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FCC / IC SAR Test Report

Report No. : SA111026C09
Applicant : BUFFALO INC.
Address : Akamon-dori Bldg, 30-20, Ohsu 3-chome, Naka-ku ,Nagoya 460-8315, Japan
Product : AirStation Wireless-N Media Bridge
FCC ID : FDI-09102114-0
IC : 6102A-039
Brand : Buffalo
Model No. : WLI-UTX-AG300
Standards : FCC 47 CFR Part 2 (2.1093) / IC RSS-102 Issue 4:2010 / IEEE C95.1:1991
IEEE 1528:2003 / FCC OET Bulletin 65 Supplement C (Edition 01-01)
KDB 248227 D01 v01r02 / KDB 447498 D01 v04 / KDB 447498 D02 v02
Date of Testing : Nov. 28, 2011 ~ Feb. 18, 2012

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

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Release Control Record

Issue No.	Reason for Change	Date Issued
R01	Original release	Feb. 20, 2012



1. Summary of Maximum SAR Value

Mode / Band	Test Position	SAR-1g (W/kg)
WLAN 2.4GHz	Body (0.5 cm Gap)	0.155
WLAN 5GHz	Body (0.5 cm Gap)	0.76

Note:

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



2. Description of Equipment Under Test

DUT Type	AirStation Wireless-N Media Bridge
FCC ID	FDI-09102114-0
IC	6102A-039
Brand Name	Buffalo
Model Name	WLI-UTX-AG300
Tx Frequency Bands (Unit: MHz)	WLAN : 2400 ~ 2483.5, 5150 ~ 5350, 5470 ~ 5725, 5725 ~ 5850
Uplink Modulations	802.11b : DSSS 802.11a/g/n : OFDM
Maximum AVG Conducted Power (Unit: dBm)	802.11b : 15.20 802.11g : 15.20 802.11n HT20 (2.4GHz) : 15.40 802.11n HT40 (2.4GHz) : 15.40 802.11a : 14.30 802.11n HT20 (5GHz) : 15.40 802.11n HT40 (5GHz) : 15.30
Antenna Type	Fixed Internal Antenna
DUT Stage	Production Unit

Note:

1. The above EUT information is declared by manufacturer and for more detailed feature 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.


Fig-3.1 DASY System Setup
3.2.1 Robot

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

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



Fig-3.2 DASY4


Fig-3.3 DASY5

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3.2.2 Probes

The SAR measurement is conducted with the dosimetric probe. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency.

Model	EX3DV4	
Construction	Symmetrical design with triangular core. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).	
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 μ W/g to 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	


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

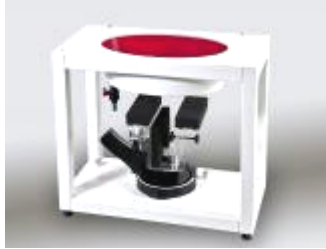
3.2.3 Data Acquisition Electronics (DAE)

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

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3.2.4 Phantoms


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

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


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3.2.5 Device Holder

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

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

3.2.6 System Validation Dipoles

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

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3.2.7 Tissue Simulating Liquids

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

The body tissue parameters that have not been specified in IEEE 1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations and extrapolated according to the head parameters specified in IEEE 1528.

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 Body				
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
B2450	-	31.4	-	0.1	-	-	68.5	-
B5G	-	-	-	-	-	10.7	78.6	10.7

3.3 SAR System Verification

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

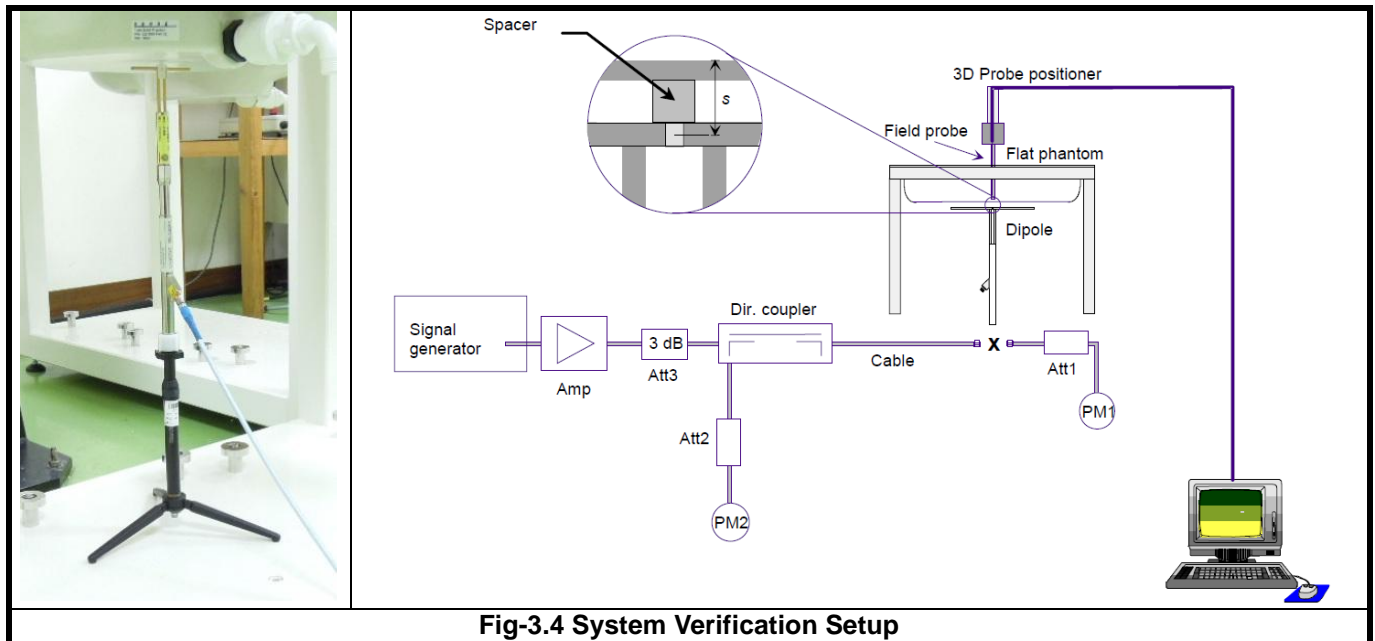


Fig-3.4 System Verification Setup

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

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

3.4 SAR Measurement Procedure

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

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

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

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

3.4.1 Area & Zoom Scan Procedure

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

3.4.2 Volume Scan Procedure

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

3.4.3 Power Drift Monitoring

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

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3.4.4 Spatial Peak SAR Evaluation

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

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

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

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

3.4.5 SAR Averaged Methods

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

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

4. SAR Measurement Evaluation

4.1 EUT Configuration and Setting

For WLAN SAR testing, the EUT has installed WLAN engineering testing software which can provide continuous transmitting RF signal. This RF signal utilized in SAR measurement has almost 100% duty cycle. The data rates for WLAN SAR testing were set in lowest data rate as 1 Mbps for 802.11b, 6 Mbps for 802.11g, 6 Mbps for 802.11a, and MCS8 for 802.11n per KDB 248227.

4.2 EUT Testing Position

This DUT was tested in four different USB configurations. They are “direct laptop plug-in for configuration 1, 2 and 4”, “USB cable plug-in for configuration 3”, and “direct laptop plug-in for DUT Tip Mode” shown as below. Both direct laptop plug-in and USB cable plug-in test configurations are tested with 5 mm separation between the particular dongle orientation and the flat phantom.





			
Configuration 1 (Horizontal Up)	Configuration 2 (Horizontal Down)	Configuration 3 (Vertical Front)	Configuration 4 (Vertical Back)

Fig-4.1 Illustration for USB Connector Orientations



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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
B2450	2450	21.3	1.97	50.90	1.95	52.7	-1.02	3.54	Nov. 29, 2011
B2450	2450	20.6	1.97	51.315	1.95	52.7	1.03	-2.63	Feb. 17, 2012
B5G	5200	21.5	5.30	48.30	5.30	49.0	0.00	1.45	Nov. 28, 2011
B5G	5200	21.4	5.23	49.30	5.30	49.0	-1.32	0.61	Jan. 04, 2012
B5G	5200	21.7	5.228	49.243	5.30	49.0	-1.36	0.50	Jan. 05, 2012
B5G	5200	20.5	5.168	47.47	5.30	49.0	-2.49	-3.12	Feb. 18, 2012
B5G	5500	21.5	5.72	47.90	5.65	48.6	-1.22	1.46	Nov. 28, 2011
B5G	5500	21.4	5.70	49.00	5.65	48.6	0.88	0.82	Jan. 04, 2012
B5G	5500	21.7	5.706	48.974	5.65	48.6	0.99	0.77	Jan. 05, 2012
B5G	5500	20.5	5.665	47.358	5.65	48.6	0.27	-2.56	Feb. 18, 2012
B5G	5800	21.5	6.16	47.30	6.00	48.2	-2.60	1.90	Nov. 28, 2011
B5G	5800	21.4	6.21	48.30	6.00	48.2	3.50	0.21	Jan. 04, 2012
B5G	5800	21.7	6.215	48.332	6.00	48.2	3.58	0.27	Jan. 05, 2012
B5G	5800	20.5	6.253	46.677	6.00	48.2	4.22	-3.16	Feb. 18, 2012

Note:

The dielectric properties of the tissue simulating liquid must be measured within 24 hours before the SAR testing and within ±5% of the target values. Liquid temperature during the SAR testing must be within ±2 °C.

4.4 System Verification

The measuring results for system check are shown as below.

Test Date	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
Nov. 29, 2011	2450	53.30	12.40	49.60	-6.94	716	3650	1277
Feb. 17, 2012	2450	50.00	12.80	51.20	2.40	737	3650	861
Nov. 28, 2011	5200	77.10	8.18	81.80	6.10	1019	3650	1277
Jan. 04, 2012	5200	77.10	7.63	76.30	-1.04	1019	3650	579
Jan. 05, 2012	5200	77.10	8.00	80.00	3.76	1019	3590	861
Feb. 18, 2012	5200	72.70	7.99	79.90	9.90	1018	3650	861
Nov. 28, 2011	5500	82.40	8.37	83.70	1.58	1019	3650	1277
Jan. 04, 2012	5500	82.40	8.36	83.60	1.46	1019	3650	579
Jan. 05, 2012	5500	82.40	8.02	80.20	-2.67	1019	3590	861
Feb. 18, 2012	5500	78.30	8.33	83.30	6.39	1018	3650	861
Nov. 28, 2011	5800	73.40	7.27	72.70	-0.95	1019	3650	1277
Jan. 04, 2012	5800	73.40	7.70	77.00	4.90	1019	3650	579
Jan. 05, 2012	5800	73.40	7.73	77.30	5.31	1019	3590	861
Feb. 18, 2012	5800	73.40	7.44	74.40	1.36	1018	3650	861

Note:

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

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4.5 Conducted Power Results

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

Band	802.11b			802.11g		
Channel	1	6	11	1	6	11
Frequency (MHz)	2412	2437	2462	2412	2437	2462
Average Power	15.00	15.20	15.10	15.10	15.20	15.20

Band	802.11n (HT20)			802.11n (HT40)		
Channel	1	6	11	3	6	9
Frequency (MHz)	2412	2437	2462	2422	2437	2452
Average Power	15.10	15.30	15.40	15.30	15.40	15.40

Band	802.11a							
Channel	36	40	44	48	52	56	60	64
Frequency (MHz)	5180	5200	5220	5240	5260	5280	5300	5320
Average Power	14.20	14.10	14.10	14.20	14.30	14.10	14.20	14.20

Band	802.11a							
Channel	100	104	108	112	116	132	136	140
Frequency (MHz)	5500	5520	5540	5560	5580	5660	5680	5700
Average Power	12.80	14.20	14.20	14.30	14.30	11.50	11.60	8.50

Band	802.11a							
Channel	149	153	157	161	165	-	-	-
Frequency (MHz)	5745	5765	5785	5805	5825	-	-	-
Average Power	14.20	14.00	14.00	14.30	14.10	-	-	-

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	15.40	15.20	15.30	15.20	15.20	15.20	15.40	15.10

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	15.30	15.40	15.20	15.10	15.20	15.20	15.30	12.70

Band	802.11n (HT20)							
Channel	149	153	157	161	165	-	-	-
Frequency (MHz)	5745	5765	5785	5805	5825	-	-	-
Average Power	15.20	15.10	15.10	15.30	15.20	-	-	-

Band	802.11n (HT40)							
Channel	38	46	54	62	102	118	134	151
Frequency (MHz)	5190	5230	5270	5310	5510	5590	5670	5755
Average Power	15.30	15.30	15.30	15.30	15.20	15.10	15.20	15.10

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4.6 SAR Testing Results

4.6.1 SAR Results for Body

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Channel	Tx Antenna	SAR-1g (W/kg)
1	802.11b	-	Horizontal Up	0.5	6	0	0.155
2	802.11b	-	Horizontal Down	0.5	6	0	0.153
3	802.11b	-	Vertical Front	0.5	6	0	0.023
4	802.11b	-	Vertical Back	0.5	6	0	0.091
5	802.11b	-	Tip Mode	0.5	6	0	0.083
8	802.11n	HT20	Horizontal Up	0.5	11	0+1	0.138
80	802.11n	HT20	Horizontal Down	0.5	11	0+1	0.135
81	802.11n	HT20	Vertical Front	0.5	11	0+1	0.067
82	802.11n	HT20	Vertical Back	0.5	11	0+1	0.063
83	802.11n	HT20	Tip Mode	0.5	11	0+1	0.078
29	802.11a	-	Horizontal Up	0.5	48	0	0.066
42	802.11a	-	Horizontal Down	0.5	48	0	0.123
43	802.11a	-	Vertical Front	0.5	48	0	0.089
44	802.11a	-	Vertical Back	0.5	48	0	0.093
45	802.11a	-	Tip Mode	0.5	48	0	0.093
84	802.11n	HT20	Horizontal Up	0.5	36	0+1	0.053
46	802.11n	HT20	Horizontal Down	0.5	36	0+1	0.045
85	802.11n	HT20	Vertical Front	0.5	36	0+1	0.025
86	802.11n	HT20	Vertical Back	0.5	36	0+1	0.019
87	802.11n	HT20	Tip Mode	0.5	36	0+1	0.033
16	802.11a	-	Horizontal Up	0.5	52	0	0.154
17	802.11a	-	Horizontal Down	0.5	52	0	0.037
18	802.11a	-	Vertical Front	0.5	52	0	0.051
19	802.11a	-	Vertical Back	0.5	52	0	0.091
20	802.11a	-	Tip Mode	0.5	52	0	0.037
40	802.11n	HT20	Horizontal Up	0.5	60	0+1	0.157
88	802.11n	HT20	Horizontal Down	0.5	60	0+1	0.045
89	802.11n	HT20	Vertical Front	0.5	60	0+1	0.044
90	802.11n	HT20	Vertical Back	0.5	60	0+1	0.026
91	802.11n	HT20	Tip Mode	0.5	60	0+1	0.073
32	802.11a	-	Horizontal Up	0.5	116	0	0.275
48	802.11a	-	Horizontal Down	0.5	116	0	0.45
49	802.11a	-	Vertical Front	0.5	116	0	0.353
50	802.11a	-	Vertical Back	0.5	116	0	0.432
51	802.11a	-	Tip Mode	0.5	116	0	0.636
92	802.11n	HT20	Horizontal Up	0.5	104	0+1	0.171
93	802.11n	HT20	Horizontal Down	0.5	104	0+1	0.11
94	802.11n	HT20	Vertical Front	0.5	104	0+1	0.083
95	802.11n	HT20	Vertical Back	0.5	104	0+1	0.073
52	802.11n	HT20	Tip Mode	0.5	104	0+1	0.327
36	802.11a	-	Horizontal Up	0.5	161	0	0.297
54	802.11a	-	Horizontal Down	0.5	161	0	0.422
55	802.11a	-	Vertical Front	0.5	161	0	0.296
56	802.11a	-	Vertical Back	0.5	161	0	0.304
57	802.11a	-	Tip Mode	0.5	161	0	0.76
96	802.11n	HT20	Horizontal Up	0.5	161	0+1	0.234
97	802.11n	HT20	Horizontal Down	0.5	161	0+1	0.182
98	802.11n	HT20	Vertical Front	0.5	161	0+1	0.092
99	802.11n	HT20	Vertical Back	0.5	161	0+1	0.083
58	802.11n	HT20	Tip Mode	0.5	161	0+1	0.732



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Note:

1. According to KDB 248227, SAR testing for 802.11g is not required when the maximum power of 802.11g is less than 1/4 higher than 802.11b.
2. According to KDB 248227, SAR testing for 802.11n HT40 is not required when the maximum power of 802.11n HT40 is less than 1/4 higher than 802.11n HT20.
3. According to KDB 248227, SAR testing for other channels is not required when the SAR of maximum power channel is less than 0.8 W/kg.

Test Engineer : Match Tsui



5. Calibration of Test Equipment

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Kit	SPEAG	D2450V2	716	Jan. 26, 2011	Annual
System Validation Kit	SPEAG	D2450V2	737	Jan. 24, 2012	Annual
System Validation Kit	SPEAG	D5GHzV2	1018	Jan. 18, 2012	Annual
System Validation Kit	SPEAG	D5GHzV2	1019	Jan. 25, 2011	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3590	Feb. 25, 2011	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3650	Oct. 26, 2011	Annual
Data Acquisition Electronics	SPEAG	DAE3	579	Sep. 23, 2011	Annual
Data Acquisition Electronics	SPEAG	DAE4	861	Aug. 29, 2011	Annual
Data Acquisition Electronics	SPEAG	DAE4	1277	Jul. 29, 2011	Annual
SAM Phantom	SPEAG	QD 000 P40	N/A	N/A	N/A
ELI Phantom	SPEAG	QD OVA 001B	N/A	N/A	N/A
ENA Series Network Analyzer	Agilent	E5071C	MY46104190	Apr. 15, 2011	Annual
Signal Generator	Agilent	E8257C	MY43320668	Dec. 20, 2011	Annual
Power Meter	Anritsu	ML2487A	6K00001571	May 25, 2011	Annual
Power Sensor	Anritsu	MA2491A	030954	May 25, 2011	Annual
Dielectric Probe Kit	Agilent	85070D	N/A	N/A	N/A

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



FCC / IC SAR Test Report

A D T

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: 886-3-318-5050

Taiwan LinKo EMC/RF Lab:

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

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Fax: 886-2-2605-1924

Taiwan HsinChu EMC/RF Lab:

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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_B2450_111129

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

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

Medium: B2450_1129 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 50.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Postprocessing SW: SEMCAD, V1.8 Build 186

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

Maximum value of SAR (interpolated) = 19.5 mW/g

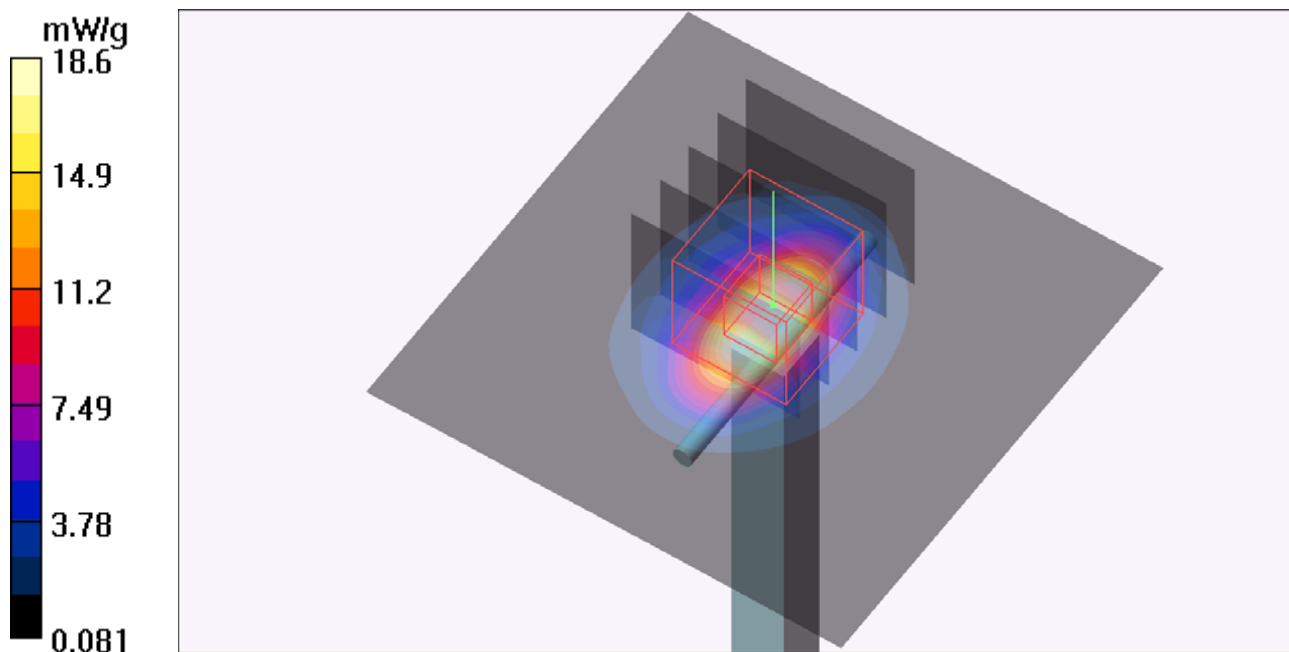
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 99.4 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 25.6 W/kg

SAR(1 g) = 12.4 mW/g; SAR(10 g) = 5.73 mW/g

Maximum value of SAR (measured) = 18.6 mW/g



System Check_B2450_120217

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

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

Medium: B2450_0217 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 51.315$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.5 °C ; Liquid Temperature : 20.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

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

Maximum value of SAR (interpolated) = 20.282 mW/g

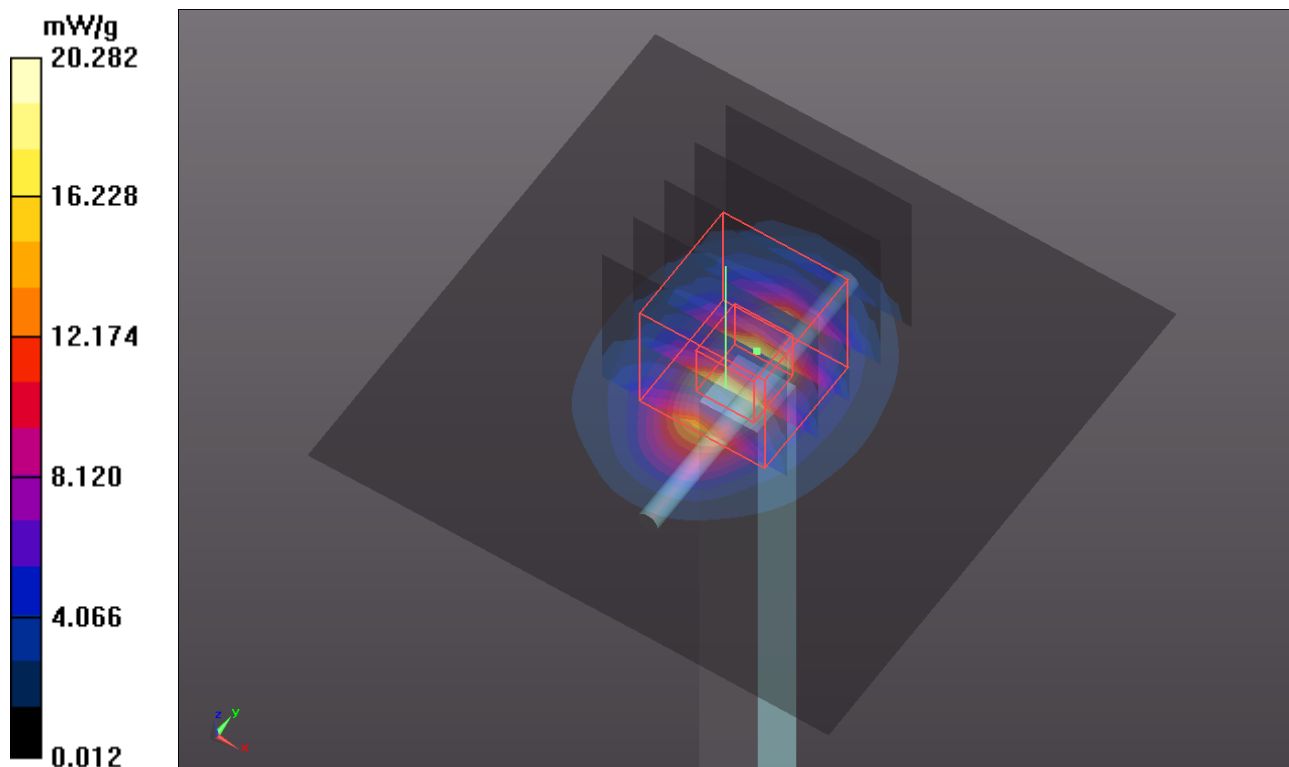
Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 101.1 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 26.3600

SAR(1 g) = 12.8 mW/g; SAR(10 g) = 5.93 mW/g

Maximum value of SAR (measured) = 19.130 mW/g



System Check_B5200_111128

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

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

Medium: B5G_1128 Medium parameters used: $f = 5200$ MHz; $\sigma = 5.3$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.7 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- ; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=100mW, f=5200 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 17.2 mW/g

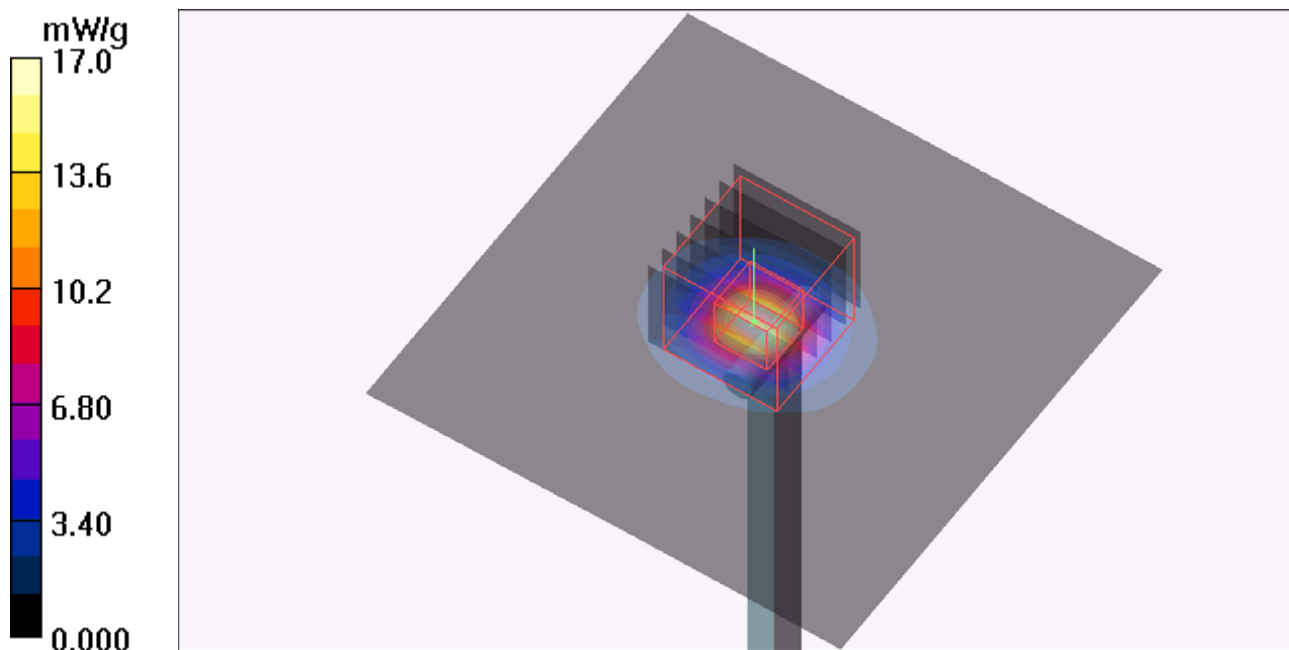
Pin=100mW, f=5200 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 61.1 V/m; Power Drift = 0.068 dB

Peak SAR (extrapolated) = 29.7 W/kg

SAR(1 g) = 8.18 mW/g; SAR(10 g) = 2.4 mW/g

Maximum value of SAR (measured) = 17.0 mW/g



System Check_B5200_120104

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

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

Medium: B5G_0104 Medium parameters used: $f = 5200$ MHz; $\sigma = 5.23$ mho/m; $\epsilon_r = 49.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=100mW, f=5200 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 16.1 mW/g

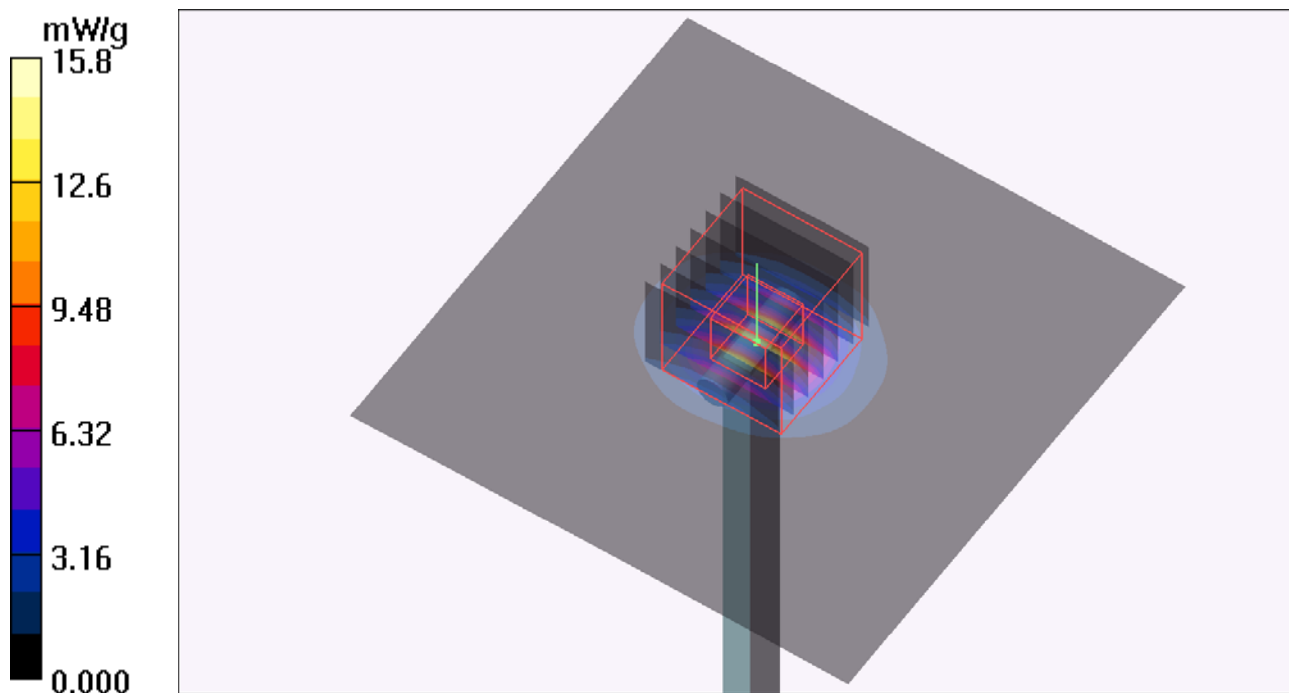
Pin=100mW, f=5200 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 59.9 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 27.3 W/kg

SAR(1 g) = 7.63 mW/g; SAR(10 g) = 2.25 mW/g

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



System Check_B5200_120105

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

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

Medium: B5G_0105 Medium parameters used: $f = 5200$ MHz; $\sigma = 5.228$ mho/m; $\epsilon_r = 49.243$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.81, 4.81, 4.81); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Pin=100mW, f=5200 MHz 3/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 17.243 mW/g

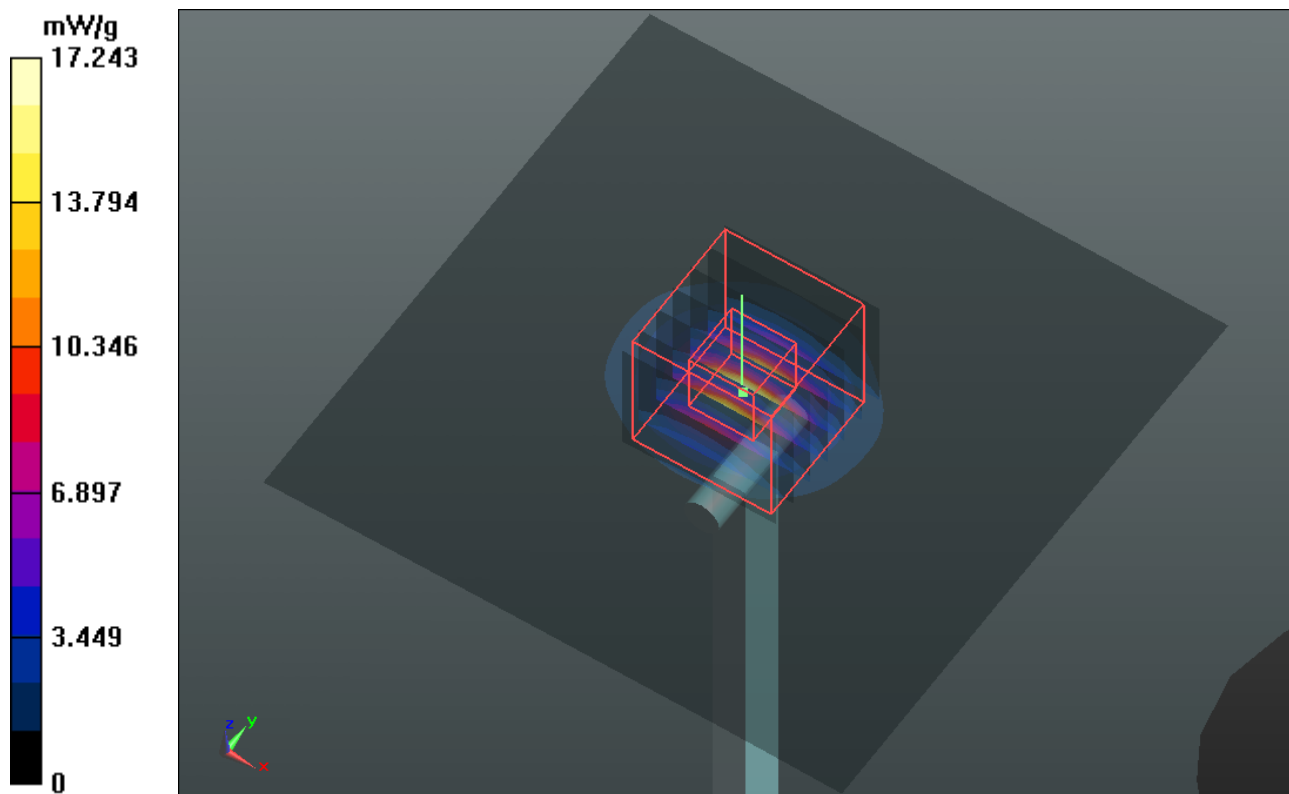
Pin=100mW, f=5200 MHz 3/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 63.906 V/m; Power Drift = -0.137 dB

Peak SAR (extrapolated) = 28.8150

SAR(1 g) = 8 mW/g; SAR(10 g) = 2.19 mW/g

Maximum value of SAR (measured) = 16.708 mW/g



System Check_B5200_120218

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1018

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

Medium: B5G_0218 Medium parameters used: $f = 5200$ MHz; $\sigma = 5.168$ mho/m; $\epsilon_r = 47.47$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Pin=100mW, f=5200 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 16.872 mW/g

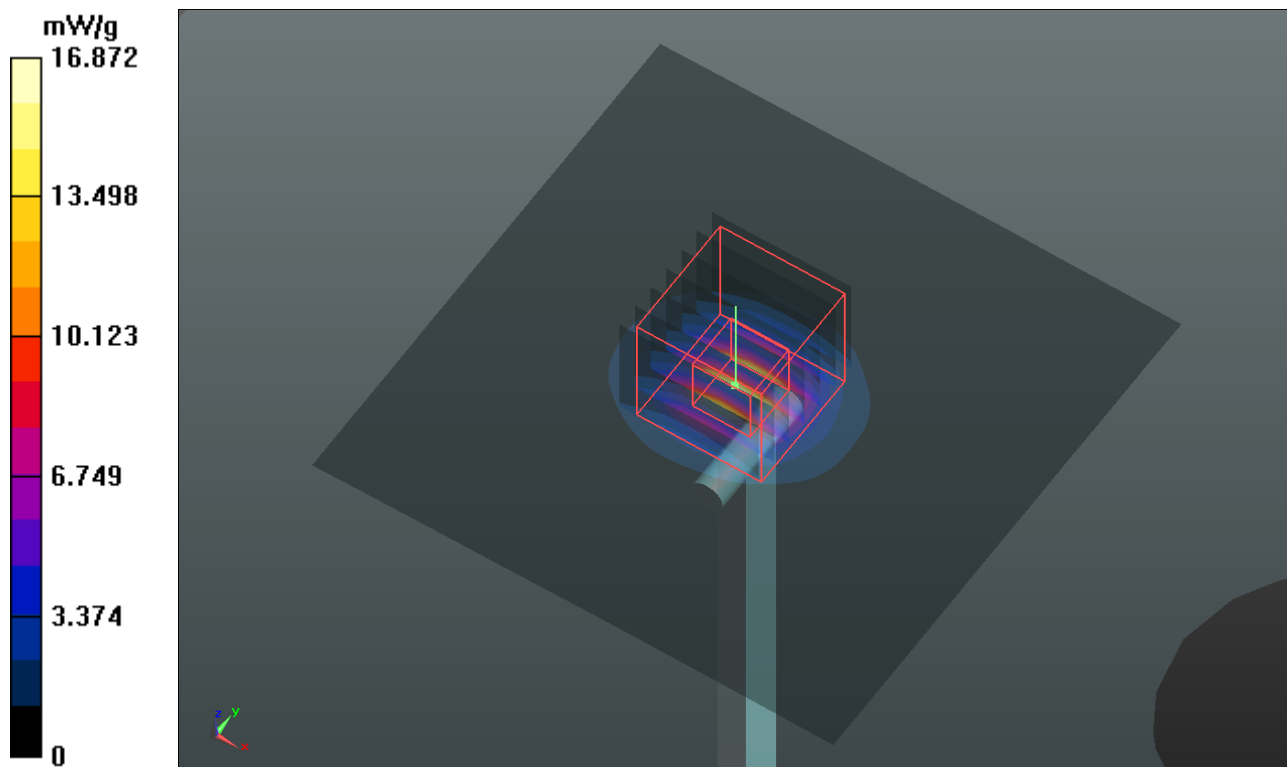
Pin=100mW, f=5200 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 61.096 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 28.3860

SAR(1 g) = 7.99 mW/g; SAR(10 g) = 2.36 mW/g

Maximum value of SAR (measured) = 16.538 mW/g



System Check_B5500_111128

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

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

Medium: B5G_1128 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.72$ mho/m; $\epsilon_r = 47.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.7 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.73, 3.73, 3.73); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- ; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=100mW, f=5500 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 18.3 mW/g

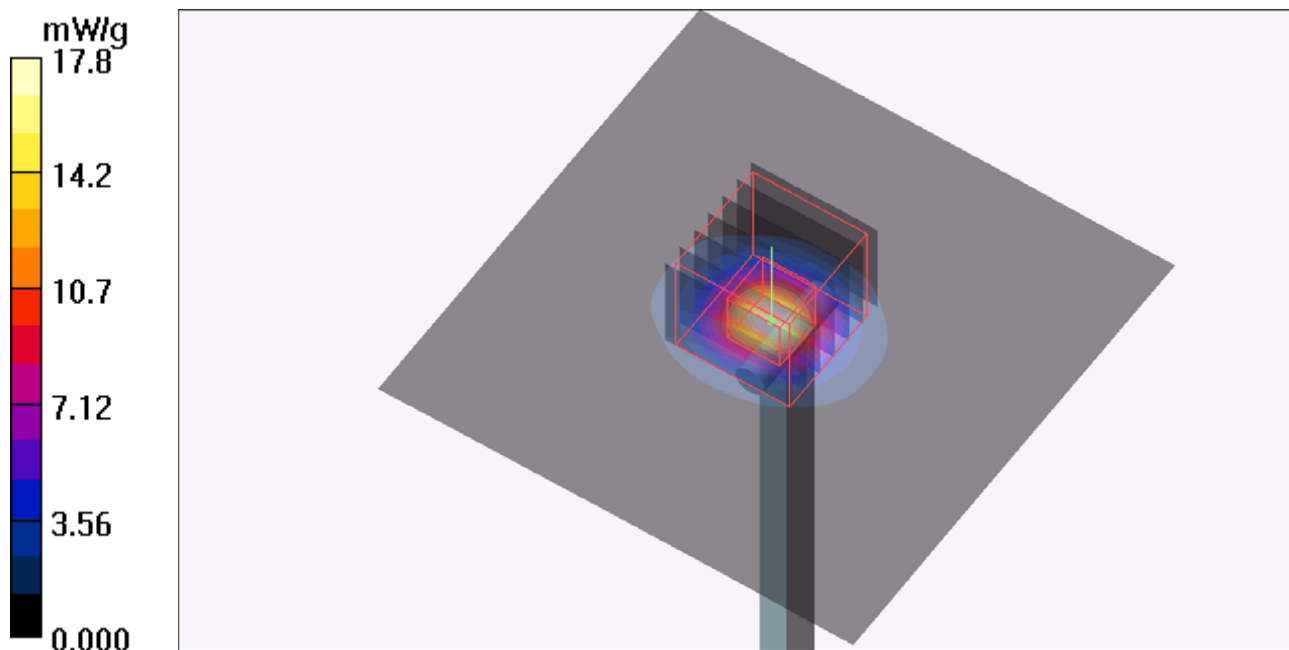
Pin=100mW, f=5500 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 61.9 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 30.5 W/kg

SAR(1 g) = 8.37 mW/g; SAR(10 g) = 2.43 mW/g

Maximum value of SAR (measured) = 17.8 mW/g



System Check_B5500_120104

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

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

Medium: B5G_0104 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.7$ mho/m; $\epsilon_r = 49$; $\rho = 1000$

kg/m³

Ambient Temperature : 21.7 °C ; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.73, 3.73, 3.73); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=100mW, f=5500 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 18.3 mW/g

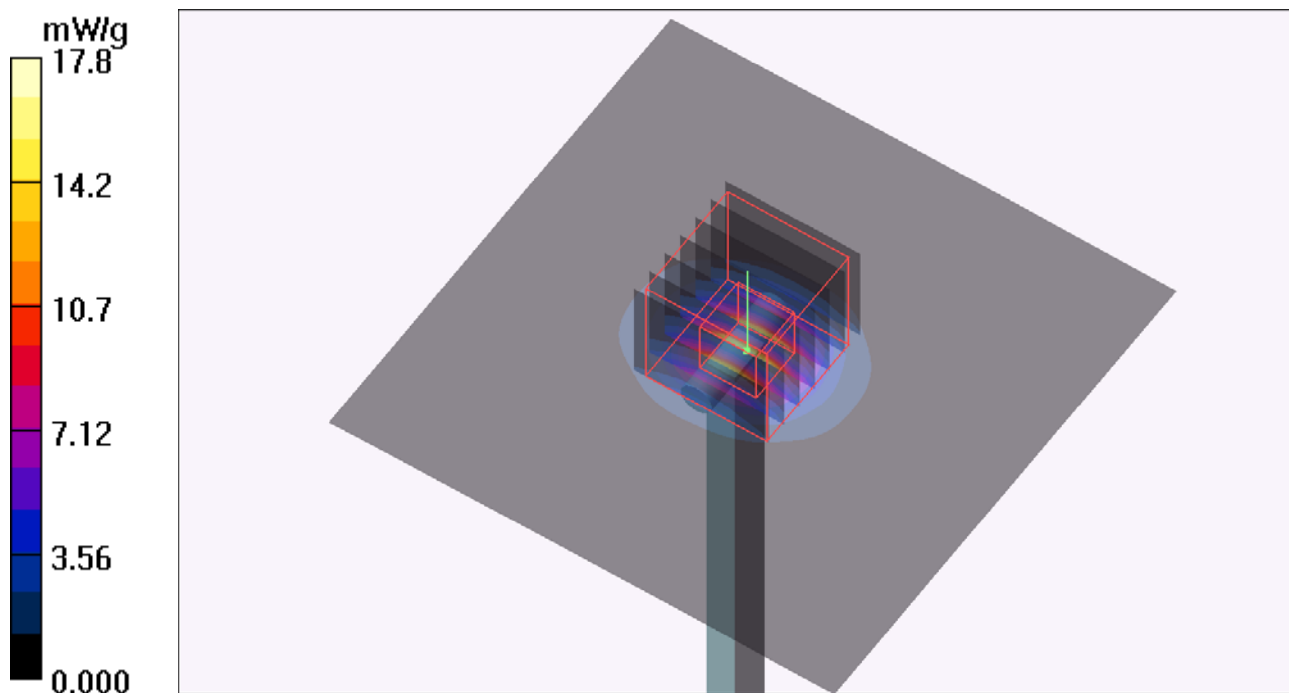
Pin=100mW, f=5500 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 61.9 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 30.1 W/kg

SAR(1 g) = 8.36 mW/g; SAR(10 g) = 2.43 mW/g

Maximum value of SAR (measured) = 17.8 mW/g



System Check_B5500_120105

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

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

Medium: B5G_0105 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.706$ mho/m; $\epsilon_r = 48.974$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Pin=100mW, f=5500 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 17.075 mW/g

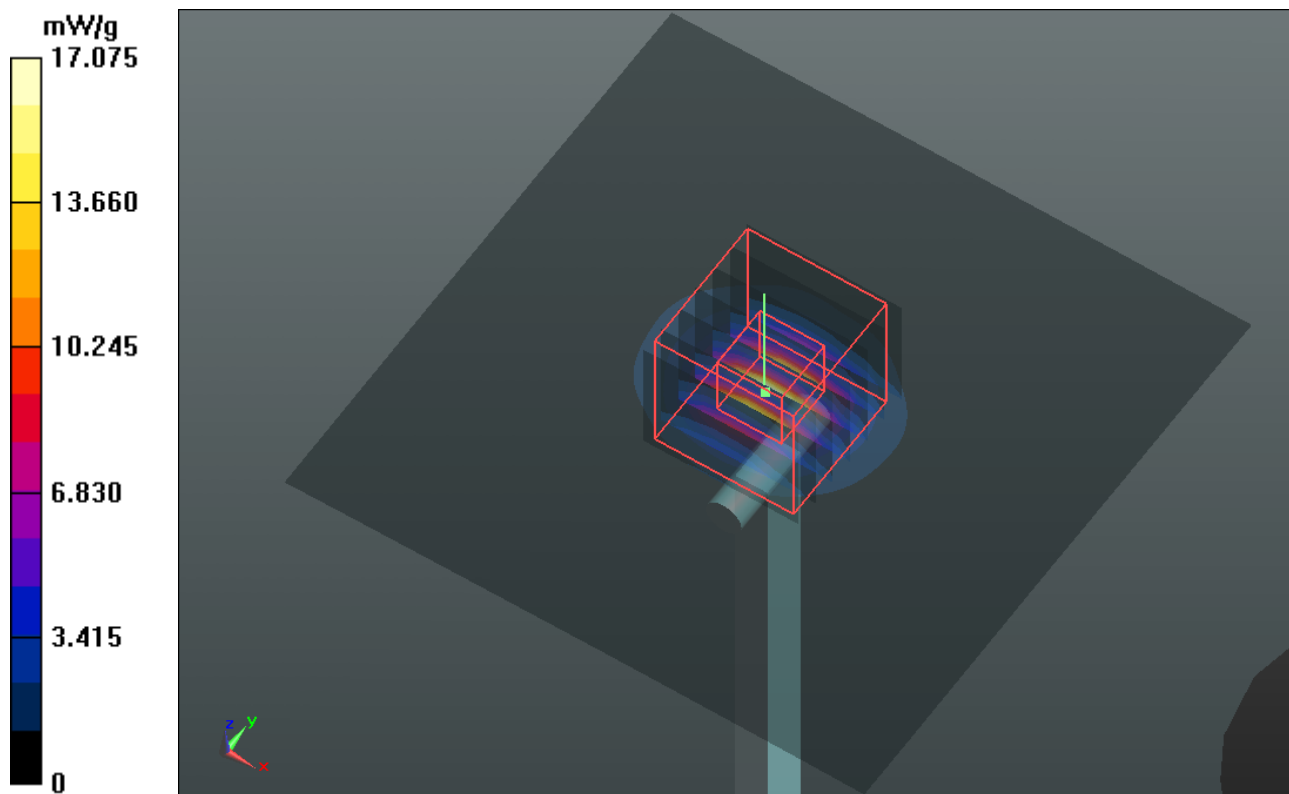
Pin=100mW, f=5500 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 59.698 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 30.2480

SAR(1 g) = 8.02 mW/g; SAR(10 g) = 2.16 mW/g

Maximum value of SAR (measured) = 16.798 mW/g



System Check_B5500_120218

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1018

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

Medium: B5G_0218 Medium parameters used: $f = 5500$ MHz; $\sigma = 5.665$ mho/m; $\epsilon_r = 47.358$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.73, 3.73, 3.73); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Pin=100mW, f=5500 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 18.326 mW/g

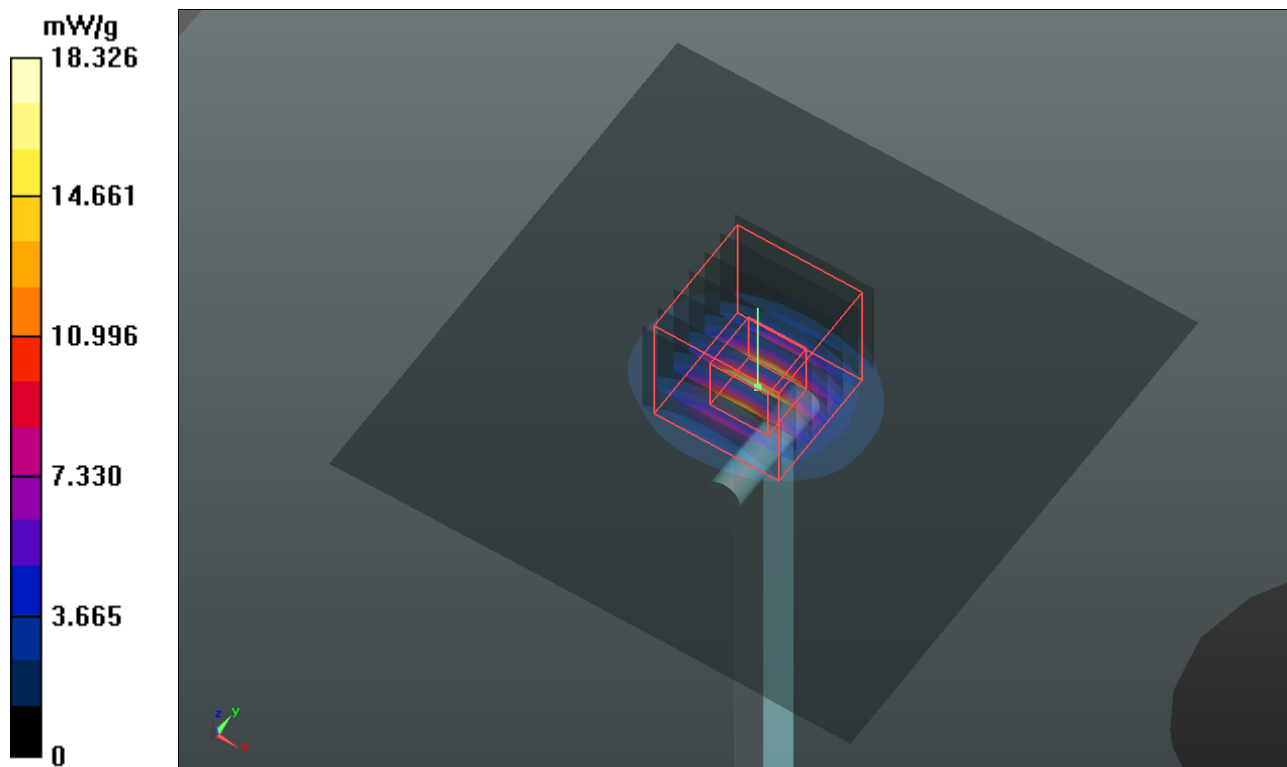
Pin=100mW, f=5500 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 61.912 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 29.5940

SAR(1 g) = 8.33 mW/g; SAR(10 g) = 2.42 mW/g

Maximum value of SAR (measured) = 17.639 mW/g



System Check_B5800_111128

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

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

Medium: B5G_1128 Medium parameters used: $f = 5800$ MHz; $\sigma = 6.16$ mho/m; $\epsilon_r = 47.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.7 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.81, 3.81, 3.81); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- ; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=100mW, f=5800 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 15.6 mW/g

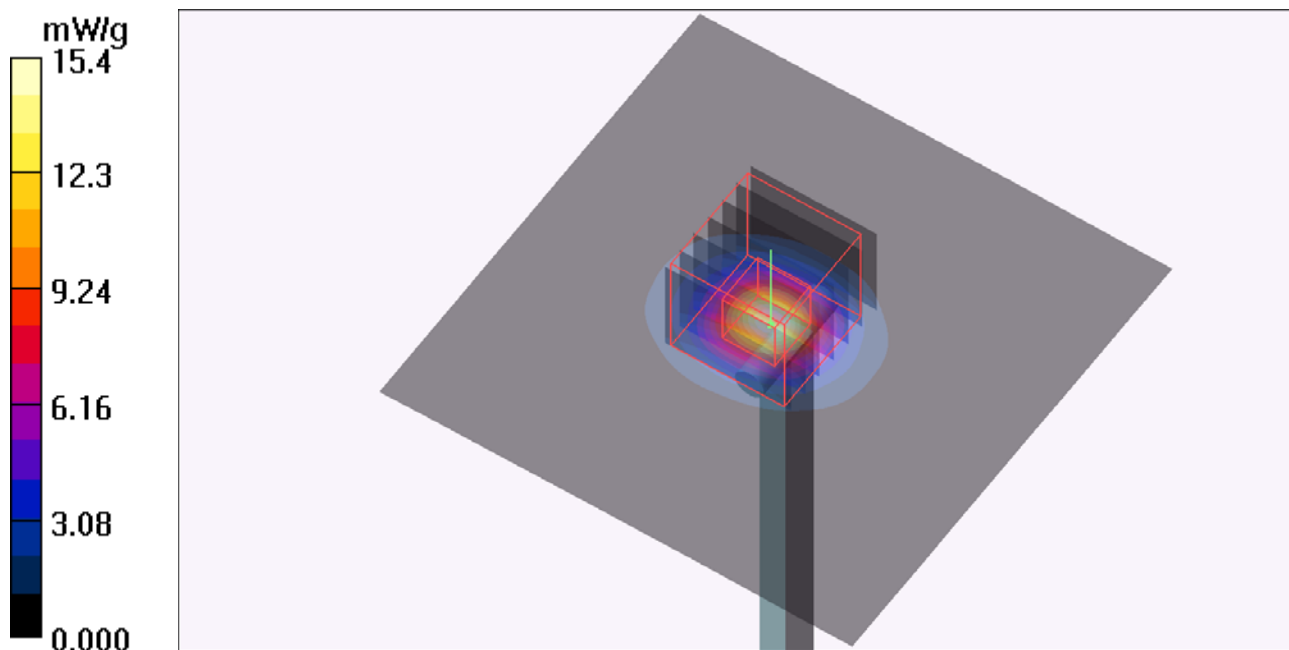
Pin=100mW, f=5800 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 55.9 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 27.7 W/kg

SAR(1 g) = 7.27 mW/g; SAR(10 g) = 2.11 mW/g

Maximum value of SAR (measured) = 15.4 mW/g



System Check_B5800_120104

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

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

Medium: B5G_0104 Medium parameters used: $f = 5800$ MHz; $\sigma = 6.21$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.5 °C; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.81, 3.81, 3.81); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=100mW, f=5800 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 16.9 mW/g

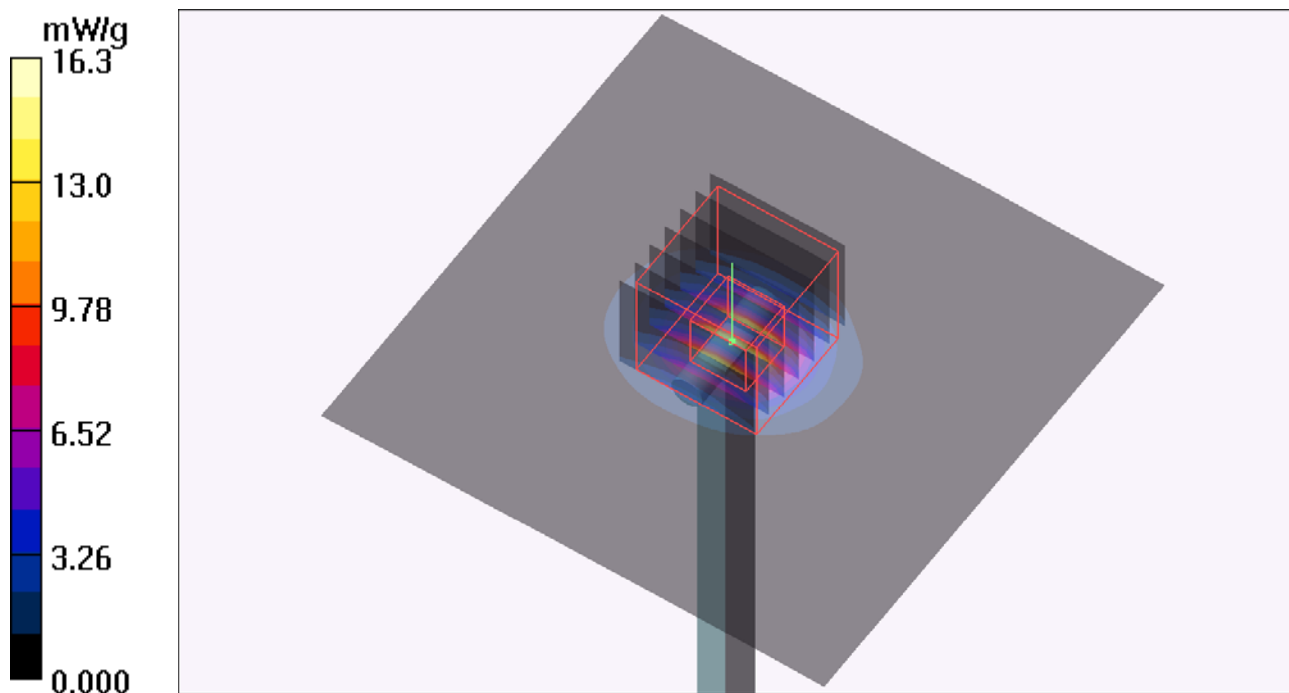
Pin=100mW, f=5800 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 56.8 V/m; Power Drift = 0.118 dB

Peak SAR (extrapolated) = 29.2 W/kg

SAR(1 g) = 7.7 mW/g; SAR(10 g) = 2.23 mW/g

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



System Check_B5800_120105

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

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

Medium: B5G_0105 Medium parameters used: $f = 5800$ MHz; $\sigma = 6.215$ mho/m; $\epsilon_r = 48.332$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.55, 4.55, 4.55); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Pin=100mW, f=5800 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 16.243 mW/g

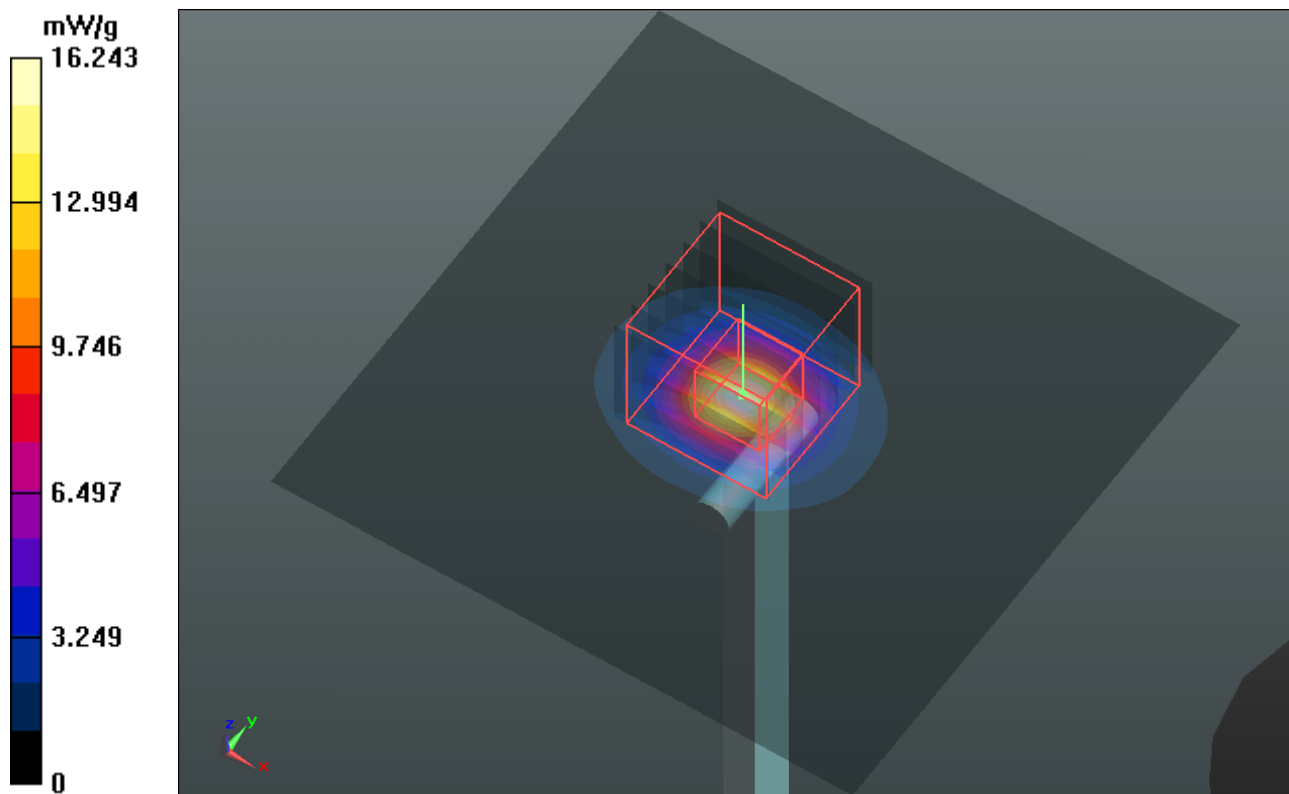
Pin=100mW, f=5800 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 56.304 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 31.1820

SAR(1 g) = 7.73 mW/g; SAR(10 g) = 2.23 mW/g

Maximum value of SAR (measured) = 16.417 mW/g



System Check_B5800_120218

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1018

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

Medium: B5G_0218 Medium parameters used: $f = 5800$ MHz; $\sigma = 6.253$ mho/m; $\epsilon_r = 46.677$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.81, 3.81, 3.81); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Pin=100mW, f=5800 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 15.987 mW/g

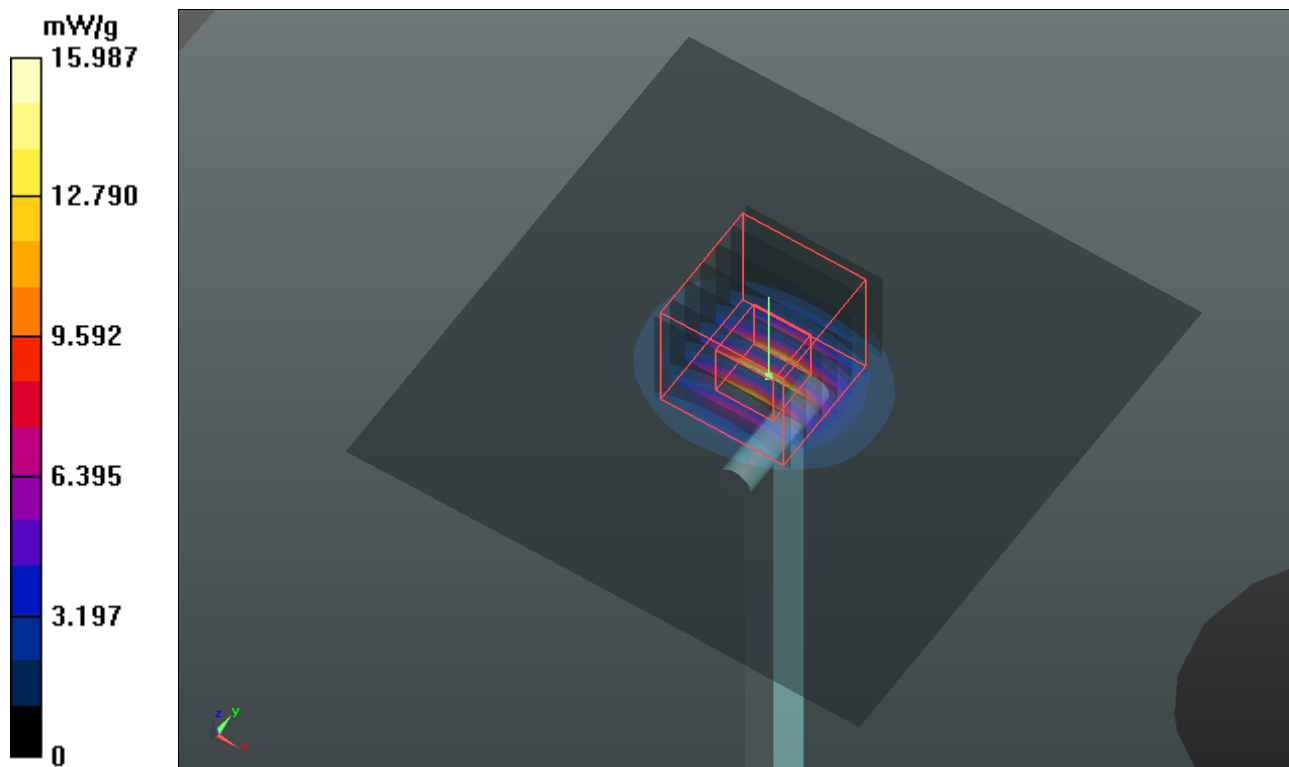
Pin=100mW, f=5800 MHz/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 55.862 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 27.9930

SAR(1 g) = 7.44 mW/g; SAR(10 g) = 2.17 mW/g

Maximum value of SAR (measured) = 15.634 mW/g





Appendix B. SAR Plots of SAR Measurement

The plots for SAR measurement are shown as follows.

P01 802.11b_Horizontal Up_0.5cm_Ch6_ANT 0

DUT: 111026C09

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: B2450_1129 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.187 mW/g

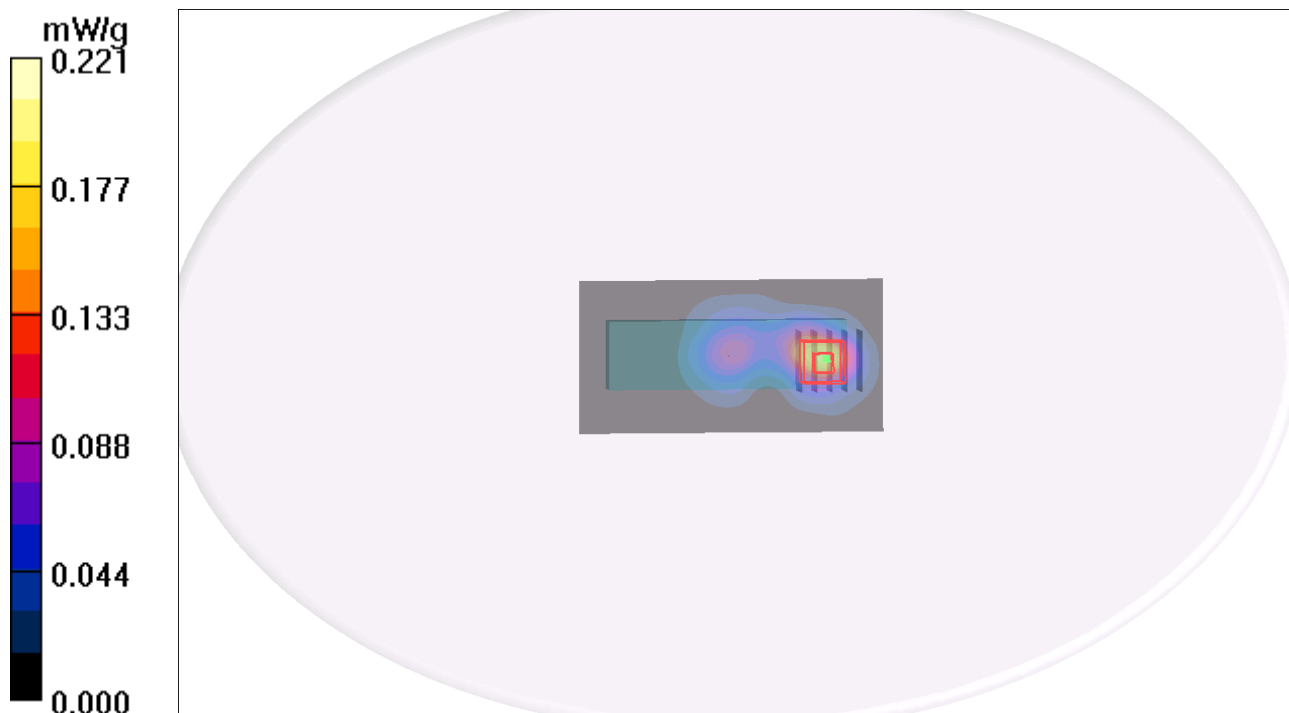
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.25 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 0.298 W/kg

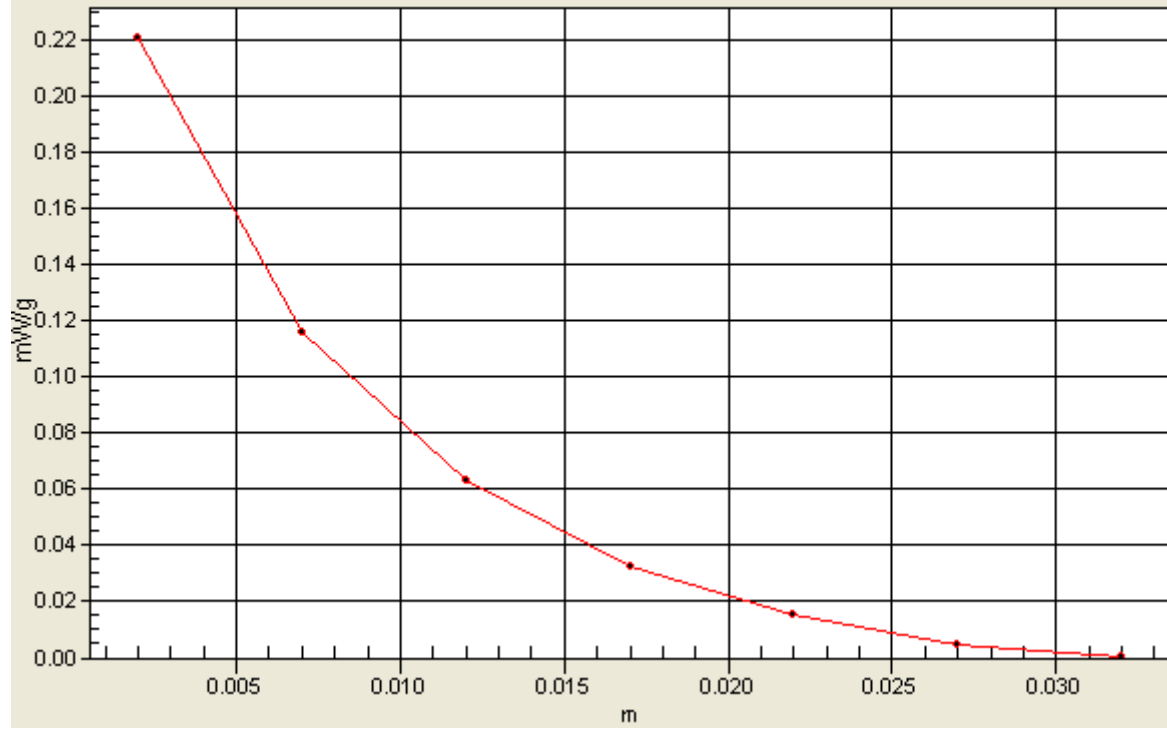
SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.075 mW/g

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



1g/10g Averaged SAR

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



P02 802.11b_Horizontal Down_0.5cm_Ch6_ANT 0

DUT: 111026C09

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: B2450_1129 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (81x41x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.209 mW/g

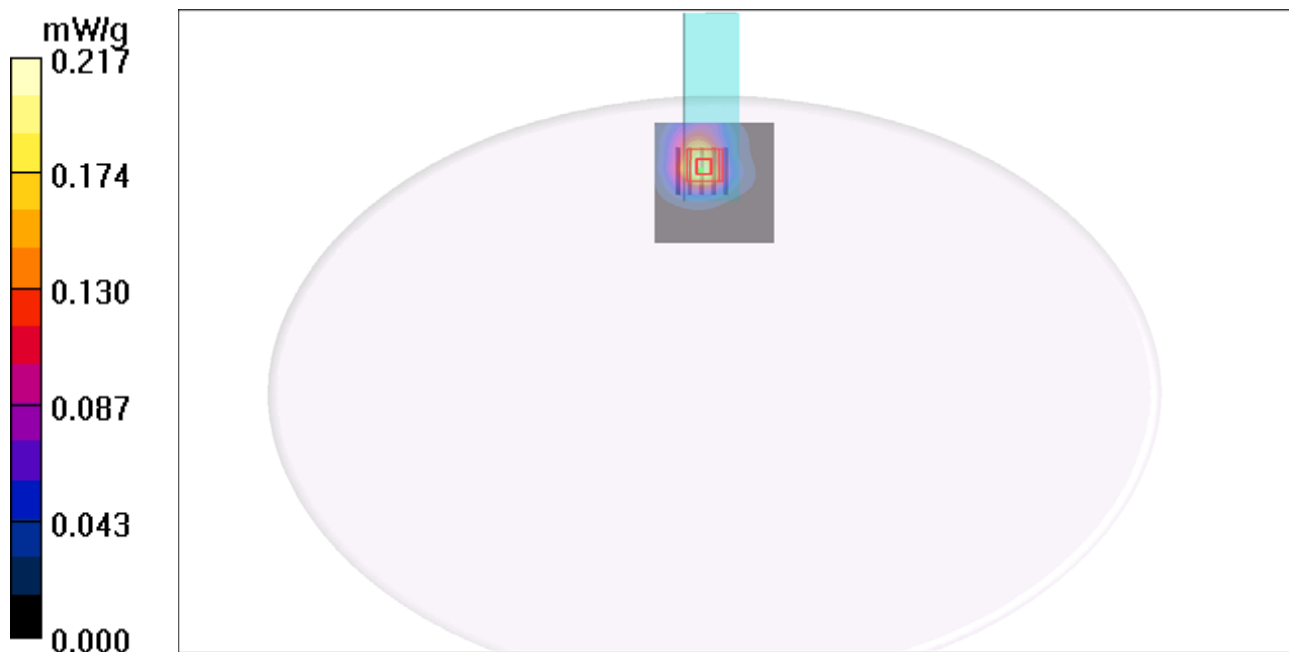
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.696 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 0.300 W/kg

SAR(1 g) = 0.153 mW/g; SAR(10 g) = 0.078 mW/g

Maximum value of SAR (measured) = 0.217 mW/g



P03 802.11b_Vertical Front_0.5cm_Ch6_ANT 0

DUT: 111026C09

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: B2450_1129 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.034 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.16 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 0.048 W/kg

SAR(1 g) = 0.023 mW/g; SAR(10 g) = 0.011 mW/g

Maximum value of SAR (measured) = 0.036 mW/g



P04 802.11b_Vertical Back_0.5cm_Ch6_ANT 0

DUT: 111026C09

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: B2450_1129 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.130 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.17 V/m; Power Drift = -0.116 dB

Peak SAR (extrapolated) = 0.173 W/kg

SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.046 mW/g

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

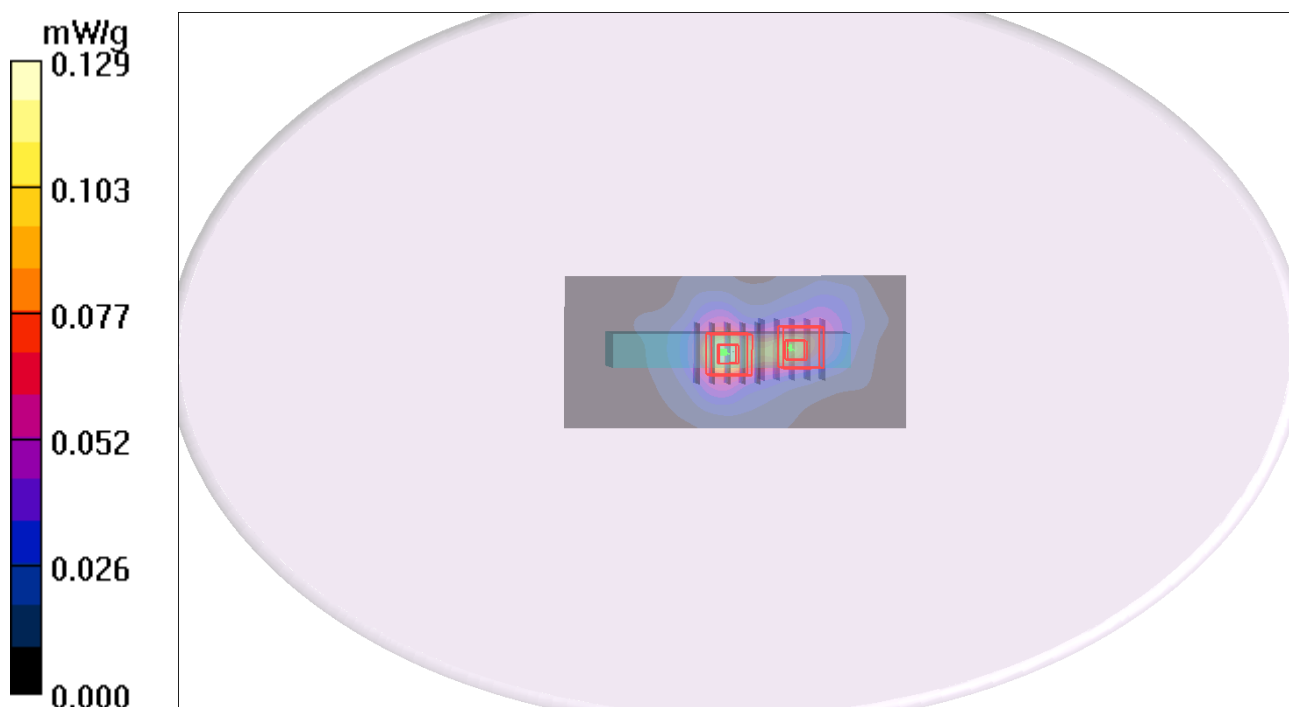
Ch6/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.17 V/m; Power Drift = -0.116 dB

Peak SAR (extrapolated) = 0.134 W/kg

SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.029 mW/g

Maximum value of SAR (measured) = 0.091 mW/g



P05 802.11b_Tip Mode_0.5cm_Ch6_ANT 0

DUT: 111026C09

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: B2450_1129 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (31x41x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.105 mW/g

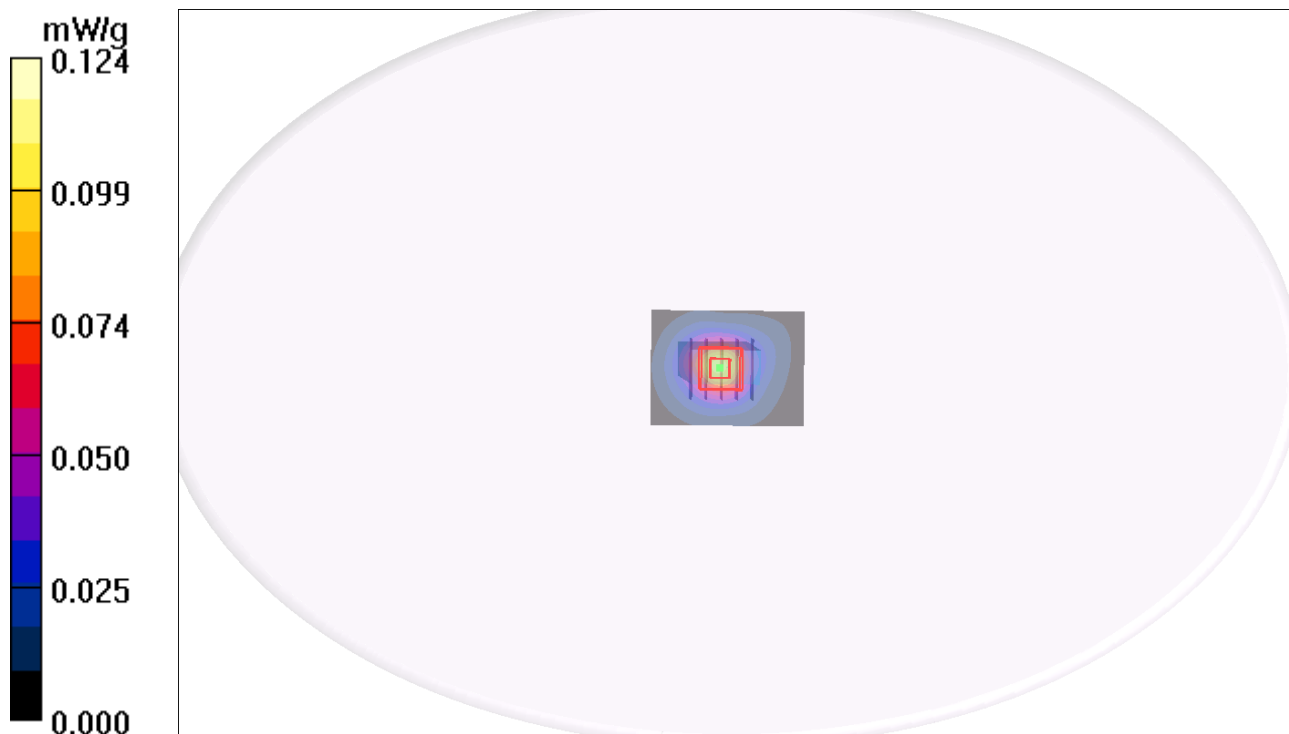
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.96 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 0.168 W/kg

SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.040 mW/g

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



P08 802.11n_HT20_Horizontal Up_0.5cm_Ch11_ANT 0+1

DUT: 111026C09

Communication System: 802.11n_20MHz; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: B2450_1129 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 50.9$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.3 °C

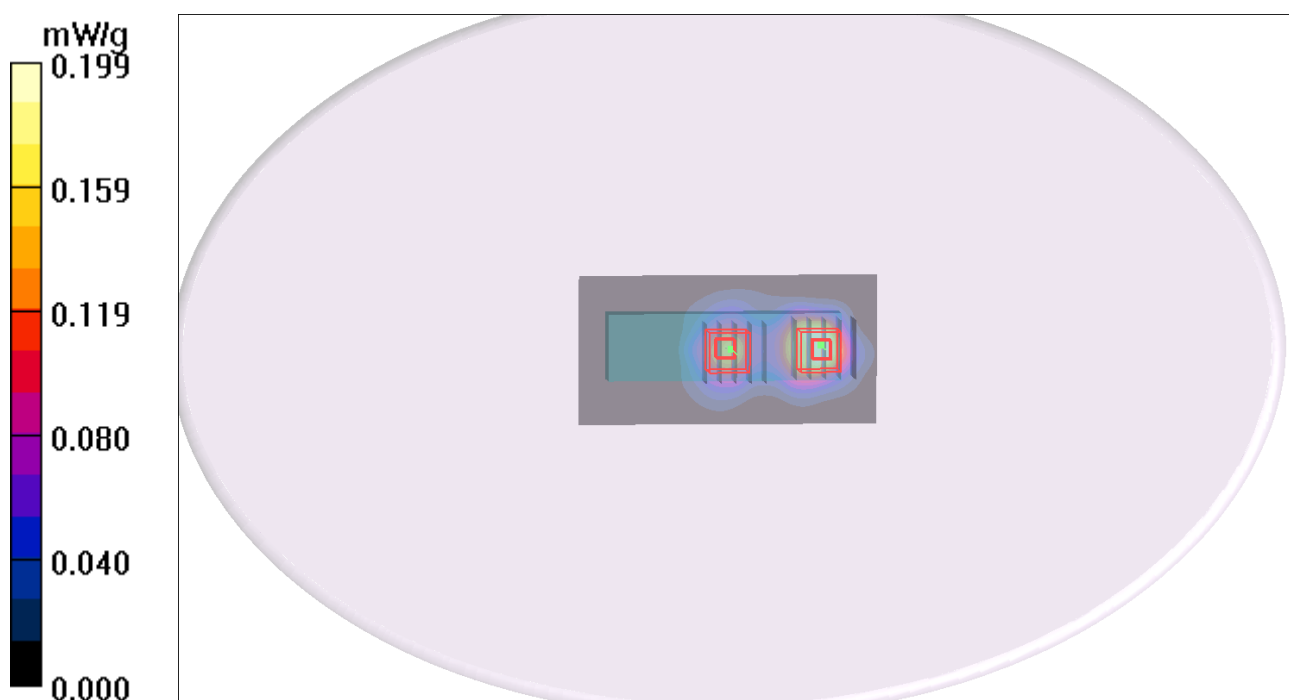
DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Postprocessing SW: SEMCAD, V1.8 Build 186

Ch11/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.234 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.27 V/m; Power Drift = -0.033 dB
Peak SAR (extrapolated) = 0.272 W/kg
SAR(1 g) = 0.138 mW/g; SAR(10 g) = 0.072 mW/g
Maximum value of SAR (measured) = 0.199 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.27 V/m; Power Drift = -0.033 dB
Peak SAR (extrapolated) = 0.184 W/kg
SAR(1 g) = 0.097 mW/g; SAR(10 g) = 0.051 mW/g
Maximum value of SAR (measured) = 0.133 mW/g



P80 802.11n_HT20_Horizontal Down_0.5cm_Ch11_ANT 0+1

DUT: 111026C09

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_0217 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.986$ mho/m; $\epsilon_r = 51.27$; $\rho =$

1000 kg/m³

Ambient Temperature : 21.5 °C ; Liquid Temperature : 20.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch11/Area Scan (81x41x1): Measurement grid: dx=20mm, dy=20mm

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

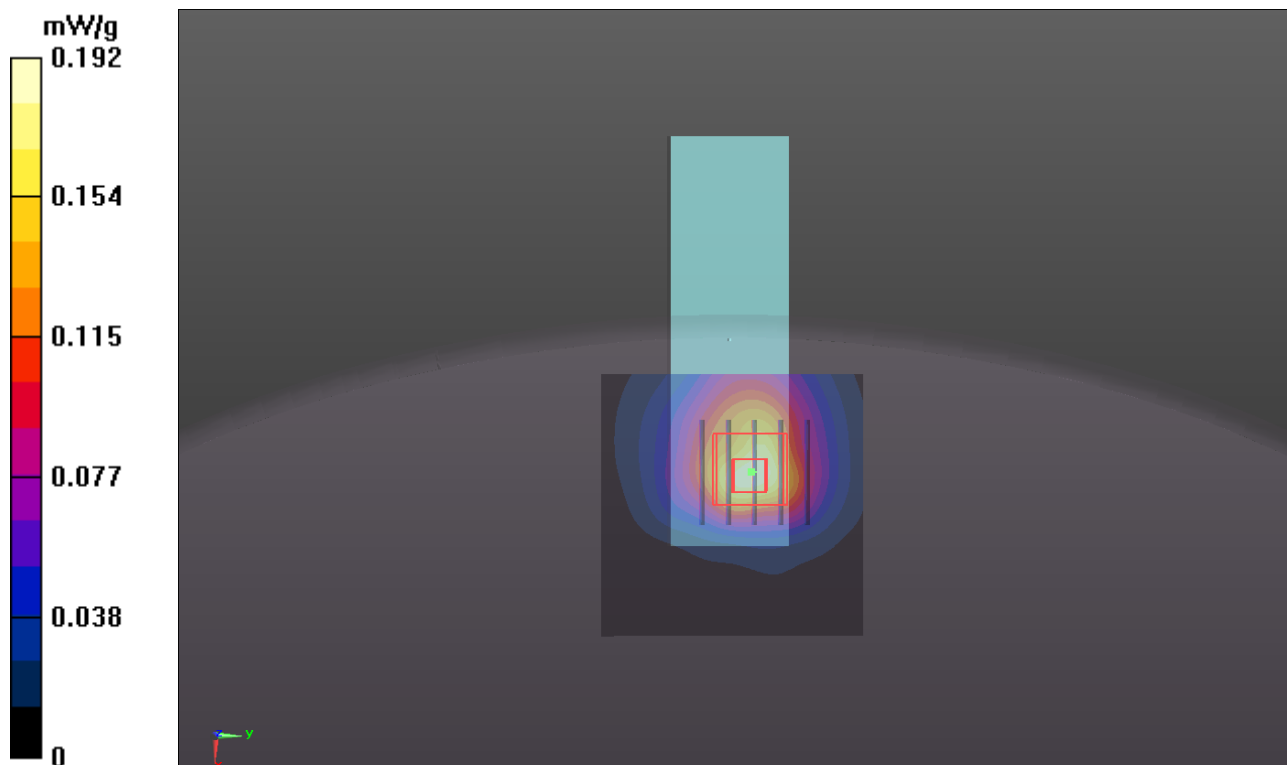
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.316 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.2630

SAR(1 g) = 0.135 mW/g; SAR(10 g) = 0.071 mW/g

Maximum value of SAR (measured) = 0.195 mW/g



P81 802.11n_HT20_Verical Front_0.5cm_Ch11_ANT 0+1

DUT: 111026C09

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_0217 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.986$ mho/m; $\epsilon_r = 51.27$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.5 °C ; Liquid Temperature : 20.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch11/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.099 mW/g

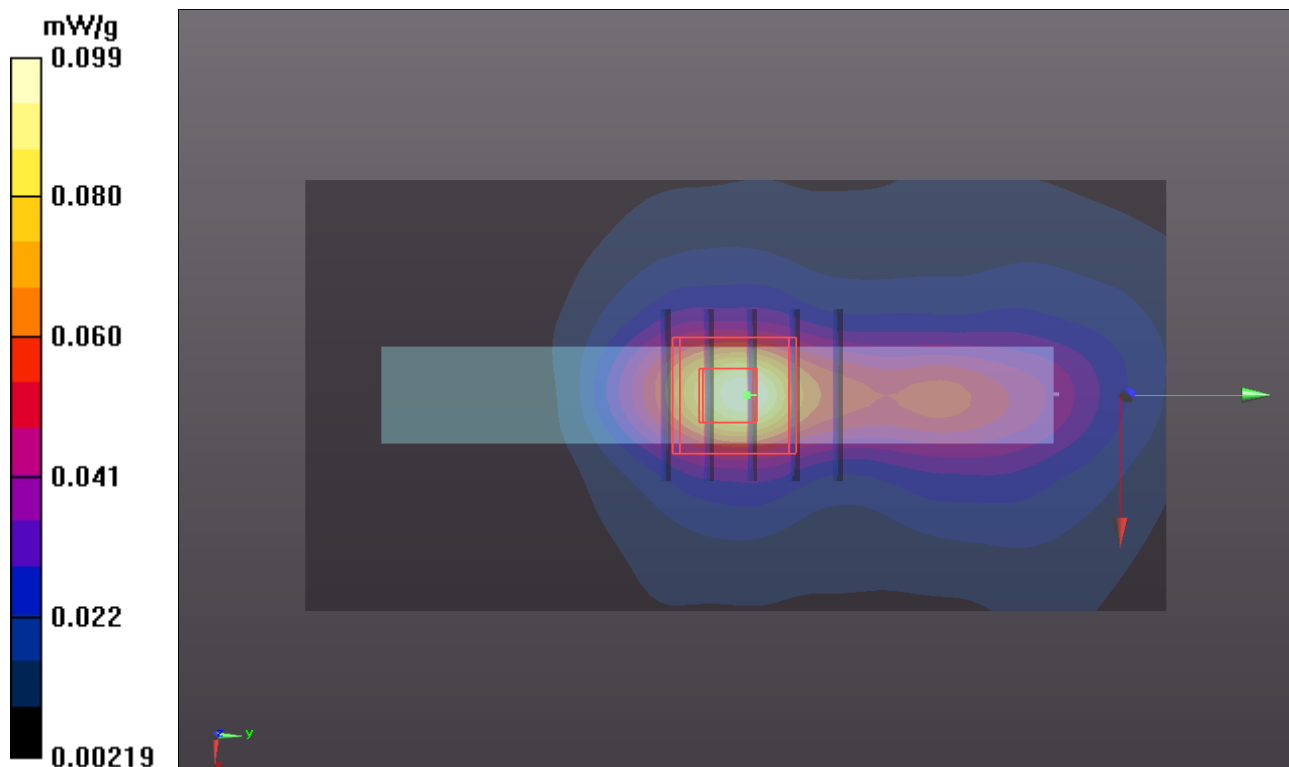
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.495 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.1310

SAR(1 g) = 0.067 mW/g; SAR(10 g) = 0.034 mW/g

Maximum value of SAR (measured) = 0.095 mW/g



P82 802.11n_HT20_Veritical Back_0.5cm_Ch11_ANT 0+1

DUT: 111026C09

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_0217 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.986$ mho/m; $\epsilon_r = 51.27$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.5 °C ; Liquid Temperature : 20.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch11/Area Scan (41x81x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.090 mW/g

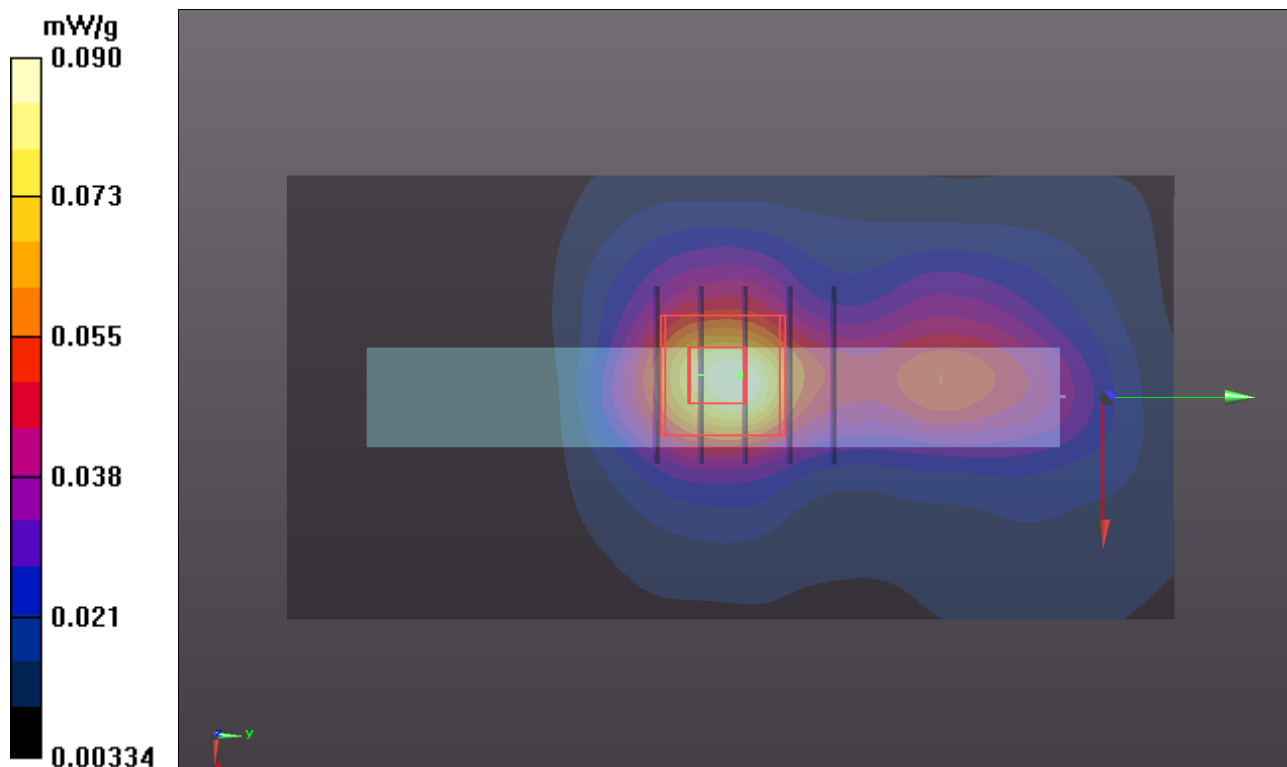
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.556 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.1270

SAR(1 g) = 0.063 mW/g; SAR(10 g) = 0.033 mW/g

Maximum value of SAR (measured) = 0.088 mW/g



P83 802.11n_HT20_Tip Mode_0.5cm_Ch11_ANT 0+1

DUT: 111026C09

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B2450_0217 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.986$ mho/m; $\epsilon_r = 51.27$; $\rho =$

1000 kg/m³

Ambient Temperature : 21.5 °C ; Liquid Temperature : 20.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(6.89, 6.89, 6.89); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch11/Area Scan (41x41x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 0.114 mW/g

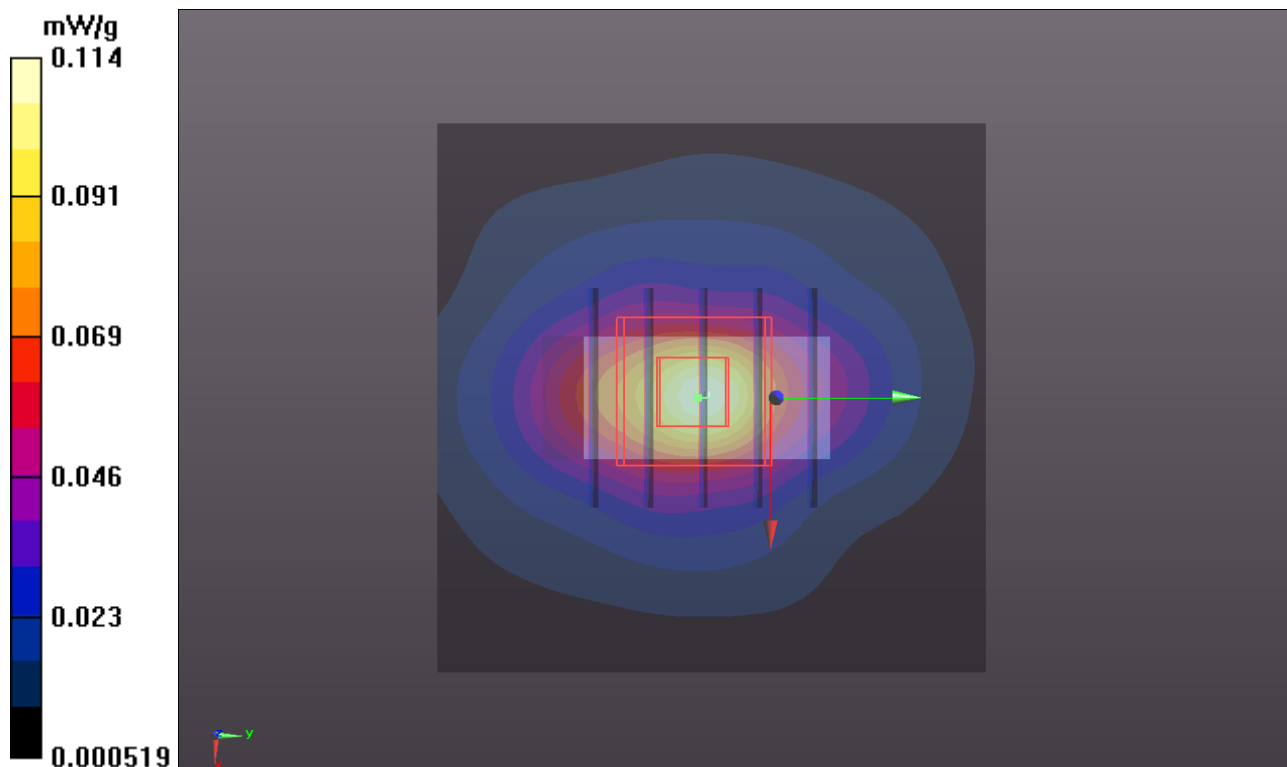
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.675 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.1640

SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.039 mW/g

Maximum value of SAR (measured) = 0.118 mW/g



P29 802.11a_Horizontal Up_0.5cm_Ch48_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: B5G_1128 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.42$ mho/m; $\epsilon_r = 48.2$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.7 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch48/Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.088 mW/g

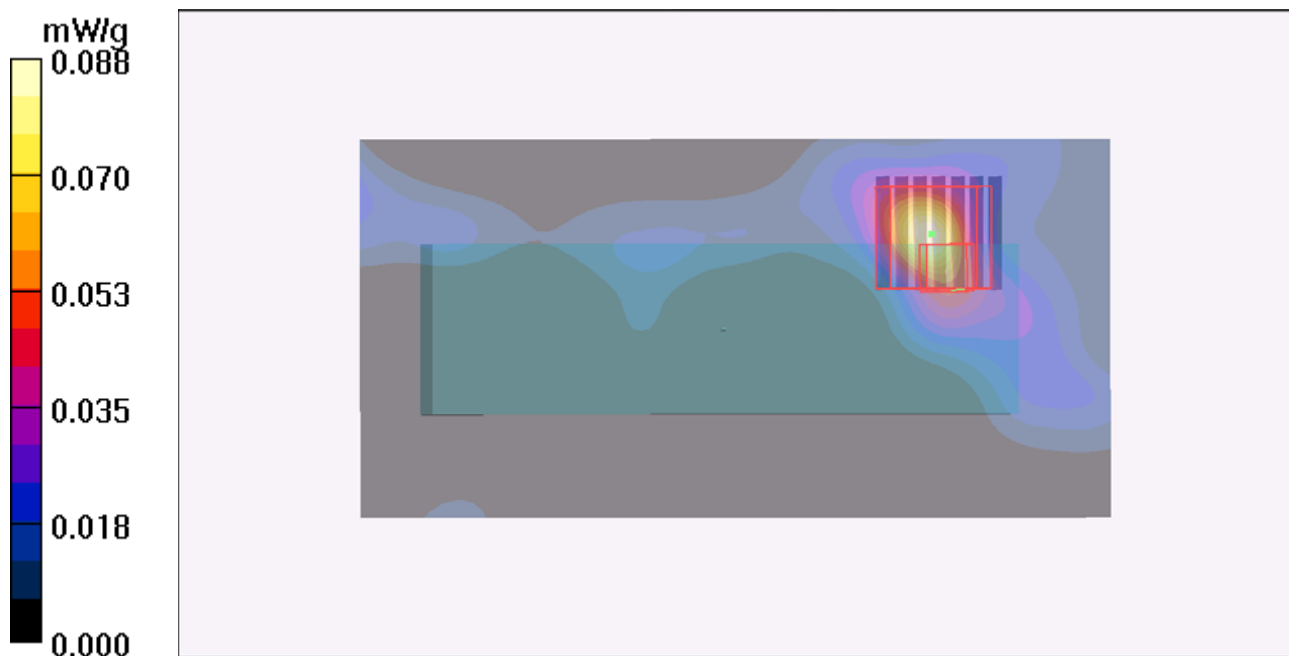
Ch48/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.24 V/m; Power Drift = -0.186 dB

Peak SAR (extrapolated) = 0.354 W/kg

SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.016 mW/g

Maximum value of SAR (measured) = 0.202 mW/g



P42 802.11a_Horizontal Downm_0.5cm_Ch48_ANT 0

DUT: 111026C09

Communication System: WLAN 5G; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: B5G_0105 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.305$ mho/m; $\epsilon_r = 49.188$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.81, 4.81, 4.81); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch48/Area Scan (161x81x1): Measurement grid: dx=10mm, dy=10mm

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

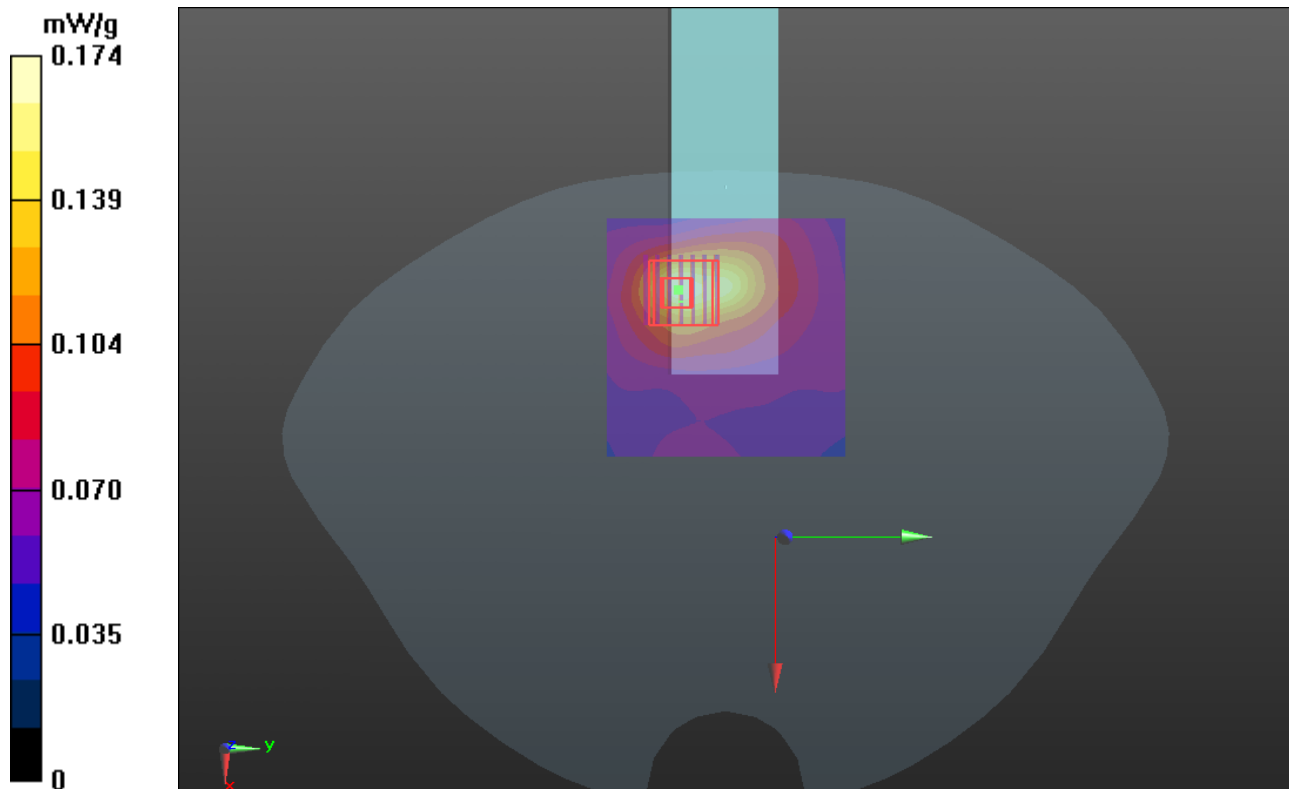
Ch48/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 3.387 V/m; Power Drift = -0.193 dB

Peak SAR (extrapolated) = 0.5420

SAR(1 g) = 0.123 mW/g; SAR(10 g) = 0.082 mW/g

Maximum value of SAR (measured) = 0.179 mW/g



P43 802.11a_Verical Back_0.5cm_Ch48_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: B5G_0104 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.3$ mho/m; $\epsilon_r = 49.2$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C ; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch48/Area Scan (61x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.099 mW/g

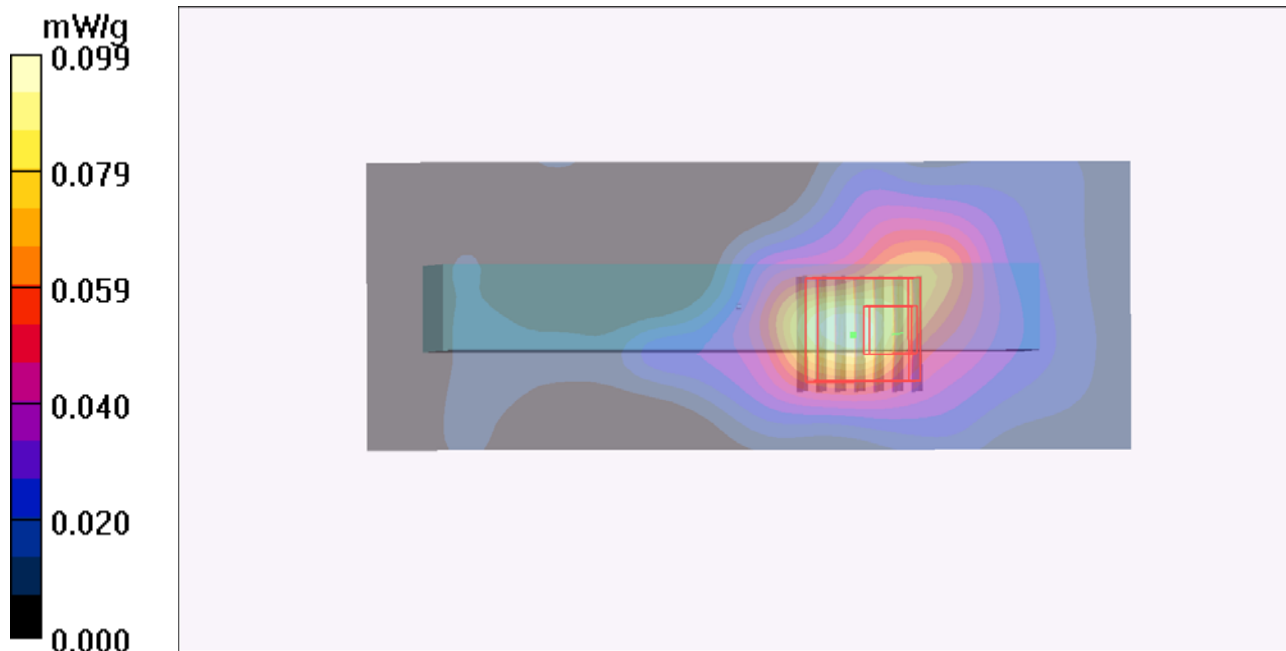
Ch48/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.90 V/m; Power Drift = -0.008 dB

Peak SAR (extrapolated) = 0.302 W/kg

SAR(1 g) = 0.089 mW/g; SAR(10 g) = 0.025 mW/g

Maximum value of SAR (measured) = 0.173 mW/g



P44 802.11a_Verical Back_0.5cm_Ch48_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: B5G_0104 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.3$ mho/m; $\epsilon_r = 49.2$; $\rho = 1000$ kg/m³

Ambient Temperature : 21 °C; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch48/Area Scan (61x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.148 mW/g

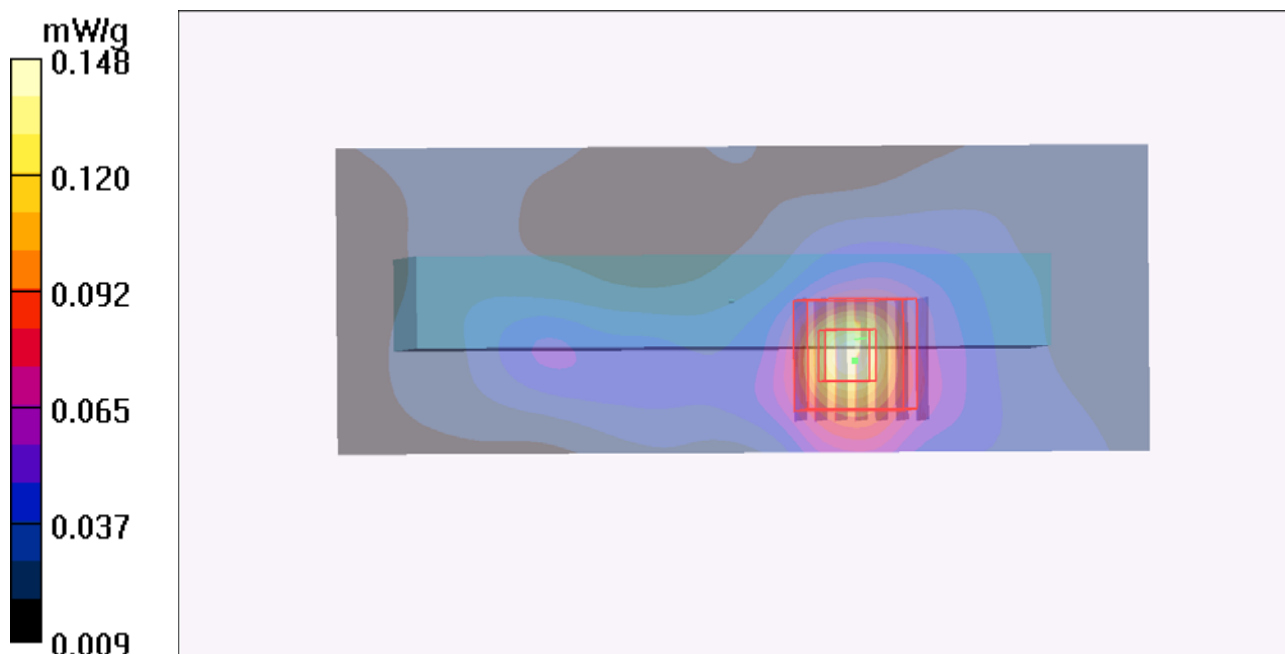
Ch48/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.45 V/m; Power Drift = 0.169 dB

Peak SAR (extrapolated) = 0.886 W/kg

SAR(1 g) = 0.093 mW/g; SAR(10 g) = 0.024 mW/g

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



P45 802.11a_Tip Mode_0.5cm_Ch48_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: B5G_0104 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.3$ mho/m; $\epsilon_r = 49.2$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.5 °C ; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch48/Area Scan (61x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.150 mW/g

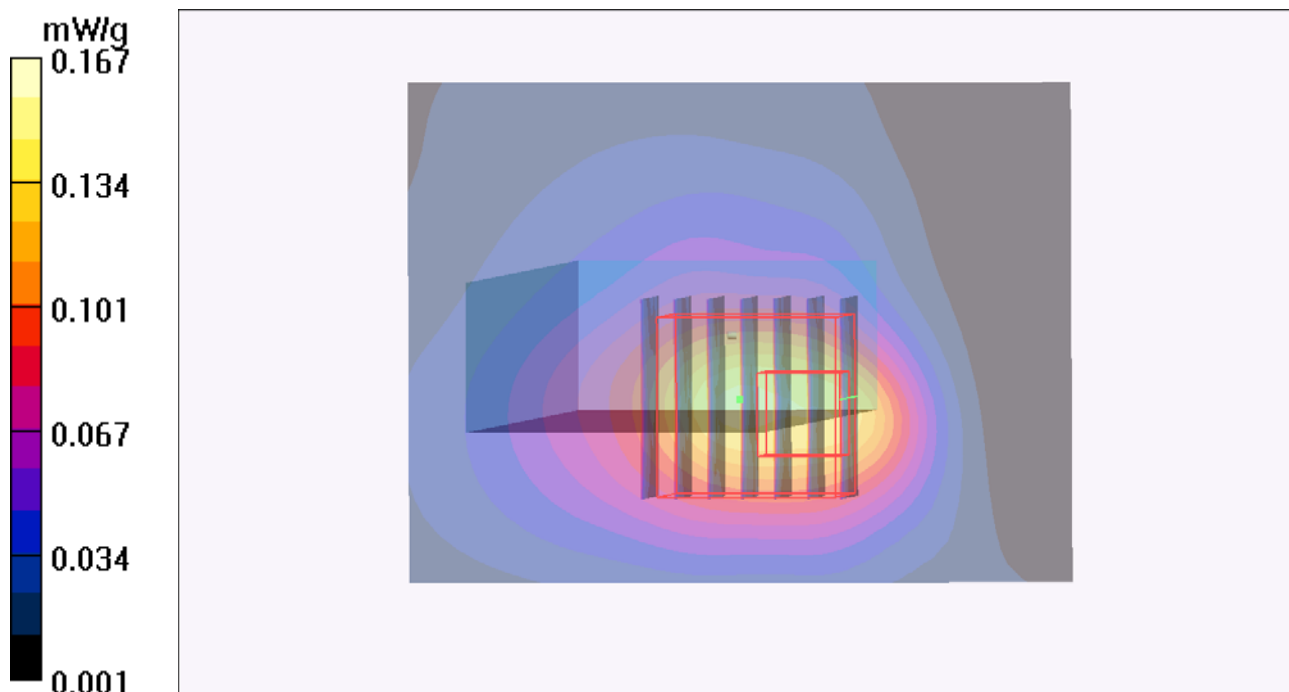
Ch48/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 4.97 V/m; Power Drift = -0.150 dB

Peak SAR (extrapolated) = 0.452 W/kg

SAR(1 g) = 0.093 mW/g; SAR(10 g) = 0.037 mW/g

Maximum value of SAR (measured) = 0.167 mW/g



P84 802.11n_HT20_Horizontal Up_0.5cm_Ch36_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5180$ MHz; $\sigma = 5.155$ mho/m; $\epsilon_r = 47.497$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch36/Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.087 mW/g

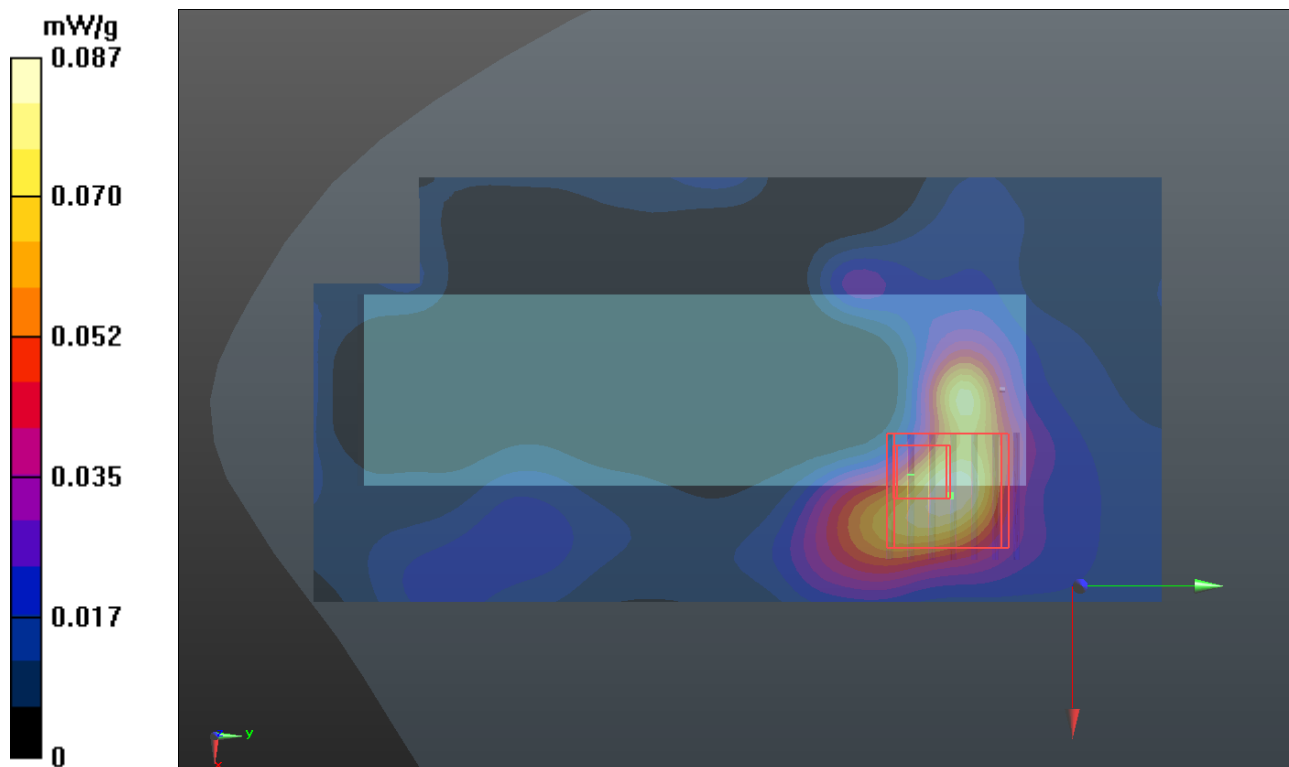
Ch36/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.937 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.2660

SAR(1 g) = 0.053 mW/g; SAR(10 g) = 0.020 mW/g

Maximum value of SAR (measured) = 0.099 mW/g



P46 802.11n_HT20_Horizontal Downm_0.5cm_Ch36_ANT 0+1

DUT: 111026C09

Communication System: WLAN 5G; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: B5G_0105 Medium parameters used: $f = 5180$ MHz; $\sigma = 5.206$ mho/m; $\epsilon_r = 49.273$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.81, 4.81, 4.81); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch36/Area Scan (161x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.105 mW/g

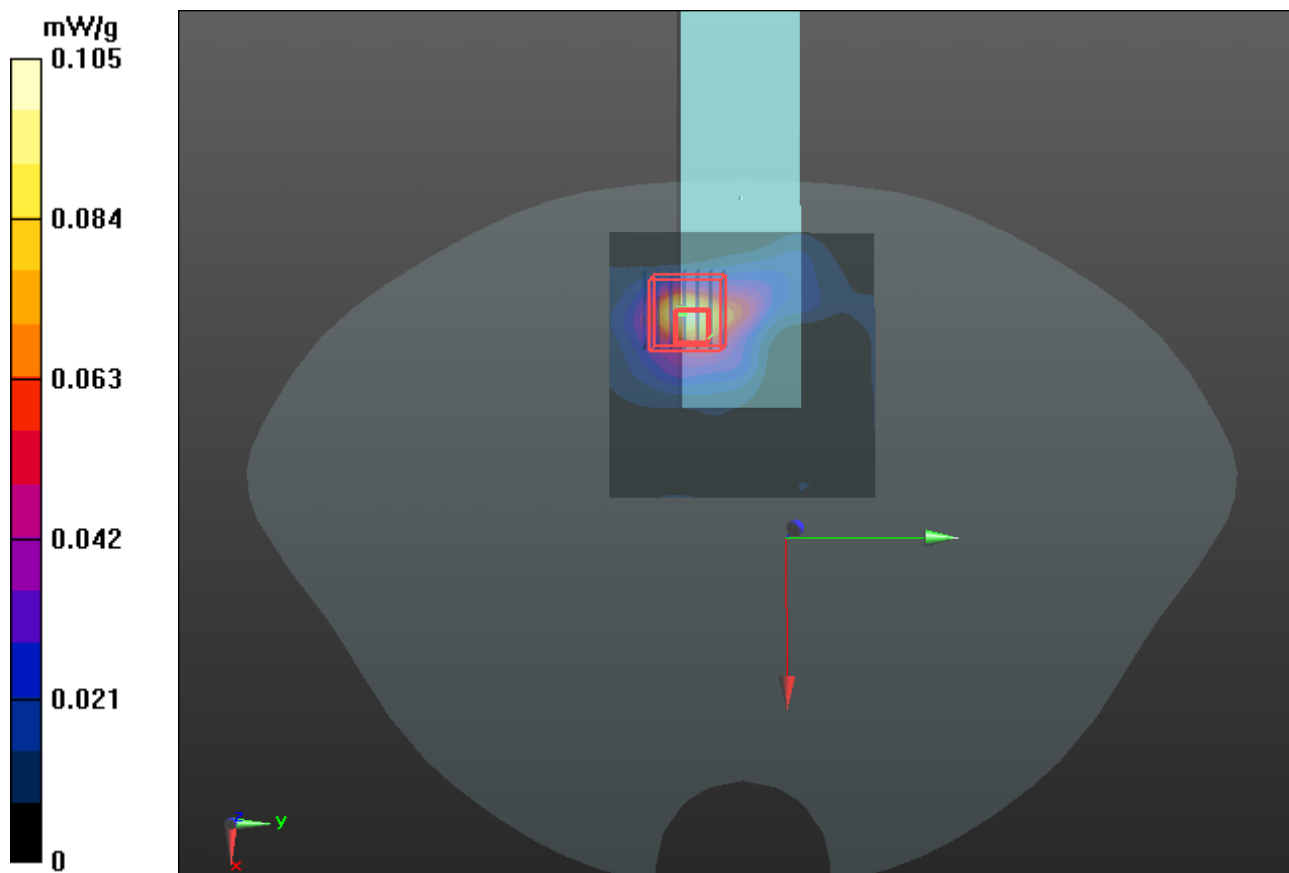
Ch36/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.154 V/m; Power Drift = 0.151 dB

Peak SAR (extrapolated) = 0.3650

SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.016 mW/g

Maximum value of SAR (measured) = 0.113 mW/g



P85 802.11n_HT20_Vertical Front_0.5cm_Ch36_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5180$ MHz; $\sigma = 5.155$ mho/m; $\epsilon_r = 47.497$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch36/Area Scan (81x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.041 mW/g

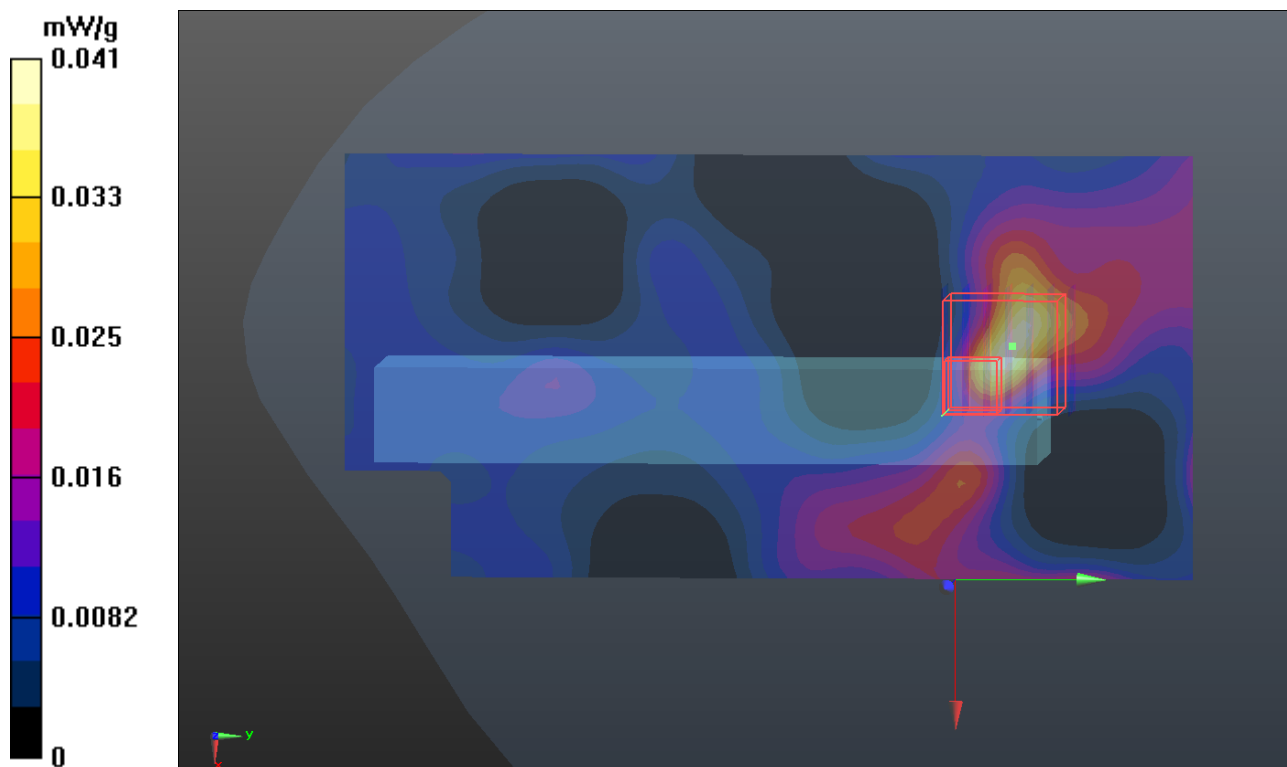
Ch36/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.495 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.3580

SAR(1 g) = 0.025 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.060 mW/g



P86 802.11n_HT20_Vertical Back_0.5cm_Ch36_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5180$ MHz; $\sigma = 5.155$ mho/m; $\epsilon_r = 47.497$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch36/Area Scan (81x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.040 mW/g

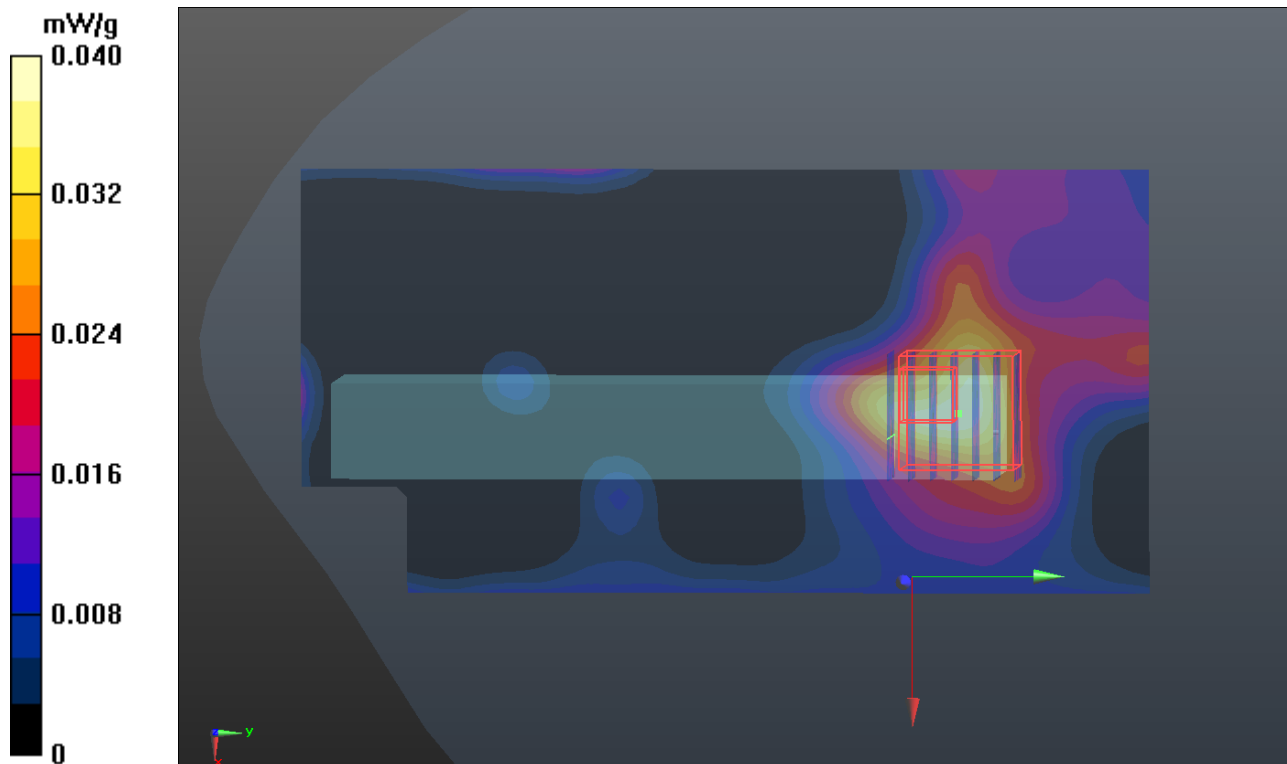
Ch36/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.024 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.1830

SAR(1 g) = 0.019 mW/g; SAR(10 g) = 0.011 mW/g

Maximum value of SAR (measured) = 0.041 mW/g



P87 802.11n_HT20_Tip Mode_0.5cm_Ch36_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5180$ MHz; $\sigma = 5.155$ mho/m; $\epsilon_r = 47.497$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.28, 4.28, 4.28); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch36/Area Scan (121x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.047 mW/g

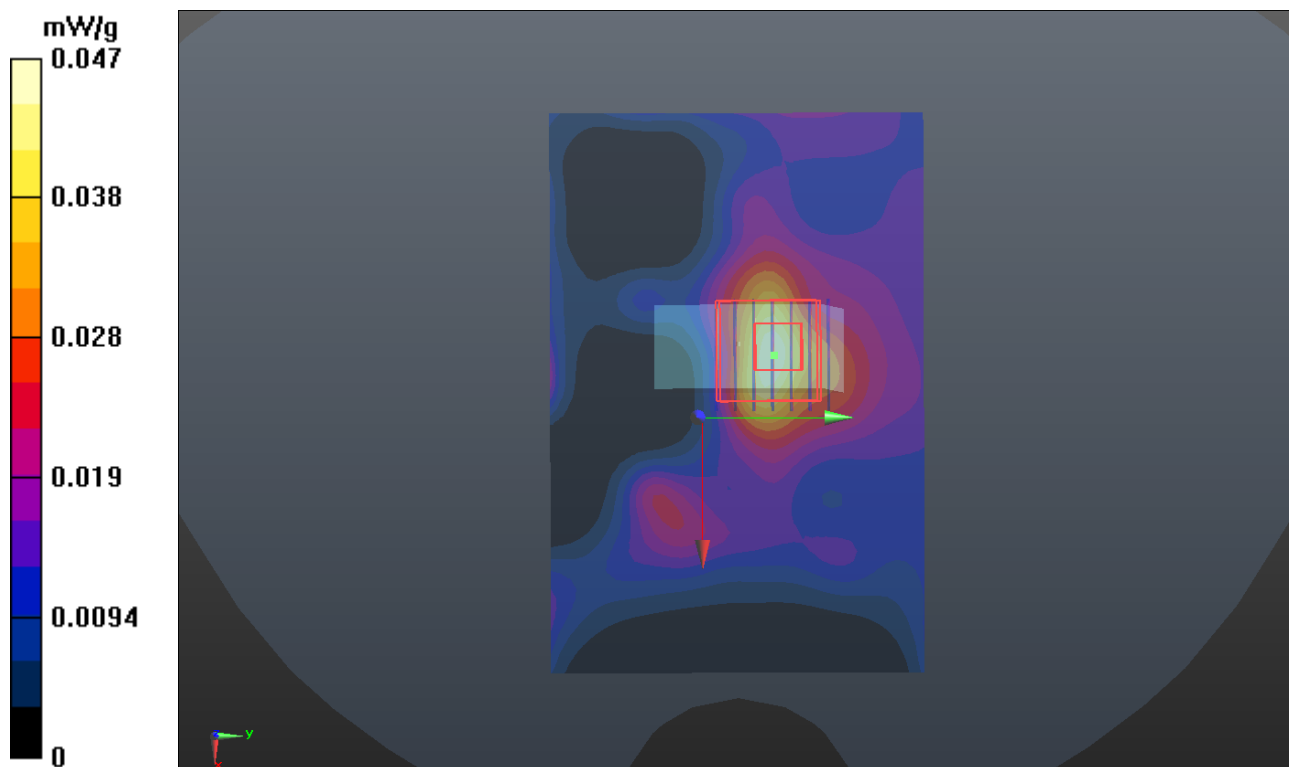
Ch36/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 3.263 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.1740

SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.017 mW/g

Maximum value of SAR (measured) = 0.057 mW/g



P16 802.11a_Horizontal Up_0.5cm_Ch52_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium: B5G_1128 Medium parameters used: $f = 5260$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.7 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.11, 4.11, 4.11); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch52/Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.151 mW/g

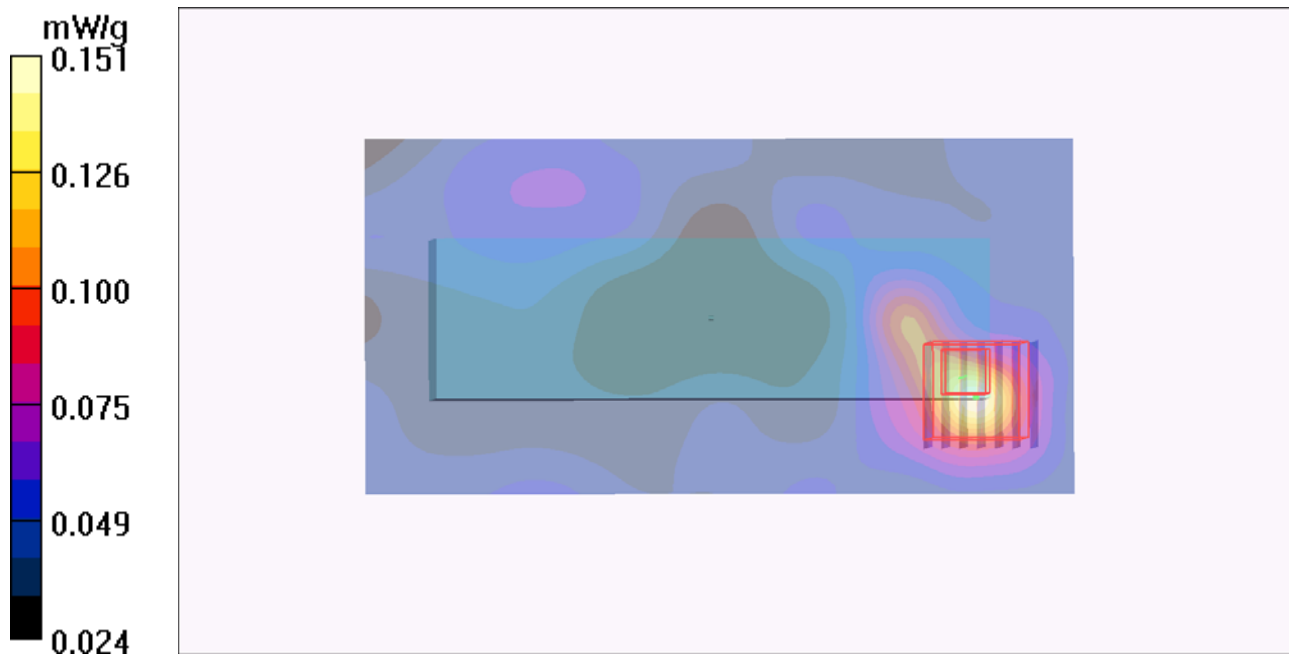
Ch52/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.83 V/m; Power Drift = 0.176 dB

Peak SAR (extrapolated) = 0.572 W/kg

SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.070 mW/g

Maximum value of SAR (measured) = 0.274 mW/g



P17 802.11a_Horizontal Down_0.5cm_Ch52_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium: B5G_1128 Medium parameters used: $f = 5260$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 48.3$; $\rho =$

1000 kg/m³

Ambient Temperature : 22.7 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.11, 4.11, 4.11); Calibrated: 2011/10/26

- Sensor-Surface: 2mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29

- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039

- ; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch52/Area Scan (161x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.115 mW/g

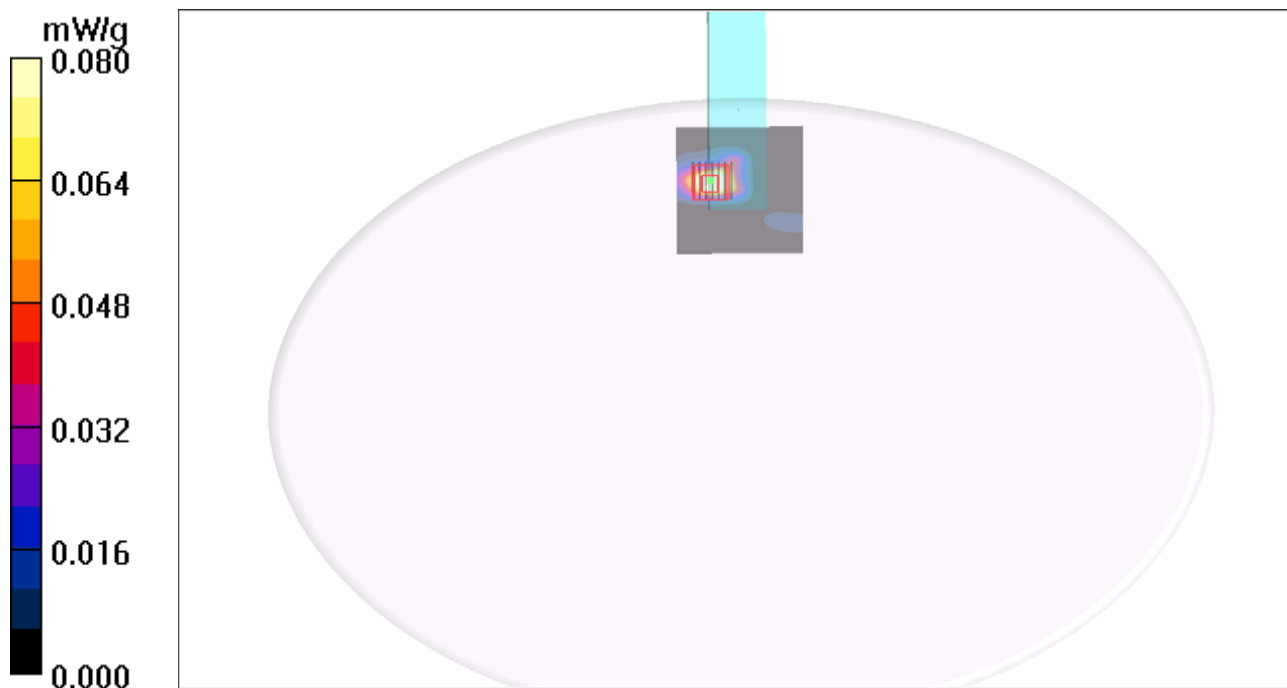
Ch52/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 0.481 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.295 W/kg

SAR(1 g) = 0.037 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.080 mW/g



P18 802.11a_Vertical Front_0.5cm_Ch52_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium: B5G_1128 Medium parameters used: $f = 5260$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.11, 4.11, 4.11); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch52/Area Scan (81x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.066 mW/g

Ch52/Zoom Scan (7x7x9)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.34 V/m; Power Drift = 0.165 dB

Peak SAR (extrapolated) = 0.155 W/kg

SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.042 mW/g

Maximum value of SAR (measured) = 0.072 mW/g

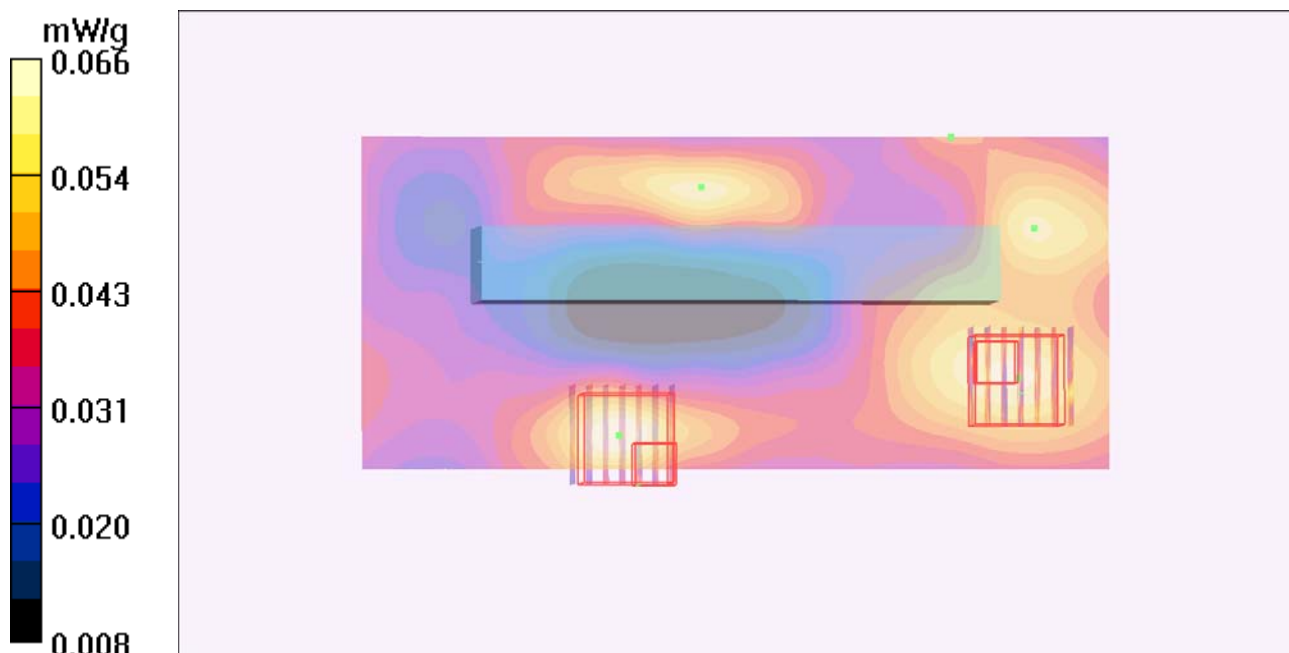
Ch52/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.34 V/m; Power Drift = 0.165 dB

Peak SAR (extrapolated) = 0.073 W/kg

SAR(1 g) = 0.032 mW/g; SAR(10 g) = 0.029 mW/g

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



P19 802.11a_Verical Back_0.5cm_Ch52_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium: B5G_1128 Medium parameters used: $f = 5260$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.11, 4.11, 4.11); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch52/Area Scan (61x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.084 mW/g

Ch52/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.96 V/m; Power Drift = 0.138 dB

Peak SAR (extrapolated) = 0.267 W/kg

SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.050 mW/g

Maximum value of SAR (measured) = 0.154 mW/g

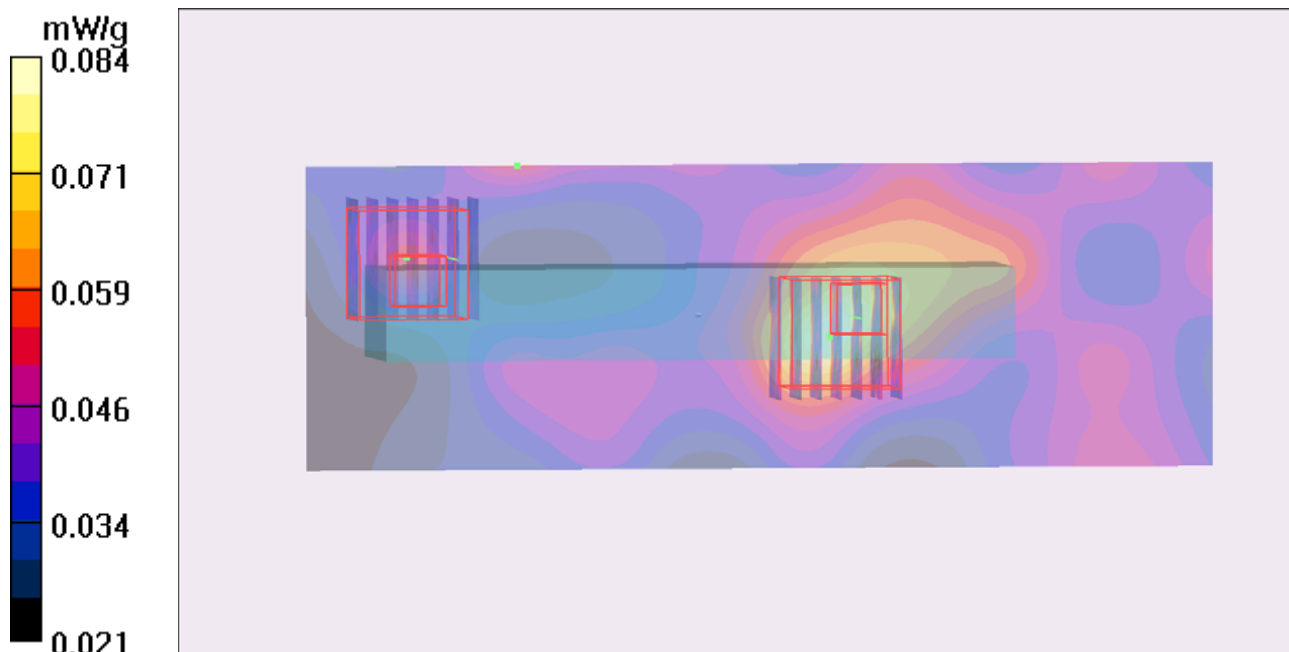
Ch52/Zoom Scan (7x7x9)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.96 V/m; Power Drift = 0.138 dB

Peak SAR (extrapolated) = 0.090 W/kg

SAR(1 g) = 0.040 mW/g; SAR(10 g) = 0.035 mW/g

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



P20 802.11a_Tip Mode_0.5cm_Ch52_ANT 0

DUT: 111026C09

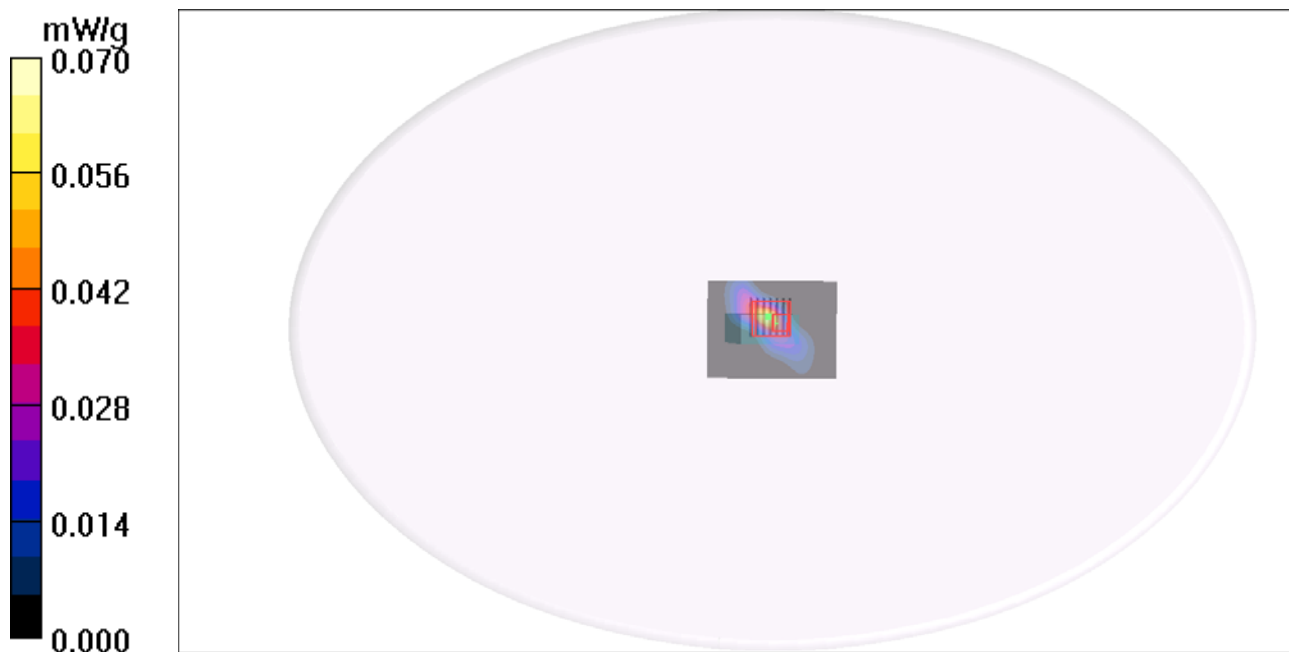
Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1
Medium: B5G_1128 Medium parameters used: $f = 5260$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³
Ambient Temperature : 22.7 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.11, 4.11, 4.11); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- ; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch52/Area Scan (61x81x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.063 mW/g

Ch52/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 2.94 V/m; Power Drift = 0.190 dB
Peak SAR (extrapolated) = 0.389 W/kg
SAR(1 g) = 0.037 mW/g; SAR(10 g) = 0.013 mW/g
Maximum value of SAR (measured) = 0.070 mW/g



P40 802.11n_HT20_Horizontal Up_0.5cm_Ch60_ANT 0+1

DUT: 111026C09

Communication System: 802.11aN_20MHz; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: B5G_0104 Medium parameters used: $f = 5300$ MHz; $\sigma = 5.38$ mho/m; $\epsilon_r = 49.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C ; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.11, 4.11, 4.11); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch60/Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.187 mW/g

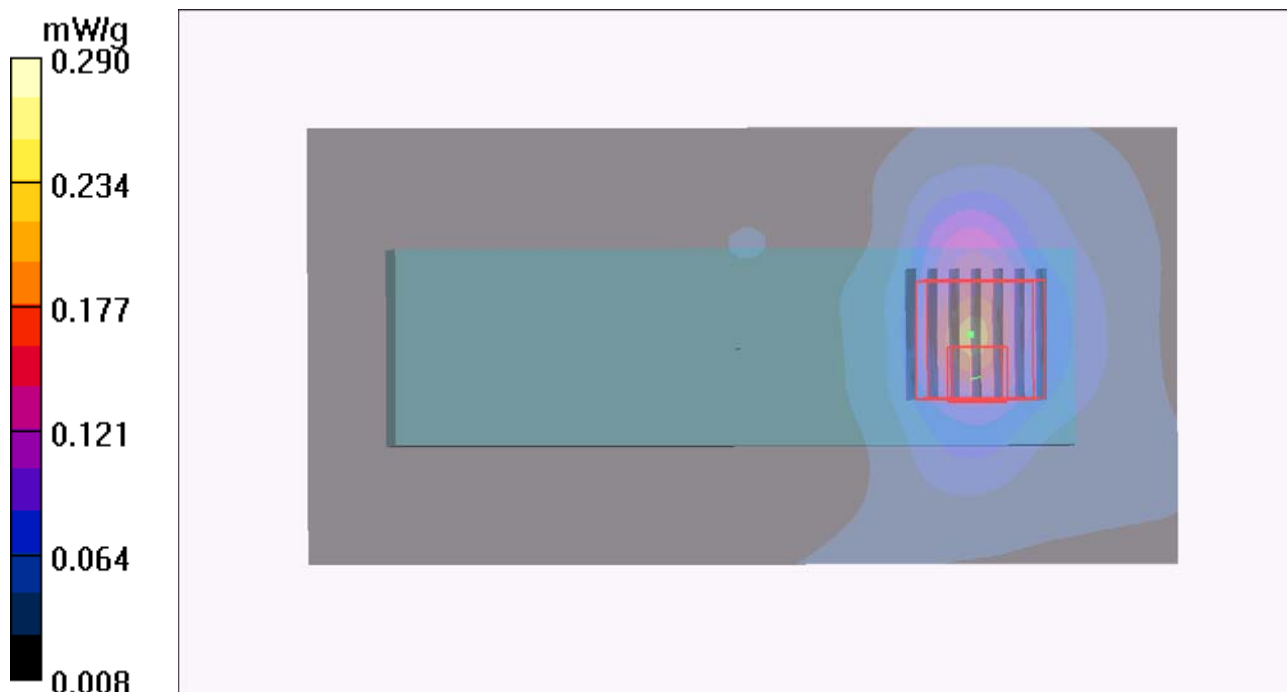
Ch60/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.32 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.619 W/kg

SAR(1 g) = 0.157 mW/g; SAR(10 g) = 0.063 mW/g

Maximum value of SAR (measured) = 0.290 mW/g



P88 802.11n_HT20_Horizontal Down_0.5cm_Ch60_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5300$ MHz; $\sigma = 5.33$ mho/m; $\epsilon_r = 47.678$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.11, 4.11, 4.11); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch60/Area Scan (161x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.101 mW/g

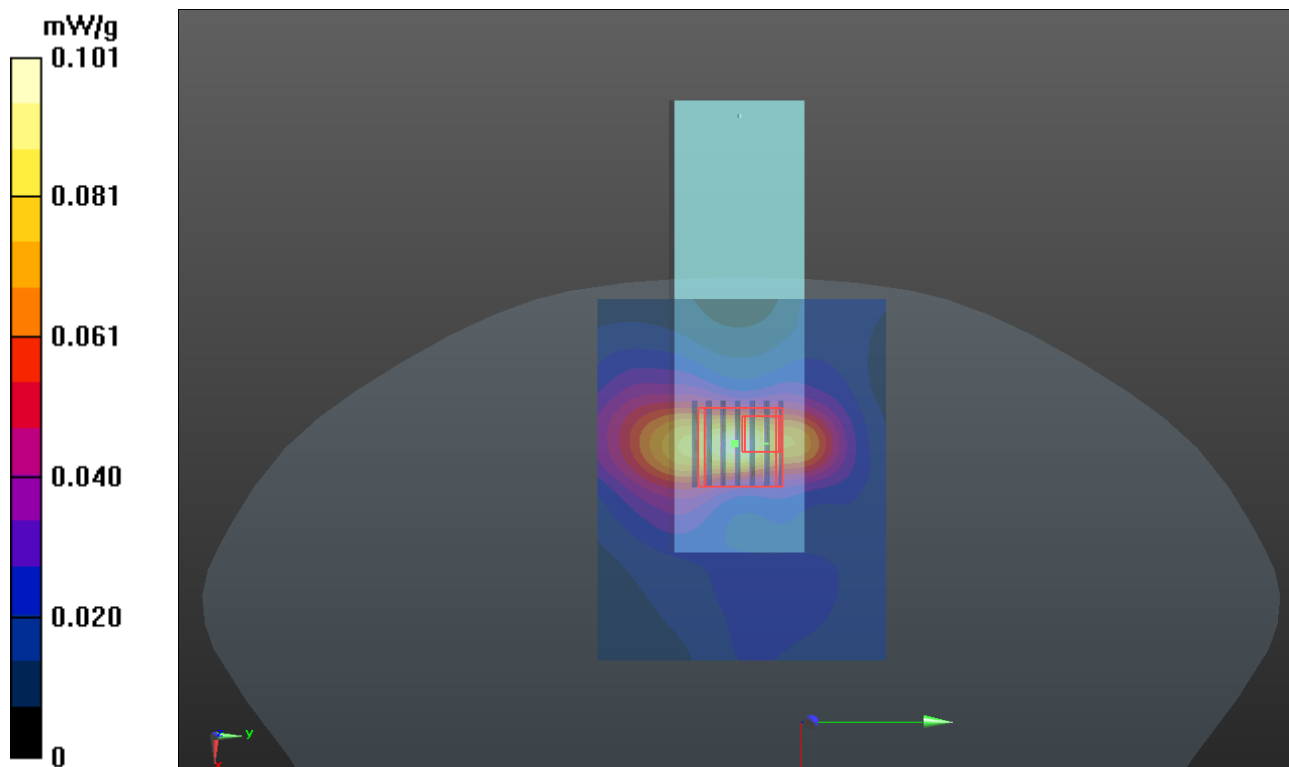
Ch60/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.373 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.2500

SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.021 mW/g

Maximum value of SAR (measured) = 0.100 mW/g



P89 802.11n_HT20_Vertical Front_0.5cm_Ch60_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5300$ MHz; $\sigma = 5.33$ mho/m; $\epsilon_r = 47.678$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.11, 4.11, 4.11); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch60/Area Scan (81x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.064 mW/g

Ch60/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 3.696 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.4400

SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.020 mW/g

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

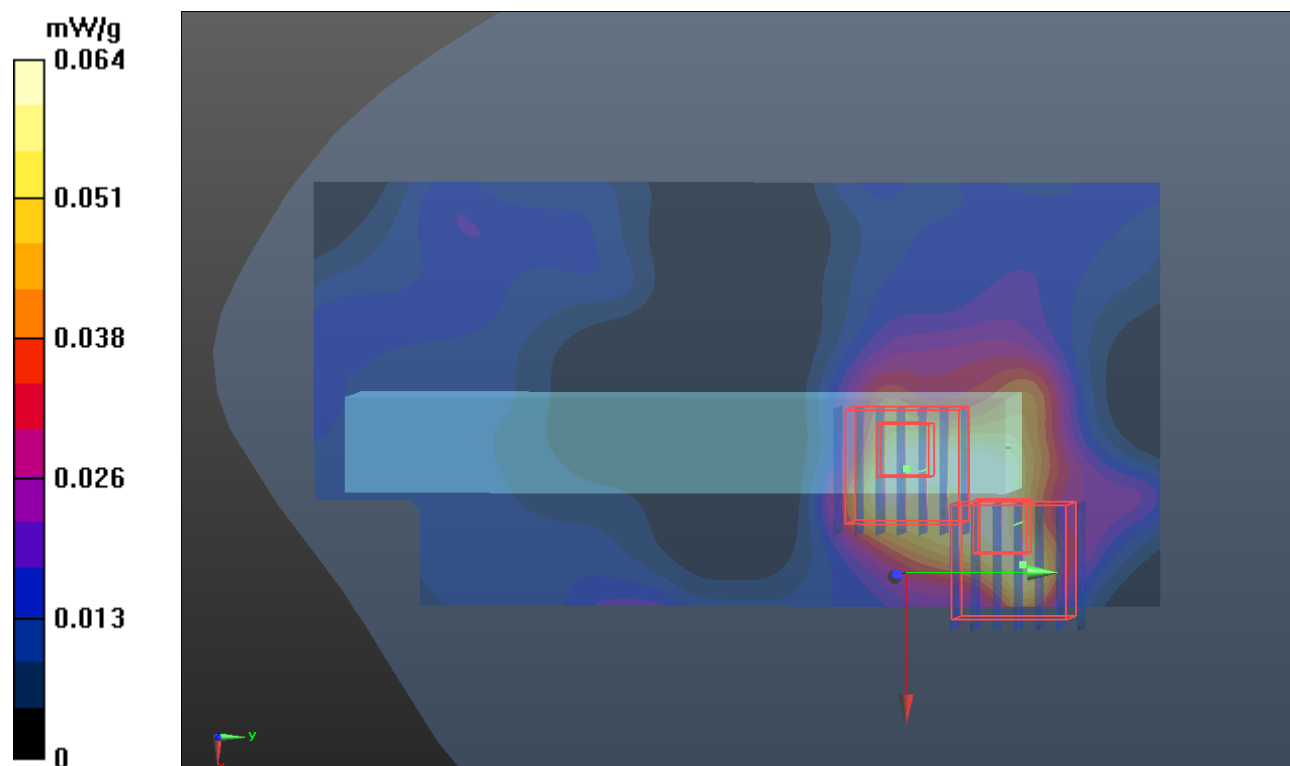
Ch60/Zoom Scan (7x7x9)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 3.696 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.1560

SAR(1 g) = 0.023 mW/g; SAR(10 g) = 0.013 mW/g

Maximum value of SAR (measured) = 0.041 mW/g



P90 802.11n_HT20_Veritical Back_0.5cm_Ch60_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5300$ MHz; $\sigma = 5.33$ mho/m; $\epsilon_r = 47.678$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.11, 4.11, 4.11); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch60/Area Scan (81x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.049 mW/g

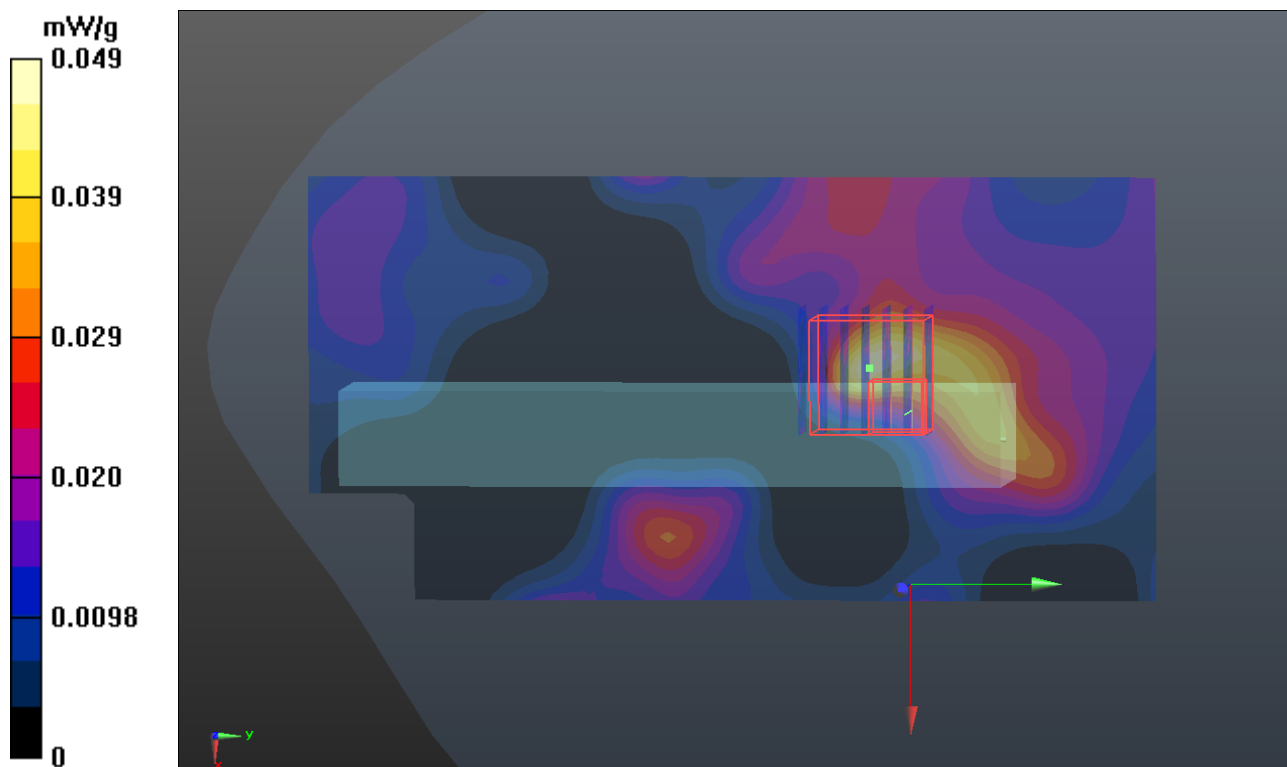
Ch60/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.693 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.2100

SAR(1 g) = 0.026 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.053 mW/g



P91 802.11n_HT20_Tip Mode_0.5cm_Ch60_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5300$ MHz; $\sigma = 5.33$ mho/m; $\epsilon_r = 47.678$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(4.11, 4.11, 4.11); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch60/Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.111 mW/g

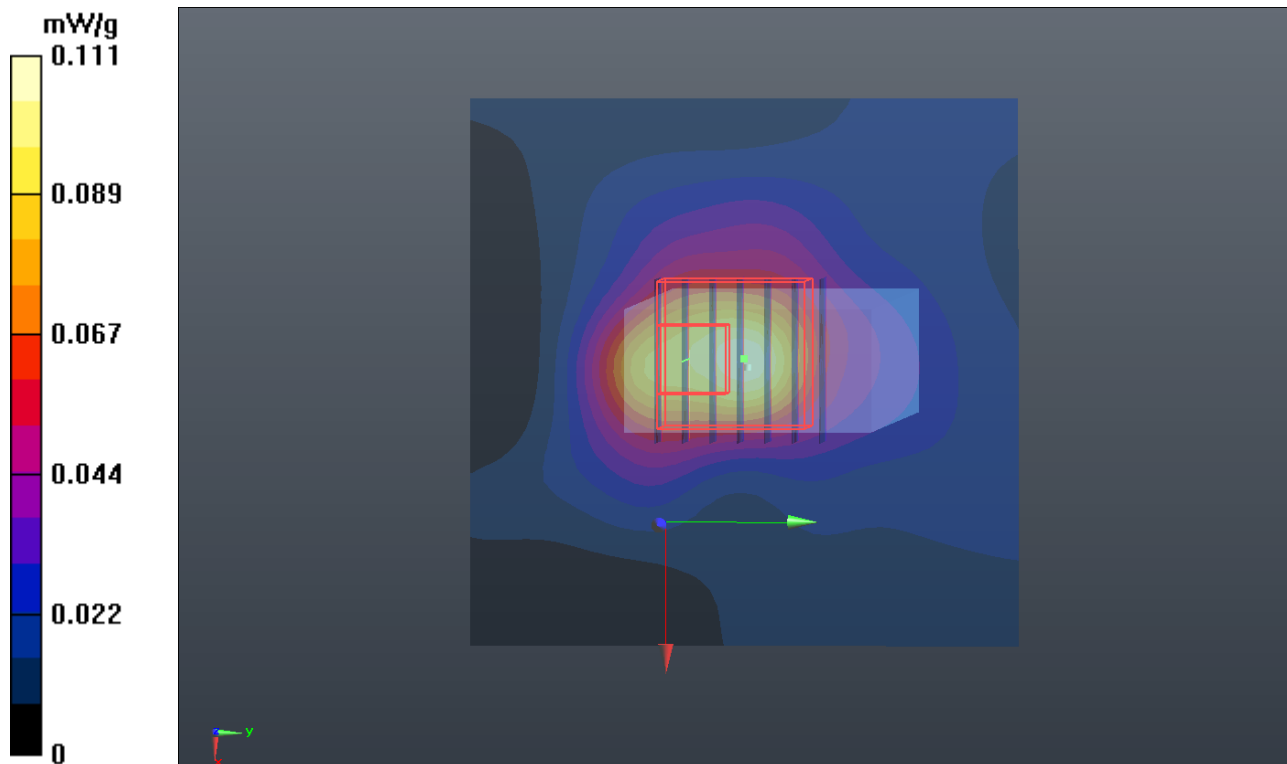
Ch60/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 5.165 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.2240

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.032 mW/g

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



P32 802.11a_Horizontal Up_0.5cm_Ch116_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium: B5G_1128 Medium parameters used: $f = 5580$ MHz; $\sigma = 5.86$ mho/m; $\epsilon_r = 47.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.7 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.57, 3.57, 3.57); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- ; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch116/Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

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

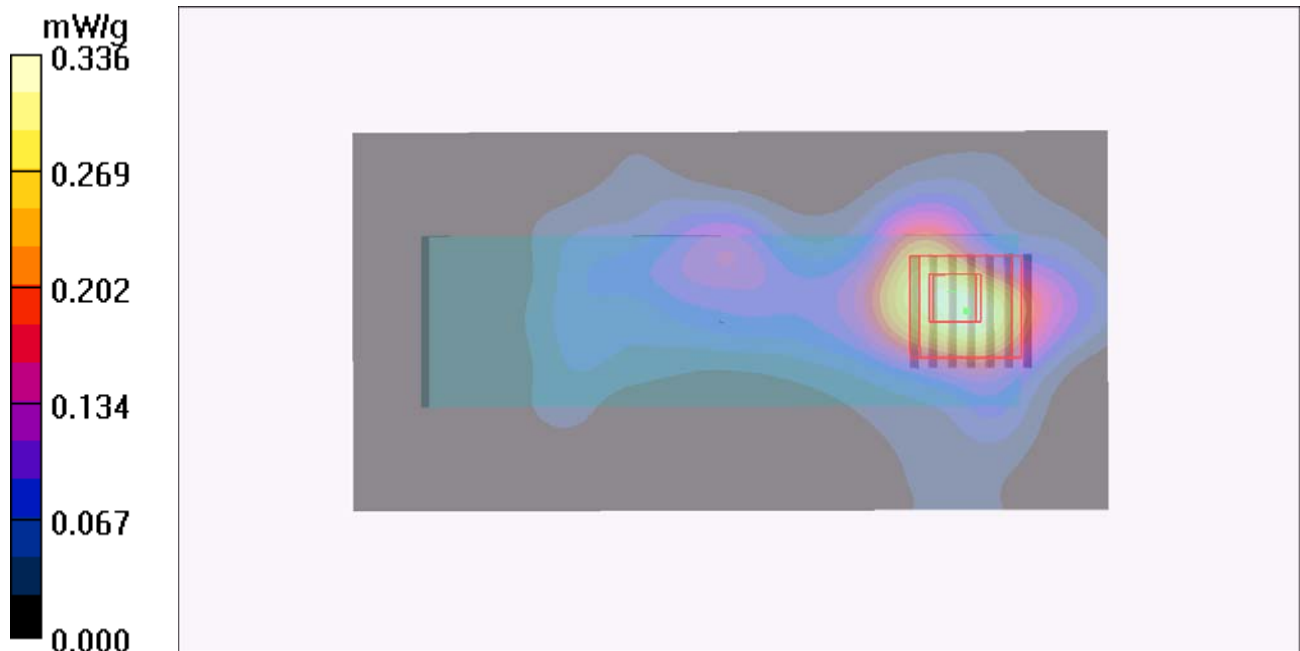
Ch116/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 4.36 V/m; Power Drift = -0.193 dB

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.275 mW/g; SAR(10 g) = 0.085 mW/g

Maximum value of SAR (measured) = 0.570 mW/g



P48 802.11a_Horizontal Down_0.5cm_Ch116_ANT 0

DUT: 111026C09

Communication System: WLAN 5G; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium: B5G_0105 Medium parameters used: $f = 5580$ MHz; $\sigma = 5.818$ mho/m; $\epsilon_r = 48.666$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.01, 4.01, 4.01); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch116/Area Scan (161x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.832 mW/g

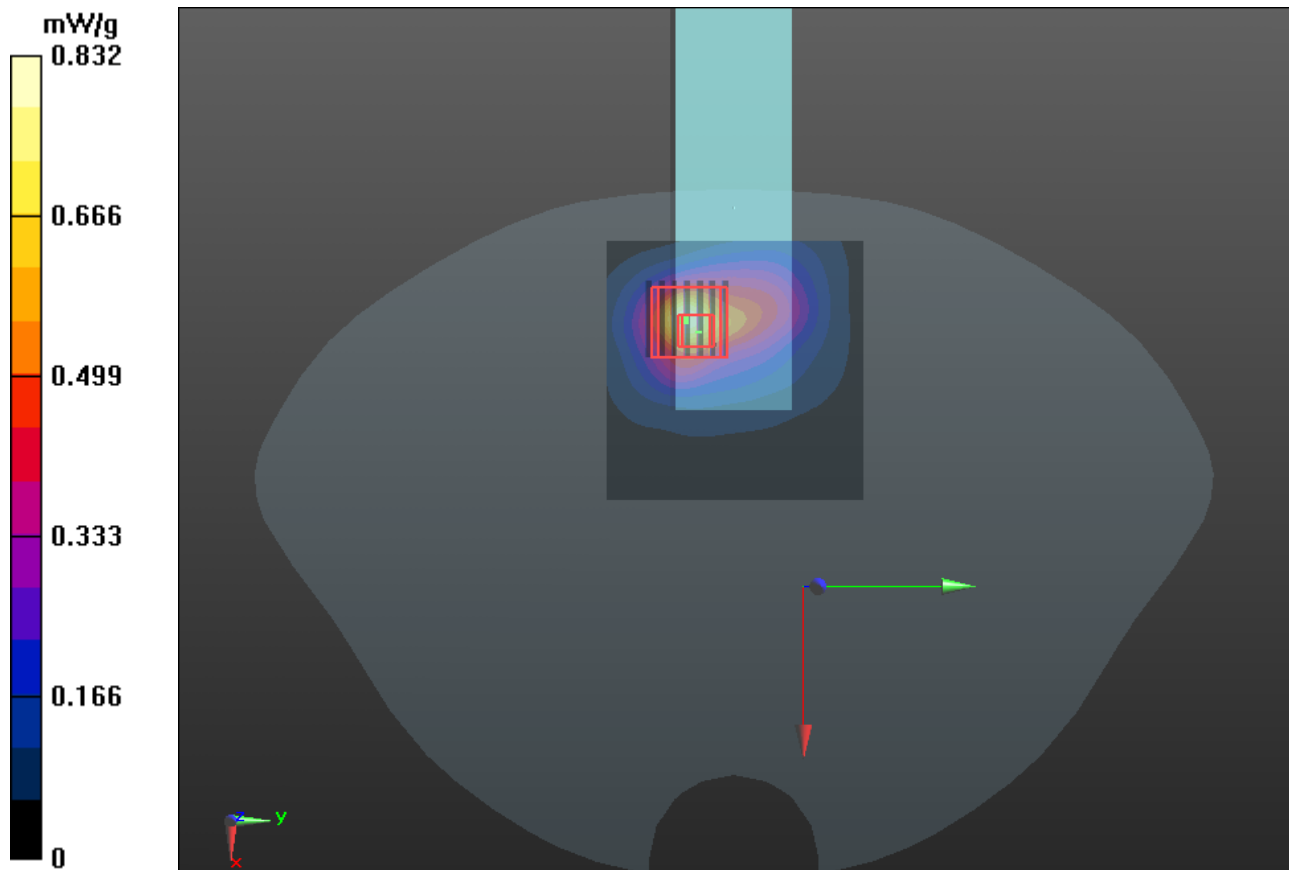
Ch116/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.131 V/m; Power Drift = -0.151 dB

Peak SAR (extrapolated) = 1.6390

SAR(1 g) = 0.450 mW/g; SAR(10 g) = 0.154 mW/g

Maximum value of SAR (measured) = 0.886 mW/g



P49 802.11a_Vertical Front_0.5cm_Ch116_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium: B5G_0104 Medium parameters used: $f = 5580$ MHz; $\sigma = 5.81$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.6 °C; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.57, 3.57, 3.57); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch116/Area Scan (61x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.472 mW/g

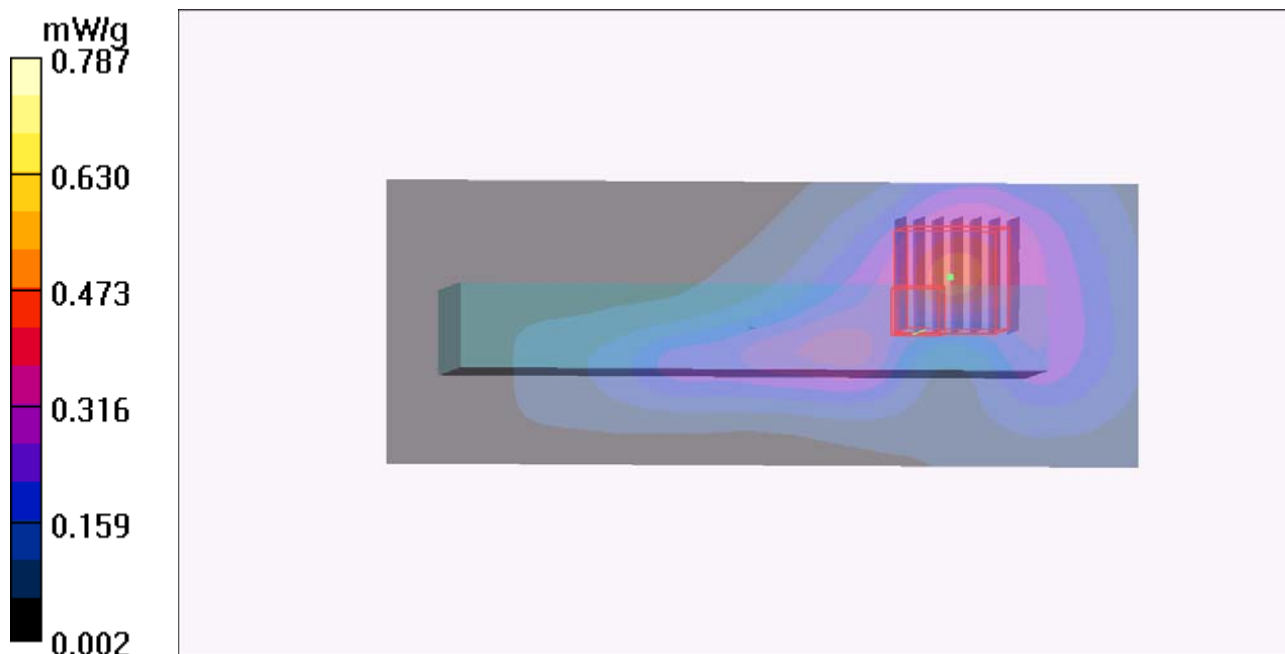
Ch116/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 7.56 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.116 mW/g

Maximum value of SAR (measured) = 0.787 mW/g



P50 802.11a_Verical Back_0.5cm_Ch116_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium: B5G_0104 Medium parameters used: $f = 5580$ MHz; $\sigma = 5.81$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.3 °C ; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.57, 3.57, 3.57); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch116/Area Scan (61x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.664 mW/g

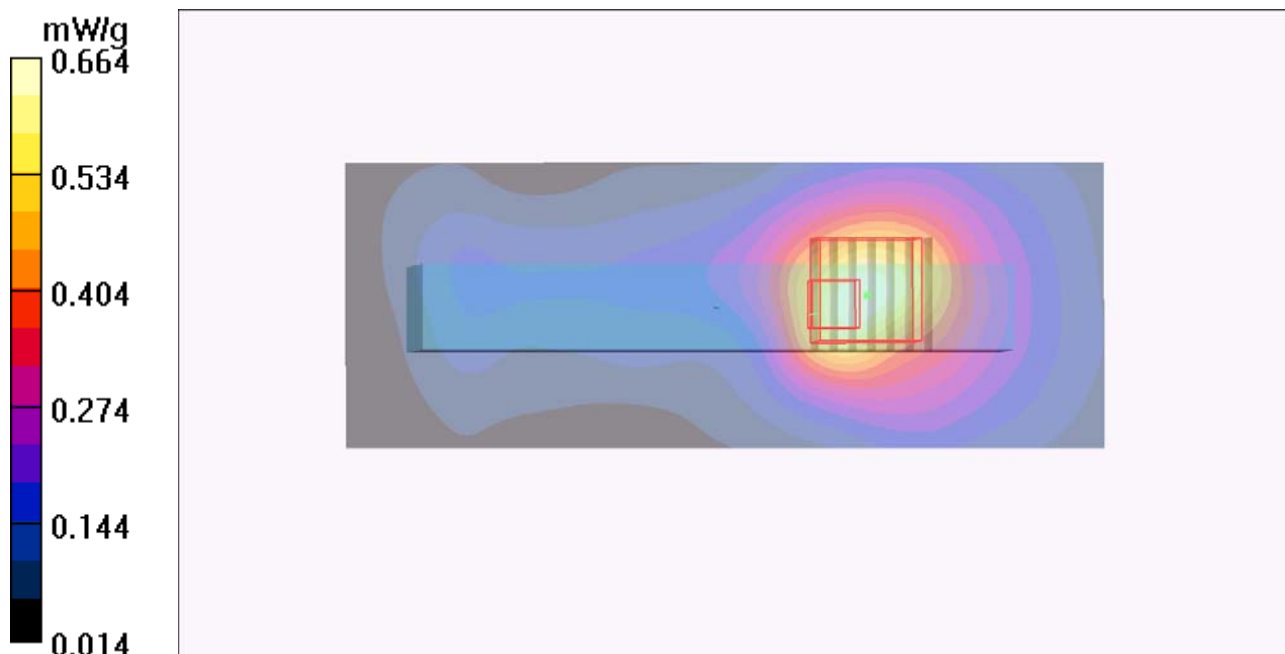
Ch116/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 8.08 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 1.82 W/kg

SAR(1 g) = 0.432 mW/g; SAR(10 g) = 0.174 mW/g

Maximum value of SAR (measured) = 0.886 mW/g



P51 802.11a_Tip Mode_0.5cm_Ch116_ANT 0

DUT: 111026C09

Communication System: WLAN 5G; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium: B5G_0105 Medium parameters used: $f = 5580$ MHz; $\sigma = 5.818$ mho/m; $\epsilon_r = 48.666$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.3 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.01, 4.01, 4.01); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch116/Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.343 mW/g

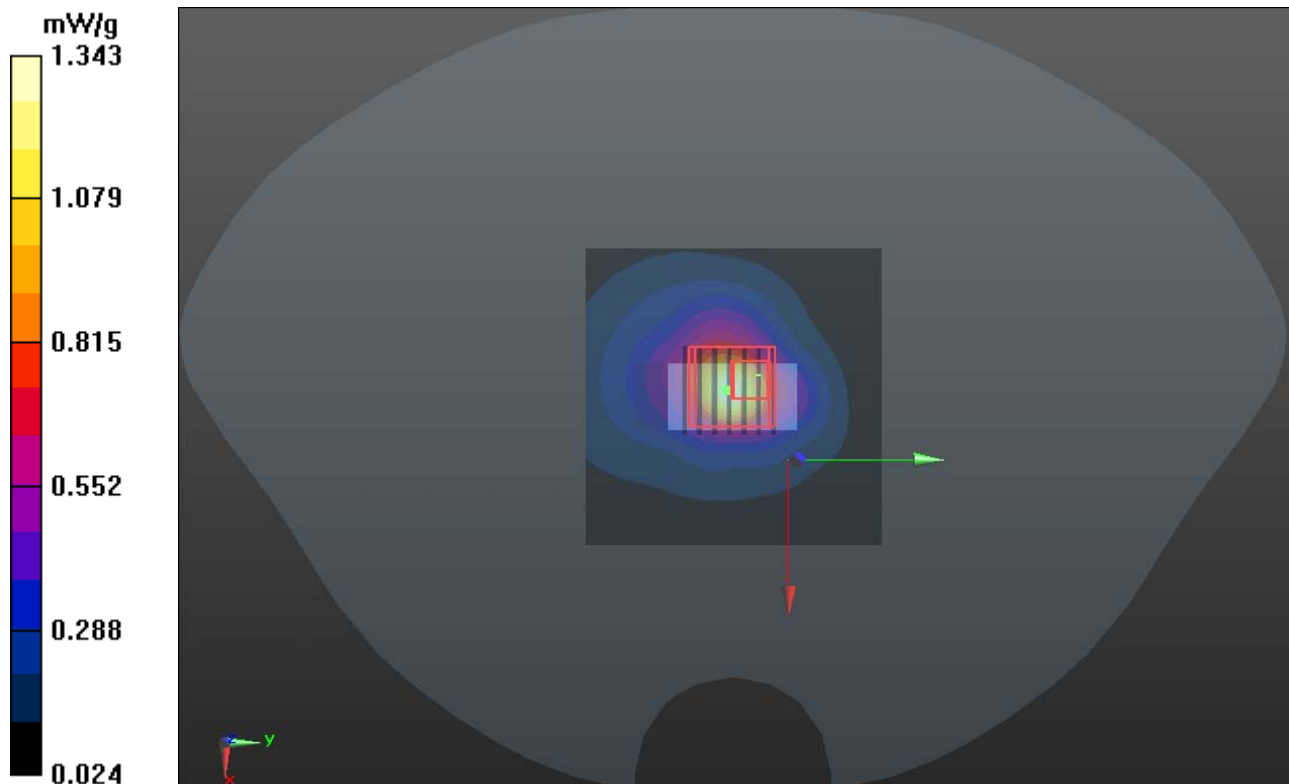
Ch116/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 17.438 V/m; Power Drift = -0.157 dB

Peak SAR (extrapolated) = 2.3790

SAR(1 g) = 0.636 mW/g; SAR(10 g) = 0.227 mW/g

Maximum value of SAR (measured) = 1.210 mW/g



P92 802.11n_HT20_Horizontal Up_0.5cm_Ch104_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5520$ MHz; $\sigma = 5.686$ mho/m; $\epsilon_r = 47.324$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.73, 3.73, 3.73); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch104/Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.312 mW/g

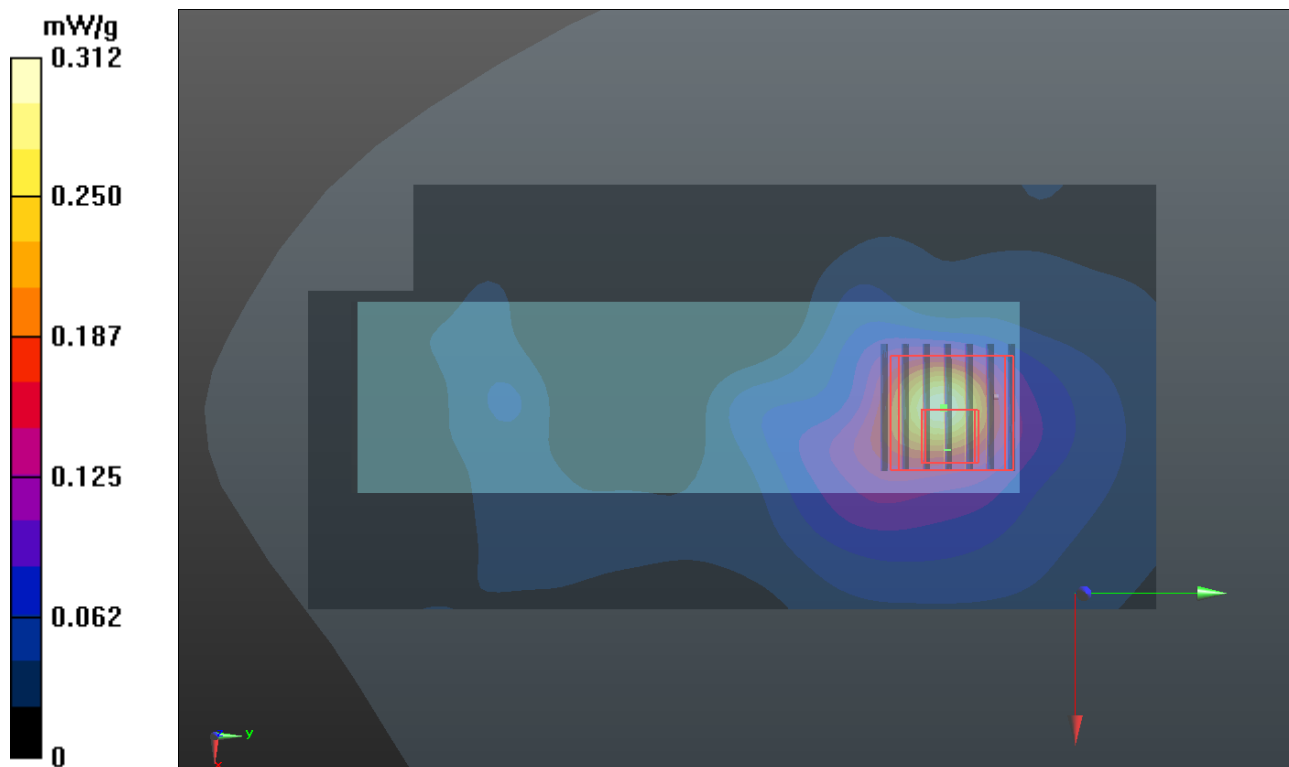
Ch104/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 4.448 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.6500

SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.064 mW/g

Maximum value of SAR (measured) = 0.325 mW/g



P93 802.11n_HT20_Horizontal Down_0.5cm_Ch104_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5520$ MHz; $\sigma = 5.686$ mho/m; $\epsilon_r = 47.324$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.73, 3.73, 3.73); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch104/Area Scan (161x81x1): Measurement grid: dx=10mm, dy=10mm

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

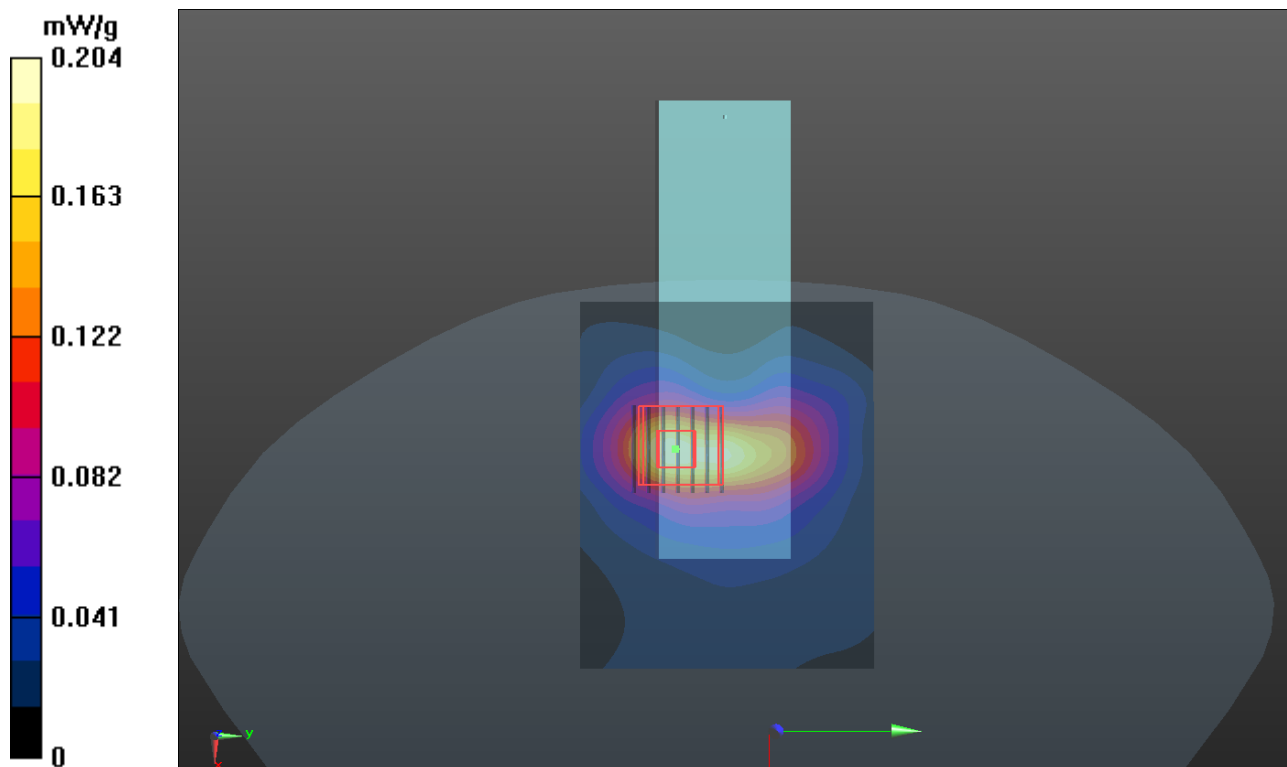
Ch104/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.546 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.4390

SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.044 mW/g

Maximum value of SAR (measured) = 0.203 mW/g



P94 802.11n_HT20_Vertical Front_0.5cm_Ch104_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5520$ MHz; $\sigma = 5.686$ mho/m; $\epsilon_r = 47.324$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.73, 3.73, 3.73); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch104/Area Scan (81x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.172 mW/g

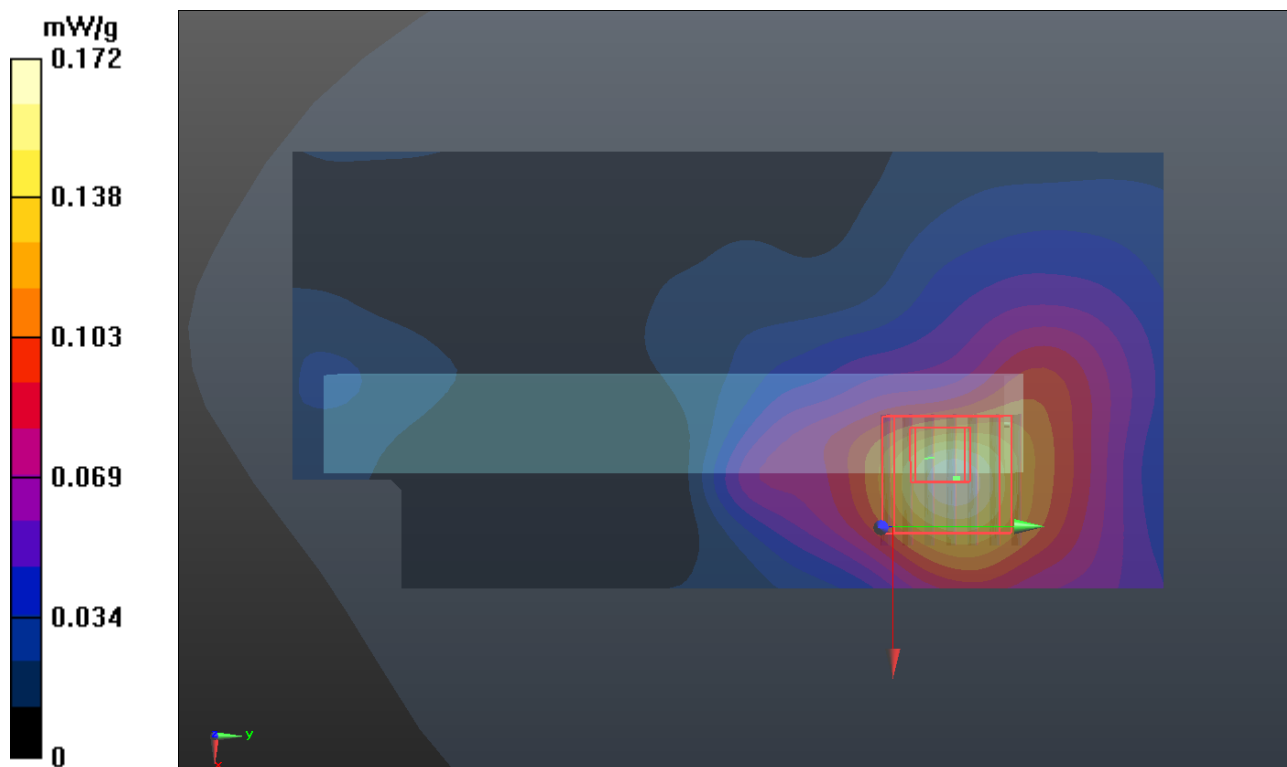
Ch104/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 6.684 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.2870

SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.038 mW/g

Maximum value of SAR (measured) = 0.149 mW/g



P95 802.11n_HT20_Veritical Back_0.5cm_Ch104_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5520$ MHz; $\sigma = 5.686$ mho/m; $\epsilon_r = 47.324$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.73, 3.73, 3.73); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch104/Area Scan (81x181x1): Measurement grid: dx=10mm, dy=10mm

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

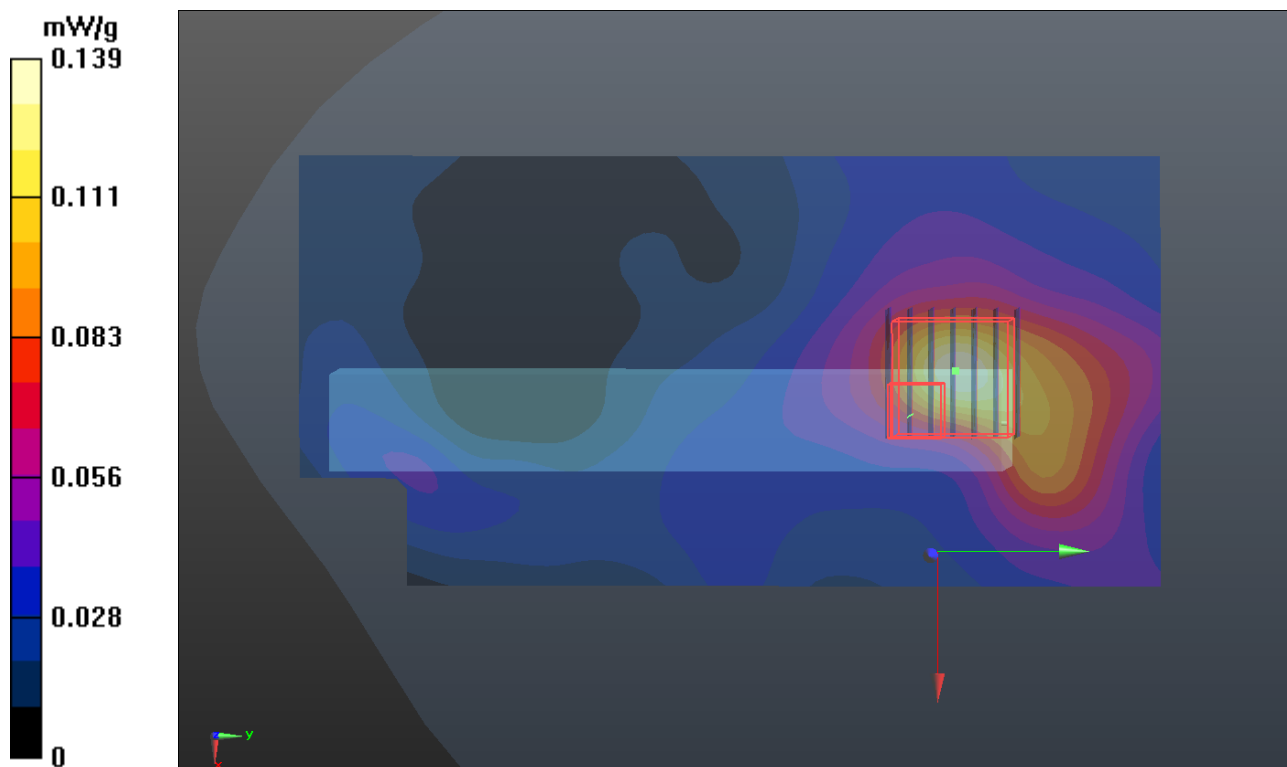
Ch104/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 5.728 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 0.2730

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.034 mW/g

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



P52 802.11n_HT20_Tip Mode_0.5cm_Ch104_ANT 0+1

DUT: 111026C09

Communication System: WLAN 5G; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium: B5G_0105 Medium parameters used: $f = 5520$ MHz; $\sigma = 5.73$ mho/m; $\epsilon_r = 48.95$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch104/Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.617 mW/g

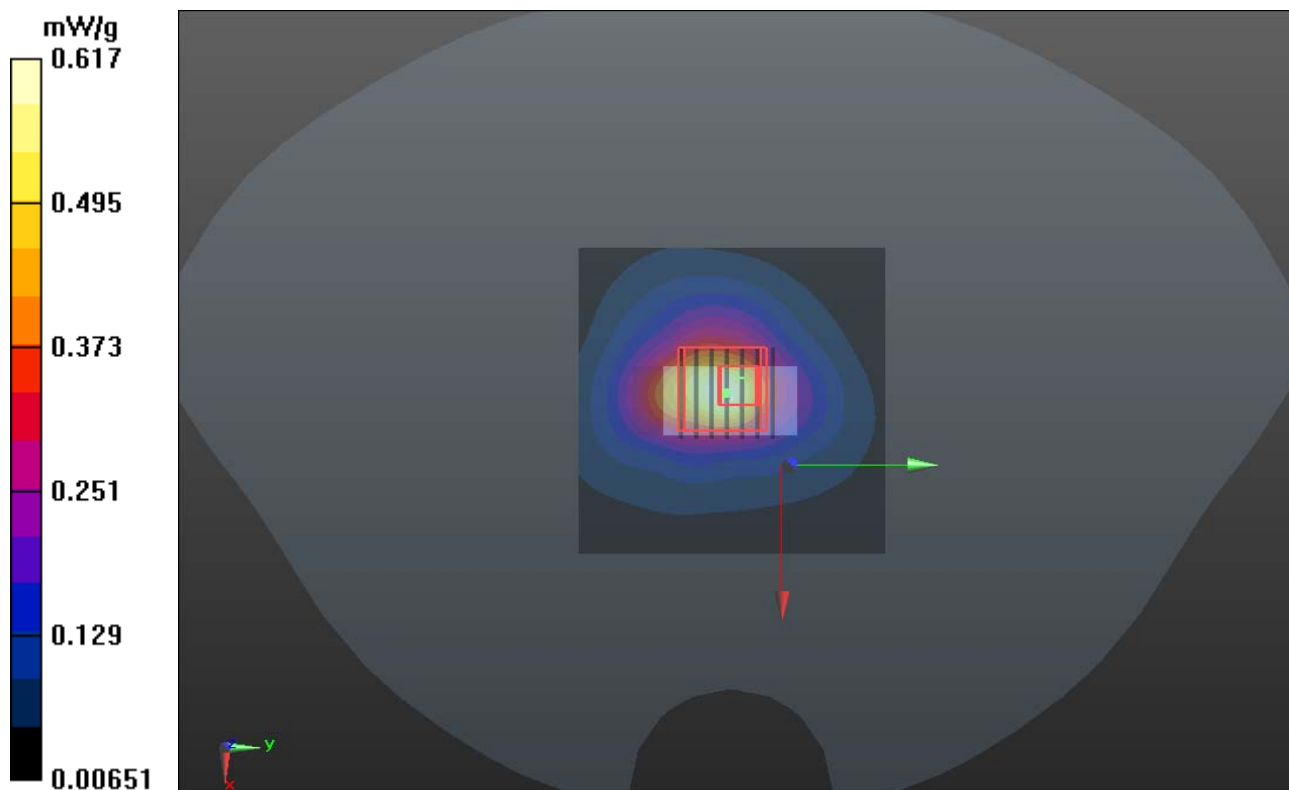
Ch104/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 11.338 V/m; Power Drift = -0.151 dB

Peak SAR (extrapolated) = 1.2500

SAR(1 g) = 0.327 mW/g; SAR(10 g) = 0.129 mW/g

Maximum value of SAR (measured) = 0.609 mW/g



P36 802.11a_Horizontal Up_0.5cm_Ch161_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5805 MHz; Duty Cycle: 1:1

Medium: B5G_1128 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.17$ mho/m; $\epsilon_r = 47.4$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.81, 3.81, 3.81); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2011/07/29
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch161/Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

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

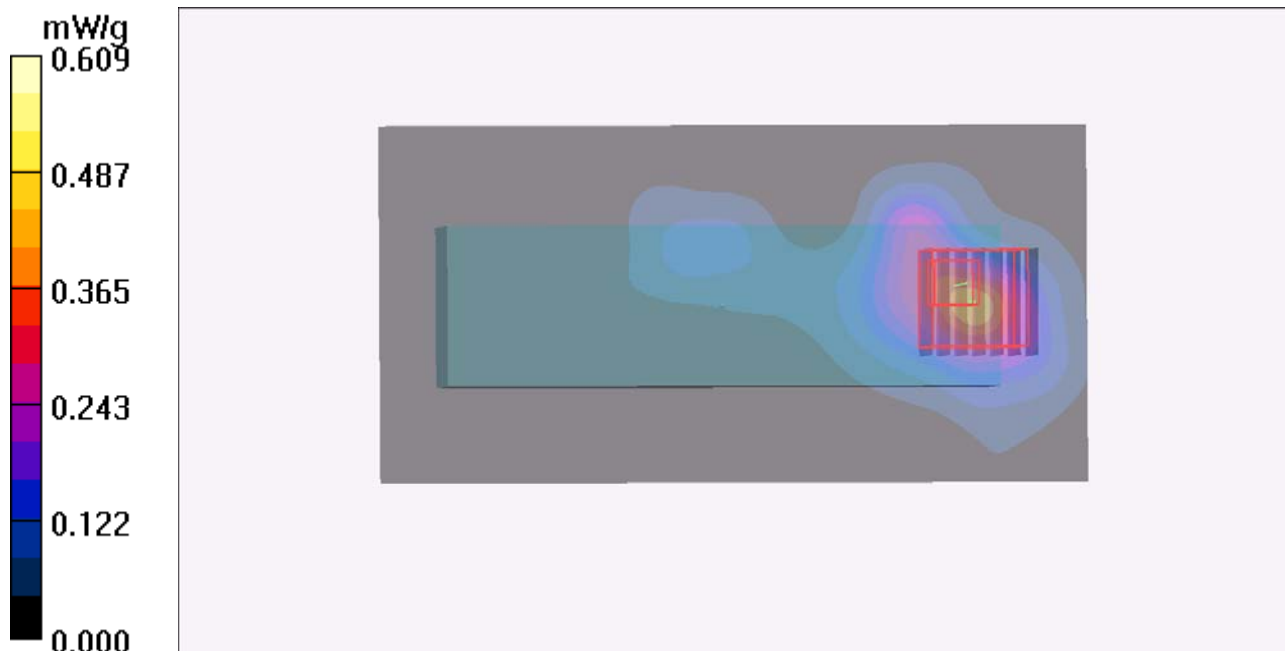
Ch161/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 3.65 V/m; Power Drift = -0.17'dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.297 mW/g; SAR(10 g) = 0.089 mW/g

Maximum value of SAR (measured) = 0.609 mW/g



P54 802.11a_Horizontal Downm_0.5cm_Ch161_ANT 0

DUT: 111026C09

Communication System: WLAN 5G; Frequency: 5805 MHz; Duty Cycle: 1:1

Medium: B5G_0105 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.218$ mho/m; $\epsilon_r = 48.301$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.55, 4.55, 4.55); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch161/Area Scan (161x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.739 mW/g

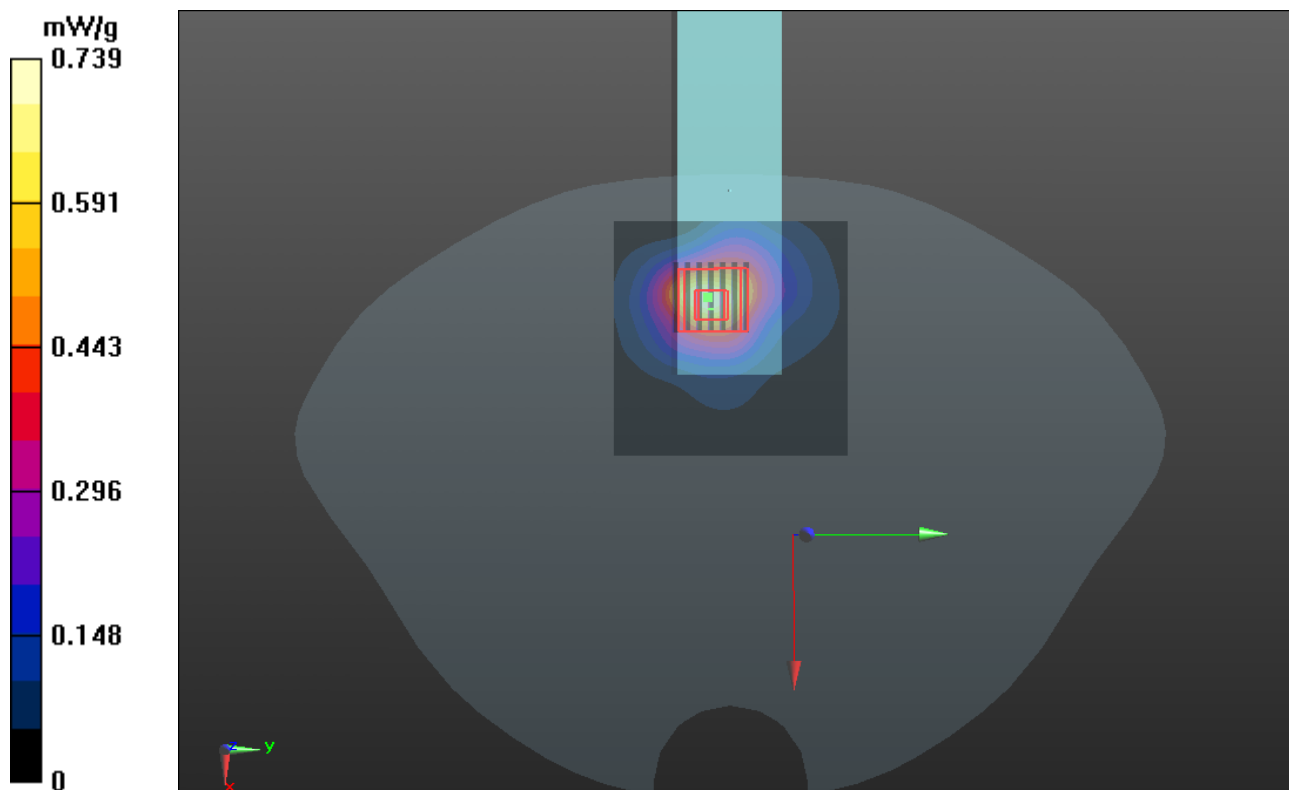
Ch161/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.509 V/m; Power Drift = -0.182 dB

Peak SAR (extrapolated) = 1.6830

SAR(1 g) = 0.422 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.819 mW/g



P55 802.11a_Vertical Front_0.5cm_Ch161_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5805 MHz; Duty Cycle: 1:1

Medium: B5G_0104 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.21$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.5 °C; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.81, 3.81, 3.81); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch161/Area Scan (61x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.687 mW/g

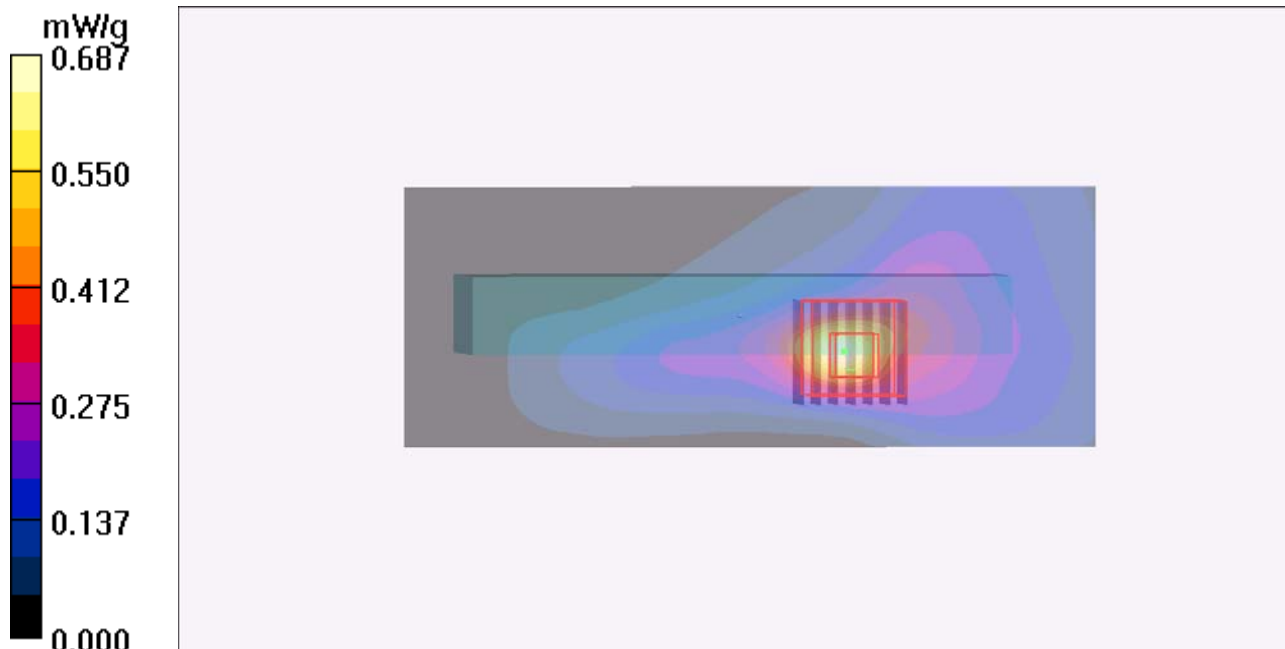
Ch161/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 6.07 V/m; Power Drift = -0.152 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.296 mW/g; SAR(10 g) = 0.095 mW/g

Maximum value of SAR (measured) = 0.598 mW/g



P56 802.11a_Verical Back_0.5cm_Ch161_ANT 0

DUT: 111026C09

Communication System: 802.11a; Frequency: 5805 MHz; Duty Cycle: 1:1

Medium: B5G_0104 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.21$ mho/m; $\epsilon_r = 48.3$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.2 °C ; Liquid Temperature : 21.4 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.81, 3.81, 3.81); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2011/09/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch161/Area Scan (61x161x1): Measurement grid: dx=10mm, dy=10mm

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

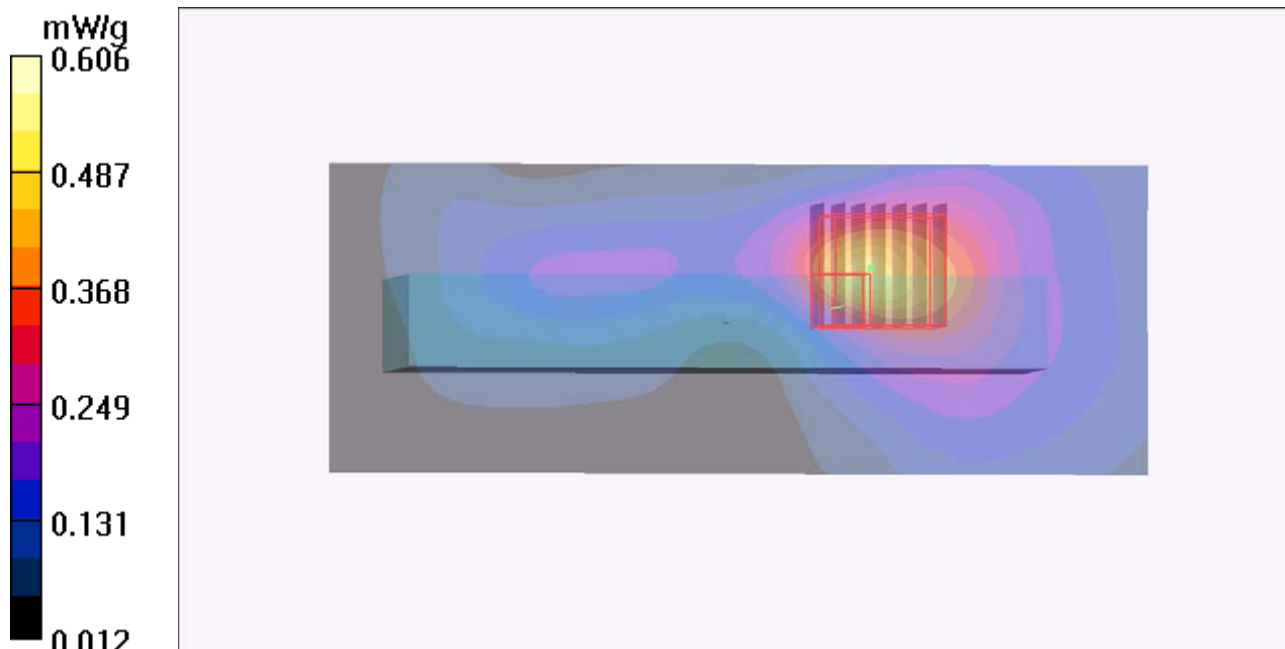
Ch161/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 5.42 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 0.304 mW/g; SAR(10 g) = 0.128 mW/g

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



P57 802.11a_Tip Mode_0.5cm_Ch161_ANT 0

DUT: 111026C09

Communication System: WLAN 5G; Frequency: 5805 MHz; Duty Cycle: 1:1

Medium: B5G_0105 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.218$ mho/m; $\epsilon_r = 48.301$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.1 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.55, 4.55, 4.55); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch161/Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.531 mW/g

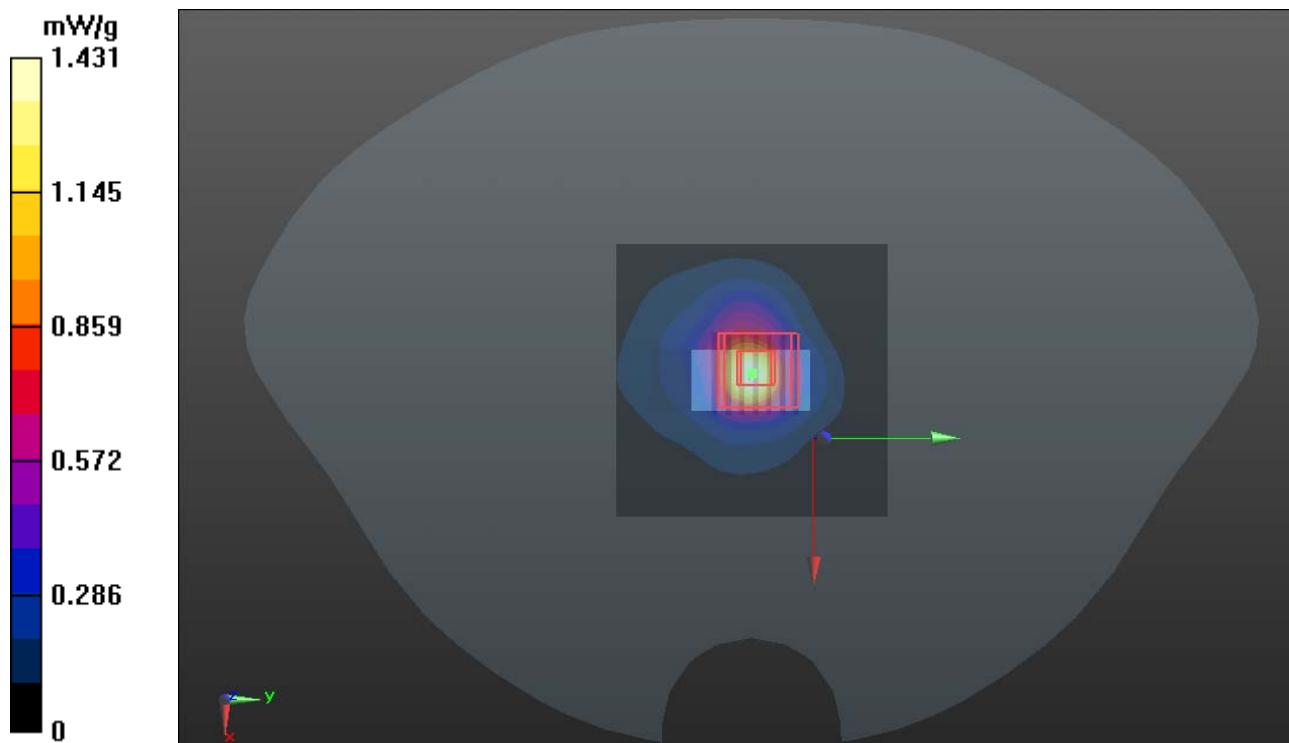
Ch161/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 17.196 V/m; Power Drift = -0.05 dB

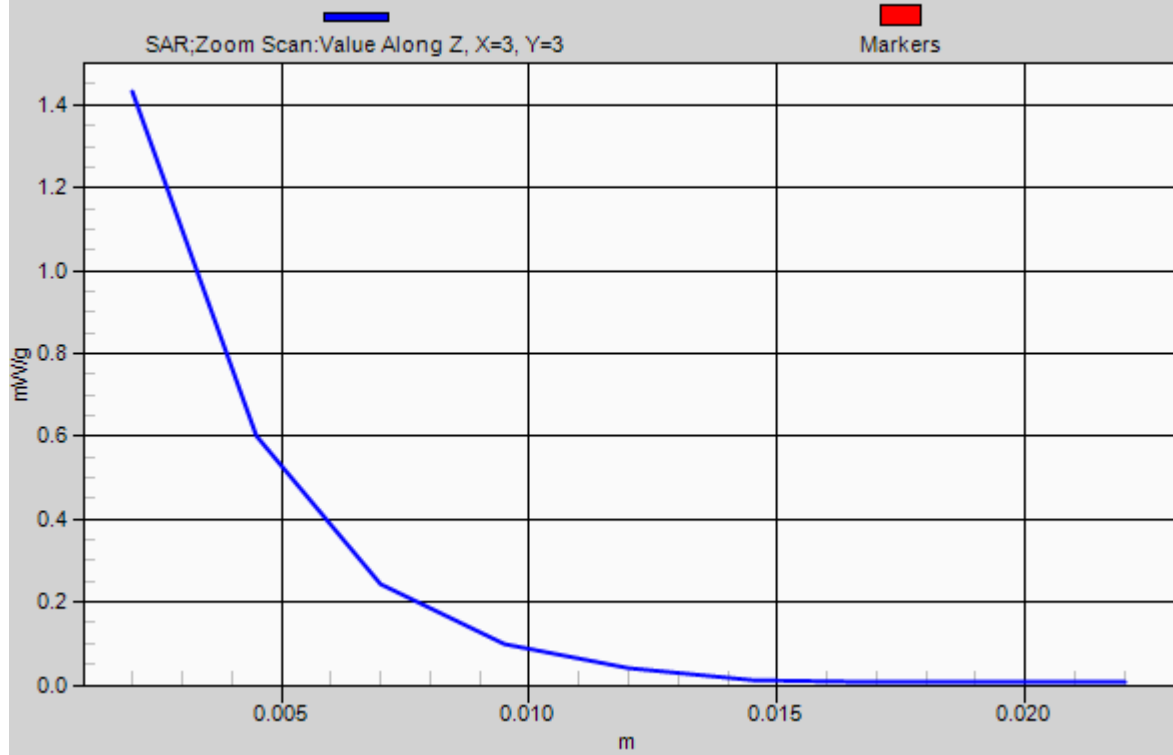
Peak SAR (extrapolated) = 3.0380

SAR(1 g) = 0.760 mW/g; SAR(10 g) = 0.278 mW/g

Maximum value of SAR (measured) = 1.431 mW/g



1g/10g Averaged SAR



P96 802.11n_HT20_Horizontal Up_0.5cm_Ch161_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5805 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.252$ mho/m; $\epsilon_r = 46.63$; $\rho = 1000$ kg/m³

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.81, 3.81, 3.81); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch161/Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.464 mW/g

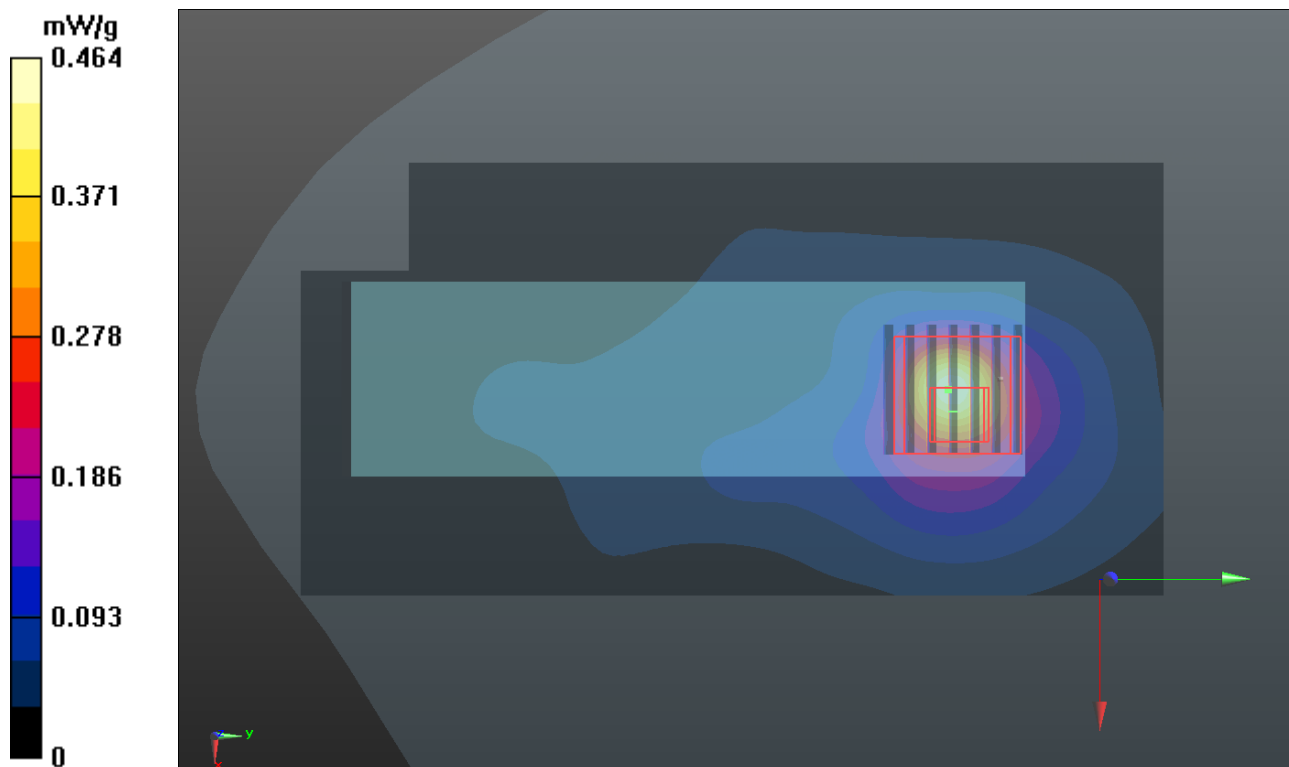
Ch161/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 6.428 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.9540

SAR(1 g) = 0.234 mW/g; SAR(10 g) = 0.090 mW/g

Maximum value of SAR (measured) = 0.436 mW/g



P97 802.11n_HT20_Horizontal Down_0.5cm_Ch161_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5805 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5805 \text{ MHz}$; $\sigma = 6.252 \text{ mho/m}$; $\epsilon_r = 46.63$; $\rho = 1000 \text{ kg/m}^3$

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.81, 3.81, 3.81); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch161/Area Scan (161x81x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.355 mW/g

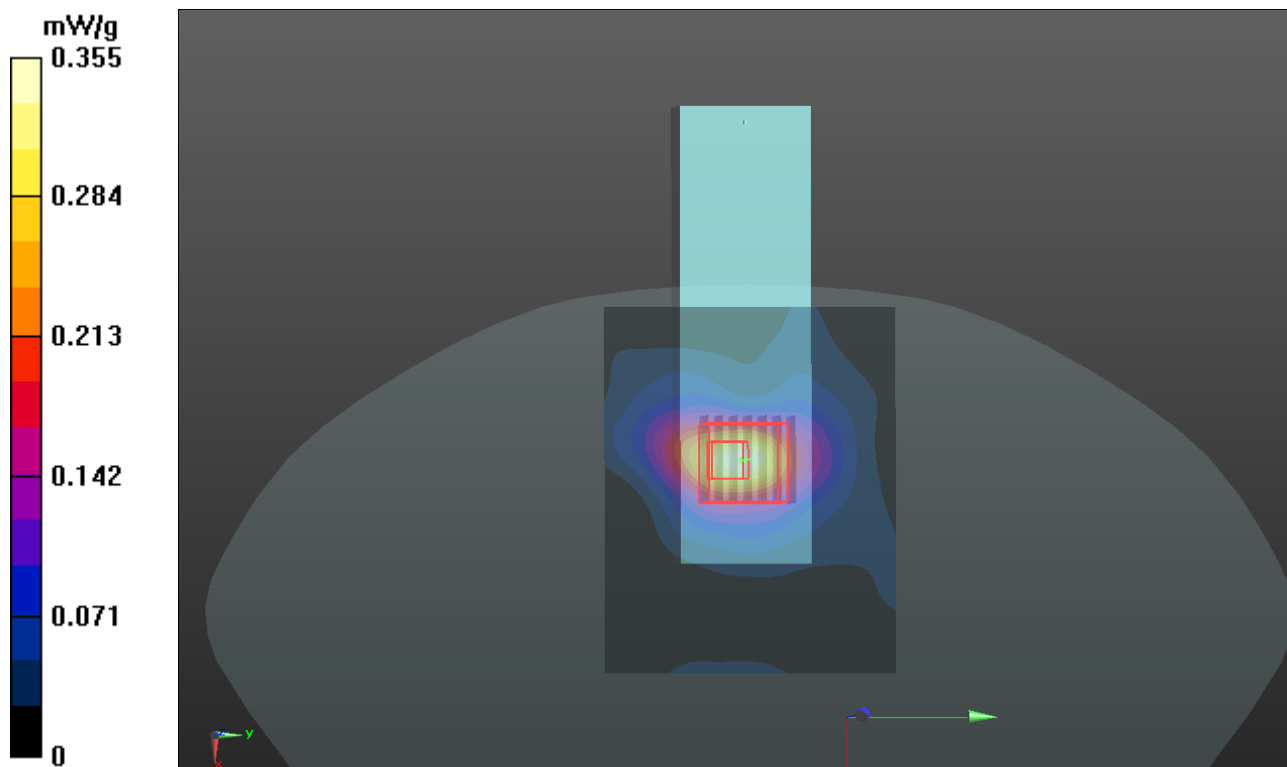
Configuration/Ch161/Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 1.175 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.7760

SAR(1 g) = 0.182 mW/g; SAR(10 g) = 0.074 mW/g

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



P98 802.11n_HT20_Verical Front_0.5cm_Ch161_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5805 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.252$ mho/m; $\epsilon_r = 46.63$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.81, 3.81, 3.81); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch161/Area Scan (: 1x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.187 mW/g

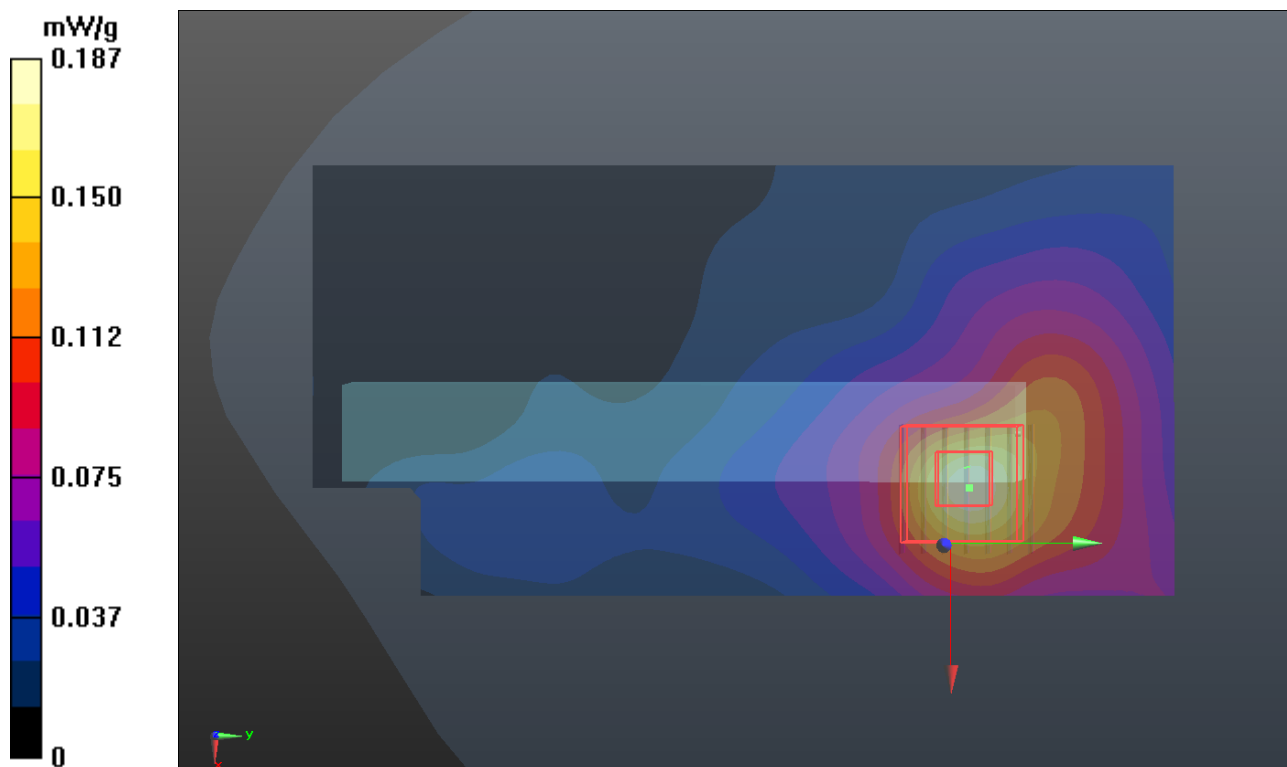
Ch161/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 6.249 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 0.2880

SAR(1 g) = 0.092 mW/g; SAR(10 g) = 0.041 mW/g

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



P99 802.11n_HT20_Veritical Back_0.5cm_Ch161_ANT 0+1

DUT: 111026C09

Communication System: WLAN_5G; Frequency: 5805 MHz; Duty Cycle: 1:1

Medium: B5G_0218 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.252$ mho/m; $\epsilon_r = 46.63$; $\rho = 1000$ kg/m³

Ambient Temperature : 21.4 °C ; Liquid Temperature : 20.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(3.81, 3.81, 3.81); Calibrated: 2011/10/26
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1653
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch161/Area Scan (81x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.136 mW/g

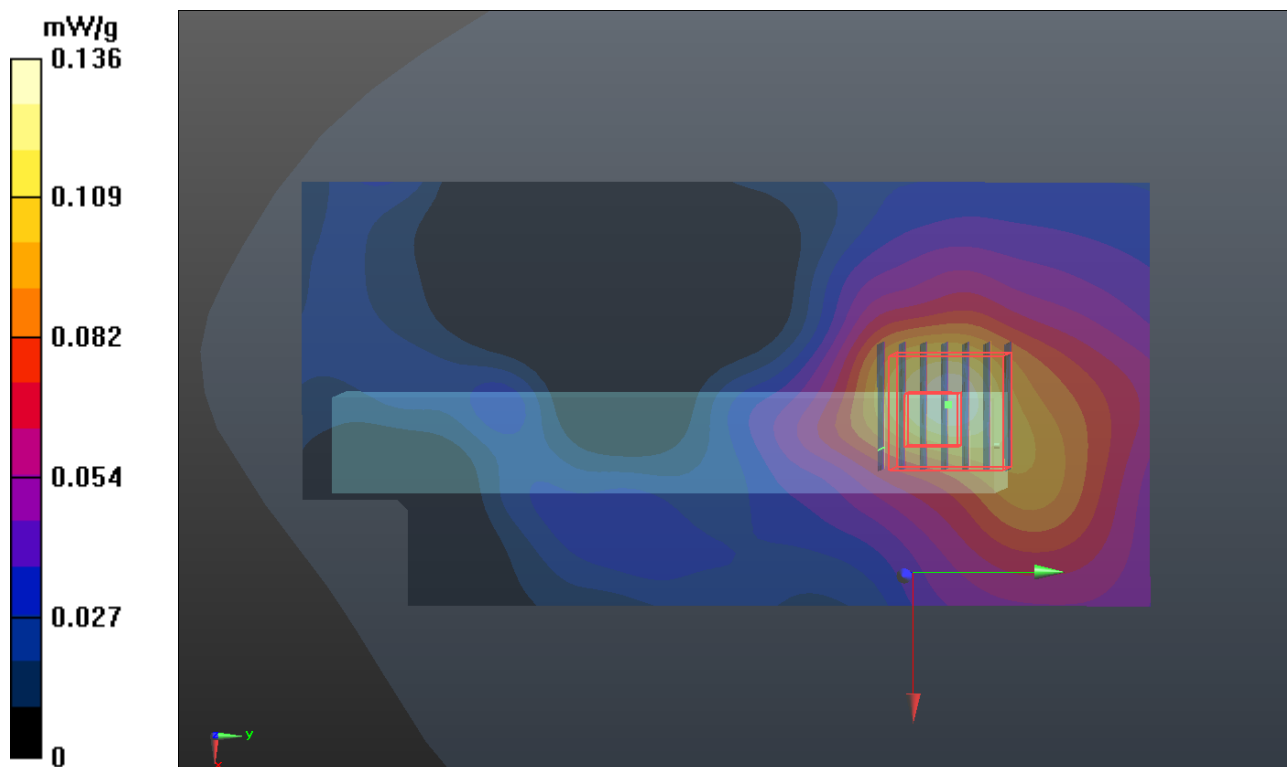
Ch161/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 5.438 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.4060

SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.039 mW/g

Maximum value of SAR (measured) = 0.194 mW/g



P58 802.11n_HT20_Tip Mode_0.5cm_Ch161_ANT 0+1

DUT: 111026C09

Communication System: WLAN 5G; Frequency: 5805 MHz; Duty Cycle: 1:1

Medium: B5G_0105 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.218$ mho/m; $\epsilon_r = 48.301$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3590; ConvF(4.55, 4.55, 4.55); Calibrated: 2011/02/25
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2011/08/29
- Phantom: SAM Phantom_Left; Type: SAM; Serial: 1202
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch161/Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.655 mW/g

Ch161/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 19.203 V/m; Power Drift = -0.165 dB

Peak SAR (extrapolated) = 2.8910

SAR(1 g) = 0.732 mW/g; SAR(10 g) = 0.268 mW/g

Maximum value of SAR (measured) = 1.379 mW/g

