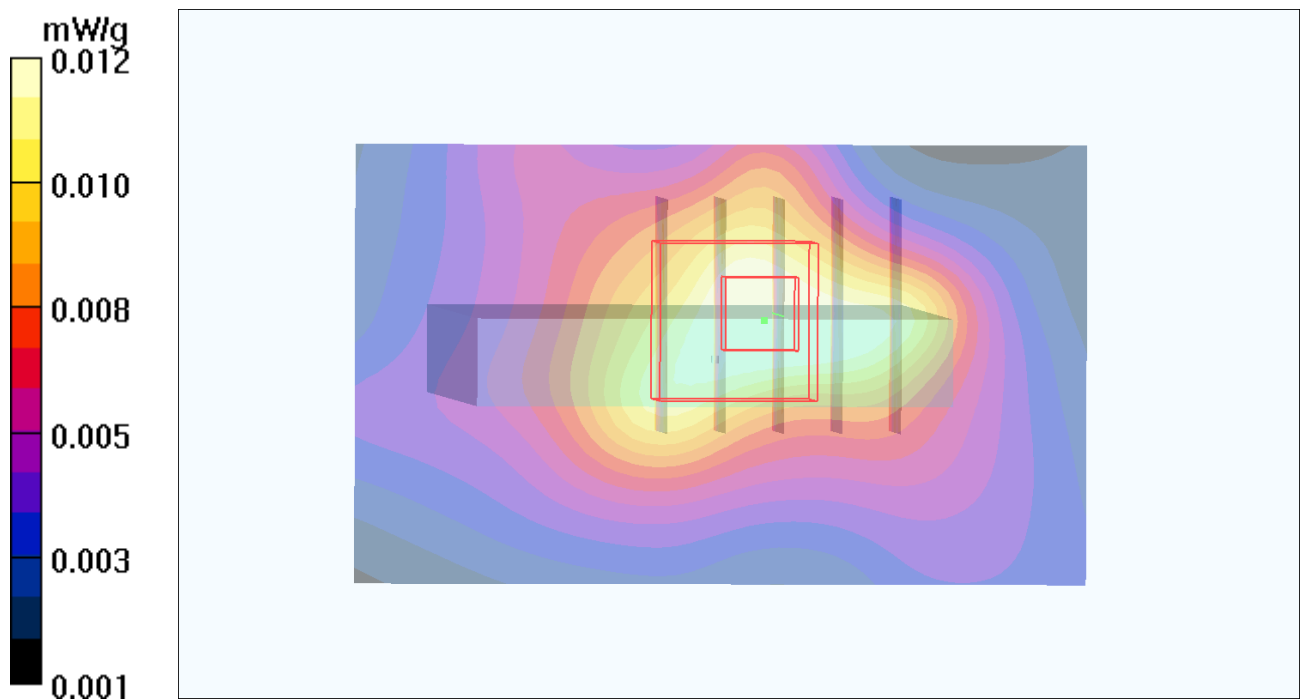
Ch01/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.39 V/m; Power Drift = -0.195 dB

Peak SAR (extrapolated) = 0.018 W/kg

SAR(1 g) = 0.00872 mW/g; SAR(10 g) = 0.00529 mW/g

Maximum value of SAR (measured) = 0.012 mW/g



P110 802.11n_HT20_Rear Face_1cm_Ch01_Earphone

DUT: 111121C23

Communication System: 802.11n_20MHz; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: B2450_0103 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C ; Liquid Temperature : 20.9 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch01/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.153 mW/g

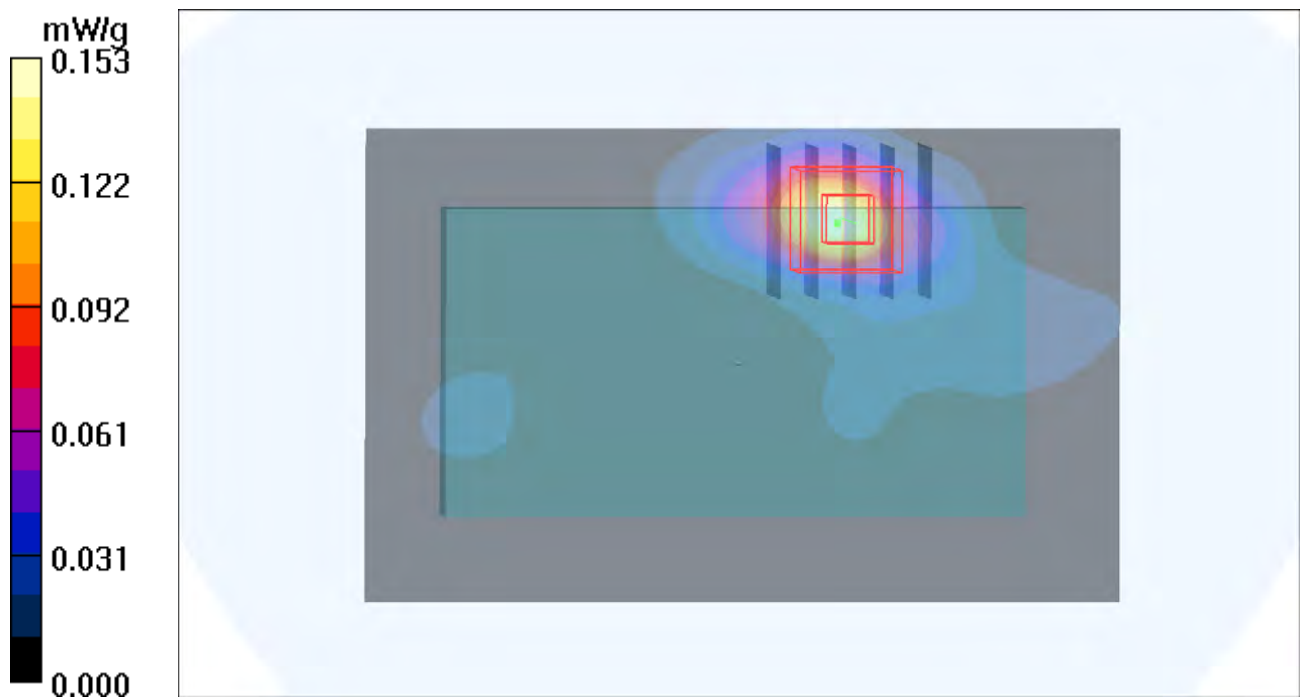
Ch01/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.37 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.047 mW/g

Maximum value of SAR (measured) = 0.155 mW/g



P201 802.16e_QPSK1/2_5M_Right Cheek_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.189 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.90 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.217 W/kg

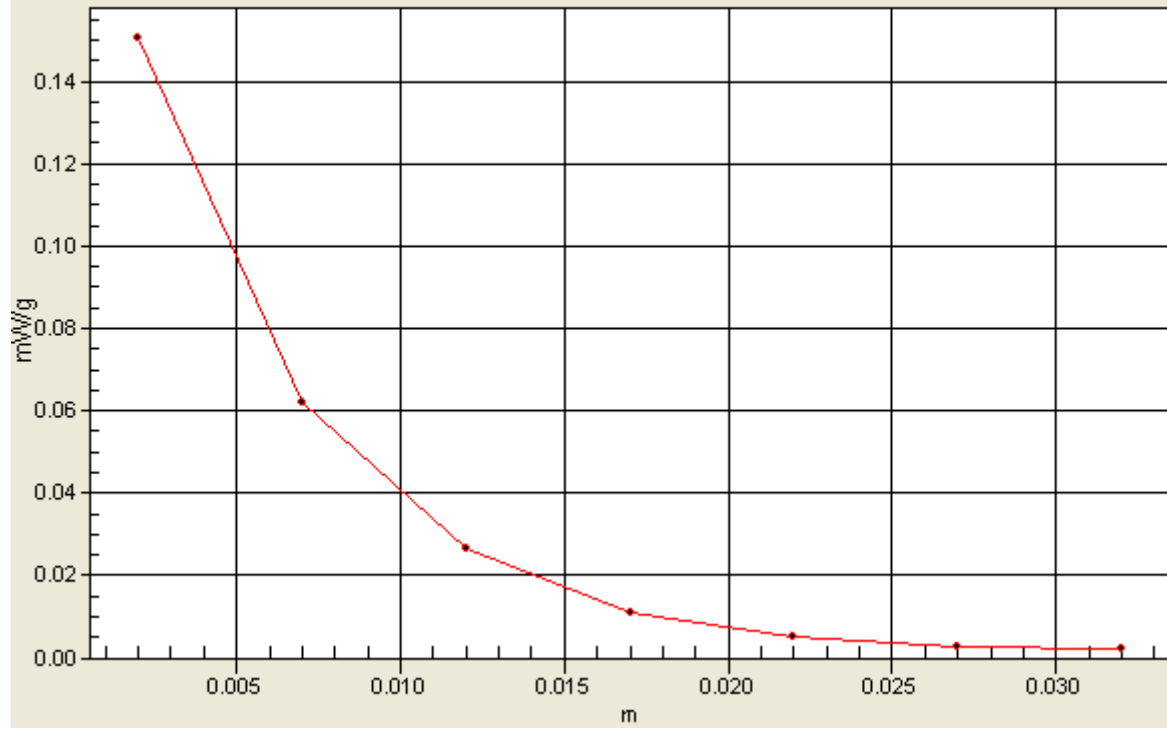
SAR(1 g) = 0.093 mW/g; SAR(10 g) = 0.043 mW/g

Maximum value of SAR (measured) = 0.151 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=2, Y=2



P202 802.16e_QPSK1/2_5M_Right Tilted_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.143 mW/g

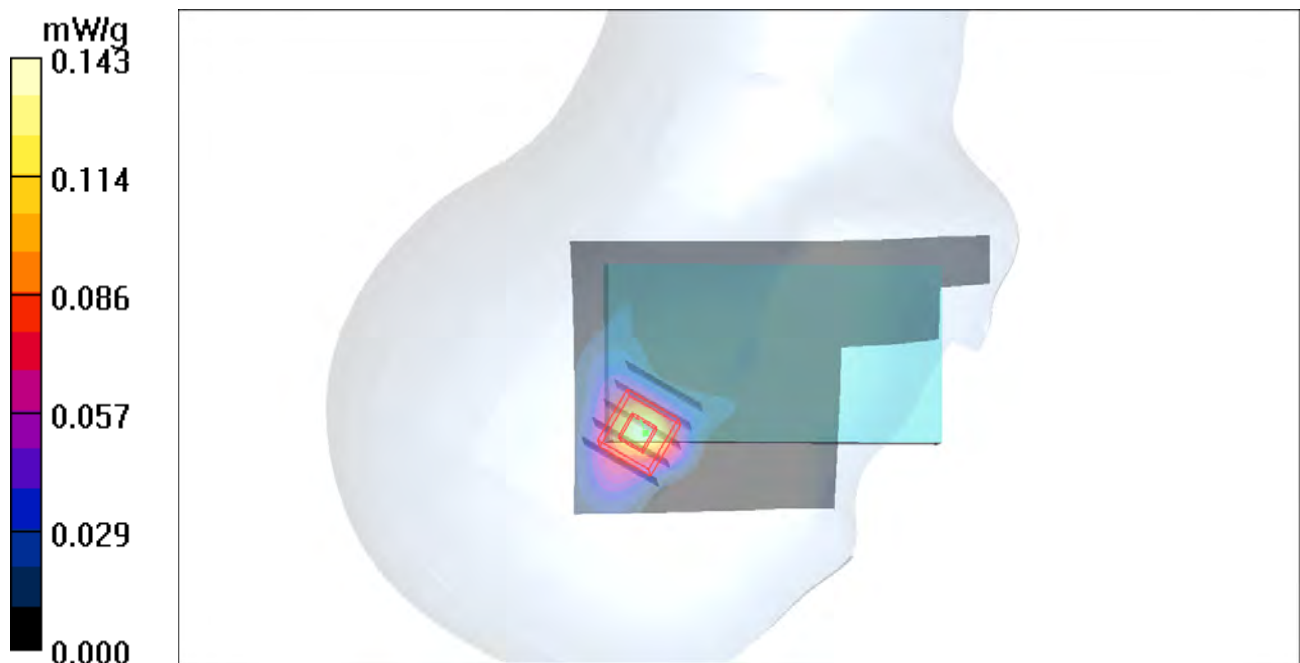
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.92 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.169 W/kg

SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.036 mW/g

Maximum value of SAR (measured) = 0.119 mW/g



P203 802.16e_QPSK1/2_5M_Left Cheek_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.062 mW/g

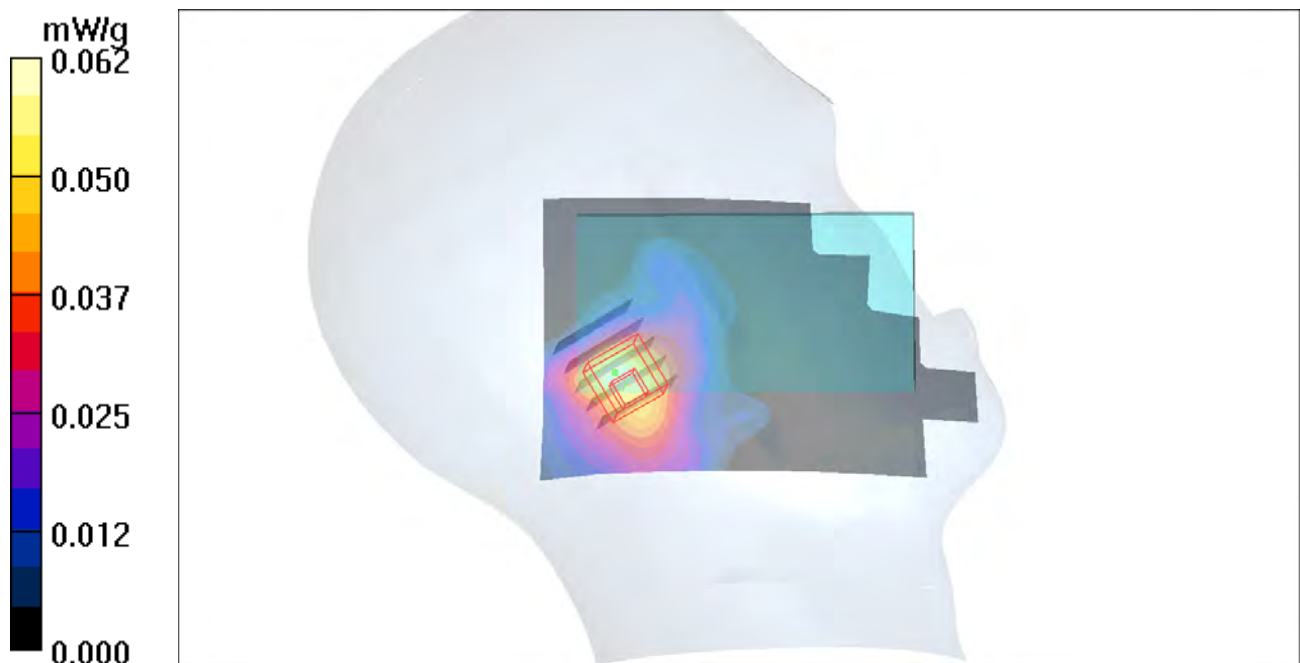
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.38 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.121 W/kg

SAR(1 g) = 0.057 mW/g; SAR(10 g) = 0.027 mW/g

Maximum value of SAR (measured) = 0.086 mW/g



P204 802.16e_QPSK1/2_5M_Left Tilted_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.050 mW/g

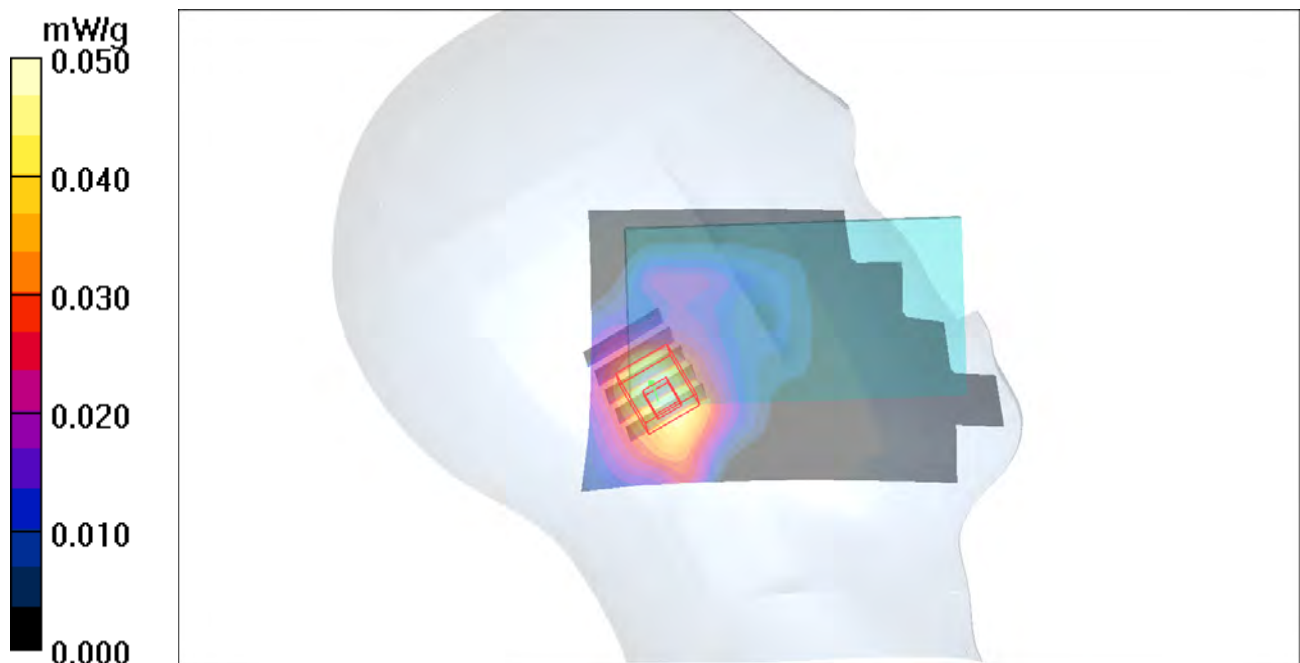
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.85 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.090 W/kg

SAR(1 g) = 0.042 mW/g; SAR(10 g) = 0.020 mW/g

Maximum value of SAR (measured) = 0.063 mW/g



P205 802.16e_QPSK1/2_10M_Right Cheek_Ant1

DUT: 111121C23

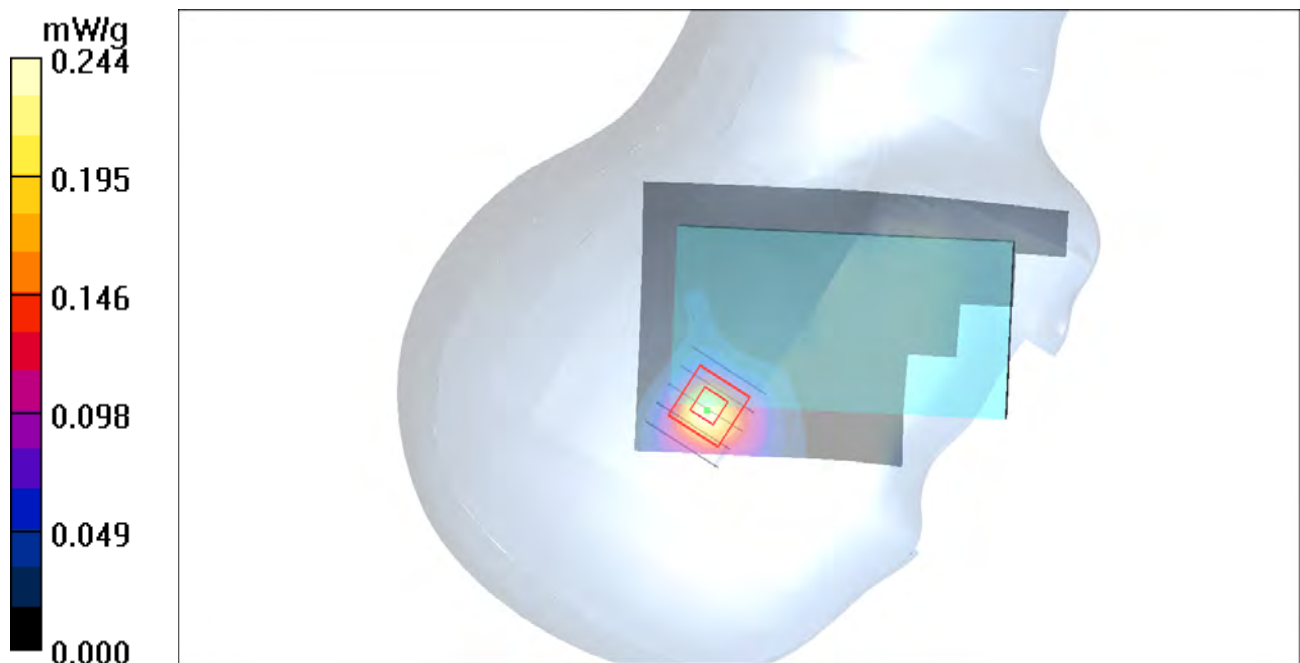
Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24
Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

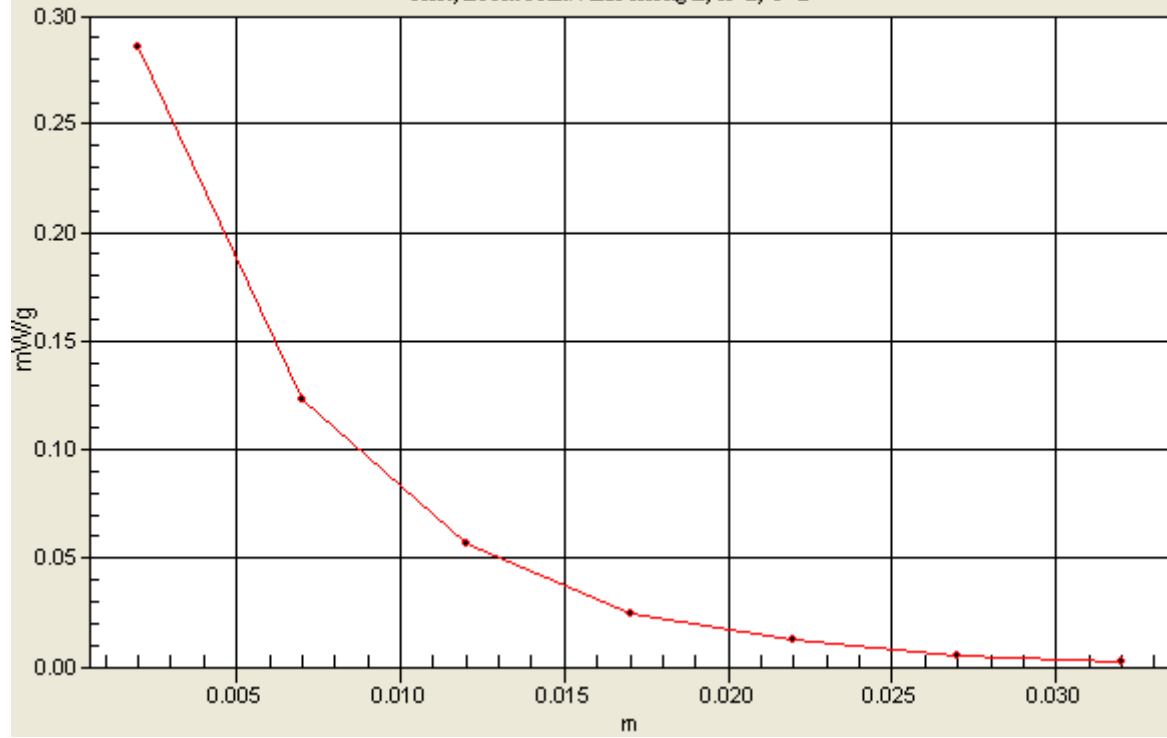
Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.244 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.28 V/m; Power Drift = -0.111 dB
Peak SAR (extrapolated) = 0.423 W/kg
SAR(1 g) = 0.173 mW/g; SAR(10 g) = 0.074 mW/g
Maximum value of SAR (measured) = 0.286 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=2, Y=2



P206 802.16e_QPSK1/2_10M_Right Tilted_Ant1

DUT: 111121C23

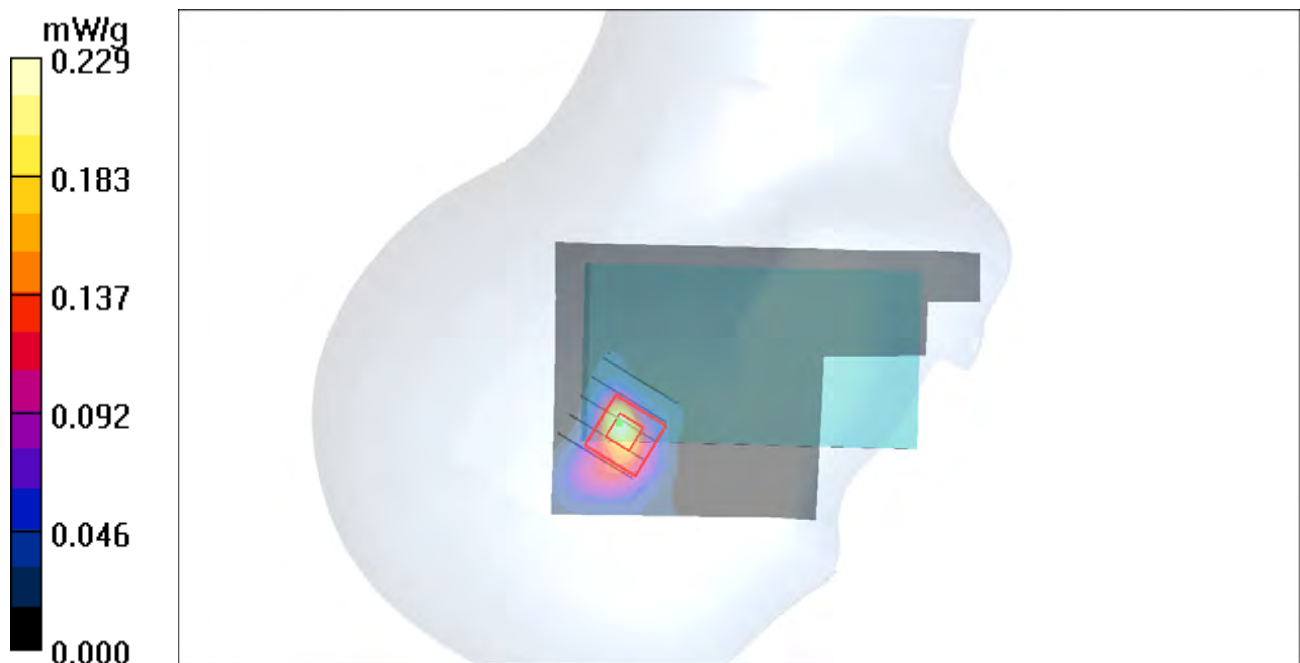
Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24
Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.229 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.17 V/m; Power Drift = -0.173 dB
Peak SAR (extrapolated) = 0.292 W/kg
SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.055 mW/g
Maximum value of SAR (measured) = 0.185 mW/g



P207 802.16e_QPSK1/2_10M_Left Cheek_Ant1

DUT: 111121C23

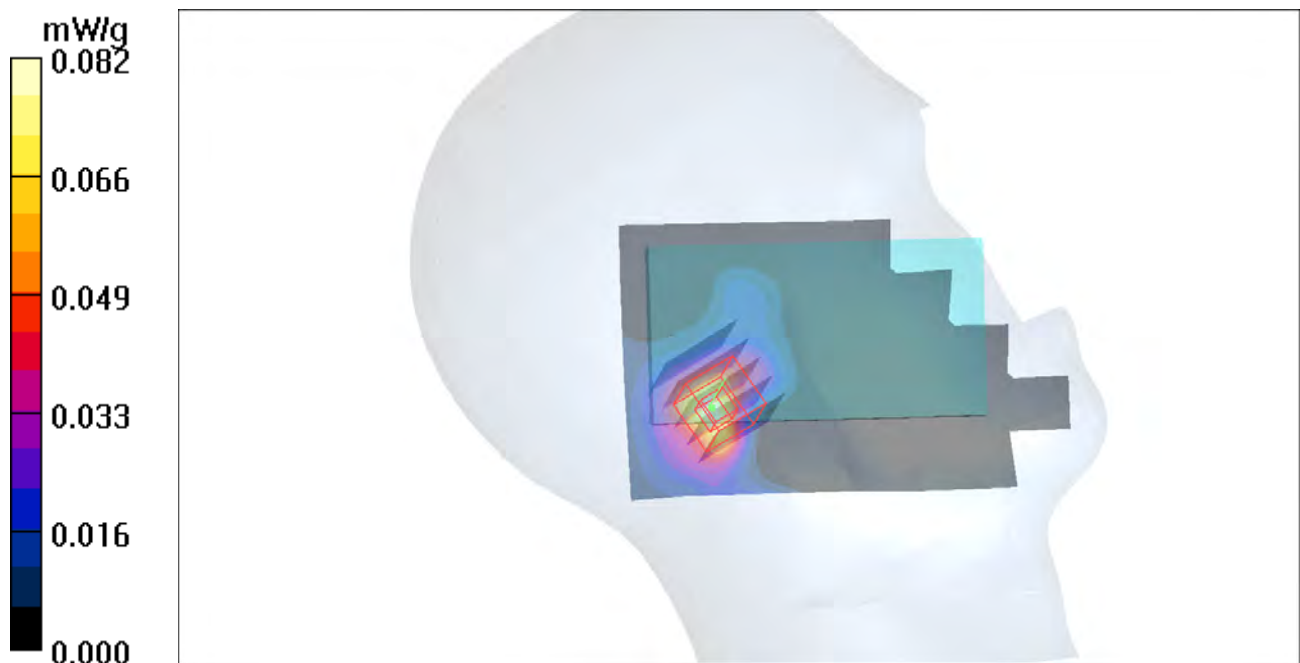
Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24
Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.2 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.082 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.22 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.119 W/kg
SAR(1 g) = 0.057 mW/g; SAR(10 g) = 0.028 mW/g
Maximum value of SAR (measured) = 0.084 mW/g



P208 802.16e_QPSK1/2_10M_Left Tilted_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.056 mW/g

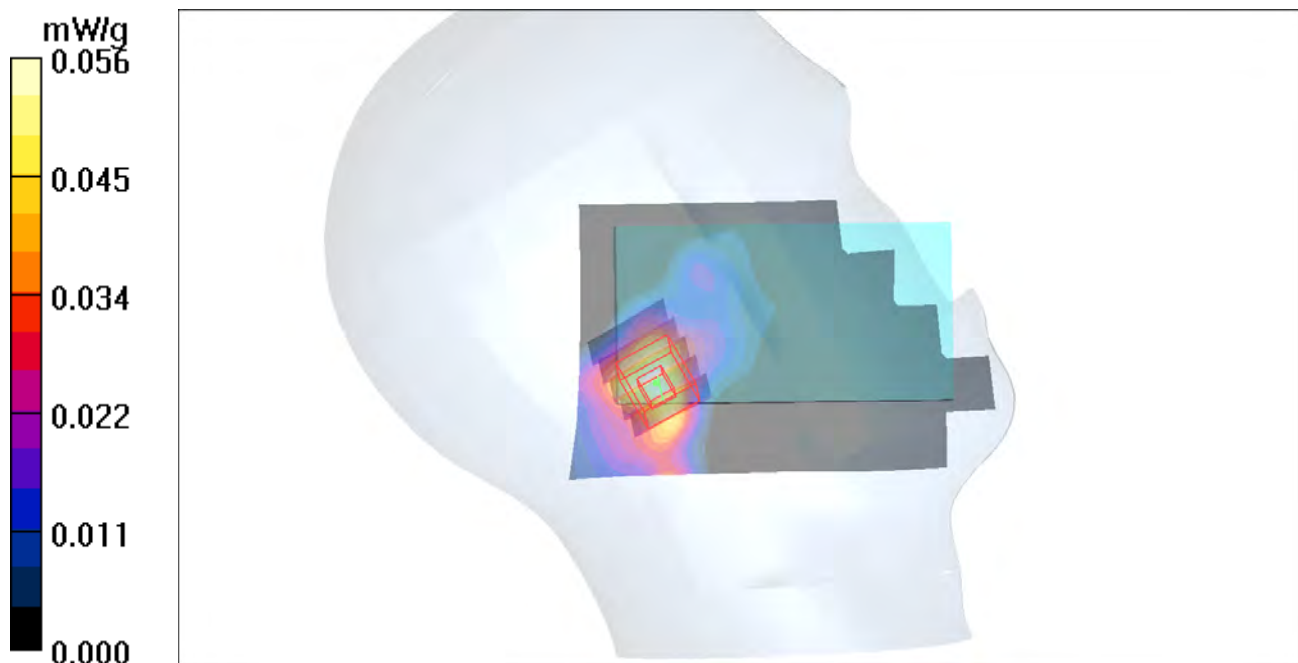
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.42 V/m; Power Drift = 0.129 dB

Peak SAR (extrapolated) = 0.080 W/kg

SAR(1 g) = 0.040 mW/g; SAR(10 g) = 0.020 mW/g

Maximum value of SAR (measured) = 0.055 mW/g



P209 802.16e_QPSK1/2_5M_Right Cheek_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.102 mW/g

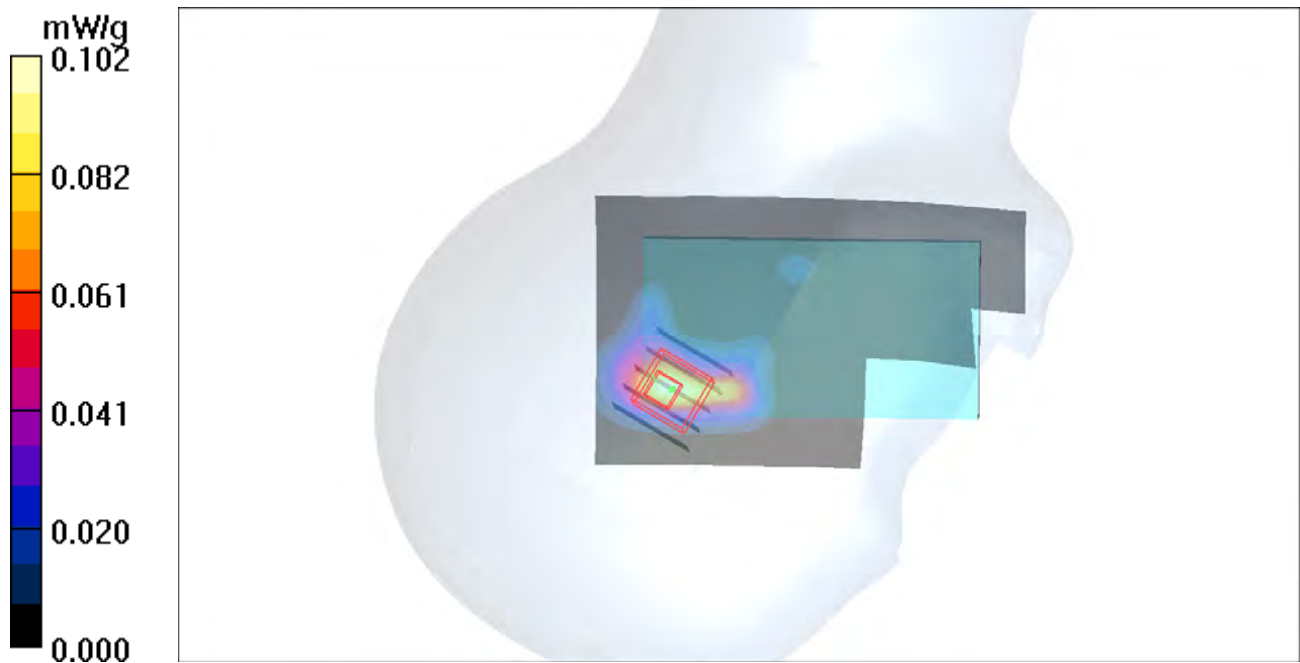
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.69 V/m; Power Drift = -0.031 dB

Peak SAR (extrapolated) = 0.104 W/kg

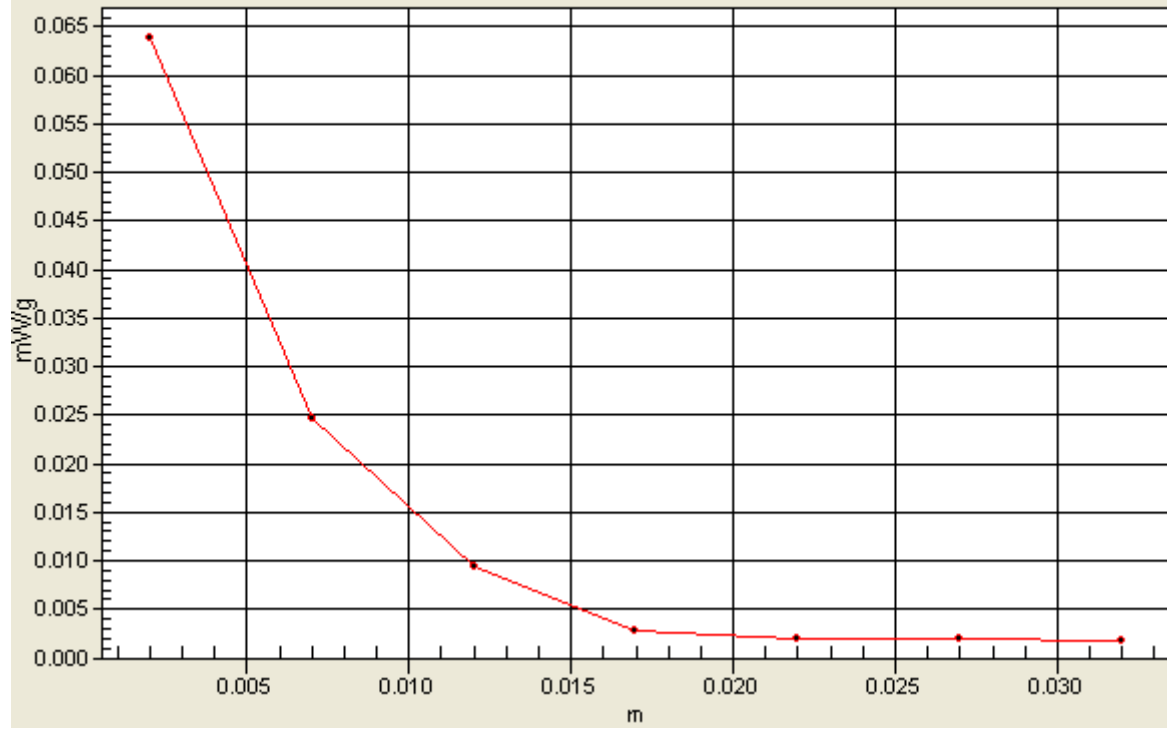
SAR(1 g) = 0.041 mW/g; SAR(10 g) = 0.018 mW/g

Maximum value of SAR (measured) = 0.064 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=3, Y=2



P210 802.16e_QPSK1/2_5M_Right Tilted_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.082 mW/g

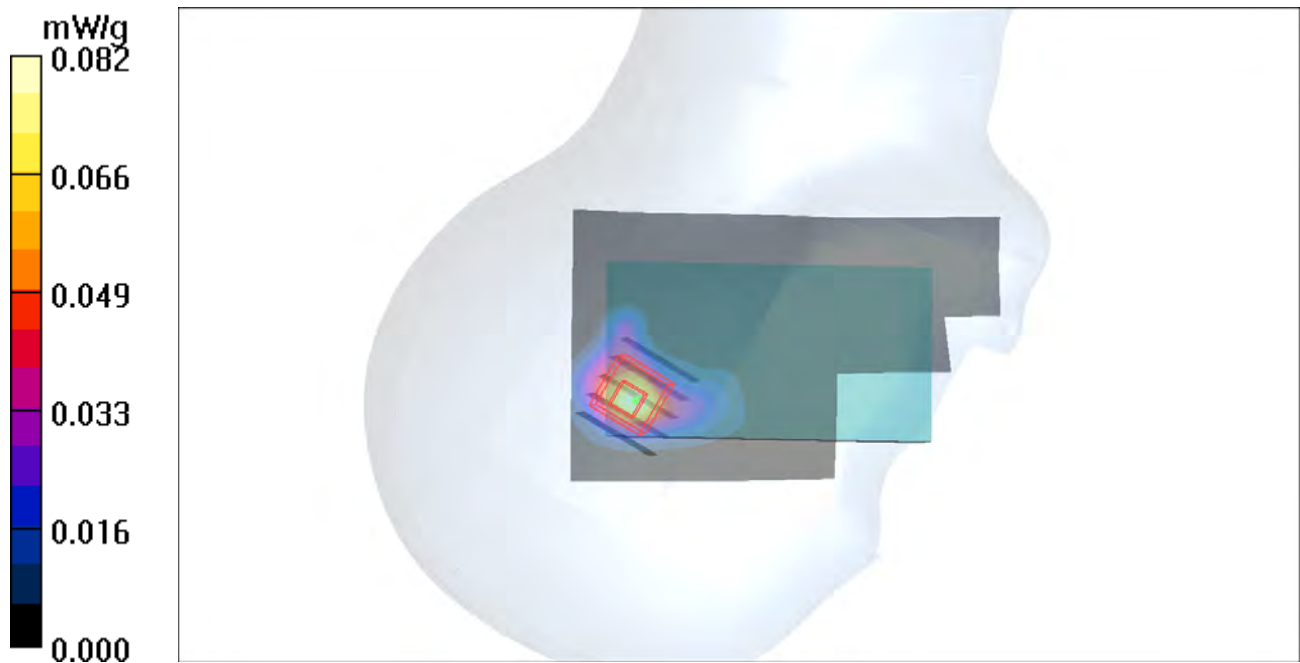
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.94 V/m; Power Drift = 0.104 dB

Peak SAR (extrapolated) = 0.102 W/kg

SAR(1 g) = 0.041 mW/g; SAR(10 g) = 0.018 mW/g

Maximum value of SAR (measured) = 0.067 mW/g



P211 802.16e_QPSK1/2_5M_Left Cheek_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.060 mW/g

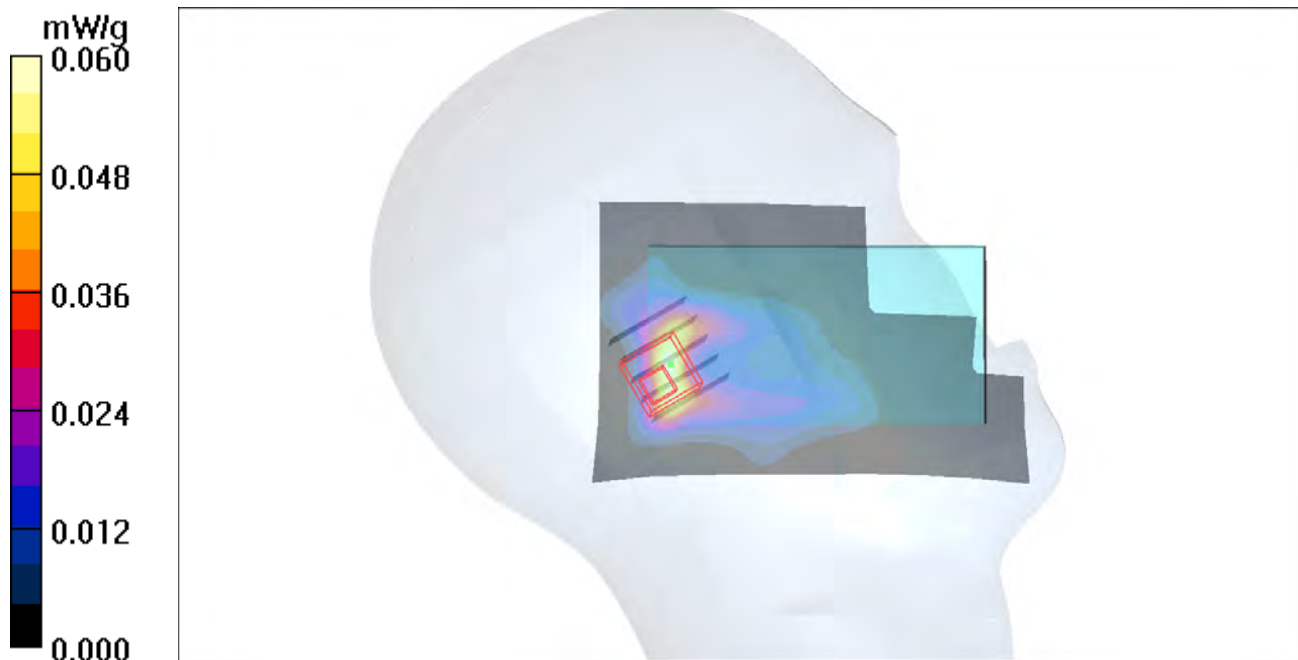
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.97 V/m; Power Drift = -0.180 dB

Peak SAR (extrapolated) = 0.064 W/kg

SAR(1 g) = 0.027 mW/g; SAR(10 g) = 0.013 mW/g

Maximum value of SAR (measured) = 0.042 mW/g



P212 802.16e_QPSK1/2_5M_Left Tilted_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.060 mW/g

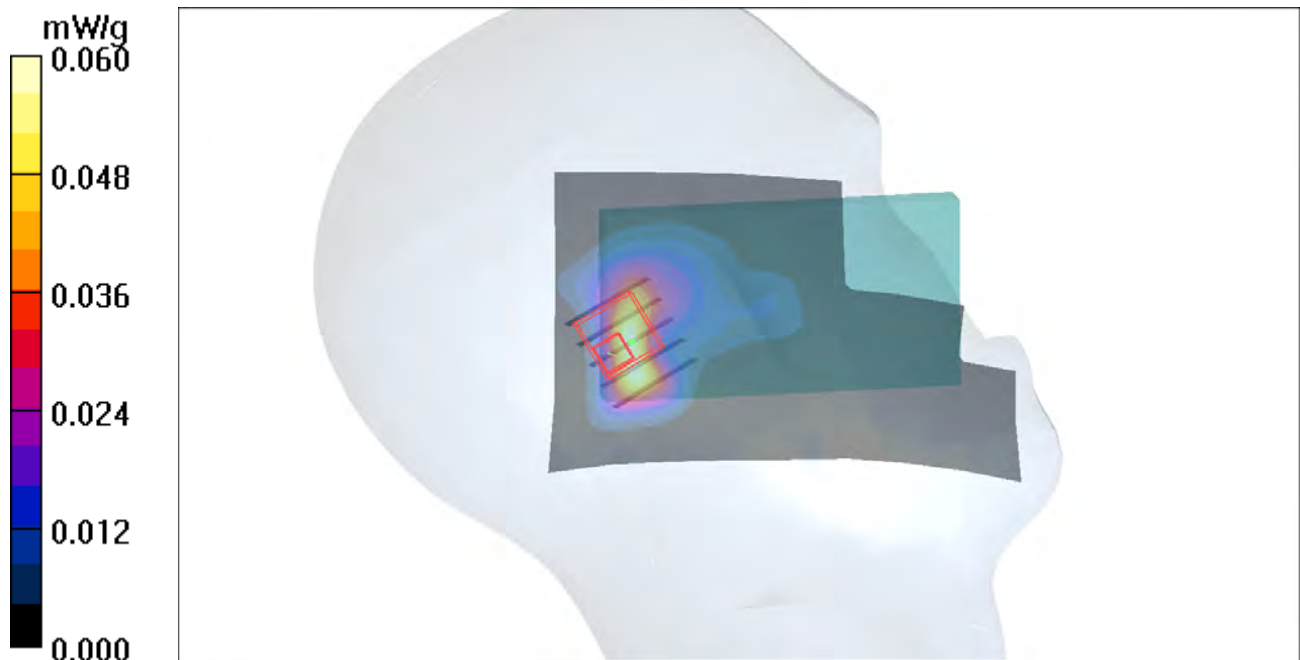
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.44 V/m; Power Drift = 0.062 dB

Peak SAR (extrapolated) = 0.070 W/kg

SAR(1 g) = 0.027 mW/g; SAR(10 g) = 0.014 mW/g

Maximum value of SAR (measured) = 0.042 mW/g



P213 802.16e_QPSK1/2_10M_Right Cheek_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24
Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.1 °C; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.209 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.02 V/m; Power Drift = -0.112 dB

Peak SAR (extrapolated) = 0.516 W/kg

SAR(1 g) = 0.218 mW/g; SAR(10 g) = 0.094 mW/g

Maximum value of SAR (measured) = 0.363 mW/g

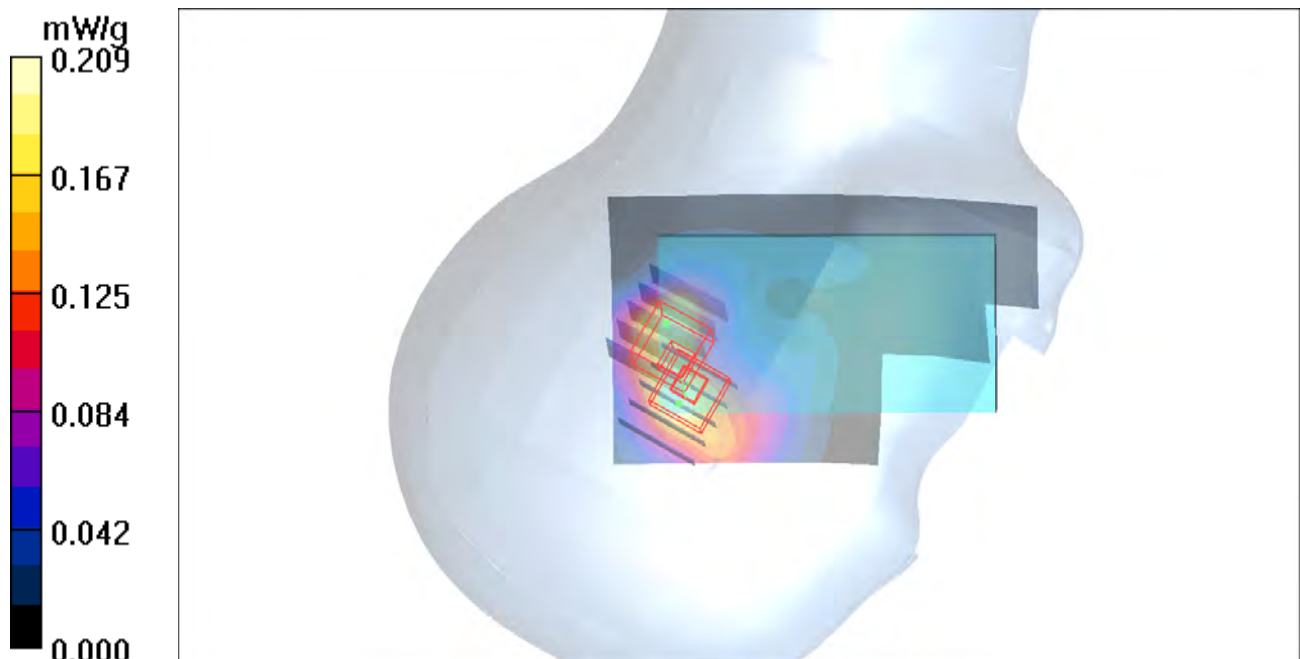
Ch1/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.02 V/m; Power Drift = -0.112 dB

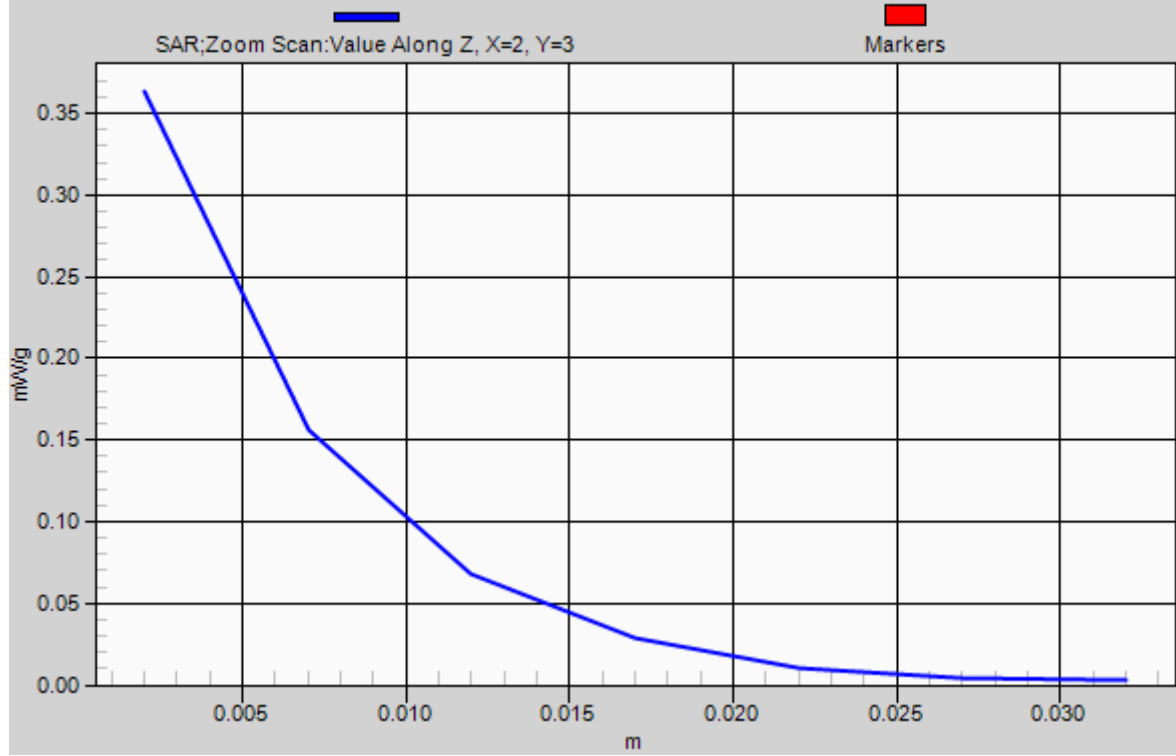
Peak SAR (extrapolated) = 0.471 W/kg

SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.327 mW/g



1g/10g Averaged SAR



P214 802.16e_QPSK1/2_10M_Right Tilted_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.253 mW/g

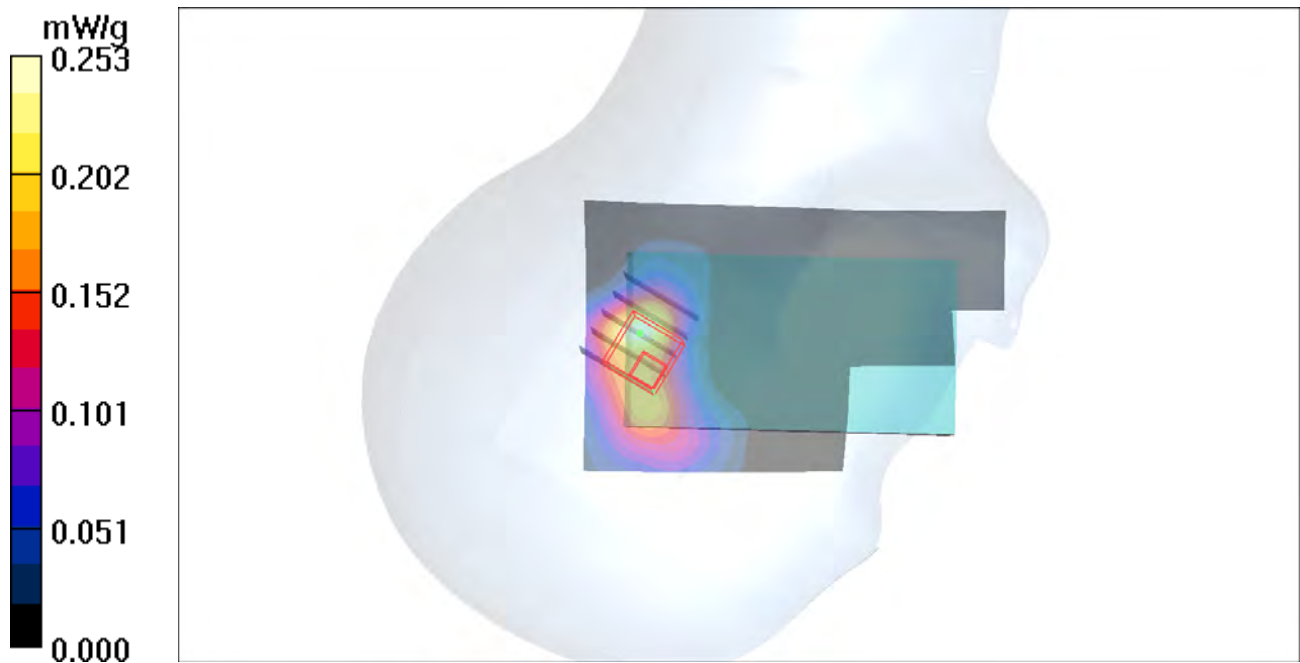
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.87 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 0.394 W/kg

SAR(1 g) = 0.130 mW/g; SAR(10 g) = 0.065 mW/g

Maximum value of SAR (measured) = 0.274 mW/g



P215 802.16e_QPSK1/2_10M_Left Cheek_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.161 mW/g

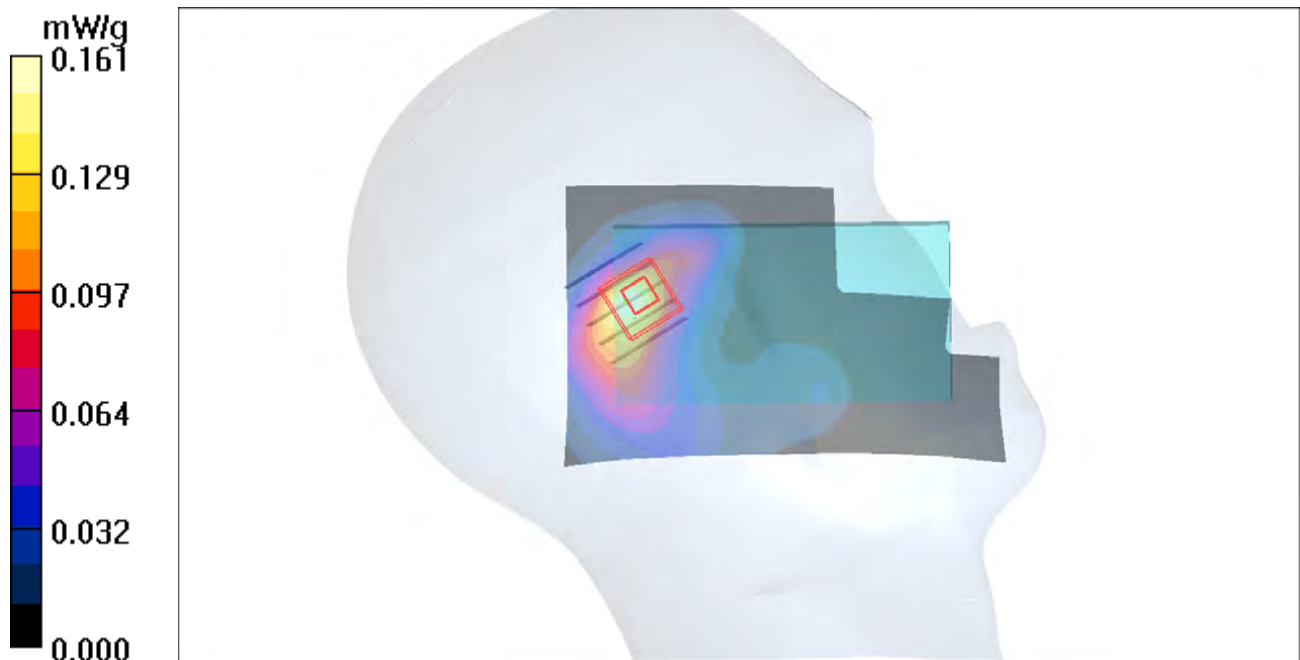
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.94 V/m; Power Drift = -0.089 dB

Peak SAR (extrapolated) = 0.241 W/kg

SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.054 mW/g

Maximum value of SAR (measured) = 0.170 mW/g



P216 802.16e_QPSK1/2_10M_Left Tilted_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: H2600_1230 Medium parameters used: $f = 2593$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.0 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.68, 6.68, 6.68); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.238 mW/g

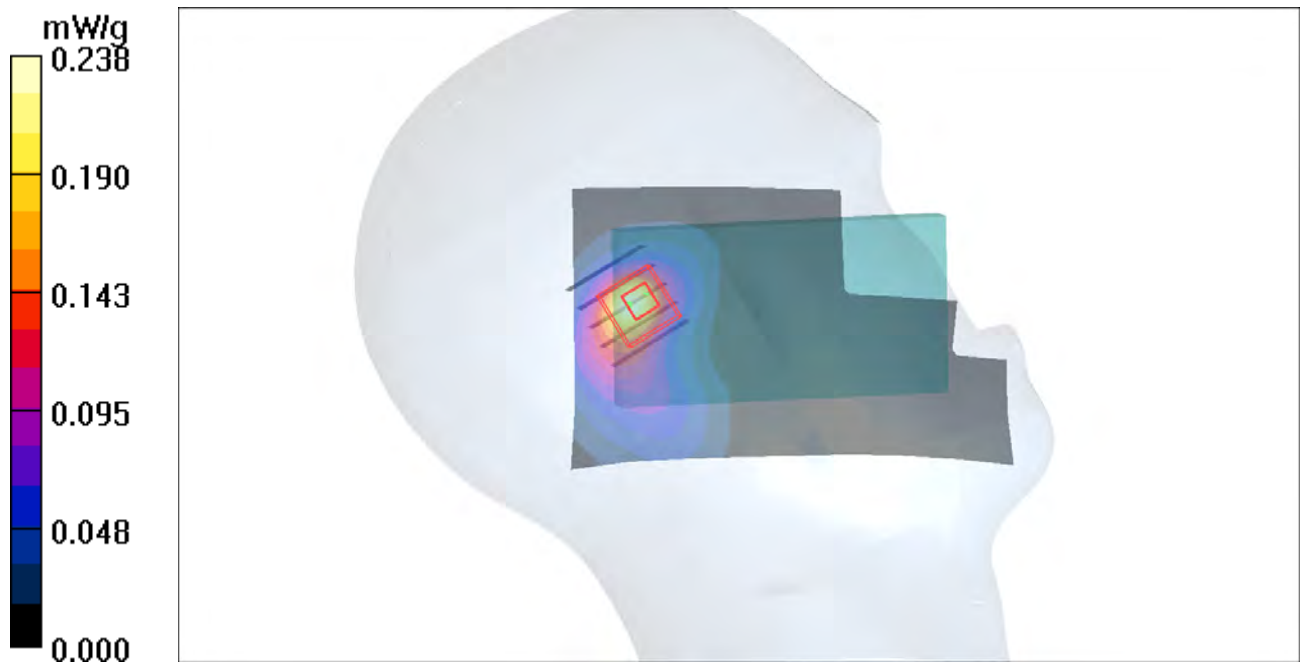
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.4 V/m; Power Drift = -0.064 dB

Peak SAR (extrapolated) = 0.342 W/kg

SAR(1 g) = 0.158 mW/g; SAR(10 g) = 0.073 mW/g

Maximum value of SAR (measured) = 0.236 mW/g



P217 802.16e_QPSK1/2_5M_Front Face_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.089 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.04 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.150 W/kg

SAR(1 g) = 0.070 mW/g; SAR(10 g) = 0.034 mW/g

Maximum value of SAR (measured) = 0.107 mW/g

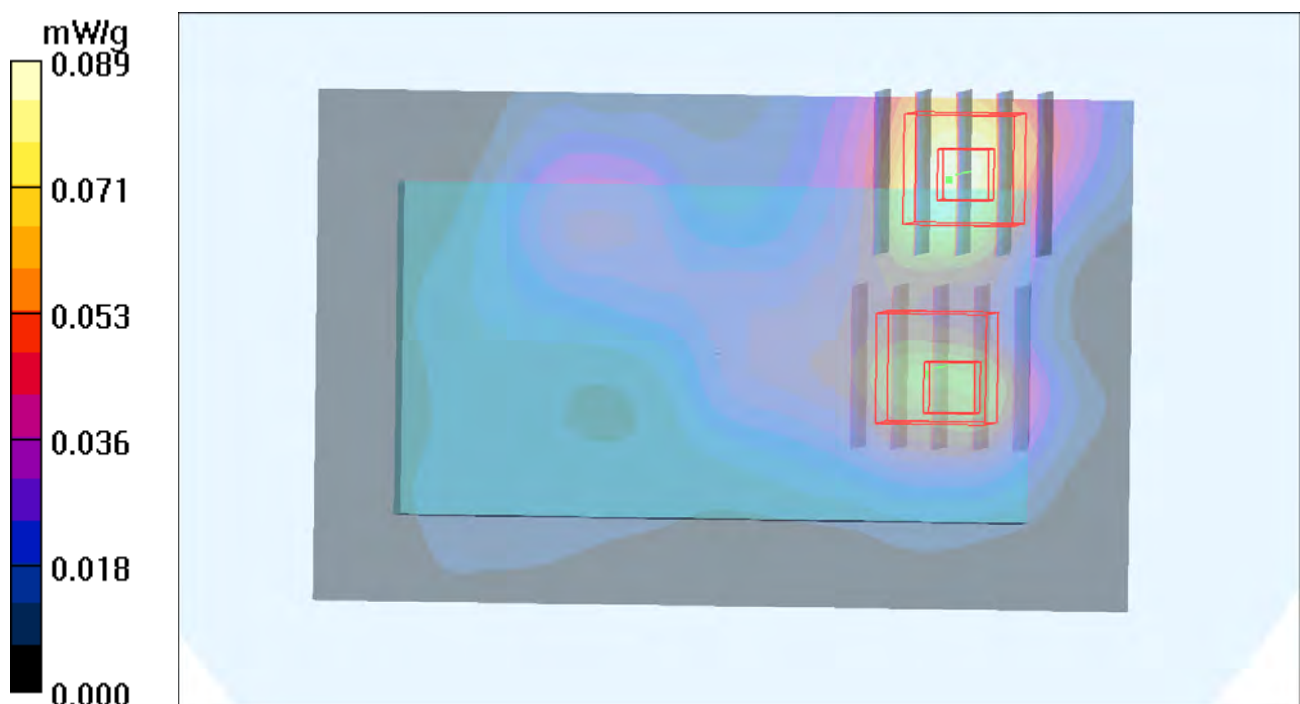
Ch1/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.04 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.077 W/kg

SAR(1 g) = 0.047 mW/g; SAR(10 g) = 0.022 mW/g

Maximum value of SAR (measured) = 0.061 mW/g



P218 802.16e_QPSK1/2_5M_Rear Face_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.418 mW/g

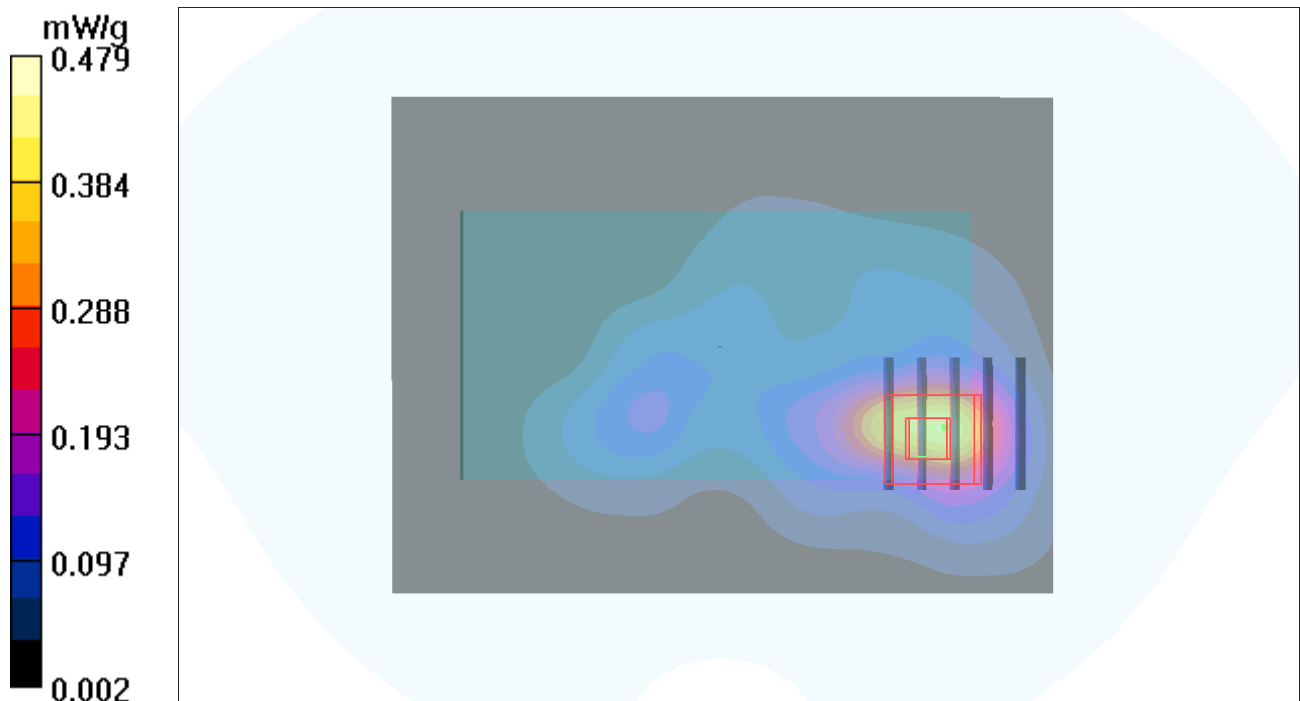
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.51 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.767 W/kg

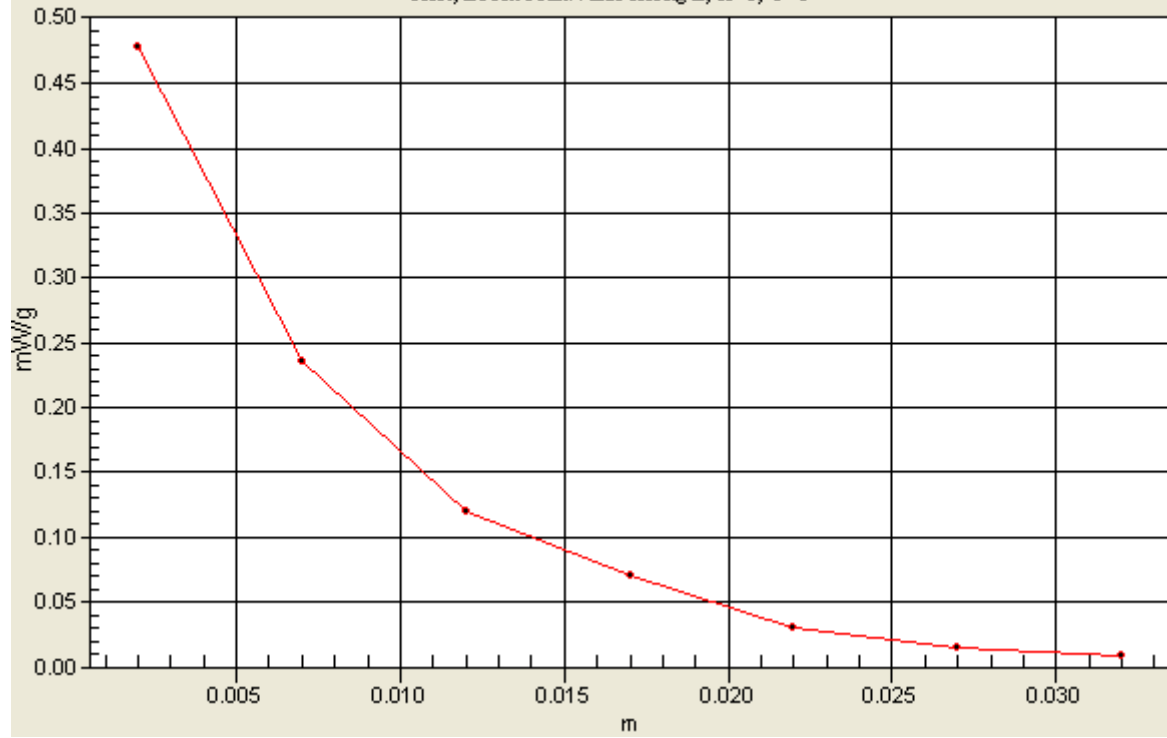
SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.163 mW/g

Maximum value of SAR (measured) = 0.479 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=1, Y=1



P219 802.16e_QPSK1/2_5M_Left Side_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.3 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (31x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.332 mW/g

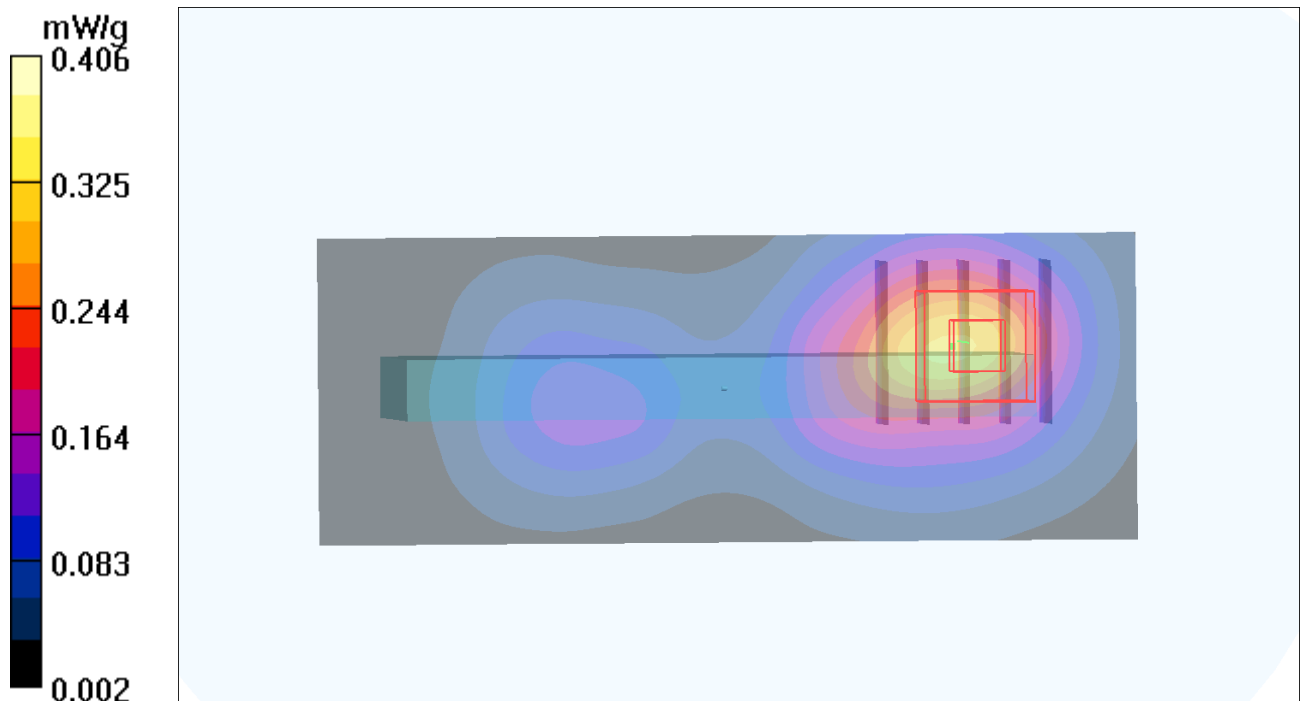
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.05 V/m; Power Drift = 0.149 dB

Peak SAR (extrapolated) = 0.607 W/kg

SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.135 mW/g

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



P220 802.16e_QPSK1/2_5M_Top Side_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (31x51x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.117 mW/g

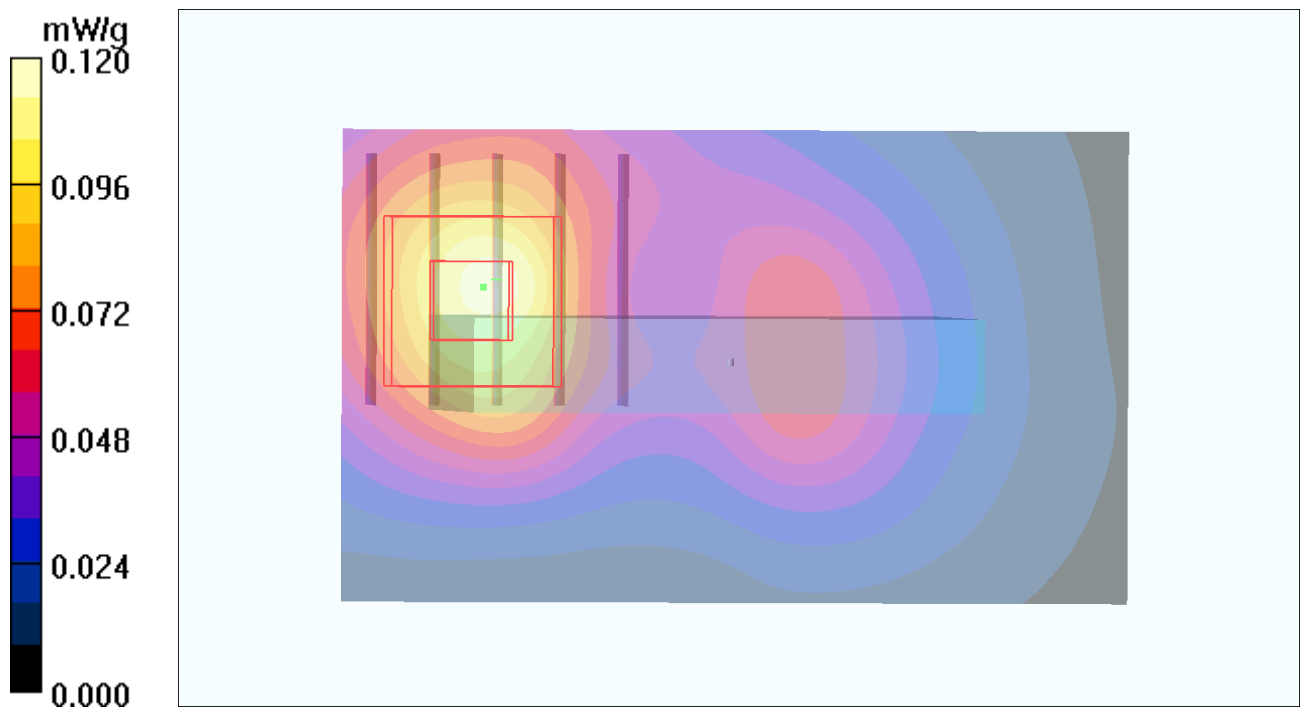
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.59 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.169 W/kg

SAR(1 g) = 0.085 mW/g; SAR(10 g) = 0.044 mW/g

Maximum value of SAR (measured) = 0.120 mW/g



P221 802.16e_QPSK1/2_5M_Rear Face_Ant1_Earphone

DUT: 111121C23

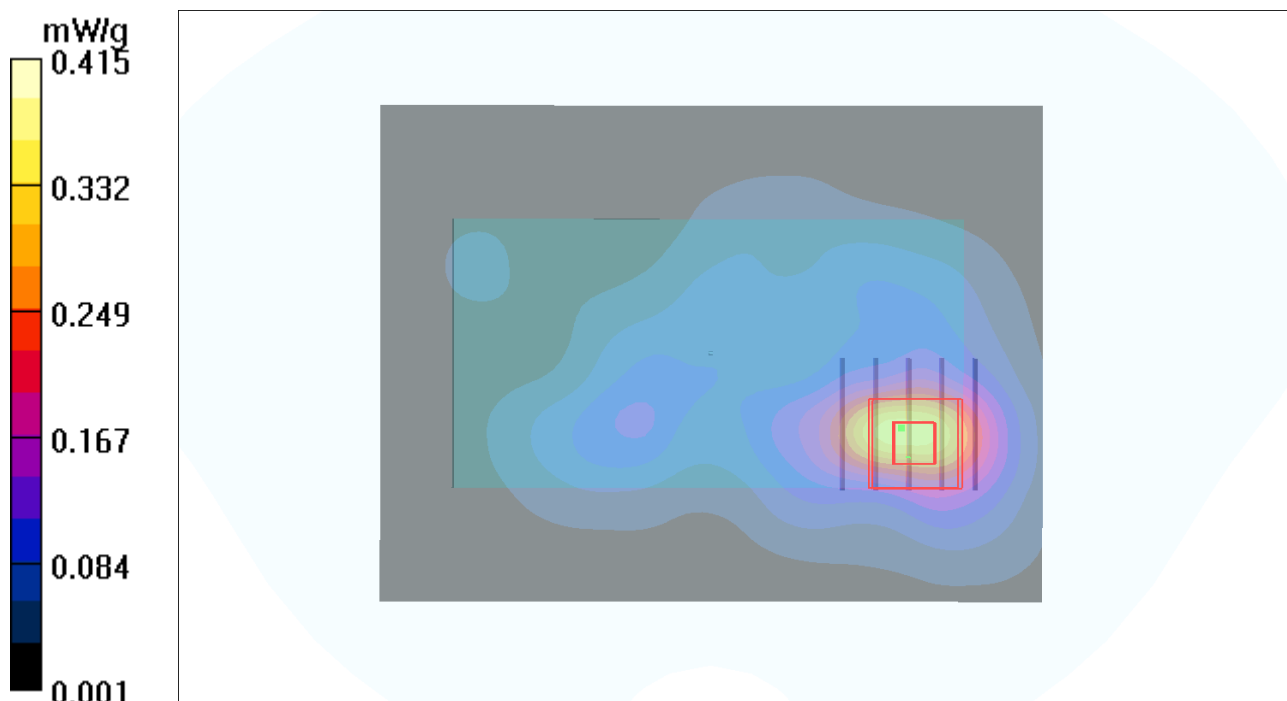
Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24
Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.350 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.35 V/m; Power Drift = -0.134 dB
Peak SAR (extrapolated) = 0.602 W/kg
SAR(1 g) = 0.293 mW/g; SAR(10 g) = 0.138 mW/g
Maximum value of SAR (measured) = 0.415 mW/g



P222 802.16e_QPSK1/2_10M_Front Face_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz;Duty Cycle: 1:3.24
 Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³
 Ambient Temperature : 22.4 °C; Liquid Temperature : 21.1 °C

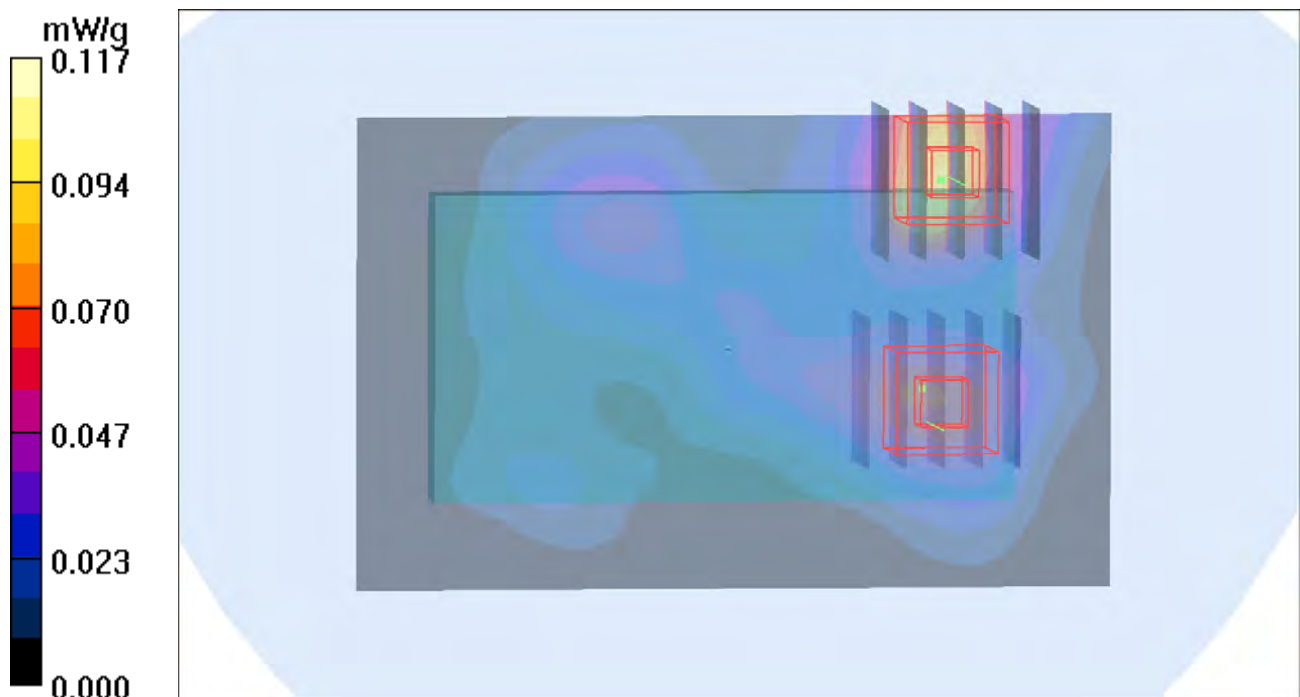
DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm
 Maximum value of SAR (interpolated) = 0.095 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 3.96 V/m; Power Drift = 0.184 dB
 Peak SAR (extrapolated) = 0.157 W/kg
SAR(1 g) = 0.077 mW/g; SAR(10 g) = 0.038 mW/g
 Maximum value of SAR (measured) = 0.117 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 3.96 V/m; Power Drift = 0.184 dB
 Peak SAR (extrapolated) = 0.089 W/kg
SAR(1 g) = 0.046 mW/g; SAR(10 g) = 0.024 mW/g
 Maximum value of SAR (measured) = 0.064 mW/g



P223 802.16e_QPSK1/2_10M_Rear Face_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24
Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.4 °C; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.395 mW/g

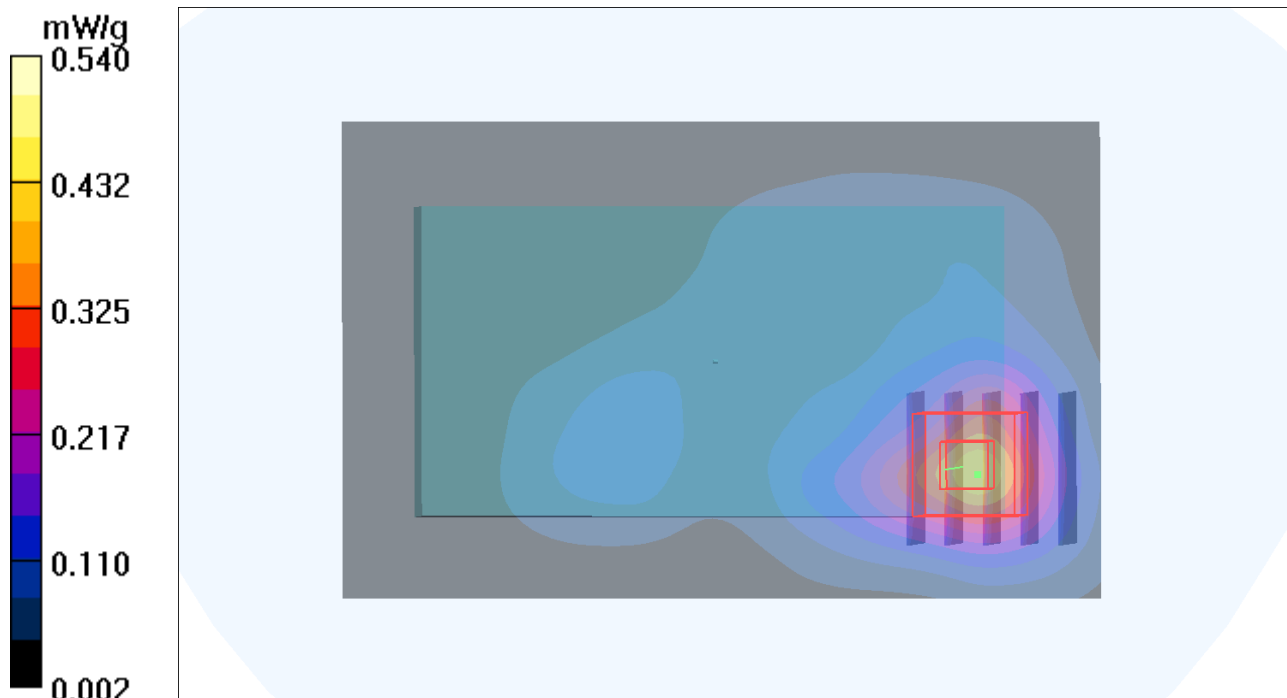
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.63 V/m; Power Drift = 0.039 dB

Peak SAR (extrapolated) = 0.776 W/kg

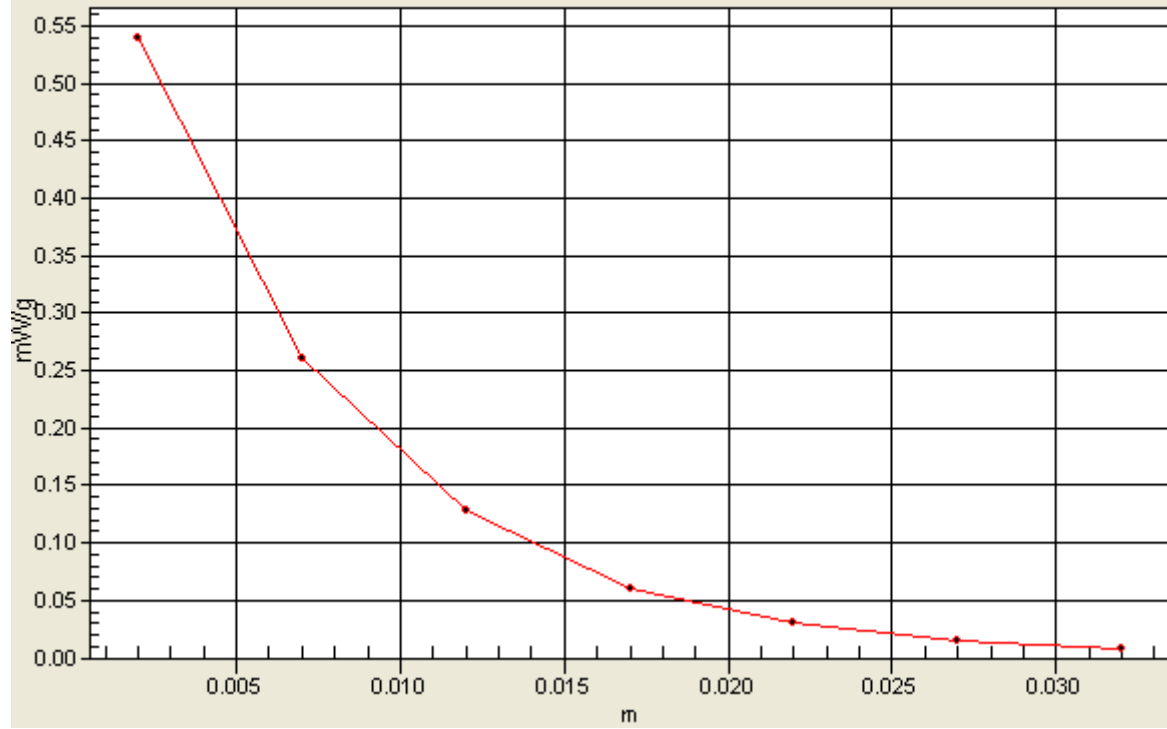
SAR(1 g) = 0.368 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.540 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=2, Y=1



P224 802.16e_QPSK1/2_10M_Left Side_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (31x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.374 mW/g

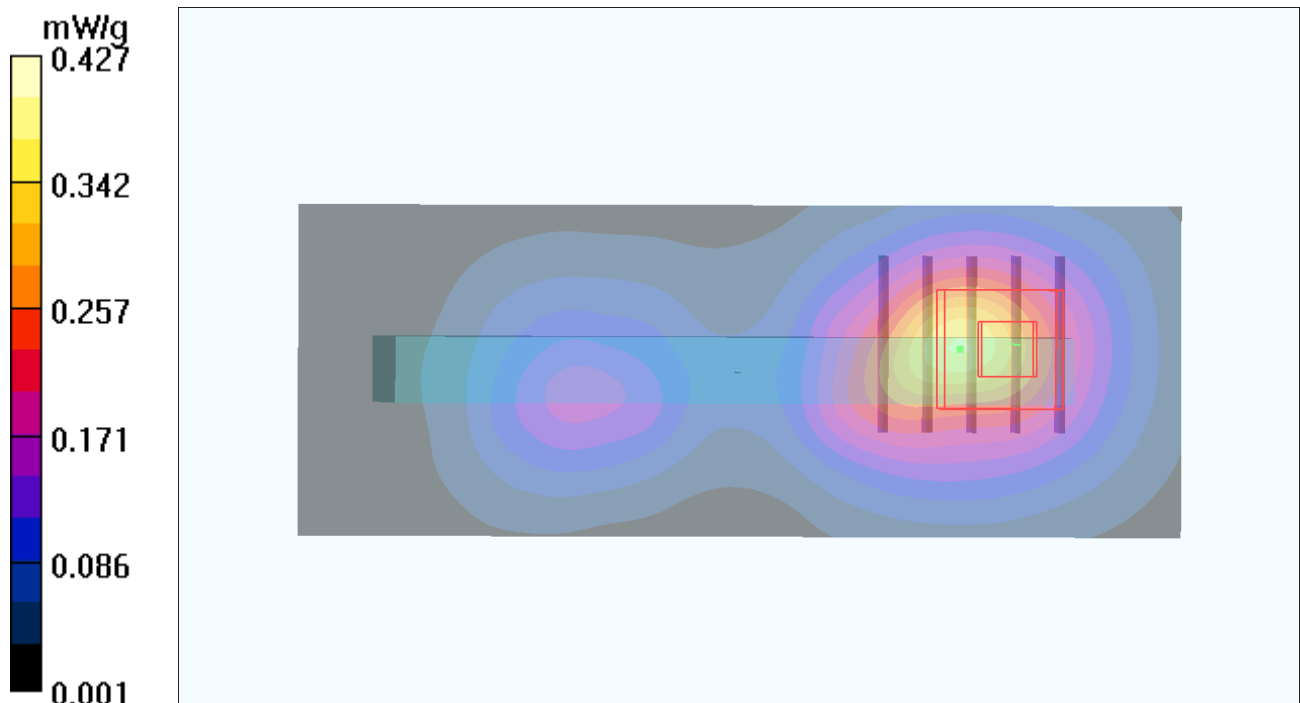
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.05 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 0.606 W/kg

SAR(1 g) = 0.276 mW/g; SAR(10 g) = 0.132 mW/g

Maximum value of SAR (measured) = 0.427 mW/g



P225 802.16e_QPSK1/2_10M_Top Side_Ant1

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (31x61x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.125 mW/g

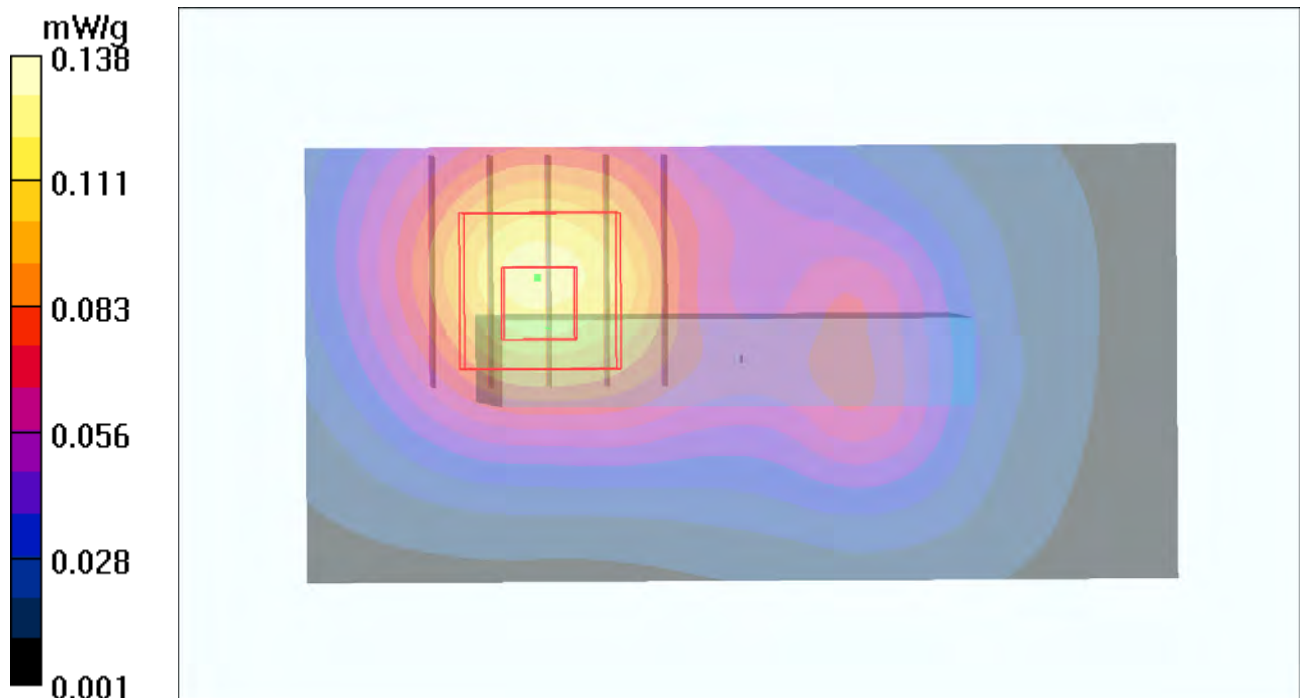
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.37 V/m; Power Drift = -0.073 dB

Peak SAR (extrapolated) = 0.194 W/kg

SAR(1 g) = 0.096 mW/g; SAR(10 g) = 0.049 mW/g

Maximum value of SAR (measured) = 0.138 mW/g



P226 802.16e_QPSK1/2_10M_Rear Face_Ant1_Earphone

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.361 mW/g

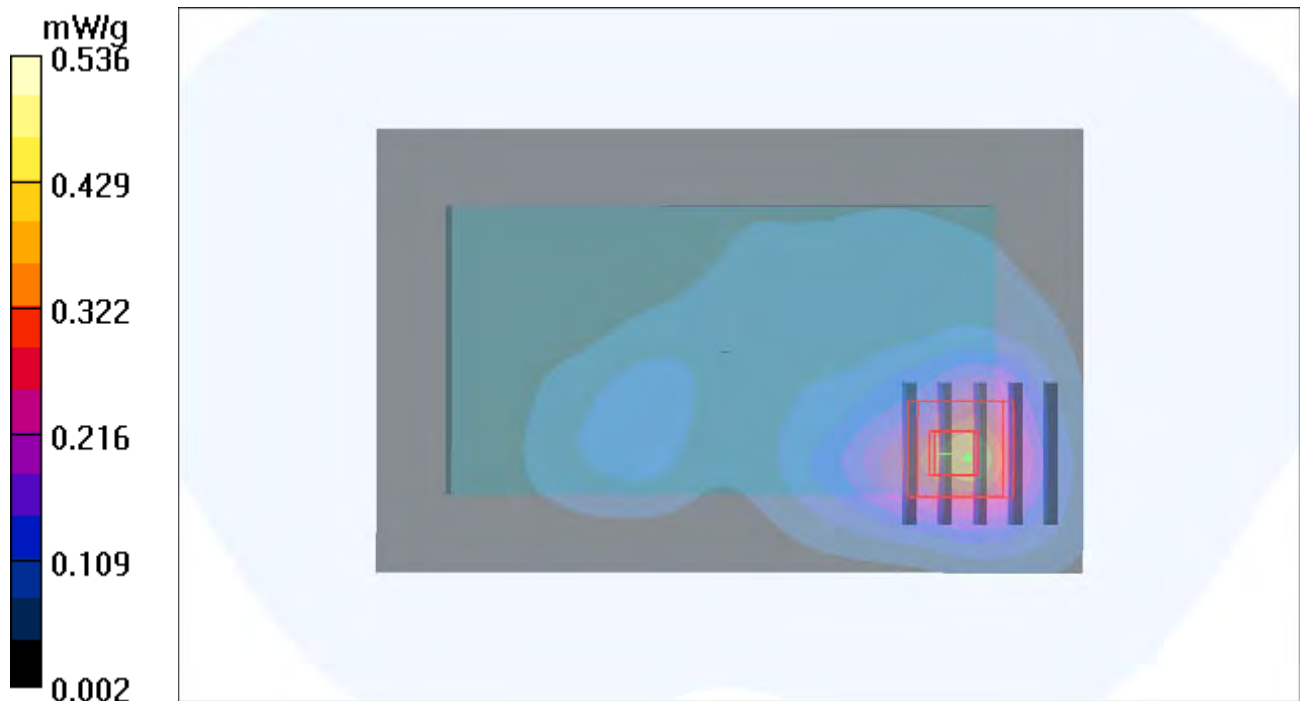
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.60 V/m; Power Drift = 0.174 dB

Peak SAR (extrapolated) = 0.765 W/kg

SAR(1 g) = 0.361 mW/g; SAR(10 g) = 0.166 mW/g

Maximum value of SAR (measured) = 0.536 mW/g



P227 802.16e_QPSK1/2_5M_Front Face_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.111 mW/g

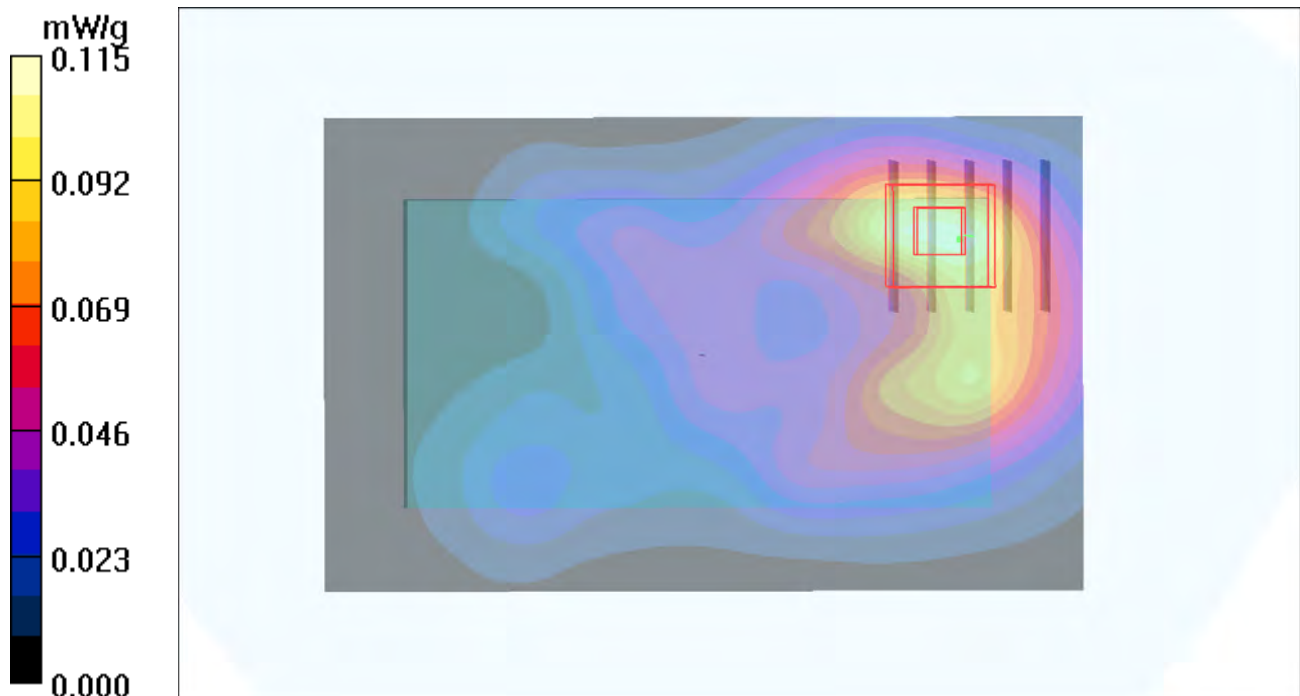
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.60 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 0.162 W/kg

SAR(1 g) = 0.077 mW/g; SAR(10 g) = 0.039 mW/g

Maximum value of SAR (measured) = 0.115 mW/g



P228 802.16e_QPSK1/2_5M_Rear Face_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.258 mW/g

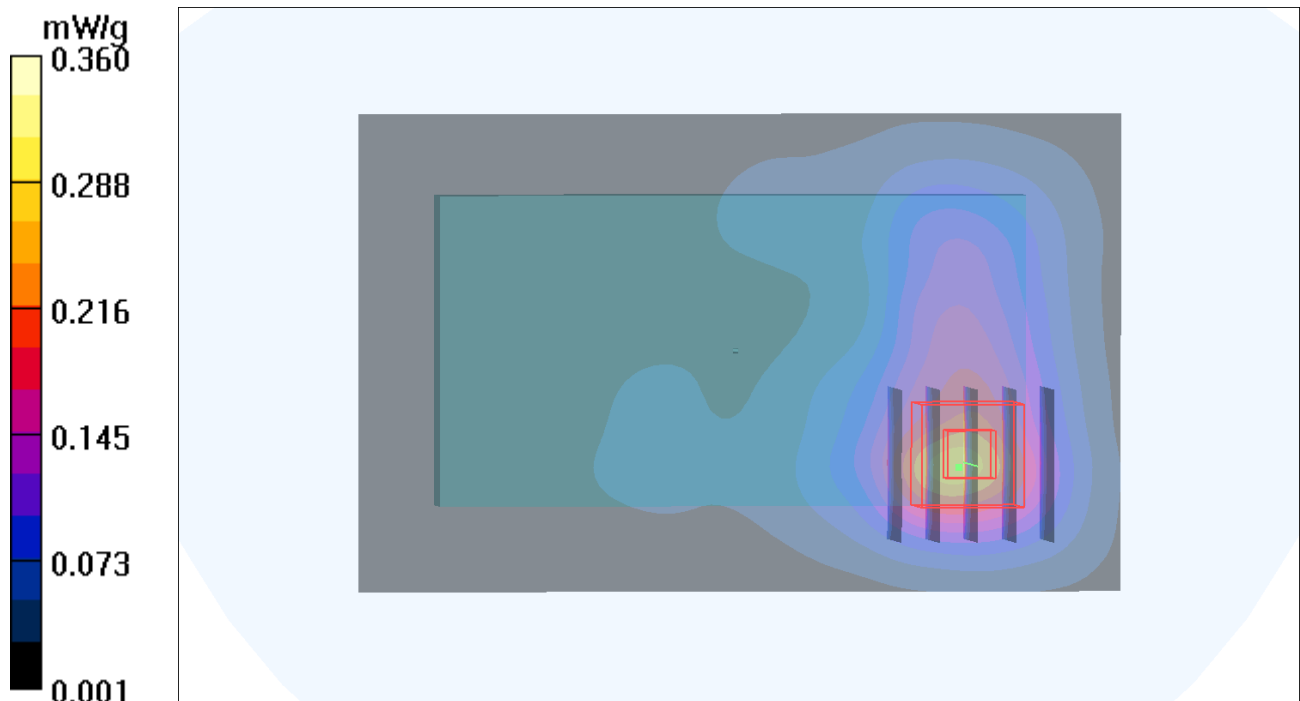
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.93 V/m; Power Drift = 0.166 dB

Peak SAR (extrapolated) = 0.510 W/kg

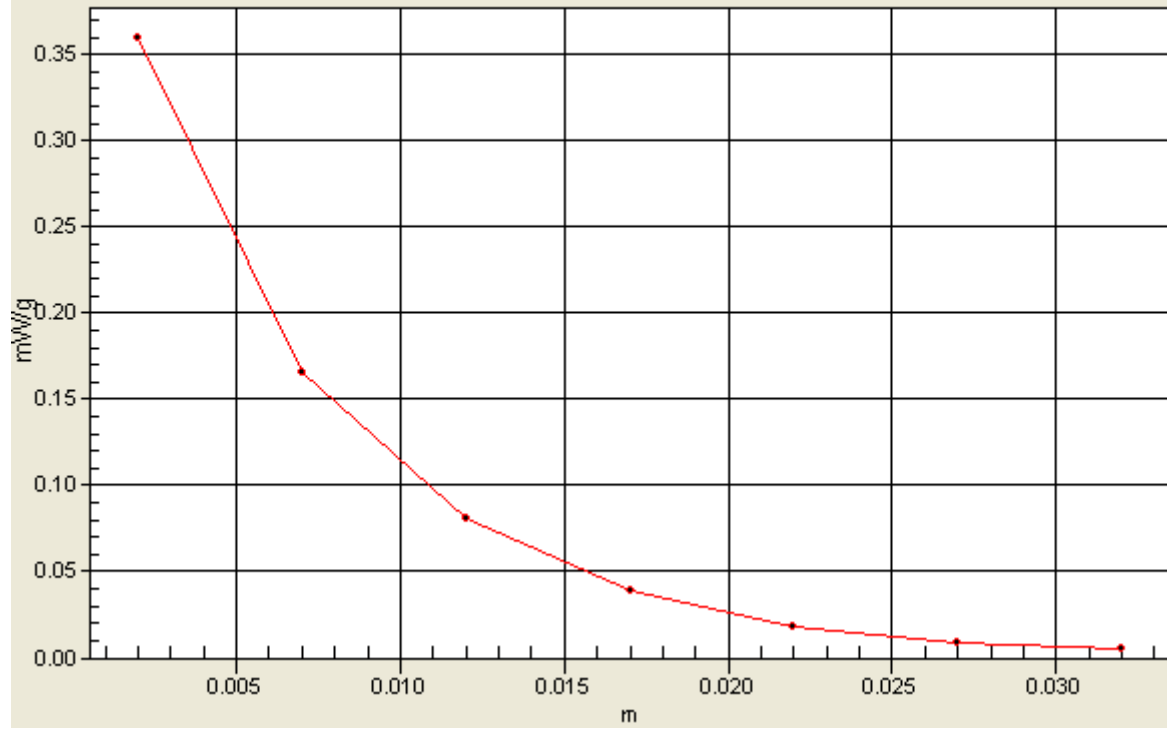
SAR(1 g) = 0.234 mW/g; SAR(10 g) = 0.110 mW/g

Maximum value of SAR (measured) = 0.360 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=2, Y=2



P229 802.16e_QPSK1/2_5M_Left Side_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (31x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.122 mW/g

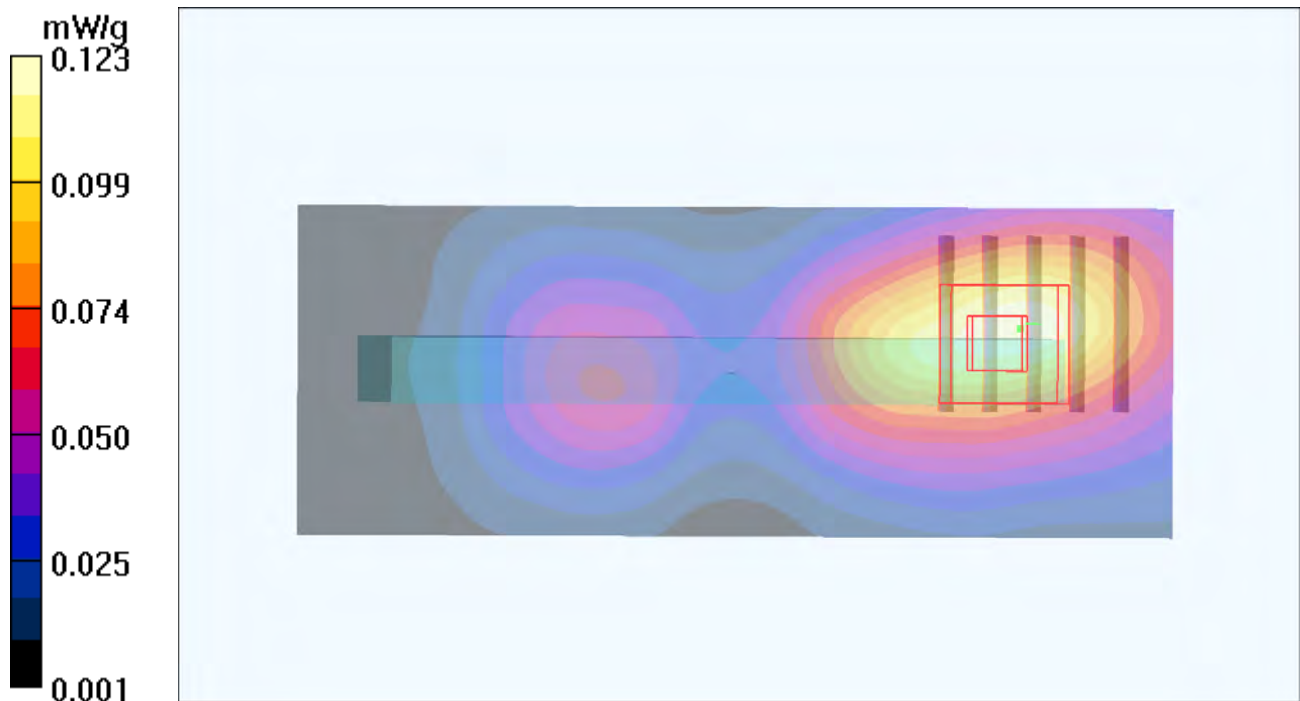
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.33 V/m; Power Drift = 0.133 dB

Peak SAR (extrapolated) = 0.178 W/kg

SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.047 mW/g

Maximum value of SAR (measured) = 0.123 mW/g



P230 802.16e_QPSK1/2_5M_Top Side_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x61x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.219 mW/g

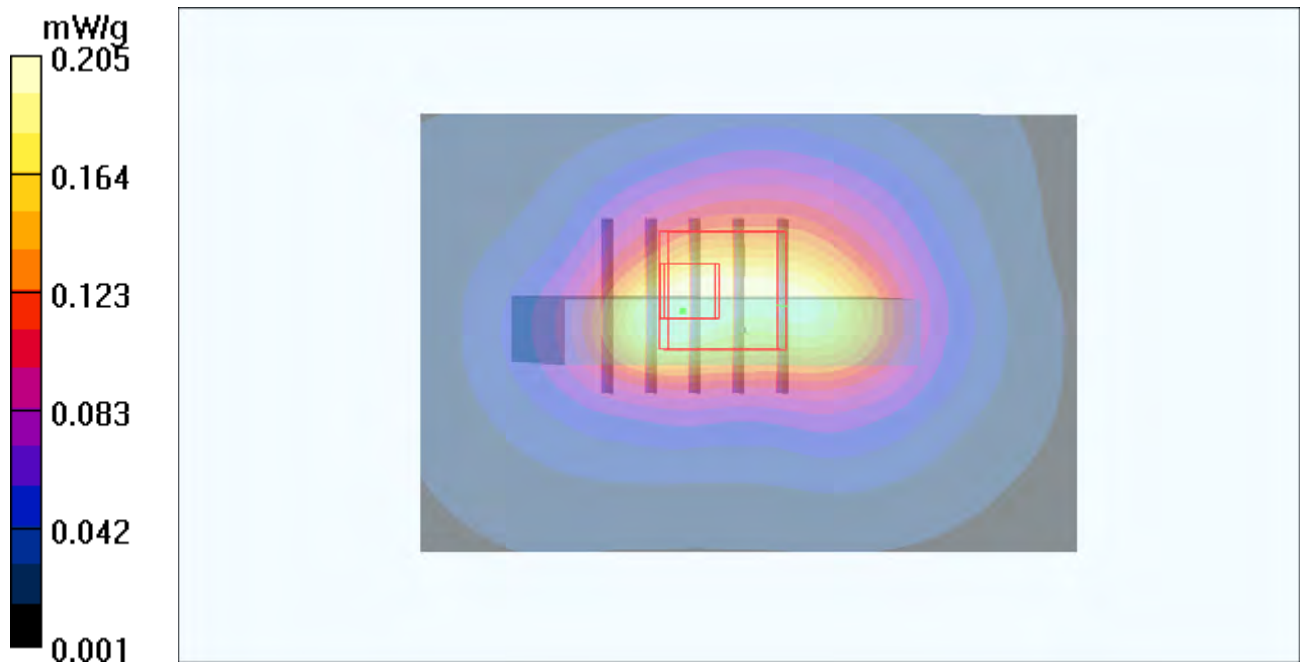
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.04 V/m; Power Drift = 0.099 dB

Peak SAR (extrapolated) = 0.286 W/kg

SAR(1 g) = 0.137 mW/g; SAR(10 g) = 0.072 mW/g

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



P231 802.16e_QPSK1/2_5M_Rear Face_Ant2_Earphone

DUT: 111121C23

Communication System: Wimax_2.6GHz 5M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.238 mW/g

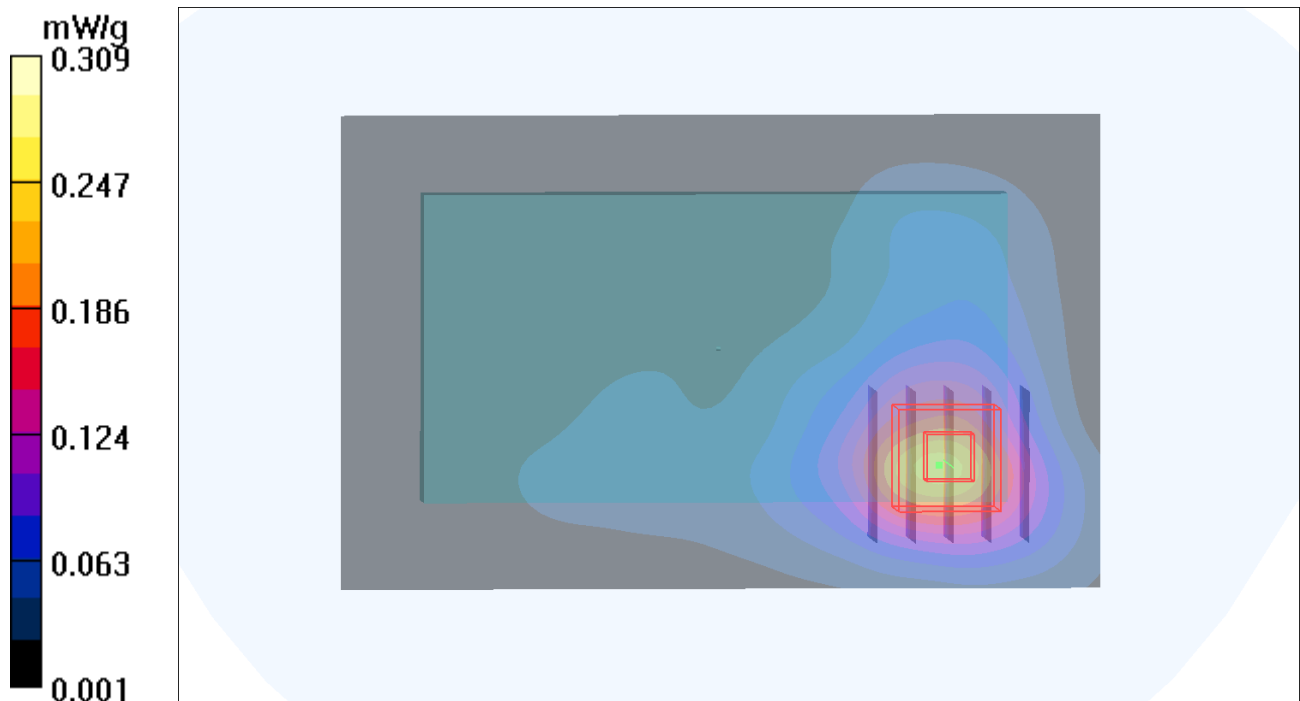
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.67 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.431 W/kg

SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.098 mW/g

Maximum value of SAR (measured) = 0.309 mW/g



P232 802.16e_QPSK1/2_10M_Front Face_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.3 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.135 mW/g

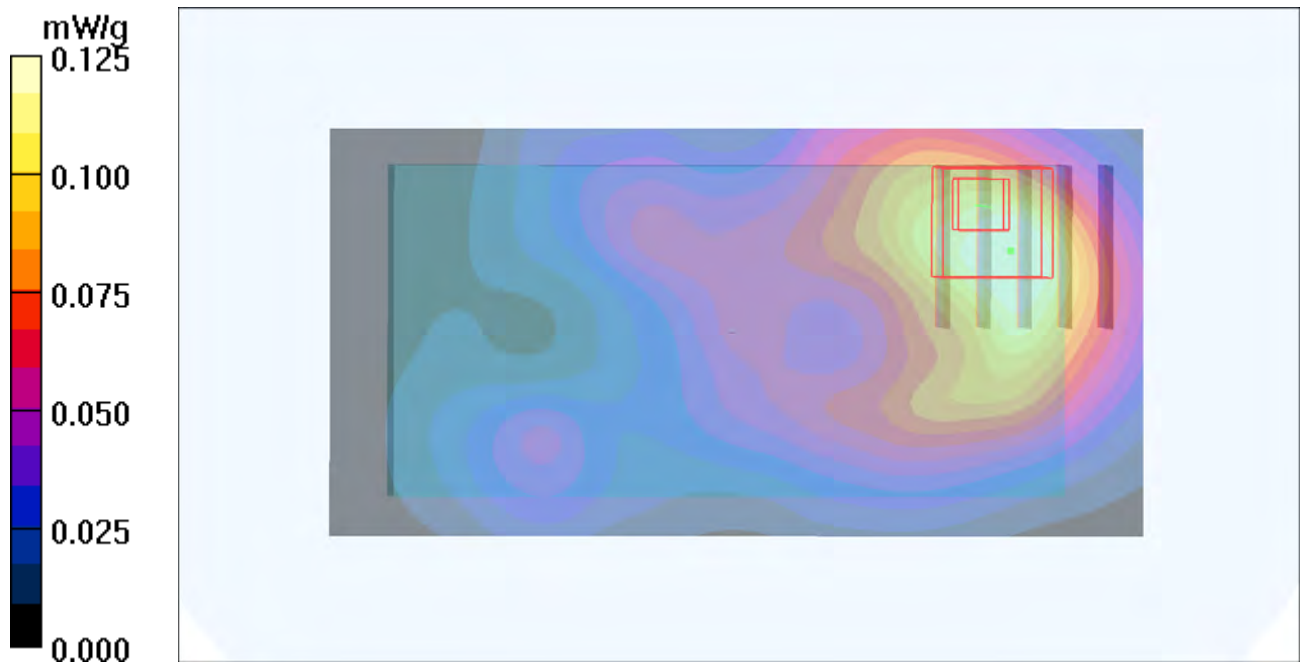
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.01 V/m; Power Drift = 0.191 dB

Peak SAR (extrapolated) = 0.175 W/kg

SAR(1 g) = 0.085 mW/g; SAR(10 g) = 0.045 mW/g

Maximum value of SAR (measured) = 0.125 mW/g



P233 802.16e_QPSK1/2_10M_Rear Face_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.250 mW/g

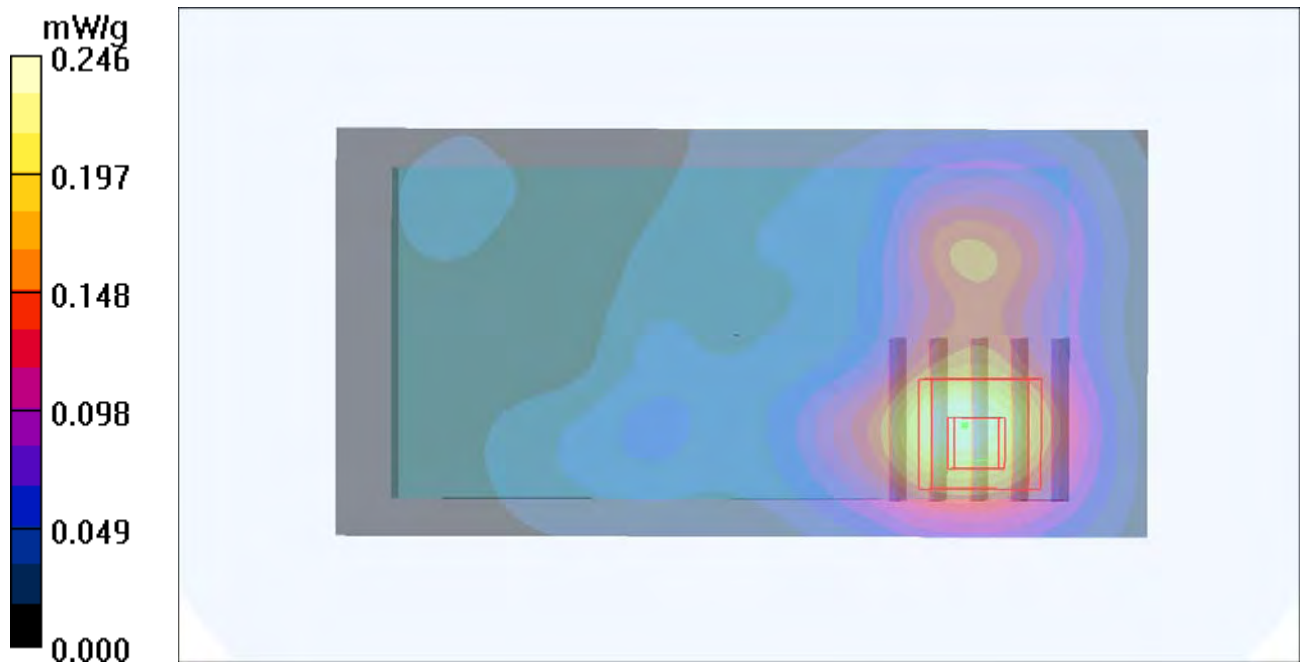
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.69 V/m; Power Drift = 0.079 dB

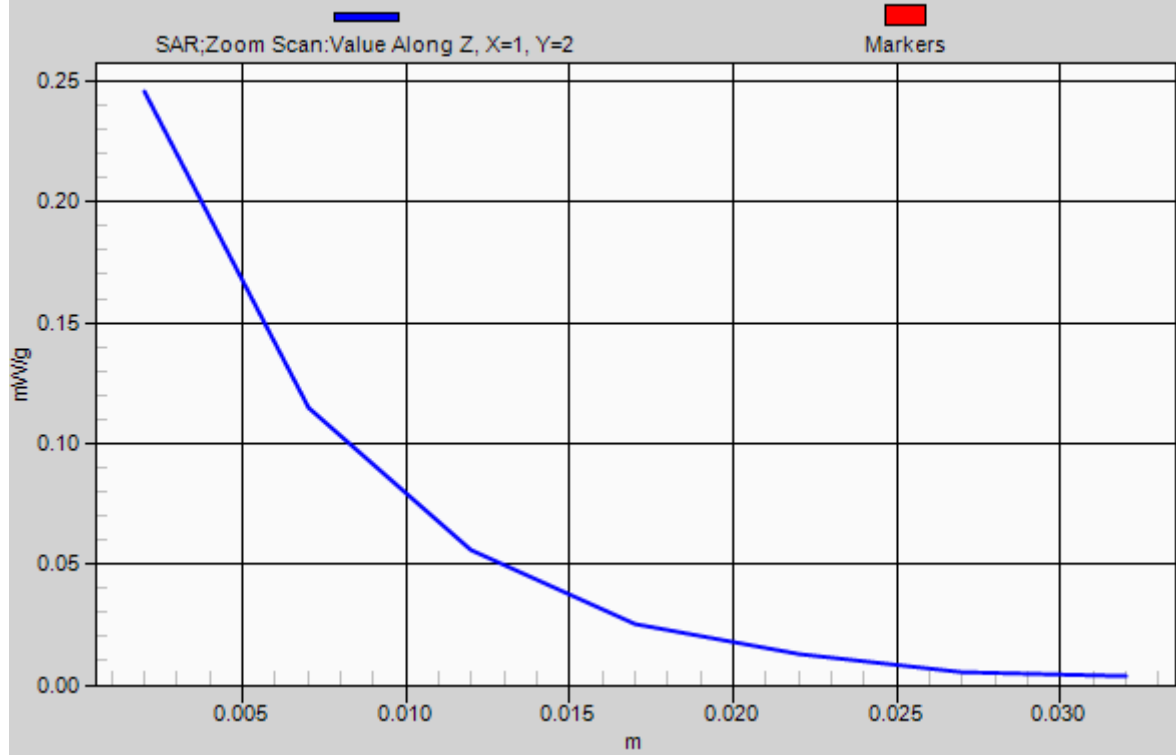
Peak SAR (extrapolated) = 0.342 W/kg

SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.085 mW/g

Maximum value of SAR (measured) = 0.246 mW/g



1g/10g Averaged SAR



P234 802.16e_QPSK1/2_10M_Left Side_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24

Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$

kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579; Calibrated: 2011/09/23

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (31x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.095 mW/g

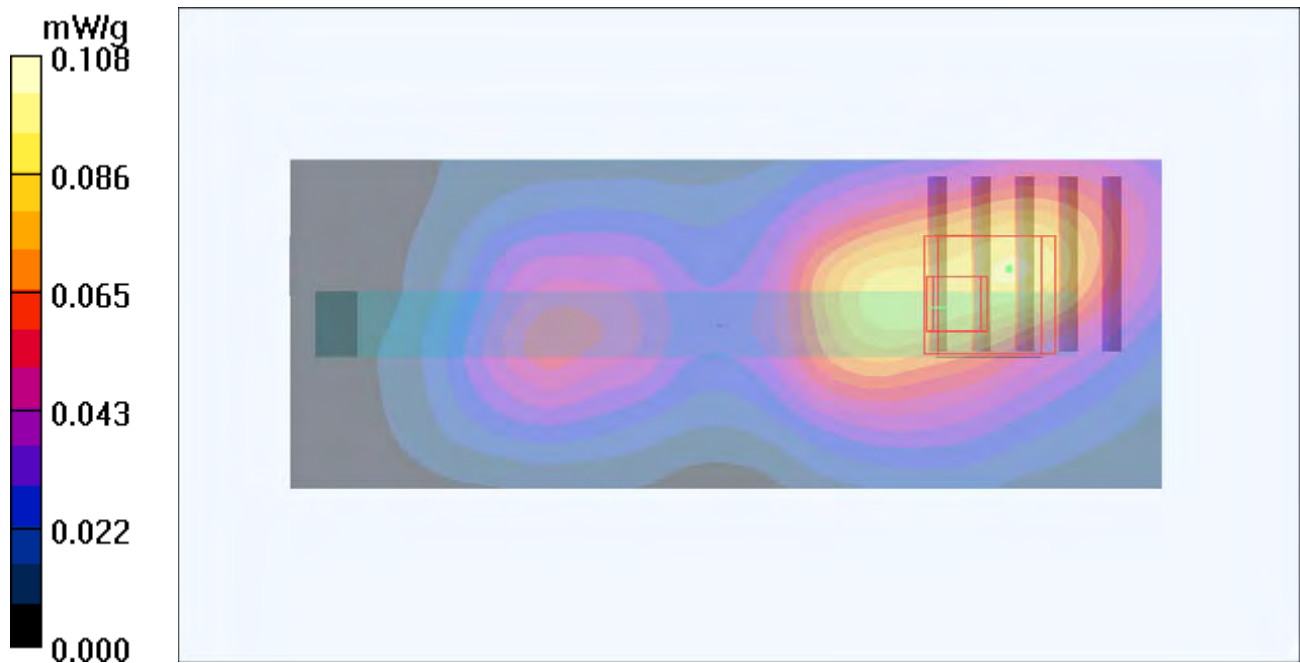
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.10 V/m; Power Drift = -0.185 dB

Peak SAR (extrapolated) = 0.149 W/kg

SAR(1 g) = 0.071 mW/g; SAR(10 g) = 0.037 mW/g

Maximum value of SAR (measured) = 0.108 mW/g



P235 802.16e_QPSK1/2_10M_Top Side_Ant2

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24
Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.3 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (31x71x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.199 mW/g

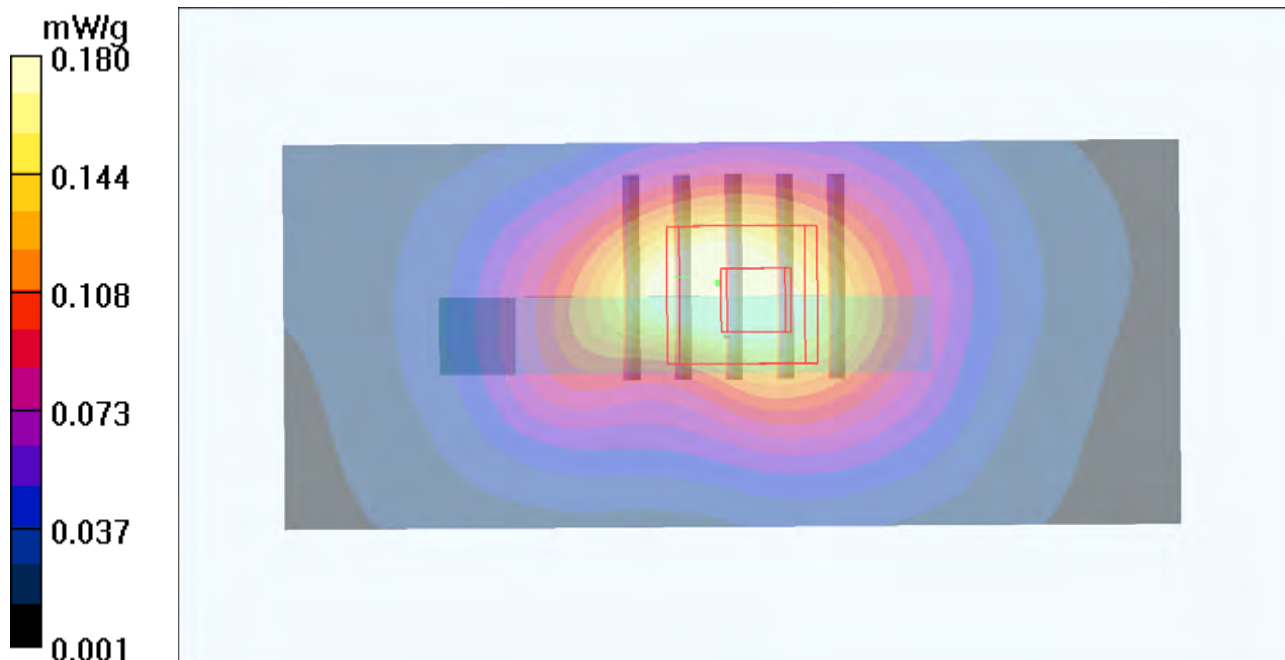
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.68 V/m; Power Drift = 0.045 dB

Peak SAR (extrapolated) = 0.256 W/kg

SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.067 mW/g

Maximum value of SAR (measured) = 0.180 mW/g



P236 802.16e_QPSK1/2_10M_Rear Face_Ant2_Earphone

DUT: 111121C23

Communication System: Wimax_2.6GHz 10M; Frequency: 2593 MHz; Duty Cycle: 1:3.24
Medium: B2600_1229 Medium parameters used: $f = 2593$ MHz; $\sigma = 2.2$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.79, 6.79, 6.79); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.231 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.22 V/m; Power Drift = 0.178 dB

Peak SAR (extrapolated) = 0.356 W/kg

SAR(1 g) = 0.170 mW/g; SAR(10 g) = 0.084 mW/g

Maximum value of SAR (measured) = 0.238 mW/g

