

FCC SAR Test Report

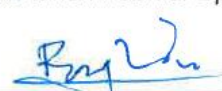
Report No. : SA120801C12
Applicant : HTC Corporation
Address : 23, Xinghua Rd., Taoyuan 330, Taiwan, R.O.C.
Product : Windows Phone
FCC ID : NM8PM23200
Brand : HTC
Model No. : PM23200
Standards : FCC 47 CFR Part 2 (2.1093) / IEEE C95.1:1991 / IEEE 1528:2003
FCC OET Bulletin 65 Supplement C (Edition 01-01)
KDB 248227 D01 v01r02 / KDB 648474 D01 v01r05 / KDB 941225 D01 v02
KDB 941225 D03 v01 / KDB 941225 D06 v01
Date of Testing : Aug. 13, 2012 ~ Aug. 27, 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. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by TAF or any government agencies.

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Release Control Record

Issue No.	Reason for Change	Date Issued
R01	Original release	Aug. 29, 2012

1. Summary of Maximum SAR Value

Mode / Band	Test Position	SAR-1g (W/kg)
GSM850	Head	0.381
	Body Worn (1 cm Gap)	0.618
	Hotspot Mode (1 cm Gap)	0.698
GSM1900	Head	0.413
	Body Worn (1 cm Gap)	0.487
	Hotspot Mode (1 cm Gap)	0.497
WCDMA Band II	Head	0.186
	Body Worn (1 cm Gap)	0.394
	Hotspot Mode (1 cm Gap)	0.304
WCDMA Band V	Head	0.235
	Body Worn (1 cm Gap)	0.376
	Hotspot Mode (1 cm Gap)	0.416
WLAN 2.4GHz	Head	0.453
	Body Worn (1 cm Gap)	0.135
	Hotspot Mode (1 cm Gap)	0.132
WLAN 5GHz	Head	0.016
	Body Worn (1 cm Gap)	0.088
	Hotspot Mode (1 cm Gap)	0.056
Bluetooth	Head	N/A
	Body Worn (1 cm Gap)	N/A
	Hotspot Mode (1 cm Gap)	N/A

Note:

1. 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. Since the Bluetooth maximum power is less than $2P_{Ref}$, SAR testing for Bluetooth is not required.

2. Description of Equipment Under Test

EUT Type	Windows Phone
FCC ID	NM8PM23200
Brand Name	HTC
Model Name	PM23200
IMEI Code	353569050021655
HW Version	DVT
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, 5150 ~ 5350, 5470 ~ 5725, 5725 ~ 5825 Bluetooth : 2400 ~ 2483.5
Uplink Modulations	GSM & GPRS : GMSK EDGE : 8PSK WCDMA : QPSK 802.11b : DSSS 802.11a/g/n : OFDM Bluetooth : GFSK
Maximum AVG Conducted Power (Unit: dBm)	GSM850 : 32.98 GSM1900 : 30.17 WCDMA Band II : 23.58 WCDMA Band V : 23.57 802.11b : 18.43 802.11g : 13.27 802.11n HT20 (2.4GHz) : 12.34 802.11n HT40 (2.4GHz) : 12.28 802.11a : 13.86 802.11n HT20 (5GHz) : 13.90 802.11n HT40 (5GHz) : 13.74
Antenna Type	Fixed Internal Antenna
EUT Stage	Identical Prototype

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.

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.

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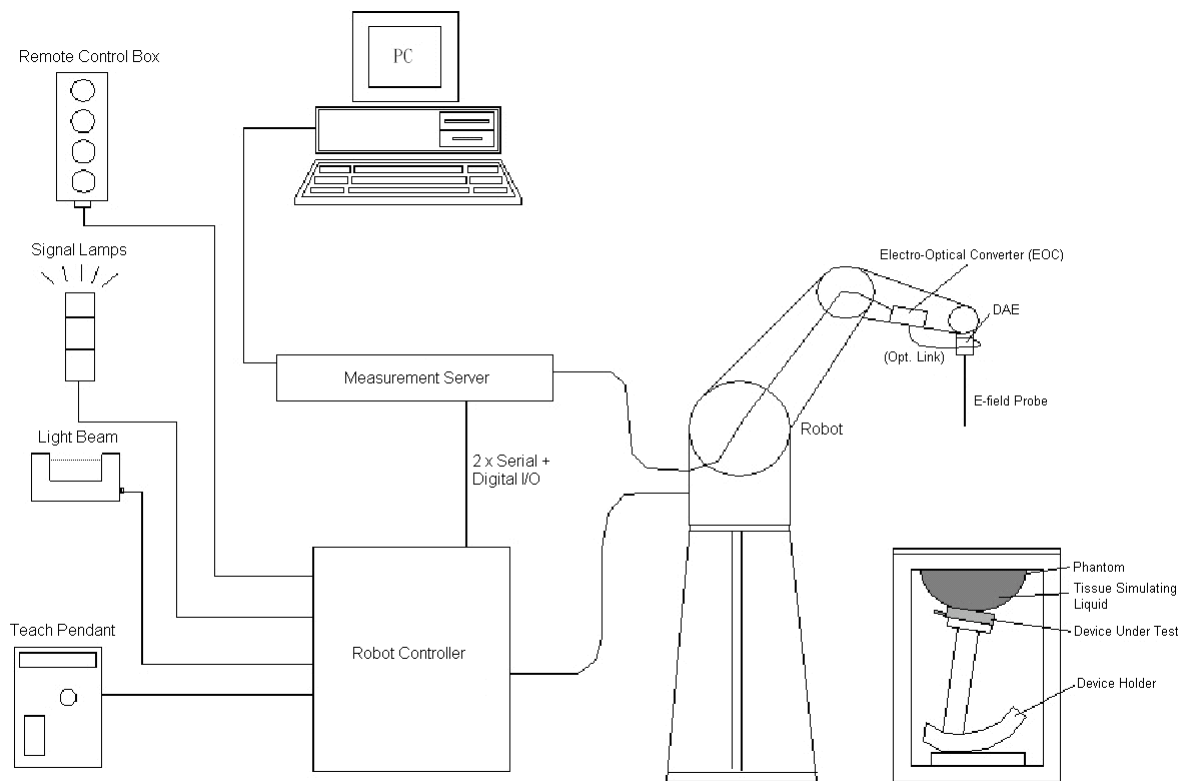


Fig-3.1 DASY System Setup

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

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

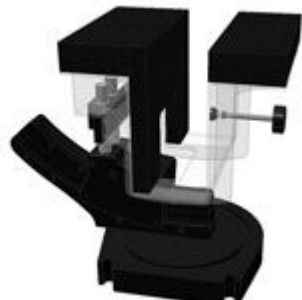
Model	Twin SAM	
Construction	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover 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	

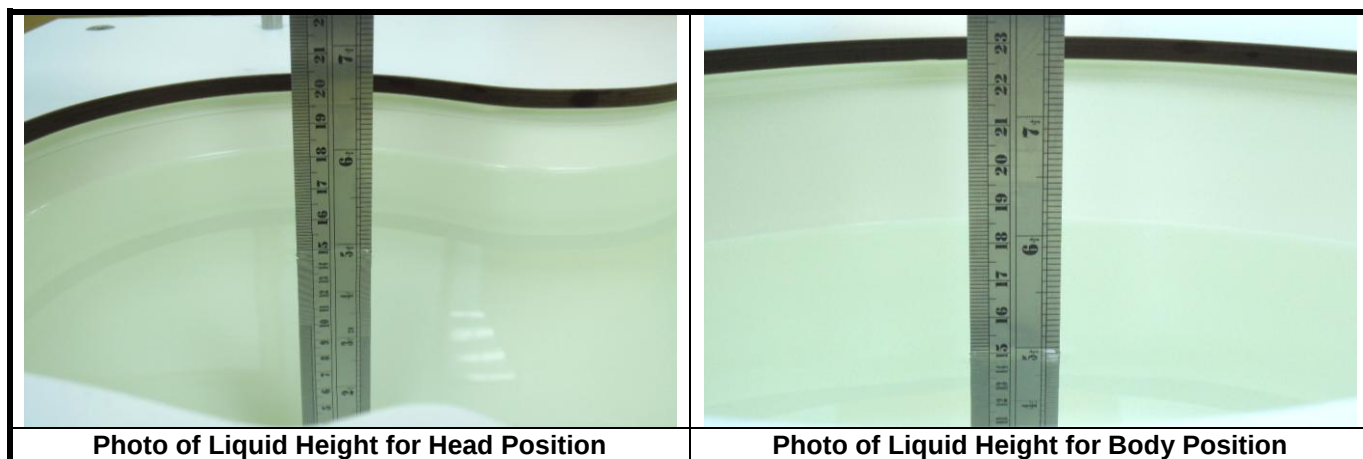
3.2.6 System Validation Dipoles

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 Table-3.1.



The dielectric properties of the head tissue simulating liquids are defined in IEEE 1528 and FCC OET 65 Supplement C Appendix C. For the body tissue simulating liquids, the dielectric properties are defined in FCC OET 65 Supplement C Appendix C. 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				
835	41.5	39.4 ~ 43.6	0.90	0.86 ~ 0.95
1900	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2450	39.2	37.2 ~ 41.2	1.80	1.71 ~ 1.89
5200	36.0	34.2 ~ 37.8	4.66	4.43 ~ 4.89
5300	35.9	34.1 ~ 37.7	4.76	4.52 ~ 5.00
5500	35.6	33.8 ~ 37.4	4.96	4.71 ~ 5.21
5600	35.5	33.7 ~ 37.3	5.07	4.82 ~ 5.32
5800	35.3	33.5 ~ 37.1	5.27	5.01 ~ 5.53
For Body				
835	55.2	52.4 ~ 58.0	0.97	0.92 ~ 1.02
1900	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
2450	52.7	50.1 ~ 55.3	1.95	1.85 ~ 2.05
5200	49.0	46.6 ~ 51.5	5.30	5.04 ~ 5.57
5300	48.9	46.5 ~ 51.3	5.42	5.15 ~ 5.69
5500	48.6	46.2 ~ 51.0	5.65	5.37 ~ 5.93
5600	48.5	46.1 ~ 50.9	5.77	5.48 ~ 6.06
5800	48.2	45.8 ~ 50.6	6.00	5.70 ~ 6.30

The following table gives the recipes for tissue simulating liquids.

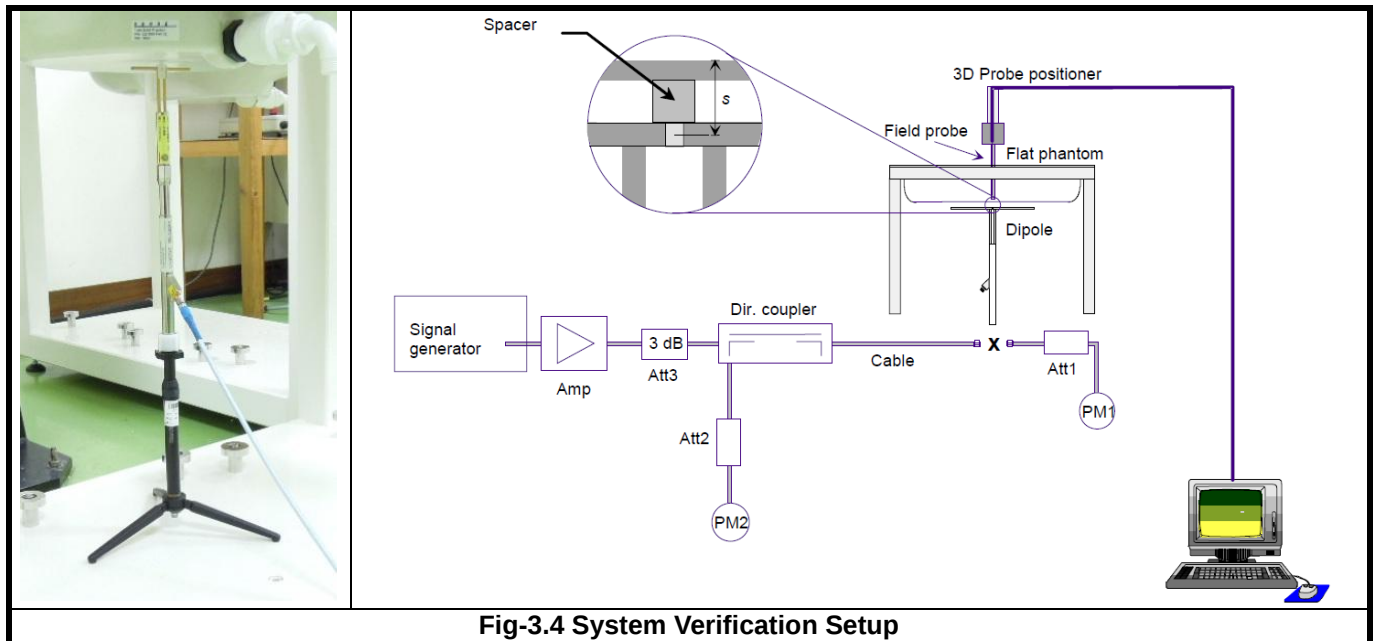
Table-3.2 Recipes of Tissue Simulating Liquid

Tissue Type	Bactericide	DGBE	HEC	NaCl	Sucrose	Triton X-100	Water	Diethylene Glycol Mono-hexylether
H835	0.2	-	0.2	1.5	57.0	-	41.1	-
H1900	-	44.5	-	0.2	-	-	55.3	-
H2450	-	45.0	-	0.1	-	-	54.9	-
H5G	-	-	-	-	-	17.2	65.5	17.3
B835	0.2	-	0.2	0.9	48.5	-	50.2	-
B1900	-	29.5	-	0.3	-	-	70.2	-
B2450	-	31.4	-	0.1	-	-	68.5	-
B5G	-	-	-	-	-	10.7	78.6	10.7

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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.



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 DASY 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 EUT 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 EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in 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

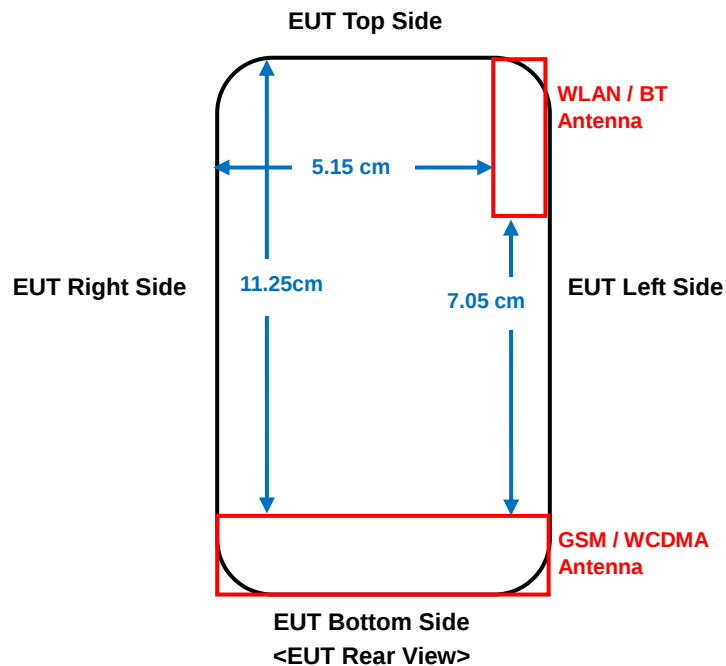
In DASY, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

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

<Antenna Location>



This device supports WiFi hotspot function, so body SAR was tested under 1 cm for the surfaces / slide edges where a transmitting antenna is within 2.5 cm from the edge. Since the SAR is required for antenna located within 2.5 cm from edge, SAR testing for each antenna is listed as below.

GSM / WCDMA Antenna : Front Face, Rear Face, Left Side, Right Side, Bottom Side

WLAN / BT Antenna : Front Face, Rear Face, Left Side, Top Side

The simultaneous transmission possibilities are listed as below.

Simultaneous Tx Combination	Configuration	Head (Voice / VoIP)	Body Worn (Voice / VoIP)	Hotspot (Data)
1	GSM850 (Voice / Data) + WLAN / BT (Data)	Yes	Yes	Yes
2	GSM1900 (Voice / Data) + WLAN / BT (Data)	Yes	Yes	Yes
3	WCDMA II (Voice / Data) + WLAN / BT (Data)	Yes	Yes	Yes
4	WCDMA V (Voice / Data) + WLAN / BT (Data)	Yes	Yes	Yes

The WLAN and BT cannot transmit simultaneously, so there is no co-location test requirement for WLAN and BT.

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Per KDB 941225 D04 requirement, the required test configuration for this device is as below:

1. This DUT is class B device
2. This DUT supports (E)GPRS multi-slot class 12 (max. uplink : 4, max. downlink : 4, total timeslots : 5)
3. This DUT supports DTM multi-slot class 11 (max. uplink : 3 for 1 CS & 2 PS, max. downlink : 4, total timeslots : 5)
4. The measured maximum conducted power can be referred to section 11.1 of this report
5. For DTM multi-slot class 11 link mode, the device was linked with system emulator (Brand: Agilent, Model: E5515C) and transmit maximum power on maximum number of Tx slots (one CS timeslot and two PS timeslots per frame).

For WWAN SAR testing, the EUT was linked and controlled by base station emulator (Brand: Agilent, Model: E5515C). 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 EUT. The EUT was set from the emulator to radiate maximum output power during SAR testing.

For GSM850, the power control level is set to 5. For GPRS850 (GMSK, CS1), the power control level is set to 5. For EDGE850 (GMSK: MCS1, 8PSK:MCS9), the power control level is set to 8. For GSM1900, the power control level is set to 0. For GPRS1900 (GMSK, CS1), the power control level is set to 0. For EDGE1900 (GMSK: MCS1, 8PSK:MCS9), the power control level is set to 2. SAR testing is performed on the maximum frame-averaged power mode.

For WCDMA, head and body SAR is tested under 12.2k RMC mode with power control set all up bits. SAR for AMR is not required since its power is less than 1/4 dB higher than RMC. SAR for HSDPA/HSUPA is not required since its power is less than 1/4 dB higher than RMC without HSDPA/HSUPA and SAR for 12.2 kbps RMC is less than 75% of the SAR limit (1.2 W/kg).

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 1 Mbps for 802.11b, and MCS0 for 802.11n due to the highest RF output power.

4.2 EUT Testing Position

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

1. Define two imaginary lines on the handset

- 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.
- 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.
- 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.

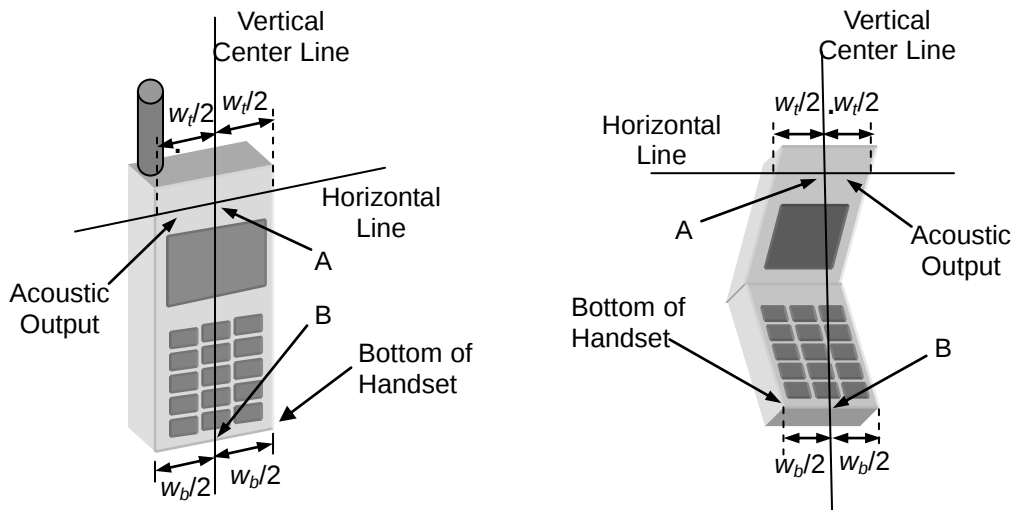


Fig-4.1 Illustration for Handset Vertical and Horizontal Reference Lines

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2. Cheek Position

- 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.
- 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).

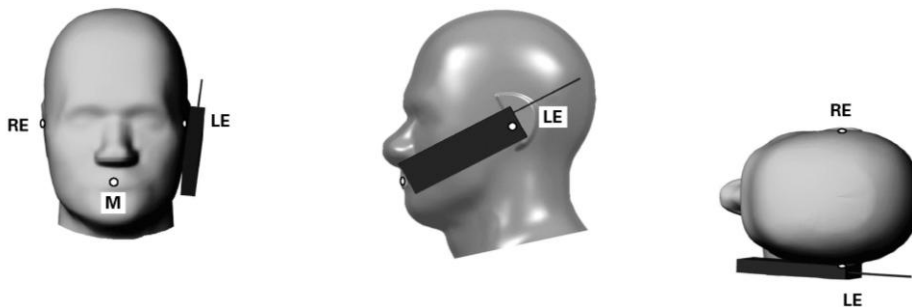


Fig-4.2 Illustration for Cheek Position

3. Tilted Position

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

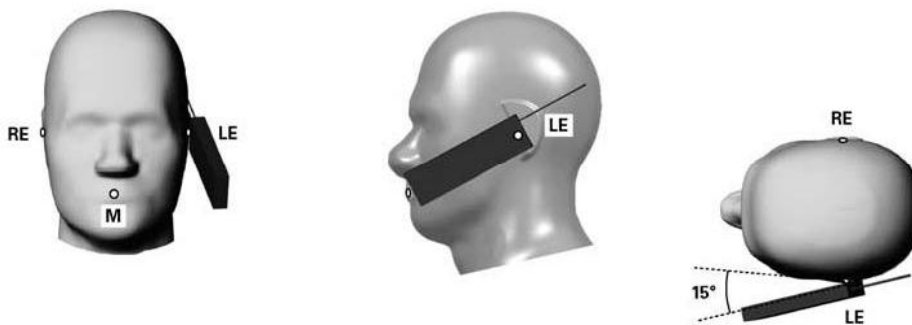


Fig-4.3 Illustration for Tilted Position

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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 1.0 cm.

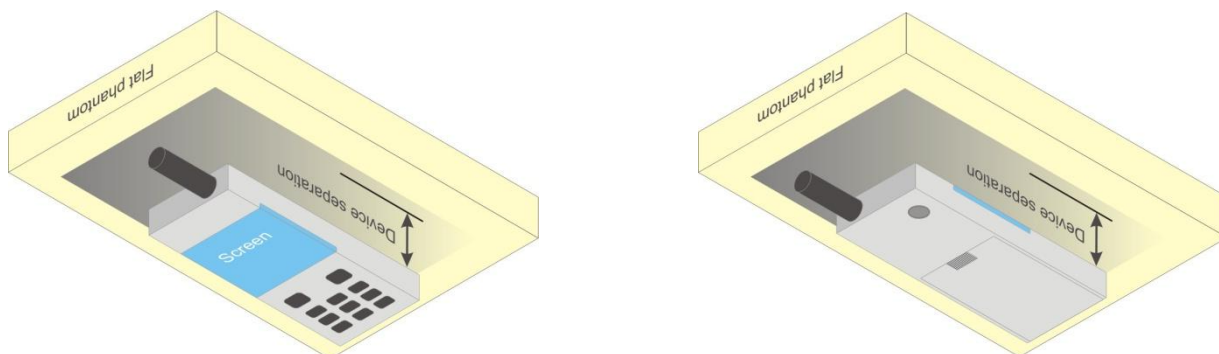


Fig-4.4 Illustration for Body Worn Position

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	21.1	0.917	42.809	0.90	41.5	1.89	3.15	Aug. 13, 2012
H835	835	20.4	0.898	42.009	0.90	41.5	-0.22	1.23	Aug. 27, 2012
H1900	1900	21.0	1.443	39.72	1.40	40.0	3.07	-0.70	Aug. 13, 2012
H1900	1900	20.5	1.44	39.70	1.40	40.0	2.86	-0.75	Aug. 27, 2012
H2450	2450	20.3	1.80	40.40	1.80	39.2	0.00	3.06	Aug. 21, 2012
H5G	5200	20.1	4.70	37.00	4.66	36.0	0.86	2.78	Aug. 21, 2012
H5G	5500	20.1	5.07	36.40	4.96	35.6	2.22	2.25	Aug. 21, 2012
H5G	5800	20.1	5.43	35.70	5.27	35.3	3.04	1.13	Aug. 21, 2012
B835	835	20.5	0.98	55.843	0.97	55.2	1.03	1.16	Aug. 14, 2012
B1900	1900	20.9	1.543	52.865	1.52	53.3	1.51	-0.82	Aug. 13, 2012
B2450	2450	20.4	2.02	53.40	1.95	52.7	3.59	1.33	Aug. 20, 2012
B5G	5200	20.5	5.24	49.40	5.30	49.0	-1.13	0.82	Aug. 20, 2012
B5G	5500	20.5	5.69	48.90	5.65	48.6	0.71	0.62	Aug. 20, 2012
B5G	5800	20.5	6.11	48.20	6.00	48.2	1.83	0.00	Aug. 20, 2012

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 $\pm 2^\circ\text{C}$.

4.4 System Verification

The measuring results for system check are shown as below.

Test Date	Mode	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
Aug. 13, 2012	Head	835	9.46	2.43	9.72	2.75	4d021	3650	910
Aug. 27, 2012	Head	835	9.46	2.39	9.56	1.06	4d021	3650	910
Aug. 13, 2012	Head	1900	38.90	9.77	39.08	0.46	5d036	3650	910
Aug. 27, 2012	Head	1900	38.90	9.71	38.84	-0.15	5d036	3864	1277
Aug. 21, 2012	Head	2450	52.90	13.20	52.80	-0.19	737	3590	579
Aug. 21, 2012	Head	5200	79.60	7.66	76.60	-3.77	1018	3590	579
Aug. 21, 2012	Head	5500	84.70	9.02	90.20	6.49	1018	3590	579
Aug. 21, 2012	Head	5800	78.60	8.21	82.10	4.45	1018	3590	579
Aug. 14, 2012	Body	835	9.60	2.37	9.48	-1.25	4d021	3864	861
Aug. 13, 2012	Body	1900	38.90	9.67	38.68	-0.57	5d036	3864	861
Aug. 20, 2012	Body	2450	50.00	12.30	49.20	-1.60	737	3590	579
Aug. 20, 2012	Body	5200	72.70	7.00	70.00	-3.71	1018	3590	579
Aug. 20, 2012	Body	5500	78.30	7.46	74.60	-4.73	1018	3590	579
Aug. 20, 2012	Body	5800	73.40	6.90	69.00	-5.99	1018	3590	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.

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 Uplink)	32.98	32.92	32.79	30.17	30.07	29.94
GPRS 8 (GMSK, 1 Uplink)	32.90	32.90	32.65	30.08	30.01	29.90
GPRS 10 (GMSK, 2 Uplink)	31.56	31.69	31.47	29.08	29.20	28.94
GPRS 11 (GMSK, 3 Uplink)	30.86	30.78	30.76	29.05	29.18	29.03
GPRS 12 (GMSK, 4 Uplink)	29.48	29.44	29.47	28.10	27.96	28.01
DTM 9 (GMSK, 2 Uplink)	31.55	31.59	31.42	29.07	29.21	29.06
DTM 11 (GMSK, 3 Uplink)	30.85	30.67	30.75	29.04	29.17	29.01
EDGE 8 (8PSK, 1 Uplink)	27.90	27.81	27.78	27.20	26.94	27.04
EDGE 10 (8PSK, 2 Uplink)	27.76	27.65	27.62	27.17	26.93	27.05
EDGE 11 (8PSK, 3 Uplink)	27.66	27.62	27.58	26.15	25.91	26.02
EDGE 12 (8PSK, 4 Uplink)	25.40	25.30	25.18	25.14	24.98	25.10
DTM 9 (8PSK, 2 Uplink)	26.56	26.61	26.77	25.73	25.76	25.76
DTM 11 (8PSK, 3 Uplink)	26.60	26.55	26.65	25.77	25.75	25.78
Maximum Frame-Averaged Output Power						
GSM (GMSK, 1 Uplink)	23.98	23.92	23.79	21.17	21.07	20.94
GPRS 8 (GMSK, 1 Uplink)	23.90	23.90	23.65	21.08	21.01	20.90
GPRS 10 (GMSK, 2 Uplink)	25.56	25.69	25.47	23.08	23.20	22.94
GPRS 11 (GMSK, 3 Uplink)	26.60	26.52	26.50	24.79	24.92	24.77
GPRS 12 (GMSK, 4 Uplink)	26.48	26.44	26.47	25.10	24.96	25.01
DTM 9 (GMSK, 2 Uplink)	25.55	25.59	25.42	23.07	23.21	23.06
DTM 11 (GMSK, 3 Uplink)	26.59	26.41	26.49	24.78	24.91	24.75
EDGE 8 (8PSK, 1 Uplink)	18.90	18.81	18.78	18.20	17.94	18.04
EDGE 10 (8PSK, 2 Uplink)	21.76	21.65	21.62	21.17	20.93	21.05
EDGE 11 (8PSK, 3 Uplink)	23.40	23.36	23.32	21.89	21.65	21.76
EDGE 12 (8PSK, 4 Uplink)	22.40	22.30	22.18	22.14	21.98	22.10
DTM 9 (8PSK, 2 Uplink)	20.56	20.61	20.77	19.73	19.76	19.76
DTM 11 (8PSK, 3 Uplink)	22.34	22.29	22.39	21.51	21.49	21.52

Note:

- SAR testing for GSM/GPRS/EDGE/DTM was performed on the maximum frame-averaged power mode.
- The frame-averaged power is linearly scaled the maximum burst-averaged power based on time slots. The calculated methods are shown as below:

Frame-averaged power = Burst-averaged power (1 Uplink) – 9 dBm
 Frame-averaged power = Burst averaged power (2 Uplink) – 6 dBm
 Frame-averaged power = Burst averaged power (3 Uplink) – 4.26 dBm
 Frame-averaged power = Burst averaged power (4 Uplink) – 3 dBm

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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	23.58	23.55	23.32	23.57	23.51	23.42
HSDPA Subtest-1	22.72	22.75	22.45	22.62	22.57	22.51
HSDPA Subtest-2	22.70	22.73	22.48	22.57	22.60	22.50
HSDPA Subtest-3	22.31	22.32	22.08	22.06	22.08	22.00
HSDPA Subtest-4	22.31	22.23	22.01	22.05	22.07	22.06
HSUPA Subtest-1	22.35	22.38	22.49	22.32	22.26	22.57
HSUPA Subtest-2	20.71	20.87	20.50	20.59	20.64	20.54
HSUPA Subtest-3	21.41	21.47	20.63	21.48	21.28	20.80
HSUPA Subtest-4	22.07	22.07	22.12	21.84	22.16	22.10
HSUPA Subtest-5	22.74	22.76	22.52	22.55	22.58	22.46

Band	802.11b			802.11g		
Channel	1	6	11	1	6	11
Frequency (MHz)	2412	2437	2462	2412	2437	2462
Average Power	18.28	18.39	18.43	13.06	13.18	13.27

Band	802.11n (HT20)			802.11n (HT40)		
Channel	1	6	11	3	6	9
Frequency (MHz)	2412	2437	2462	2422	2437	2452
Average Power	12.17	12.32	12.34	12.21	12.24	12.28

Band	802.11a							
Channel	36	40	44	48	52	56	60	64
Frequency (MHz)	5180	5200	5220	5240	5260	5280	5300	5320
Average Power	13.16	13.21	13.22	13.34	13.45	13.59	13.72	13.86

Band	802.11a							
Channel	100	104	108	112	116	132	136	140
Frequency (MHz)	5500	5520	5540	5560	5580	5660	5680	5700
Average Power	13.06	13.21	13.33	13.40	13.46	13.60	13.56	13.53

Band	802.11a							
Channel	149	153	157	161	-	-	-	-
Frequency (MHz)	5745	5765	5785	5805	-	-	-	-
Average Power	12.81	12.77	12.71	12.64	-	-	-	-

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Band	802.11n (HT20)							
Channel	36	40	44	48	52	56	60	64
Frequency (MHz)	5180	5200	5220	5240	5260	5280	5300	5320
Average Power	13.14	13.28	13.30	13.39	13.50	13.65	13.75	13.90

Band	802.11n (HT20)							
Channel	100	104	108	112	116	132	136	140
Frequency (MHz)	5500	5520	5540	5560	5580	5660	5680	5700
Average Power	13.11	13.24	13.35	13.46	13.55	13.65	13.63	13.58

Band	802.11n (HT20)							
Channel	149	153	157	161	-	-	-	-
Frequency (MHz)	5745	5765	5785	5805	-	-	-	-
Average Power	12.87	12.79	12.73	12.68	-	-	-	-

Band	802.11n (HT40)							
Channel	38	46	54	62	102	134	151	159
Frequency (MHz)	5190	5230	5270	5310	5510	5670	5755	5795
Average Power	13.12	13.28	13.47	13.74	13.08	13.54	12.76	12.65

4.6 SAR Testing Results

4.6.1 SAR Results for Head

Plot No.	Band	Mode	Test Position	Channel	SAR-1g (W/kg)
75	GSM850	GPRS11	Right Cheek	128	0.328
76	GSM850	GPRS11	Right Tilted	128	0.295
77	GSM850	GPRS11	Left Cheek	128	0.381
78	GSM850	GPRS11	Left Tilted	128	0.226
70	GSM1900	GPRS12	Right Cheek	512	0.413
71	GSM1900	GPRS12	Right Tilted	512	0.117
72	GSM1900	GPRS12	Left Cheek	512	0.204
73	GSM1900	GPRS12	Left Tilted	512	0.119
9	WCDMA II	RMC12.2K	Right Cheek	9262	0.186
10	WCDMA II	RMC12.2K	Right Tilted	9262	0.038
11	WCDMA II	RMC12.2K	Left Cheek	9262	0.125
12	WCDMA II	RMC12.2K	Left Tilted	9262	0.063
13	WCDMA V	RMC12.2K	Right Cheek	4132	0.223
14	WCDMA V	RMC12.2K	Right Tilted	4132	0.202
15	WCDMA V	RMC12.2K	Left Cheek	4132	0.235
16	WCDMA V	RMC12.2K	Left Tilted	4132	0.174
123	802.11b	-	Right Cheek	11	0.453
124	802.11b	-	Right Tilted	11	0.309
125	802.11b	-	Left Cheek	11	0.301
126	802.11b	-	Left Tilted	11	0.283
127	802.11n	HT20	Right Cheek	48	N/A
128	802.11n	HT20	Right Tilted	48	N/A
129	802.11n	HT20	Left Cheek	48	N/A
130	802.11n	HT20	Left Tilted	48	N/A
131	802.11n	HT20	Right Cheek	64	N/A
132	802.11n	HT20	Right Tilted	64	N/A
133	802.11n	HT20	Left Cheek	64	0.000987
134	802.11n	HT20	Left Tilted	64	N/A
146	802.11n	HT20	Right Cheek	132	0.016
136	802.11n	HT20	Right Tilted	132	N/A
137	802.11n	HT20	Left Cheek	132	N/A
138	802.11n	HT20	Left Tilted	132	N/A
139	802.11n	HT20	Right Cheek	149	N/A
140	802.11n	HT20	Right Tilted	149	N/A
141	802.11n	HT20	Left Cheek	149	N/A
142	802.11n	HT20	Left Tilted	149	N/A

Note:

- SAR is performed on the highest power channel. When the SAR value of highest power channel is less than 0.8 W/kg, SAR testing for optional channel is not required.
- Since GPRS/EDGE and WLAN of this device supports VOIP capability through 3rd party apps software, we have evaluated data mode for head SAR.
- SAR testing for 802.11g/n is not required because its maximum power is less than 1/4 dB higher than 802.11b.
- SAR testing for WLAN 5G is performed on the maximum power mode.
- The "N/A" means there is no SAR value or the SAR is too low to be measured.

4.6.2 SAR Results for Body

<Body Worn Mode>

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Channel	SAR-1g (W/kg)
22	GSM850	GPRS11	Front Face	1	128	0.318
23	GSM850	GPRS11	Rear Face	1	128	0.618
29	GSM1900	GPRS12	Front Face	1	512	0.348
30	GSM1900	GPRS12	Rear Face	1	512	0.487
36	WCDMA II	RMC12.2K	Front Face	1	9262	0.239
37	WCDMA II	RMC12.2K	Rear Face	1	9262	0.394
43	WCDMA V	RMC12.2K	Front Face	1	4132	0.203
44	WCDMA V	RMC12.2K	Rear Face	1	4132	0.376
121	802.11b	-	Front Face	1	11	0.054
122	802.11b	-	Rear Face	1	11	0.135
105	802.11n	HT20	Front Face	1	48	N/A
106	802.11n	HT20	Rear Face	1	48	0.043
107	802.11n	HT20	Front Face	1	64	N/A
108	802.11n	HT20	Rear Face	1	64	0.077
109	802.11n	HT20	Front Face	1	132	N/A
110	802.11n	HT20	Rear Face	1	132	0.088
115	802.11n	HT20	Front Face	1	149	N/A
116	802.11n	HT20	Rear Face	1	149	0.075

Note:

1. SAR is performed on the highest power channel. When the SAR value of highest power channel is less than 0.8 W/kg, SAR testing for optional channel is not required.
2. Since GPRS/EDGE, WCDMA and WLAN of this device supports VOIP capability through 3rd party apps software, we have evaluated data mode for body worn mode.
3. SAR testing for 802.11g/n is not required because its maximum power is less than 1/4 dB higher than 802.11b.
4. SAR testing for WLAN 5G is performed on the maximum power mode.
5. The "N/A" means there is no SAR value or the SAR is too low to be measured.

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<Hotspot Mode>

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Channel	SAR-1g (W/kg)
17	GSM850	GPRS11	Front Face	1	128	0.401
18	GSM850	GPRS11	Rear Face	1	128	0.698
19	GSM850	GPRS11	Left Side	1	128	0.595
20	GSM850	GPRS11	Right Side	1	128	0.318
21	GSM850	GPRS11	Bottom Side	1	128	0.102
24	GSM1900	GPRS12	Front Face	1	512	0.389
25	GSM1900	GPRS12	Rear Face	1	512	0.497
26	GSM1900	GPRS12	Left Side	1	512	0.054
27	GSM1900	GPRS12	Right Side	1	512	0.257
28	GSM1900	GPRS12	Bottom Side	1	512	0.066
31	WCDMA II	RMC12.2K	Front Face	1	9262	0.229
32	WCDMA II	RMC12.2K	Rear Face	1	9262	0.253
33	WCDMA II	RMC12.2K	Left Side	1	9262	0.015
34	WCDMA II	RMC12.2K	Right Side	1	9262	0.083
35	WCDMA II	RMC12.2K	Bottom Side	1	9262	0.304
38	WCDMA V	RMC12.2K	Front Face	1	4132	0.252
39	WCDMA V	RMC12.2K	Rear Face	1	4132	0.416
40	WCDMA V	RMC12.2K	Left Side	1	4132	0.353
41	WCDMA V	RMC12.2K	Right Side	1	4132	0.235
42	WCDMA V	RMC12.2K	Bottom Side	1	4132	0.054
117	802.11b	-	Front Face	1	11	0.1
118	802.11b	-	Rear Face	1	11	0.132
119	802.11b	-	Left Side	1	11	0.049
120	802.11b	-	Top Side	1	11	0.1
101	802.11n	HT20	Front Face	1	48	N/A
102	802.11n	HT20	Rear Face	1	48	0.056
103	802.11n	HT20	Left Side	1	48	0.016
104	802.11n	HT20	Top Side	1	48	N/A
111	802.11n	HT20	Front Face	1	149	N/A
112	802.11n	HT20	Rear Face	1	149	0.056
113	802.11n	HT20	Left Side	1	149	0.013
114	802.11n	HT20	Top Side	1	149	N/A

Note:

1. SAR is performed on the highest power channel. When the SAR value of highest power channel is less than 0.8 W/kg, SAR testing for optional channel is not required.
2. SAR testing for 802.11g/n is not required because its maximum power is less than 1/4 dB higher than 802.11b.
3. Only WLAN 5G band 1 and 4 (5.15~5.25 and 5.725~5.825 GHz) support wireless hotspot mode.
4. SAR testing for WLAN 5G is performed on the maximum power mode.
5. The "N/A" means there is no SAR value or the SAR is too low to be measured.

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4.6.3 Simultaneous Multi-band Transmission Evaluation

No.	Conditions (SAR1 + SAR2)	Mode	Position	Max. SAR1	Max. SAR2	SAR Summation	SPLSR
1	GSM850 + WLAN 2.4G	Head	Right Cheek	0.328	0.453	0.781	-
			Right Tilted	0.295	0.309	0.604	-
			Left Cheek	0.381	0.301	0.682	-
			Left Tilted	0.226	0.283	0.509	-
		Body-Worn	Front Face	0.318	0.054	0.372	-
			Rear Face	0.618	0.135	0.753	-
		Hotspot	Front Face	0.401	0.1	0.501	-
			Rear Face	0.698	0.132	0.83	-
			Left Side	0.595	0.049	0.644	-
			Right Side	0.318	0	0.318	-
			Top Side	0	0.1	0.1	-
			Bottom Side	0.102	0	0.102	-
	GSM850 + WLAN 5G	Head	Right Cheek	0.328	0.016	0.344	-
			Right Tilted	0.295	0	0.295	-
			Left Cheek	0.381	0.000987	0.381987	-
			Left Tilted	0.226	0	0.226	-
		Body-Worn	Front Face	0.318	0	0.318	-
			Rear Face	0.618	0.088	0.706	-
		Hotspot	Front Face	0.401	0	0.401	-
			Rear Face	0.698	0.056	0.754	-
			Left Side	0.595	0.016	0.611	-
			Right Side	0.318	0	0.318	-
			Top Side	0	0	0	-
			Bottom Side	0.102	0	0.102	-
2	GSM1900 + WLAN 2.4G	Head	Right Cheek	0.413	0.453	0.866	-
			Right Tilted	0.117	0.309	0.426	-
			Left Cheek	0.204	0.301	0.505	-
			Left Tilted	0.119	0.283	0.402	-
		Body-Worn	Front Face	0.348	0.054	0.402	-
			Rear Face	0.487	0.135	0.622	-
		Hotspot	Front Face	0.389	0.1	0.489	-
			Rear Face	0.497	0.132	0.629	-
			Left Side	0.054	0.049	0.103	-
			Right Side	0.257	0	0.257	-
			Top Side	0	0.1	0.1	-
			Bottom Side	0.066	0	0.066	-
	GSM1900 + WLAN 5G	Head	Right Cheek	0.413	0.016	0.429	-
			Right Tilted	0.117	0	0.117	-
			Left Cheek	0.204	0.000987	0.204987	-
			Left Tilted	0.119	0	0.119	-
		Body-Worn	Front Face	0.348	0	0.348	-
			Rear Face	0.487	0.088	0.575	-
		Hotspot	Front Face	0.389	0	0.389	-
			Rear Face	0.497	0.056	0.553	-
			Left Side	0.054	0.016	0.07	-
			Right Side	0.257	0	0.257	-
			Top Side	0	0	0	-
			Bottom Side	0.066	0	0.066	-

FCC SAR Test Report

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No.	Conditions (SAR1 + SAR2)	Mode	Position	Max. SAR1	Max. SAR2	SAR Summation	SPLSR
3	WCDMA II + WLAN 2.4G	Head	Right Cheek	0.186	0.453	0.639	-
			Right Tilted	0.038	0.309	0.347	-
			Left Cheek	0.125	0.301	0.426	-
			Left Tilted	0.063	0.283	0.346	-
		Body-Worn	Front Face	0.239	0.054	0.293	-
			Rear Face	0.394	0.135	0.529	-
		Hotspot	Front Face	0.229	0.1	0.329	-
			Rear Face	0.253	0.132	0.385	-
			Left Side	0.015	0.049	0.064	-
			Right Side	0.083	0	0.083	-
			Top Side	0	0.1	0.1	-
			Bottom Side	0.304	0	0.304	-
	WCDMA II + WLAN 5G	Head	Right Cheek	0.186	0.016	0.202	-
			Right Tilted	0.038	0	0.038	-
			Left Cheek	0.125	0.000987	0.125987	-
			Left Tilted	0.063	0	0.063	-
		Body-Worn	Front Face	0.239	0	0.239	-
			Rear Face	0.394	0.088	0.482	-
		Hotspot	Front Face	0.229	0	0.229	-
			Rear Face	0.253	0.056	0.309	-
			Left Side	0.015	0.016	0.031	-
			Right Side	0.083	0	0.083	-
			Top Side	0	0	0	-
			Bottom Side	0.304	0	0.304	-
4	WCDMA V + WLAN 2.4G	Head	Right Cheek	0.223	0.453	0.676	-
			Right Tilted	0.202	0.309	0.511	-
			Left Cheek	0.235	0.301	0.536	-
			Left Tilted	0.174	0.283	0.457	-
		Body-Worn	Front Face	0.203	0.054	0.257	-
			Rear Face	0.376	0.135	0.511	-
		Hotspot	Front Face	0.252	0.1	0.352	-
			Rear Face	0.416	0.132	0.548	-
			Left Side	0.353	0.049	0.402	-
			Right Side	0.235	0	0.235	-
			Top Side	0	0.1	0.1	-
			Bottom Side	0.054	0	0.054	-
	WCDMA V + WLAN 5G	Head	Right Cheek	0.223	0.016	0.239	-
			Right Tilted	0.202	0	0.202	-
			Left Cheek	0.235	0.000987	0.235987	-
			Left Tilted	0.174	0	0.174	-
		Body-Worn	Front Face	0.203	0	0.203	-
			Rear Face	0.376	0.088	0.464	-
		Hotspot	Front Face	0.252	0	0.252	-
			Rear Face	0.416	0.056	0.472	-
			Left Side	0.353	0.016	0.369	-
			Right Side	0.235	0	0.235	-
			Top Side	0	0	0	-
			Bottom Side	0.054	0	0.054	-

Note:

1. The maximum SAR summation is calculated based on the same configuration and test position.

Summary:

According to KDB 648474, the simultaneous transmission SAR for WWAN and WLAN was not required, because the SAR summation is less than 1.6 W/kg. The BT standalone SAR and WWAN/BT simultaneous transmission SAR were not required, because the maximum output power of Bluetooth is less than $2P_{Ref}$ and the closest separation distance of these antennas is larger than 5 cm.

5. Calibration of Test Equipment

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Kit	SPEAG	D835V2	4d021	Apr. 20, 2012	Annual
System Validation Kit	SPEAG	D1900V2	5d036	Jan. 26, 2012	Annual
System Validation Kit	SPEAG	D2450V2	737	Jan. 24, 2012	Annual
System Validation Kit	SPEAG	D5GHzV2	1018	Jan. 18, 2012	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3590	Feb. 23, 2012	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3650	Oct. 26, 2011	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3864	Jul. 19, 2012	Annual
Data Acquisition Electronics	SPEAG	DAE4	910	Dec. 07, 2011	Annual
Data Acquisition Electronics	SPEAG	DAE3	579	Apr. 27, 2012	Annual
Data Acquisition Electronics	SPEAG	DAE4	861	Aug. 29, 2011	Annual
Data Acquisition Electronics	SPEAG	DAE4	1277	Jul. 19, 2012	Annual
SAM Phantom	SPEAG	QD000P40CD	TP-1652	N/A	N/A
SAM Phantom	SPEAG	QD000P40CD	TP-1654	N/A	N/A
Radio Communication Tester	Agilent	E5515C	MY50260642	Oct. 25, 2011	Biennial
ENA Series Network Analyzer	Agilent	E5071C	MY46214281	May 14, 2012	Annual
MXG Analog Signal Generator	Agilent	N5181A	MY50143868	May 06, 2012	Annual
Power Meter	Anritsu	ML2495A	1218009	May 07, 2012	Annual
Power Sensor	Anritsu	MA2411B	1207252	May 07, 2012	Annual
EXA Spectrum Analyzer	Agilent	N9010A	MY52100136	Apr. 23, 2012	Annual
Dielectric Probe Kit	Agilent	85070D	E2-020018	May 14, 2012	Annual
Thermometer	YFE	YF-160A	110600361	Feb. 21, 2012	Annual
Directional Coupler	Woken	0110A05602O-10	11122702	Apr. 19, 2012	Annual
Power Amplifier	AR	5S1G4	0339656	Apr. 23, 2012	Annual
Power Amplifier	Mini-Circuit	ZVE-8G	001000422	Apr. 23, 2012	Annual
Attenuator	Woken	00800A1G01L-03	N/A	Apr. 19, 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

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Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Standard Uncertainty (1g)	Vi
Measurement System						
Probe Calibration	6.55	Normal	1	1	± 6.55 %	∞
Axial Isotropy	4.7	Rectangular	√3	0.7	± 1.9 %	∞
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	± 3.9 %	∞
Boundary Effects	2.0	Rectangular	√3	1	± 1.2 %	∞
Linearity	4.7	Rectangular	√3	1	± 2.7 %	∞
System Detection Limits	1.0	Rectangular	√3	1	± 0.6 %	∞
Readout Electronics	0.3	Normal	1	1	± 0.3 %	∞
Response Time	0.8	Rectangular	√3	1	± 0.5 %	∞
Integration Time	2.6	Rectangular	√3	1	± 1.5 %	∞
RF Ambient Noise	3.0	Rectangular	√3	1	± 1.7 %	∞
RF Ambient Reflections	3.0	Rectangular	√3	1	± 1.7 %	∞
Probe Positioner	0.8	Rectangular	√3	1	± 0.5 %	∞
Probe Positioning	9.9	Rectangular	√3	1	± 5.7 %	∞
Max. SAR Eval.	4.0	Rectangular	√3	1	± 2.3 %	∞
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 %	30
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	± 1.7 %	∞
Liquid Permittivity (Meas.)	5.0	Normal	1	0.6	± 3.0 %	30
Combined Standard Uncertainty					± 13.4 %	
Expanded Uncertainty (K=2)					± 26.8 %	

Uncertainty budget for frequency range 3 GHz to 6 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: 886-3-327-0892

Taiwan LinKo EMC/RF Lab:

Add: No. 47, 14th Ling, Chia Pau Vil., Linkou Dist., New Taipei City 244, Taiwan, R.O.C.

Tel: 886-2-2605-2180

Fax: 886-2-2605-1924

Taiwan HsinChu EMC/RF Lab:

Add: No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Vil., Chiung Lin Township, Hsinchu County 307, Taiwan, R.O.C.

Tel: 886-3-593-5343

Fax: 886-3-593-5342

Email: service.adt@tw.bureauveritas.com

Web Site: www.adt.com.tw

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

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Appendix A. SAR Plots of System Verification

The plots for system verification are shown as follows.

System Check_H835_120813**DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021**

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

Medium: H835_0813 Medium parameters used: $f = 835$ MHz; $\sigma = 0.917$ mho/m; $\epsilon_r = 42.809$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.87, 8.87, 8.87); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Maximum value of SAR (interpolated) = 3.08 mW/g

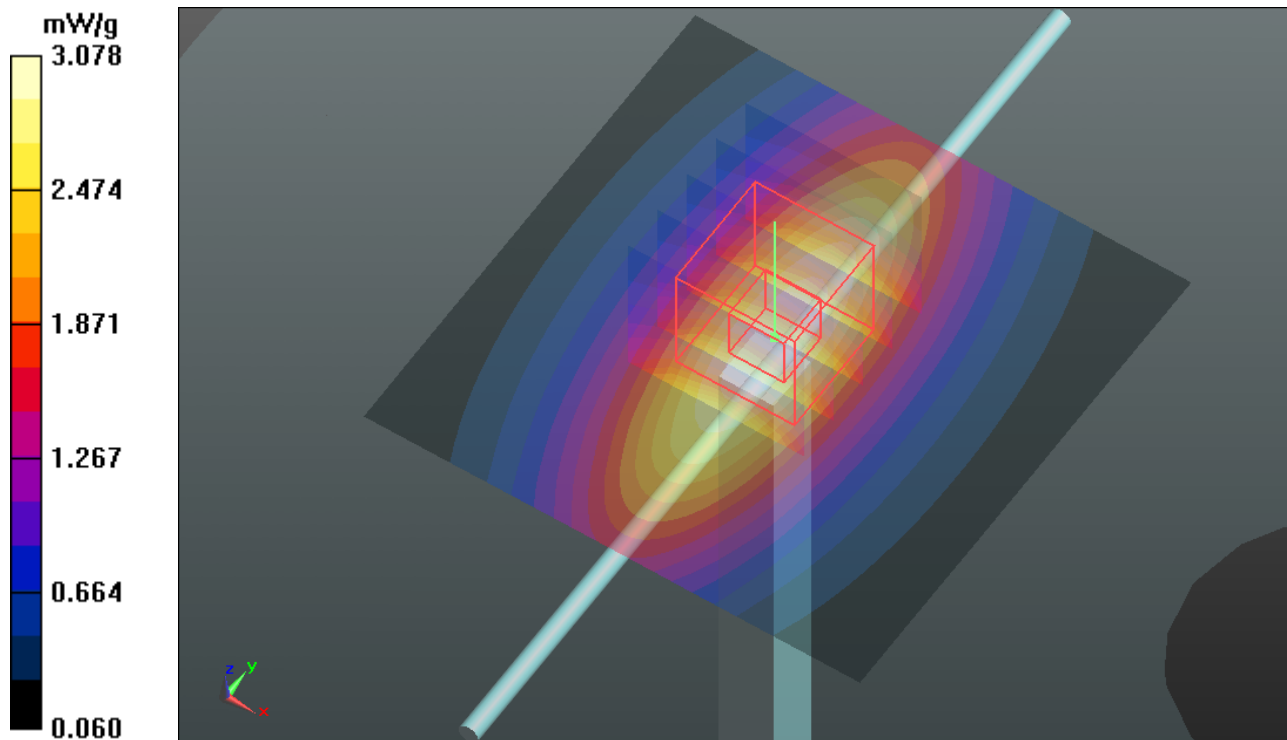
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 55.976 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.568 mW/g

SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.6 mW/g

Maximum value of SAR (measured) = 3.07 mW/g



System Check_H835_120827**DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021**

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

Medium: H835_0827 Medium parameters used: $f = 835$ MHz; $\sigma = 0.898$ mho/m; $\epsilon_r = 42.009$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C ; Liquid Temperature : 20.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.87, 8.87, 8.87); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 3.03 W/kg

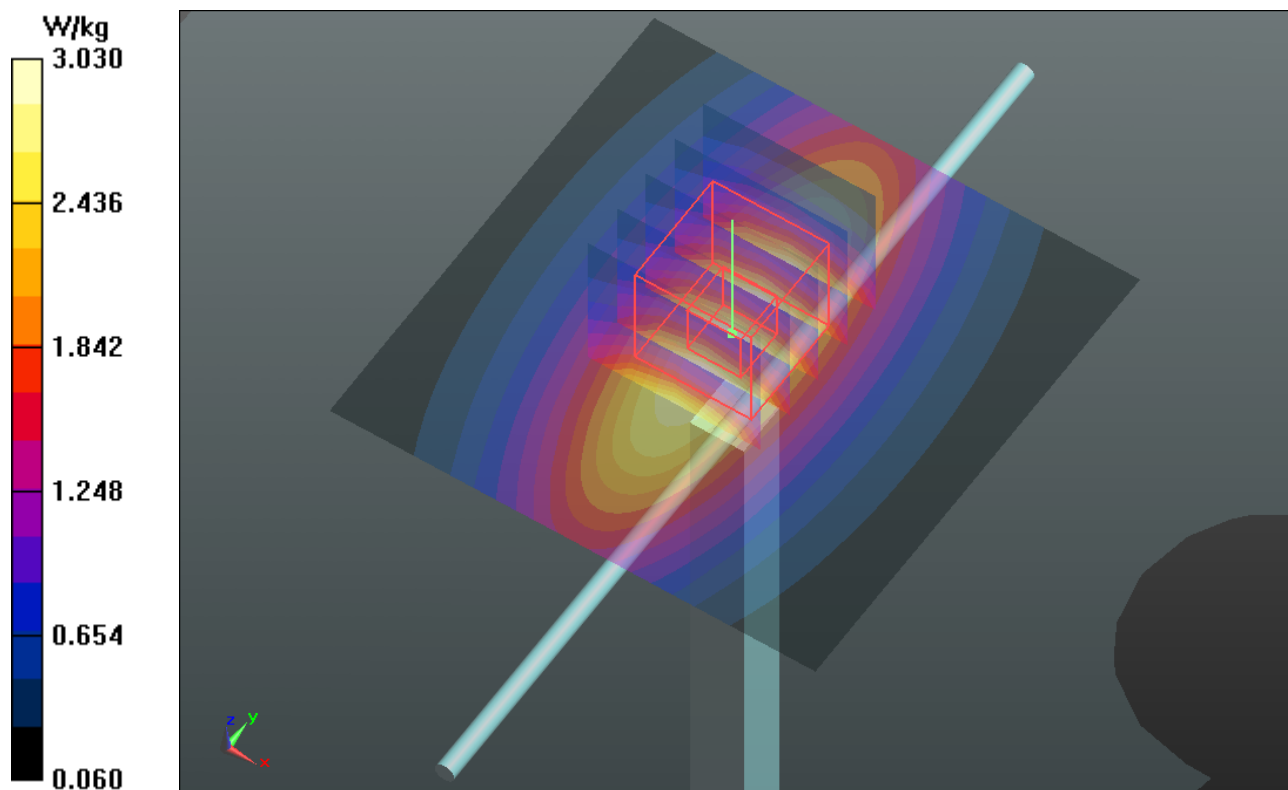
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 56.074 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.507 mW/g

SAR(1 g) = 2.39 mW/g; SAR(10 g) = 1.58 mW/g

Maximum value of SAR (measured) = 3.01 W/kg



System Check_H1900_120813**DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036**

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

Medium: H1900_0813 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.443$ mho/m; $\epsilon_r = 39.72$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.0 °C; Liquid Temperature : 21.0 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.4, 7.4, 7.4); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Maximum value of SAR (interpolated) = 14.5 mW/g

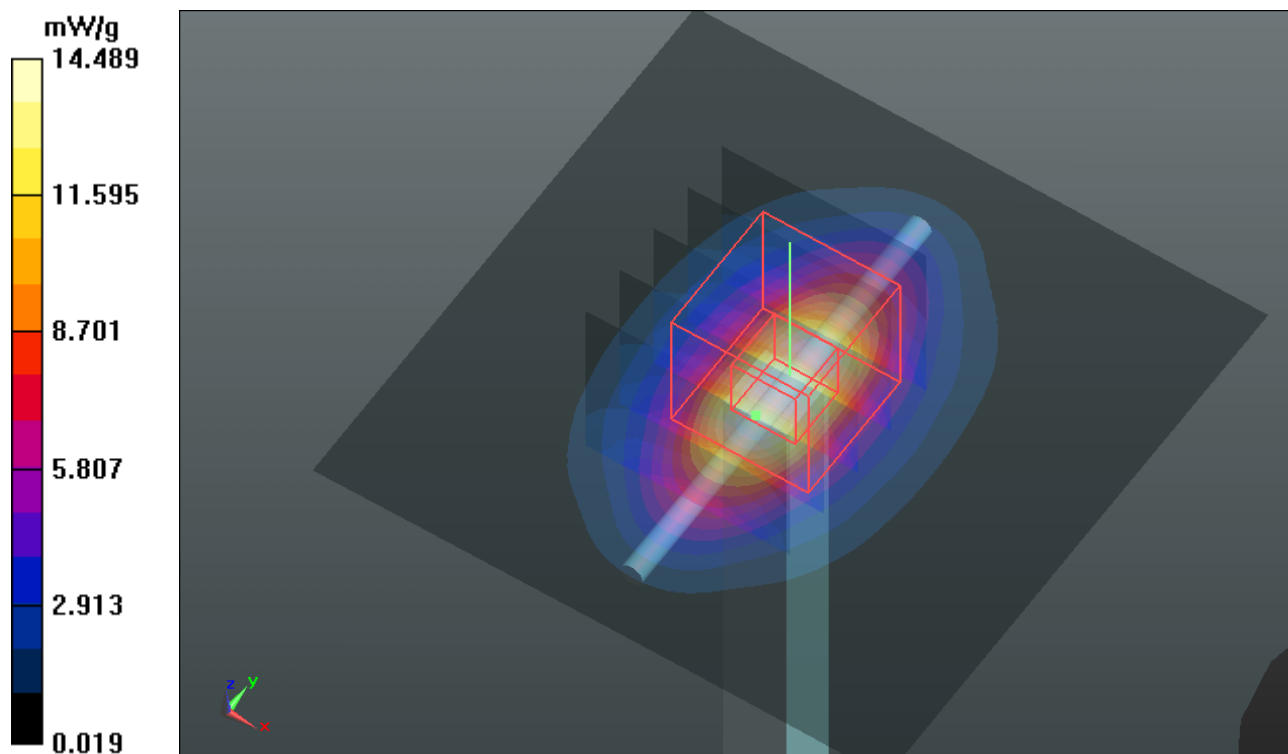
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 100.5 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 18.614 mW/g

SAR(1 g) = 9.77 mW/g; SAR(10 g) = 5.02 mW/g

Maximum value of SAR (measured) = 14.2 mW/g



System Check_H1900_120827**DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036**

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

Medium: H1900_0827 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 39.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(8.13, 8.13, 8.13); Calibrated: 2012/07/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2012/07/19
- 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) = 14.9 mW/g

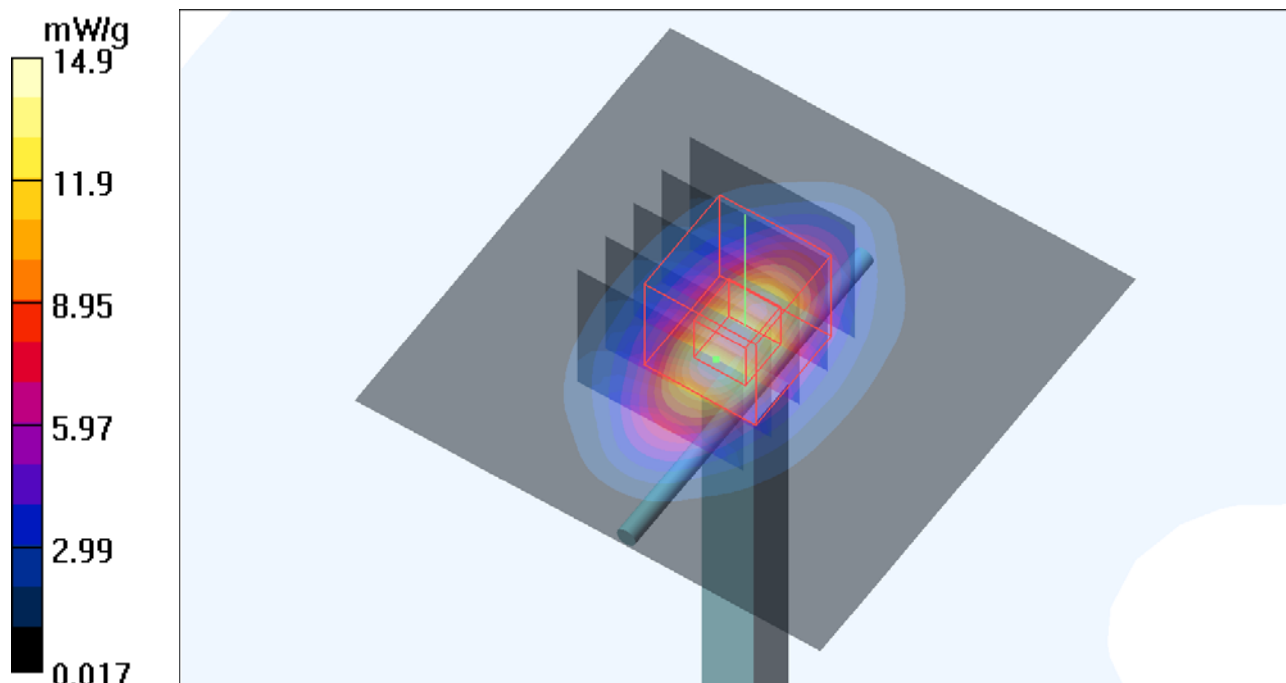
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 100.8 V/m; Power Drift = 0.004 dB

Peak SAR (extrapolated) = 18.3 W/kg

SAR(1 g) = 9.71 mW/g; SAR(10 g) = 4.95 mW/g

Maximum value of SAR (measured) = 13.9 mW/g



System Check_H2450_120821**DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737**

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

Medium: H2450_0821 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.8$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.3 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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) = 21.0 mW/g

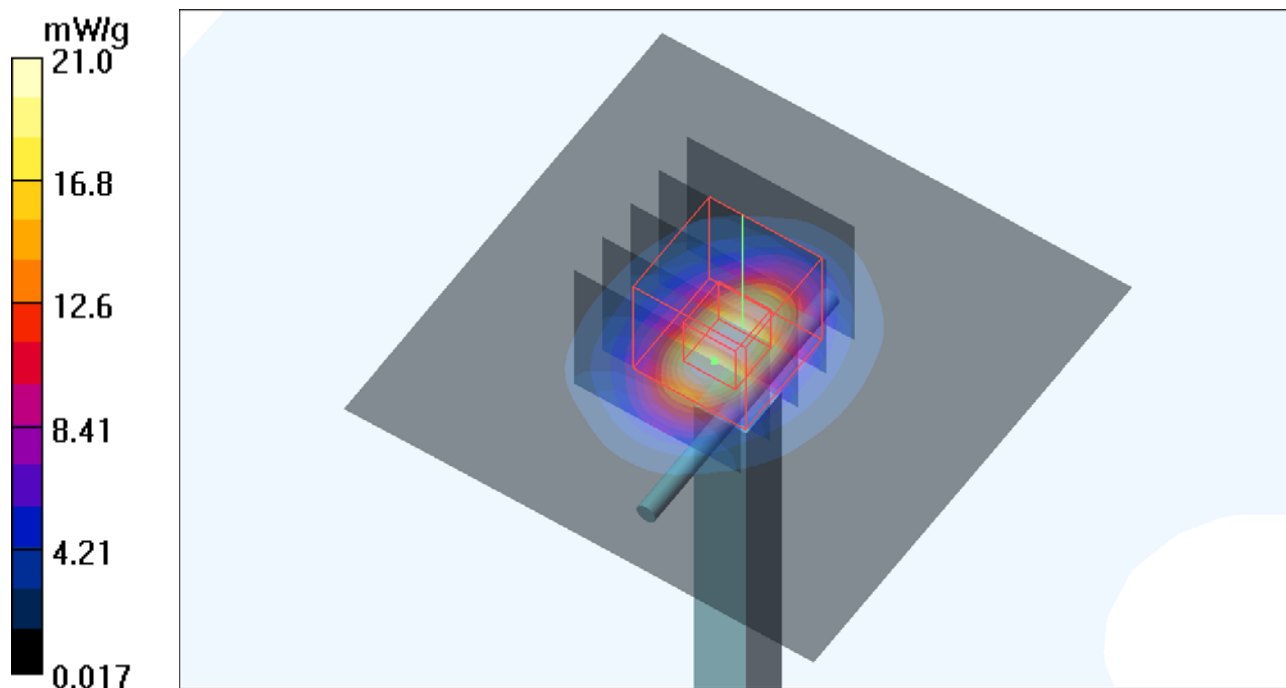
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 108.0 V/m; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 28.4 W/kg

SAR(1 g) = 13.2 mW/g; SAR(10 g) = 6.02 mW/g

Maximum value of SAR (measured) = 19.8 mW/g



System Check_H5200_120821**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1018**

Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: H5G_0821 Medium parameters used: $f = 5200$ MHz; $\sigma = 4.7$ mho/m; $\epsilon_r = 37$; $\rho = 1000$ kg/m^3

Ambient Temperature : 21.4 °C; Liquid Temperature : 20.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(5.64, 5.64, 5.64); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 16.3 mW/g

Pin=100mW/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm,

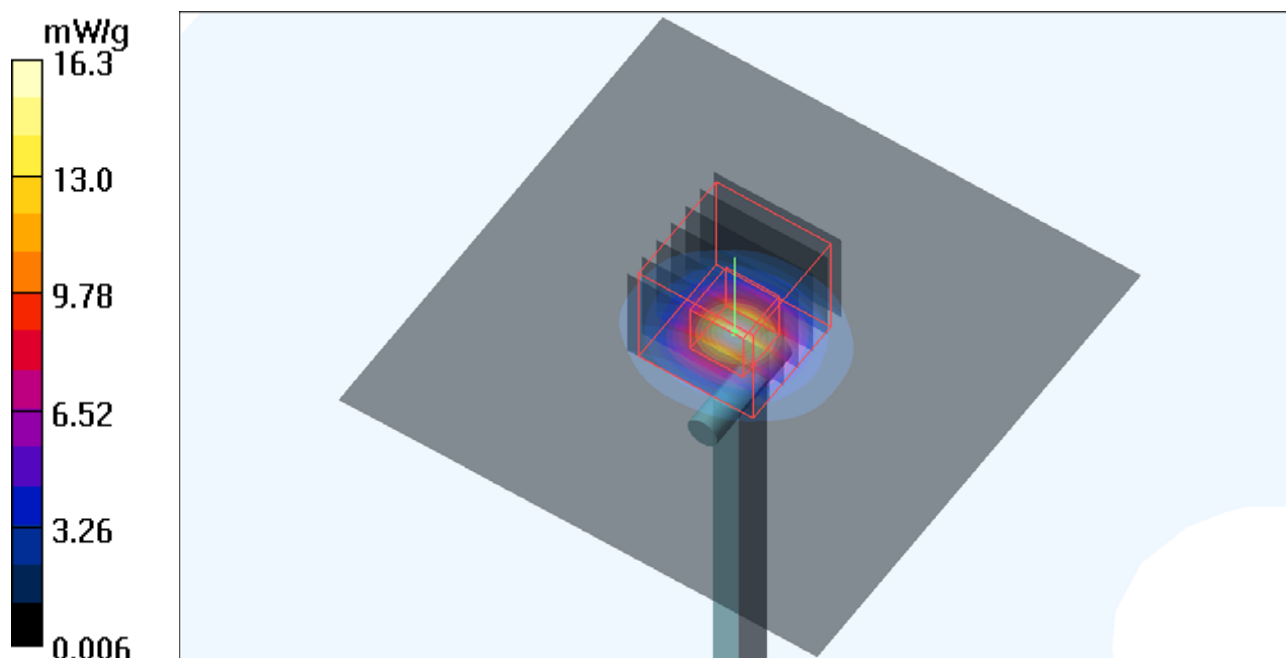
dy=4mm, dz=2.5mm

Reference Value = 61.3 V/m; Power Drift = 0.015 dB

Peak SAR (extrapolated) = 32.4 W/kg

SAR(1 g) = 7.66 mW/g; SAR(10 g) = 2.16 mW/g

Maximum value of SAR (measured) = 15.9 mW/g



System Check_H5500_120821**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1018**

Communication System: CW; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: H5G_0821 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.07$ mho/m; $\epsilon_r = 36.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C; Liquid Temperature : 20.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(5.13, 5.13, 5.13); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 17.7 mW/g

Pin=100mW/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm,

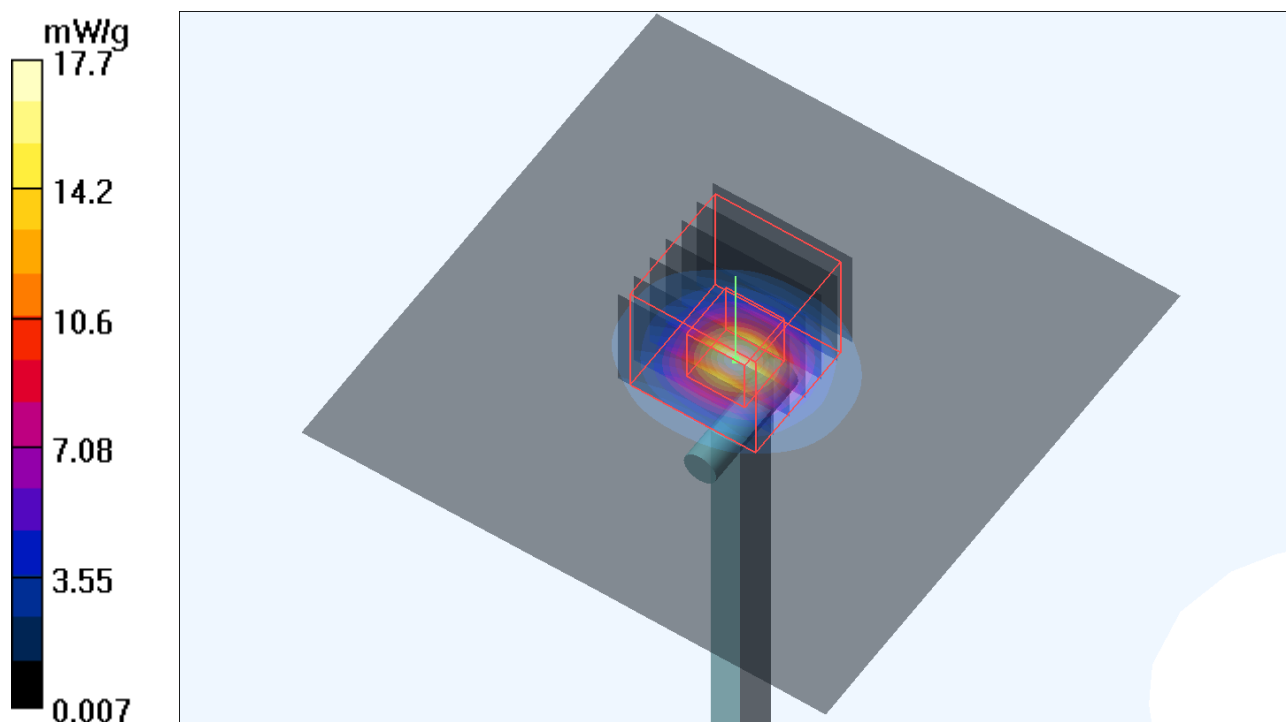
dy=4mm, dz=2.5mm

Reference Value = 62.1 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 40.5 W/kg

SAR(1 g) = 9.02 mW/g; SAR(10 g) = 2.49 mW/g

Maximum value of SAR (measured) = 19.6 mW/g



System Check_H5800_120821**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1018**

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: H5G_0821 Medium parameters used: $f = 5800$ MHz; $\sigma = 5.43$ mho/m; $\epsilon_r = 35.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C; Liquid Temperature : 20.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.79, 4.79, 4.79); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 17.3 mW/g

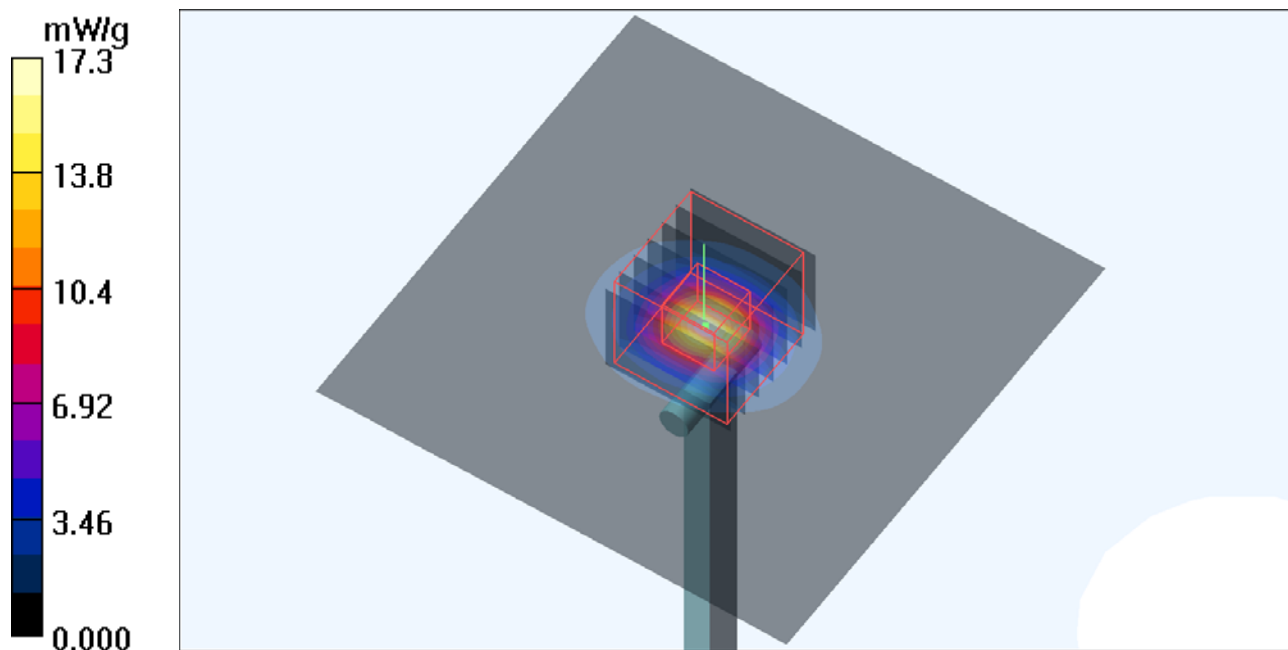
Pin=100mW/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 62.2 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 37.8 W/kg

SAR(1 g) = 8.21 mW/g; SAR(10 g) = 2.22 mW/g

Maximum value of SAR (measured) = 17.3 mW/g



System Check_B835_120814**DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021**

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

Medium: B835_0814 Medium parameters used: $f = 835$ MHz; $\sigma = 0.98$ mho/m; $\epsilon_r = 55.843$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Maximum value of SAR (interpolated) = 3.02 mW/g

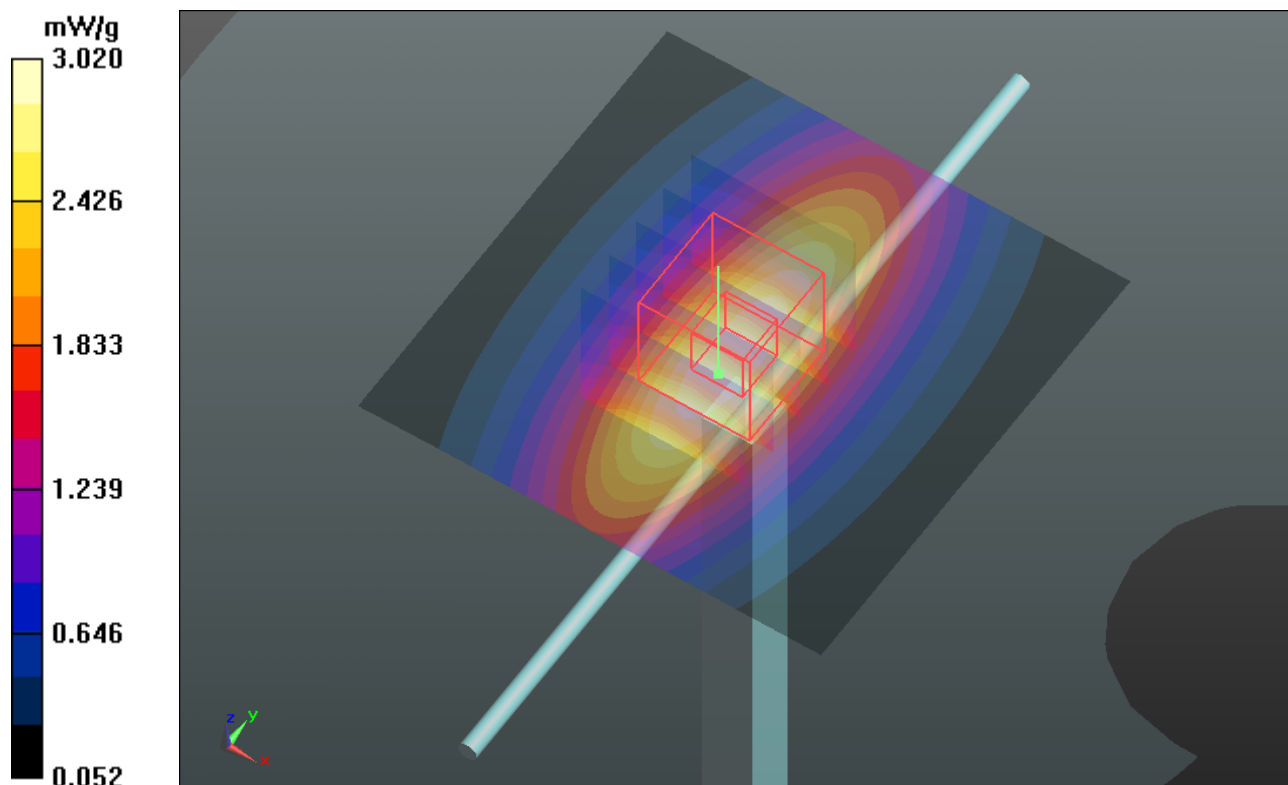
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 53.333 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 3.521 mW/g

SAR(1 g) = 2.37 mW/g; SAR(10 g) = 1.56 mW/g

Maximum value of SAR (measured) = 2.98 mW/g



System Check_B1900_120813**DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036**

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

Medium: B1900_0813 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.543$ mho/m; $\epsilon_r = 52.865$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Maximum value of SAR (interpolated) = 14.5 mW/g

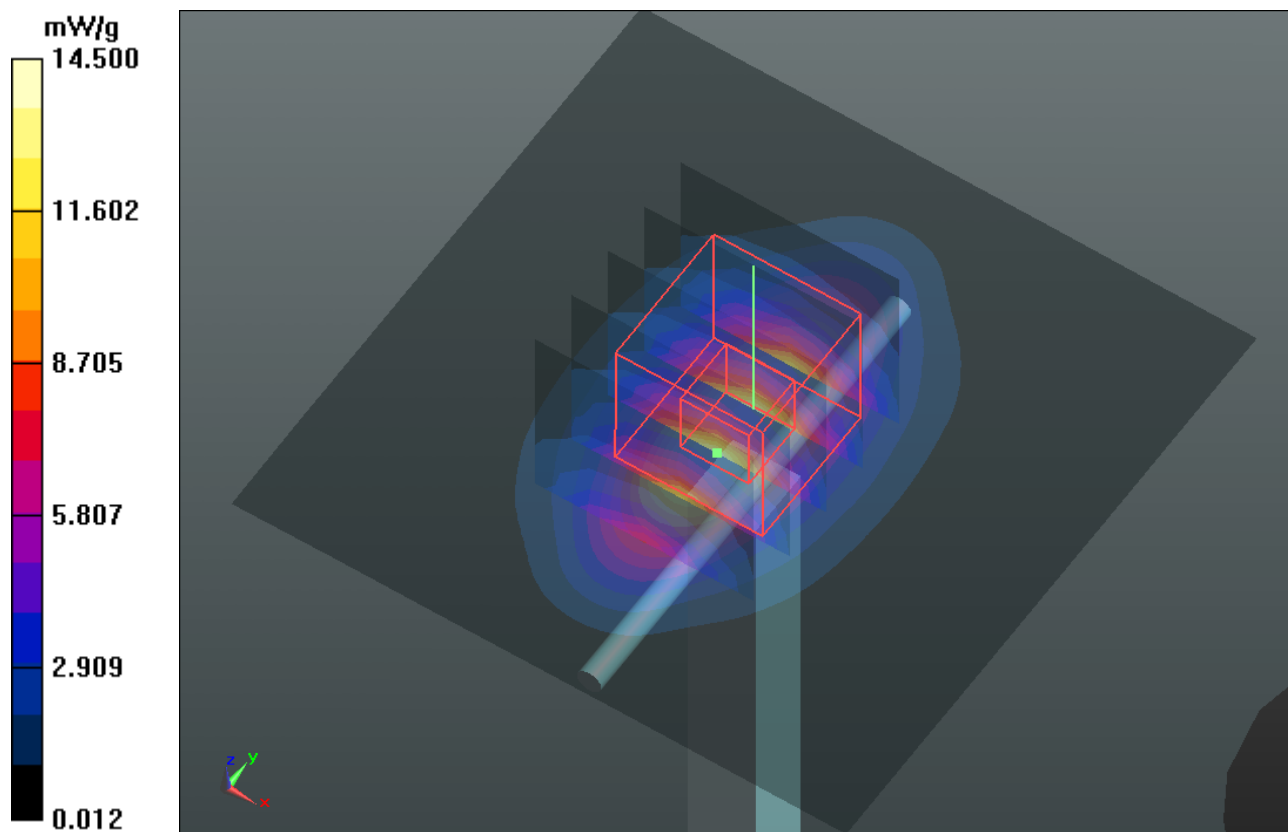
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 96.472 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 17.497 mW/g

SAR(1 g) = 9.67 mW/g; SAR(10 g) = 5.01 mW/g

Maximum value of SAR (measured) = 13.6 mW/g



System Check_B2450_120820**DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737**

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

Medium: B2450_0820 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.8, 7.8, 7.8); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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) = 19.6 mW/g

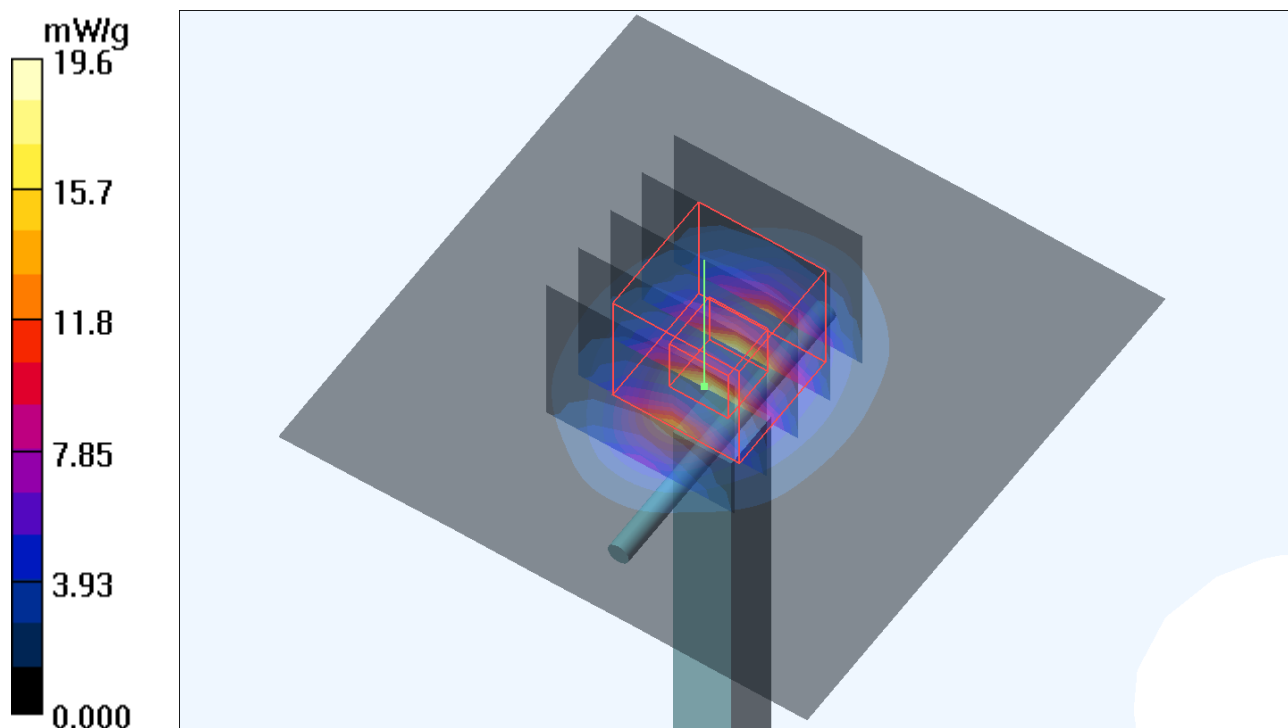
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 99.4 V/m; Power Drift = -0.135 dB

Peak SAR (extrapolated) = 25.9 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_B5200_120820**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1018**

Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5200$ MHz; $\sigma = 5.24$ mho/m; $\epsilon_r = 49.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.89, 4.89, 4.89); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 14.2 mW/g

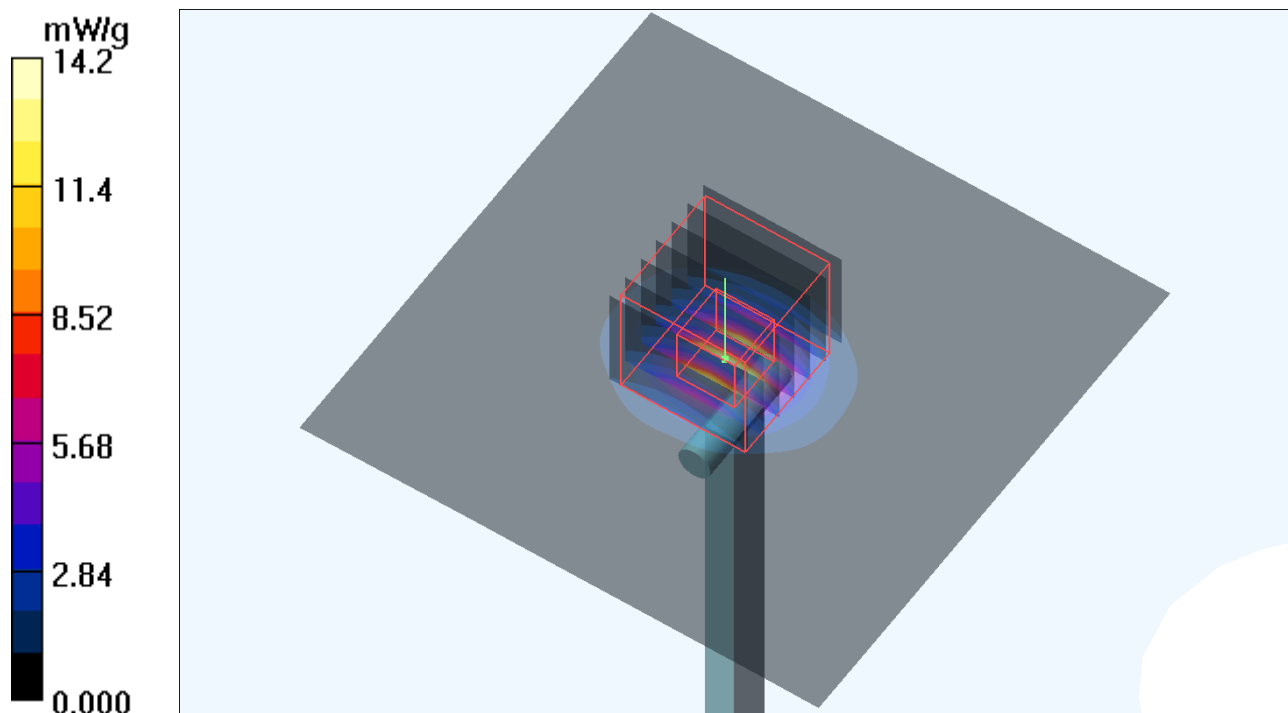
Pin=100mW/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 58.5 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 26.2 W/kg

SAR(1 g) = 7 mW/g; SAR(10 g) = 1.97 mW/g

Maximum value of SAR (measured) = 14.8 mW/g



System Check_B5500_120820**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1018**

Communication System: CW; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.69$ mho/m; $\epsilon_r = 48.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.35, 4.35, 4.35); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 15.8 mW/g

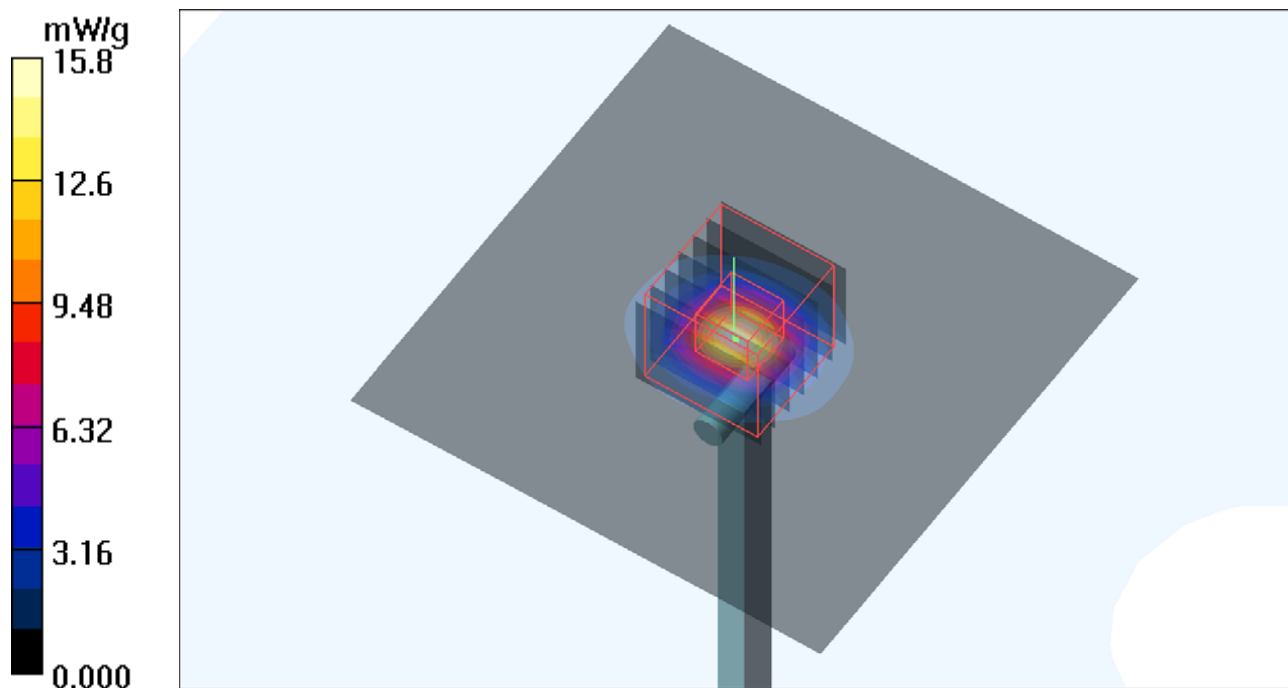
Pin=100mW/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 57.4 V/m; Power Drift = 0.062 dB

Peak SAR (extrapolated) = 29.1 W/kg

SAR(1 g) = 7.46 mW/g; SAR(10 g) = 2.01 mW/g

Maximum value of SAR (measured) = 15.2 mW/g



System Check_B5800_120820**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1018**

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5800$ MHz; $\sigma = 6.11$ mho/m; $\epsilon_r = 48.2$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.54, 4.54, 4.54); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 15.0 mW/g

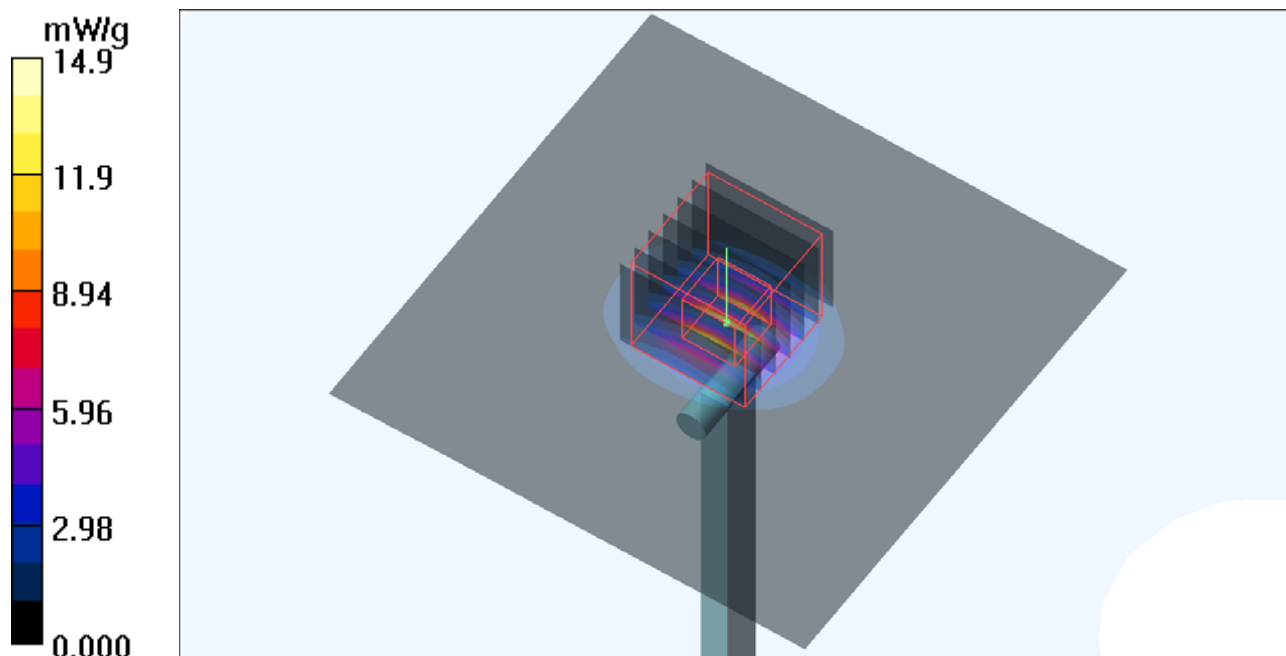
Pin=100mW/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 54.0 V/m; Power Drift = -0.002 dB

Peak SAR (extrapolated) = 29.7 W/kg

SAR(1 g) = 6.9 mW/g; SAR(10 g) = 1.92 mW/g

Maximum value of SAR (measured) = 14.9 mW/g



Appendix B. SAR Plots of SAR Measurement

The plots for SAR measurement are shown as follows.

P75 GSM850_GPRS11_Right Cheek_Ch128**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: H835_0827 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 42.16$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 20.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.87, 8.87, 8.87); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 0.355 W/kg

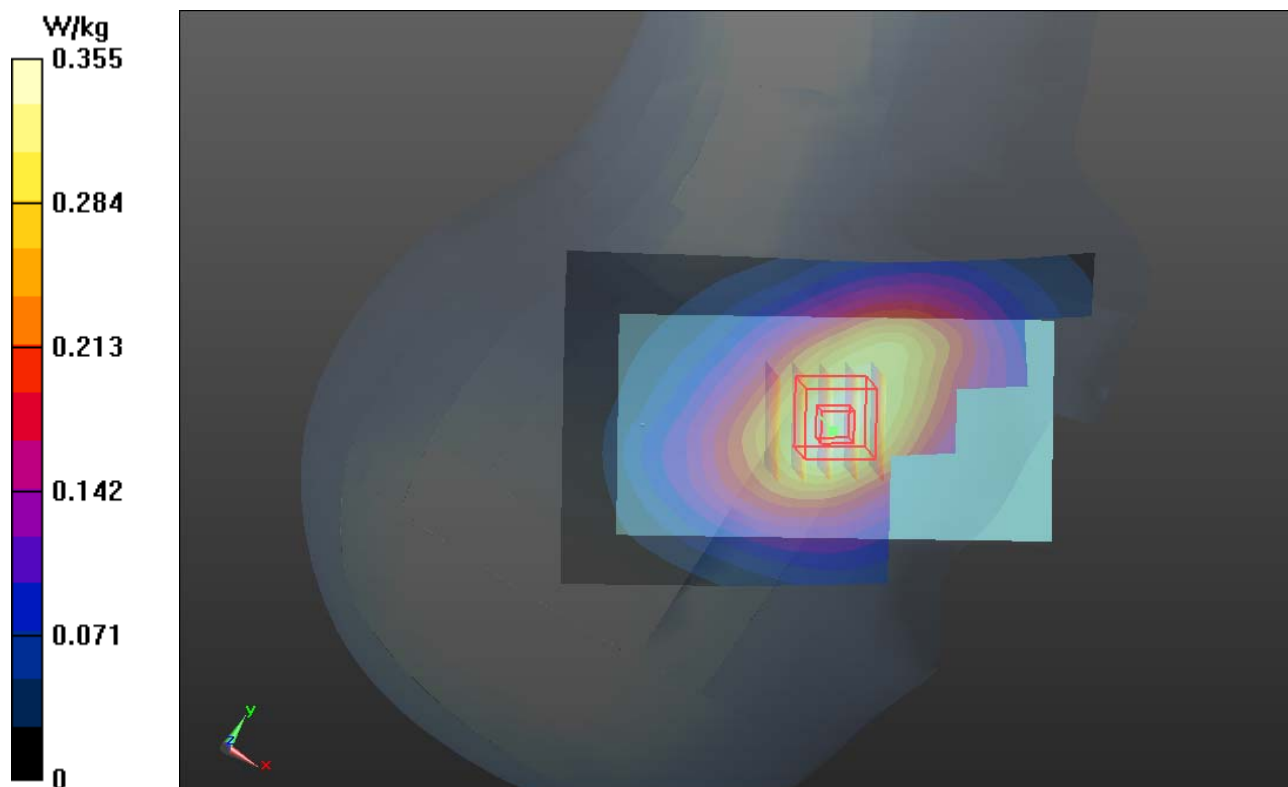
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.892 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.407 mW/g

SAR(1 g) = 0.328 mW/g; SAR(10 g) = 0.250 mW/g

Maximum value of SAR (measured) = 0.376 W/kg



P76 GSM850_GPRS11_Right Tilted_Ch128**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: H835_0827 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 42.16$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 20.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.87, 8.87, 8.87); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 0.331 W/kg

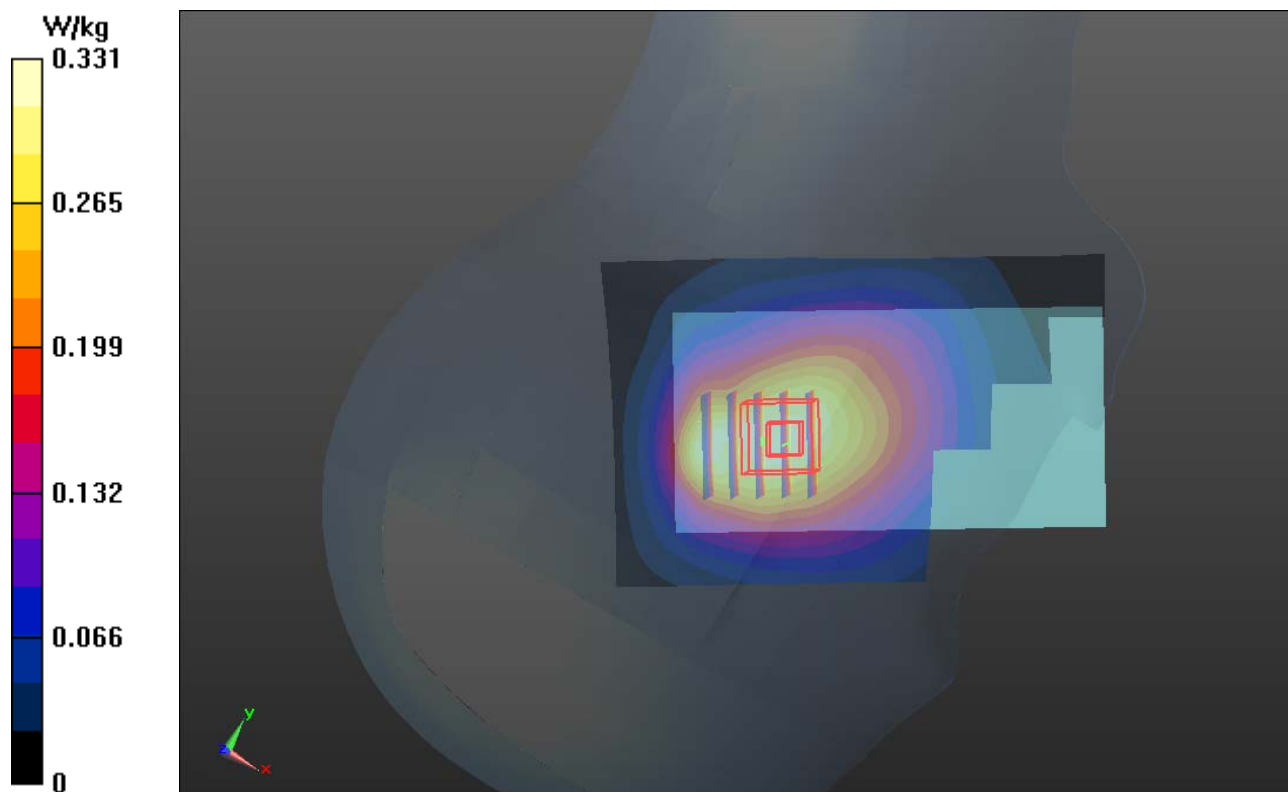
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.763 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.366 mW/g

SAR(1 g) = 0.295 mW/g; SAR(10 g) = 0.223 mW/g

Maximum value of SAR (measured) = 0.338 W/kg



P77 GSM850_GPRS11_Left Cheek_Ch128**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: H835_0827 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 42.16$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 20.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.87, 8.87, 8.87); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 0.446 W/kg

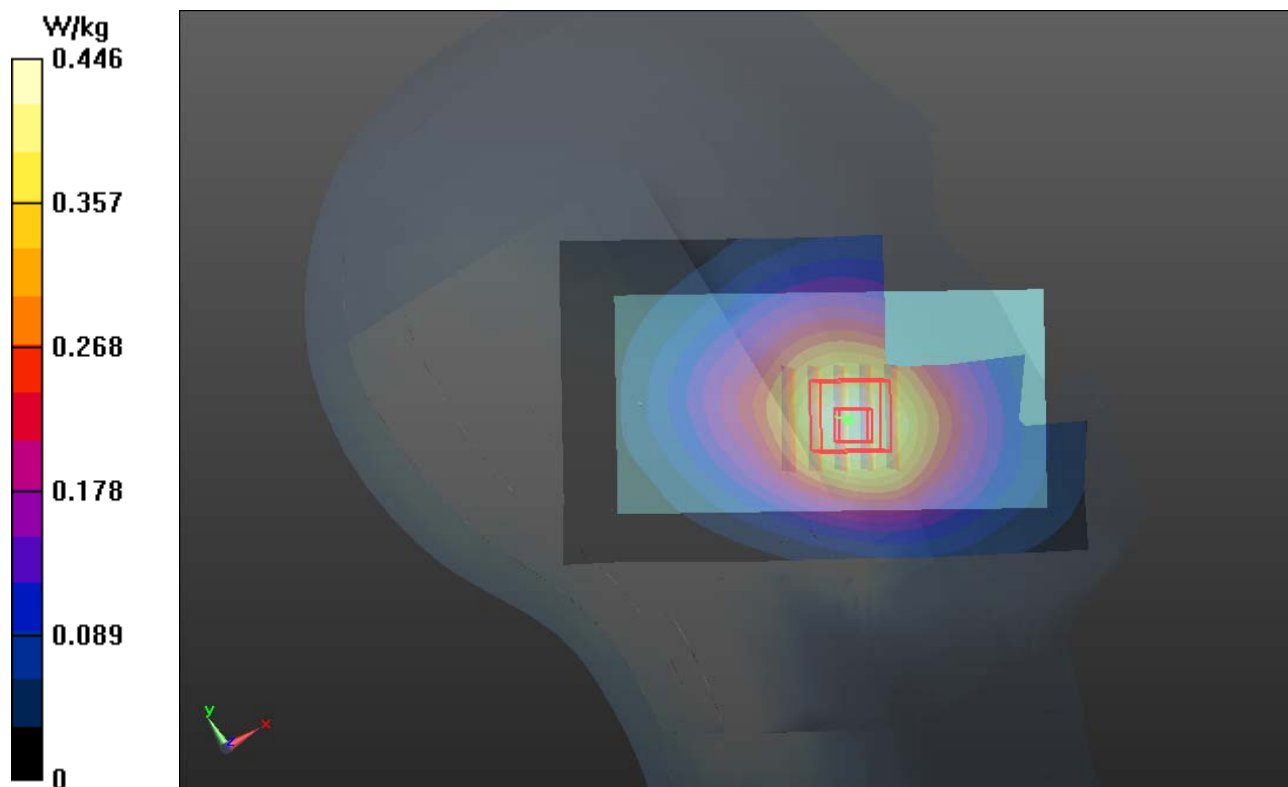
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

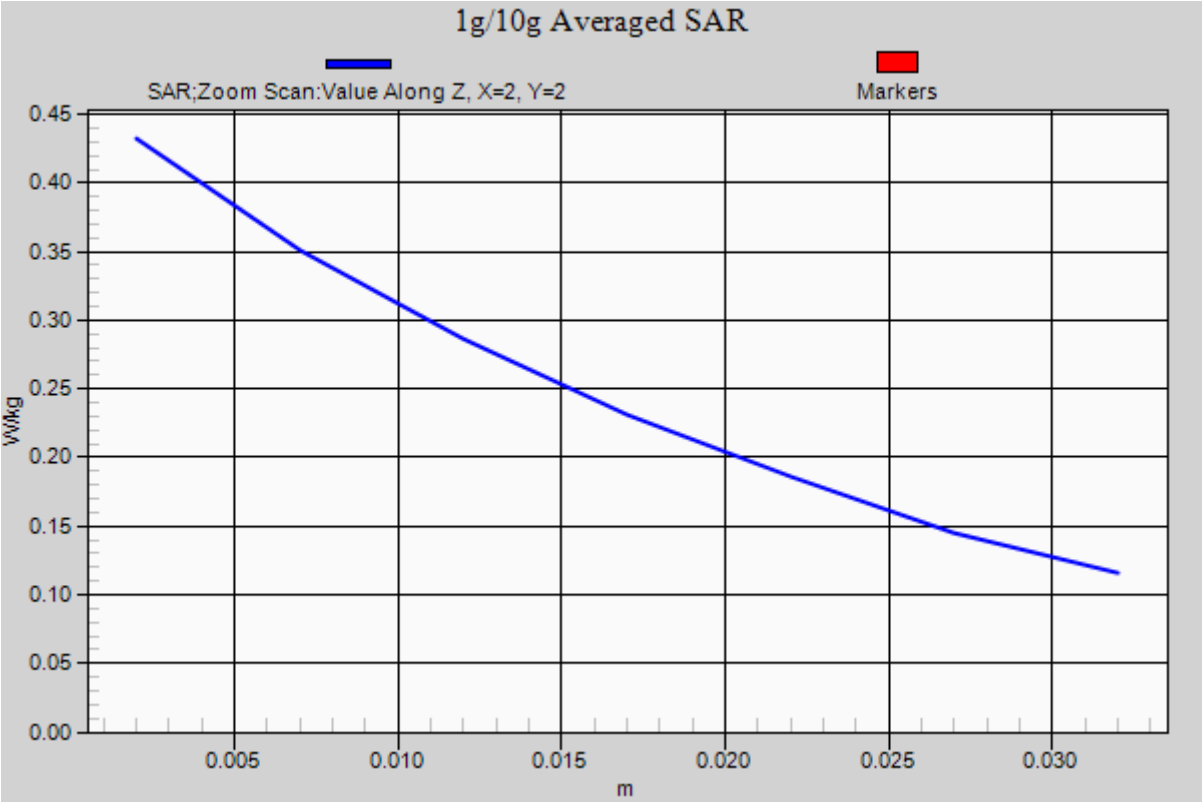
Reference Value = 9.146 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.488 mW/g

SAR(1 g) = 0.381 mW/g; SAR(10 g) = 0.289 mW/g

Maximum value of SAR (measured) = 0.432 W/kg





P78 GSM850_GPRS11_Left Tilted_Ch128**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: H835_0827 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.887$ mho/m; $\epsilon_r = 42.16$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 20.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.87, 8.87, 8.87); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 0.267 W/kg

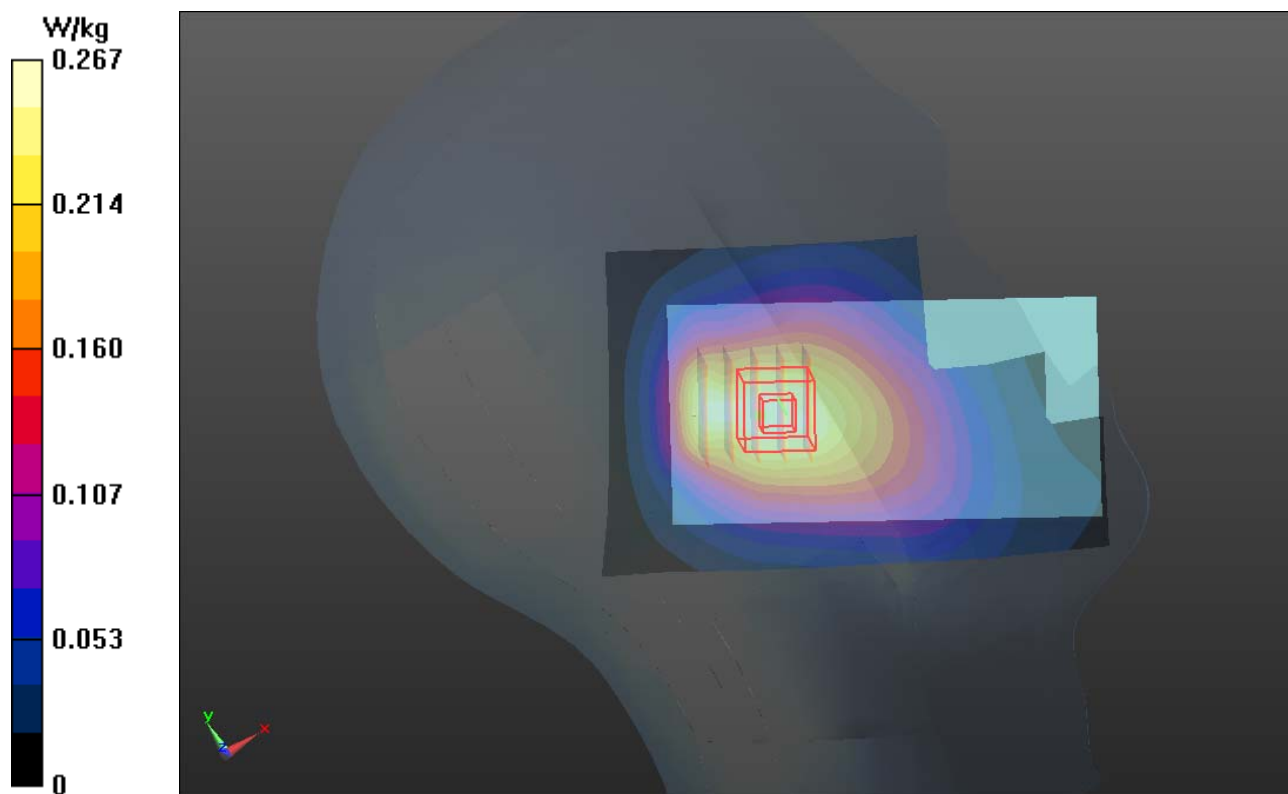
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.732 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.280 mW/g

SAR(1 g) = 0.226 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.257 W/kg



P70 GSM1900_GPRS12_Right Cheek_Ch512**DUT: 120801C12**

Communication System: GSM1900 GPRS12; Frequency: 1850.2 MHz; Duty Cycle: 1:2
Medium: H1900_0827 Medium parameters used : $f = 1850.2$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³
Ambient Temperature : 21.8 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(8.13, 8.13, 8.13); Calibrated: 2012/07/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2012/07/19
- 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

Ch512/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.551 mW/g

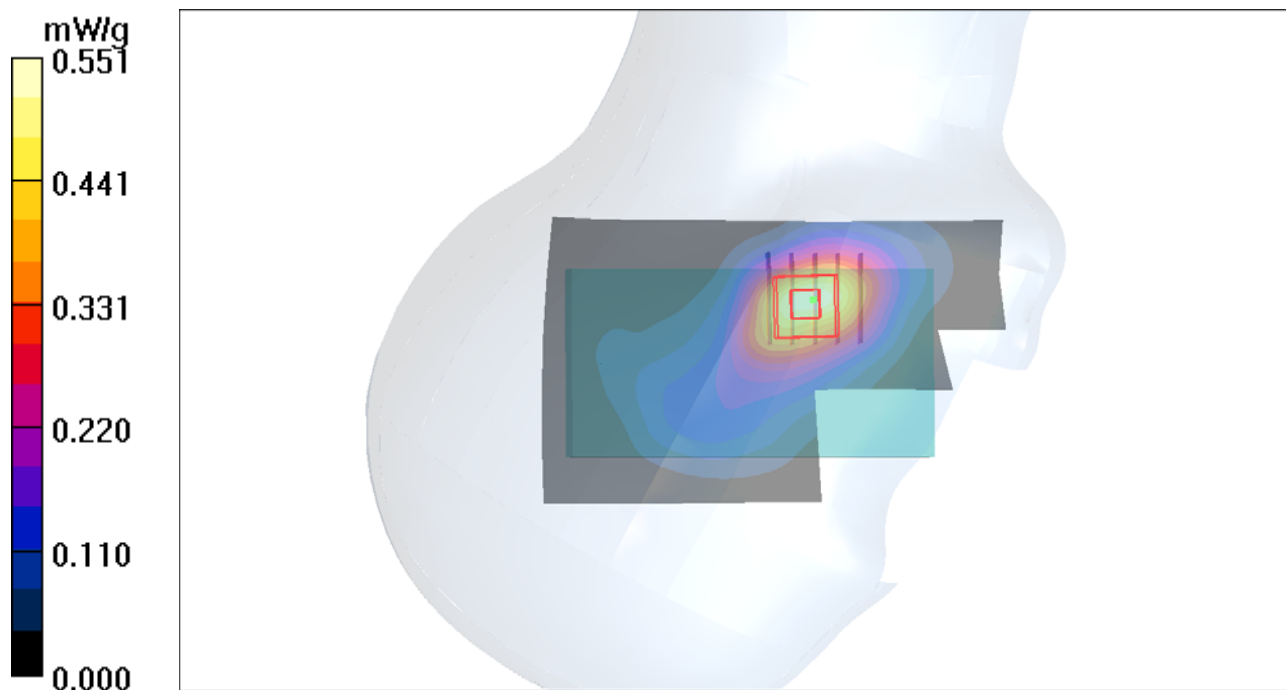
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.10 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 0.626 W/kg

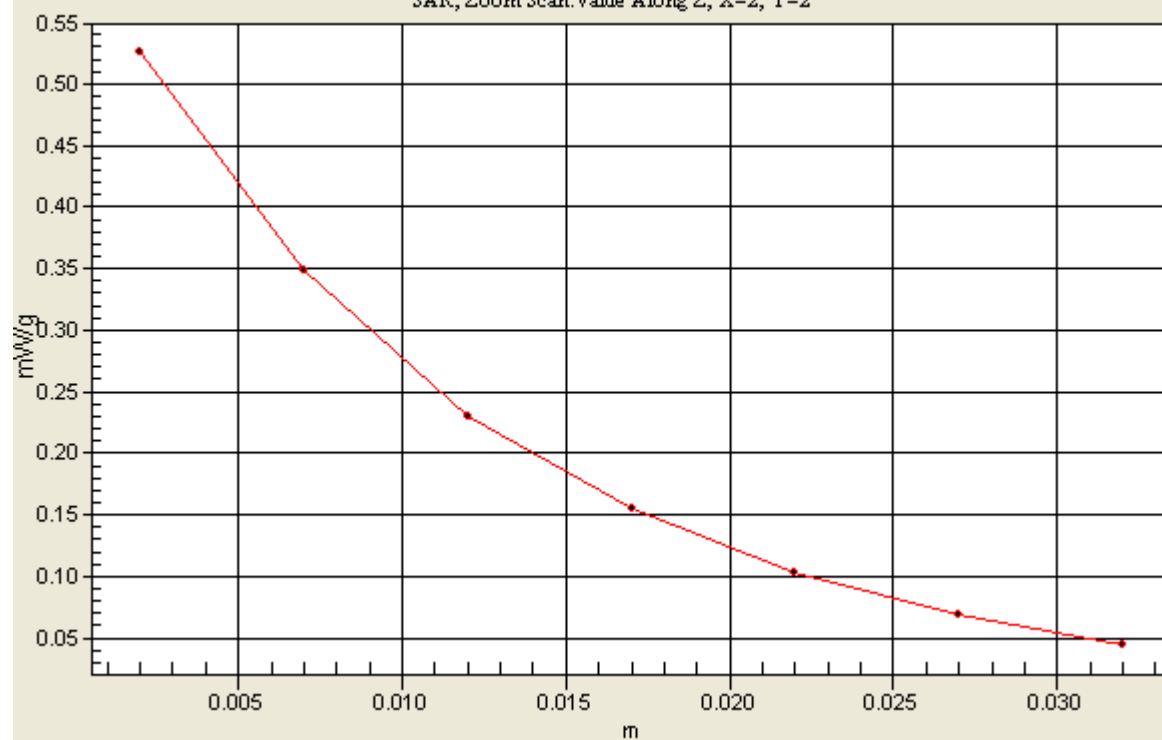
SAR(1 g) = 0.413 mW/g; SAR(10 g) = 0.256 mW/g

Maximum value of SAR (measured) = 0.525 mW/g



1g/10g Averaged SAR

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



P71 GSM1900_GPRS12_Right Tilted_Ch512**DUT: 120801C12**

Communication System: GSM1900 GPRS12; Frequency: 1850.2 MHz; Duty Cycle: 1:2

Medium: H1900_0827 Medium parameters used : $f = 1850.2$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(8.13, 8.13, 8.13); Calibrated: 2012/07/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2012/07/19
- 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

Ch512/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.164 mW/g

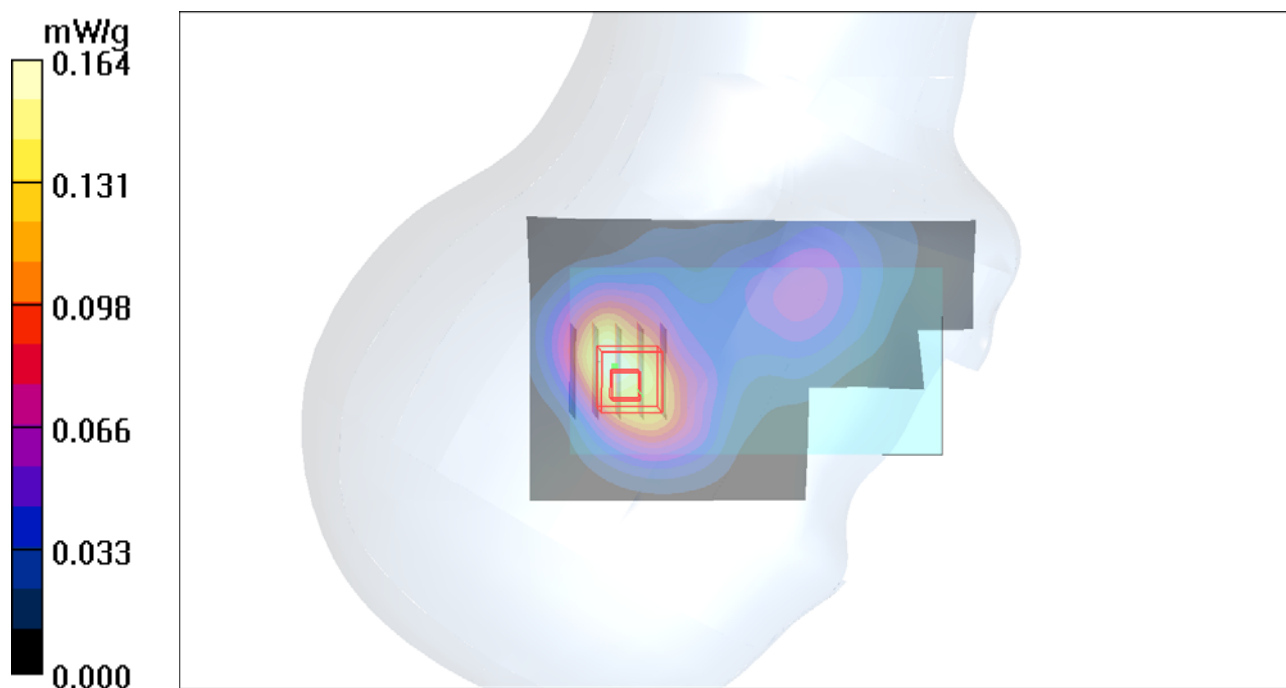
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.92 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 0.171 W/kg

SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.074 mW/g

Maximum value of SAR (measured) = 0.143 mW/g



P72 GSM1900_GPRS12_Left Cheek_Ch512**DUT: 120801C12**

Communication System: GSM1900 GPRS12; Frequency: 1850.2 MHz; Duty Cycle: 1:2
Medium: H1900_0827 Medium parameters used : $f = 1850.2$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³
Ambient Temperature : 21.8 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(8.13, 8.13, 8.13); Calibrated: 2012/07/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2012/07/19
- 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

Ch512/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

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

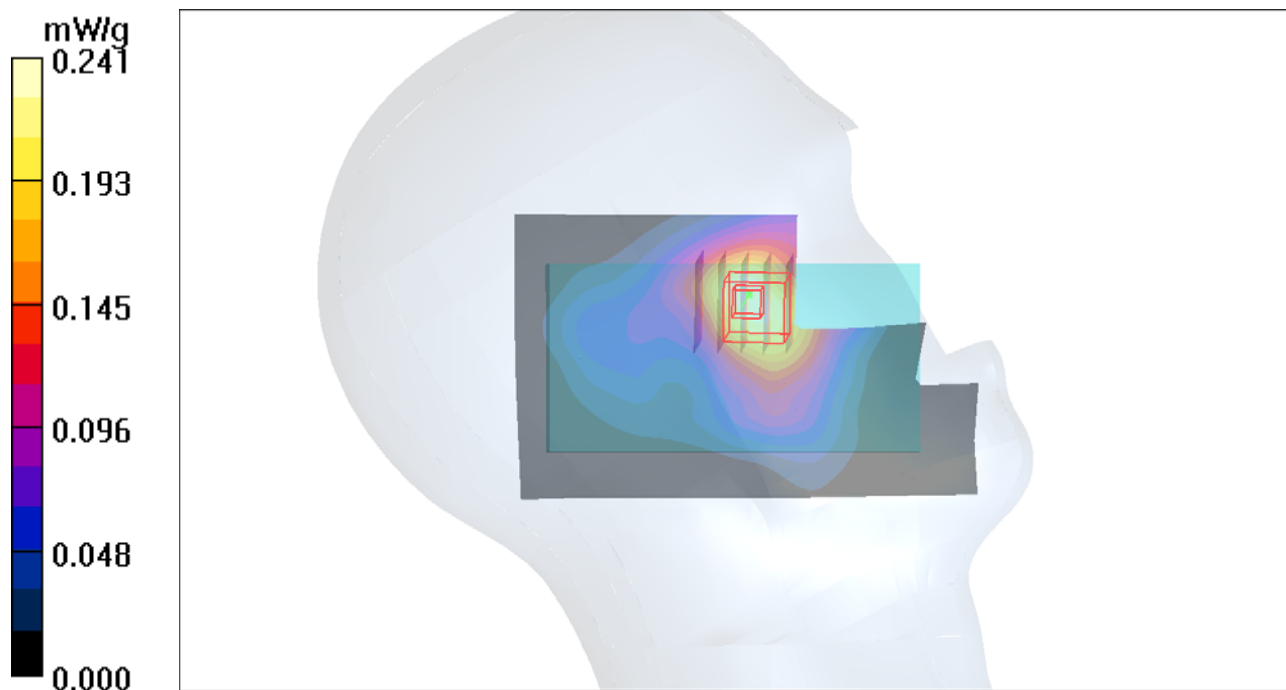
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.78 V/m; Power Drift = 0.189 dB

Peak SAR (extrapolated) = 0.300 W/kg

SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.130 mW/g

Maximum value of SAR (measured) = 0.257 mW/g



P73 GSM1900_GPRS12_Left Tilted_Ch512**DUT: 120801C12**

Communication System: GSM1900 GPRS12; Frequency: 1850.2 MHz; Duty Cycle: 1:2
Medium: H1900_0827 Medium parameters used : $f = 1850.2$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³
Ambient Temperature : 21.8 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(8.13, 8.13, 8.13); Calibrated: 2012/07/19
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2012/07/19
- 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

Ch512/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.166 mW/g

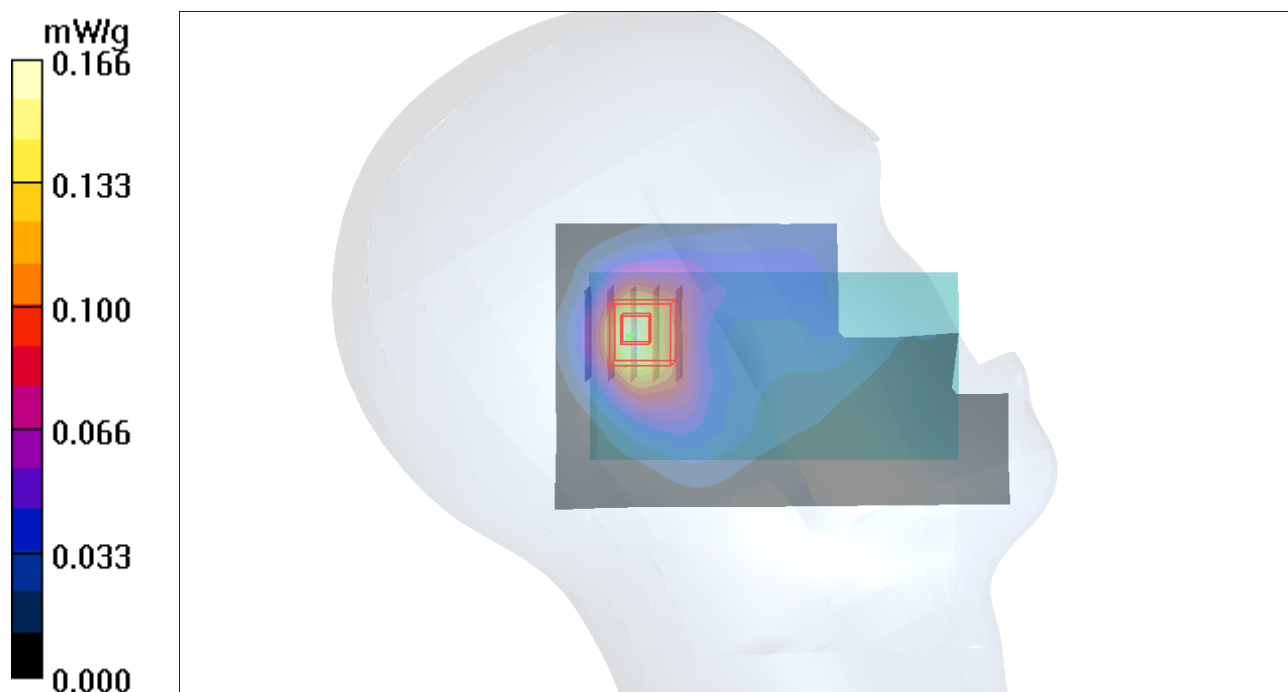
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.39 V/m; Power Drift = 0.002 dB

Peak SAR (extrapolated) = 0.184 W/kg

SAR(1 g) = 0.119 mW/g; SAR(10 g) = 0.070 mW/g

Maximum value of SAR (measured) = 0.152 mW/g



P13 WCDMA V_RMC12.2k_Right Cheek_Ch4132**DUT: 120801C12**

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

Medium: H835_0813 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.908$ mho/m; $\epsilon_r = 42.917$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.87, 8.87, 8.87); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4132/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.257 mW/g

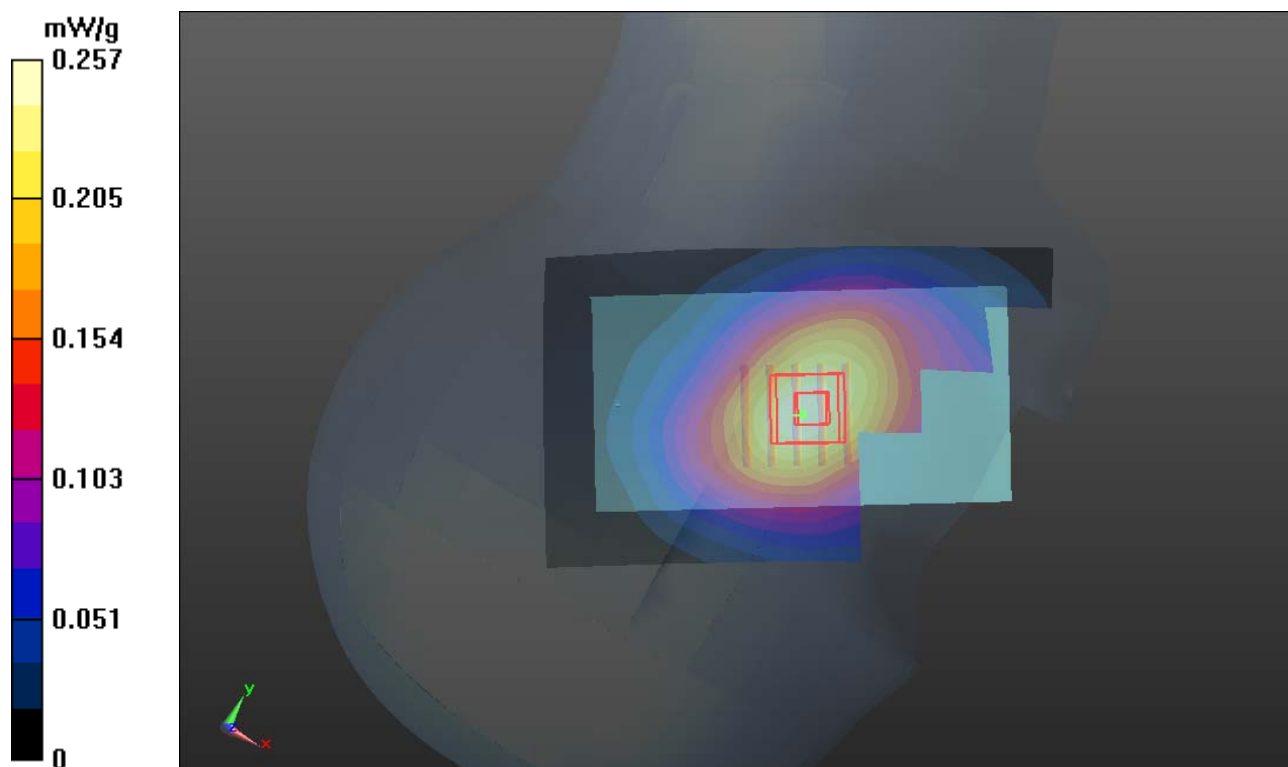
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.807 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.273 mW/g

SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.252 mW/g



P14 WCDMA V_RMC12.2k_Right Tilted_Ch4132**DUT: 120801C12**

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

Medium: H835_0813 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.908$ mho/m; $\epsilon_r = 42.917$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.87, 8.87, 8.87); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4132/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.223 mW/g

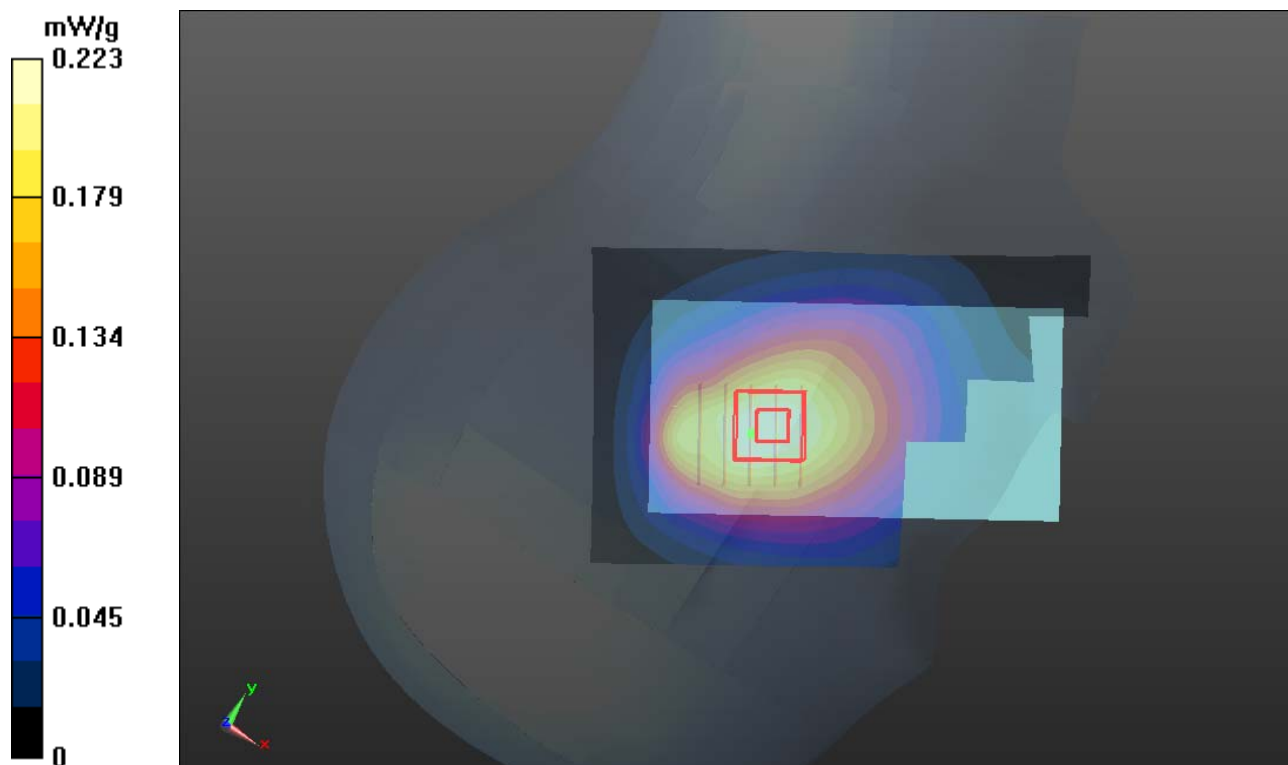
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.333 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.256 mW/g

SAR(1 g) = 0.202 mW/g; SAR(10 g) = 0.151 mW/g

Maximum value of SAR (measured) = 0.231 mW/g



P15 WCDMA V_RMC12.2k_Left Cheek_Ch4132**DUT: 120801C12**

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

Medium: H835_0813 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.908$ mho/m; $\epsilon_r = 42.917$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.87, 8.87, 8.87); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4132/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.267 mW/g

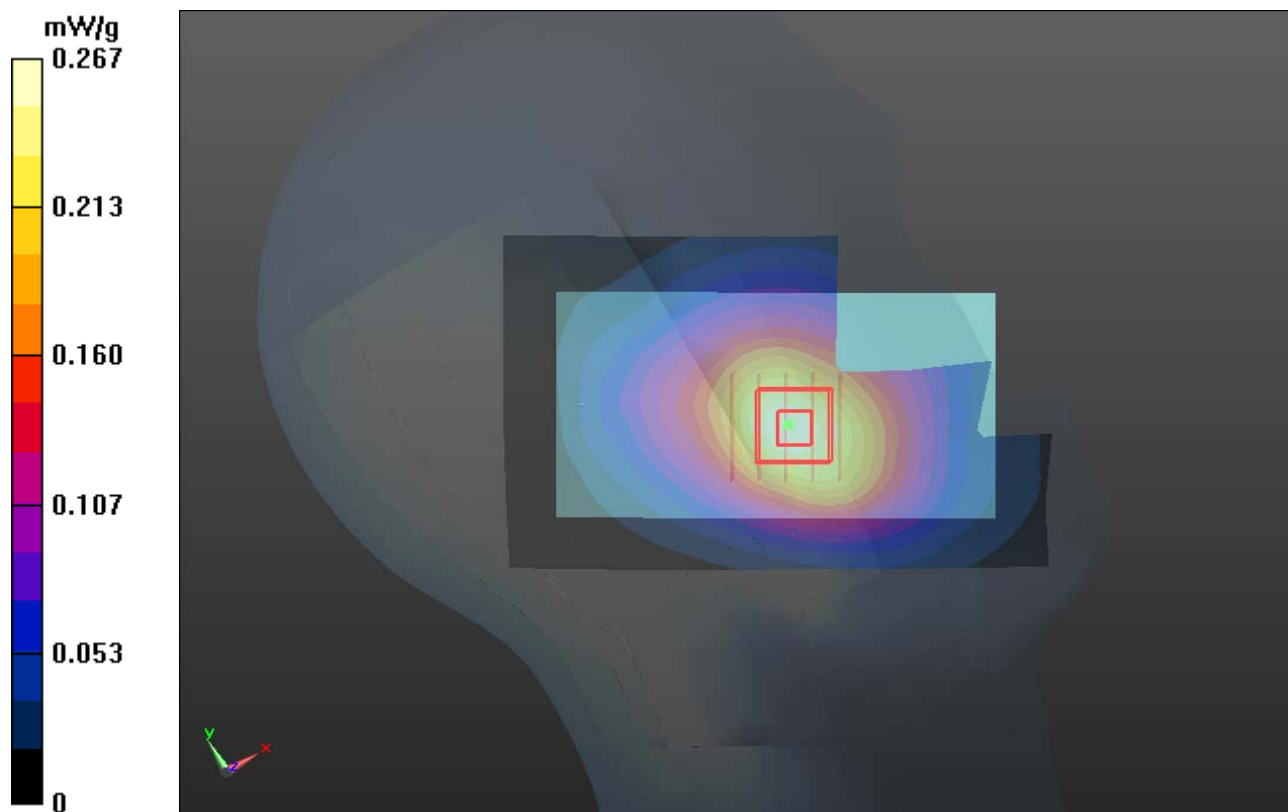
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

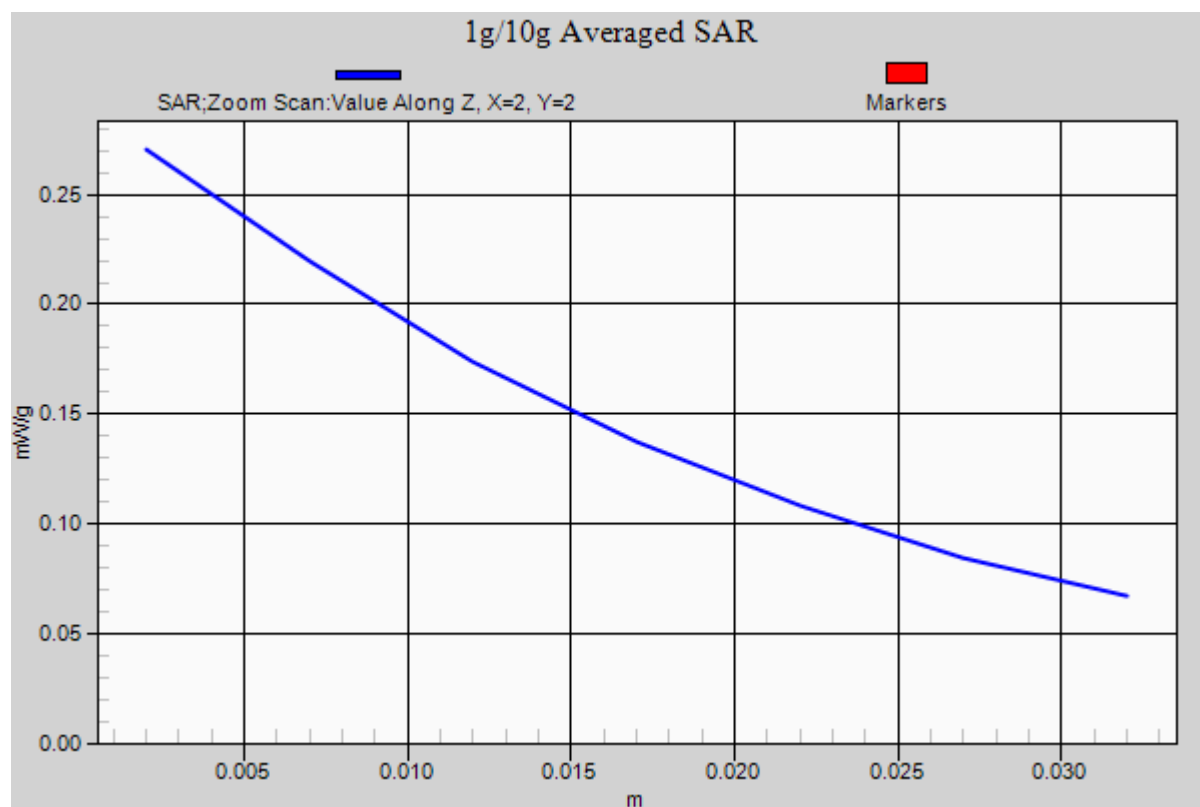
Reference Value = 7.373 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.293 mW/g

SAR(1 g) = 0.235 mW/g; SAR(10 g) = 0.176 mW/g

Maximum value of SAR (measured) = 0.270 mW/g





P16 WCDMA V_RMC12.2k_Left Tilted_Ch4132**DUT: 120801C12**

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

Medium: H835_0813 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.908$ mho/m; $\epsilon_r = 42.917$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.2 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.87, 8.87, 8.87); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4132/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

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

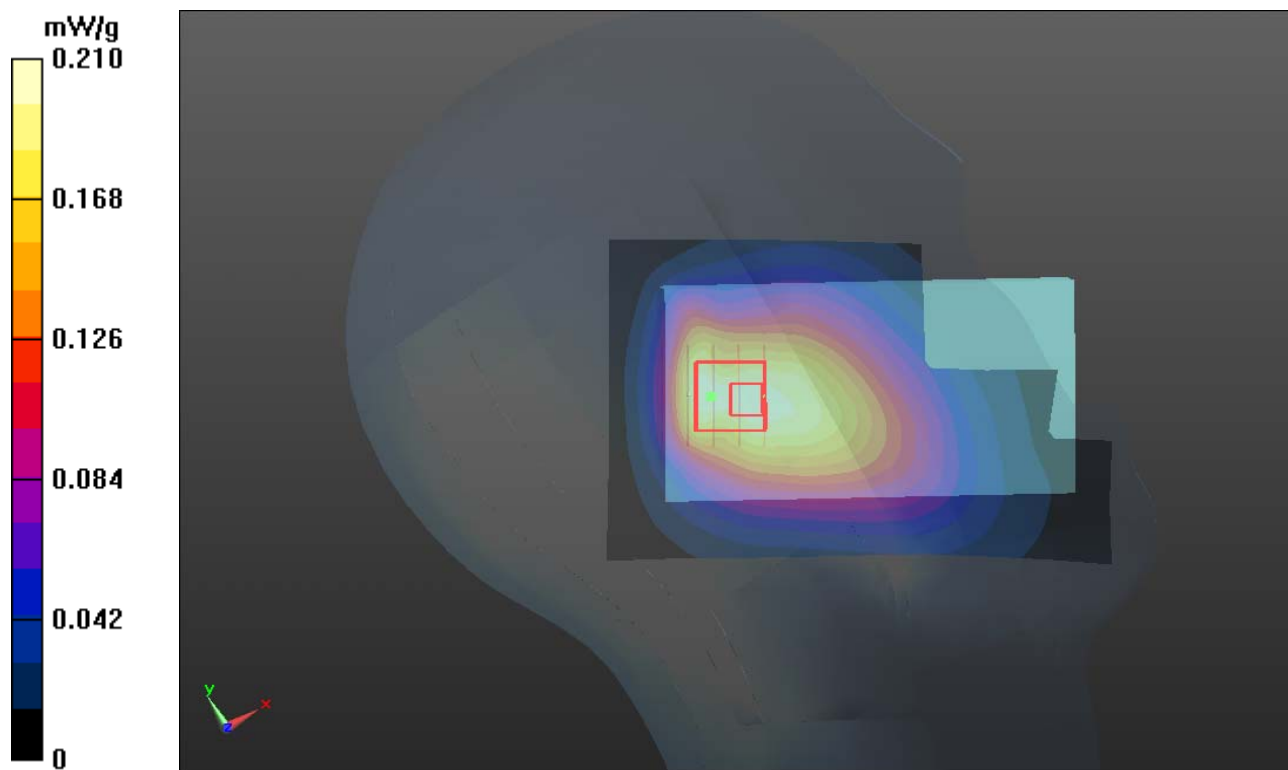
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.593 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.228 mW/g

SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.121 mW/g

Maximum value of SAR (measured) = 0.204 mW/g



P09 WCDMA II_RMC12.2k_Right Cheek_Ch9262**DUT: 120801C12**

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

Medium: H1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.395$ mho/m; $\epsilon_r = 39.935$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.0 °C; Liquid Temperature : 21.0 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.4, 7.4, 7.4); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9262/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

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

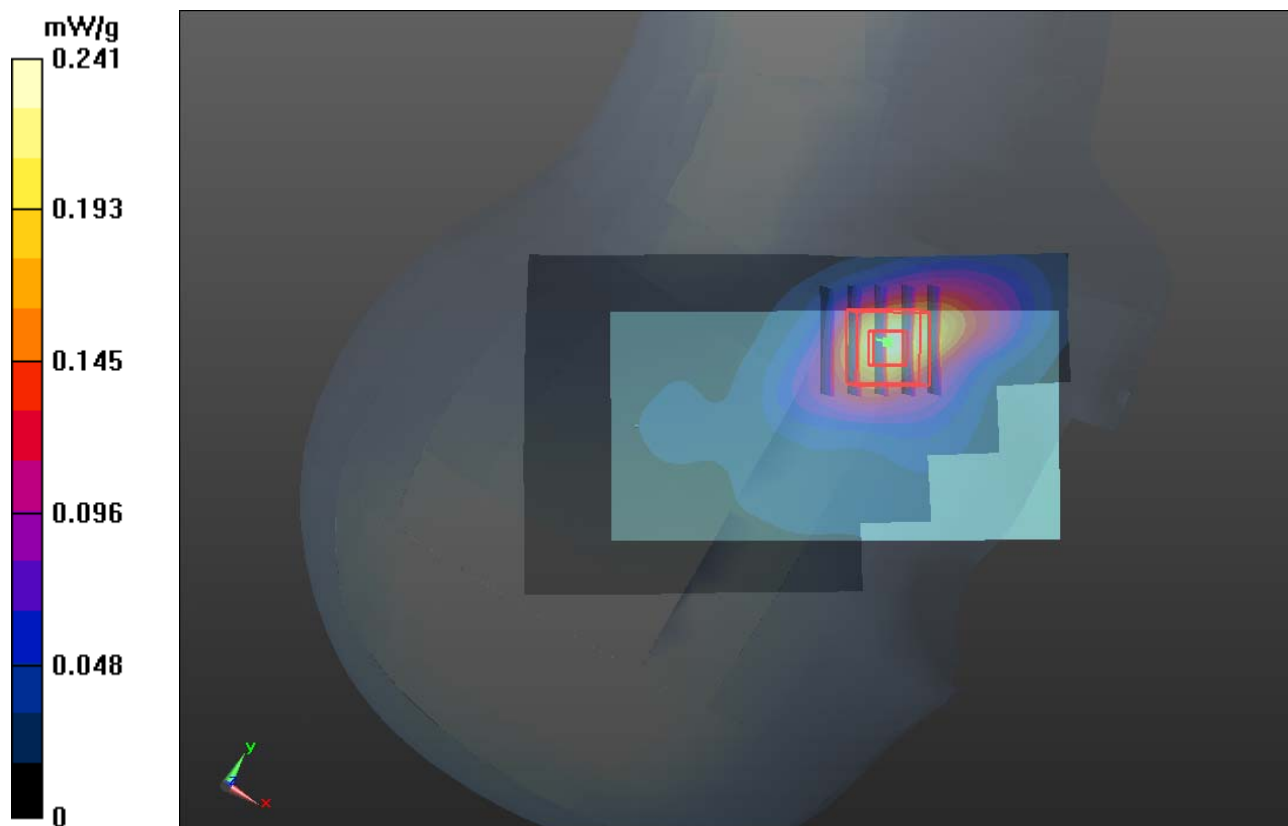
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

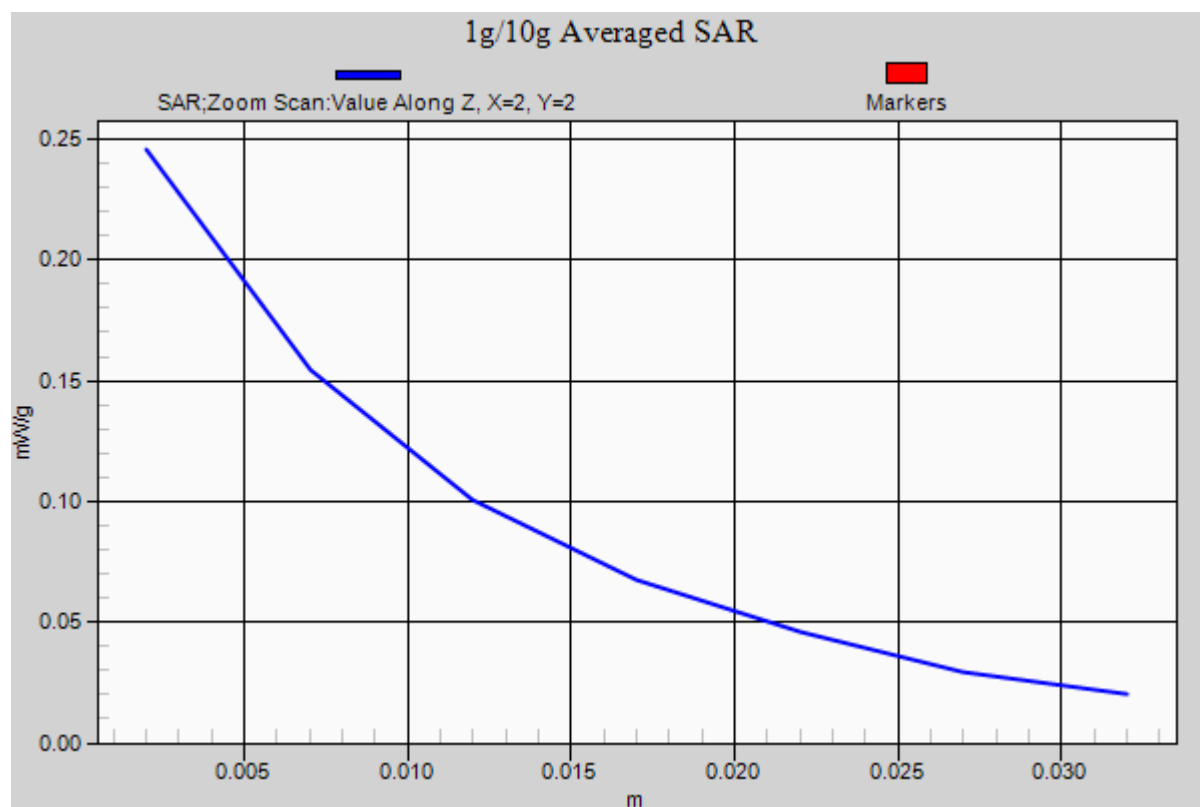
Reference Value = 3.371 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.296 mW/g

SAR(1 g) = 0.186 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.246 mW/g





P10 WCDMA II_RMC12.2k_Right Tilted_Ch9262**DUT: 120801C12**

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

Medium: H1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.395$ mho/m; $\epsilon_r = 39.935$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.0 °C; Liquid Temperature : 21.0 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.4, 7.4, 7.4); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9262/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.0494 mW/g

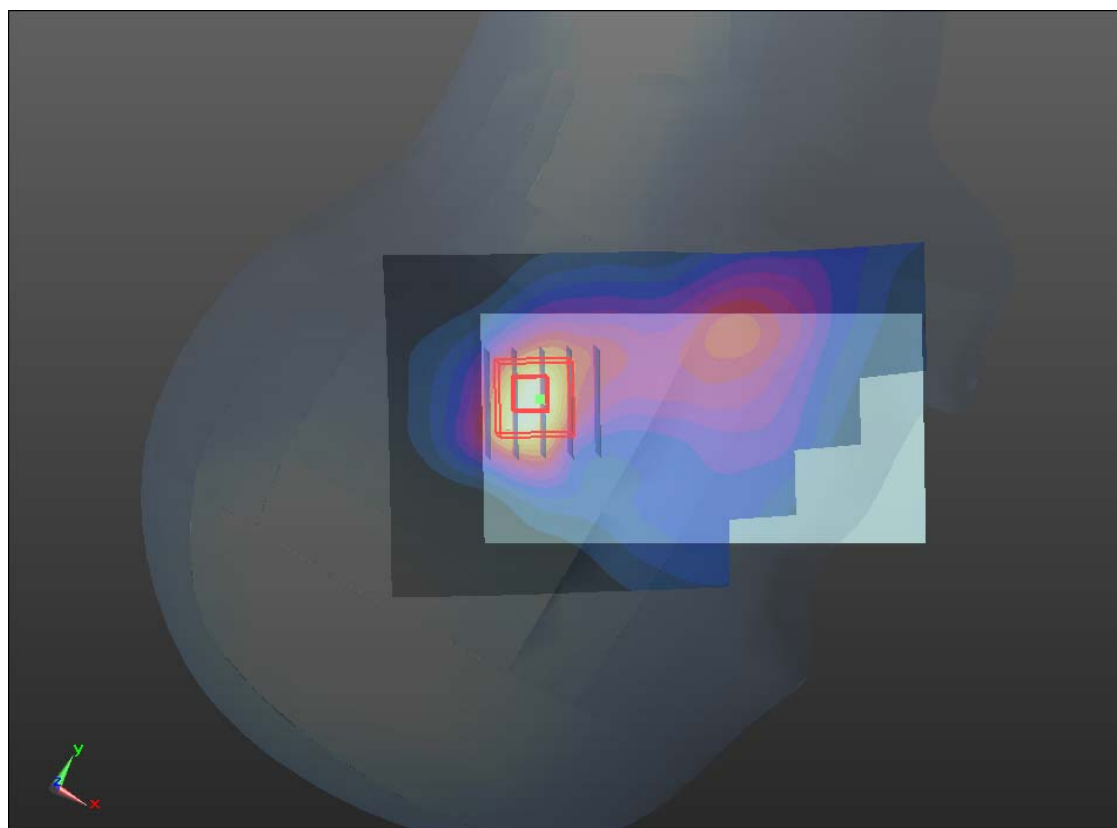
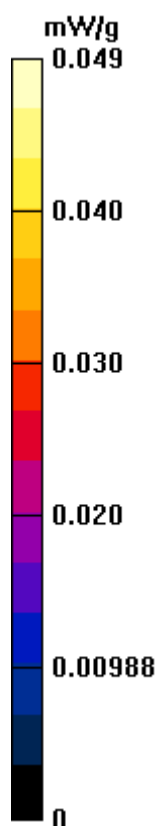
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.420 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.060 mW/g

SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.022 mW/g

Maximum value of SAR (measured) = 0.0477 mW/g



P11 WCDMA II_RMC12.2k_Left Cheek_Ch9262**DUT: 120801C12**

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

Medium: H1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.395$ mho/m; $\epsilon_r = 39.935$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.0 °C; Liquid Temperature : 21.0 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.4, 7.4, 7.4); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9262/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.135 mW/g

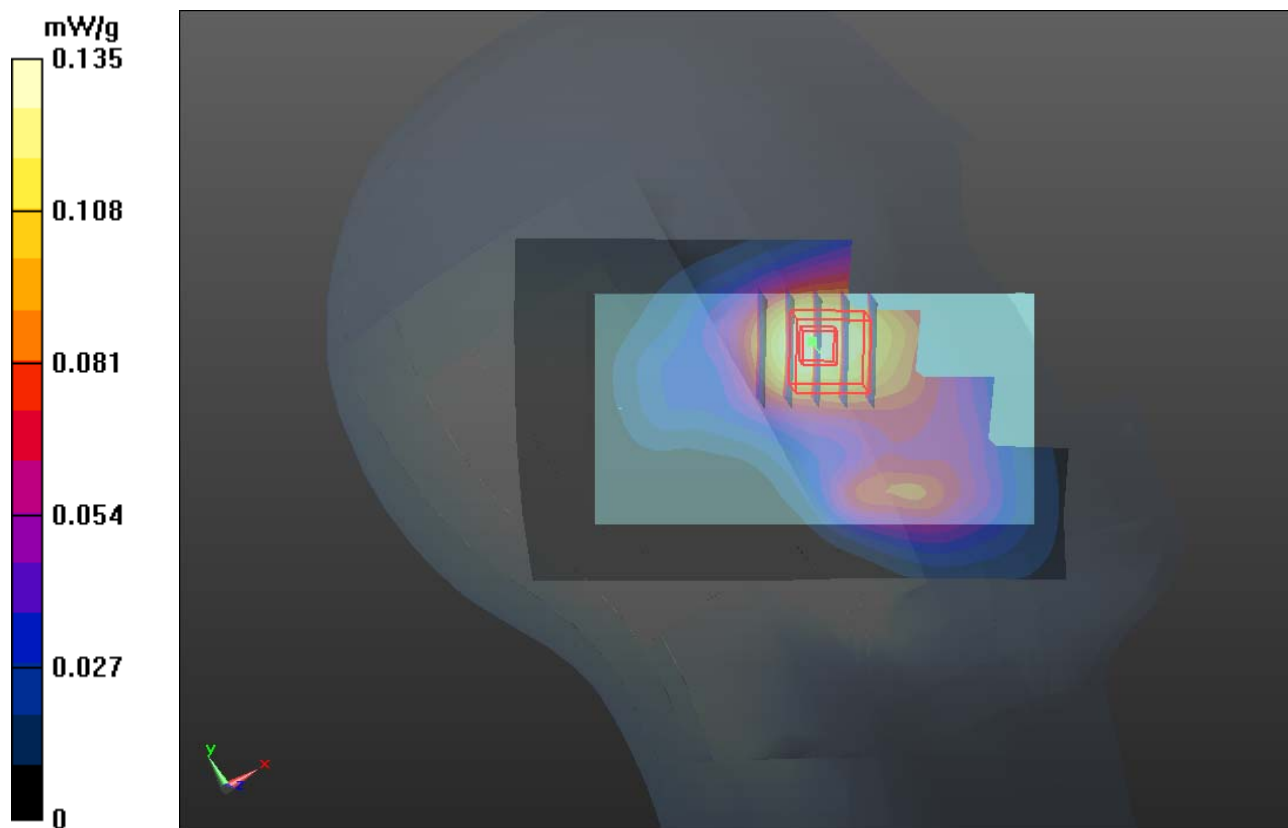
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.308 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.194 mW/g

SAR(1 g) = 0.125 mW/g; SAR(10 g) = 0.078 mW/g

Maximum value of SAR (measured) = 0.162 mW/g



P12 WCDMA II_RMC12.2k_Left Tilted_Ch9262**DUT: 120801C12**

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

Medium: H1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.395$ mho/m; $\epsilon_r = 39.935$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.0 °C; Liquid Temperature : 21.0 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.4, 7.4, 7.4); Calibrated: 2011/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn910; Calibrated: 2011/12/07
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9262/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.0876 mW/g

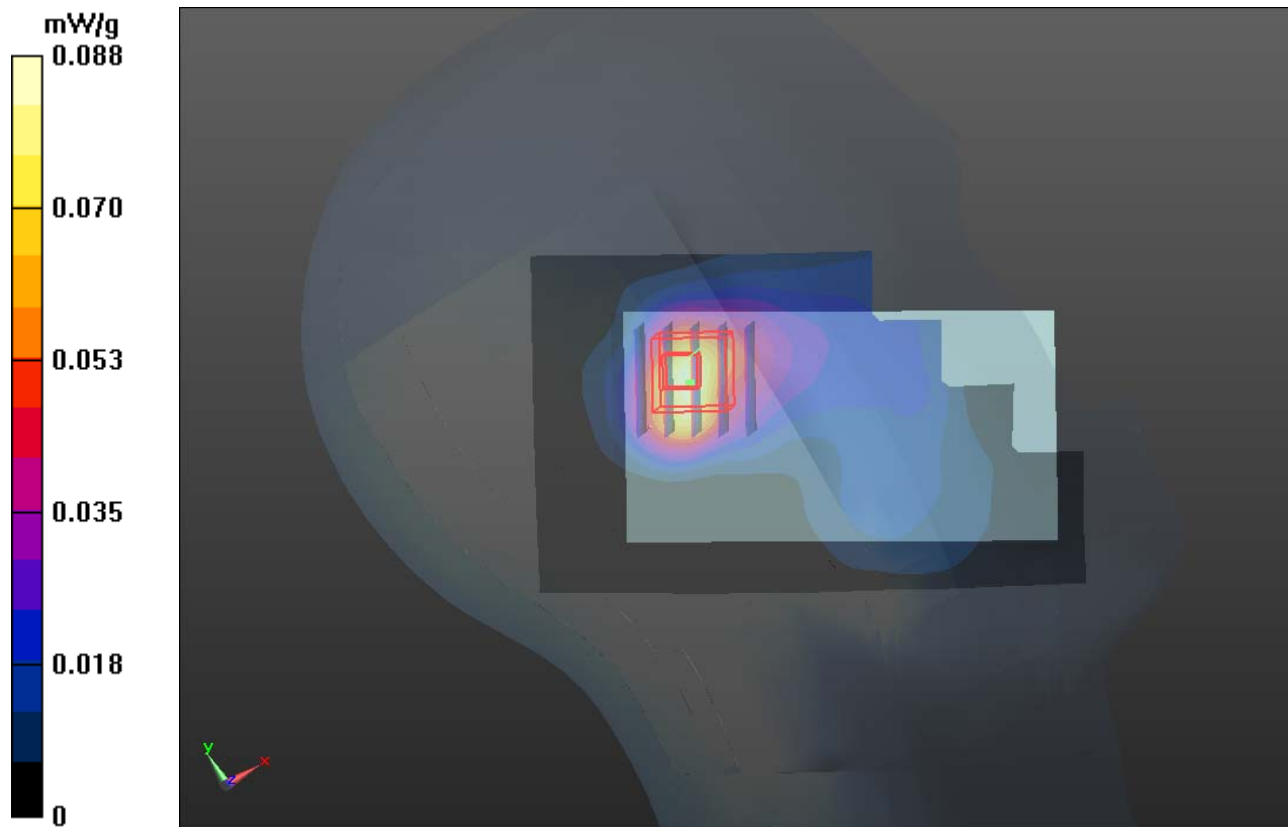
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.561 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.101 mW/g

SAR(1 g) = 0.063 mW/g; SAR(10 g) = 0.037 mW/g

Maximum value of SAR (measured) = 0.0778 mW/g



P123 802.11b_Right Cheek_Ch11**DUT: 120801C12**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: H2450_0821 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.82$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.3 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch11/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.713 mW/g

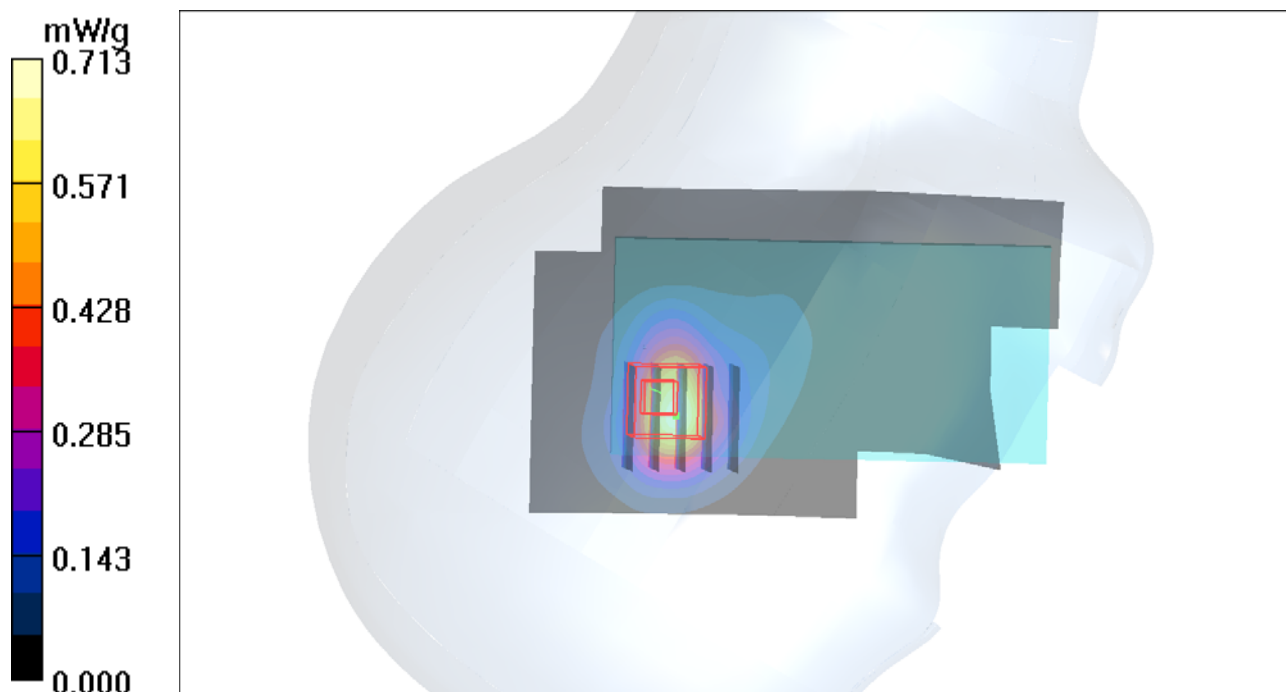
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.6 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 0.921 W/kg

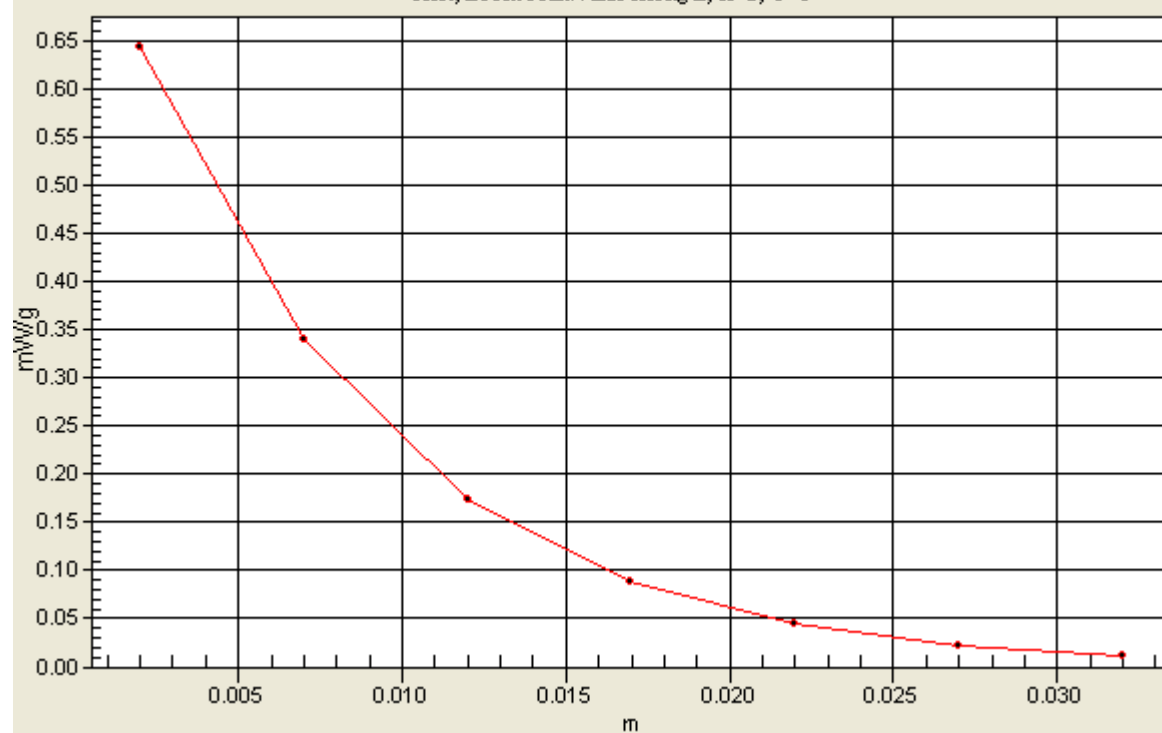
SAR(1 g) = 0.453 mW/g; SAR(10 g) = 0.216 mW/g

Maximum value of SAR (measured) = 0.644 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=3, Y=1



P124 802.11b_Right Tilted_Ch11**DUT: 120801C12**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: H2450_0821 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.82$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.3 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch11/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.440 mW/g

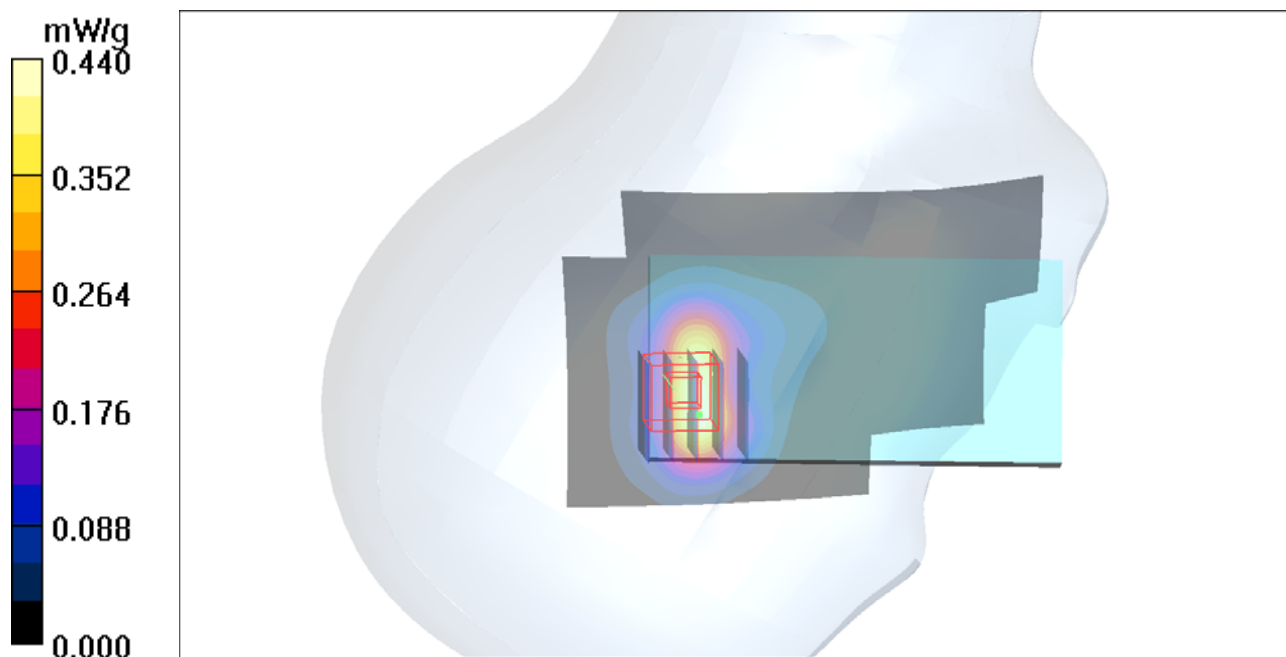
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.6 V/m; Power Drift = -0.059 dB

Peak SAR (extrapolated) = 0.629 W/kg

SAR(1 g) = 0.309 mW/g; SAR(10 g) = 0.139 mW/g

Maximum value of SAR (measured) = 0.451 mW/g



P125 802.11b_Left Cheek_Ch11**DUT: 120801C12**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: H2450_0821 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.82$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.3 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch11/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.495 mW/g

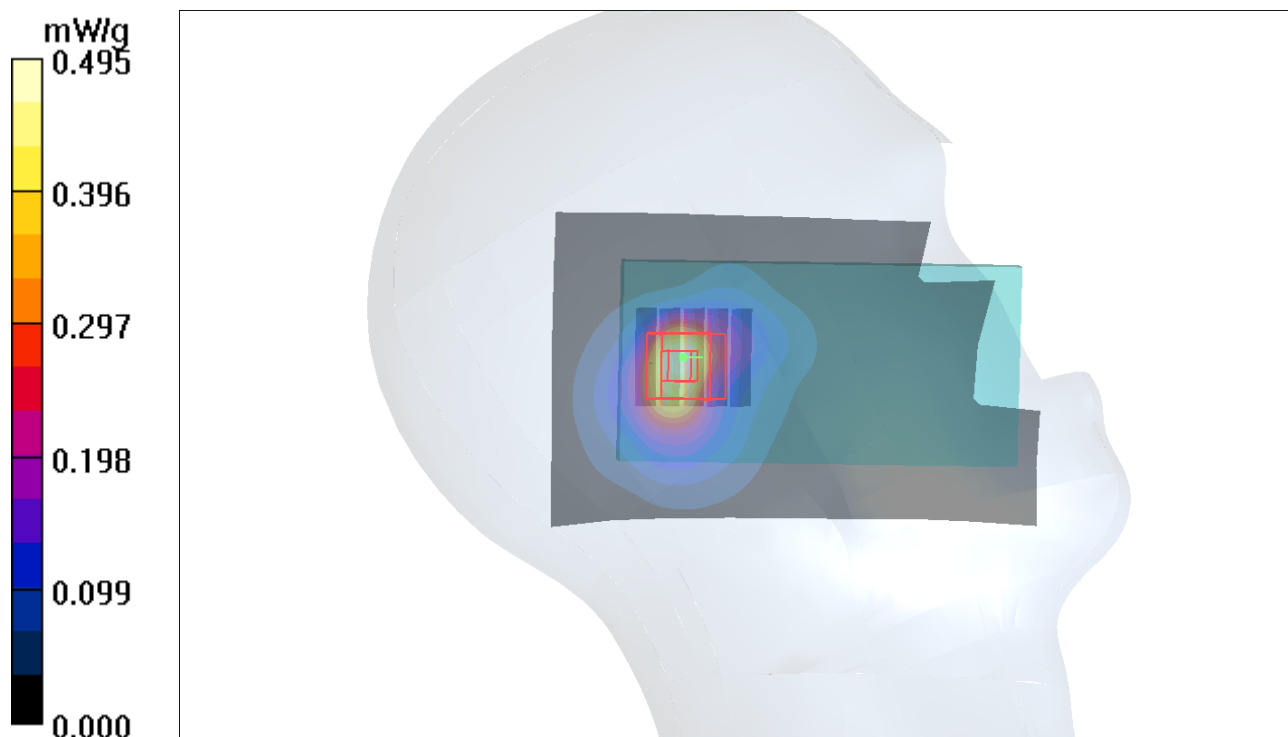
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.9 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 0.549 W/kg

SAR(1 g) = 0.301 mW/g; SAR(10 g) = 0.159 mW/g

Maximum value of SAR (measured) = 0.417 mW/g



P126 802.11b_Left Tilted_Ch11**DUT: 120801C12**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: H2450_0821 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.82$ mho/m; $\epsilon_r = 40.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.3 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch11/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

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

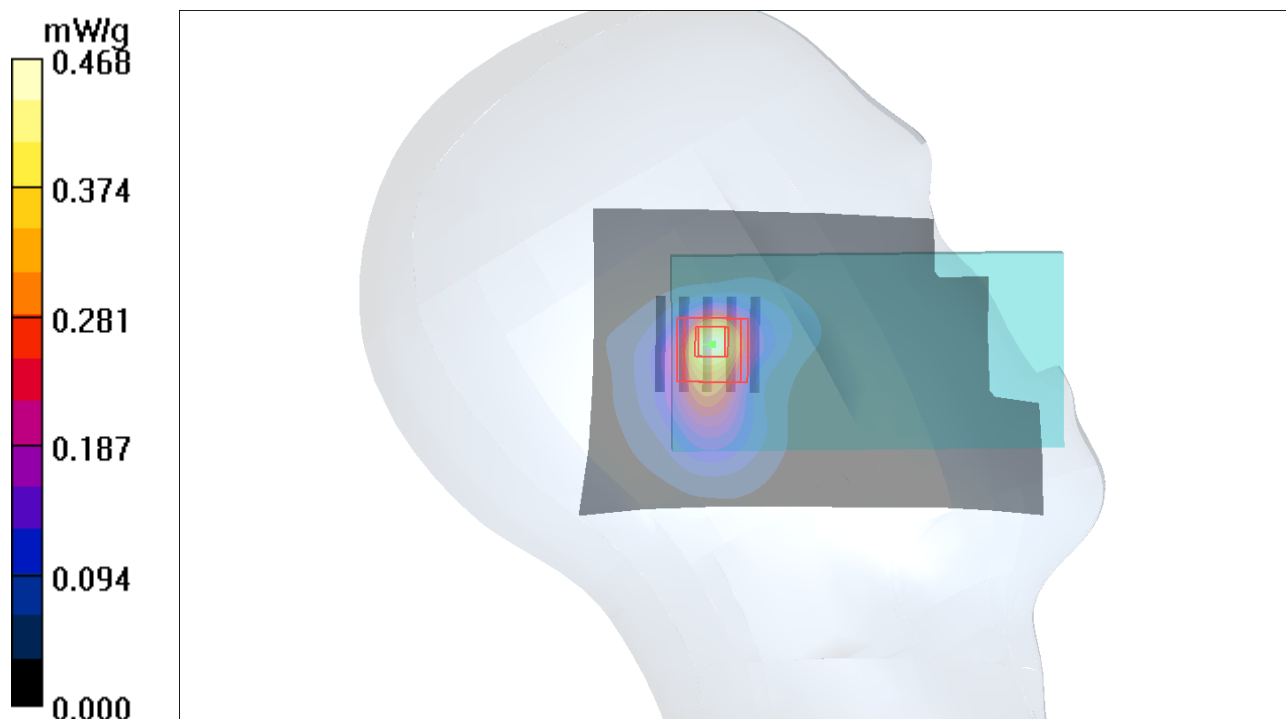
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.2 V/m; Power Drift = -0.143 dB

Peak SAR (extrapolated) = 0.552 W/kg

SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.140 mW/g

Maximum value of SAR (measured) = 0.420 mW/g



P133 802.11n_HT20_Left Cheek_Ch64**DUT: 120801C12**

Communication System: 802.11n_HT20; Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: H5G_0821 Medium parameters used: $f = 5320$ MHz; $\sigma = 4.84$ mho/m; $\epsilon_r = 36.8$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C; Liquid Temperature : 20.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(5.32, 5.32, 5.32); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch64/Area Scan (141x201x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.018 mW/g

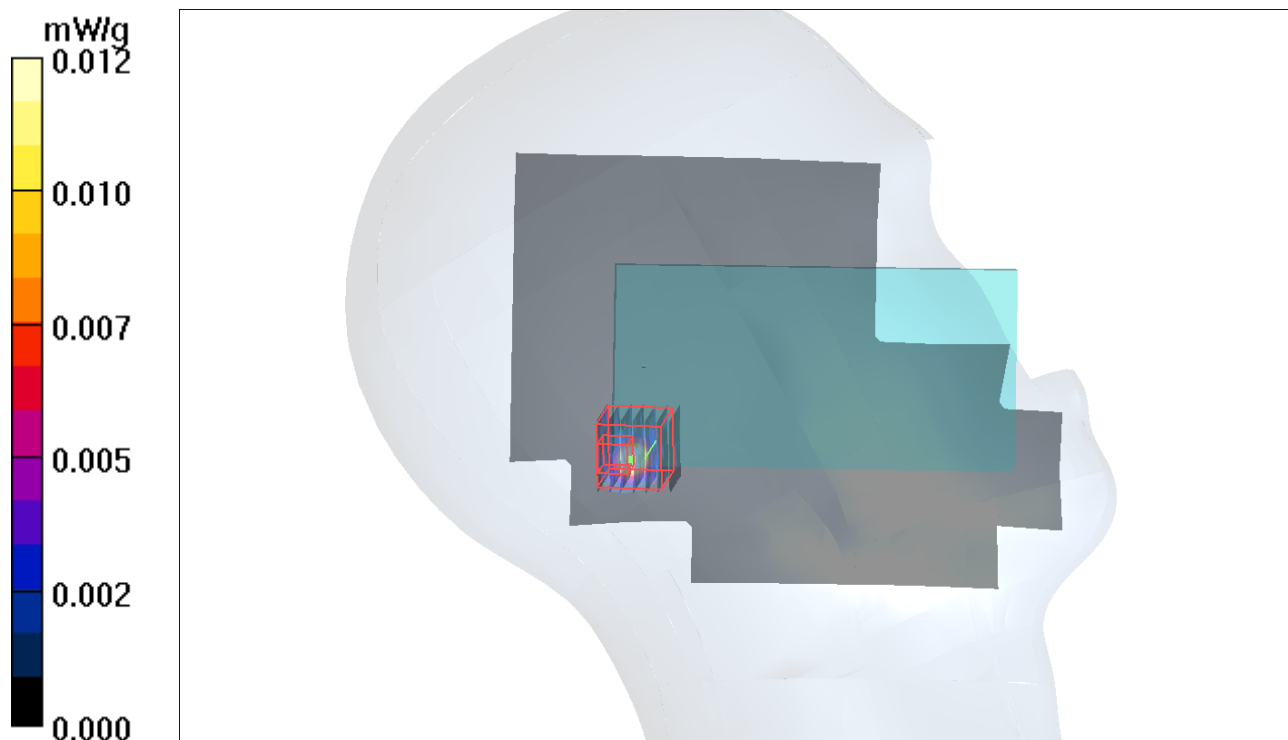
Ch64/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.000 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.025 W/kg

SAR(1 g) = 0.000987 mW/g; SAR(10 g) = 0.000148 mW/g

Maximum value of SAR (measured) = 0.012 mW/g



P146 802.11n_HT20_Right Cheek_Ch132**DUT: 120801C12**

Communication System: 802.11n_HT20; Frequency: 5660 MHz; Duty Cycle: 1:1

Medium: H5G_0821 Medium parameters used: $f = 5660$ MHz; $\sigma = 5.26$ mho/m; $\epsilon_r = 36.1$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C; Liquid Temperature : 20.1 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.89, 4.89, 4.89); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch132/Area Scan (141x201x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.032 mW/g

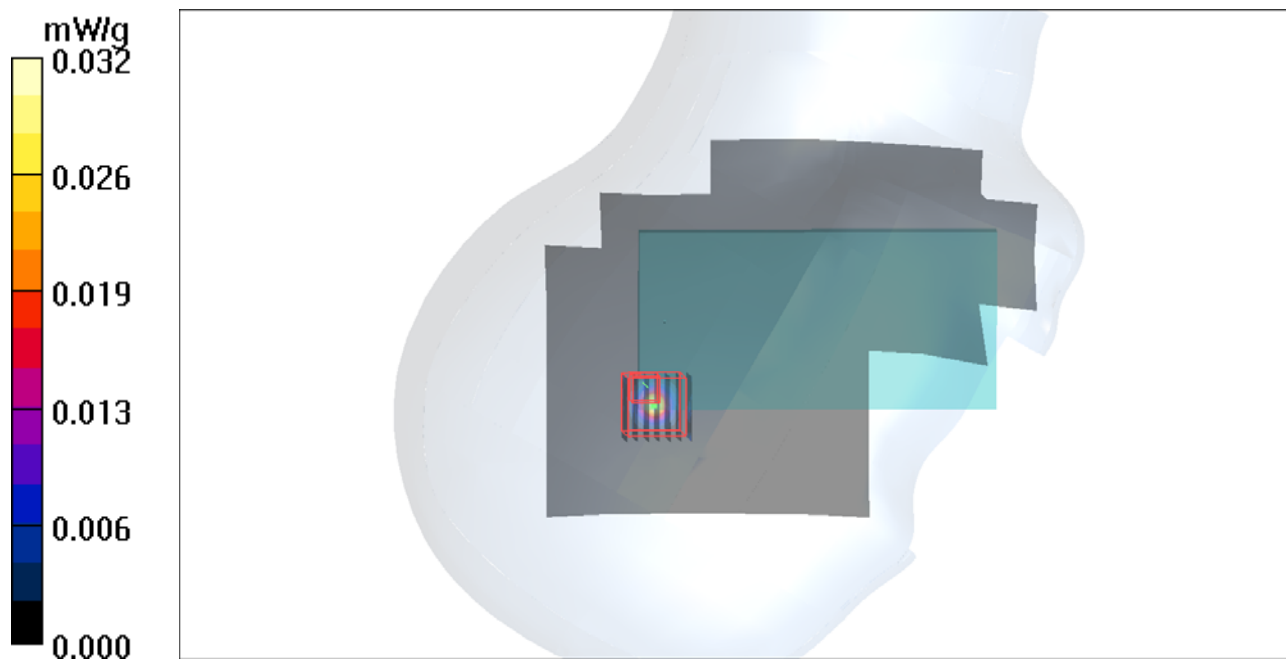
Ch132/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.000 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.161 W/kg

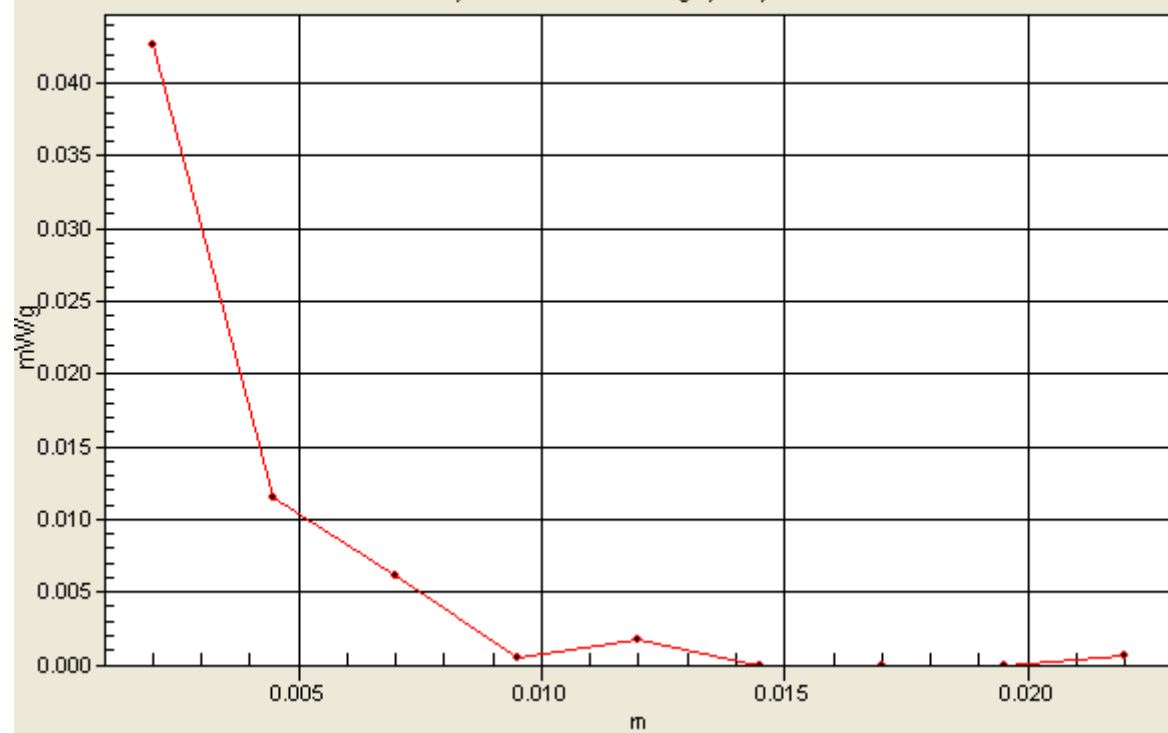
SAR(1 g) = 0.016 mW/g; SAR(10 g) = 0.00287 mW/g

Maximum value of SAR (measured) = 0.043 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=5, Y=2



P17 GSM850_GPRS11_Front Face_1cm_Ch128**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: B835_0814 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 55.951$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 0.476 W/kg

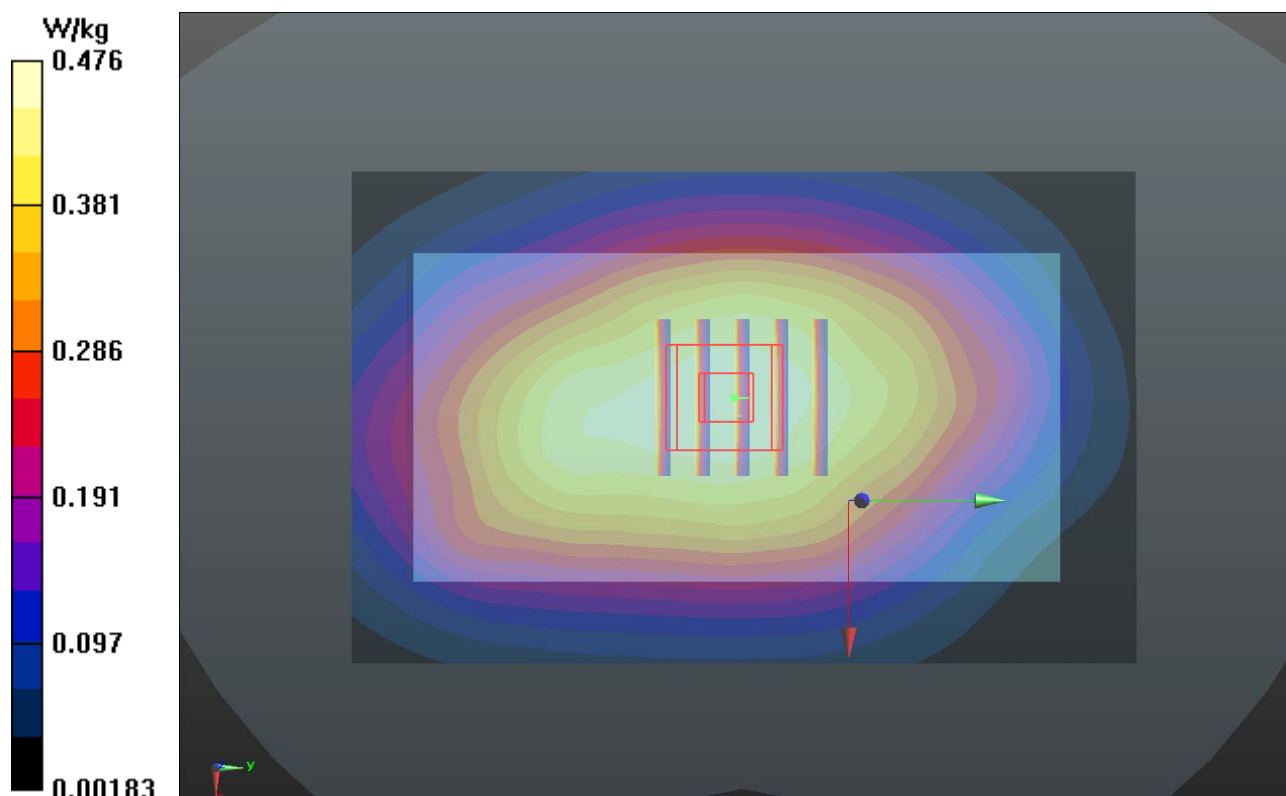
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.626 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.503 mW/g

SAR(1 g) = 0.401 mW/g; SAR(10 g) = 0.310 mW/g

Maximum value of SAR (measured) = 0.460 W/kg



P18 GSM850_GPRS11_Rear Face_1cm_Ch128**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: B835_0814 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 55.951$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 0.897 W/kg

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

Reference Value = 28.806 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.879 mW/g

SAR(1 g) = 0.698 mW/g; SAR(10 g) = 0.530 mW/g

Maximum value of SAR (measured) = 0.790 W/kg

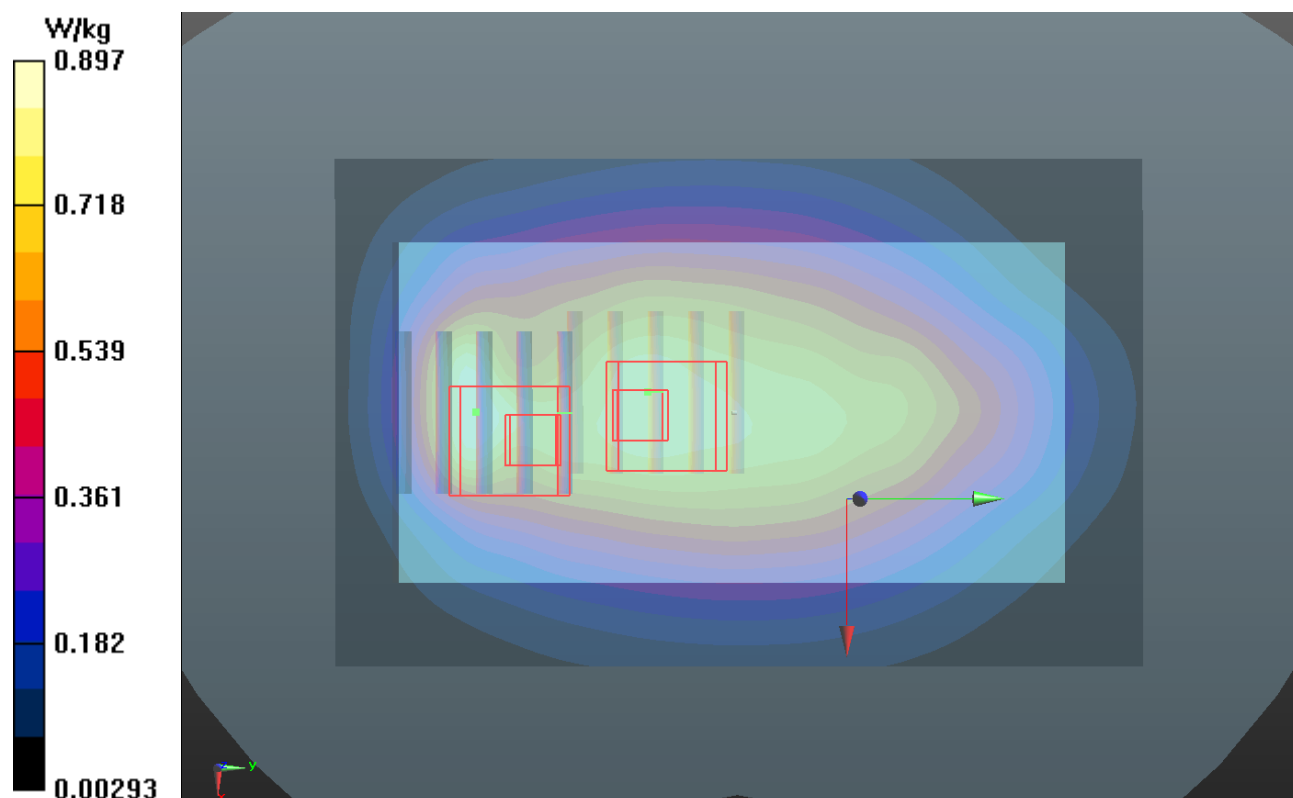
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

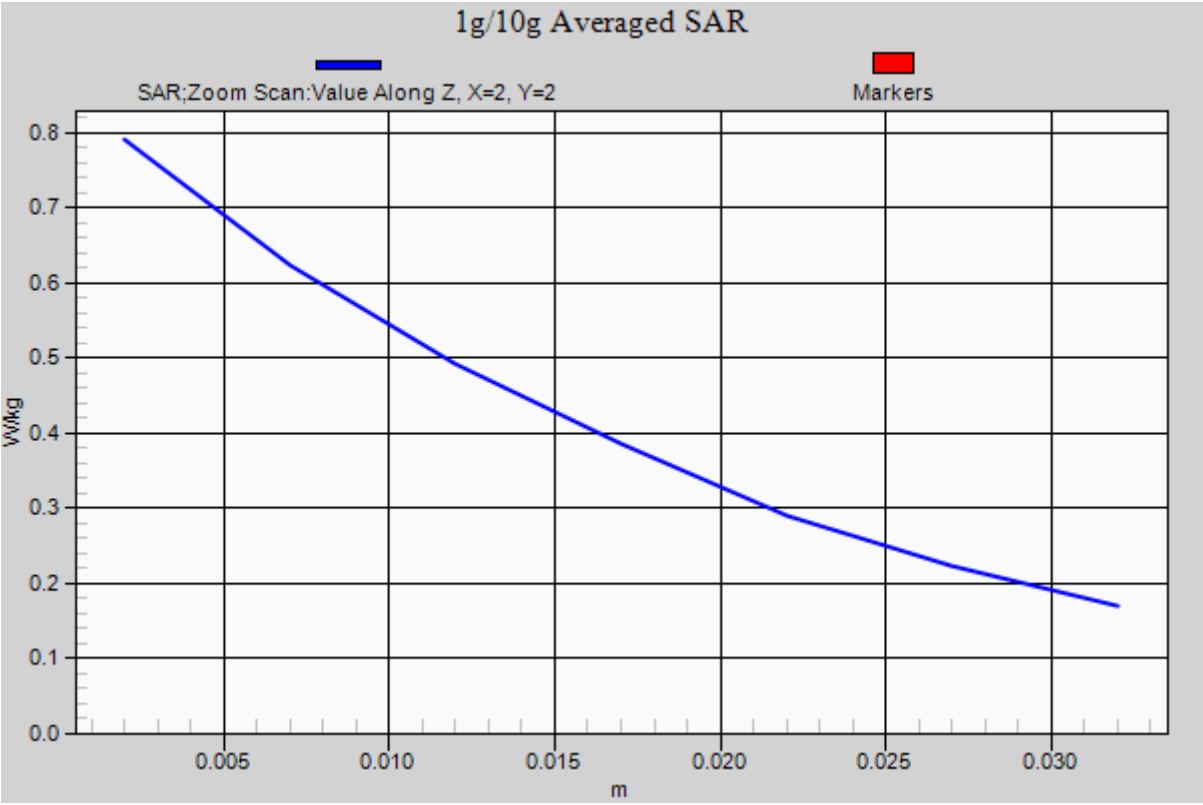
Reference Value = 28.806 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.791 mW/g

SAR(1 g) = 0.538 mW/g; SAR(10 g) = 0.352 mW/g

Maximum value of SAR (measured) = 0.711 W/kg





P19 GSM850_GPRS11_Left Side_1cm_Ch128**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: B835_0814 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 55.951$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch128/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.731 W/kg

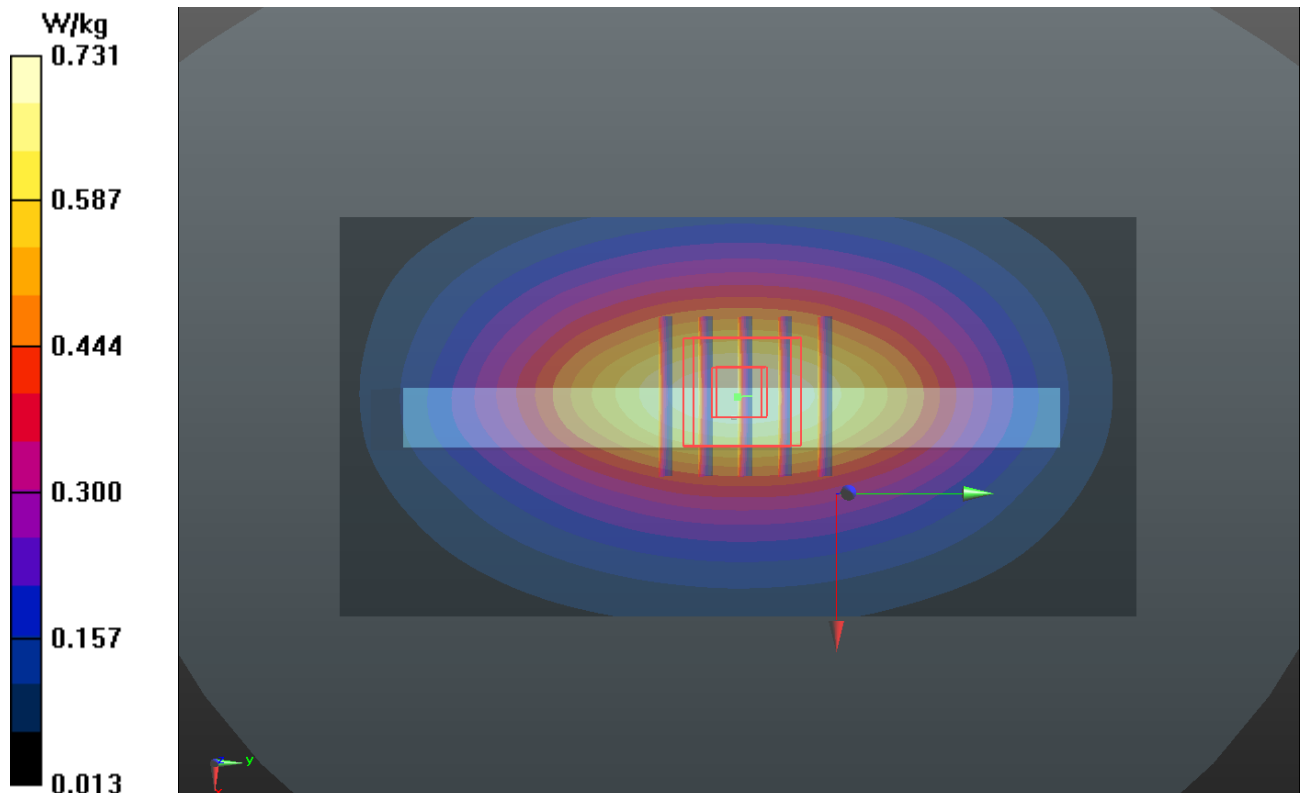
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.339 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.833 mW/g

SAR(1 g) = 0.595 mW/g; SAR(10 g) = 0.417 mW/g

Maximum value of SAR (measured) = 0.728 W/kg



P20 GSM850_GPRS11_Right Side_1cm_Ch128**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: B835_0814 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 55.951$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch128/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.391 W/kg

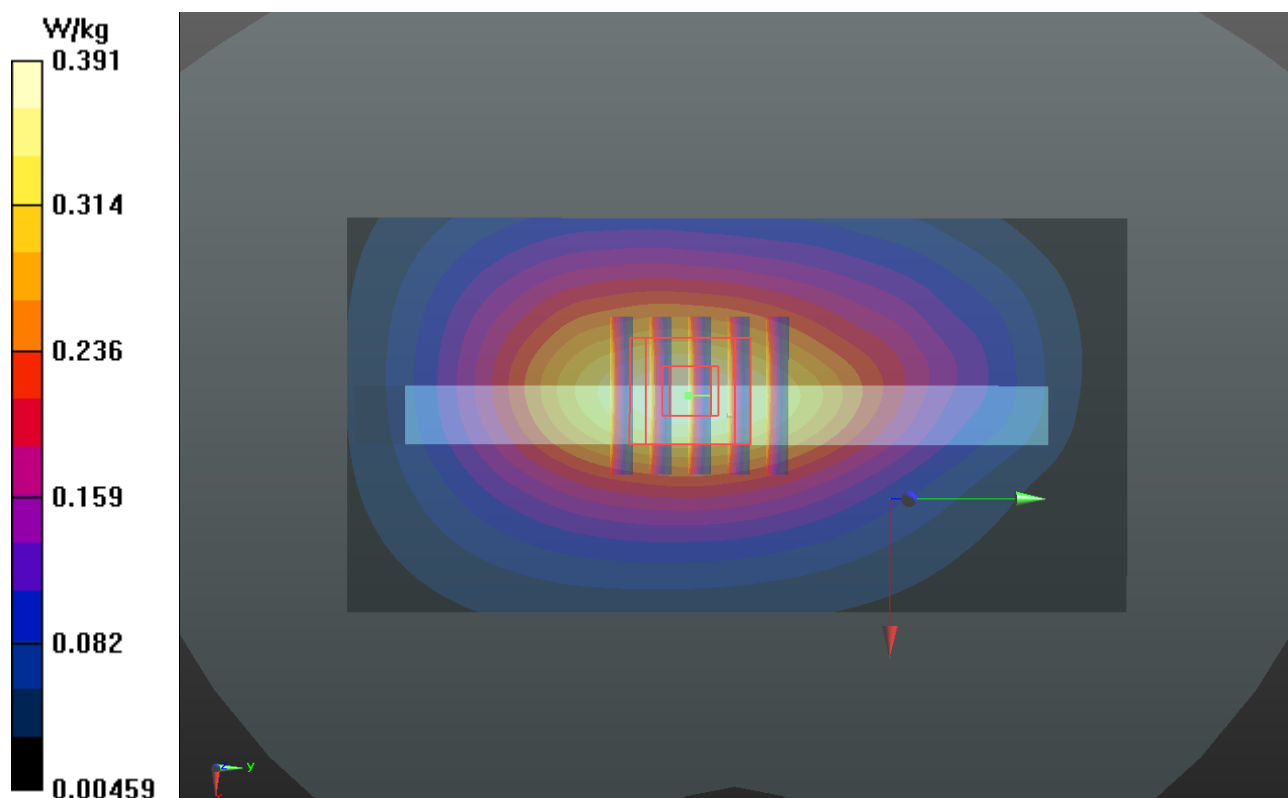
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.667 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.446 mW/g

SAR(1 g) = 0.318 mW/g; SAR(10 g) = 0.222 mW/g

Maximum value of SAR (measured) = 0.389 W/kg



P21 GSM850_GPRS11_Bottom Side_1cm_Ch128**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: B835_0814 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 55.951$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 0.134 W/kg

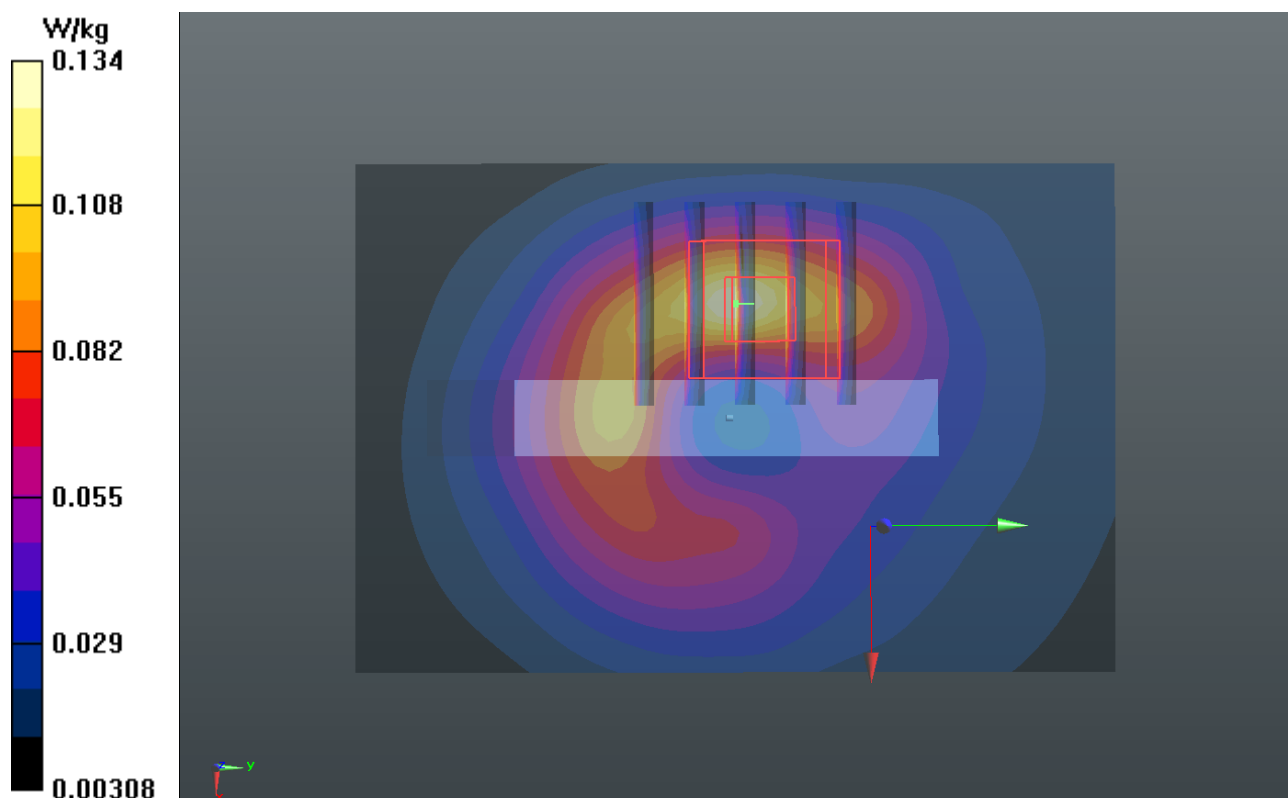
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.336 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.159 mW/g

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.056 mW/g

Maximum value of SAR (measured) = 0.139 W/kg



P22 GSM850_GPRS11_Front Face_1cm_Ch128_Earphone**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: B835_0814 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 55.951$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 0.392 W/kg

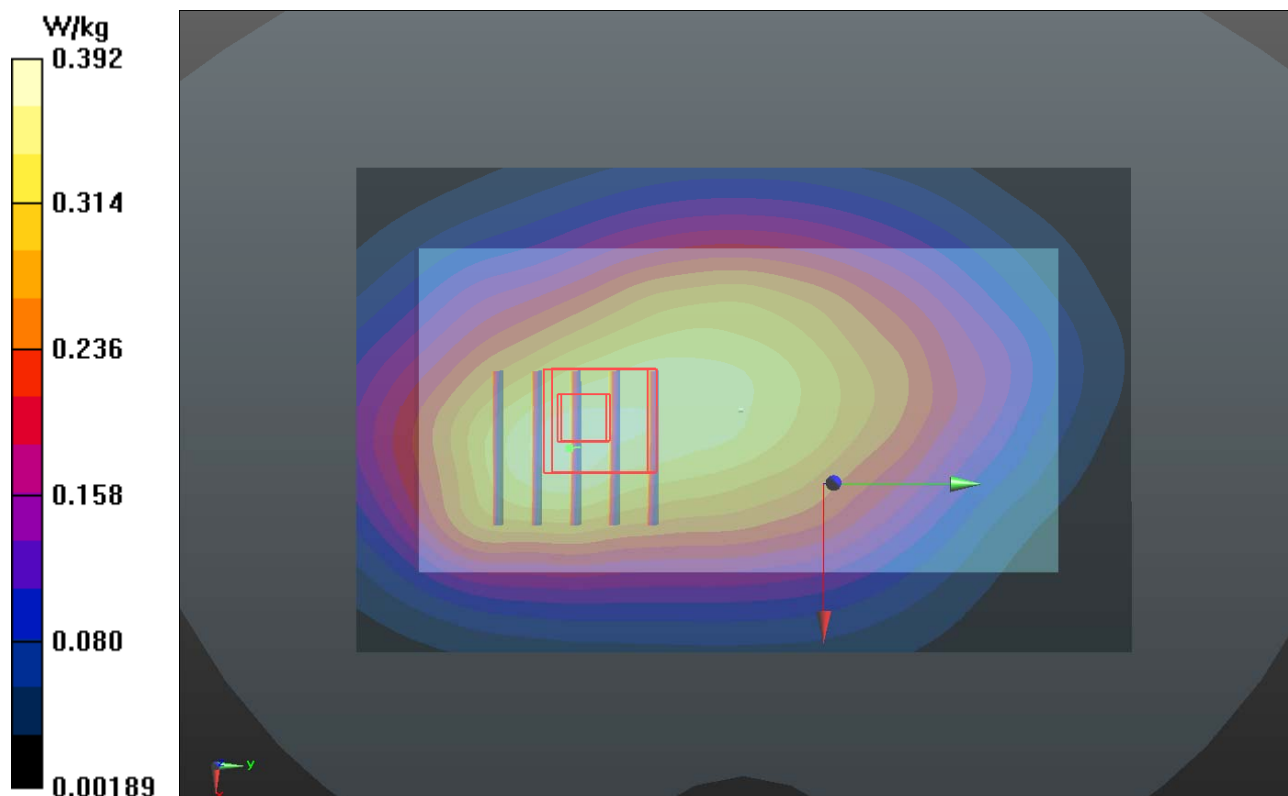
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.177 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.439 mW/g

SAR(1 g) = 0.318 mW/g; SAR(10 g) = 0.238 mW/g

Maximum value of SAR (measured) = 0.372 W/kg



P23 GSM850_GPRS11_Rear Face_1cm_Ch128_Earphone**DUT: 120801C12**

Communication System: GPRS11; Frequency: 824.2 MHz; Duty Cycle: 1:2.66993

Medium: B835_0814 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 55.951$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

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

Maximum value of SAR (interpolated) = 0.769 W/kg

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

Reference Value = 25.220 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.808 mW/g

SAR(1 g) = 0.618 mW/g; SAR(10 g) = 0.458 mW/g

Maximum value of SAR (measured) = 0.722 W/kg

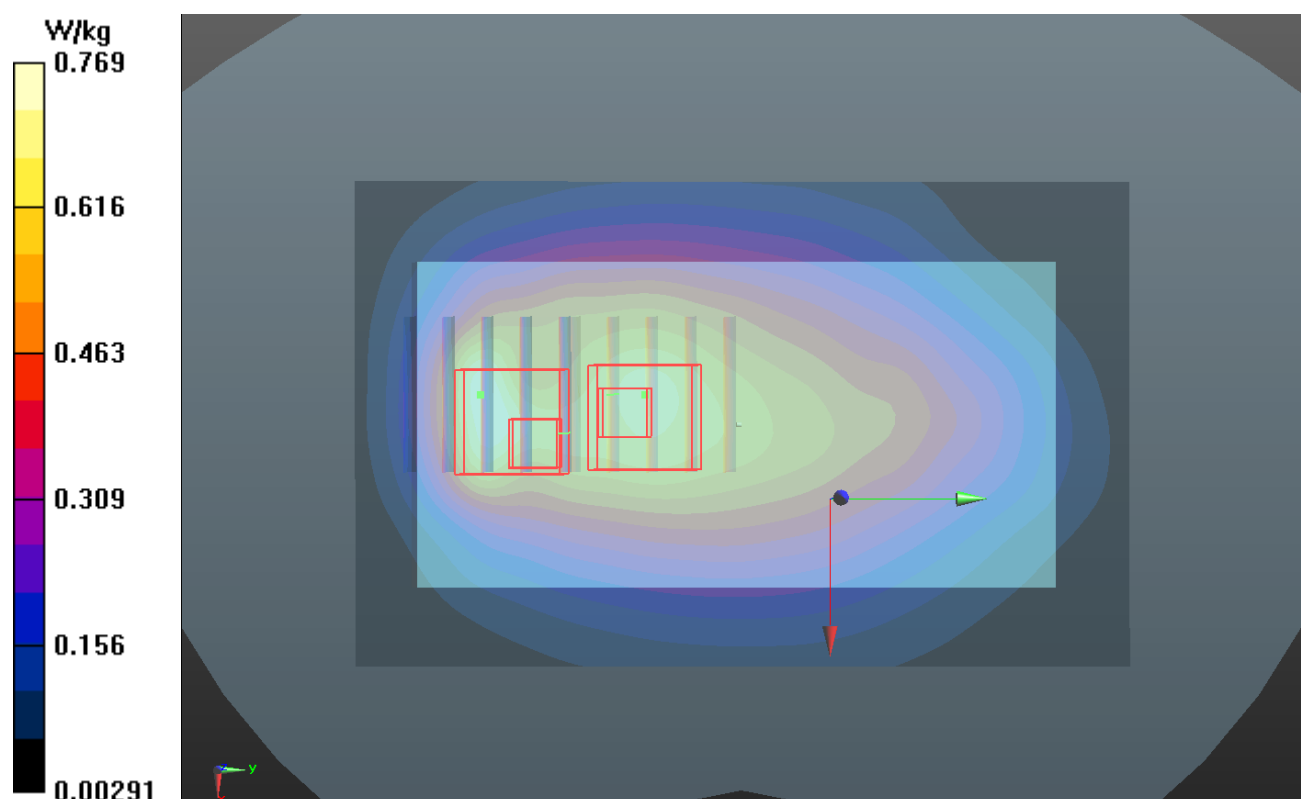
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.220 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.737 mW/g

SAR(1 g) = 0.466 mW/g; SAR(10 g) = 0.315 mW/g

Maximum value of SAR (measured) = 0.628 W/kg



P24 GSM1900_GPRS12_Front Face_1cm_Ch512**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 53.068$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C ; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch512/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.479 mW/g

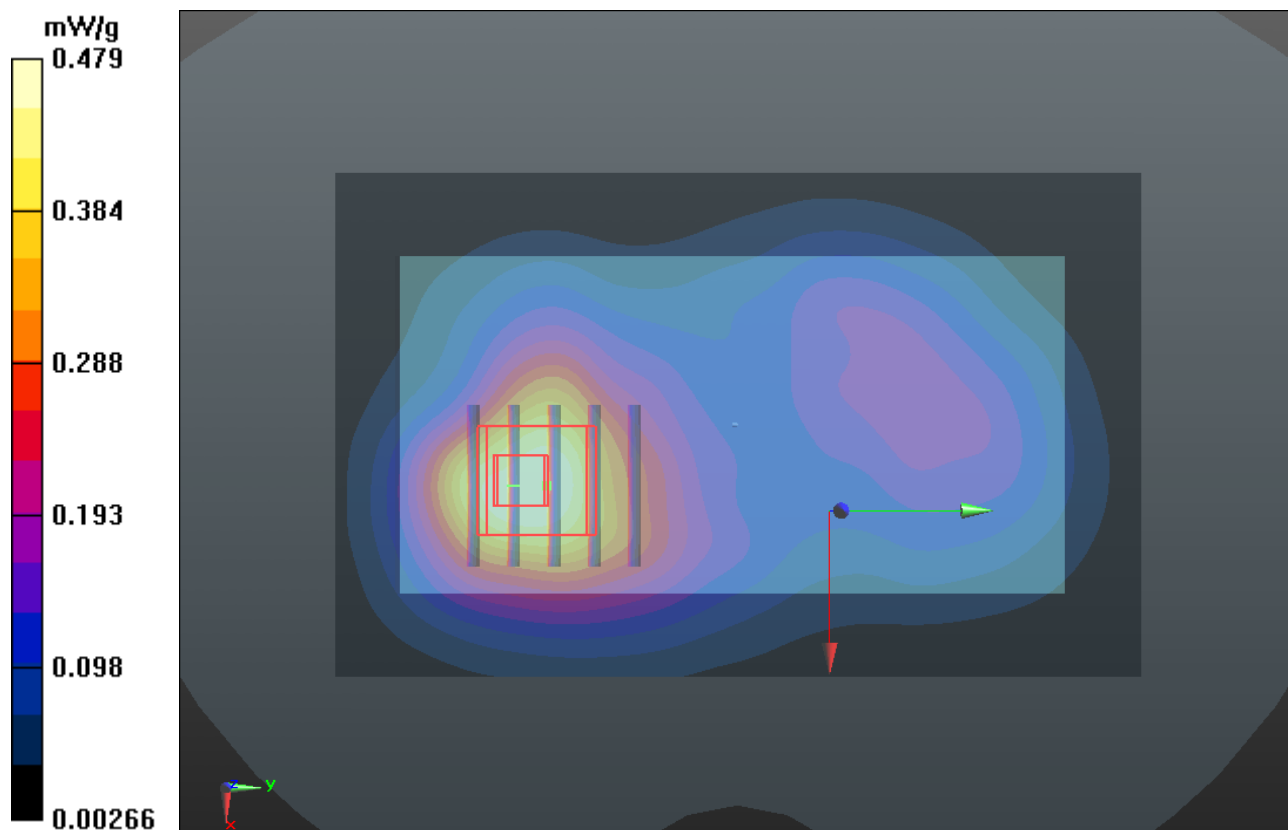
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.133 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.598 mW/g

SAR(1 g) = 0.389 mW/g; SAR(10 g) = 0.241 mW/g

Maximum value of SAR (measured) = 0.500 mW/g



P25 GSM1900_GPRS12_Rear Face_1cm_Ch512**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 53.068$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch512/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.719 mW/g

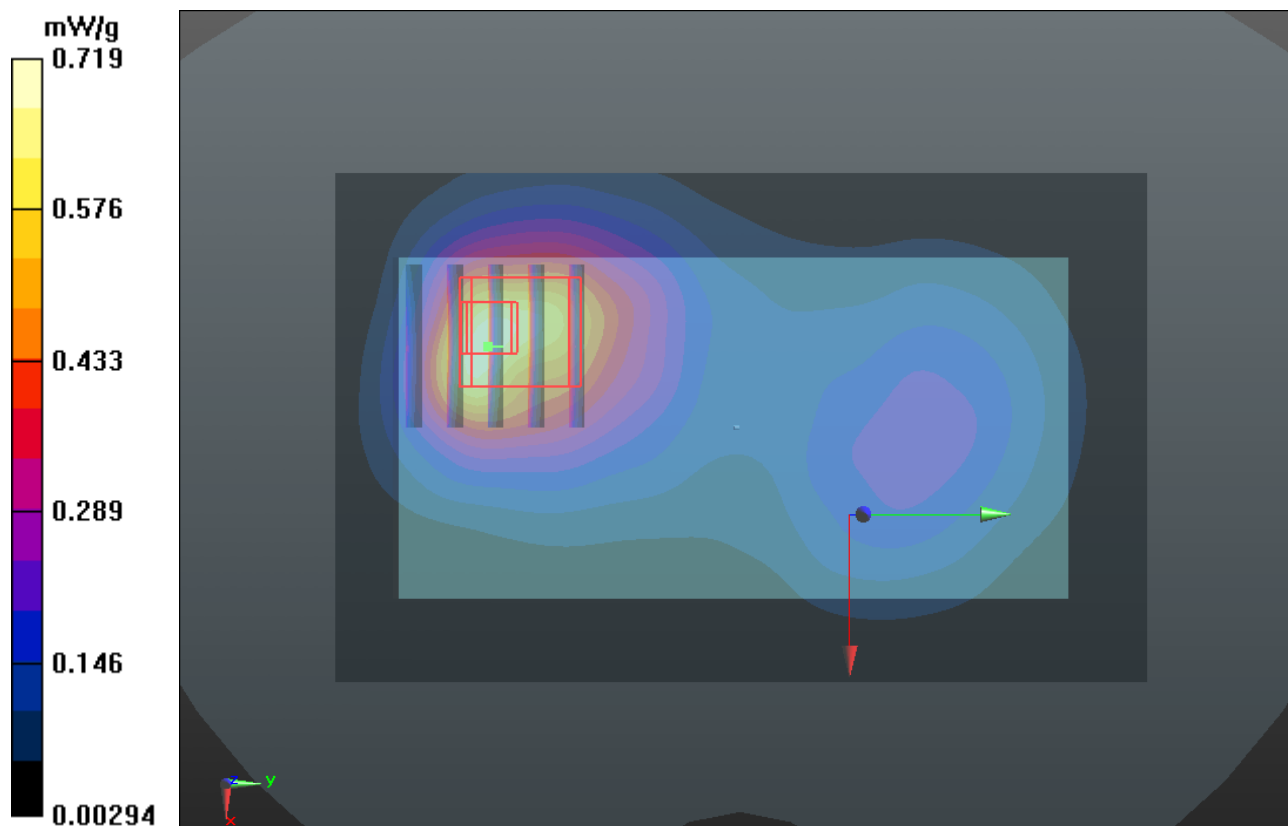
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

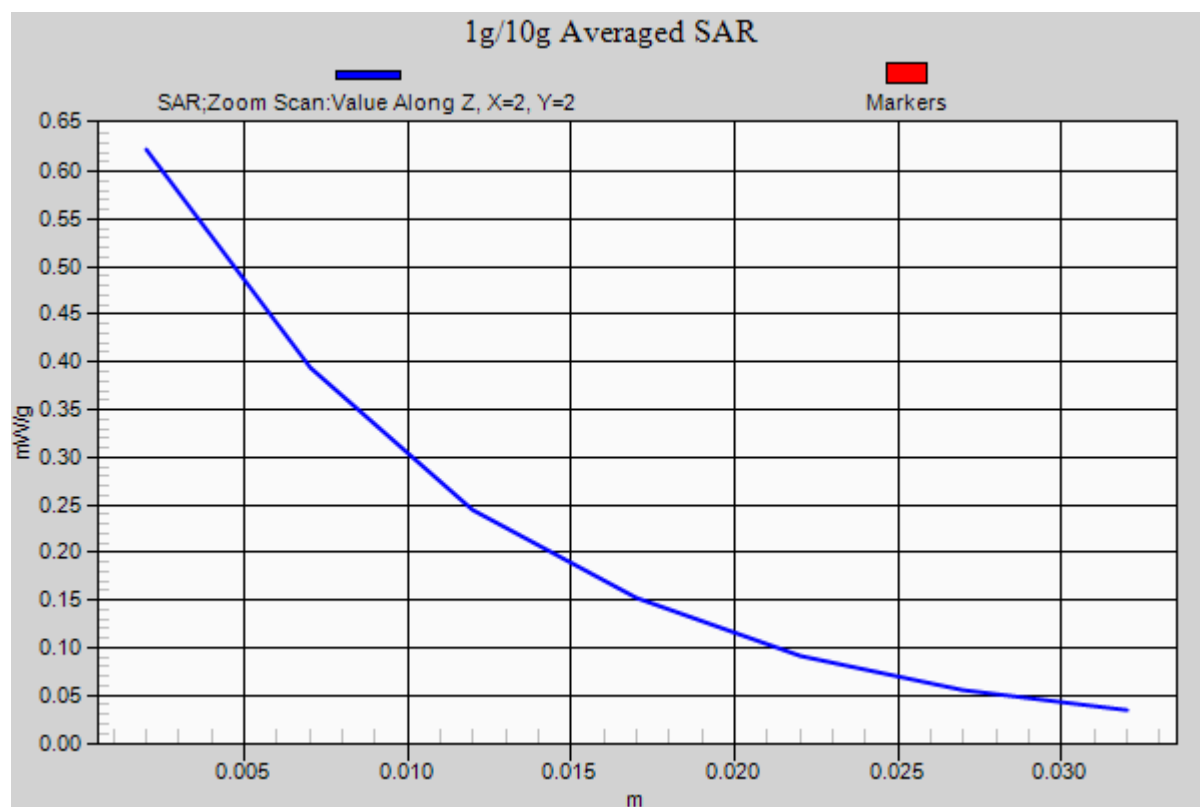
Reference Value = 8.592 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.813 mW/g

SAR(1 g) = 0.497 mW/g; SAR(10 g) = 0.294 mW/g

Maximum value of SAR (measured) = 0.623 mW/g





P26 GSM1900_GPRS12_Left Side_1cm_Ch512**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 53.068$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C ; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch512/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.0749 mW/g

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

Reference Value = 4.802 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.084 mW/g

SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.033 mW/g

Maximum value of SAR (measured) = 0.0702 mW/g

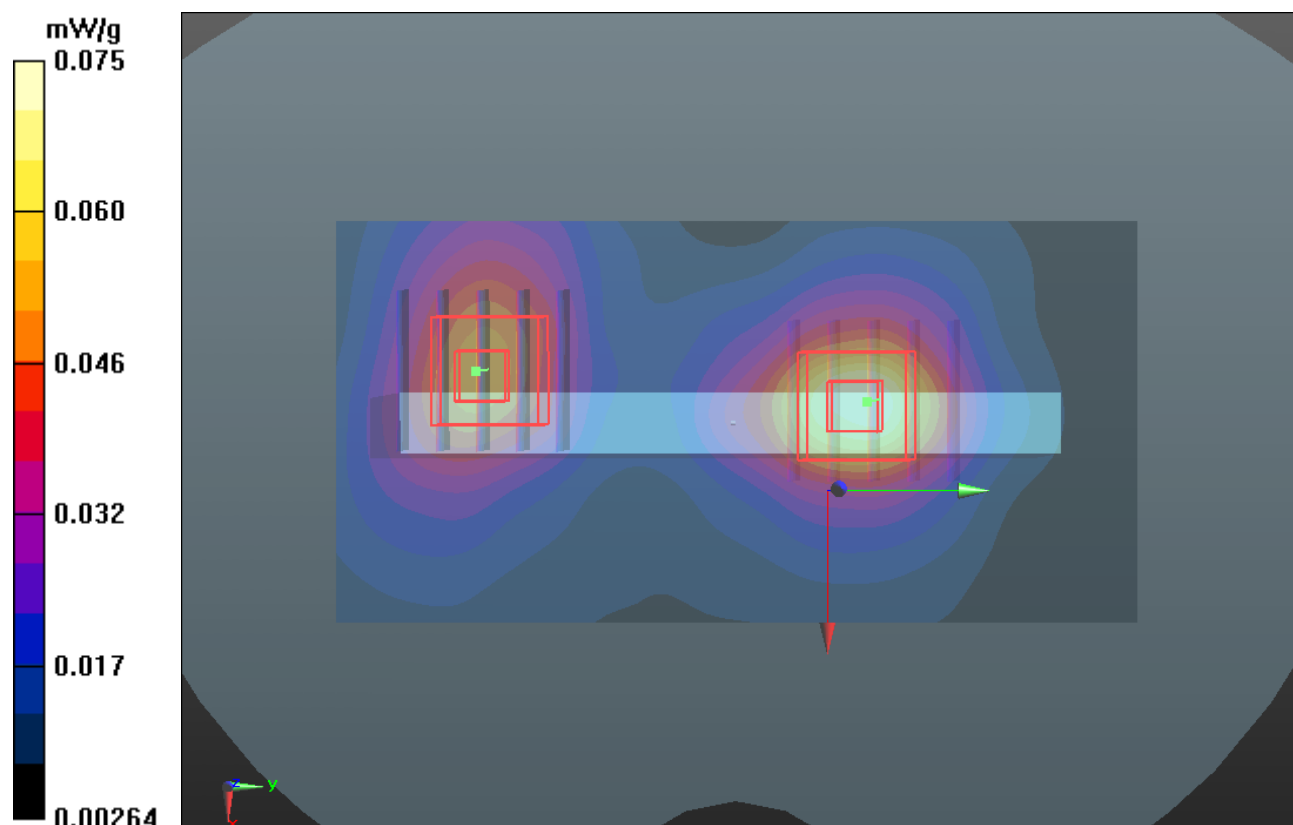
Ch512/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.802 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.070 mW/g

SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.027 mW/g

Maximum value of SAR (measured) = 0.0583 mW/g



P27 GSM1900_GPRS12_Right Side_1cm_Ch512**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 53.068$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch512/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.349 mW/g

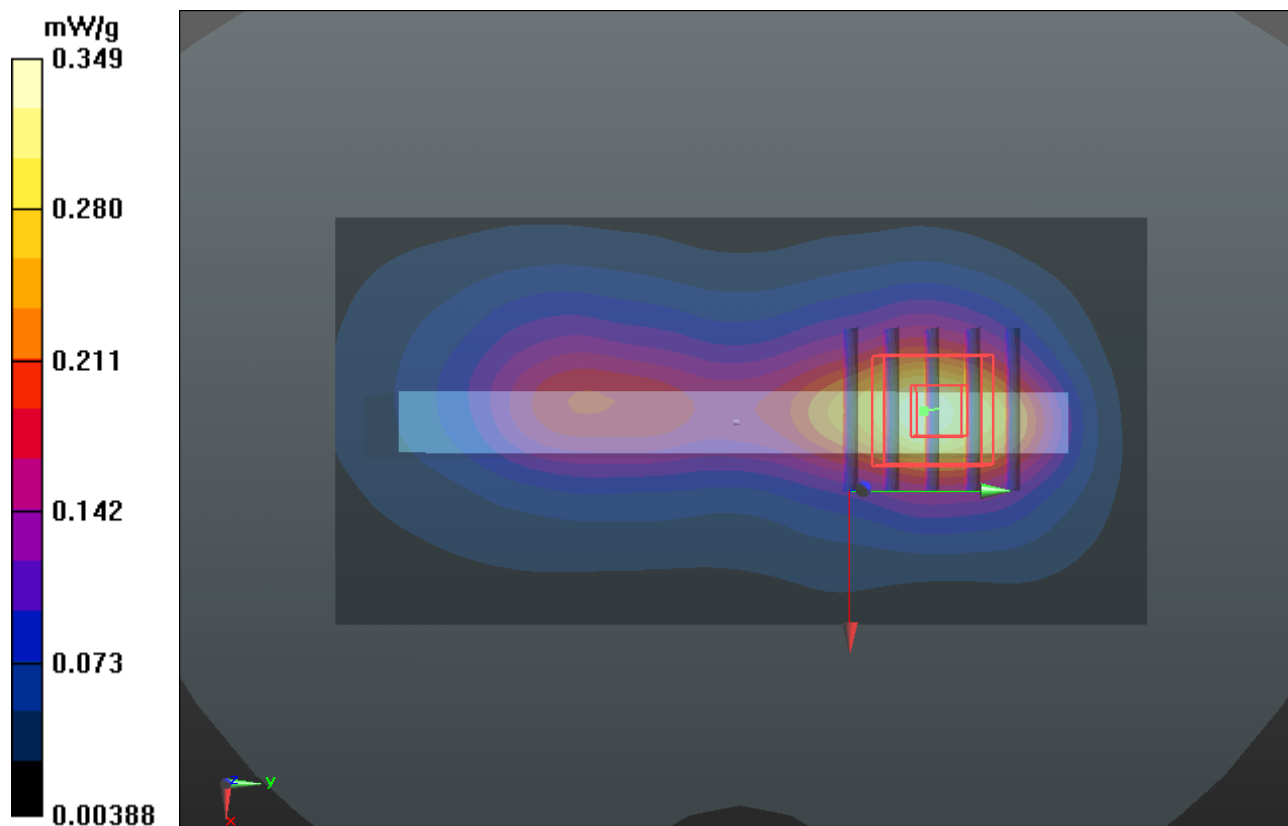
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.509 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.415 mW/g

SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.336 mW/g



P28 GSM1900_GPRS12_Bottom Side_1cm_Ch512**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 53.068$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch512/Area Scan (41x61x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.0825 mW/g

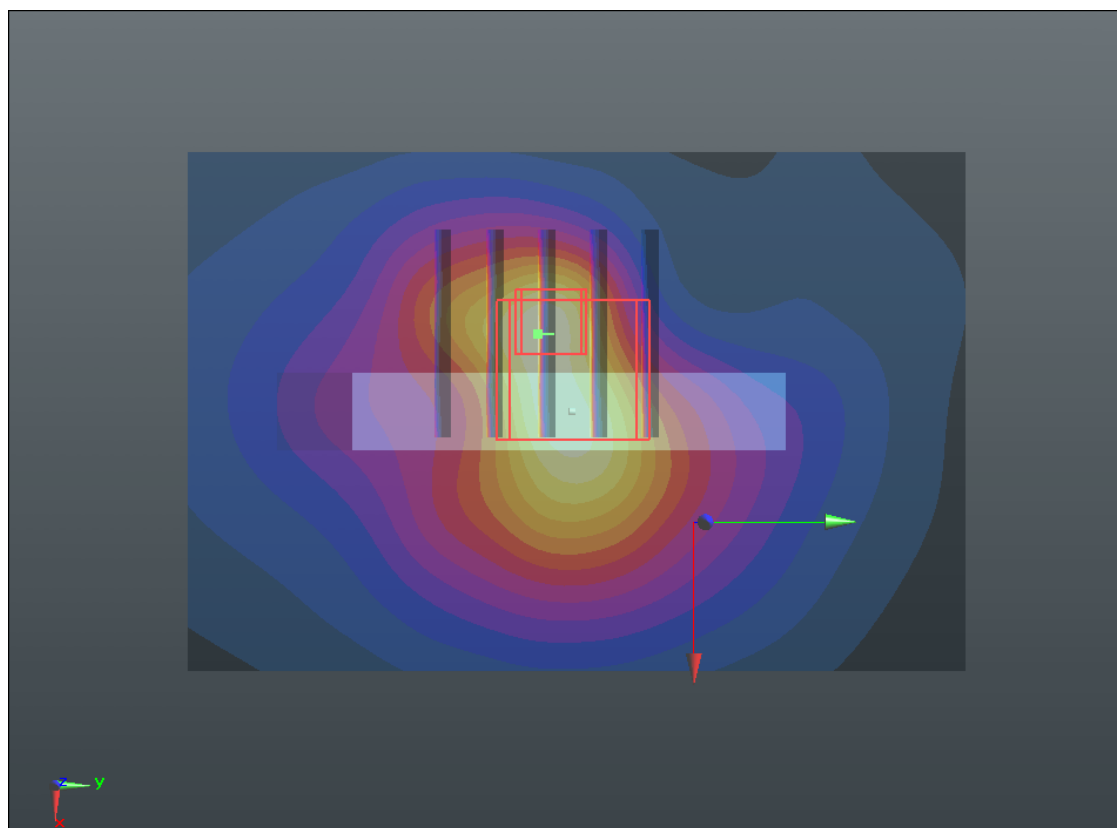
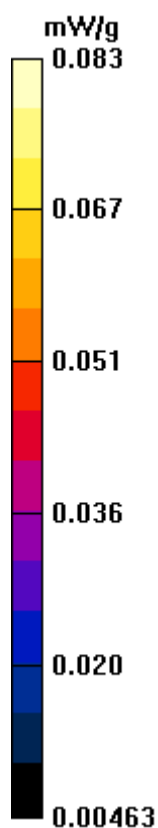
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.368 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.118 mW/g

SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.036 mW/g

Maximum value of SAR (measured) = 0.0923 mW/g



P29 GSM1900_GPRS12_Front Face_1cm_Ch512_Earphone**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 53.068$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch512/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.440 mW/g

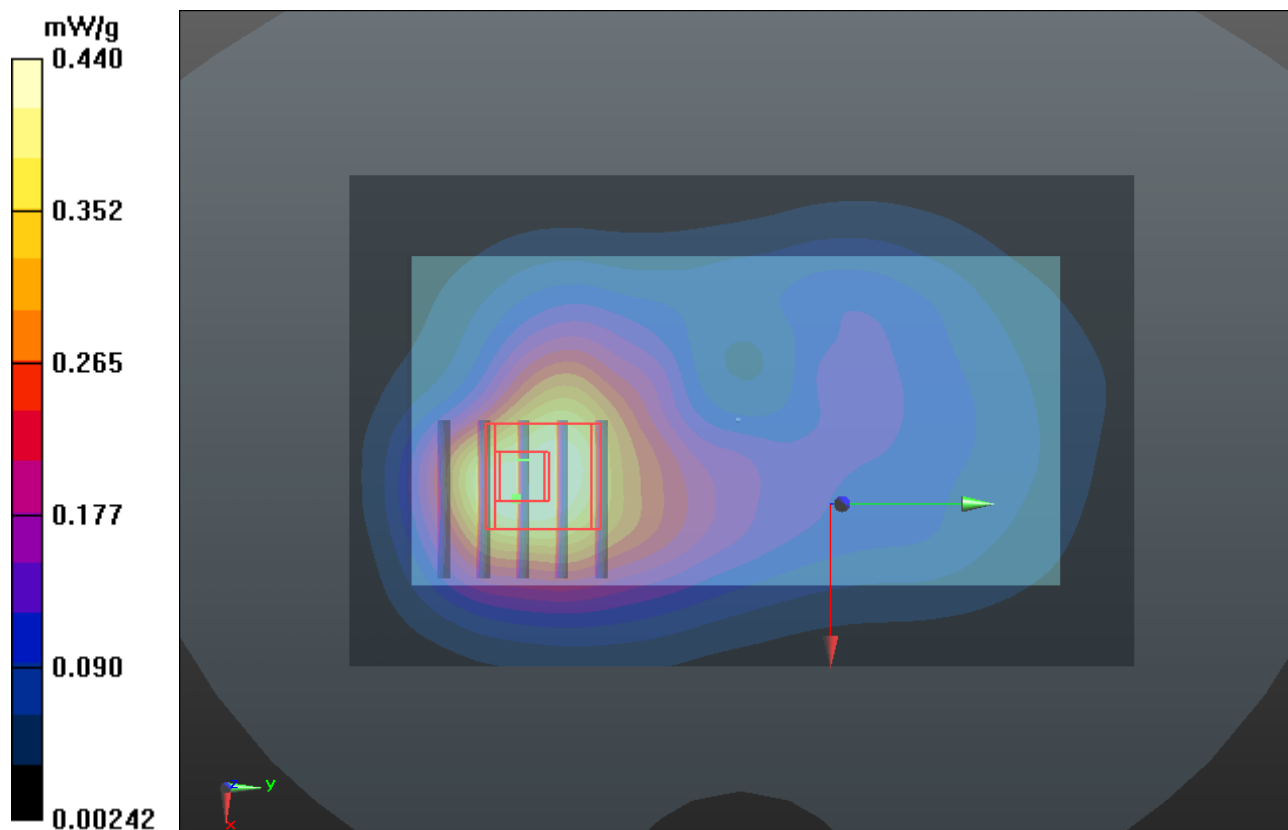
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.614 V/m; Power Drift = -0.133 dB

Peak SAR (extrapolated) = 0.537 mW/g

SAR(1 g) = 0.348 mW/g; SAR(10 g) = 0.216 mW/g

Maximum value of SAR (measured) = 0.441 mW/g



P30 GSM1900_GPRS12_Rear Face_1cm_Ch512_Earphone**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 53.068$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch512/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.773 mW/g

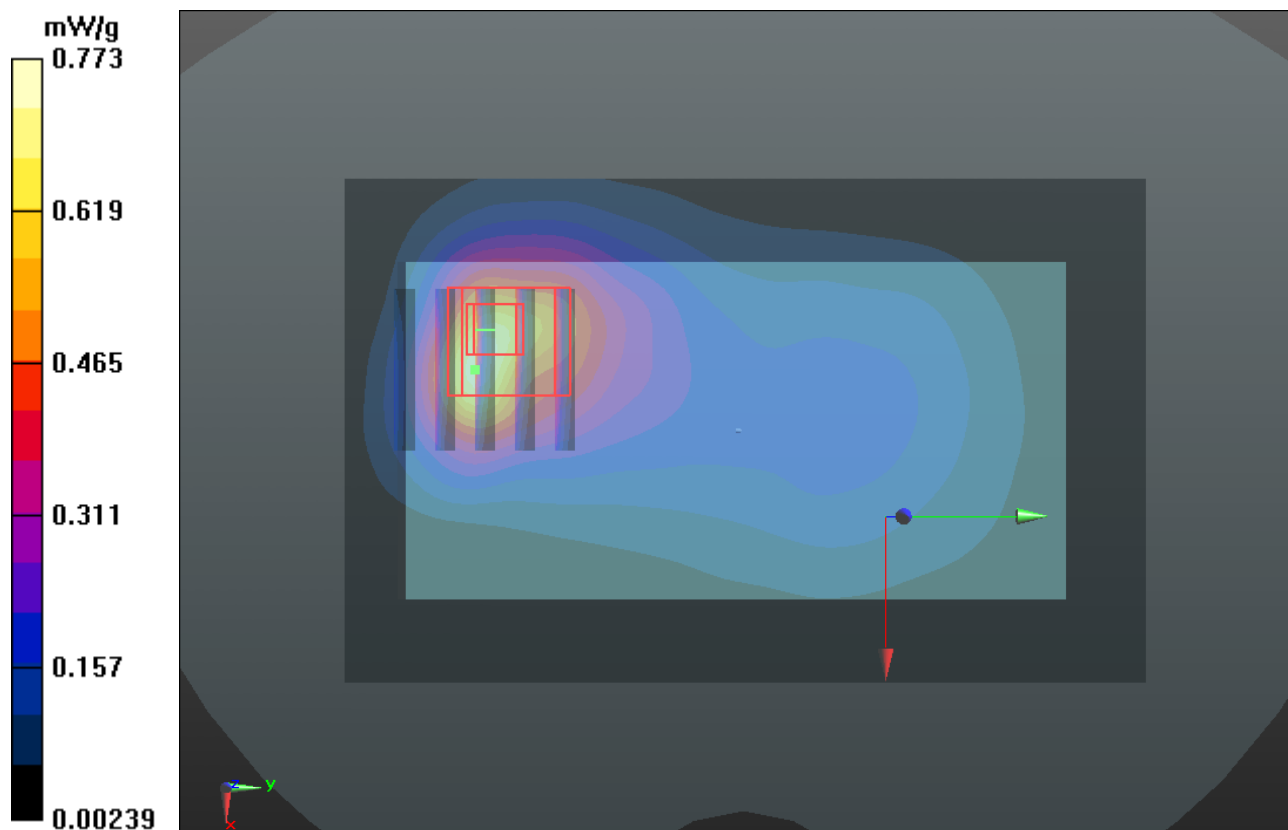
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.922 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.826 mW/g

SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.279 mW/g

Maximum value of SAR (measured) = 0.660 mW/g



P38 WCDMA V_RMC12.2k_Front Face_1cm_Ch4132**DUT: 120801C12**

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

Medium: B835_0814 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.971$ mho/m; $\epsilon_r = 55.928$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4132/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.294 mW/g

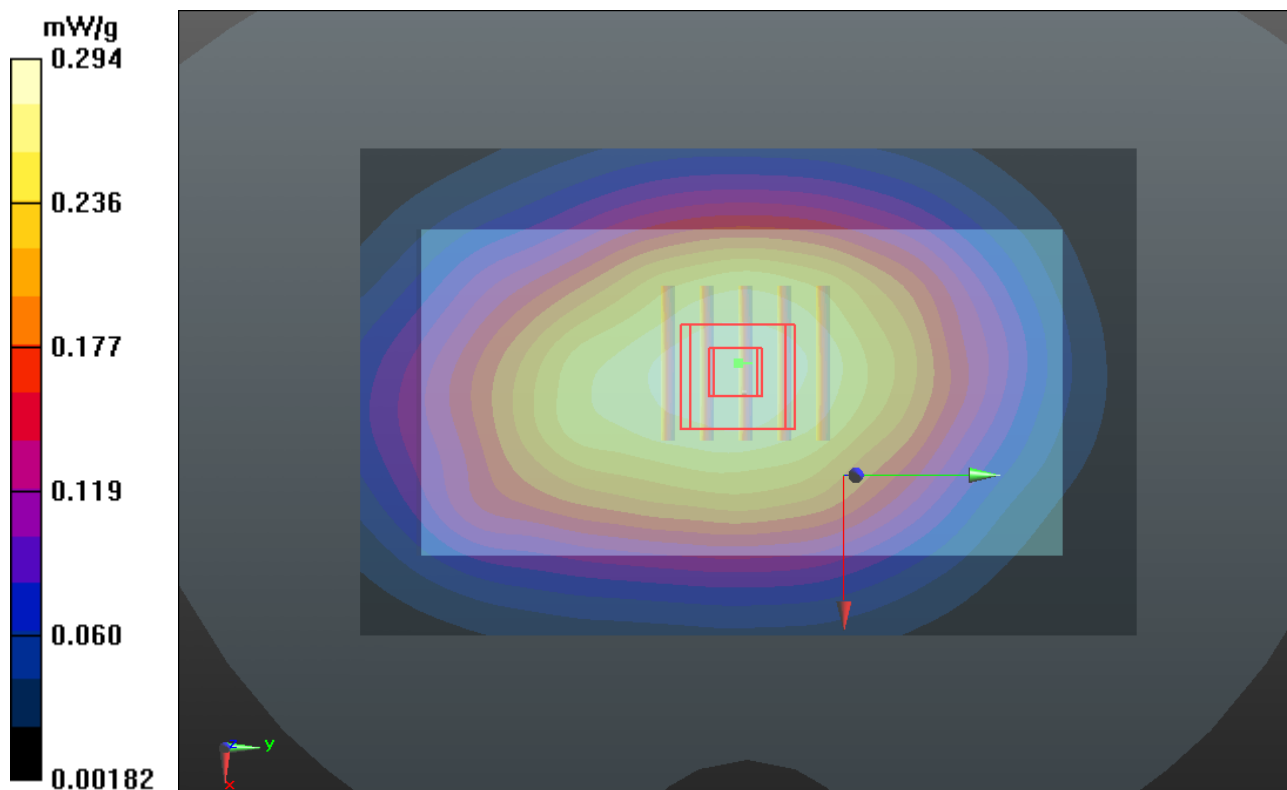
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.534 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.317 mW/g

SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.195 mW/g

Maximum value of SAR (measured) = 0.288 mW/g



P39 WCDMA V_RMC12.2k_Rear Face_1cm_Ch4132**DUT: 120801C12**

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

Medium: B835_0814 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.971$ mho/m; $\epsilon_r = 55.928$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4132/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.475 mW/g

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

Reference Value = 21.915 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.527 mW/g

SAR(1 g) = 0.416 mW/g; SAR(10 g) = 0.315 mW/g

Maximum value of SAR (measured) = 0.473 mW/g

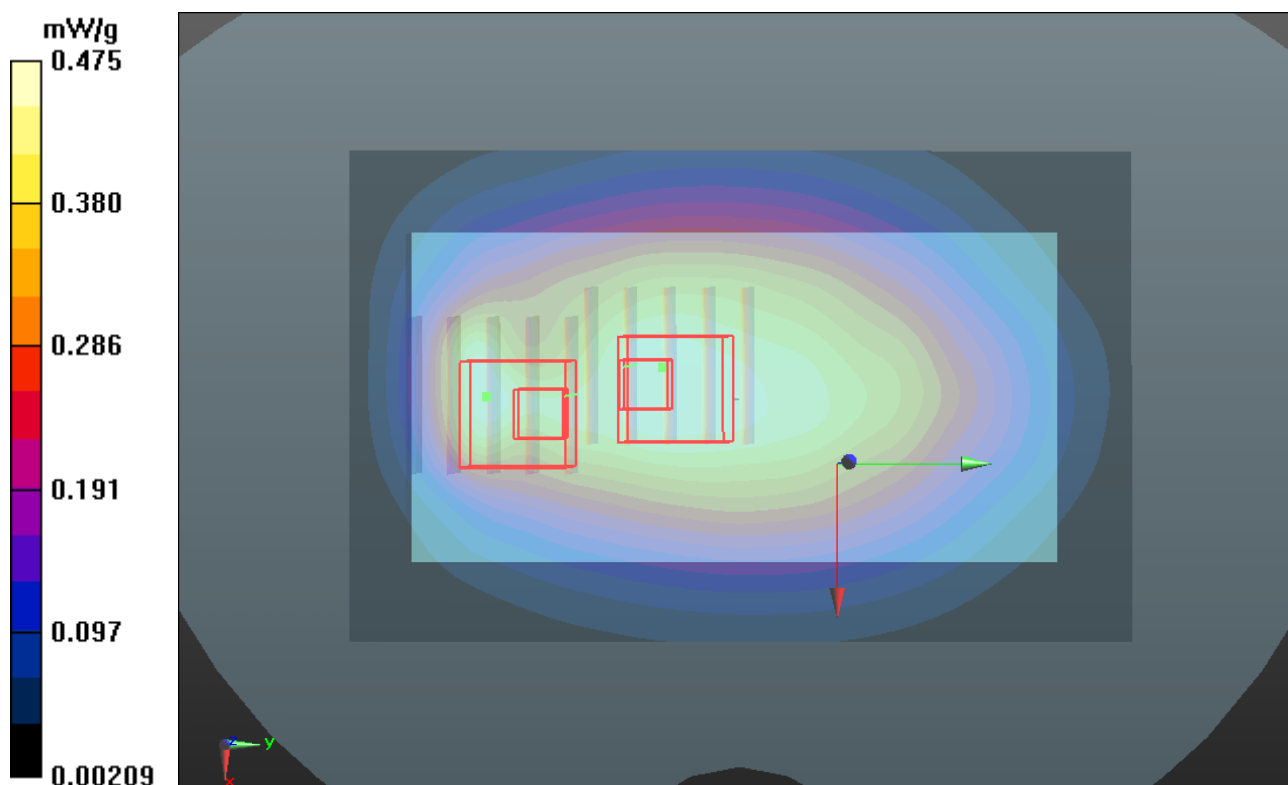
Ch4132/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

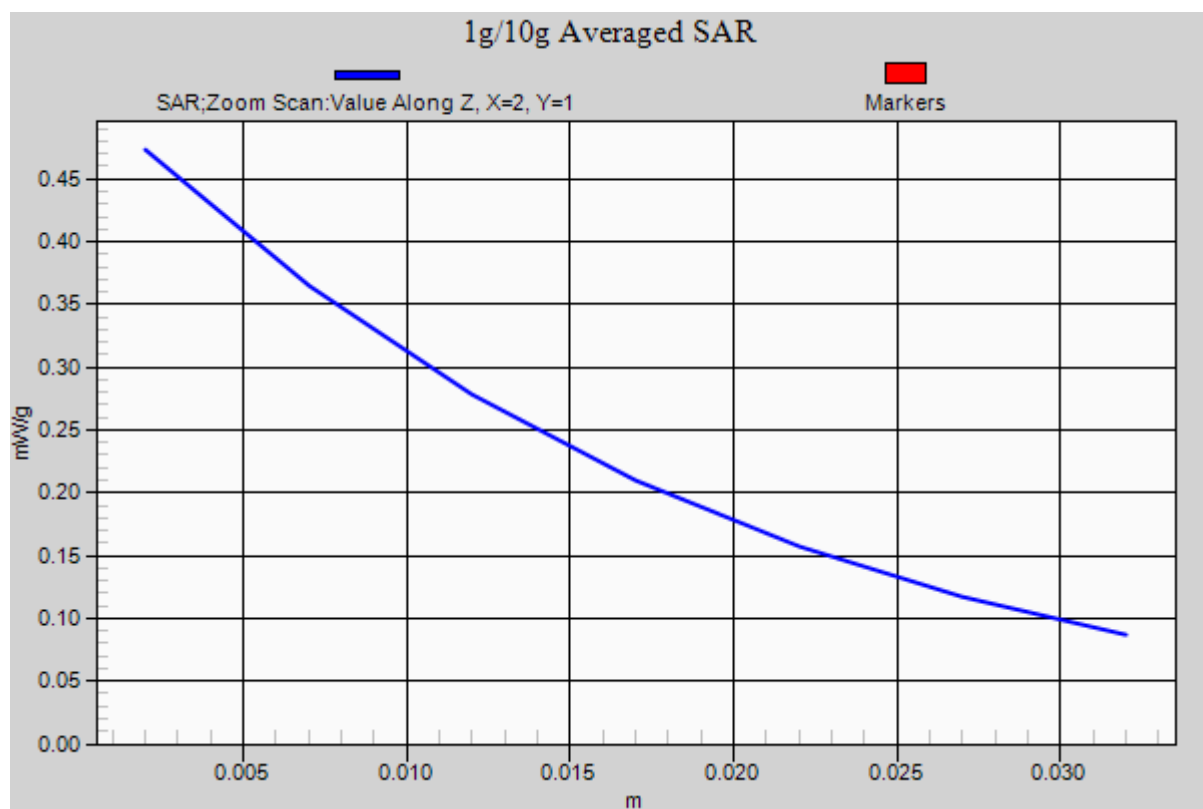
Reference Value = 21.915 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.469 mW/g

SAR(1 g) = 0.316 mW/g; SAR(10 g) = 0.207 mW/g

Maximum value of SAR (measured) = 0.422 mW/g





P40 WCDMA V_RMC12.2k_Left Side_1cm_Ch4132**DUT: 120801C12**

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

Medium: B835_0814 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.971$ mho/m; $\epsilon_r = 55.928$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Maximum value of SAR (interpolated) = 0.430 mW/g

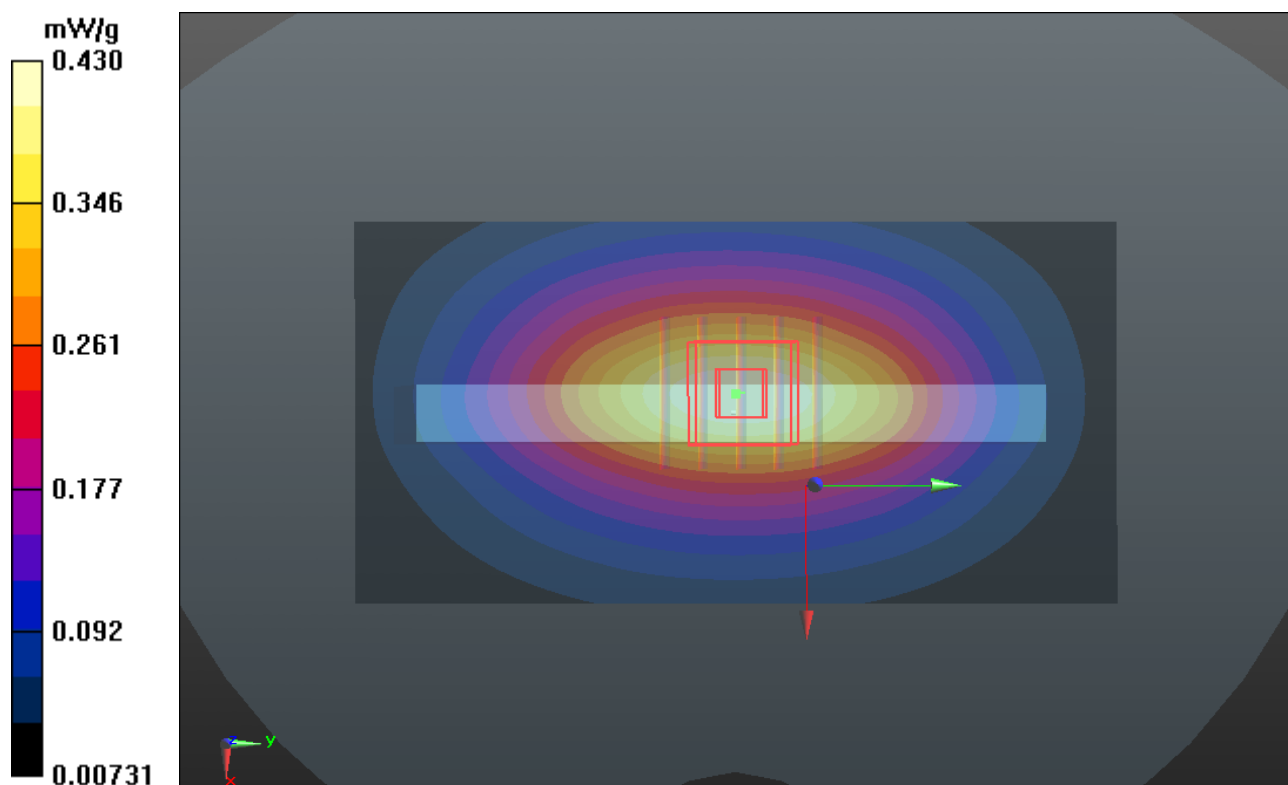
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.230 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.493 mW/g

SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.248 mW/g

Maximum value of SAR (measured) = 0.430 mW/g



P41 WCDMA V_RMC12.2k_Right Side_1cm_Ch4132**DUT: 120801C12**

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

Medium: B835_0814 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.971$ mho/m; $\epsilon_r = 55.928$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Maximum value of SAR (interpolated) = 0.289 mW/g

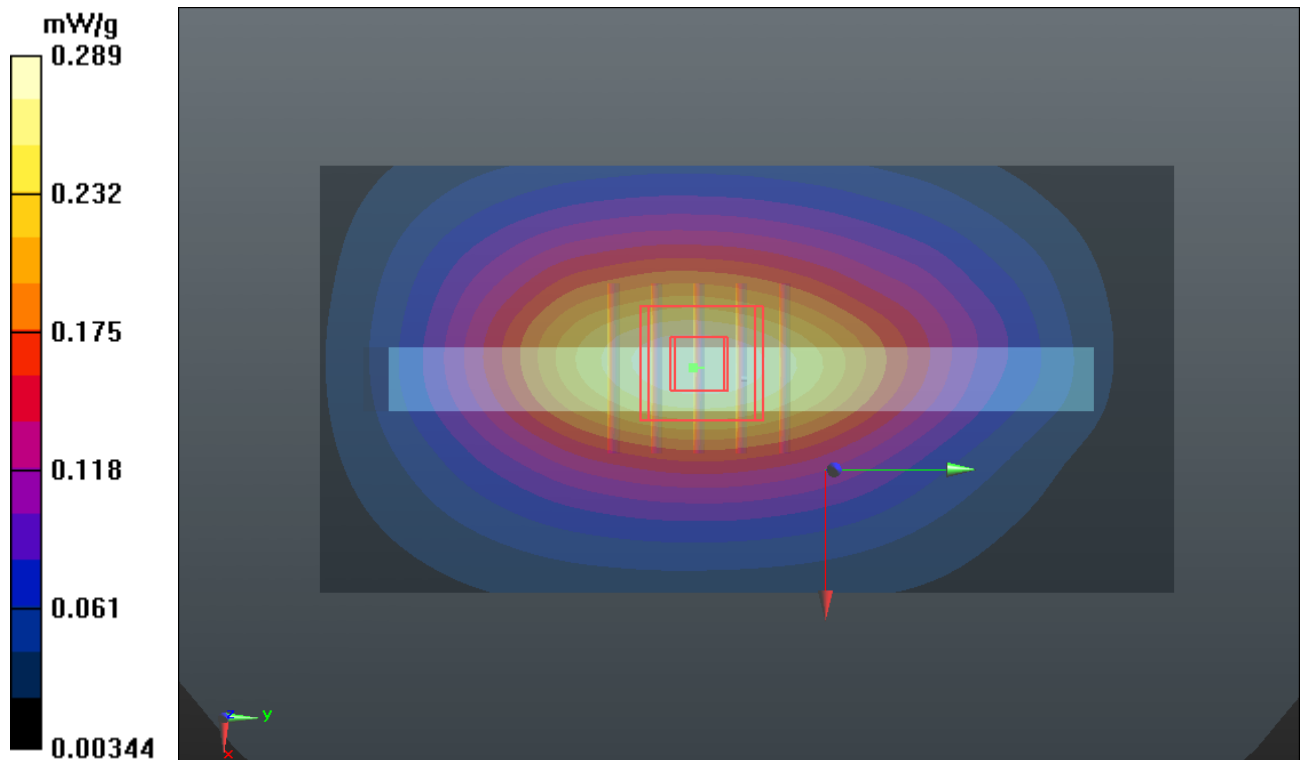
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.157 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.332 mW/g

SAR(1 g) = 0.235 mW/g; SAR(10 g) = 0.163 mW/g

Maximum value of SAR (measured) = 0.288 mW/g



P42 WCDMA V_RMC12.2k_Bottom Side_1cm_Ch4132**DUT: 120801C12**

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

Medium: B835_0814 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.971$ mho/m; $\epsilon_r = 55.928$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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

Maximum value of SAR (interpolated) = 0.0713 mW/g

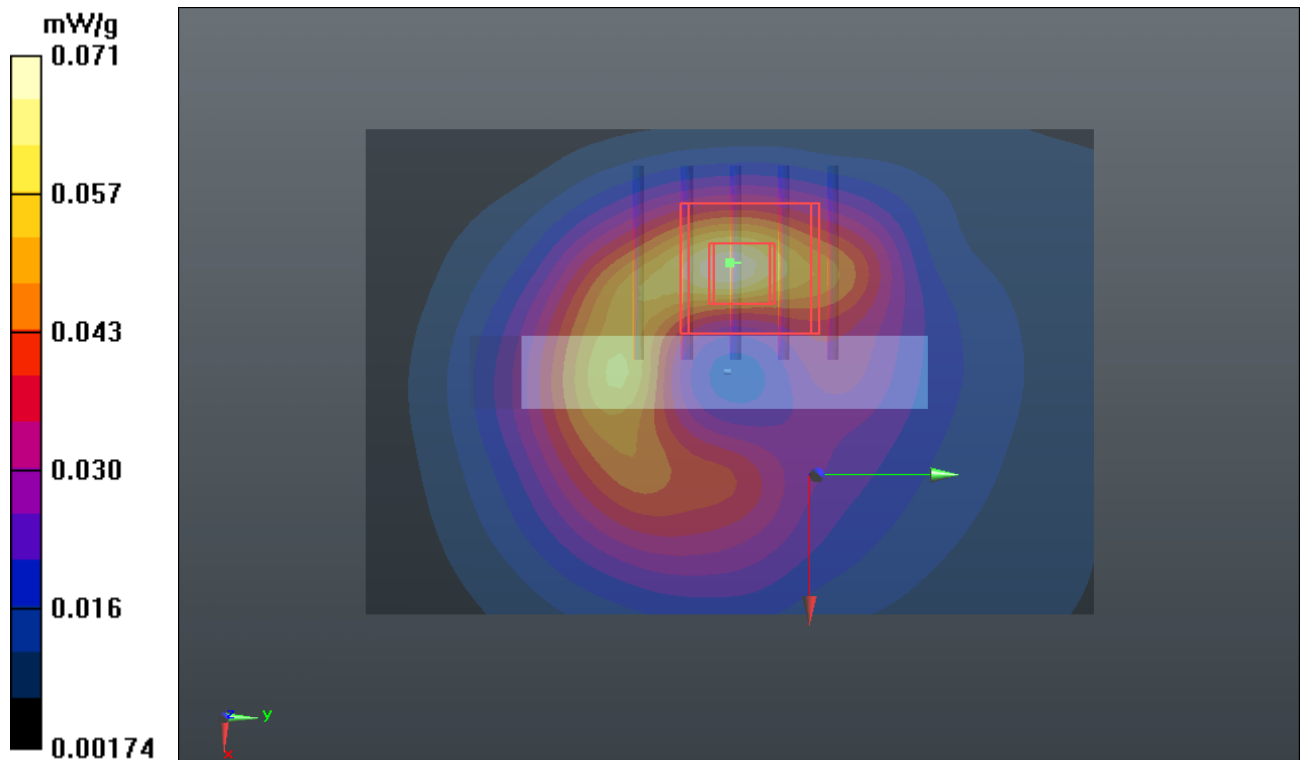
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.348 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.089 mW/g

SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.031 mW/g

Maximum value of SAR (measured) = 0.0710 mW/g



P43 WCDMA V_RMC12.2k_Front Face_1cm_Ch4132_Earphone**DUT: 120801C12**

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

Medium: B835_0814 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.971$ mho/m; $\epsilon_r = 55.928$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4132/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.237 mW/g

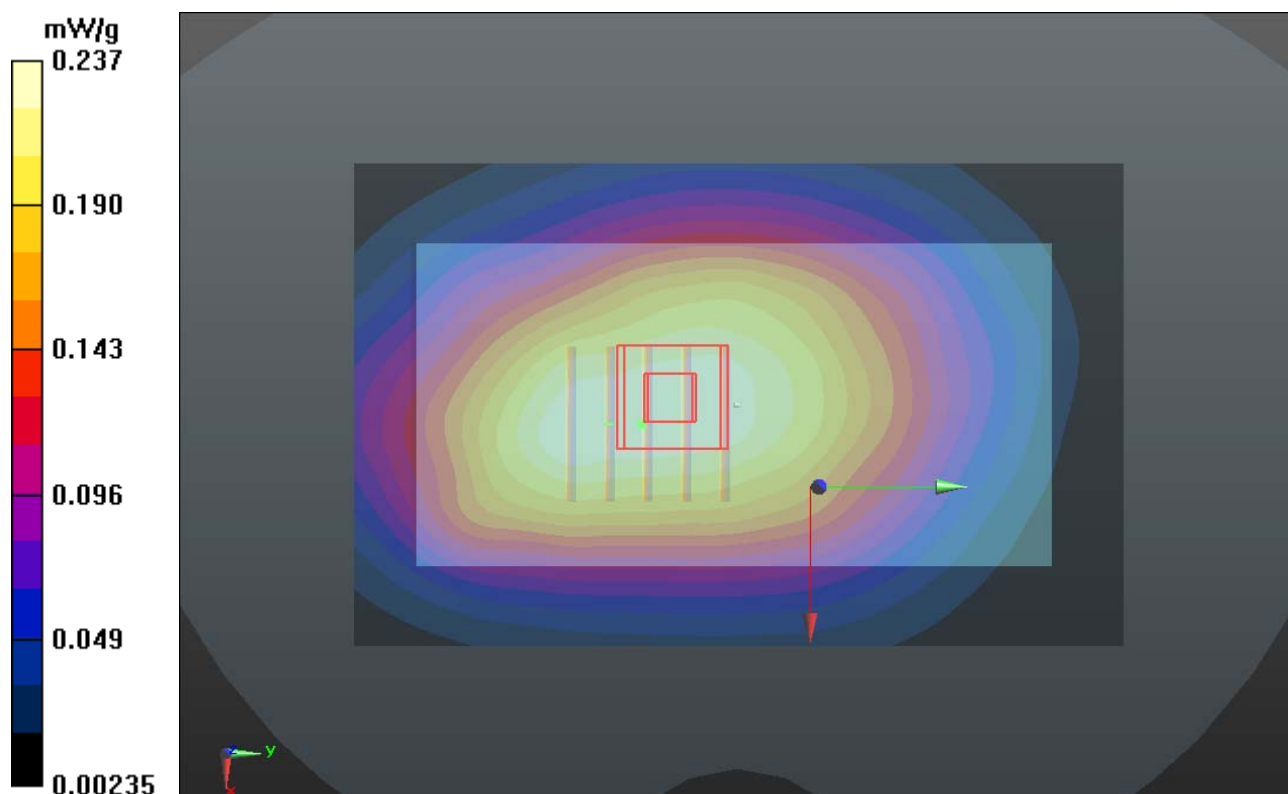
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.447 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.260 mW/g

SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.157 mW/g

Maximum value of SAR (measured) = 0.232 mW/g



P44 WCDMA V_RMC12.2k_Rear Face_1cm_Ch4132_Earphone**DUT: 120801C12**

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

Medium: B835_0814 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.971$ mho/m; $\epsilon_r = 55.928$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(9.94, 9.94, 9.94); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP 1654
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch4132/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.485 mW/g

Ch4132/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.672 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.487 mW/g

SAR(1 g) = 0.376 mW/g; SAR(10 g) = 0.279 mW/g

Maximum value of SAR (measured) = 0.431 mW/g

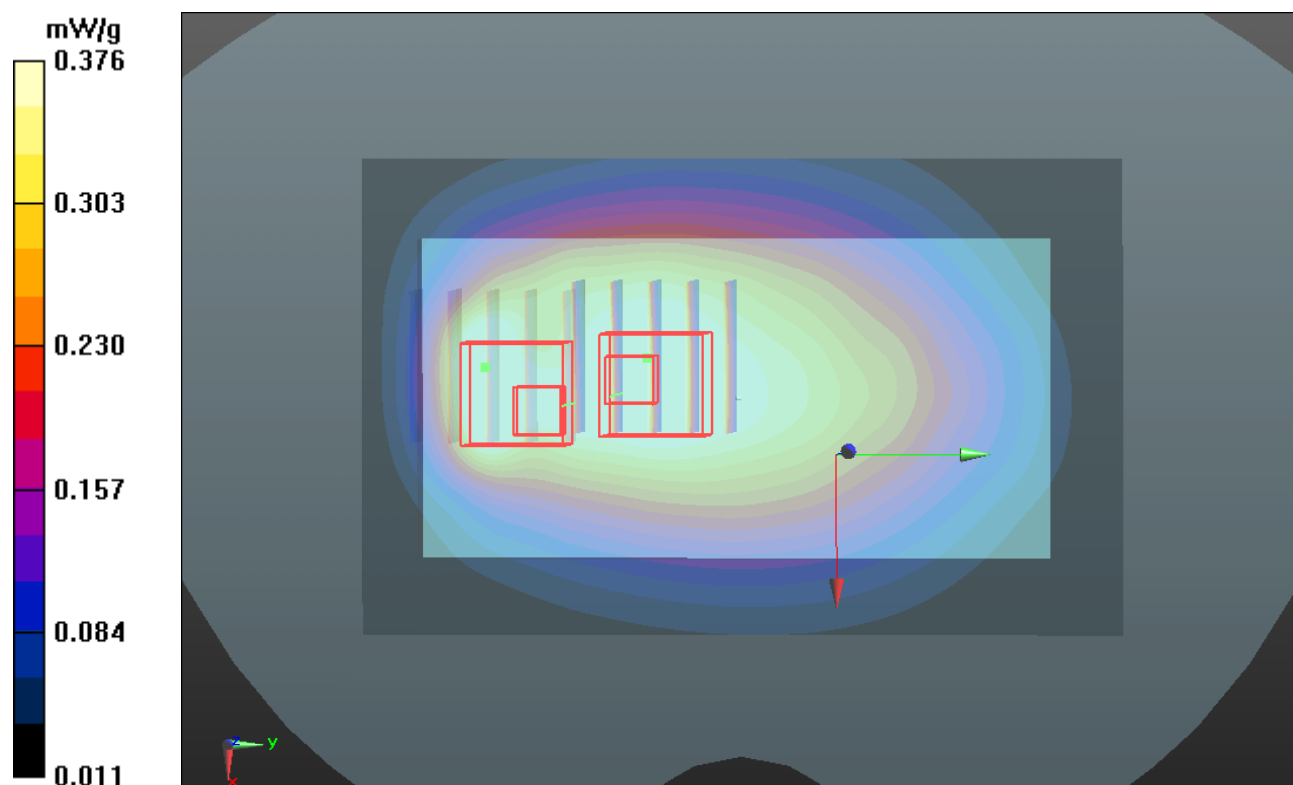
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.672 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.488 mW/g

SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.191 mW/g

Maximum value of SAR (measured) = 0.376 mW/g



P31 WCDMA II_RMC12.2k_Front Face_1cm_Ch9262**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 53.058$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9262/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

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

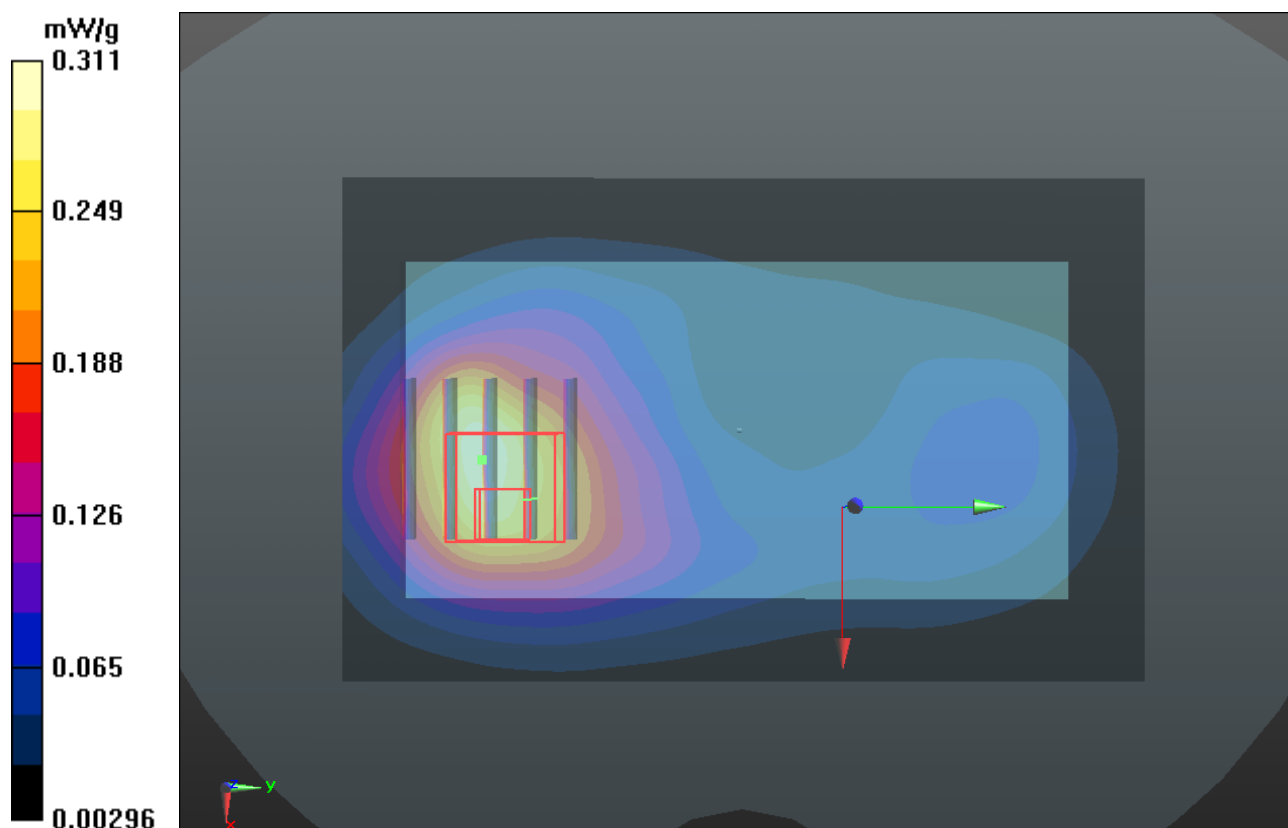
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.996 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.378 mW/g

SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.125 mW/g

Maximum value of SAR (measured) = 0.294 mW/g



P32 WCDMA II_RMC12.2k_Rear Face_1cm_Ch9262**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 53.058$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9262/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.378 mW/g

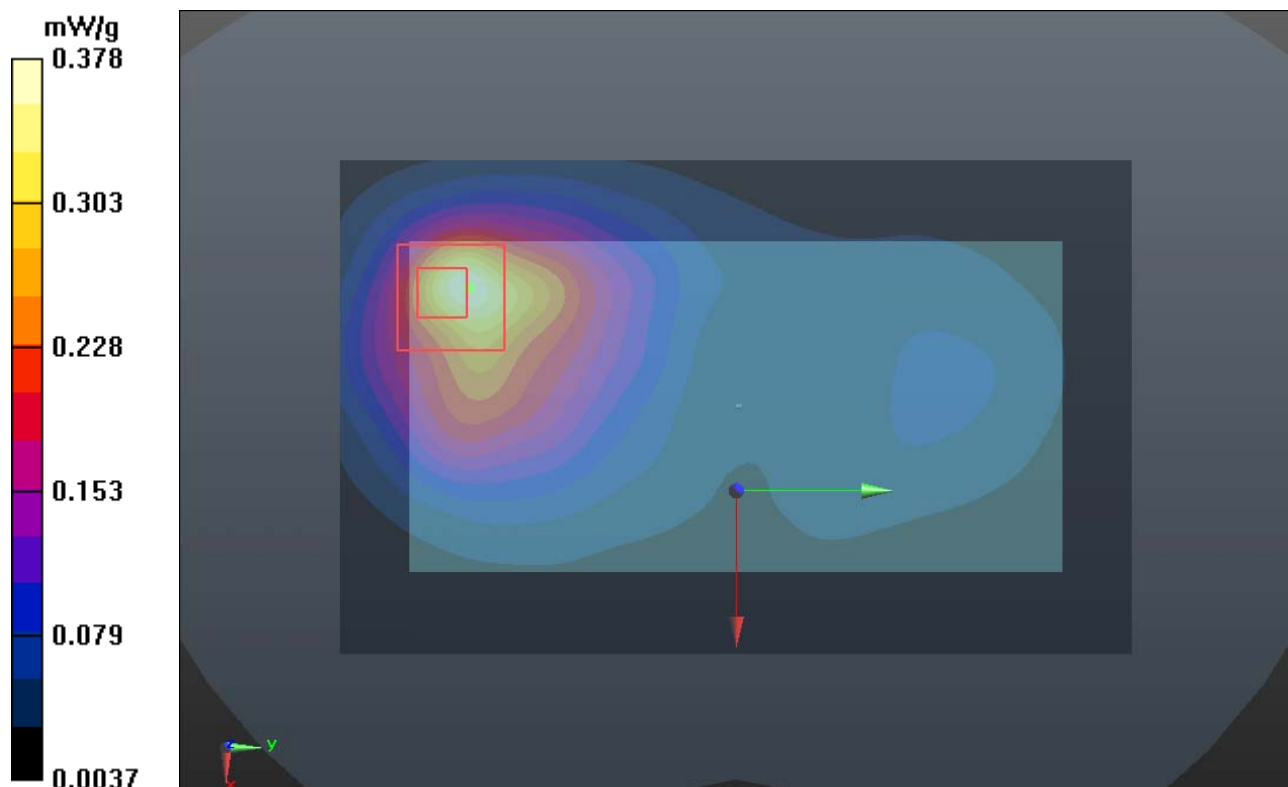
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.989 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.436 mW/g

SAR(1 g) = 0.253 mW/g; SAR(10 g) = 0.143 mW/g

Maximum value of SAR (measured) = 0.339 mW/g



P33 WCDMA II_RMC12.2k_Left Side_1cm_Ch9262**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 53.058$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9262/Area Scan (51x101x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.0200 W/kg

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

Reference Value = 3.147 V/m; Power Drift = 0.063 dB

Peak SAR (extrapolated) = 0.023 mW/g

SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.00882 mW/g

Maximum value of SAR (measured) = 0.0194 W/kg

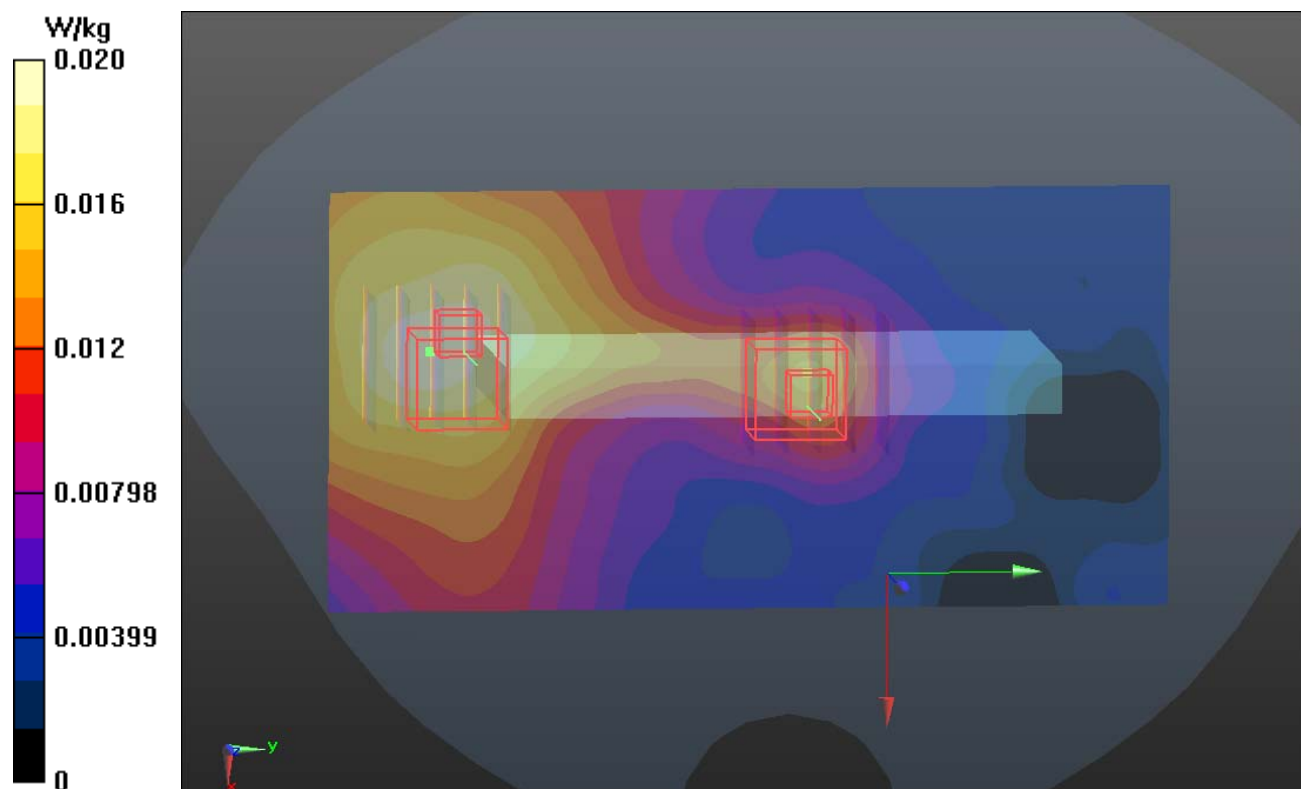
Ch9262/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.147 V/m; Power Drift = 0.063 dB

Peak SAR (extrapolated) = 0.019 mW/g

SAR(1 g) = 0.012 mW/g; SAR(10 g) = 0.00656 mW/g

Maximum value of SAR (measured) = 0.0160 W/kg



P34 WCDMA II_RMC12.2k_Right Side_1cm_Ch9262**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 53.058$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9262/Area Scan (51x101x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.108 W/kg

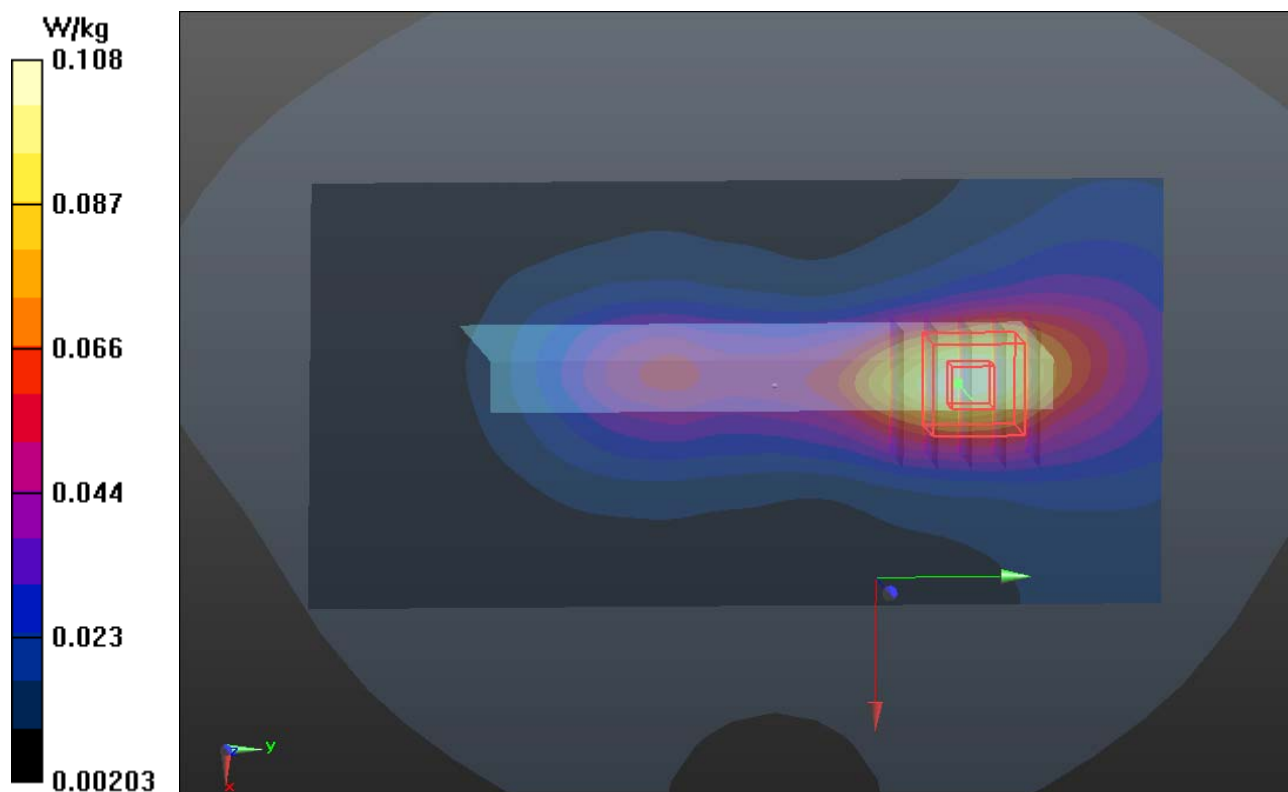
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.716 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.134 mW/g

SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.049 mW/g

Maximum value of SAR (measured) = 0.109 W/kg



P35 WCDMA II_RMC12.2k_Bottom Side_1cm_Ch9262**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 53.058$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9262/Area Scan (51x71x1): Interpolated grid: dx=2.000 mm, dy=2.000 mm

Maximum value of SAR (interpolated) = 0.384 W/kg

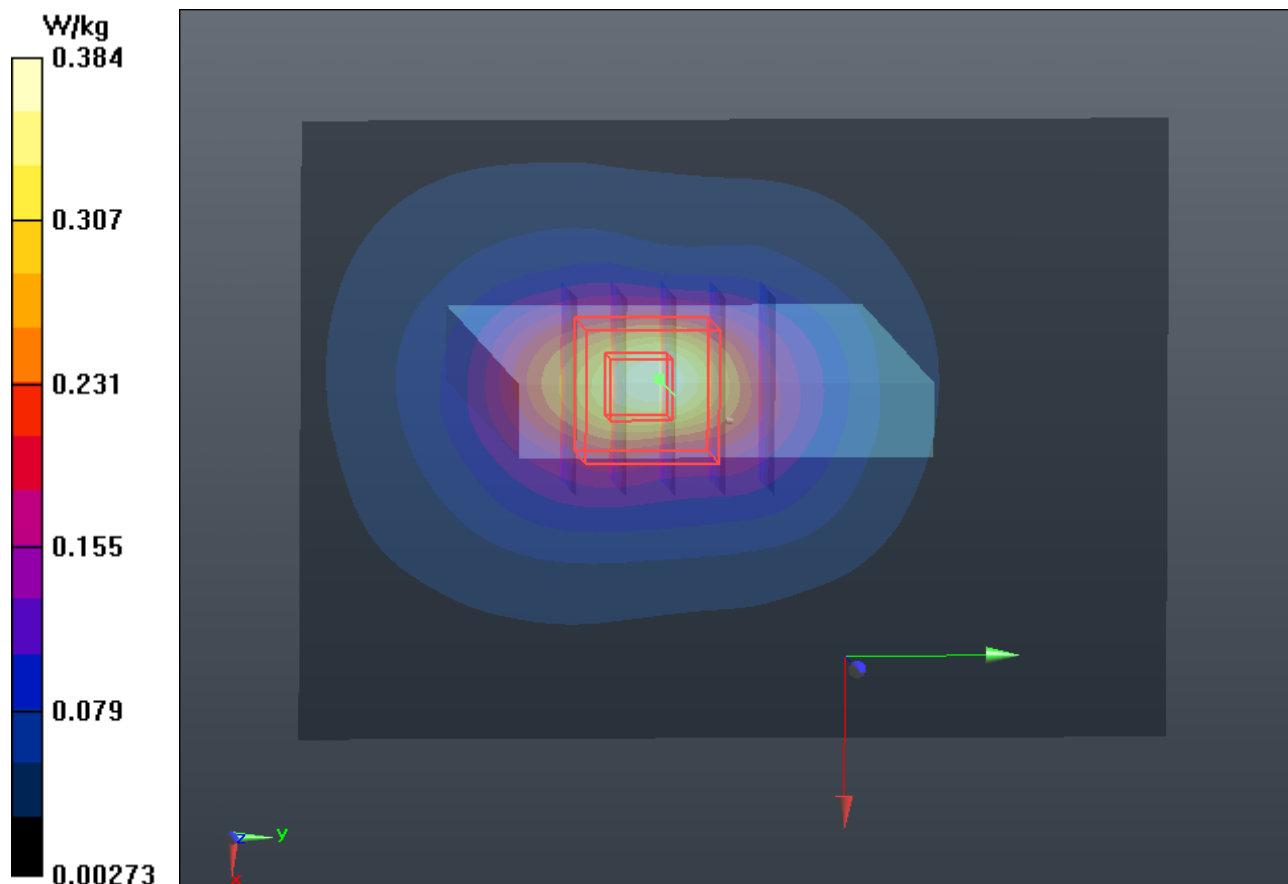
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.820 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 0.511 mW/g

SAR(1 g) = 0.304 mW/g; SAR(10 g) = 0.163 mW/g

Maximum value of SAR (measured) = 0.410 W/kg



P36 WCDMA II_RMC12.2k_Front Face_1cm_Ch9262_Earphone**DUT: 120801C12**

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

Medium: B1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 53.058$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch9262/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.308 mW/g

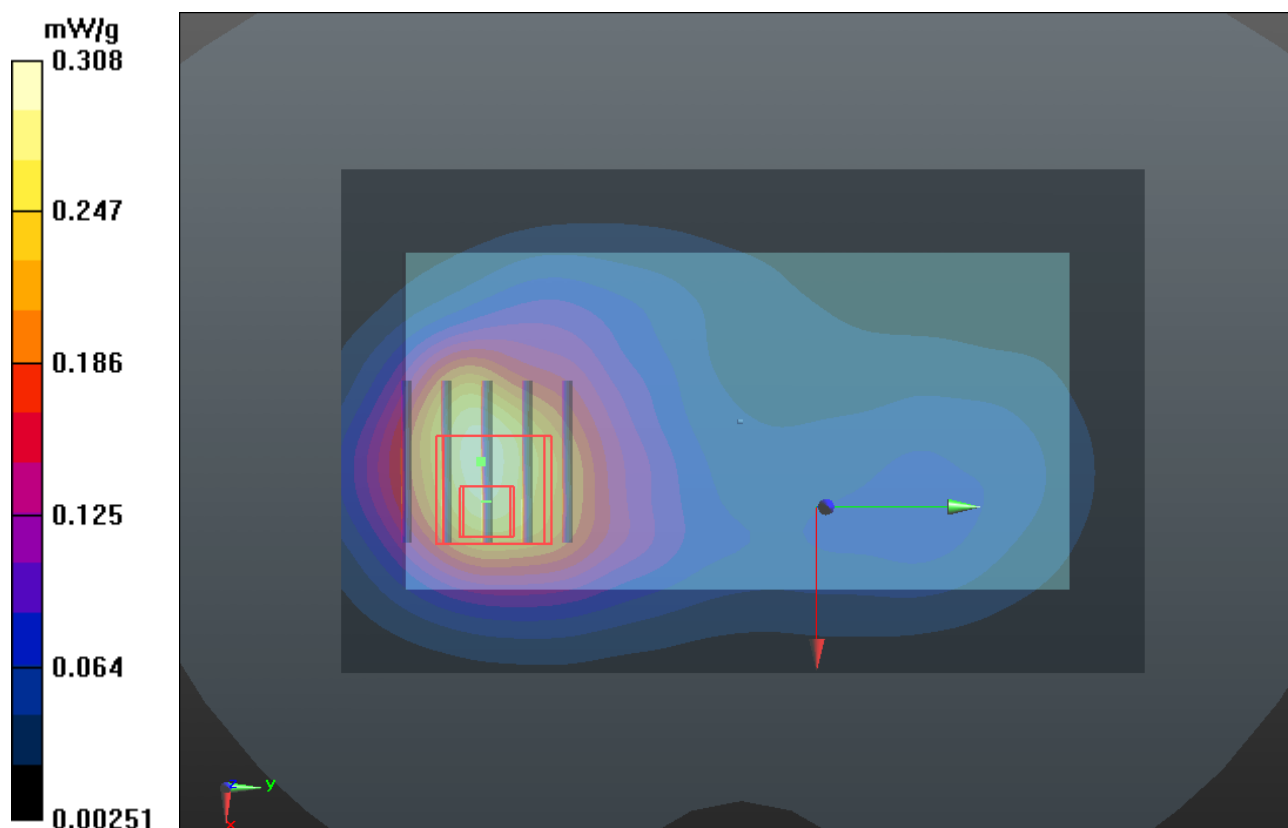
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.693 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.394 mW/g

SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.132 mW/g

Maximum value of SAR (measured) = 0.323 mW/g



P37 WCDMA II_RMC12.2k_Rear Face_1cm_Ch9262_Earphone**DUT: 120801C12**

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium: B1900_0813 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 53.058$; $\rho = 1000$ kg/m³
Ambient Temperature : 21.8 °C; Liquid Temperature : 20.9 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3864; ConvF(7.88, 7.88, 7.88); Calibrated: 2012/07/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9262/Area Scan (51x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.604 W/kg

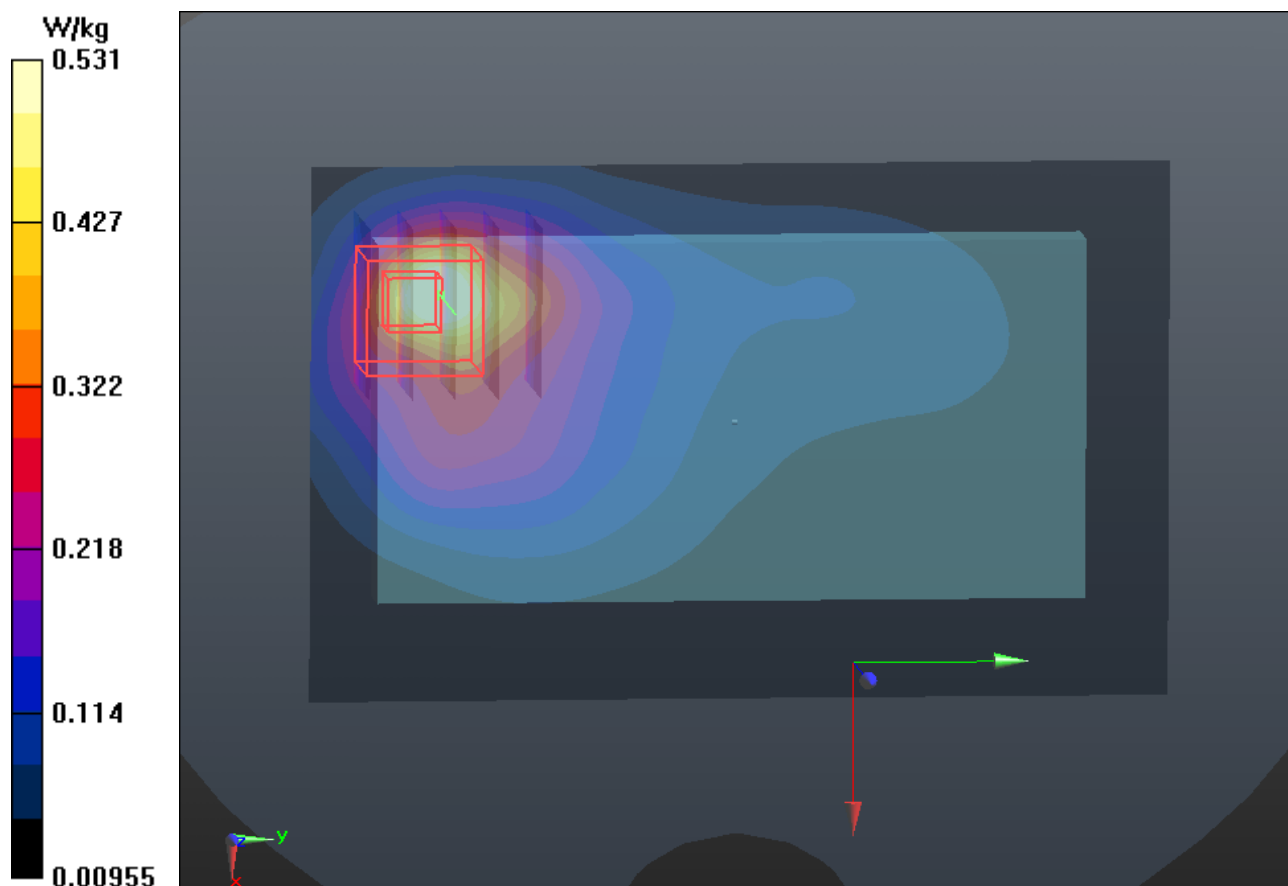
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.536 V/m; Power Drift = 0.032 dB

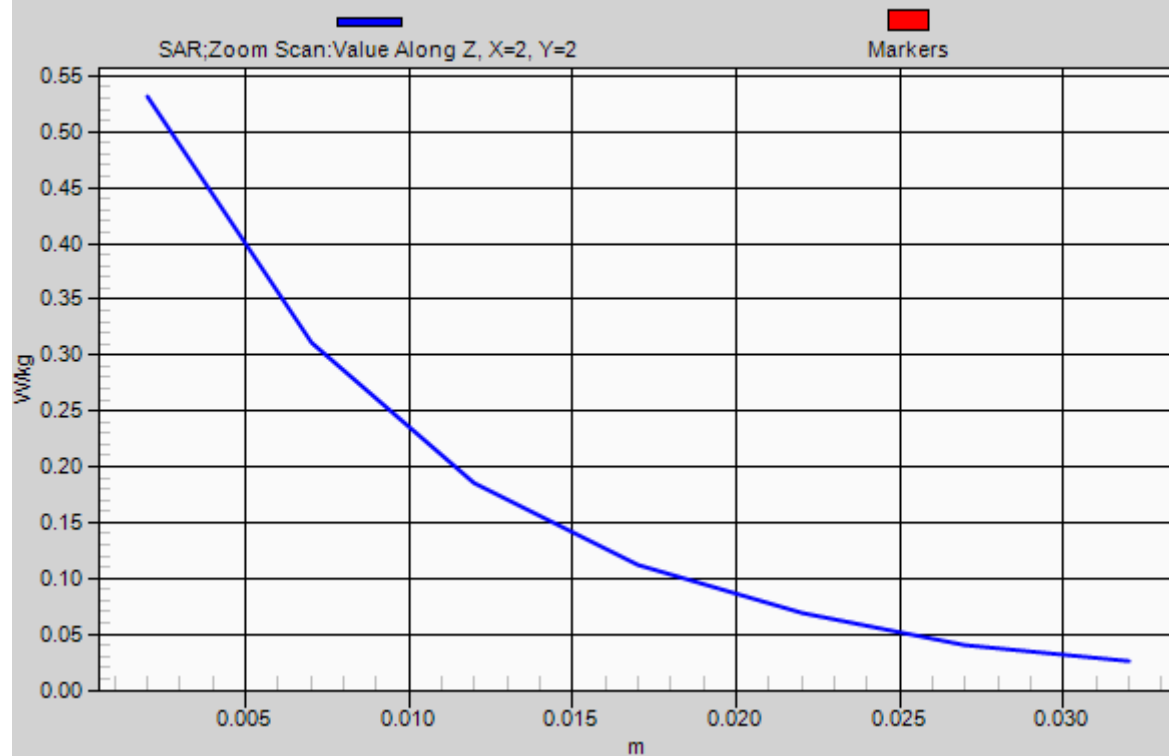
Peak SAR (extrapolated) = 0.694 mW/g

SAR(1 g) = 0.394 mW/g; SAR(10 g) = 0.212 mW/g

Maximum value of SAR (measured) = 0.531 W/kg



1g/10g Averaged SAR



P117 802.11b_Front Face_1cm_Ch11**DUT: 120801C12**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_0820 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.8, 7.8, 7.8); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch11/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.146 mW/g

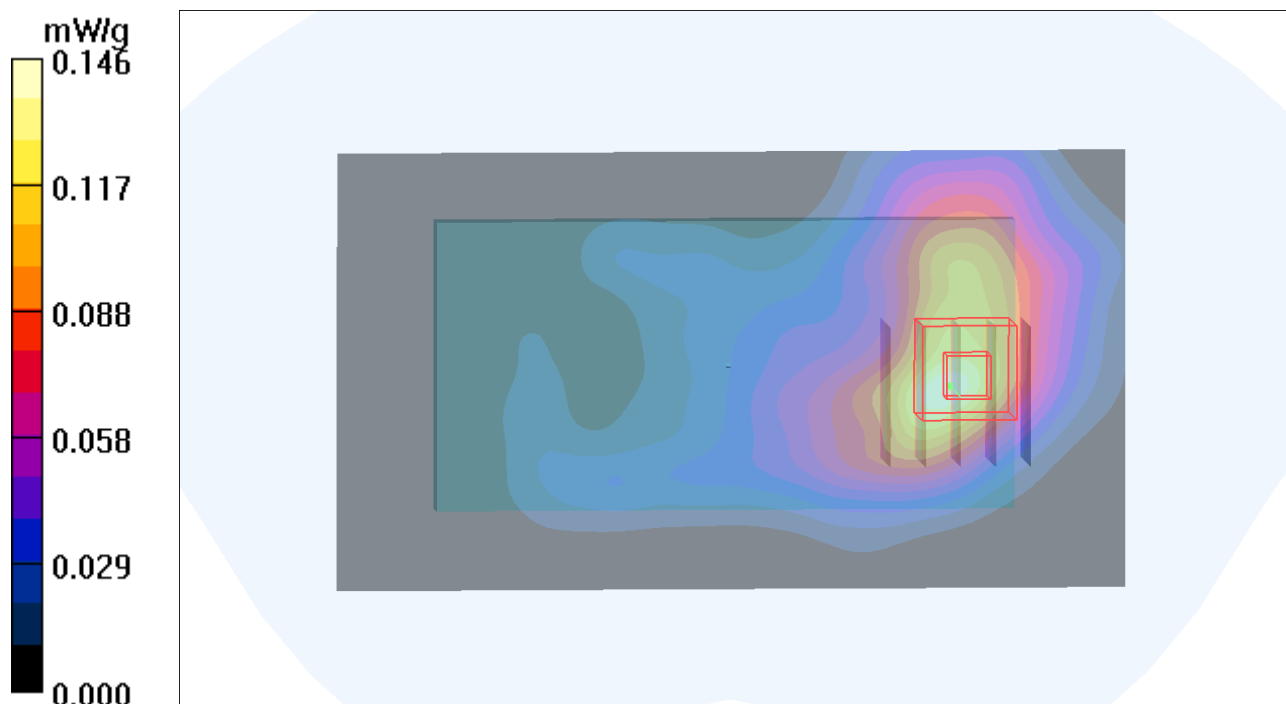
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.08 V/m; Power Drift = 0.071 dB

Peak SAR (extrapolated) = 0.185 W/kg

SAR(1 g) = 0.100 mW/g; SAR(10 g) = 0.056 mW/g

Maximum value of SAR (measured) = 0.135 mW/g



P118 802.11b_Rear Face_1cm_Ch11**DUT: 120801C12**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_0820 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C ; Liquid Temperature : 20.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.8, 7.8, 7.8); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch11/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.175 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.95 V/m; Power Drift = 0.171 dB

Peak SAR (extrapolated) = 0.242 W/kg

SAR(1 g) = 0.132 mW/g; SAR(10 g) = 0.073 mW/g

Maximum value of SAR (measured) = 0.185 mW/g

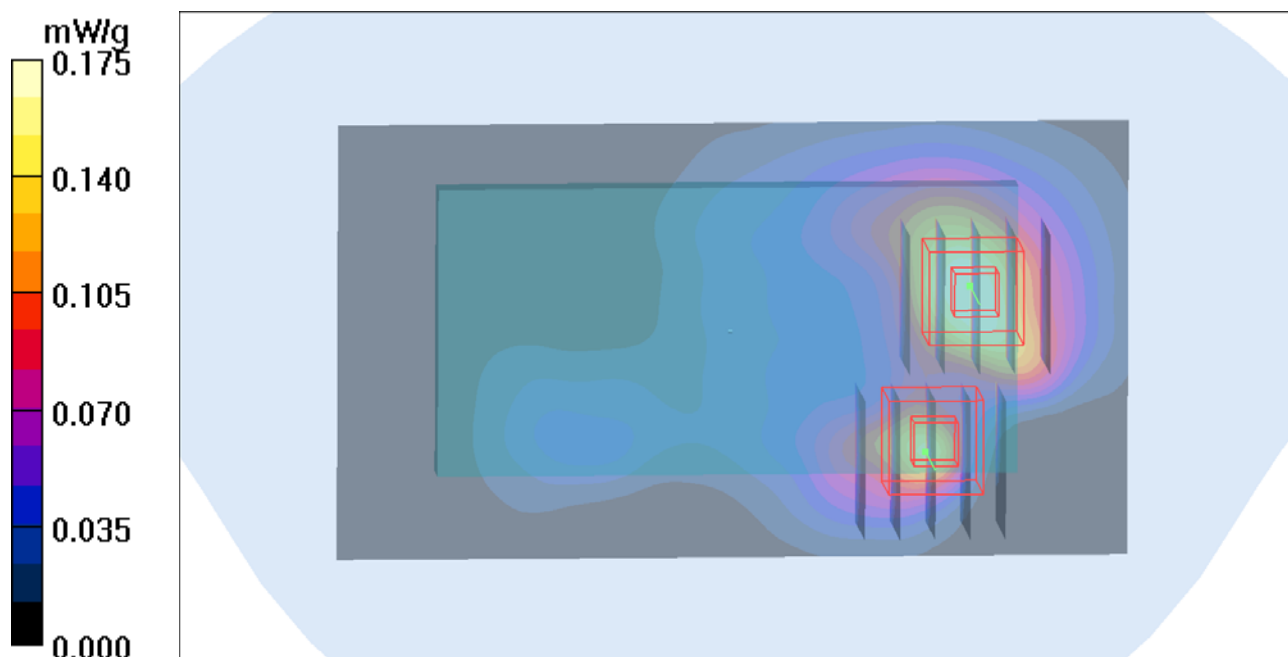
Ch11/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.95 V/m; Power Drift = 0.171 dB

Peak SAR (extrapolated) = 0.253 W/kg

SAR(1 g) = 0.115 mW/g; SAR(10 g) = 0.052 mW/g

Maximum value of SAR (measured) = 0.168 mW/g



P119 802.11b_Left Side_1cm_Ch11**DUT: 120801C12**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_0820 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.8, 7.8, 7.8); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch11/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

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

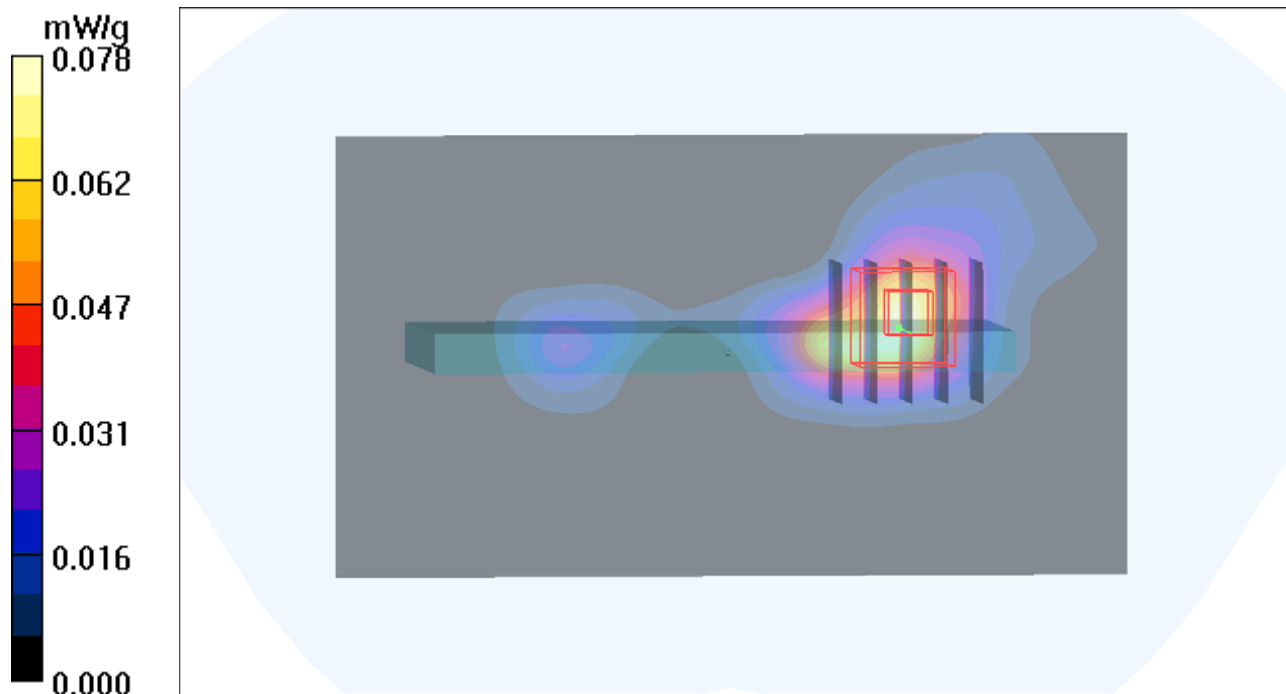
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.21 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.100 W/kg

SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.023 mW/g

Maximum value of SAR (measured) = 0.071 mW/g



P120 802.11b_Top Side_1cm_Ch11**DUT: 120801C12**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_0820 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$

kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.8, 7.8, 7.8); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch11/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.145 mW/g

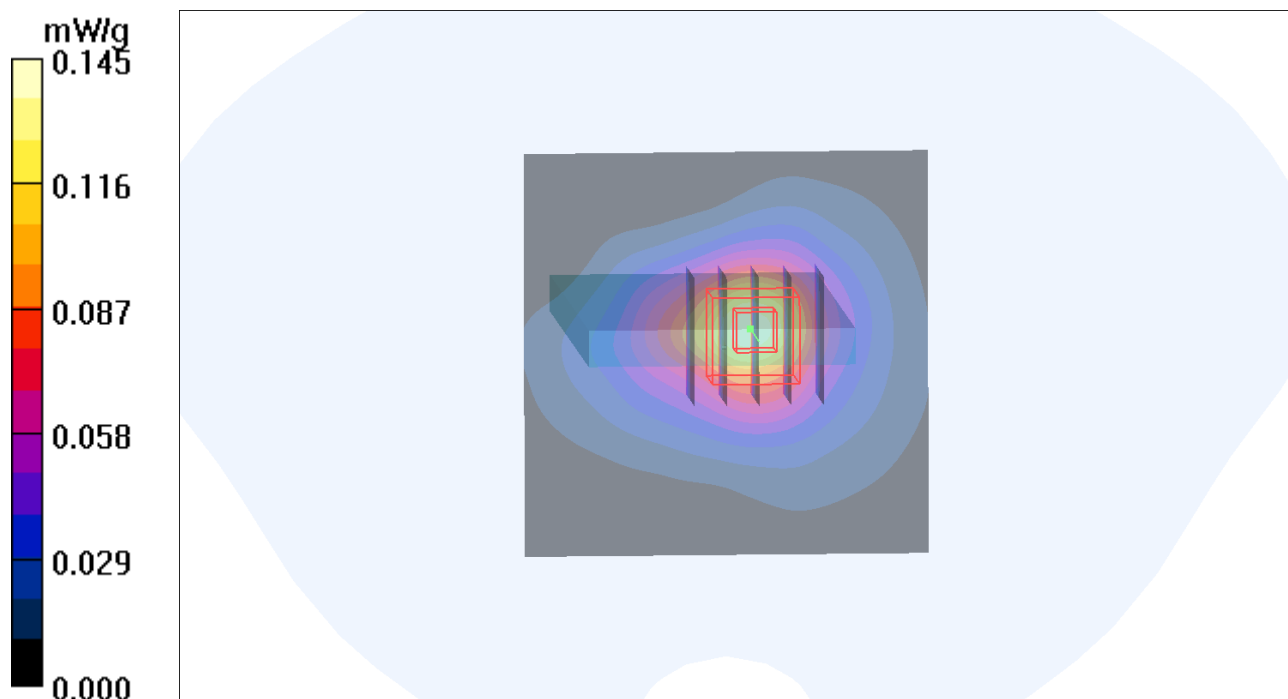
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.80 V/m; Power Drift = 0.060 dB

Peak SAR (extrapolated) = 0.190 W/kg

SAR(1 g) = 0.100 mW/g; SAR(10 g) = 0.053 mW/g

Maximum value of SAR (measured) = 0.144 mW/g



P121 802.11b_Front Face_1cm_Ch11_Earphone**DUT: 120801C12**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_0820 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.8, 7.8, 7.8); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch11/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.062 mW/g

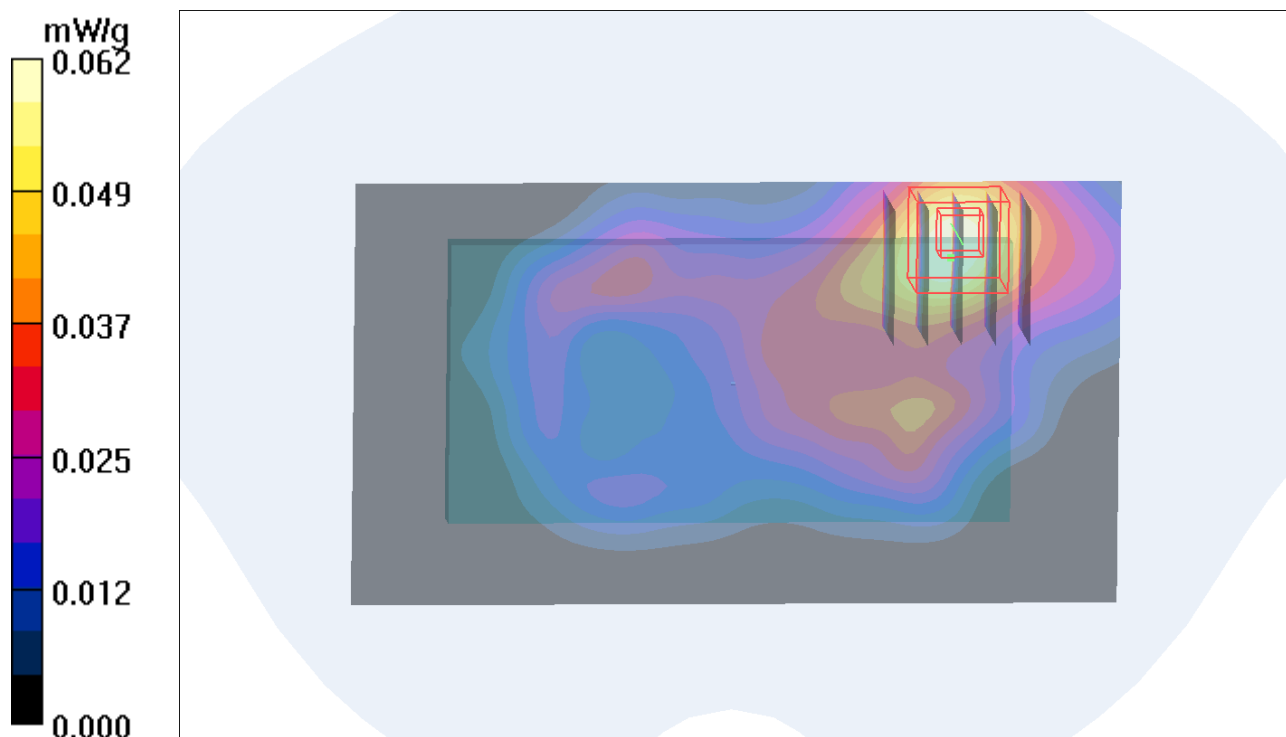
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.48 V/m; Power Drift = -0.066 dB

Peak SAR (extrapolated) = 0.113 W/kg

SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.026 mW/g

Maximum value of SAR (measured) = 0.079 mW/g



P122 802.11b_Rear Face_1cm_Ch11_Earphone**DUT: 120801C12**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_0820 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 53.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(7.8, 7.8, 7.8); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch11/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.181 mW/g

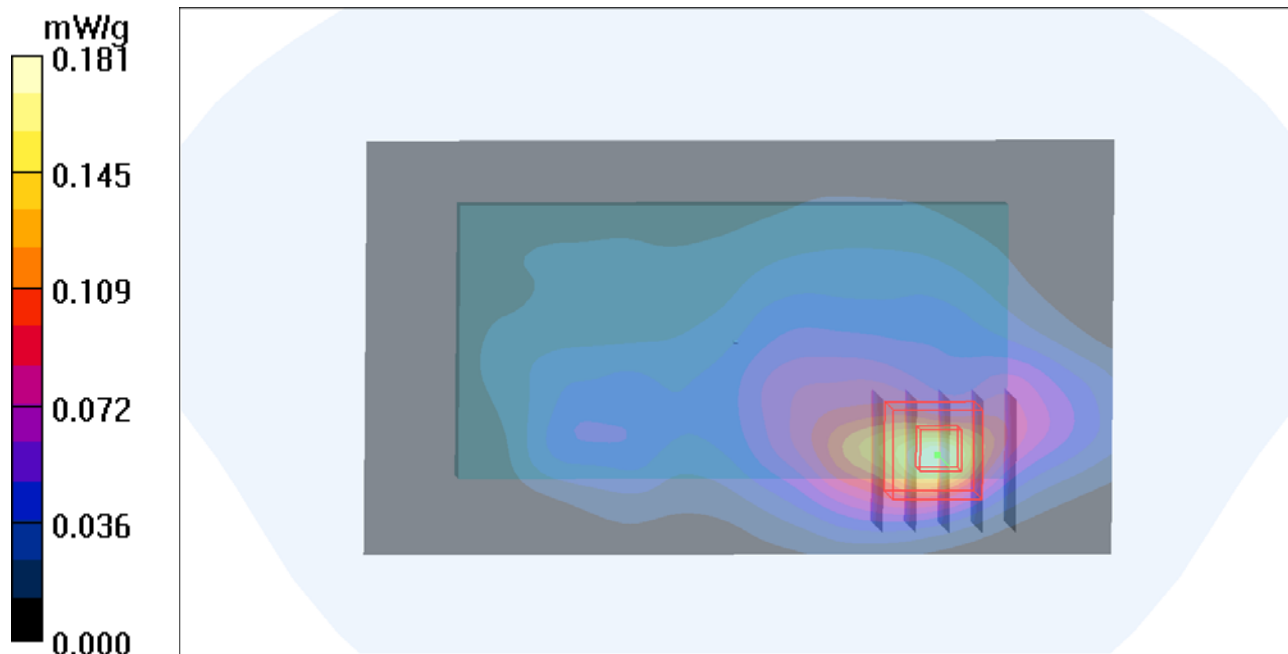
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.46 V/m; Power Drift = 0.128 dB

Peak SAR (extrapolated) = 0.285 W/kg

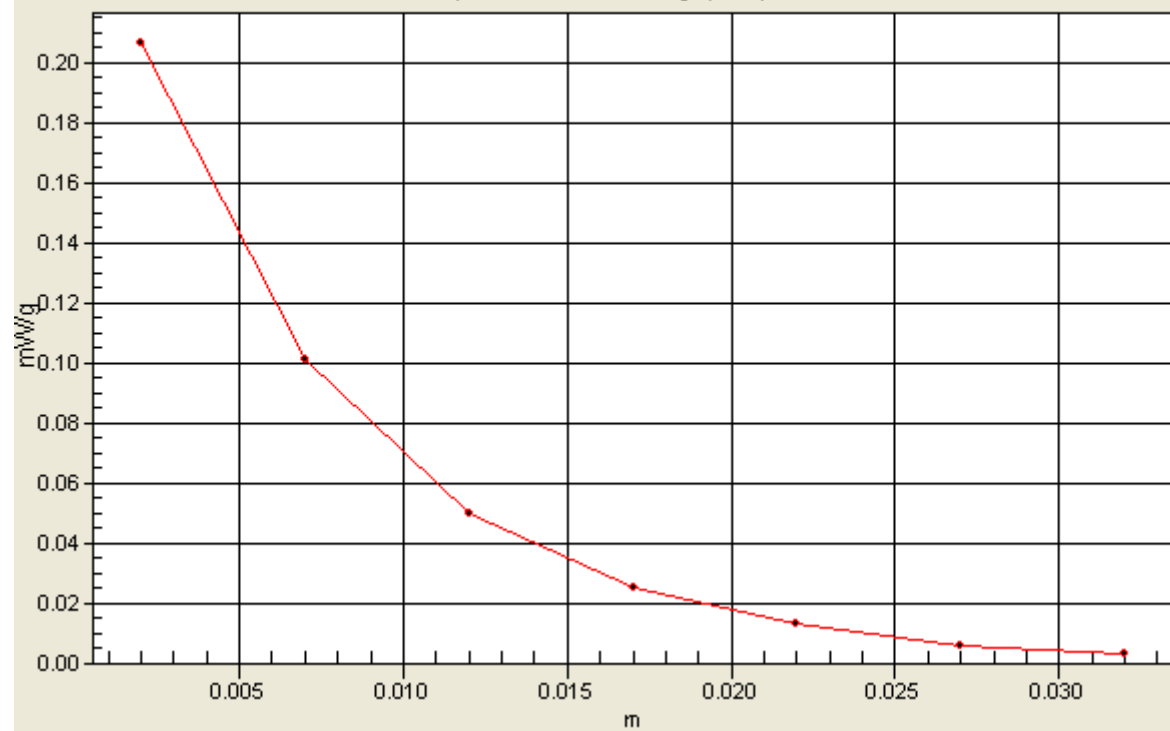
SAR(1 g) = 0.135 mW/g; SAR(10 g) = 0.064 mW/g

Maximum value of SAR (measured) = 0.207 mW/g



1g/10g Averaged SAR

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



P102 802.11n_HT20_Rear Face_1cm_Ch48**DUT: 120801C12**

Communication System: 802.11n_HT20; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.32$ mho/m; $\epsilon_r = 49.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.89, 4.89, 4.89); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch48/Area Scan (101x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.105 mW/g

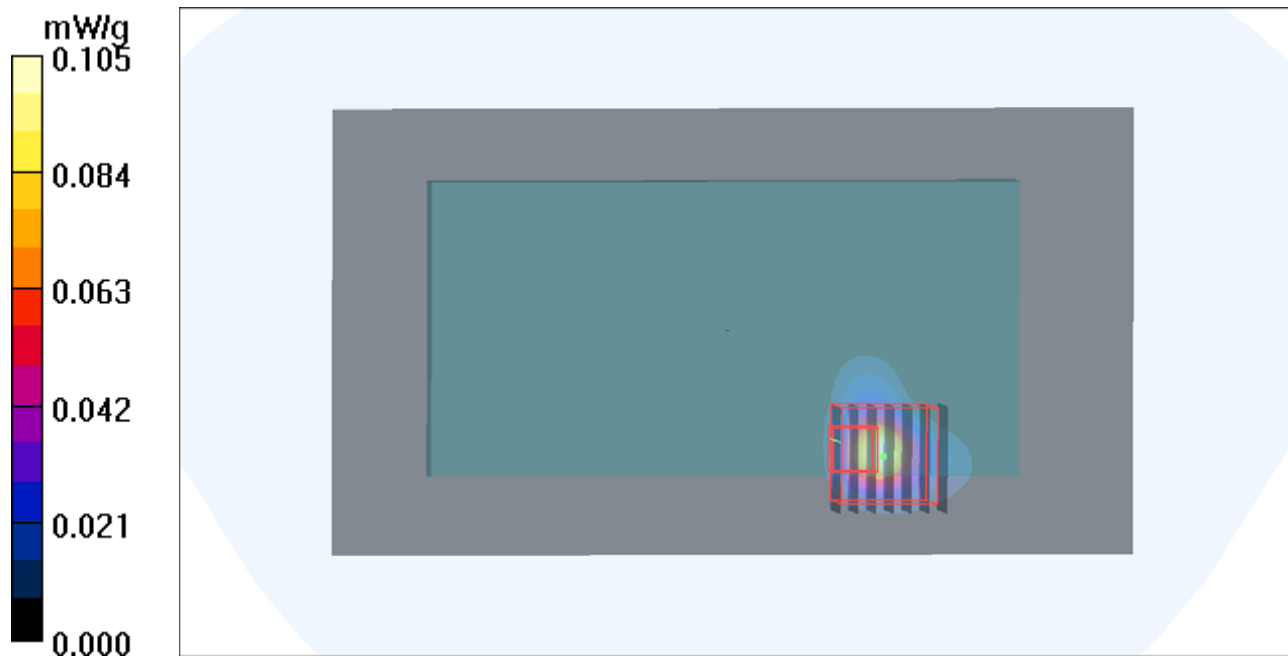
Ch48/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.859 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.230 W/kg

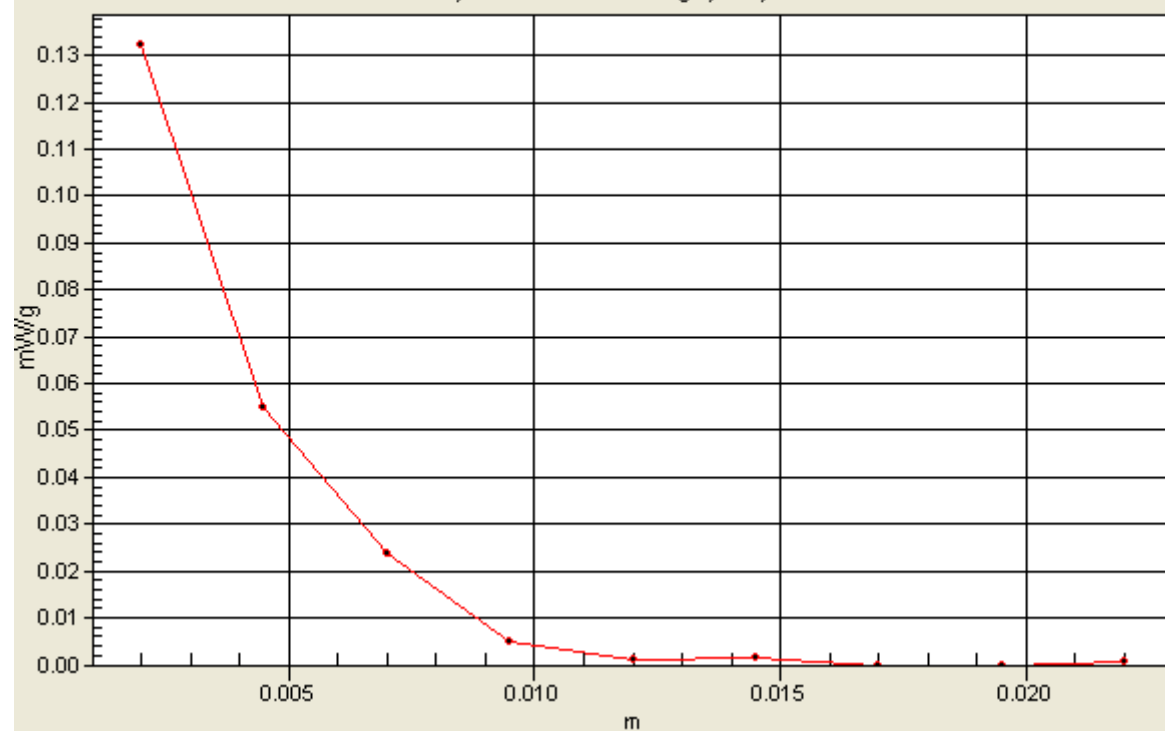
SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.132 mW/g



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=4, Y=0



P103 802.11n_HT20_Left Side_1cm_Ch48**DUT: 120801C12**

Communication System: 802.11n_HT20; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.32$ mho/m; $\epsilon_r = 49.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.89, 4.89, 4.89); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch48/Area Scan (101x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.028 mW/g

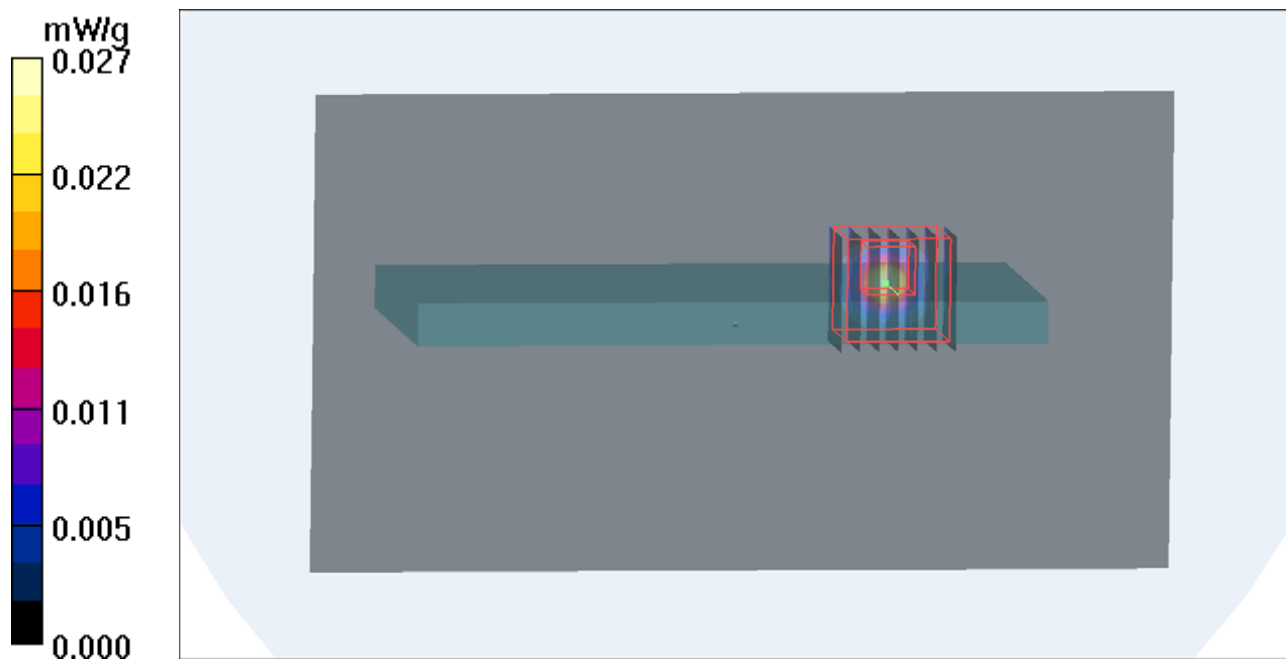
Ch48/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.000 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 0.169 W/kg

SAR(1 g) = 0.016 mW/g; SAR(10 g) = 0.00388 mW/g

Maximum value of SAR (measured) = 0.027 mW/g



P106 802.11n_HT20_Rear Face_1cm_Ch48_Earphone**DUT: 120801C12**

Communication System: 802.11n_HT20; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.32$ mho/m; $\epsilon_r = 49.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.89, 4.89, 4.89); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch48/Area Scan (101x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.046 mW/g

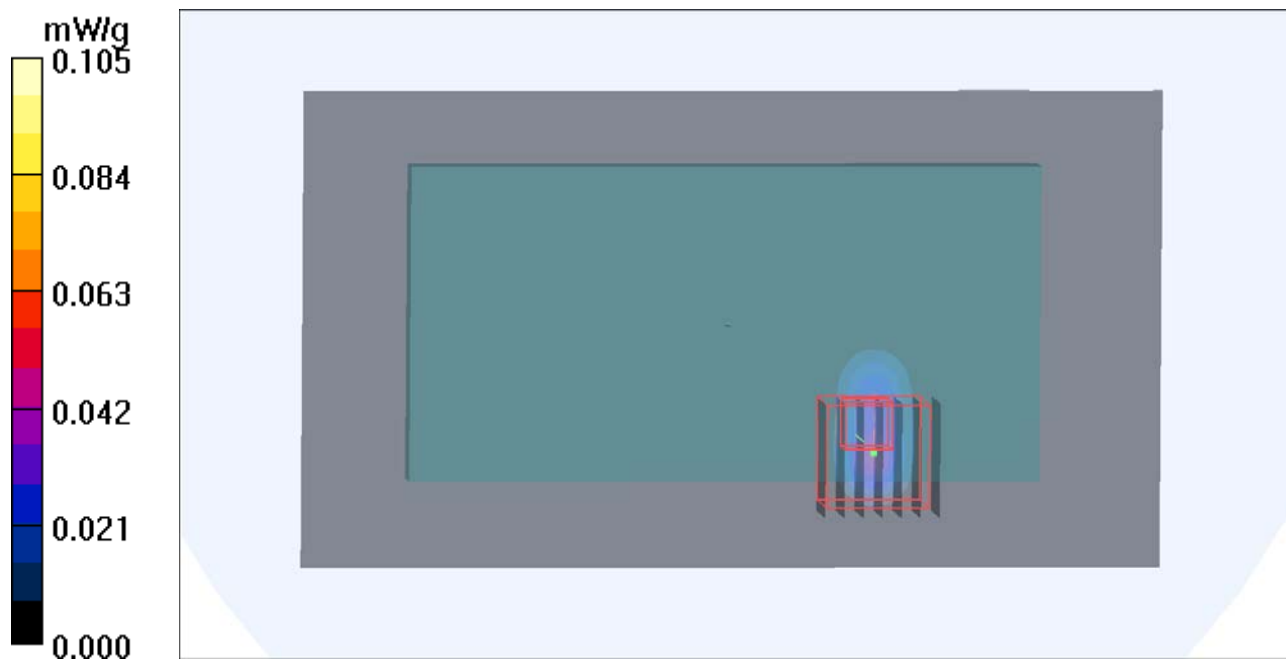
Ch48/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.000 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 0.235 W/kg

SAR(1 g) = 0.043 mW/g; SAR(10 g) = 0.011 mW/g

Maximum value of SAR (measured) = 0.105 mW/g



P108 802.11n_HT20_Rear Face_1cm_Ch64_Earphone**DUT: 120801C12**

Communication System: 802.11n_HT20; Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5320$ MHz; $\sigma = 5.41$ mho/m; $\epsilon_r = 49.2$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.81, 4.81, 4.81); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch64/Area Scan (101x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.100 mW/g

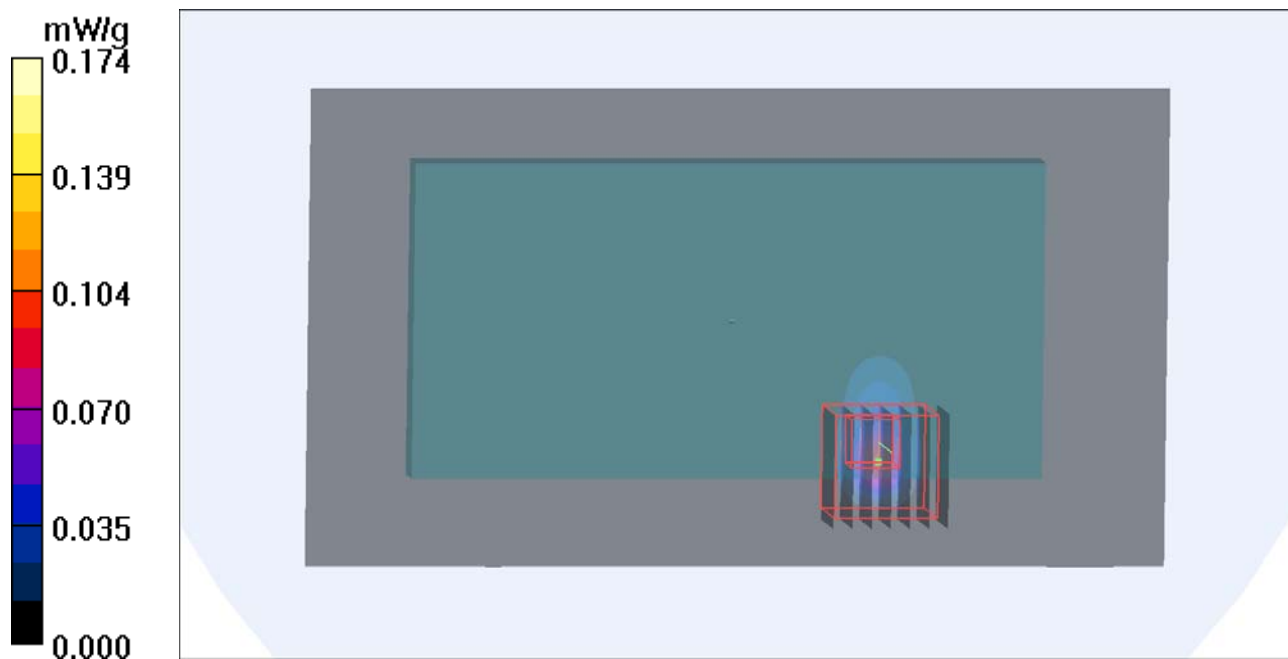
Ch64/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.000 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 0.304 W/kg

SAR(1 g) = 0.077 mW/g; SAR(10 g) = 0.019 mW/g

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



P110 802.11n_HT20_Rear Face_1cm_Ch132_Earphone**DUT: 120801C12**

Communication System: 802.11n_HT20; Frequency: 5660 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5660$ MHz; $\sigma = 5.87$ mho/m; $\epsilon_r = 48.6$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(3.92, 3.92, 3.92); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch132/Area Scan (101x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.087 mW/g

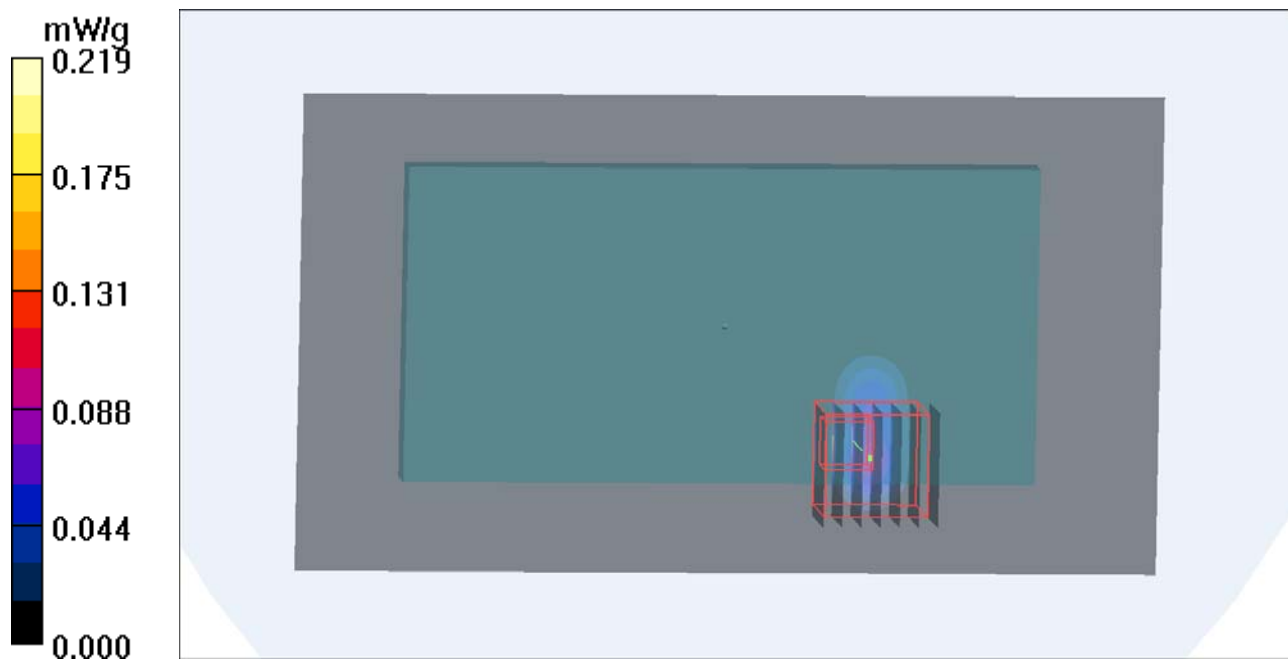
Ch132/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.000 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 0.338 W/kg

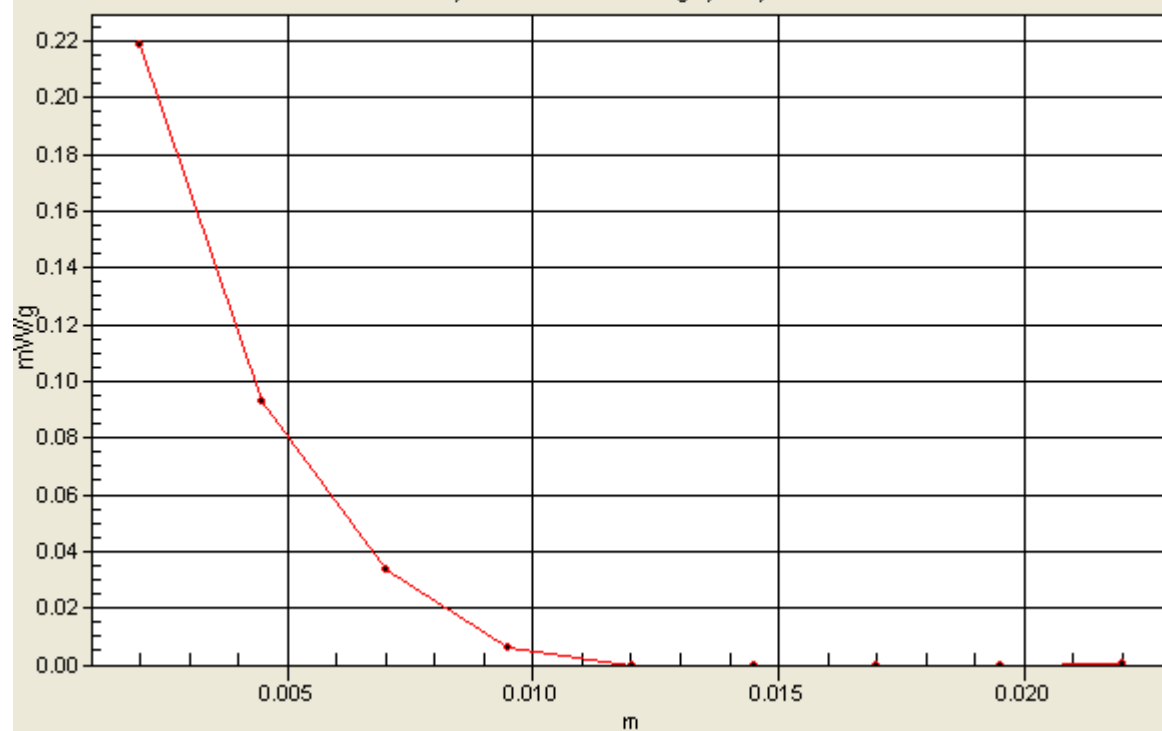
SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.021 mW/g

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



1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=4, Y=2



P112 802.11n_HT20_Rear Face_1cm_Ch149**DUT: 120801C12**

Communication System: 802.11n_HT20; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5745$ MHz; $\sigma = 6.01$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.54, 4.54, 4.54); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch149/Area Scan (101x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.072 mW/g

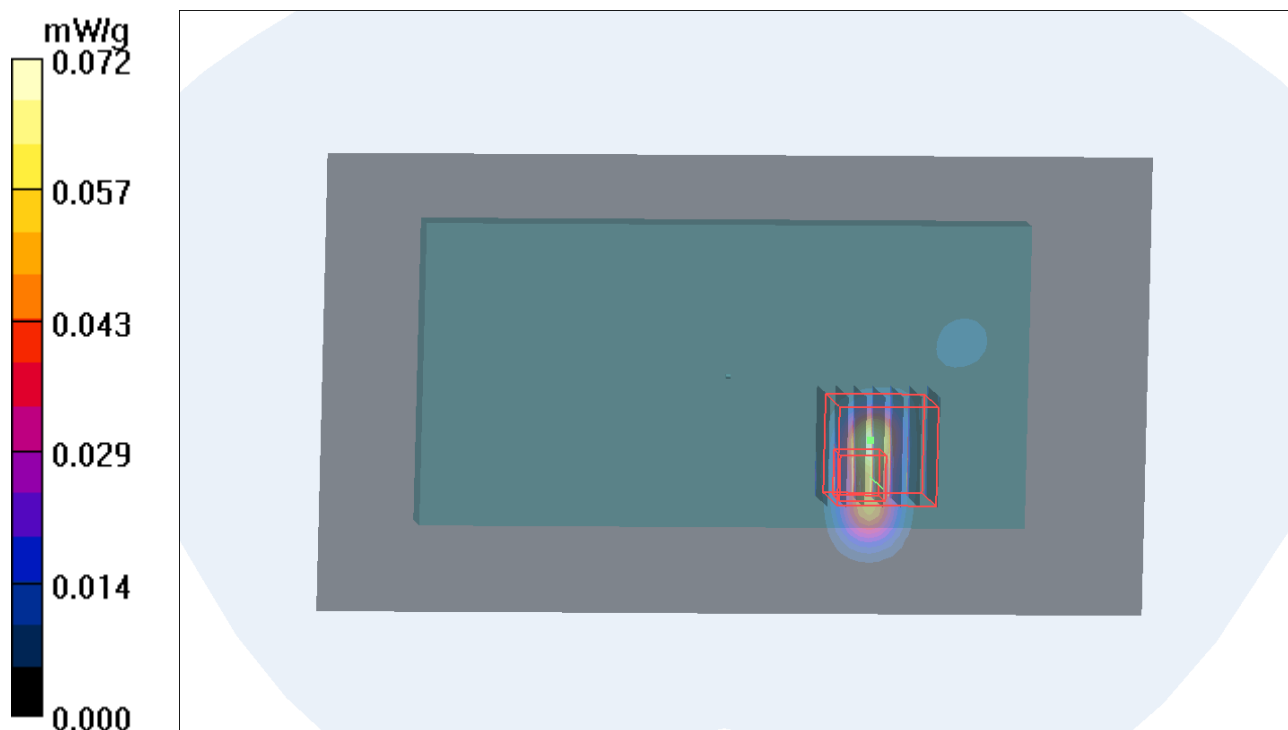
Ch149/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.000 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.781 W/kg

SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.011 mW/g

Maximum value of SAR (measured) = 0.162 mW/g



P113 802.11n_HT20_Left Side_1cm_Ch149**DUT: 120801C12**

Communication System: 802.11n_HT20; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5745$ MHz; $\sigma = 6.01$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.54, 4.54, 4.54); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch149/Area Scan (101x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.017 mW/g

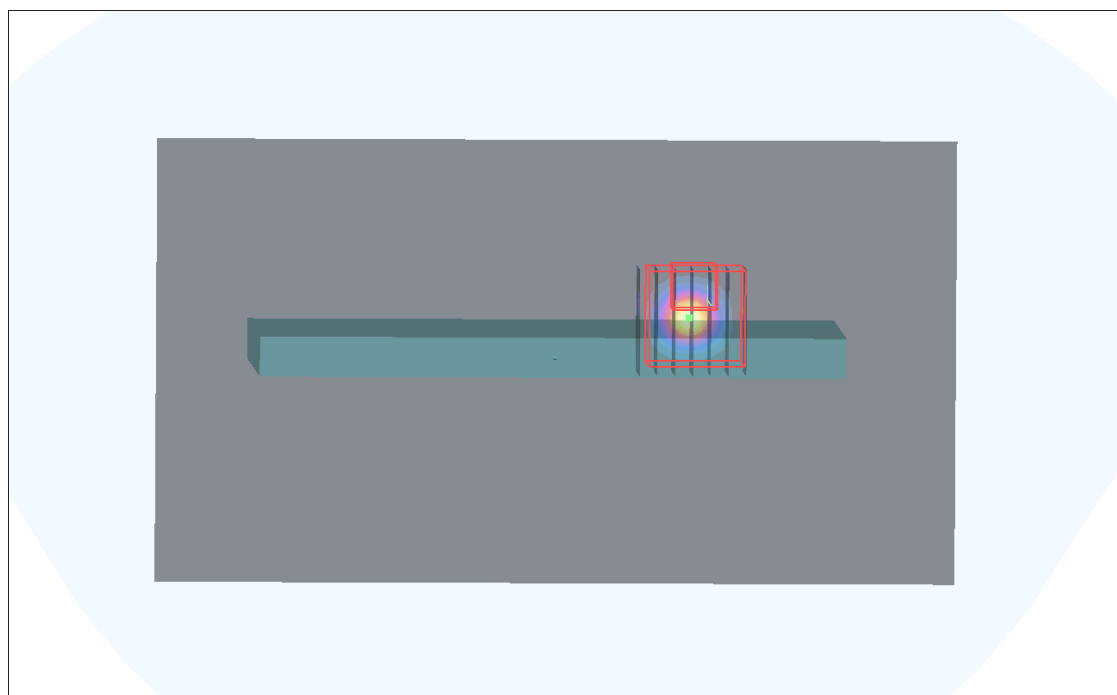
Ch149/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.000 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.145 W/kg

SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00248 mW/g

Maximum value of SAR (measured) = 0.023 mW/g



P116 802.11n_HT20_Rear Face_1cm_Ch149_Earphone**DUT: 120801C12**

Communication System: 802.11n_HT20; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: B5G_0820 Medium parameters used: $f = 5745$ MHz; $\sigma = 6.01$ mho/m; $\epsilon_r = 48.5$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 20.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.54, 4.54, 4.54); Calibrated: 2012/02/23
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2012/04/27
- 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

Ch149/Area Scan (101x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.118 mW/g

Ch149/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.000 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.319 W/kg

SAR(1 g) = 0.075 mW/g; SAR(10 g) = 0.017 mW/g

Maximum value of SAR (measured) = 0.199 mW/g

