

FCC SAR Test Report

APPLICANT : Actiontec Electronics, Inc.
EQUIPMENT : ScreenBeam USB Transmitter
BRAND NAME : Actiontec
MODEL NAME : SBT100U
FCC ID : LNQSBT100U
STANDARD : FCC 47 CFR Part 2 (2.1093)
IEEE C95.1-1991
IEEE 1528-2003
FCC OET Bulletin 65 Supplement C (Edition 01-01)

The product was completely tested on Oct. 15, 2012. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:



Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA220705-04	Rev. 01	Initial issue of report	Sep. 25, 2012
FA220705-04	Rev. 02	Update report for revising SAR Data for WLAN 5G Band IV	Oct. 08, 2012
FA220705-04	Rev. 03	Revise Page 31 &33 and Section 5.8	Oct. 09, 2012
FA220705-04	Rev. 04	Revise Section 5.8 and 6 and 8.3 and 12.1 and 12.2	Oct. 16, 2012
FA220705-04	Rev. 05	Revise Page 3 and 17 and 31 and 42	Oct. 17, 2012

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Actiontec Electronics, Inc. ScreenBeam USB Transmitter SBT100U** are as follows.

Band	Position	SAR _{1g} (W/kg)
WLAN 2.4G Ant. A	Body (0.5 cm)	1.16
WLAN 2.4G Ant. B	Body (0.5 cm)	1.11
WLAN 2.4G Ant. A+B	Body (0.5 cm)	1.16
WLAN 5G Ant. A	Body (0.5 cm)	1.15
WLAN 5G Ant. B	Body (0.5 cm)	0.587
WLAN 5G Ant. A+B	Body (0.5 cm)	1.19

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2003 and FCC OET Bulletin 65 Supplement C (Edition 01-01).



2. Administration Data

2.1 Testing Laboratory

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978

2.2 Applicant

Company Name	Actiontec Electronics, Inc.
Address	760 North Mary Ave. Sunnyvale, CA 94085

2.3 Manufacturer

Company Name	Actiontec Electronics, Inc.
Address	760 North Mary Ave. Sunnyvale, CA 94085

2.4 Application Details

Date of Start during the Test	Mar. 16, 2012
Date of End during the Test	Oct. 15, 2012

3. General Information

3.1 Description of Device Under Test (DUT)

Product Feature & Specification	
EUT	ScreenBeam USB Transmitter
Brand Name	Actiontec
Model Name	SBT100U
FCC ID	LNQSBT100U
Tx Frequency	802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n: 5180 MHz ~ 5240 MHz; 5745 MHz ~ 5825 MHz
Rx Frequency	802.11b/g/n: 2412 MHz ~ 2462 MHz 802.11a/n: 5180 MHz ~ 5240 MHz; 5745 MHz ~ 5825 MHz
Maximum Average Output Power to Antenna	802.11b: 19.18 dBm 802.11g: 18.05 dBm 802.11n (2.4GHz): 17.25 dBm (BW 20MHz) 802.11n (2.4GHz): 17.11 dBm (BW 40MHz) 802.11a: 14.98 dBm 802.11n (5GHz): 17.07 dBm (BW 20MHz) 802.11n (5GHz): 17.12 dBm (BW 40MHz)
Antenna Type	Printed Antenna
Type of Modulation	802.11b: DSSS (BPSK / QPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
DUT Stage	Identical Prototype
Remark:	
1. The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	
2. Voice call is not supported.	



3.2 Product Photos

Please refer to Appendix D.

3.3 Applied Standards

The Specific Absorption Rate (SAR) testing specification, method and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- IEEE C95.1-1991
- IEEE 1528-2003
- FCC OET Bulletin 65 Supplement C (Edition 01-01)
- FCC KDB 447498 D01 v04
- FCC KDB 447498 D02 v02
- FCC KDB 248227 D01 v01r02

3.4 Device Category and SAR Limits

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user. Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

3.5 Test Conditions

3.5.1 Ambient Condition

Ambient Temperature	20 to 24 °C
Humidity	< 60 %

3.5.2 Test Configuration

For WLAN SAR testing, WLAN engineering testing software installed on the DUT can provide continuous transmitting RF signal. This RF signal utilized in SAR measurement has over 99% duty cycle and is treated as 1.

4. Specific Absorption Rate (SAR)

4.1 Introduction

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.

4.2 SAR Definition

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:

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

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

SAR measurement can be either related to the temperature elevation in tissue by

$$SAR = C \left(\frac{\delta T}{\delta t} \right)$$

Where: C is the specific heat capacity, δT is the temperature rise and δt is the exposure duration, or related to the electrical field in the tissue by

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

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

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

5. SAR Measurement System

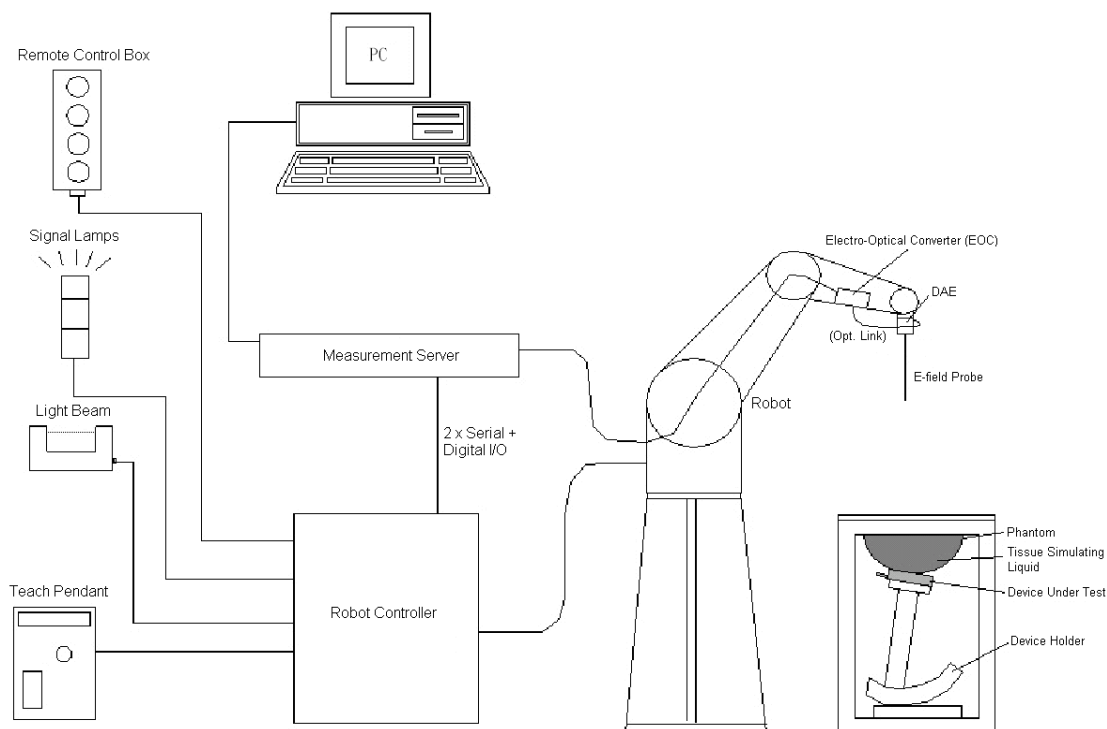


Fig 5.1 SPEAG DASY System Configurations

The DASY system for performance compliance tests is illustrated above graphically. This system consists of the following items:

- A standard high precision 6-axis robot with controller, a teach pendant and software
- A data acquisition electronic (DAE) attached to the robot arm extension
- A dosimetric probe equipped with an optical surface detector system
- The electro-optical converter (EOC) performs the conversion between optical and electrical signals
- A measurement server performs the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the accuracy of the probe positioning
- A computer operating Windows XP
- DASY software
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom
- A device holder
- Tissue simulating liquid
- Dipole for evaluating the proper functioning of the system

Some of the components are described in details in the following sub-sections.

5.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG). The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

5.1.1 E-Field Probe Specification

<ET3DV6 / ET3DV6R Probe >

Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Frequency	10 MHz to 3 GHz; Linearity: ± 0.2 dB
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic Range	5 μ W/g to 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm (Tip: 16 mm) Tip diameter: 6.8 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.7 mm



Fig 5.2 Photo of ET3DV6/ET3DV6R

<EX3DV4 / ES3DV4 Probe>

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



Fig 5.3 Photo of EX3DV4/ES3DV4

5.1.2 E-Field Probe Calibration

Each probe needs to be calibrated according to a dosimetric assessment procedure with accuracy better than $\pm 10\%$. The spherical isotropy shall be evaluated and within ± 0.25 dB. The sensitivity parameters (NormX, NormY, and NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested. The calibration data can be referred to appendix C of this report.

5.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

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



Fig 5.4 Photo of DAE

5.3 Robot

The SPEAG DASY system uses the high precision robots (DASY4: RX90BL; DASY5: TX90XL) type 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 5.1 Photo of DASY4



Fig 5.2 Photo of DASY5

5.4 Measurement Server

The measurement server is based on a PC/104 CPU board with CPU (DASY4: 166 MHz, Intel Pentium; DASY5: 400 MHz, Intel Celeron), chipdisk (DASY4: 32 MB; DASY5: 128 MB), RAM (DASY4: 64 MB, DASY5: 128 MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O board, which is directly connected to the PC/104 bus of the CPU board.

The measurement server performs all the real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operations.



Fig 5.1 Photo of Server for DASY4



Fig 5.2 Photo of Server for DASY5

5.5 Phantom

<SAM Twin Phantom>

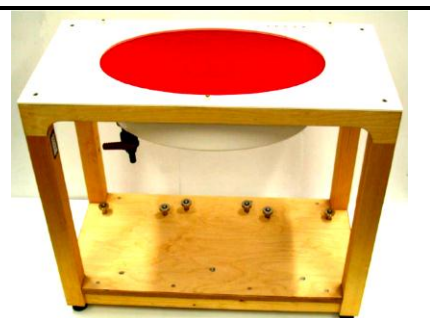
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm	
Filling Volume	Approx. 25 liters	
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet	
Measurement Areas	Left Hand, Right Hand, Flat Phantom	

Fig 5.3 Photo of SAM Phantom

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI4 Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)
Filling Volume	Approx. 30 liters
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm


Fig 5.4 Photo of ELI4 Phantom

The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

5.6 Device Holder

<Device Holder for SAM Twin Phantom>

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5 mm distance, a positioning uncertainty of ± 0.5 mm would produce a SAR uncertainty of ± 20 %. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

The DASY device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (EPR). Thus the device needs no repositioning when changing the angles.

The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity $\epsilon = 3$ and loss tangent $\delta = 0.02$. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



Fig 5.5 Device Holder

<Laptop Extension Kit>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.

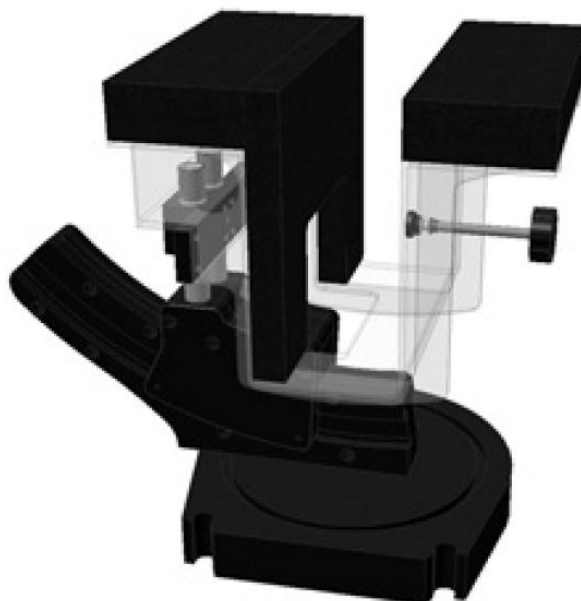


Fig 5.6 Laptop Extension Kit

5.7 Data Storage and Evaluation

5.7.1 Data Storage

The DASY software stores the assessed data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all the necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files. The post-processing software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of erroneous parameter settings. For example, if a measurement has been performed with an incorrect crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be reevaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type (e.g., [V/m], [A/m], [mW/g]). Some of these units are not available in certain situations or give meaningless results, e.g., a SAR-output in a non-lossy media, will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

5.7.2 Data Evaluation

The DASY post-processing software (SEMCAD) automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software :

Probe parameters :	- Sensitivity	$\text{Norm}_i, a_{i0}, a_{i1}, a_{i2}$
	- Conversion factor	ConvF_i
	- Diode compression point	dcp_i
Device parameters :	- Frequency	f
	- Crest factor	cf
Media parameters :	- Conductivity	σ
	- Density	ρ

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY components. In the direct measuring mode of the multi-meter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power.

The formula for each channel can be given as :

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

with V_i = compensated signal of channel i, (i = x, y, z)
 U_i = input signal of channel i, (i = x, y, z)
 cf = crest factor of exciting field (DASY parameter)
 dcp_i = diode compression point (DASY parameter)

From the compensated input signals, the primary field data for each channel can be evaluated :

$$\text{E-field Probes : } E_i = \sqrt{\frac{V_i}{\text{Norm}_i \cdot \text{ConvF}}}$$

$$\text{H-field Probes : } H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1}f + a_{i2}f^2}{f}$$

with V_i = compensated signal of channel i, (i = x, y, z)
 Norm_i = sensor sensitivity of channel i, (i = x, y, z), $\mu\text{V}/(\text{V/m})^2$ for E-field Probes
 ConvF = sensitivity enhancement in solution
 a_{ij} = sensor sensitivity factors for H-field probes
 f = carrier frequency [GHz]
 E_i = electric field strength of channel i in V/m
 H_i = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude) :

$$E_{\text{tot}} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$\text{SAR} = E_{\text{tot}}^2 \cdot \frac{\sigma}{\rho \cdot 1000}$$

with SAR = local specific absorption rate in mW/g
 E_{tot} = total field strength in V/m
 σ = conductivity in [mho/m] or [Siemens/m]
 ρ = equivalent tissue density in g/cm^3

Note that the density is set to 1, to account for actual head tissue density rather than the density of the tissue simulating liquid.

5.8 Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	Dosimetric E-Field Probe	ET3DV6	1787	May 20, 2011	May 19, 2012
SPEAG	Dosimetric E-Field Probe	EX3DV4	3792	Jun. 20, 2011	Jun. 19, 2012
SPEAG	Dosimetric E-Field Probe	EX3DV4	3792	Jun. 21, 2012	Jun. 20, 2013
SPEAG	Dosimetric E-Field Probe	EX3DV4	3578	Jun. 21, 2012	Jun. 20, 2013
SPEAG	Dosimetric E-Field Probe	EX3DV4	3820	Dec. 16, 2011	Dec. 15, 2012
SPEAG	2450MHz System Validation Kit	D2450V2	736	Jul. 25, 2011	Jul. 24, 2013
SPEAG	5GHz System Validation Kit	D5GHzV2	1006	Jan. 18, 2012	Jan. 17, 2013
SPEAG	Data Acquisition Electronics	DAE3	577	Jun. 20, 2011	Jun. 19, 2012
SPEAG	Data Acquisition Electronics	DAE4	778	Aug. 27, 2012	Aug. 26, 2013
SPEAG	Data Acquisition Electronics	DAE3	495	Apr. 28, 2011	Apr. 27, 2012
SPEAG	Data Acquisition Electronics	DAE4	1279	Jun. 17, 2011	Jun. 16, 2012
SPEAG	Device Holder	N/A	N/A	NCR	NCR
SPEAG	ELI4 Phantom	QD 0VA 001 BB	1026	NCR	NCR
SPEAG	ELI4 Phantom	QD 0VA 001 BA	1029	NCR	NCR
SPEAG	ELI4 Phantom	QD 0VA 002 AA	TP-1127	NCR	NCR
Agilent	ENA Series Network Analyzer	E5071C	MY46100746	Jun. 10, 2011	Jun. 09, 2012
Agilent	ENA Series Network Analyzer	E5071C	MY46101588	May. 11, 2012	May. 10, 2013
Agilent	ESG Vector Series Signal Generator	E4438C	MY49070755	Oct. 17, 2011	Oct. 16, 2012
Anritsu	Power Meter	ML2495A	0932001	Sep. 21, 2011	Sep. 20, 2012
Anritsu	Power Meter	ML2495A	1132003	Aug. 14, 2012	Aug. 13, 2013
Anritsu	Radio Communication Analyzer	MT8820C	6201074414	Dec. 21, 2011	Dec. 20, 2012
Agilent	Wireless Communication Test Set	E5515C	MY50266977	Nov. 13, 2011	Nov. 12, 2013
R&S	Universal Digital Radio communication Tester	CMU200	117995	Jul. 28, 2011	Jul. 27, 2012
R&S	Universal Digital Radio communication Tester	CMU200	114256	Jun. 29, 2012	Jun. 28, 2013
R&S	Spectrum Analyzer	FSP30	101329	May 03, 2011	May 02, 2012
R&S	Spectrum Analyzer	FSP	101131	Jul. 23, 2012	Jul. 22, 2013

Table 5.1 Test Equipment List

Note:

1. The calibration certificate of DASY can be referred to appendix C of this report.
2. Referring to KDB 450824 D02, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole D2450V2, SN: 736, can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.

6. Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. 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, which is shown in Fig. 6.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 6.2.



Fig 6.1 Photo of Liquid Height for Head SAR



Fig 6.2 Photo of Liquid Height for Body SAR

The following table gives the recipes for tissue simulating liquid.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (ϵ_r)
For Head								
2450	55.0	0	0	0	0	45.0	1.80	39.2
For Body								
2450	68.6	0	0	0	0	31.4	1.95	52.7

Table 6.1 Recipes of Tissue Simulating Liquid

Simulating Liquid for 5G, Manufactured by SPEAG

Ingredients	(% by weight)
Water	64~78%
Mineral oil	11~18%
Emulsifiers	9~15%
Additives and Salt	2~3%

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

The following table shows the measuring results for simulating liquid.

Freq. (MHz)	Liquid Type	Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
2450	Body	21.6	1.96	53.8	1.95	52.7	0.51	2.09	±5	Mar. 16, 2012
2450	Body	21.6	2.02	54	1.95	52.7	3.59	2.47	±5	Mar. 16, 2012
2450	Body	21.5	2.02	53.8	1.95	52.7	3.59	2.09	±5	Mar. 17, 2012
5200	Body	21.4	5.29	48.8	5.3	49	-0.19	-0.41	±5	Mar. 17, 2012
5200	Body	21.5	5.279	48.534	5.3	49	-0.40	-0.95	±5	Oct. 15, 2012
5800	Body	21.7	6.15	46.5	6	48.2	2.50	-3.53	±5	Mar. 18, 2012
5800	Body	21.4	6.229	46.417	6	48.2	3.82	-3.70	±5	Mar. 23, 2012
5800	Body	21.5	6.113	47.156	6	48.2	1.88	-2.17	±5	Oct. 06, 2012

Table 6.2 Measuring Results for Simulating Liquid

7. Uncertainty Assessment

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in Table 7.1

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	$1/k^{(b)}$	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) k is the coverage factor

Table 7.1 Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is showed in Table 7.2.

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Standard Uncertainty (1g)
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	0.3	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	0.4	Rectangular	√3	1	± 0.2 %
Probe Positioning	2.9	Rectangular	√3	1	± 1.7 %
Max. SAR Eval.	1.0	Rectangular	√3	1	± 0.6 %
Test Sample Related					
Device Positioning	2.9	Normal	1	1	± 2.9 %
Device Holder	3.6	Normal	1	1	± 3.6 %
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.)	2.5	Normal	1	0.64	± 1.6 %
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	± 1.7 %
Liquid Permittivity (Meas.)	2.5	Normal	1	0.6	± 1.5 %
Combined Standard Uncertainty					± 11.0 %
Coverage Factor for 95 %					K = 2
Expanded Uncertainty					± 22.0 %

Table 7.2 Uncertainty Budget of DASY for frequency range 300 MHz to 3 GHz

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Standard Uncertainty (1g)
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	2.9	Normal	1	1	± 2.9 %
Device Holder	3.6	Normal	1	1	± 3.6 %
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.)	2.5	Normal	1	0.64	± 1.6 %
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	± 1.7 %
Liquid Permittivity (Meas.)	2.5	Normal	1	0.6	± 1.5 %
Combined Standard Uncertainty					± 12.8 %
Coverage Factor for 95 %					K = 2
Expanded Uncertainty					± 25.3 %

Table 7.3 Uncertainty Budget of DASY for frequency range 3 GHz to 6 GHz

8. SAR Measurement Evaluation

Each DASY system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the DASY software, enable the user to conduct the system performance check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

8.1 Purpose of System Performance check

The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

8.2 System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:

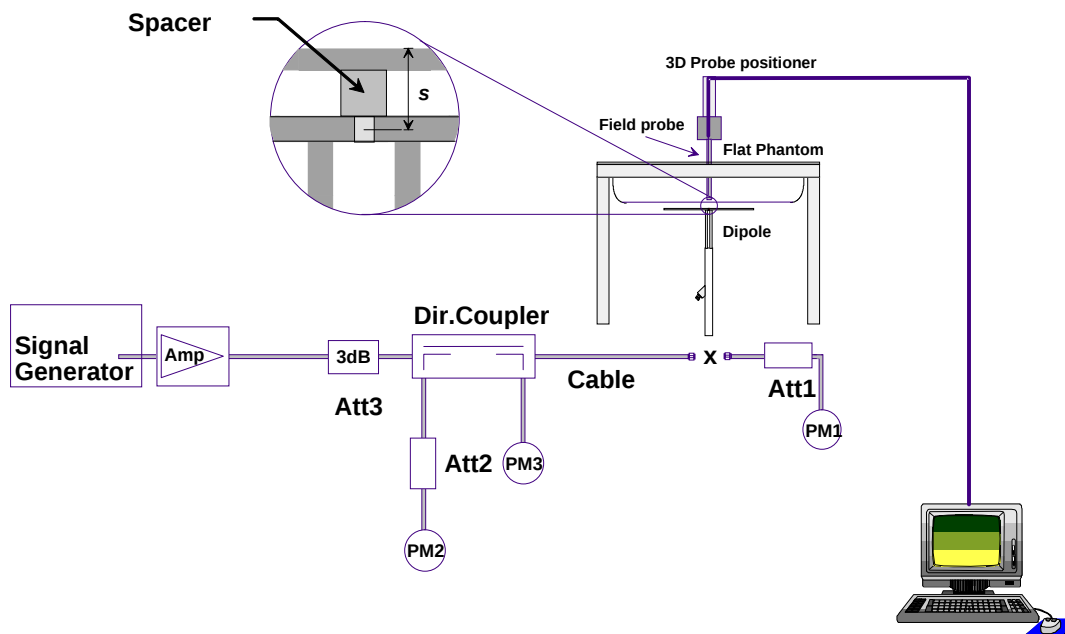


Fig 8.1 System Setup for System Evaluation

1. Signal Generator
2. Amplifier
3. Directional Coupler
4. Power Meter
5. Calibrated Dipole

The output power on dipole port must be calibrated to 24 dBm (250 mW) before dipole is connected.

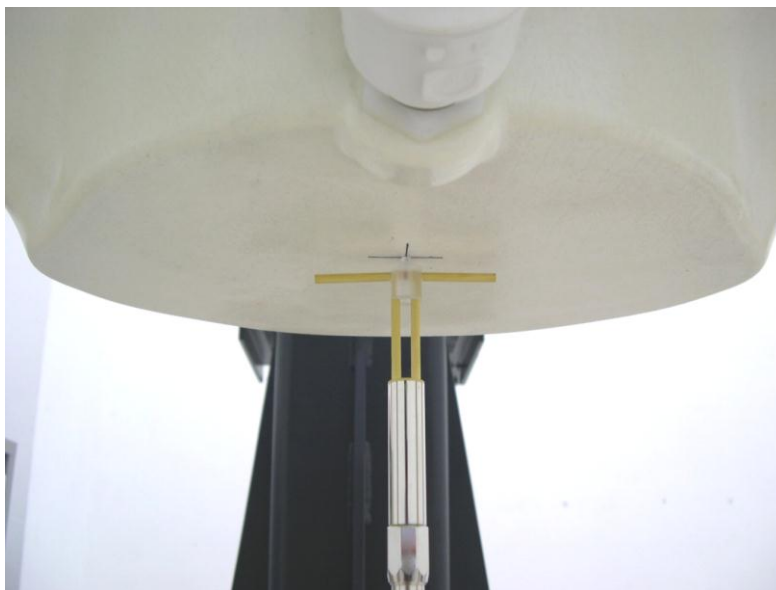


Fig 8.2 Photo of Dipole Setup

8.3 Validation Results

Comparing to the original SAR value provided by SPEAG, the validation data should be within its specification of 10 %. Table 8.1 shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

Measurement Date	Frequency (MHz)	Liquid Type	Targeted SAR _{1g} (W/kg)	Measured SAR _{1g} (W/kg)	Normalized SAR _{1g} (W/kg)	Deviation (%)
Mar. 16, 2012	2450	Body	52.3	12.5	50.00	-4.40
Mar. 16, 2012	2450	Body	52.3	13.9	55.60	6.31
Mar. 17, 2012	2450	Body	52.3	13.4	53.60	2.49
Mar. 17, 2012	5200	Body	72.6	18.8	75.20	3.58
Oct. 15, 2012	5200	Body	72.6	18.5	74.00	1.93
Mar. 18, 2012	5800	Body	73.1	19.5	78.00	6.70
Mar. 23, 2012	5800	Body	73.1	19.7	78.80	7.80
Oct. 06, 2012	5800	Body	73.1	19	76.00	3.97

Table 8.1 Target and Measurement SAR after Normalized

9. DUT Testing Position

This DUT was tested in five different USB configurations. They are “direct laptop plug-in for configuration 1 and 4”, “USB cable plug-in for configuration 2 and 3”, and “direct laptop plug-in for Tip Mode (the tip of the DUT)” shown as below. Both direct laptop plug-in and USB cable plug-in test configurations are tested with 5 cm separation between the particular dongle orientation and the flat phantom. Please refer to Appendix E for the test setup photos.

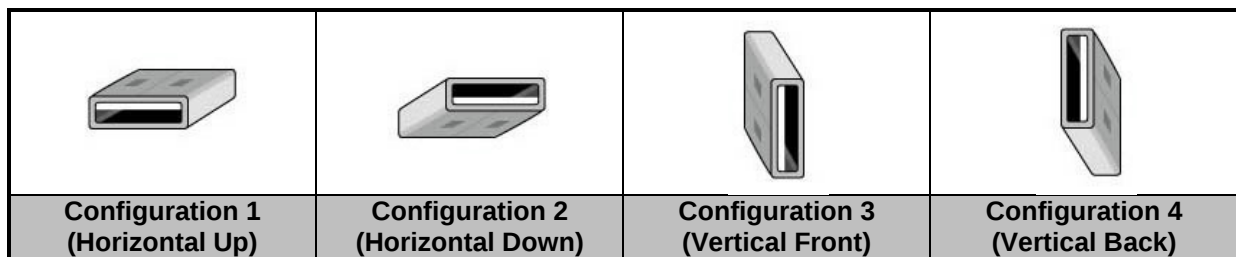


Fig 9.1 Illustration for USB Connector Orientations

10. Measurement Procedures

The measurement procedures are as follows:

- (a) Use base station simulator (if applicable) or engineering software to transmit RF power continuously (continuous Tx) in the highest power channel.
- (b) Keep DUT to radiate maximum output power or 100% duty factor (if applicable)
- (c) Measure output power through RF cable and power meter.
- (d) Place the DUT in the positions as Appendix E demonstrates.
- (e) Set scan area, grid size and other setting on the DASY software.
- (f) Measure SAR results for the highest power channel on each testing position.
- (g) Find out the largest SAR result on these testing positions of each band
- (h) Measure SAR results for other channels in worst SAR testing position if the SAR of highest power channel is larger than 0.8 W/kg

According to the 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

10.1 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

10.2 Area & Zoom Scan Procedures

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 300 MHz to 3 GHz, and 8x8x8 points with step size 4, 4 and 2.5 mm for 3 GHz to 6 GHz. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

10.3 Volume Scan Procedures

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 (step-size is 4, 4 and 2.5 mm). When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

10.4 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.

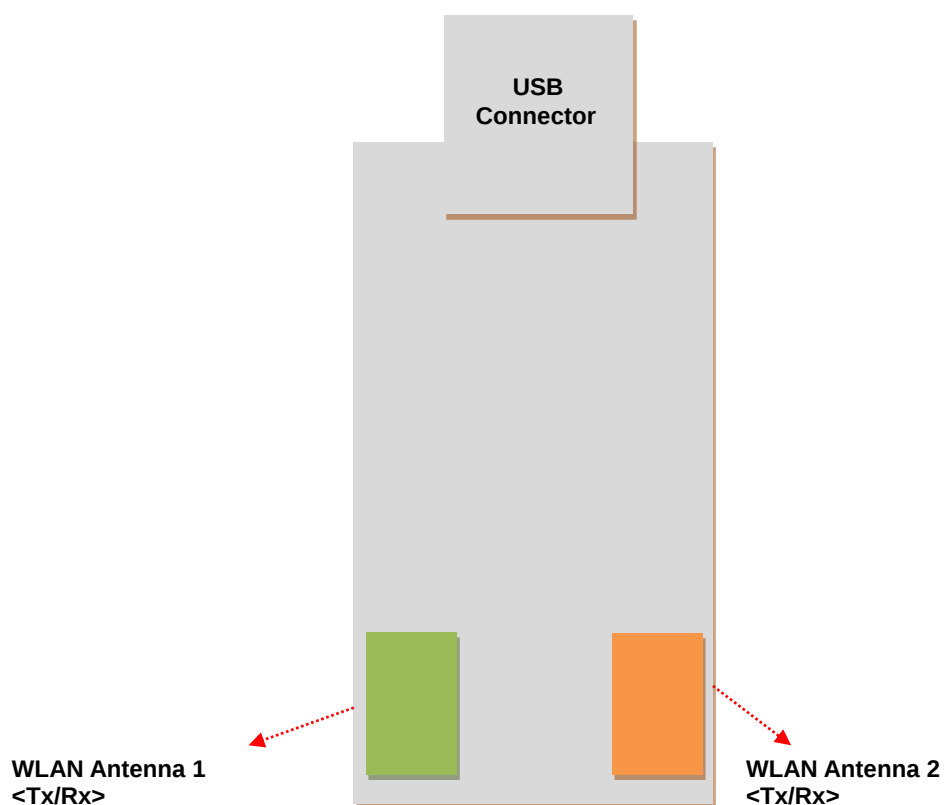
Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty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

10.5 Power Drift Monitoring

All SAR testing is under the DUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of 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.

11. SAR Test Configurations

11.1 Exposure Positions Consideration



Antenna characteristics

Mode	Antenna 1	Antenna 2	Antenna 1+2
2.4GHz 802.11b	V	X	X
2.4GHz 802.11g	V	V	X
2.4GHz 802.11n	X	X	V
5GHz 802.11a	V	V	X
5GHz 802.11n	X	X	V

12. SAR Test Results

12.1 Conducted Power (Unit: dBm)

<WLAN2.4G>

Band	802.11b		
Channel	1	6	11
Frequency (MHz)	2412	2437	2462
Average Power for Ant. 1	19.18	16.78	16.42

Band	802.11g		
Channel	1	6	11
Frequency (MHz)	2412	2437	2462
Average Power for Ant. 1	17.72	18.05	17.62

Note:

1. Per KDB 248227 for Ant. (1), choose the highest output power channel to test SAR and determine further SAR exclusion
2. Per KDB 248227, 11g output power is less than 1/4 dB higher than 11b mode, thus the SAR can be excluded.

Band	802.11g		
Channel	1	6	11
Frequency (MHz)	2412	2437	2462
Average Power for Ant. 2	17.53	18.02	17.53

Note: Per KDB 248227 for Ant. (2), choose the highest output power channel to test SAR and determine further SAR exclusion

Band	802.11n (BW 20MHz)			802.11n (BW 40MHz)		
Channel	1	6	11	3	6	9
Frequency (MHz)	2412	2437	2462	2422	2437	2452
Average Power for Ant. 1+ 2	16.88	17.25	17.13	16.84	17.11	16.87

Note:

1. Per KDB 248227 for Ant. (1+2), choose the highest output power channel to test SAR and determine further SAR exclusion
2. Per KDB 248227, 11n (40M) output power is less than 1/4 dB higher than 11n (20M) mode, thus the SAR can be excluded.

<WLAN5G>

Band	802.11a								
Channel	36	40	44	48	149	153	157	161	165
Frequency (MHz)	5180	5200	5220	5240	5745	5765	5785	5805	5825
Average Power for Ant. 1	14.85	14.76	14.96	14.98	12.38	12.42	12.68	12.51	12.37

Note:

1. Per KDB 248227 for Ant(1), choose the highest output power channel to test SAR and determine further SAR exclusion
2. As in (1) chose ch48 for band 5180Mhz~5240Mhz and chose ch157 for band 5745Mhz~5825Mhz

Band	802.11a								
Channel	36	40	44	48	149	153	157	161	165
Frequency (MHz)	5180	5200	5220	5240	5745	5765	5785	5805	5825
Average Power for Ant. 2	14.62	14.40	14.75	14.72	12.12	12.38	12.41	12.49	12.12

Note:

1. Per KDB 248227 for Ant(2), choose the highest output power channel to test SAR and determine further SAR exclusion
2. As in (1) chose ch44 for band 5180Mhz~5240Mhz and chose ch161 for band 5745Mhz~5825Mhz

Band	802.11n (BW 20MHz)								
Channel	36	40	44	48	149	153	157	161	165
Frequency (MHz)	5180	5200	5220	5240	5745	5765	5785	5805	5825
Average Power for Ant. 1 + 2	15.88	15.71	15.83	15.98	16.13	17.06	16.60	17.04	17.07

Band	802.11n (BW 40MHz)			
Channel	38	46	151	159
Frequency (MHz)	5190	5230	5755	5795
Average Power for Ant. 1 + 2	15.95	15.90	17.12	16.44

Note:

1. Per KDB 248227 for Ant(1+2), choose the highest output power channel to test SAR and determine further SAR exclusion
2. As in (1) chose ch48 for band 5180Mhz~5240Mhz and chose ch165 for band 5745Mhz~5825Mhz
3. Per KDB 248227, 11n(40M)output power is less than 1/4 dB higher than 11n(20M) mode, thus the SAR can be excluded.

12.2 Test Records for Body SAR Test

<WLAN 2.4G>

Plot No.	Band	Mode	Test Position	Gap (cm)	Ch.	Ant. Status	SAR _{1g} (W/kg)
1	802.11b	-	Horizontal Up	0.5	1	1	1.13
2	802.11b	-	Horizontal Down	0.5	1	1	0.922
3	802.11b	-	Vertical Front	0.5	1	1	0.761
4	802.11b	-	Vertical Back	0.5	1	1	0.049
5	802.11b	-	Tip Mode	0.5	1	1	0.345
6	802.11b	-	Horizontal Up	0.5	6	1	1.16
7	802.11b	-	Horizontal Up	0.5	11	1	0.991
8	802.11b	-	Horizontal Down	0.5	6	1	0.753
9	802.11b	-	Horizontal Down	0.5	11	1	0.548
11	802.11g	-	Horizontal Up	0.5	6	2	1.11
12	802.11g	-	Horizontal Down	0.5	6	2	0.5
13	802.11g	-	Vertical Front	0.5	6	2	0.028
14	802.11g	-	Vertical Back	0.5	6	2	0.495
15	802.11g	-	Tip Mode	0.5	6	2	0.134
16	802.11g	-	Horizontal Up	0.5	1	2	0.913
17	802.11g	-	Horizontal Up	0.5	11	2	0.89
20	802.11n	20M	Horizontal Up	0.5	6	1+2	1.11
21	802.11n	20M	Horizontal Down	0.5	6	1+2	0.723
22	802.11n	20M	Vertical Front	0.5	6	1+2	0.02
23	802.11n	20M	Vertical Back	0.5	6	1+2	0.284
24	802.11n	20M	Tip Mode	0.5	6	1+2	0.145
25	802.11n	20M	Horizontal Up	0.5	1	1+2	1.03
26	802.11n	20M	Horizontal Up	0.5	11	1+2	1.16

Note: Per KDB447498, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

<WLAN 5G>

Plot No.	Band	Mode	Test Position	Gap (cm)	Ch.	Ant. Status	SAR _{1g} (W/kg)
27	802.11a	-	Horizontal Up	0.5	48	1	0.459
28	802.11a	-	Horizontal Down	0.5	48	1	0.511
29	802.11a	-	Vertical Front	0.5	48	1	1.09
30	802.11a	-	Vertical Back	0.5	48	1	0.076
31	802.11a	-	Tip Mode	0.5	48	1	0.229
38	802.11a	-	Vertical Front	0.5	36	1	1.12
44	802.11a	-	Horizontal Up	0.5	157	1	0.461
45	802.11a	-	Horizontal Down	0.5	157	1	0.574
46	802.11a	-	Vertical Front	0.5	157	1	1.1
47	802.11a	-	Vertical Back	0.5	157	1	0.102
48	802.11a	-	Tip Mode	0.5	157	1	0.343
49	802.11a	-	Vertical Front	0.5	149	1	1.15
65	802.11a	-	Vertical Front	0.5	165	1	1.04
75	802.11a	-	Horizontal Up	0.5	44	2	0.303
76	802.11a	-	Horizontal Down	0.5	44	2	0.292
77	802.11a	-	Vertical Front	0.5	44	2	0.035
78	802.11a	-	Vertical Back	0.5	44	2	0.587
79	802.11a	-	Tip Mode	0.5	44	2	0.138
68	802.11a	-	Horizontal Up	0.5	161	2	0.151
69	802.11a	-	Horizontal Down	0.5	161	2	0.127
70	802.11a	-	Vertical Front	0.5	161	2	0.038
71	802.11a	-	Vertical Back	0.5	161	2	0.348
72	802.11a	-	Tip Mode	0.5	161	2	0.1

Plot No.	Band	Mode	Test Position	Gap (cm)	Ch.	Ant. Status	SAR _{1g} (W/kg)
39	802.11n	20M	Horizontal Up	0.5	48	1+2	0.2
40	802.11n	20M	Horizontal Down	0.5	48	1+2	0.239
41	802.11n	20M	Vertical Front	0.5	48	1+2	0.569
42	802.11n	20M	Vertical Back	0.5	48	1+2	0.281
43	802.11n	20M	Tip Mode	0.5	48	1+2	0.178
56	802.11n	20M	Horizontal Up	0.5	165	1+2	0.505
57	802.11n	20M	Horizontal Down	0.5	165	1+2	0.474
58	802.11n	20M	Vertical Front	0.5	165	1+2	1.13
59	802.11n	20M	Vertical Back	0.5	165	1+2	0.731
60	802.11n	20M	Tip Mode	0.5	165	1+2	0.519
61	802.11n	20M	Vertical Front	0.5	149	1+2	0.757
62	802.11n	20M	Vertical Front	0.5	157	1+2	1.19

Note: Per KDB447498, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

Test Engineer : Jack Wu, Niels Ouyang, Nick Tour, Bevis Chang, Cona Huang, Vic Yang, and Angelo Chang

13. References

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- [2] IEEE Std. C95.1-1991, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", 1991
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- [4] FCC OET Bulletin 65 (Edition 97-01) Supplement C (Edition 01-01), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", June 2001
- [5] SPEAG DASY System Handbook
- [6] FCC KDB 248227 D01 v01r02, "SAR Measurement Procedures for 802.11 a/b/g Transmitters", May 2007
- [7] FCC KDB 447498 D01 v04, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", November 2009
- [8] FCC KDB 447498 D02 v02, "SAR Measurement Procedures for USB Dongle Transmitters", November 2009
- [9] FCC KDB 941225 D01 v02, "SAR Measurement Procedures for 3G Devices – CDMA 2000 / Ev-Do / WCDMA / HSDPA / HSPA", October 2007
- [10] FCC KDB 941225 D03 v01, "Recommended SAR Test Reduction Procedures for GSM / GPRS / EDGE", December 2008
- [11] FCC KDB 941225 D04 v01, "Evaluating SAR for GSM/(E)GPRS Dual Transfer Mode", January 27 2010
- [12] FCC KDB 941225 D05 v01, "SAR Test Considerations for LTE Handsets and Data Modems", December 2010
- [13] FCC KDB 941225 D06 v01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", April 2011
- [14] FCC KDB 388624 D02, "Permit But Ask List", April 2011.



Appendix A. Plots of System Performance Check

The plots are shown as follows.

System Check_Body_2450MHz_120316**DUT: D2450V2-SN:736**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3820; ConvF(7.34, 7.34, 7.34); Calibrated: 2011/12/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2011/6/17
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 14.6 mW/g

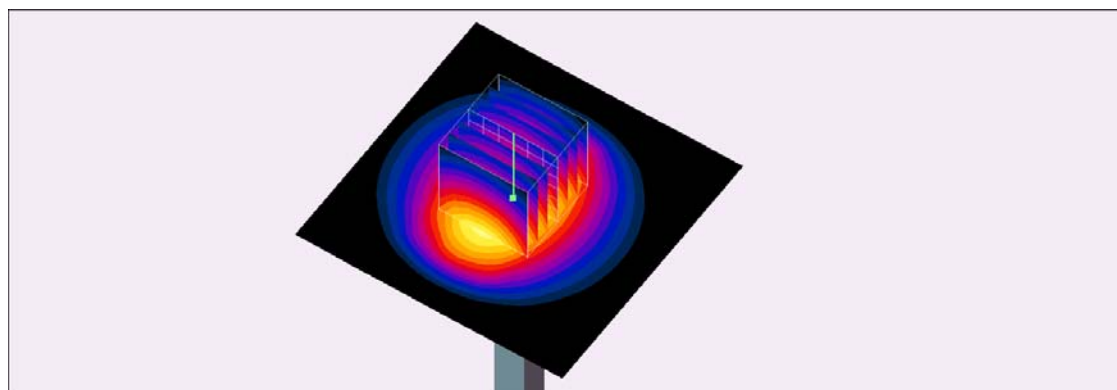
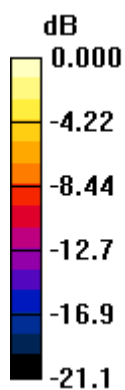
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 84.4 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 25.4 W/kg

SAR(1 g) = 12.5 mW/g; SAR(10 g) = 5.89 mW/g

Maximum value of SAR (measured) = 14.4 mW/g



0 dB = 14.4mW/g

System Check_Body_2450MHz_120316**DUT: D2450V2-SN:736**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 15.7 mW/g

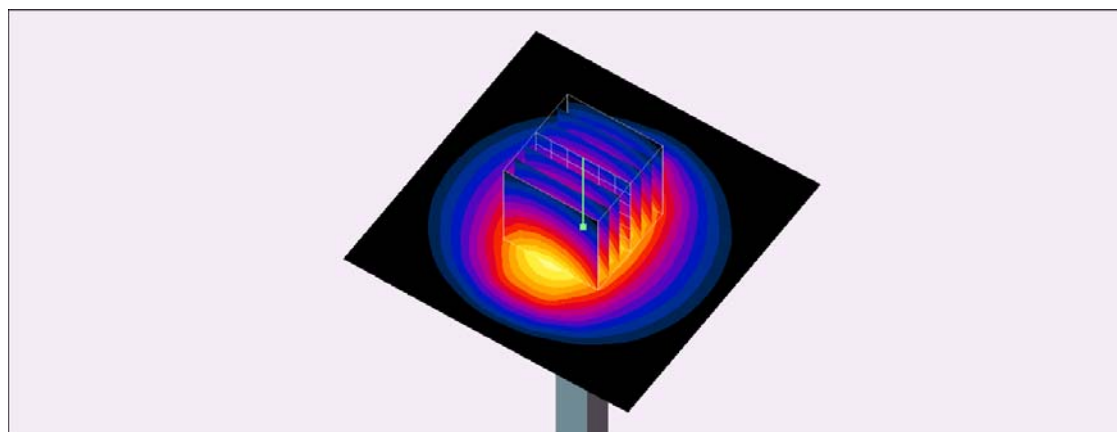
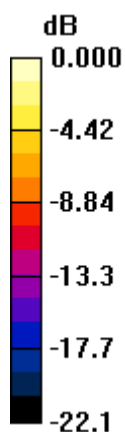
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.9 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 34.9 W/kg

SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.25 mW/g

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



0 dB = 15.2mW/g

System Check_Body_2450MHz_120317**DUT: D2450V2-SN:736**

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

Medium: MSL_2450_120317 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 15.1 mW/g

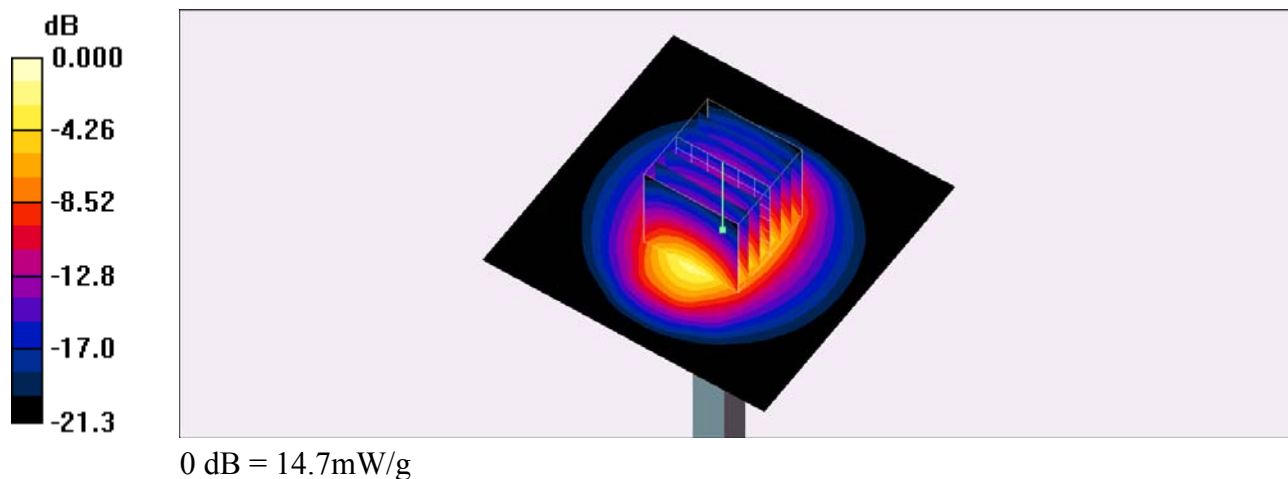
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 85.2 V/m; Power Drift = -0.110 dB

Peak SAR (extrapolated) = 33.1 W/kg

SAR(1 g) = 13.4 mW/g; SAR(10 g) = 6.13 mW/g

Maximum value of SAR (measured) = 14.7 mW/g



System Check_Body_5200MHz_120317

DUT: D5GHzV2-SN:1006

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

Medium: MSL_5G_120317 Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.29 \text{ mho/m}$; $\epsilon_r = 48.8$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.4 ; Liquid Temperature : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 32.9 mW/g

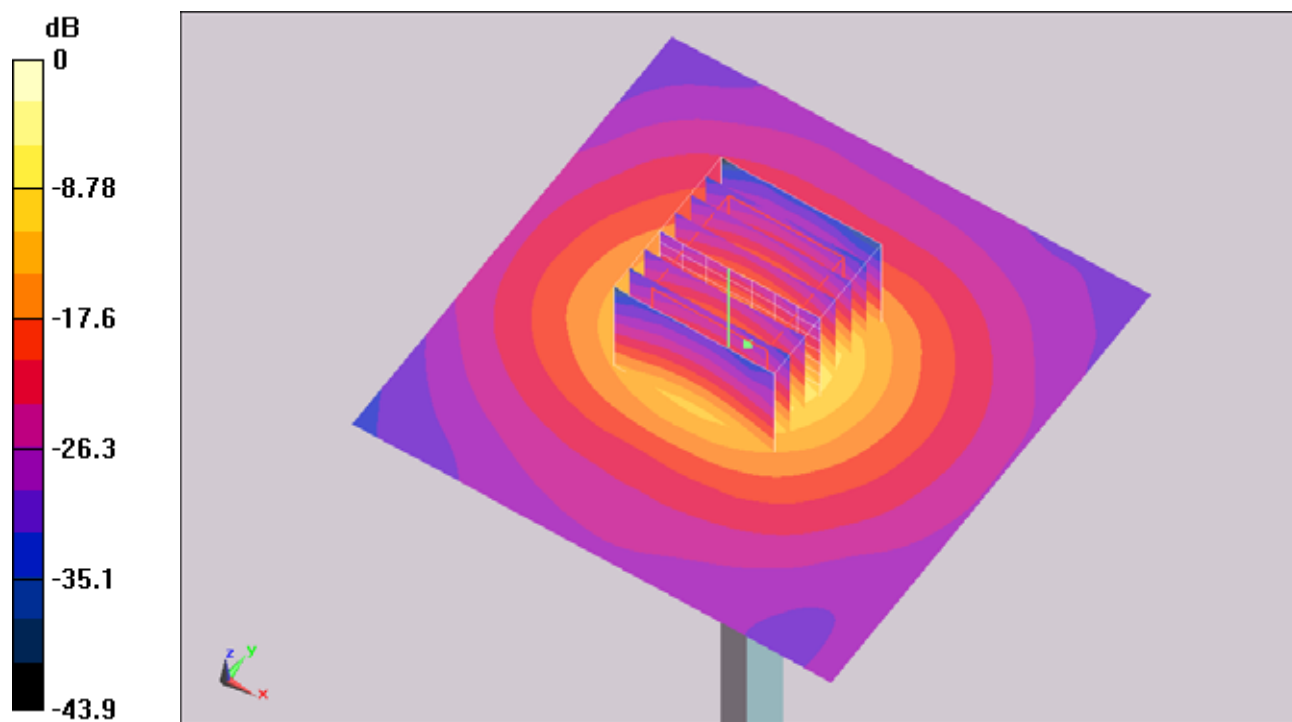
Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 80.5 V/m; Power Drift = 0.187 dB

Peak SAR (extrapolated) = 61.2 W/kg

SAR(1 g) = 18.8 mW/g; SAR(10 g) = 5.37 mW/g

Maximum value of SAR (measured) = 32.2 mW/g



0 dB = 32.2mW/g

System Check_Body_5200MHz_121015**DUT: D5GHzV2-SN:1006**

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

Medium: MSL_5G_121015 Medium parameters used: $f = 5200$ MHz; $\sigma = 5.279$ mho/m; $\epsilon_r = 48.534$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.2, 4.2, 4.2); Calibrated: 2012/6/21;
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 33.8 mW/g

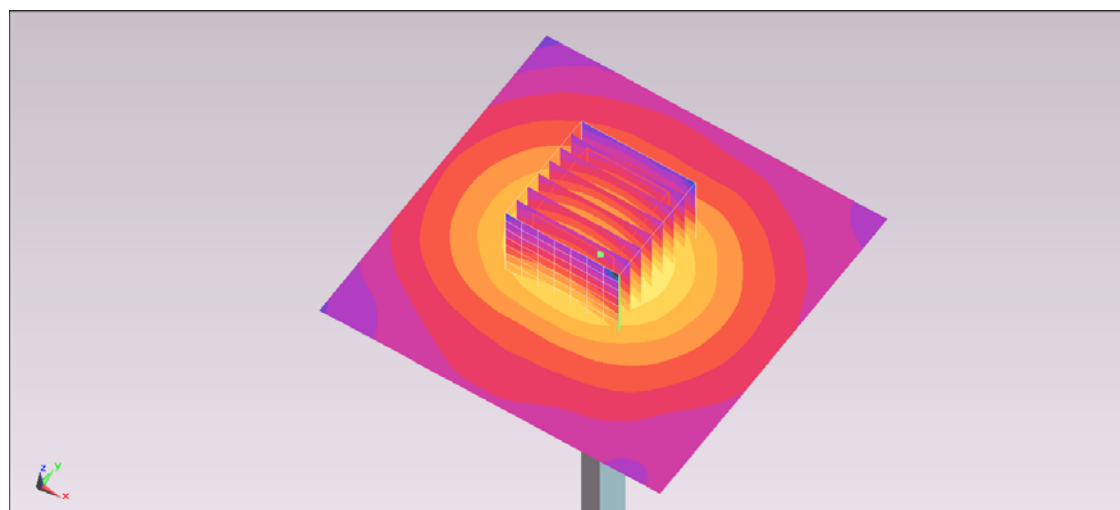
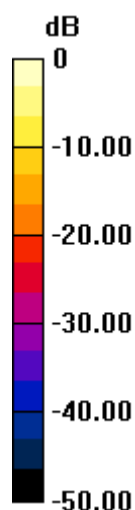
Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 82.356 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 59.304 mW/g

SAR(1 g) = 18.5 mW/g; SAR(10 g) = 5.3 mW/g

Maximum value of SAR (measured) = 30.8 mW/g



0 dB = 30.8 mW/g = 29.77 dB mW/g

System Check_Body_5800MHz_120318

DUT: D5GHzV2-SN:1006

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

Medium: MSL_5G_120318 Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.15 \text{ mho/m}$; $\epsilon_r = 46.5$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Pin=250mW/Area Scan (91x91x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 35.9 mW/g

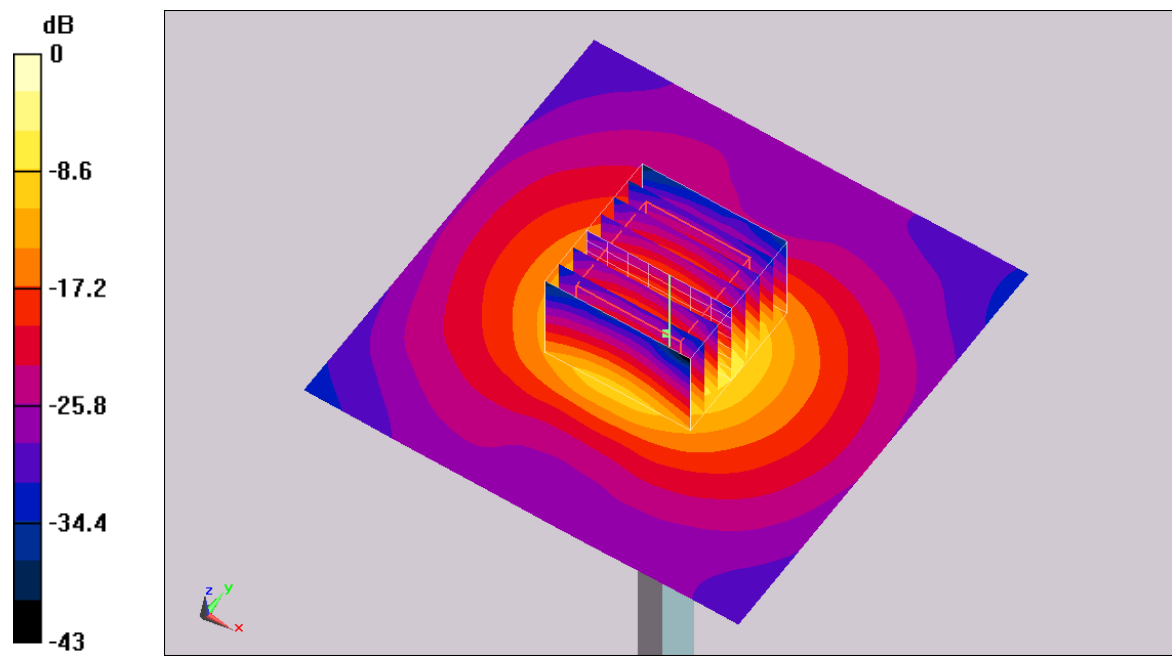
Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 82.5 V/m ; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 57.1 W/kg

SAR(1 g) = 19.5 mW/g ; SAR(10 g) = 5.62 mW/g

Maximum value of SAR (measured) = 33.1 mW/g



0 dB = 33.1mW/g

System Check_Body_5800MHz_120323**DUT: D5GHzV2-SN:1006**

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

Medium: MSL_5G_120323 Medium parameters used: $f = 5800$ MHz; $\sigma = 6.229$ mho/m; $\epsilon_r = 46.417$;

$\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3820; ConvF(3.82, 3.82, 3.82); Calibrated: 2011/12/16
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 32.839 mW/g

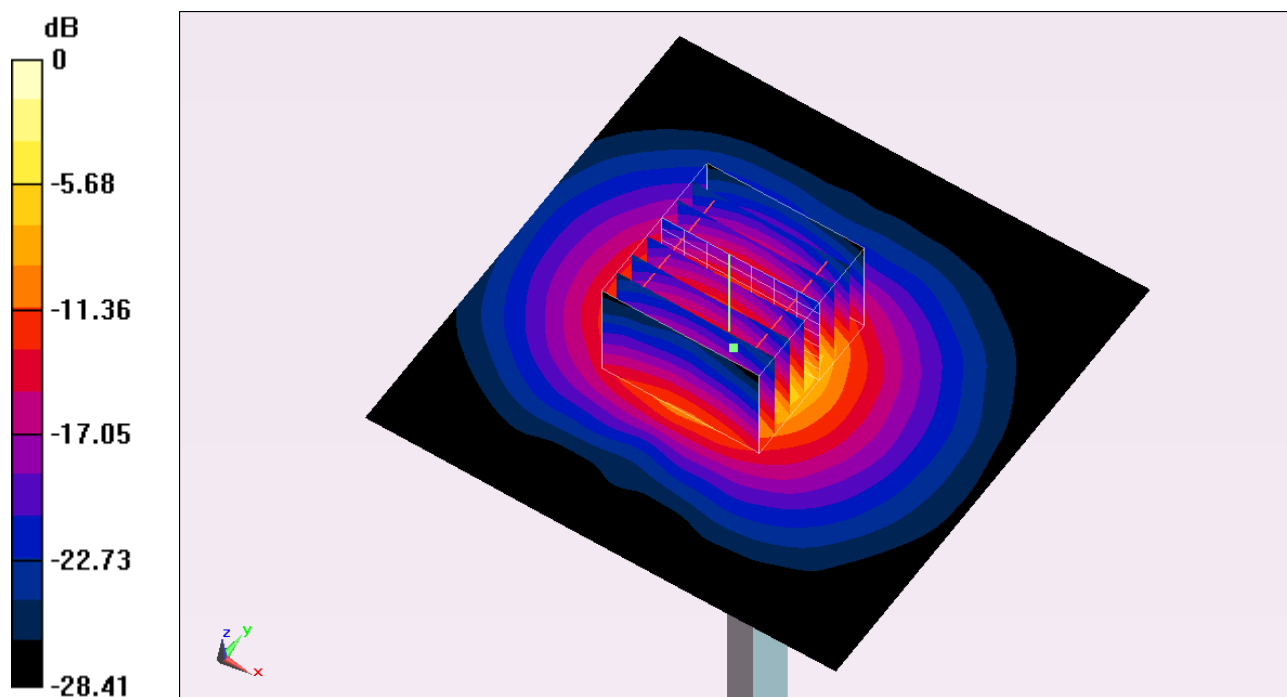
Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 71.203 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 50.7100

SAR(1 g) = 19.7 mW/g; SAR(10 g) = 6.37 mW/g

Maximum value of SAR (measured) = 31.197 mW/g



0 dB = 31.200mW/g = 29.88 dB mW/g

System Check_Body_5800MHz_121006**DUT: D5GHzV2-SN:1006**

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

Medium: MSL_5G_121006 Medium parameters used: $f = 5800$ MHz; $\sigma = 6.113$ mho/m; $\epsilon_r = 47.156$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(3.43, 3.43, 3.43); Calibrated: 2012/6/21;
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 35.3 mW/g

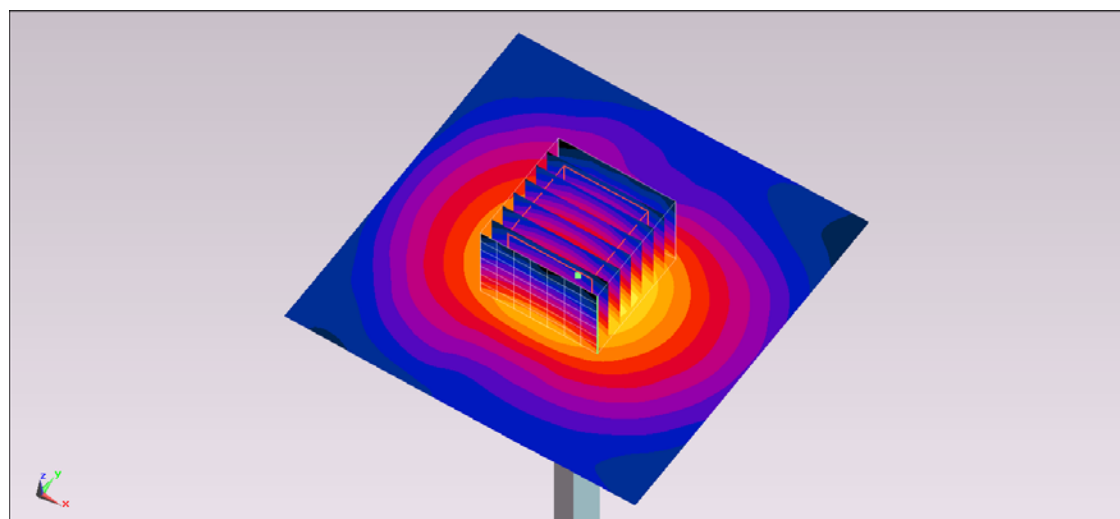
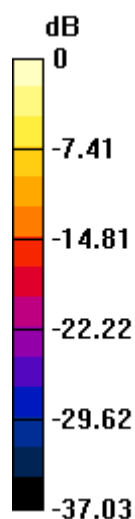
Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 80.404 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 63.448 mW/g

SAR(1 g) = 19 mW/g; SAR(10 g) = 5.52 mW/g

Maximum value of SAR (measured) = 31.3 mW/g



0 dB = 31.3 mW/g = 29.91 dB mW/g



Appendix B. Plots of SAR Measurement

The plots are shown as follows.

01 802.11b_Horizontal Up_0.5cm_Ch1_Ant 1**DUT: 220705-04**

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: MSL_2450_120316 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.22 mW/g

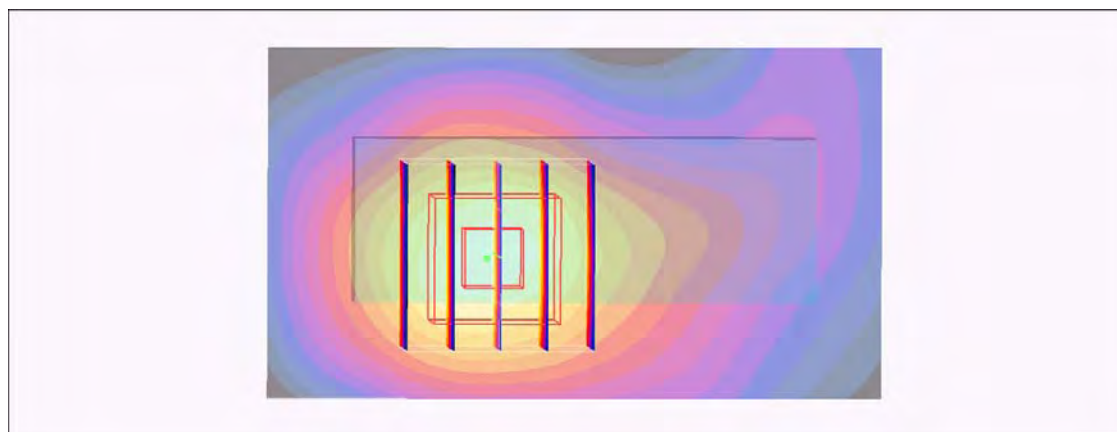
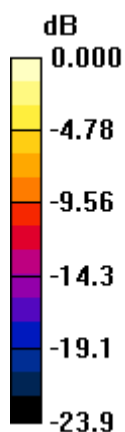
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.2 V/m; Power Drift = 0.167 dB

Peak SAR (extrapolated) = 3.14 W/kg

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.480 mW/g

Maximum value of SAR (measured) = 1.29 mW/g



0 dB = 1.29mW/g

02 802.11b_Horizontal Down_0.5cm_Ch1_Ant 1**DUT: 220705-04**

Communication System: 802.11b ; Frequency: 2412 MHz;Duty Cycle: 1:1

Medium: MSL_2450_120316 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.31 mW/g

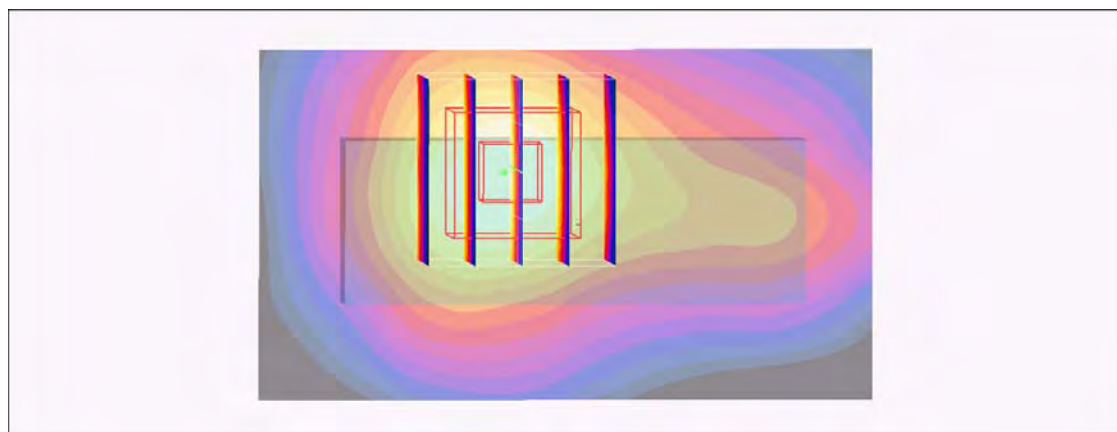
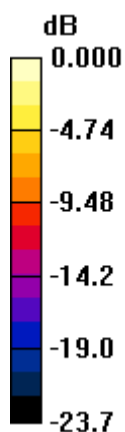
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.6 V/m; Power Drift = -0.150 dB

Peak SAR (extrapolated) = 3.07 W/kg

SAR(1 g) = 0.922 mW/g; SAR(10 g) = 0.484 mW/g

Maximum value of SAR (measured) = 1.08 mW/g



0 dB = 1.28mW/g

03 802.11b_Vertical Front_0.5cm_Ch1_Ant 1**DUT: 220705-04**

Communication System: 802.11b ; Frequency: 2412 MHz;Duty Cycle: 1:1

Medium: MSL_2450_120316 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3820; ConvF(7.34, 7.34, 7.34); Calibrated: 2011/12/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2011/6/17
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.00 mW/g

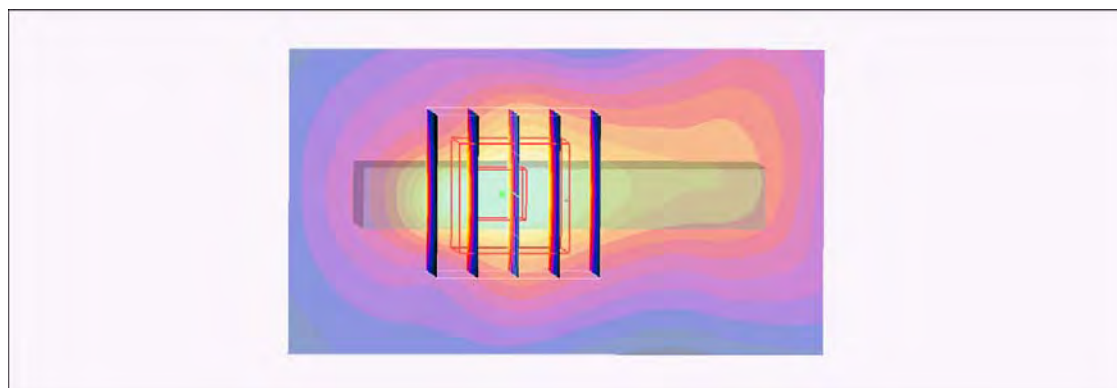
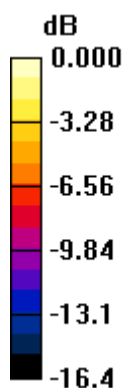
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.8 V/m; Power Drift = -0.135 dB

Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 0.761 mW/g; SAR(10 g) = 0.348 mW/g

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



0 dB = 0.855mW/g

04 802.11b_Vertical Back_0.5cm_Ch1_Ant 1**DUT: 220705-04**

Communication System: 802.11b ; Frequency: 2412 MHz;Duty Cycle: 1:1

Medium: MSL_2450_120316 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.9$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3820; ConvF(7.34, 7.34, 7.34); Calibrated: 2011/12/16
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2011/6/17
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.046 mW/g

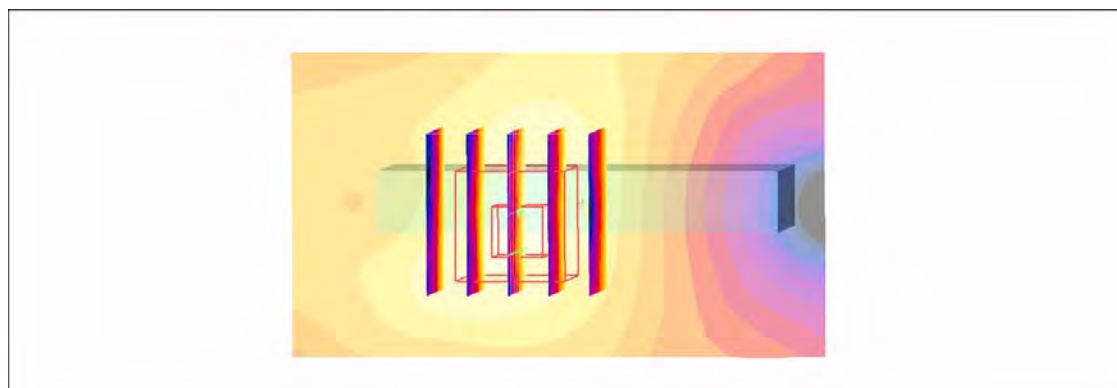
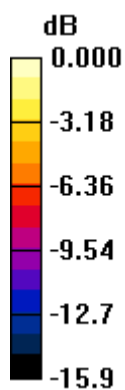
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.15 V/m; Power Drift = 0.136 dB

Peak SAR (extrapolated) = 0.085 W/kg

SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.028 mW/g

Maximum value of SAR (measured) = 0.052 mW/g



0 dB = 0.052mW/g

05 802.11b_Tip Mode_0.5cm_Ch1_Ant 1**DUT: 220705-04**

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: MSL_2450_120316 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x51x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.350 mW/g

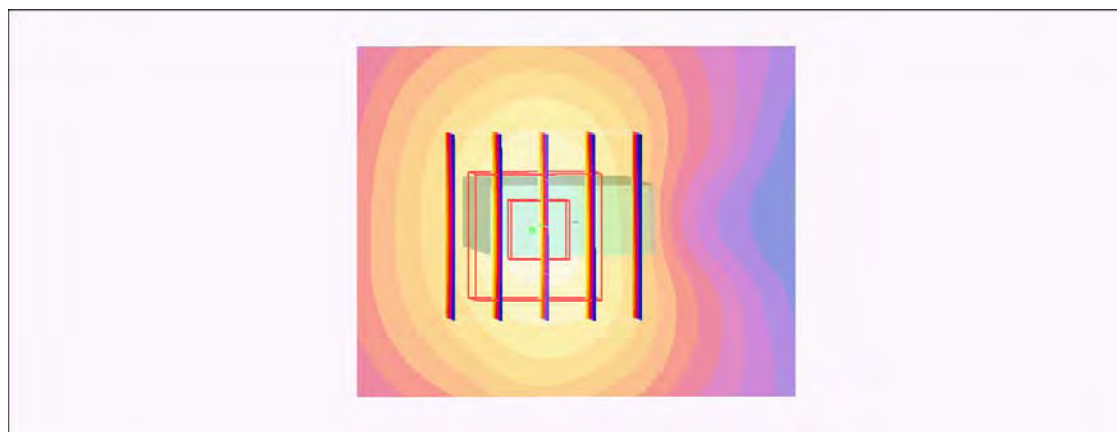
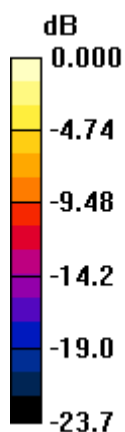
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = 0.195 dB

Peak SAR (extrapolated) = 0.856 W/kg

SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.162 mW/g

Maximum value of SAR (measured) = 0.380 mW/g



0 dB = 0.380mW/g

06 802.11b_Horizontal Up_0.5cm_Ch6_Ant 1**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.33 mW/g

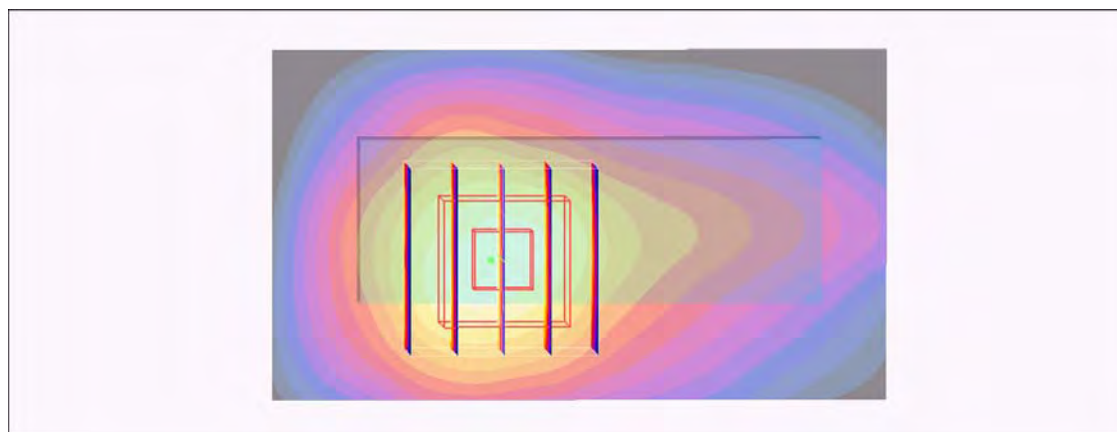
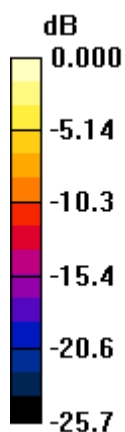
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.4 V/m; Power Drift = 0.171 dB

Peak SAR (extrapolated) = 3.30 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.474 mW/g

Maximum value of SAR (measured) = 1.31 mW/g



0 dB = 1.31mW/g

06 802.11b_Horizontal Up_0.5cm_Ch6_Ant 1_2D**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.33 mW/g

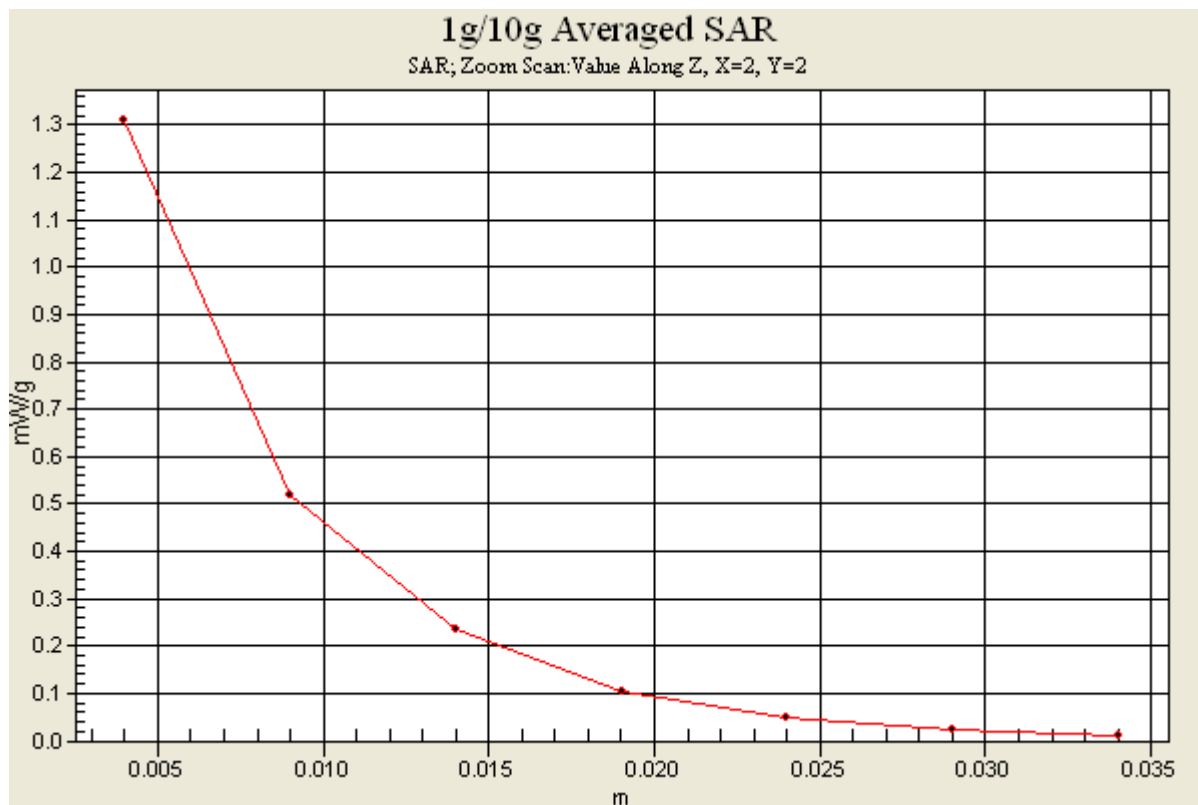
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.4 V/m; Power Drift = 0.171 dB

Peak SAR (extrapolated) = 3.30 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.474 mW/g

Maximum value of SAR (measured) = 1.31 mW/g



07 802.11b_Horizontal Up_0.5cm_Ch11_Ant 1**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.03$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch11/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.07 mW/g

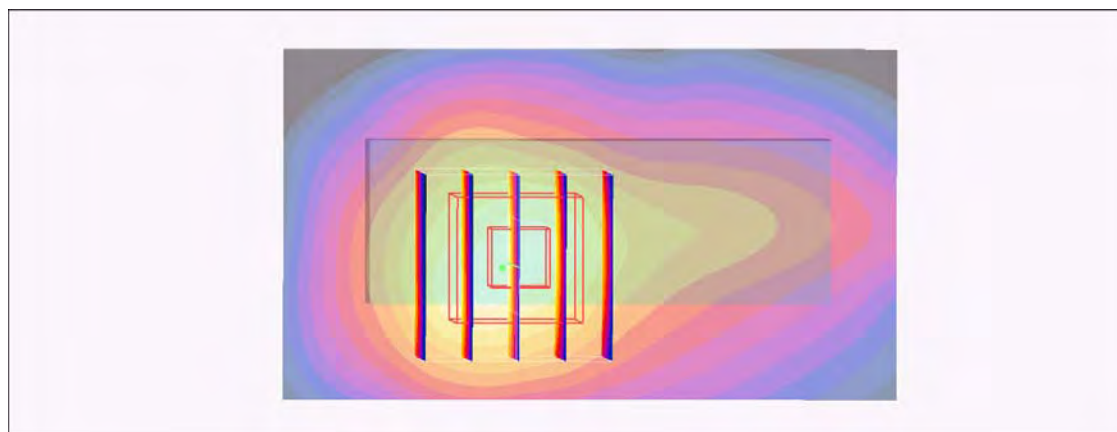
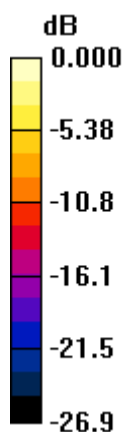
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.5 V/m; Power Drift = 0.095 dB

Peak SAR (extrapolated) = 2.85 W/kg

SAR(1 g) = 0.991 mW/g; SAR(10 g) = 0.396 mW/g

Maximum value of SAR (measured) = 1.14 mW/g



0 dB = 1.14mW/g

08 802.11b_Horizontal Down_0.5cm_Ch6_Ant 1**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.800 mW/g

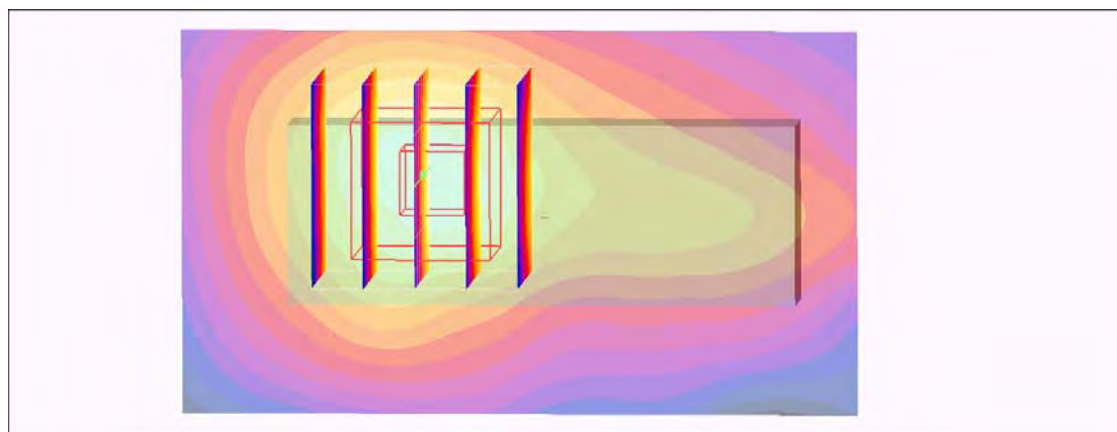
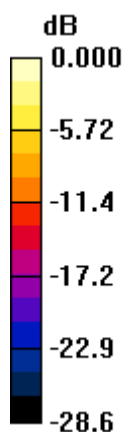
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.99 V/m; Power Drift = 0.172 dB

Peak SAR (extrapolated) = 2.18 W/kg

SAR(1 g) = 0.753 mW/g; SAR(10 g) = 0.318 mW/g

Maximum value of SAR (measured) = 0.824 mW/g



0 dB = 0.824mW/g

09 802.11b_Horizontal Down_0.5cm_Ch11_Ant 1**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.03$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch11/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.591 mW/g

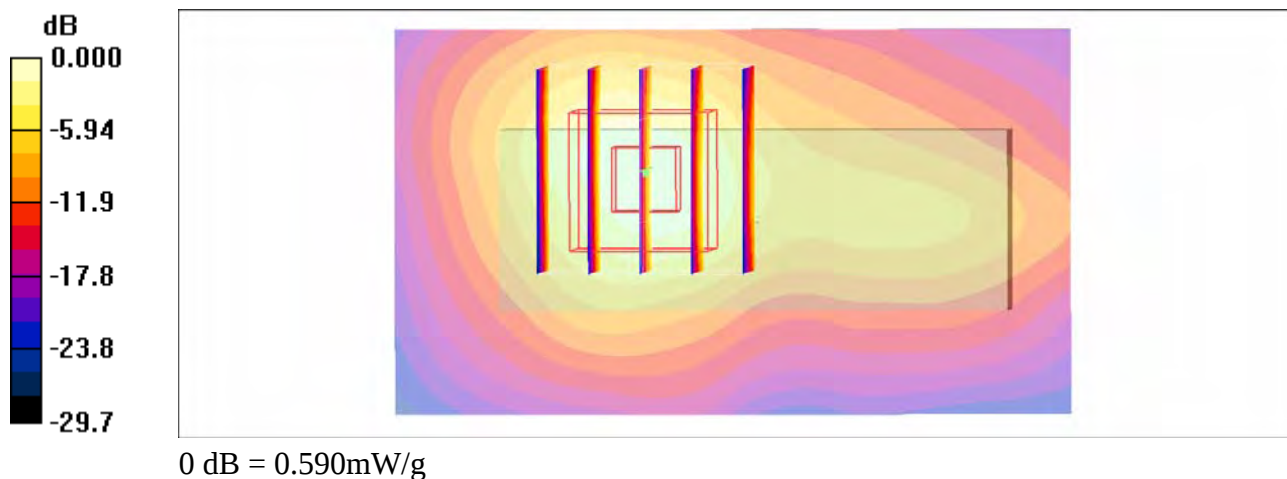
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.82 V/m; Power Drift = -0.146 dB

Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 0.548 mW/g; SAR(10 g) = 0.231 mW/g

Maximum value of SAR (measured) = 0.590 mW/g



11 802.11g_Horizontal Up_0.5cm_Ch6_Ant 2**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.30 mW/g

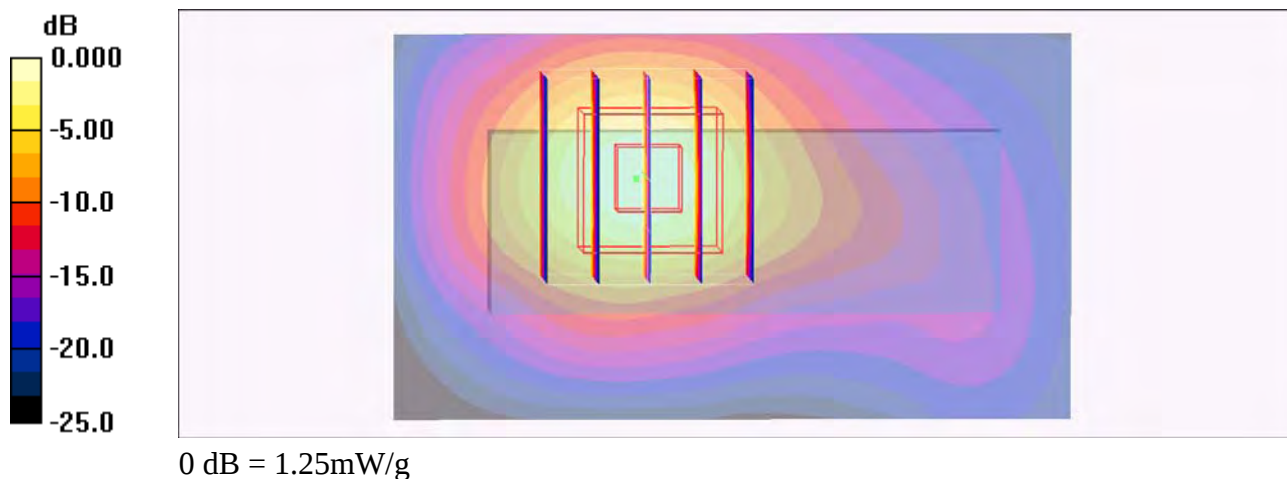
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 3.34 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.443 mW/g

Maximum value of SAR (measured) = 1.25 mW/g



11 802.11g_Horizontal Up_0.5cm_Ch6_Ant 2_2D**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.30 mW/g

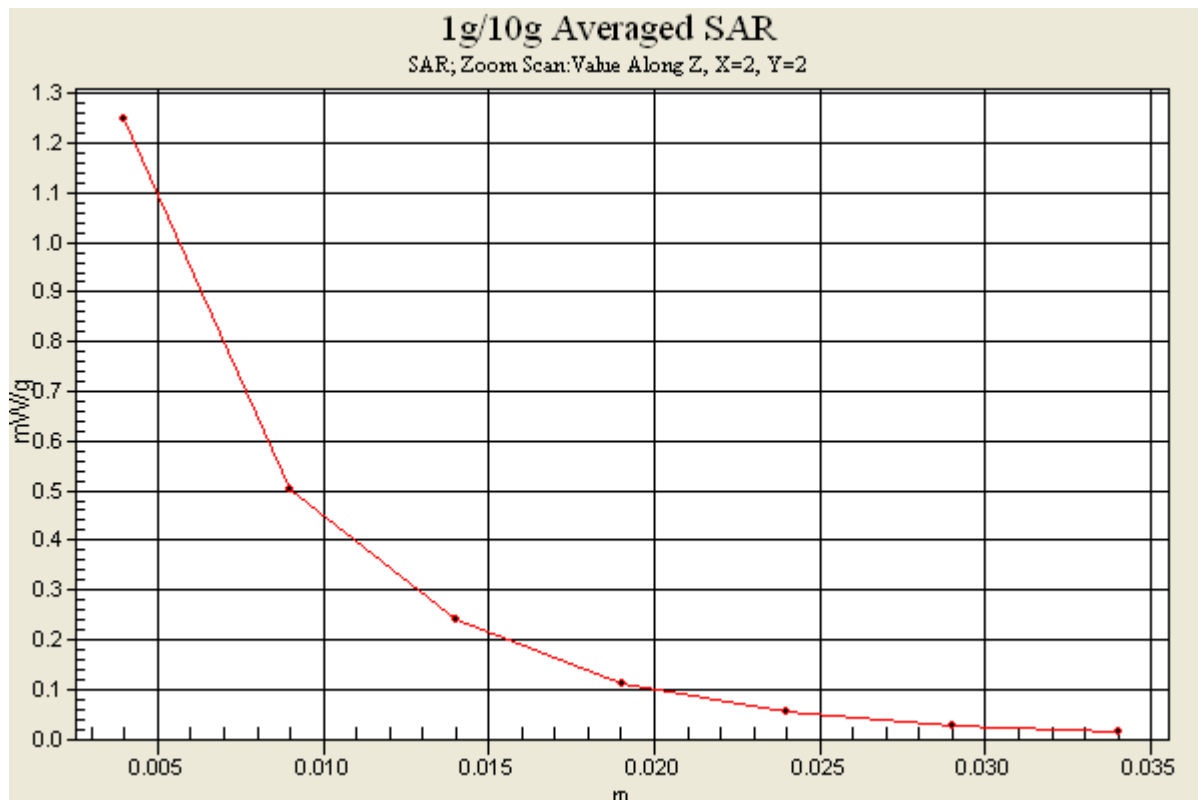
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 3.34 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.443 mW/g

Maximum value of SAR (measured) = 1.25 mW/g



12 802.11g_Horizontal Down_0.5cm_Ch6_Ant 2**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.544 mW/g

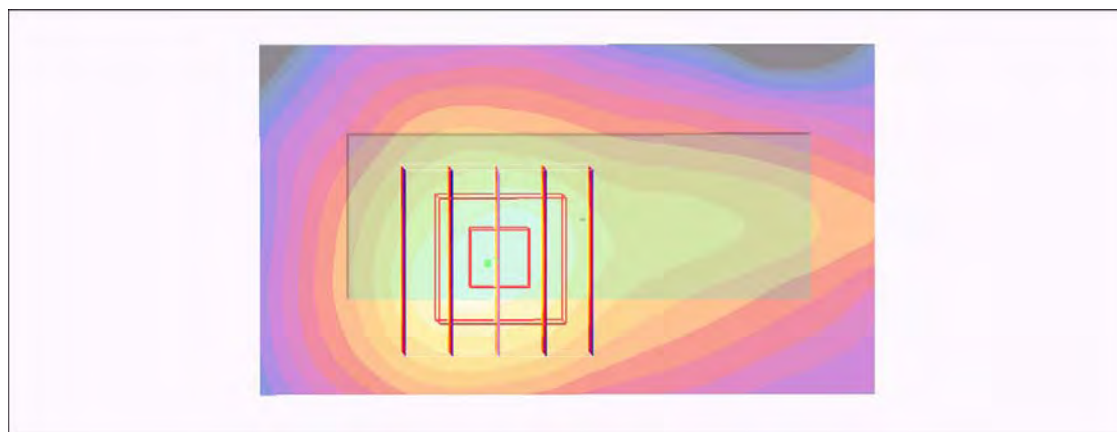
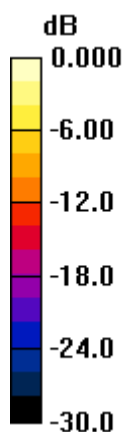
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.62 V/m; Power Drift = 0.114 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.500 mW/g; SAR(10 g) = 0.211 mW/g

Maximum value of SAR (measured) = 0.573 mW/g



0 dB = 0.573mW/g

13 802.11g_Vertical Front_0.5cm_Ch6_Ant 2**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (51x71x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 3.59 V/m; Power Drift = -0.175 dB

Peak SAR (extrapolated) = 0.057 W/kg

SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.015 mW/g

Maximum value of SAR (measured) = 0.030 mW/g

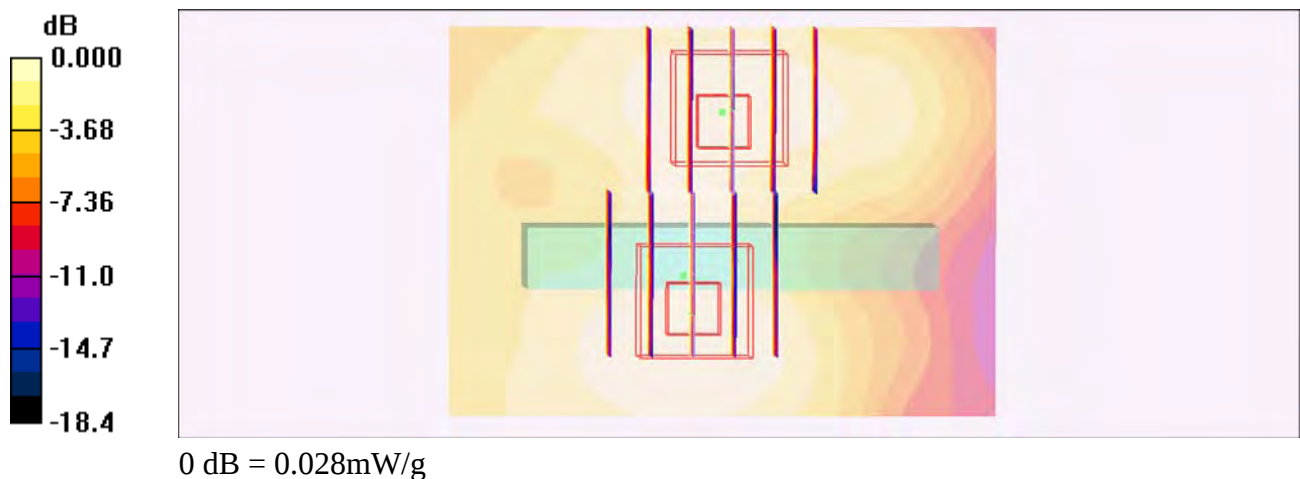
Ch6/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.59 V/m; Power Drift = -0.175 dB

Peak SAR (extrapolated) = 0.065 W/kg

SAR(1 g) = 0.027 mW/g; SAR(10 g) = 0.015 mW/g

Maximum value of SAR (measured) = 0.028 mW/g



14 802.11g_Vertical Back_0.5cm_Ch6_Ant 2**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.465 mW/g

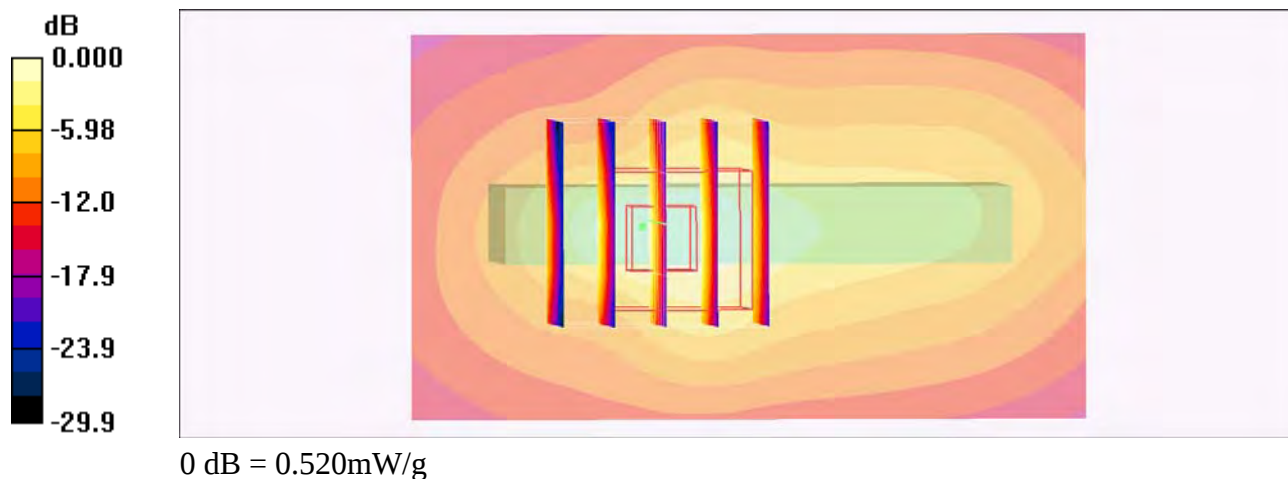
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.0 V/m; Power Drift = 0.117 dB

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 0.495 mW/g; SAR(10 g) = 0.208 mW/g

Maximum value of SAR (measured) = 0.520 mW/g



15 802.11g_Tip Mode_0.5cm_Ch6_Ant 2**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x51x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.138 mW/g

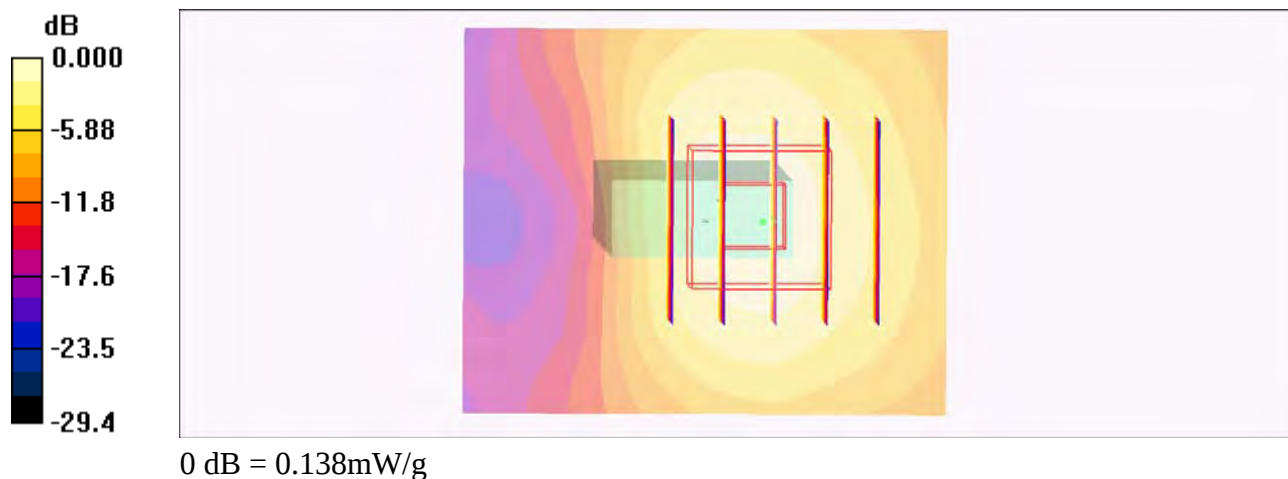
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.81 V/m; Power Drift = -0.124 dB

Peak SAR (extrapolated) = 0.338 W/kg

SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.065 mW/g

Maximum value of SAR (measured) = 0.138 mW/g



16 802.11g_Horizontal Up_0.5cm_Ch1_Ant 2**DUT: 220705-04**

Communication System: 802.11g; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: MSL_2450_120316 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.06 mW/g

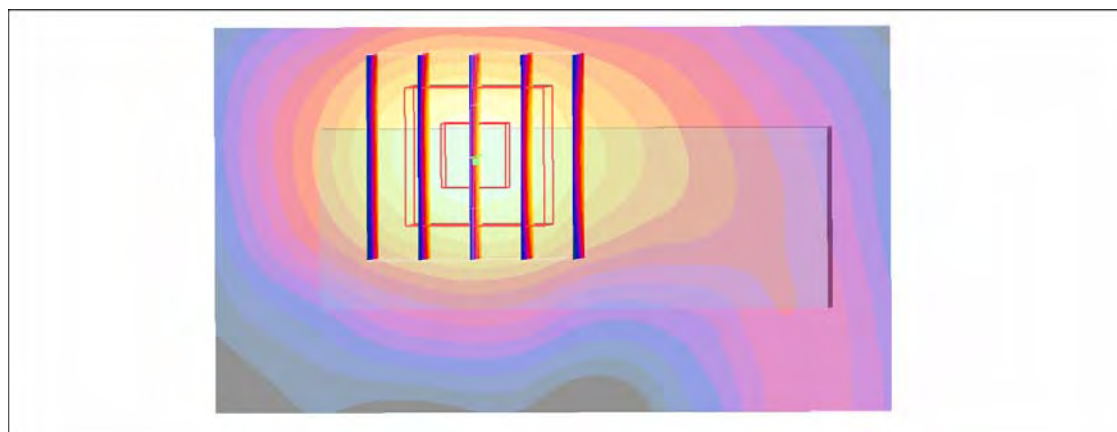
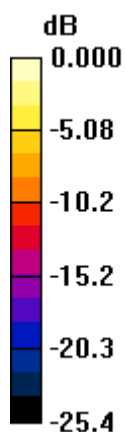
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.4 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 2.72 W/kg

SAR(1 g) = 0.913 mW/g; SAR(10 g) = 0.371 mW/g

Maximum value of SAR (measured) = 1.01 mW/g



0 dB = 1.01mW/g

17 802.11g_Horizontal Up_0.5cm_Ch11_Ant 2**DUT: 220705-04**

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

Medium: MSL_2450_120316 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.03$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch11/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.01 mW/g

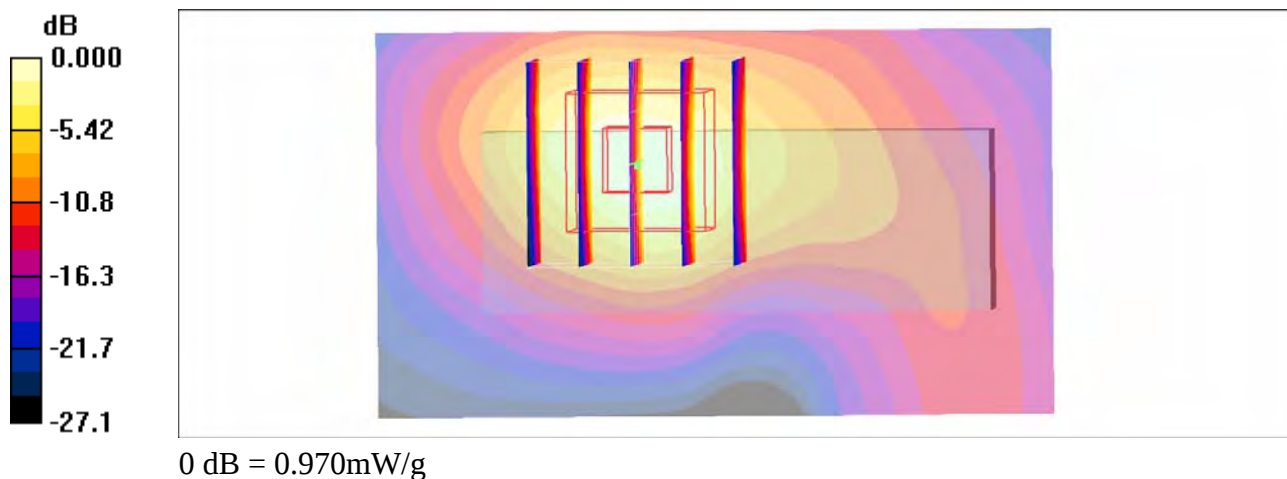
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = 0.115 dB

Peak SAR (extrapolated) = 2.70 W/kg

SAR(1 g) = 0.890 mW/g; SAR(10 g) = 0.360 mW/g

Maximum value of SAR (measured) = 0.970 mW/g



20 802.11n_20M_Horizontal Up_0.5cm_Ch6_Ant 1+2**DUT: 220705-04**

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

Medium: MSL_2450_120317 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.24 mW/g

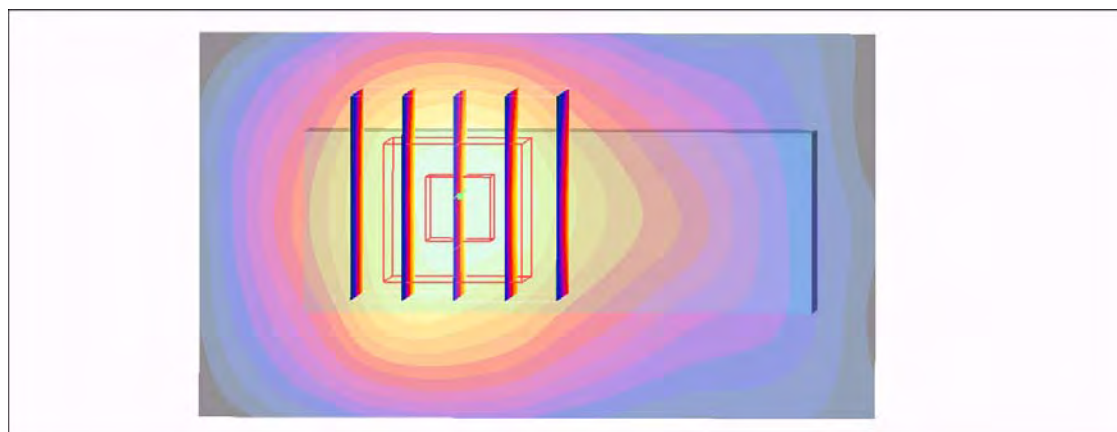
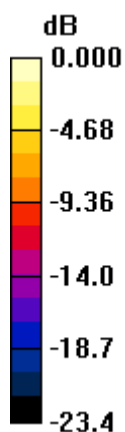
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.1 V/m; Power Drift = -0.185 dB

Peak SAR (extrapolated) = 3.10 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.483 mW/g

Maximum value of SAR (measured) = 1.18 mW/g



0 dB = 1.18mW/g

21 802.11n_20M_Horizontal Down_0.5cm_Ch6_Ant 1+2**DUT: 220705-04**

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

Medium: MSL_2450_120317 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.883 mW/g

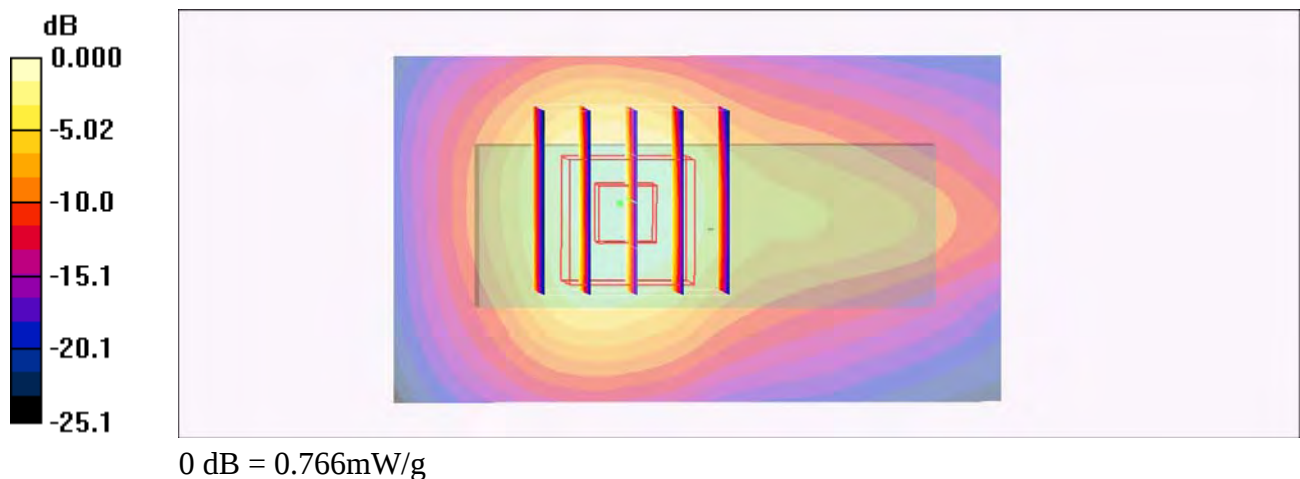
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.5 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 2.00 W/kg

SAR(1 g) = 0.723 mW/g; SAR(10 g) = 0.324 mW/g

Maximum value of SAR (measured) = 0.766 mW/g



22 802.11n_20M_Veritical Front_0.5cm_Ch6_Ant 1+2**DUT: 220705-04**

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

Medium: MSL_2450_120317 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.023 mW/g

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

Reference Value = 2.67 V/m; Power Drift = 0.196 dB

Peak SAR (extrapolated) = 0.047 W/kg

SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.011 mW/g

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

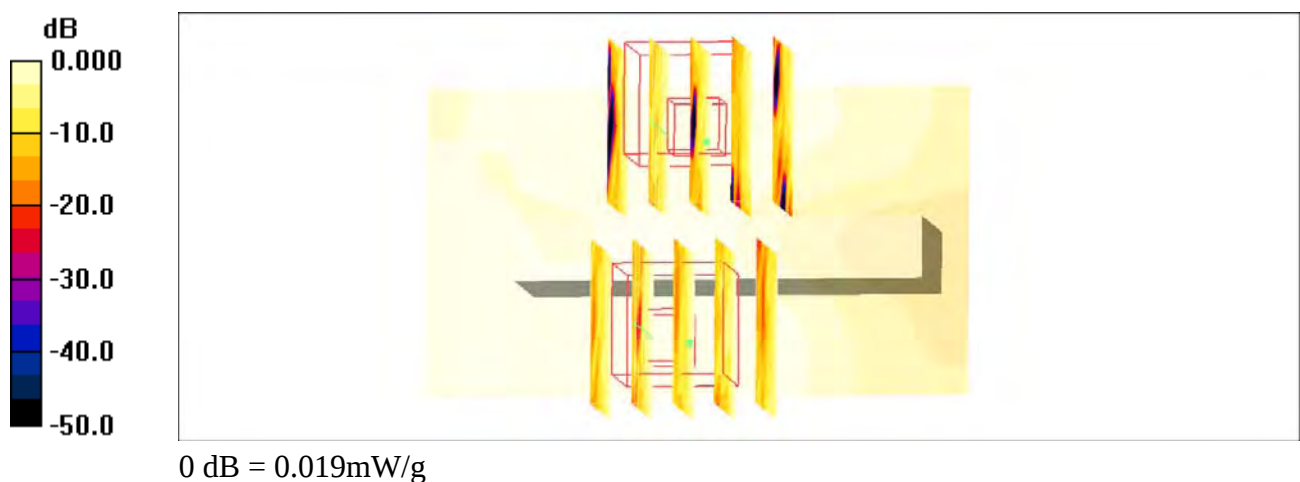
Ch6/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.67 V/m; Power Drift = 0.196 dB

Peak SAR (extrapolated) = 0.031 W/kg

SAR(1 g) = 0.018 mW/g; SAR(10 g) = 0.00951 mW/g

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



23 802.11n_20M_Veritical Back_0.5cm_Ch6_Ant 1+2**DUT: 220705-04**

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

Medium: MSL_2450_120317 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.296 mW/g

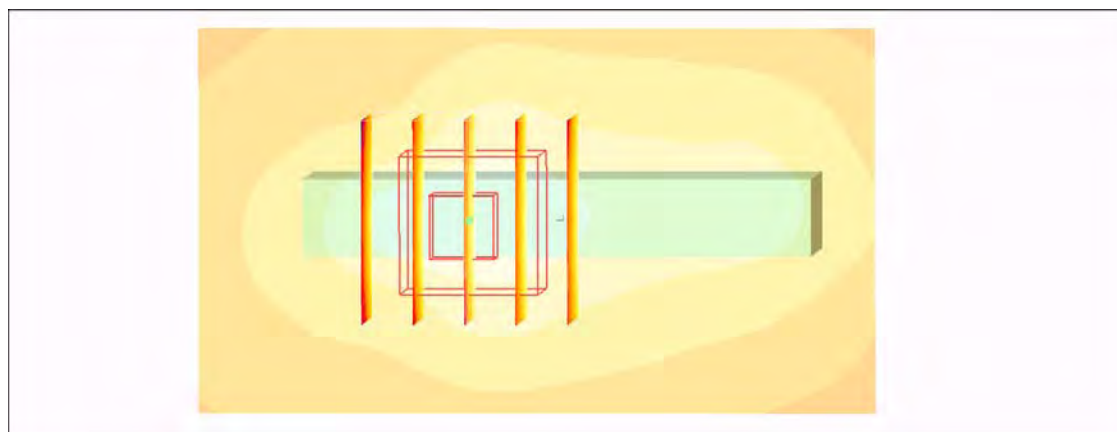
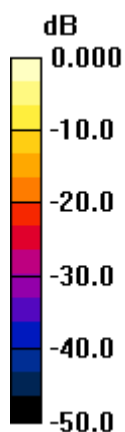
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.91 V/m; Power Drift = -0.193 dB

Peak SAR (extrapolated) = 0.783 W/kg

SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.121 mW/g

Maximum value of SAR (measured) = 0.303 mW/g



0 dB = 0.303mW/g

24 802.11n_20M_Tip Mode_0.5cm_Ch6_Ant 1+2**DUT: 220705-04**

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

Medium: MSL_2450_120317 Medium parameters used: $f = 2437$ MHz; $\sigma = 2$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch6/Area Scan (41x41x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.169 mW/g

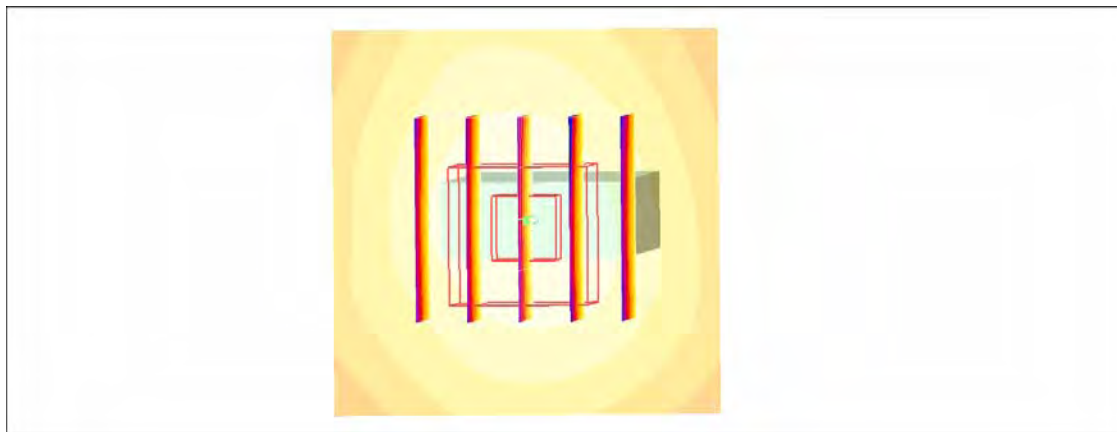
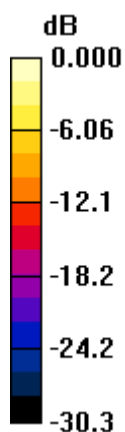
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.35 V/m; Power Drift = 0.184 dB

Peak SAR (extrapolated) = 0.345 W/kg

SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.073 mW/g

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



0 dB = 0.154mW/g

25 802.11n_20M_Horizontal Up_0.5cm_Ch1_Ant 1+2**DUT: 220705-04**

Communication System: 802.11n; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: MSL_2450_120317 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 53.9$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch1/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.23 mW/g

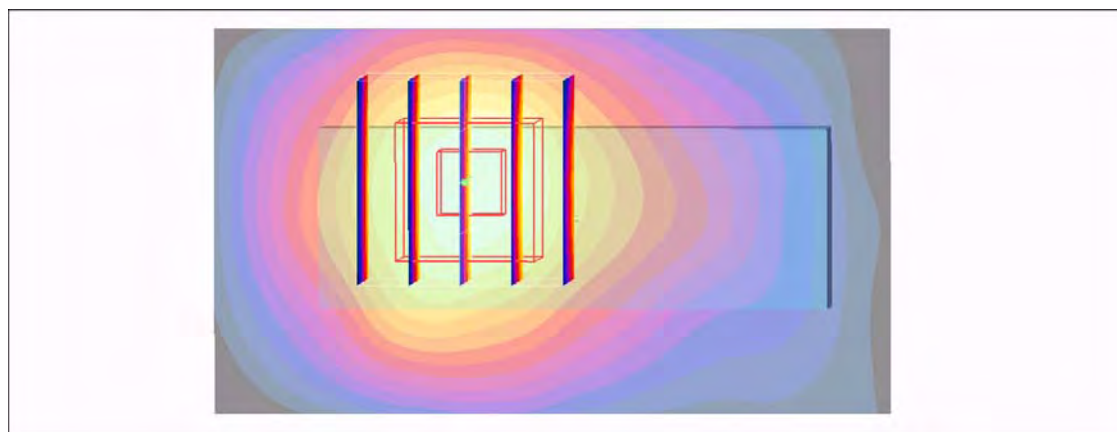
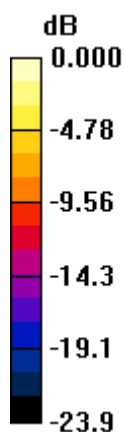
Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.3 V/m; Power Drift = -0.069 dB

Peak SAR (extrapolated) = 2.82 W/kg

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.450 mW/g

Maximum value of SAR (measured) = 1.11 mW/g



0 dB = 1.11mW/g

26 802.11n_20M_Horizontal Up_0.5cm_Ch11_Ant 1+2**DUT: 220705-04**

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

Medium: MSL_2450_120317 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch11/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.25 mW/g

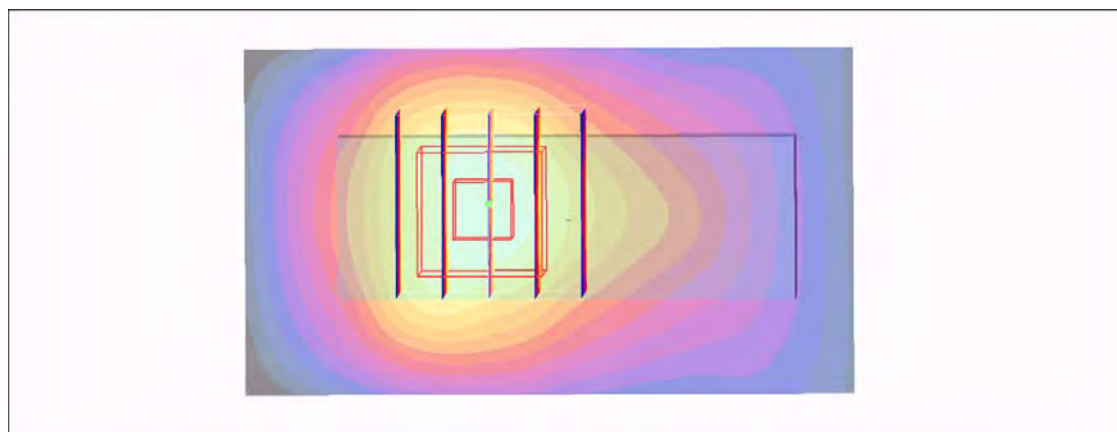
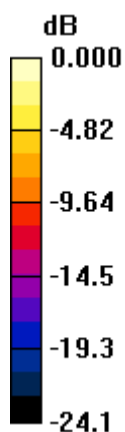
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.6 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 3.28 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.504 mW/g

Maximum value of SAR (measured) = 1.20 mW/g



0 dB = 1.20mW/g

26 802.11n_20M_Horizontal Up_0.5cm_Ch11_Ant 1+2_2D**DUT: 220705-04**

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

Medium: MSL_2450_120317 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 53.8$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY4 Configuration:

- Probe: ET3DV6 - SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch11/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.25 mW/g

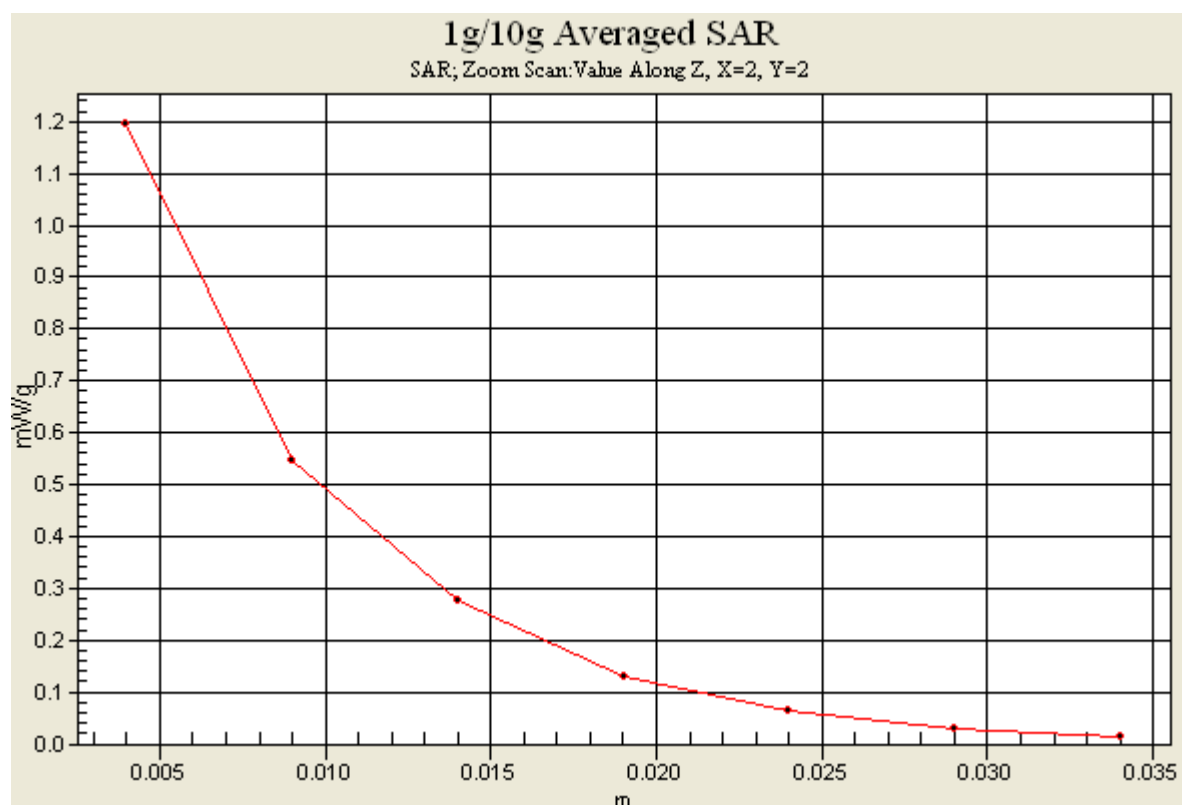
Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.6 V/m; Power Drift = -0.122 dB

Peak SAR (extrapolated) = 3.28 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.504 mW/g

Maximum value of SAR (measured) = 1.20 mW/g



27 802.11a_Horizontal Up_0.5cm_Ch48_Ant 1

DUT: 220705-04

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

Medium: MSL_5G_120317 Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 5.35 \text{ mho/m}$; $\epsilon_r = 48.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.4 ; Liquid Temperature : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.521 mW/g

Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.44 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 0.459 mW/g; SAR(10 g) = 0.204 mW/g

Maximum value of SAR (measured) = 0.885 mW/g

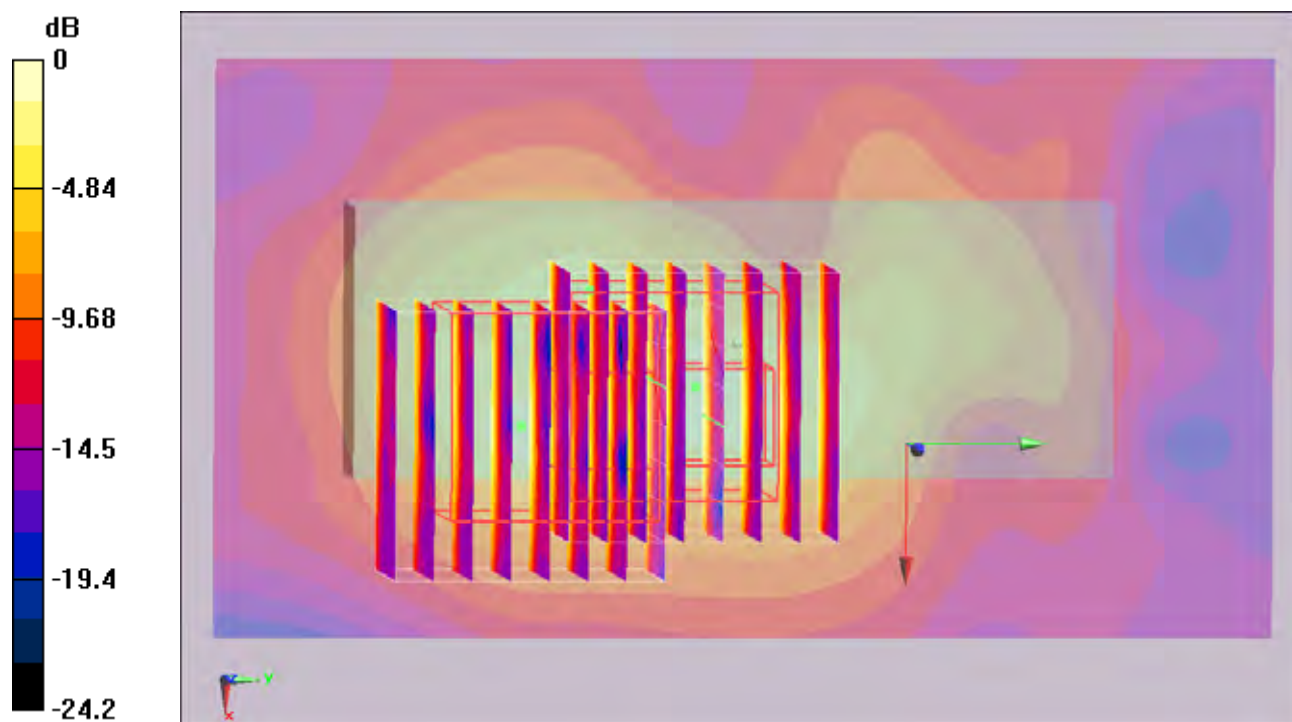
Ch48/Zoom Scan (8x8x10)/Cube 1: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.44 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 1.7 W/kg

SAR(1 g) = 0.452 mW/g; SAR(10 g) = 0.193 mW/g

Maximum value of SAR (measured) = 0.919 mW/g



0 dB = 0.919mW/g

28 802.11a_Horizontal Down_0.5cm_Ch48_Ant 1

DUT: 220705-04

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

Medium: MSL_5G_120317 Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 5.35 \text{ mho/m}$; $\epsilon_r = 48.7$; $\rho = 1000$

kg/m^3

Ambient Temperature : 22.4 ; Liquid Temperature : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.510 mW/g

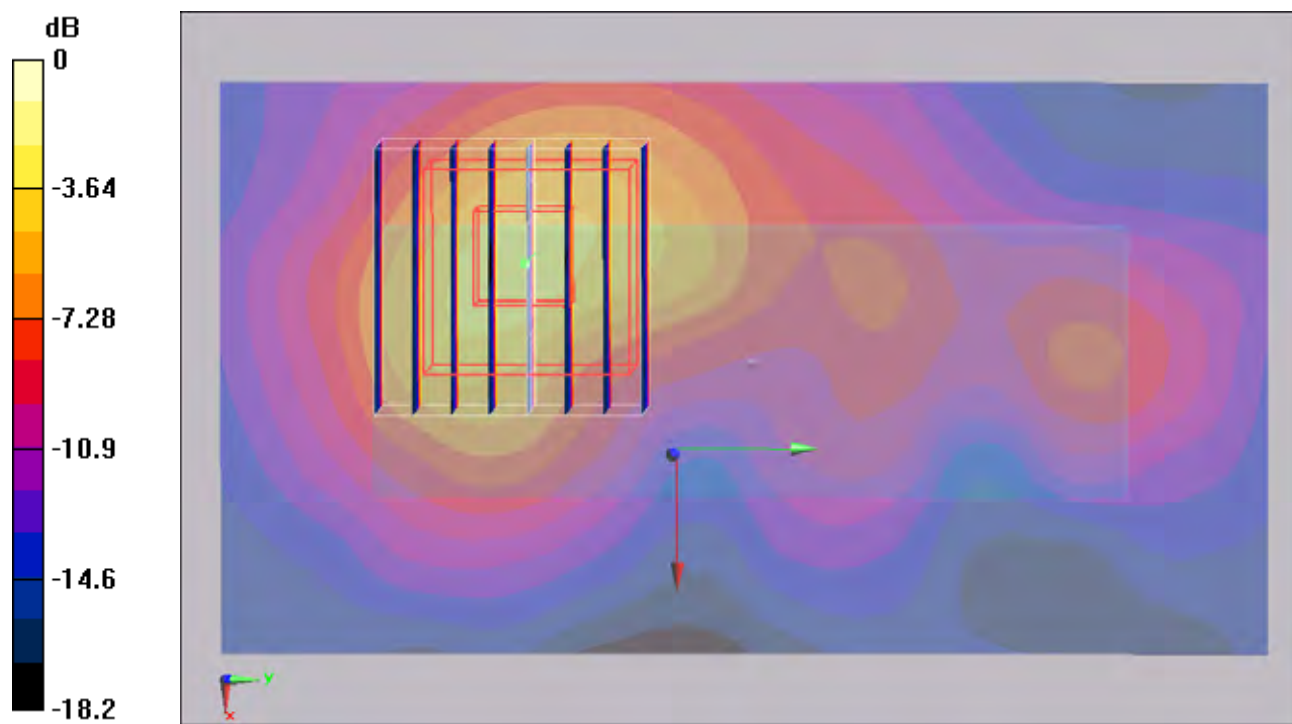
Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 4.06 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 0.511 mW/g; SAR(10 g) = 0.205 mW/g

Maximum value of SAR (measured) = 0.951 mW/g



29 802.11a_Vertical Front_0.5cm_Ch48_Ant 1

DUT: 220705-04

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

Medium: MSL_5G_120317 Medium parameters used : $f = 5240 \text{ MHz}$; $\sigma = 5.35 \text{ mho/m}$; $\epsilon_r = 48.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.4 ; Liquid Temperature : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.27 mW/g

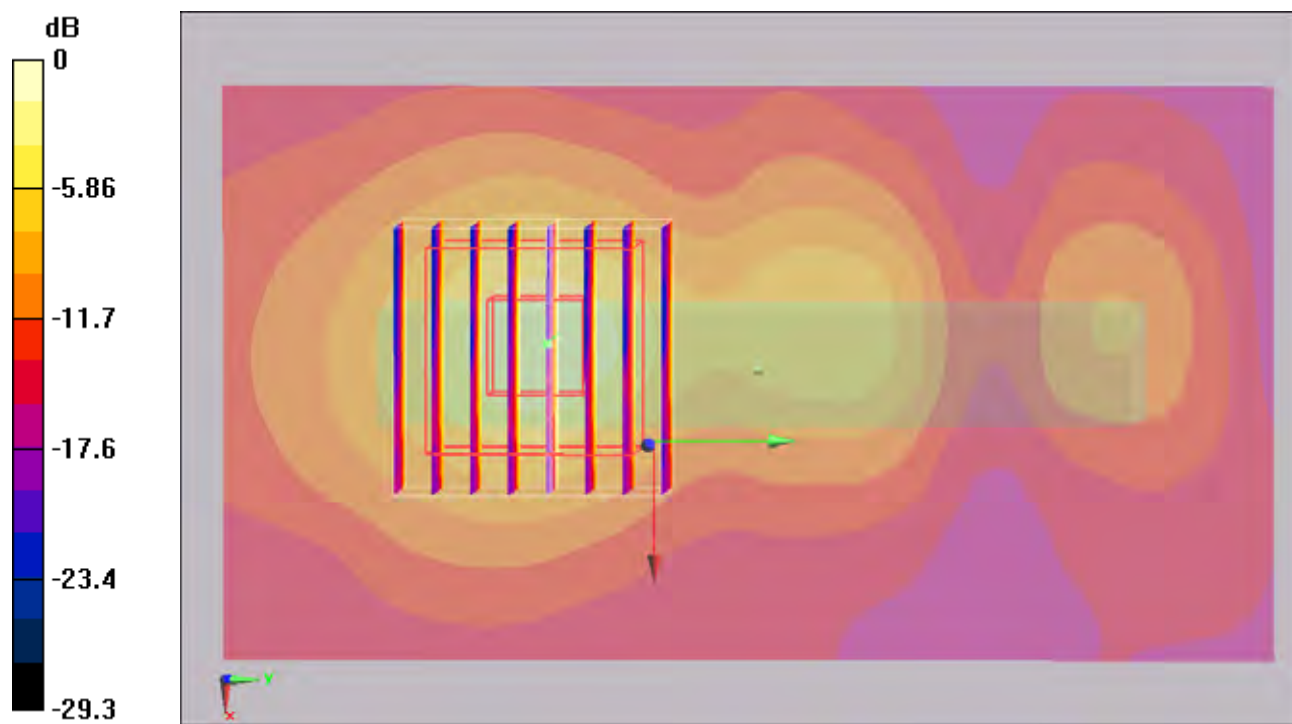
Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 7.17 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.99 W/kg

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.385 mW/g

Maximum value of SAR (measured) = 2.06 mW/g



30 802.11a_Vertical Back_0.5cm_Ch48_Ant 1

DUT: 220705-04

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

Medium: MSL_5G_120317 Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 5.35 \text{ mho/m}$; $\epsilon_r = 48.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.4 ; Liquid Temperature : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 2.99 V/m; Power Drift = 0.180 dB

Peak SAR (extrapolated) = 0.271 W/kg

SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.028 mW/g

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

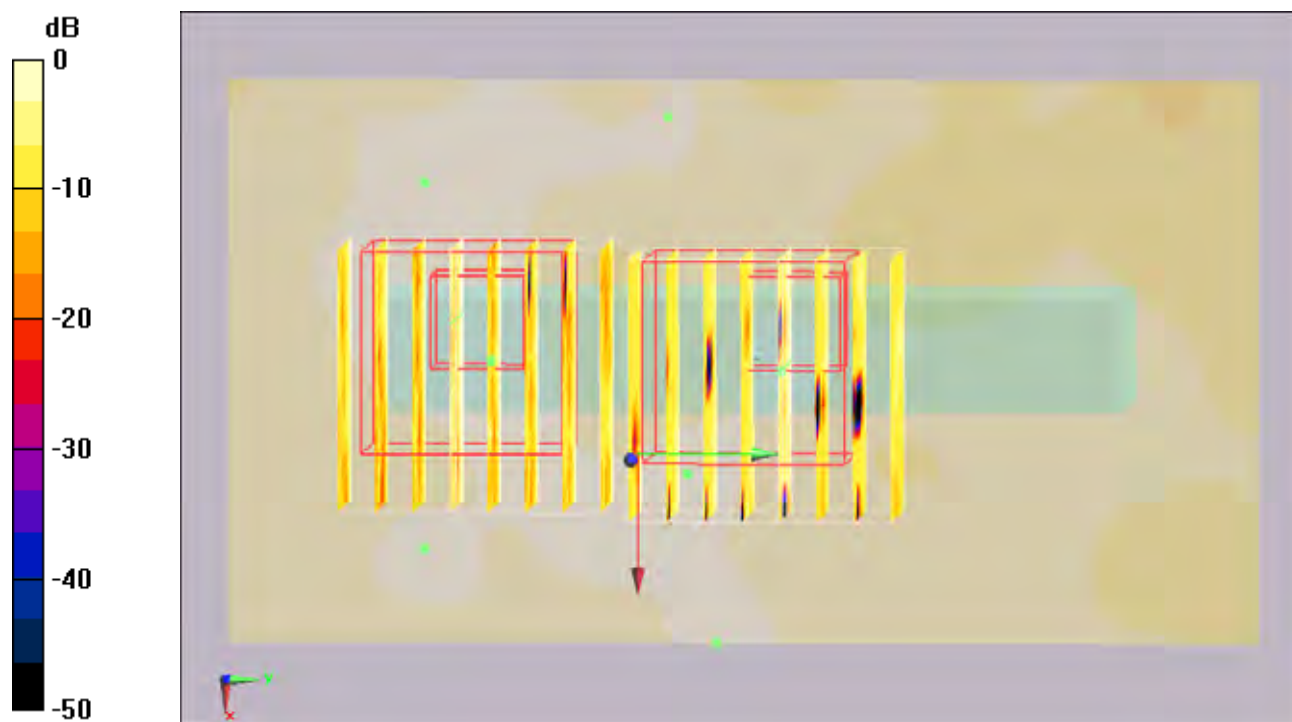
Ch48/Zoom Scan (8x8x10)/Cube 1: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 2.99 V/m; Power Drift = 0.180 dB

Peak SAR (extrapolated) = 0.189 W/kg

SAR(1 g) = 0.053 mW/g; SAR(10 g) = 0.027 mW/g

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



0 dB = 0.101mW/g

31 802.11a_Tip Mode_0.5cm_Ch48_Ant 1

DUT: 220705-04

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

Medium: MSL_5G_120317 Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 5.35 \text{ mho/m}$; $\epsilon_r = 48.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.4 ; Liquid Temperature : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x61x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.250 mW/g

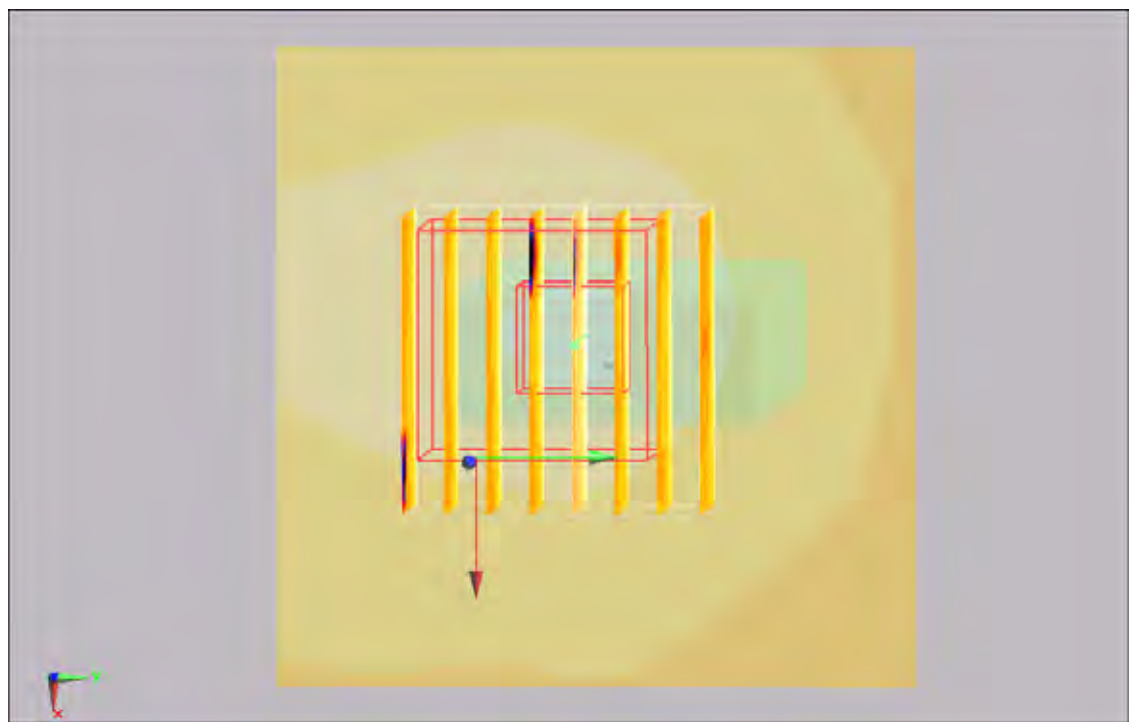
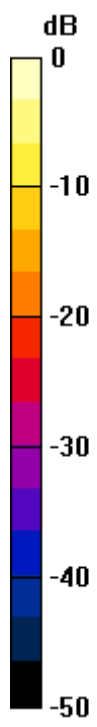
Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.46 V/m; Power Drift = 0.184 dB

Peak SAR (extrapolated) = 0.853 W/kg

SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.092 mW/g

Maximum value of SAR (measured) = 0.425 mW/g



0 dB = 0.425mW/g

38 802.11a_Vertical Front_0.5cm_Ch36_Ant 1

DUT: 220705-04

Communication System: 802.11a; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120317 Medium parameters used : $f = 5180 \text{ MHz}$; $\sigma = 5.26 \text{ mho/m}$; $\epsilon_r = 48.8$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.4 ; Liquid Temperature : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch36/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.27 mW/g

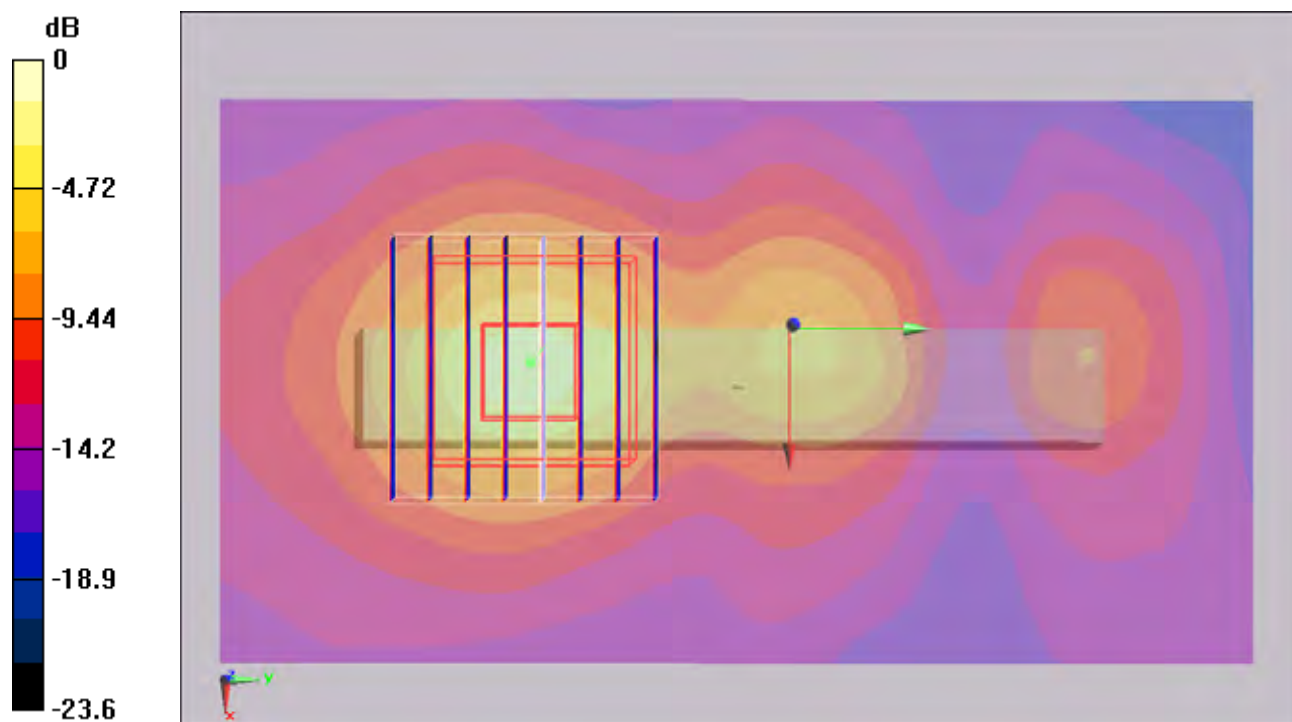
Ch36/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.22 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 4.05 W/kg

SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.395 mW/g

Maximum value of SAR (measured) = 2.13 mW/g



38 802.11a_Vertical Front_0.5cm_Ch36_Ant 1_2D**DUT: 220705-04**

Communication System: 802.11a; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120317 Medium parameters used : $f = 5180$ MHz; $\sigma = 5.26$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 ; Liquid Temperature : 21.4

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch36/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.27 mW/g

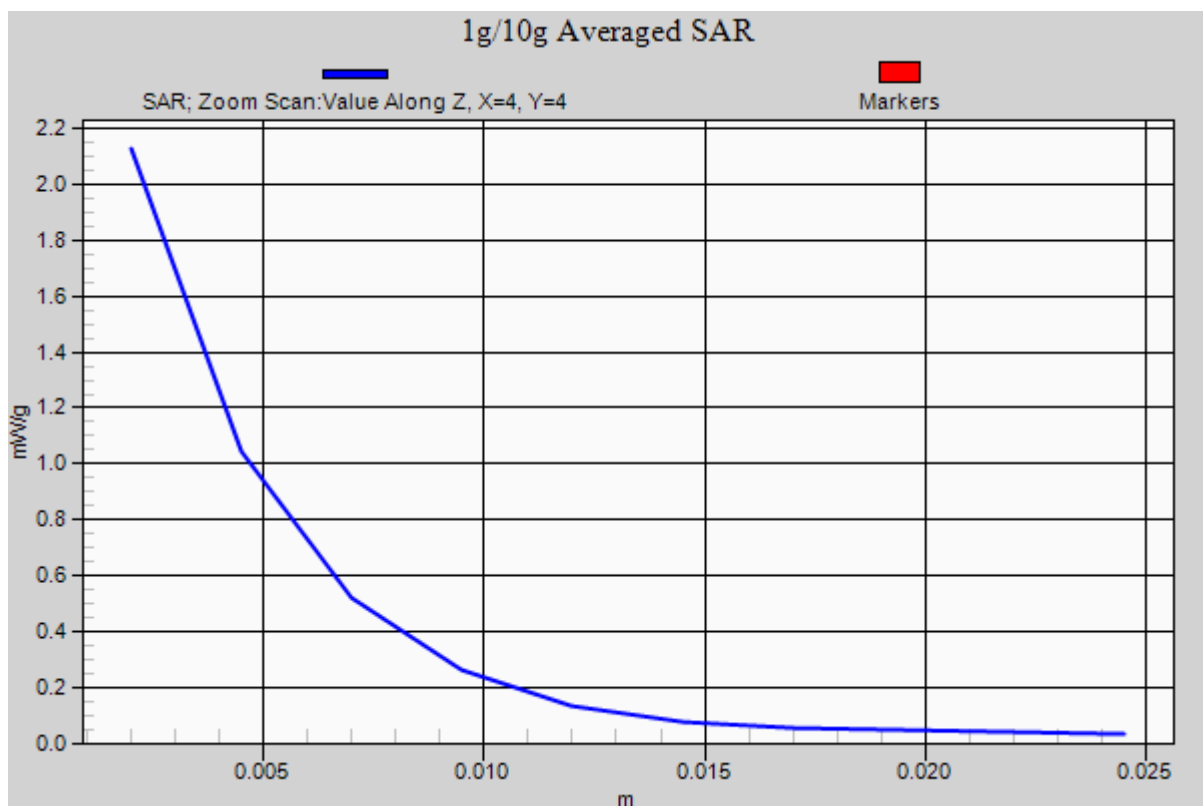
Ch36/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 8.22 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 4.05 W/kg

SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.395 mW/g

Maximum value of SAR (measured) = 2.13 mW/g



44 802.11a_Horizontal Up_0.5cm_Ch157_Ant 1

DUT: 220705-04

Communication System: 802.11a; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.14 \text{ mho/m}$; $\epsilon_r = 46.5$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch157/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.534 mW/g

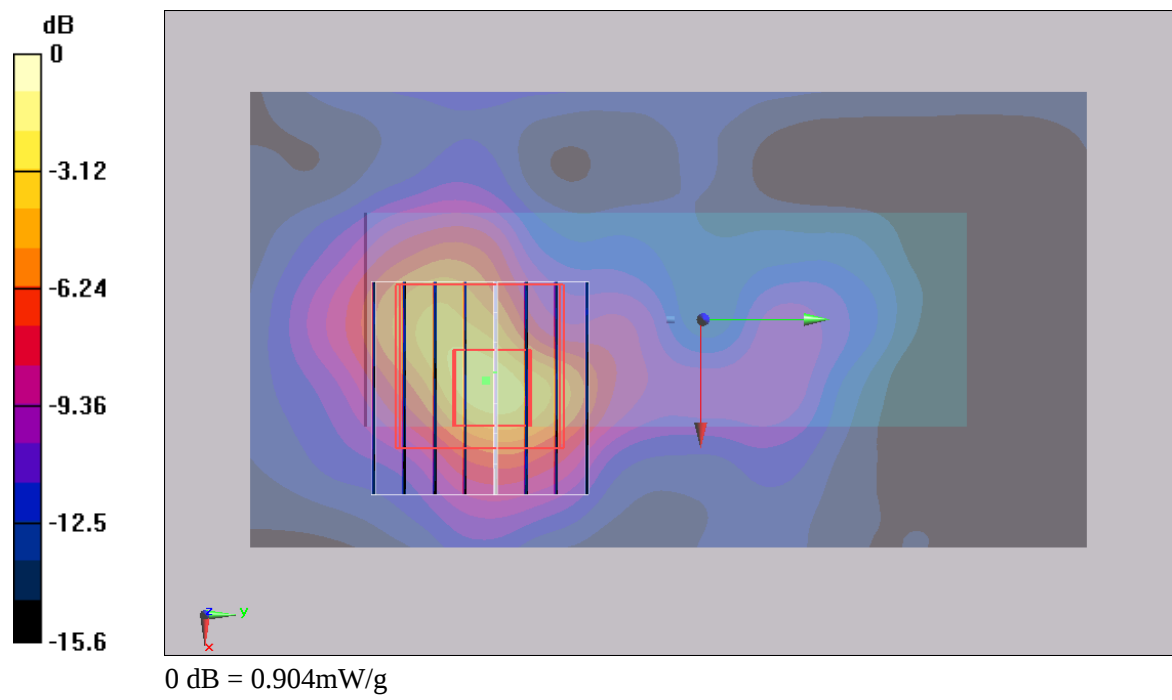
Ch157/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 3.33 V/m ; Power Drift = 0.139 dB

Peak SAR (extrapolated) = 1.94 W/kg

SAR(1 g) = 0.461 mW/g ; SAR(10 g) = 0.169 mW/g

Maximum value of SAR (measured) = 0.904 mW/g



45 802.11a_Horizontal Down_0.5cm_Ch157_Ant 1

DUT: 220705-04

Communication System: 802.11a; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.14 \text{ mho/m}$; $\epsilon_r = 46.5$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch157/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.559 mW/g

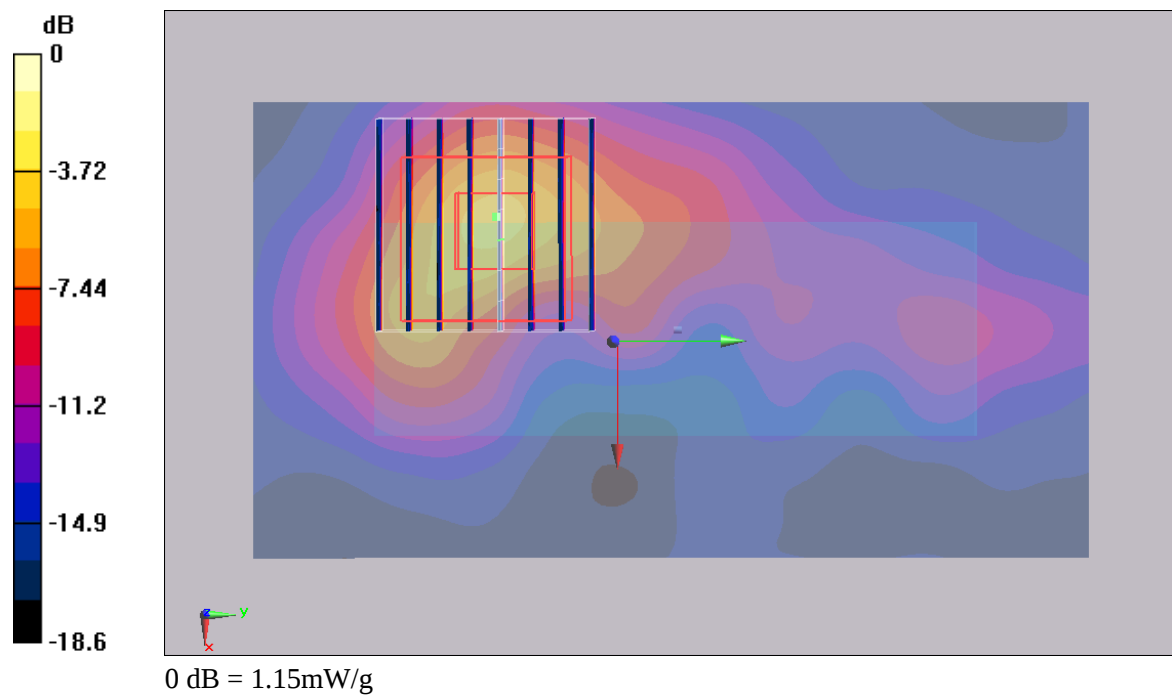
Ch157/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 3.22 V/m ; Power Drift = 0.128 dB

Peak SAR (extrapolated) = 2.2 W/kg

SAR(1 g) = 0.574 mW/g ; SAR(10 g) = 0.203 mW/g

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



46 802.11a_Vertical Front_0.5cm_Ch157_Ant 1

DUT: 220705-04

Communication System: 802.11a; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.14 \text{ mho/m}$; $\epsilon_r = 46.5$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch157/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.970 mW/g

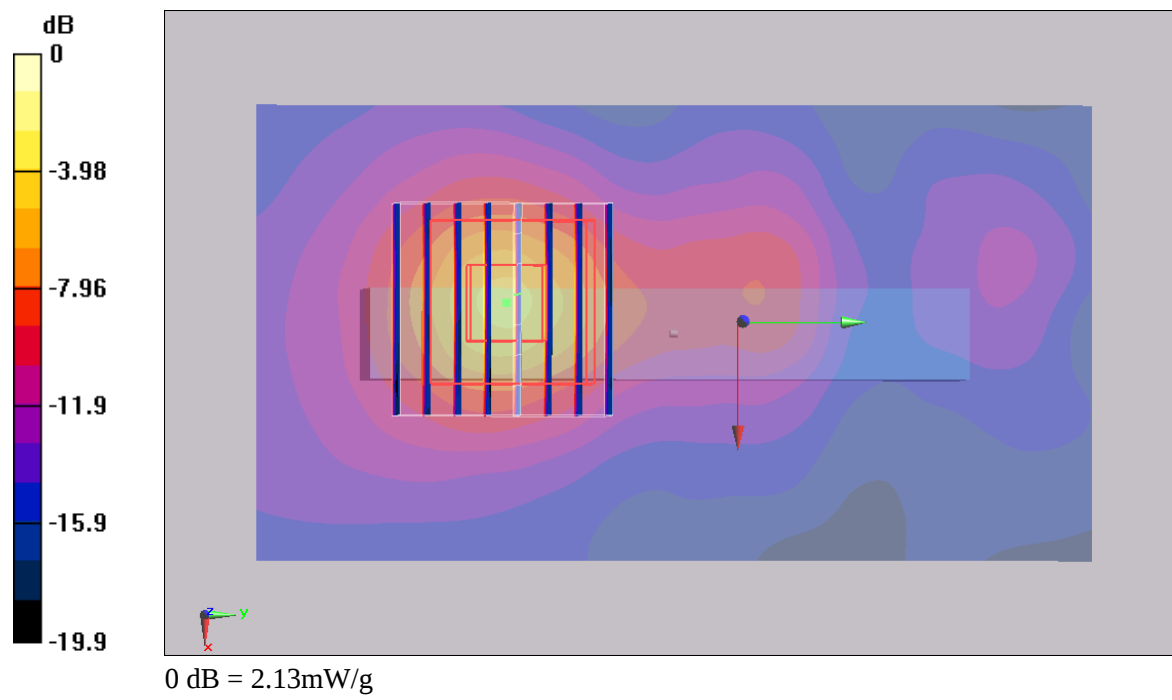
Ch157/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 5.25 V/m ; Power Drift = 0.187 dB

Peak SAR (extrapolated) = 4.34 W/kg

SAR(1 g) = 1.1 mW/g ; SAR(10 g) = 0.382 mW/g

Maximum value of SAR (measured) = 2.13 mW/g



47 802.11a_Vertical Back_0.5cm_Ch157_Ant 1

DUT: 220705-04

Communication System: 802.11a; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.14 \text{ mho/m}$; $\epsilon_r = 46.5$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch157/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

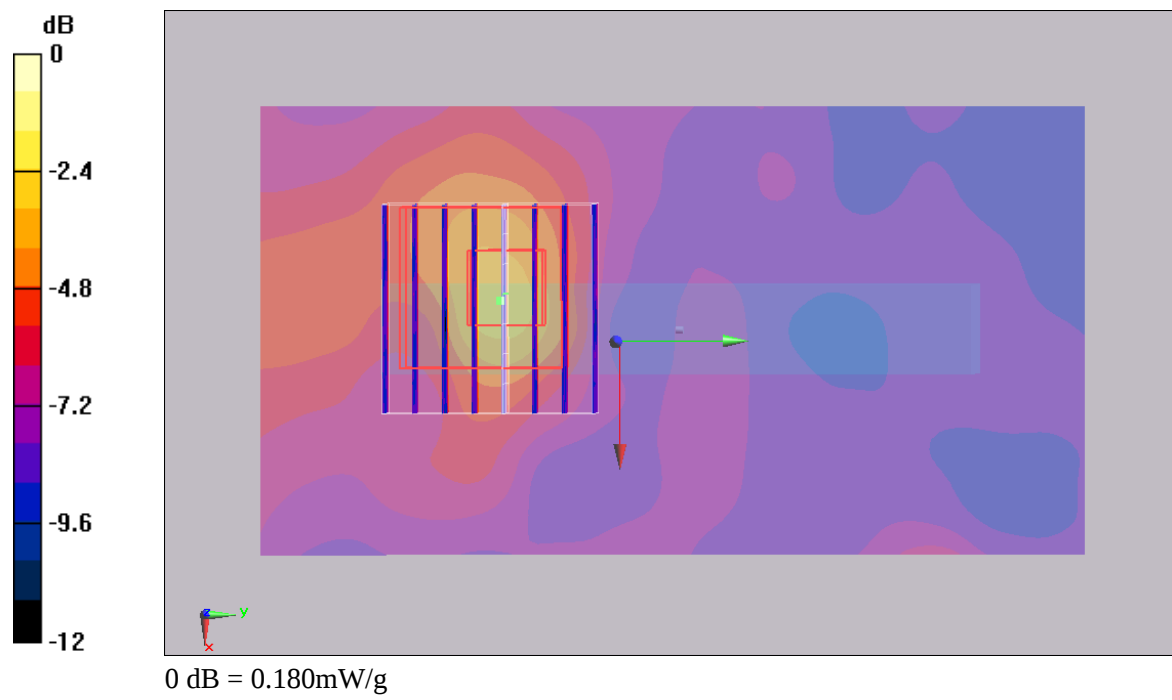
Ch157/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 2.06 V/m ; Power Drift = 0.116 dB

Peak SAR (extrapolated) = 0.449 W/kg

SAR(1 g) = 0.102 mW/g ; SAR(10 g) = 0.051 mW/g

Maximum value of SAR (measured) = 0.180 mW/g



48 802.11a_Tip Mode_0.5cm_Ch157_Ant 1

DUT: 220705-04

Communication System: 802.11a; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.14 \text{ mho/m}$; $\epsilon_r = 46.5$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch157/Area Scan (61x61x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.322 mW/g

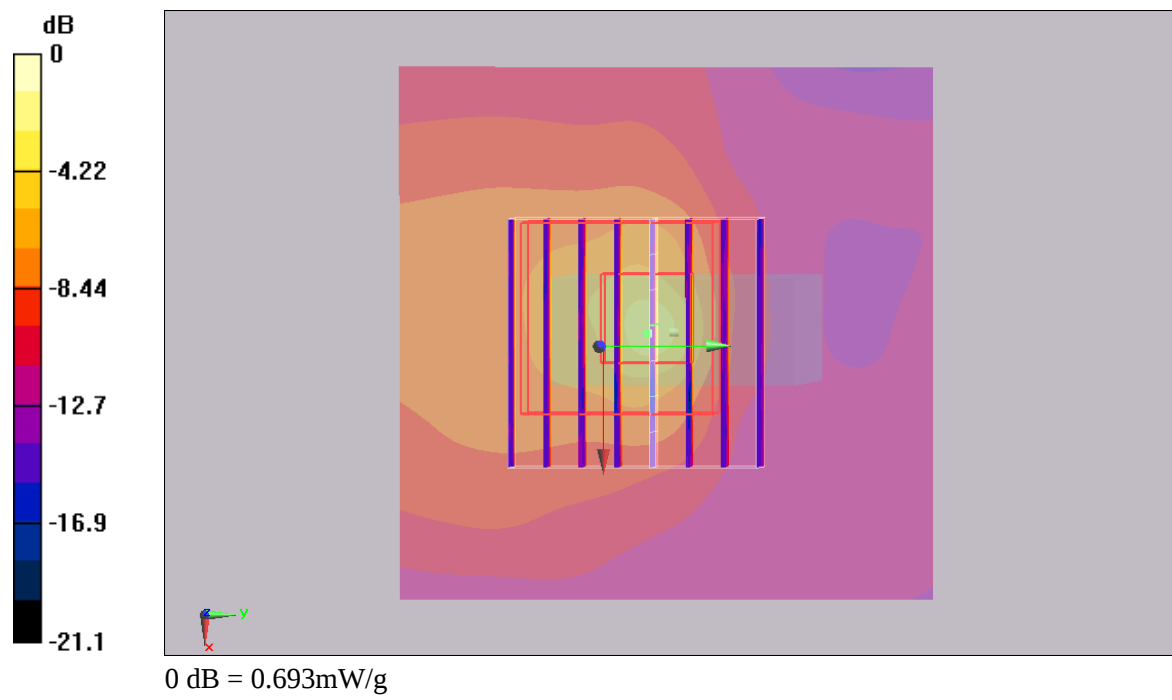
Ch157/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.57 V/m ; Power Drift = 0.147 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.343 mW/g ; SAR(10 g) = 0.121 mW/g

Maximum value of SAR (measured) = 0.693 mW/g



49 802.11a_Vertical Front_0.5cm_Ch149_Ant 1

DUT: 220705-04

Communication System: 802.11a; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5745 \text{ MHz}$; $\sigma = 6.09 \text{ mho/m}$; $\epsilon_r = 46.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch149/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.24 mW/g

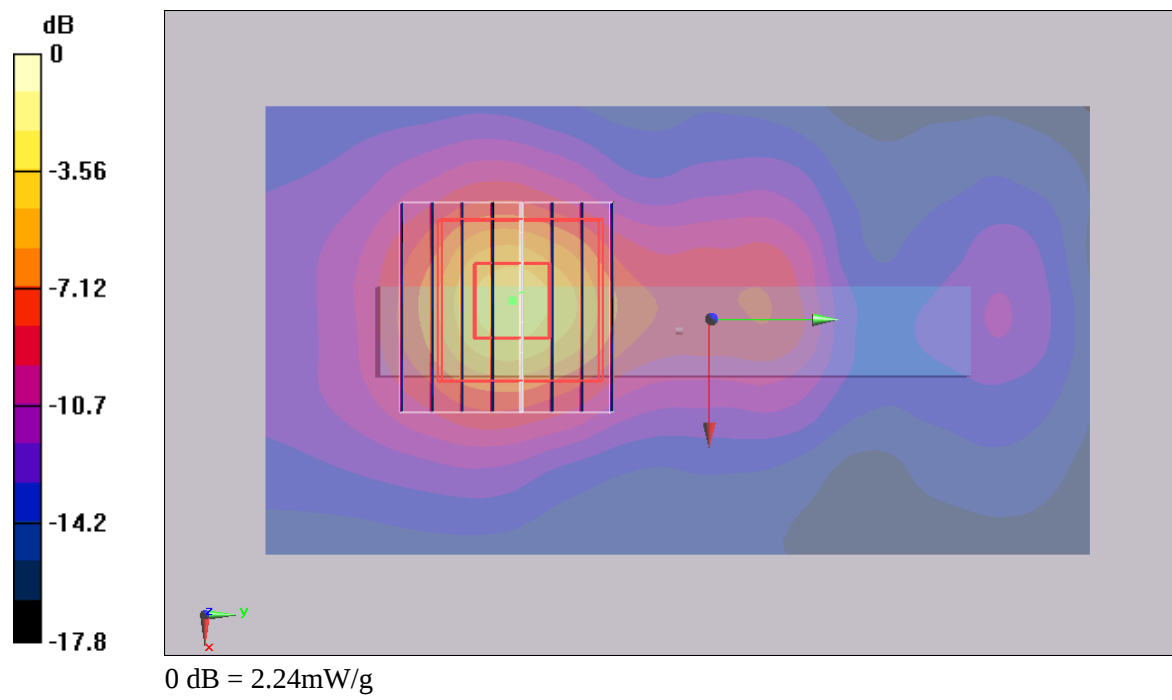
Ch149/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.41 V/m ; Power Drift = 0.183 dB

Peak SAR (extrapolated) = 4.53 W/kg

SAR(1 g) = 1.15 mW/g ; SAR(10 g) = 0.407 mW/g

Maximum value of SAR (measured) = 2.24 mW/g



49 802.11a_Vertical Front_0.5cm_Ch149_Ant 1_2D**DUT: 220705-04**

Communication System: 802.11a; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5745$ MHz; $\sigma = 6.09$ mho/m; $\epsilon_r = 46.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.7 °C; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch149/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.24 mW/g

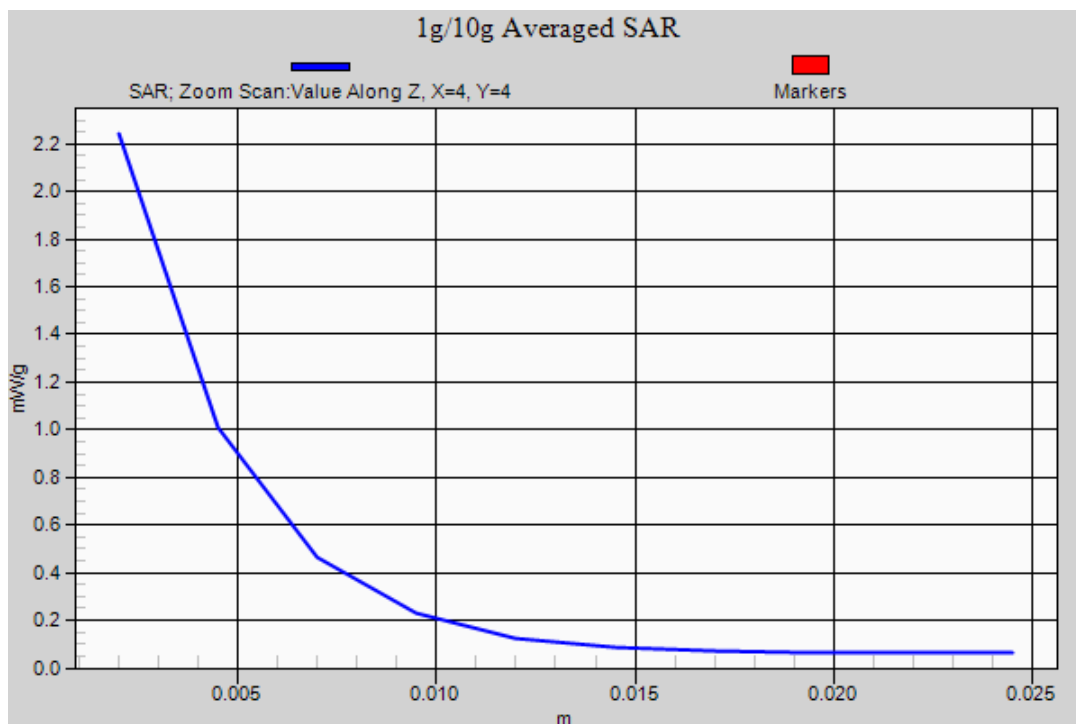
Ch149/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 6.41 V/m; Power Drift = 0.183 dB

Peak SAR (extrapolated) = 4.53 W/kg

SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.407 mW/g

Maximum value of SAR (measured) = 2.24 mW/g



65 802.11a_Vertical Front_0.5cm_Ch165_Ant 1**DUT: 220705-04**

Communication System: 802.11a; Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120323 Medium parameters used: $f = 5825$ MHz; $\sigma = 6.296$ mho/m; $\epsilon_r = 46.355$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3820; ConvF(3.82, 3.82, 3.82); Calibrated: 2011/12/16
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2011/4/28
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

Ch165/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.083 mW/g

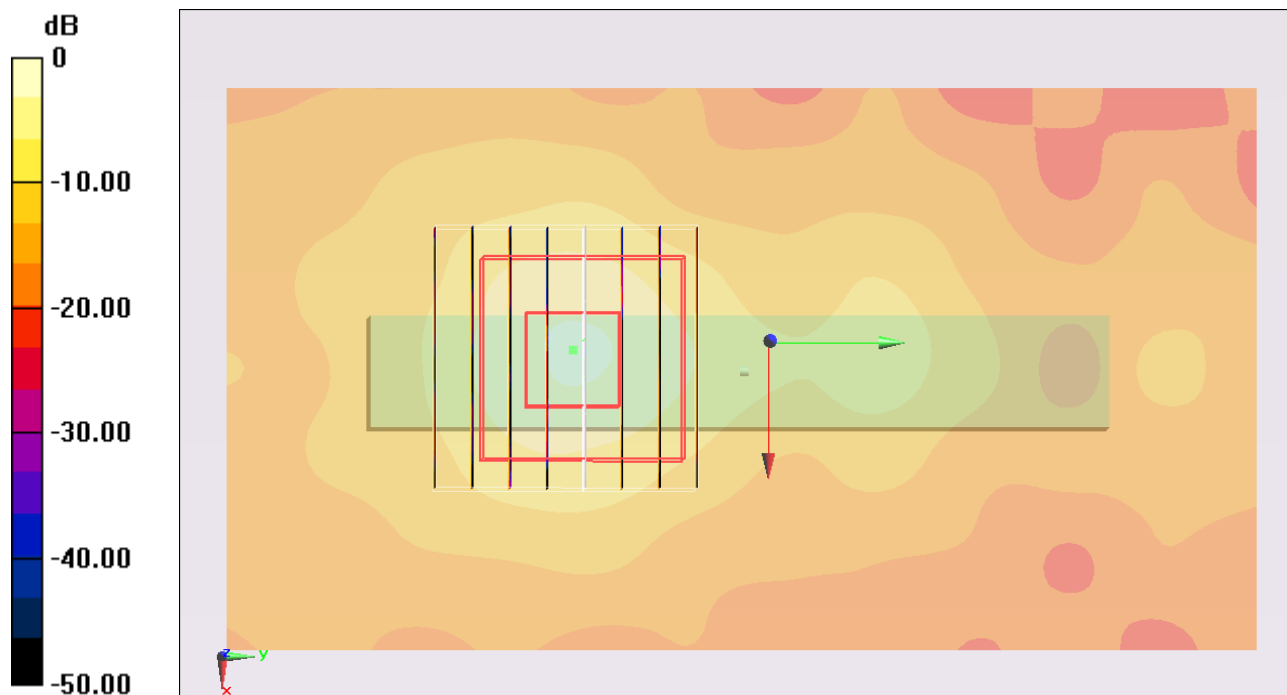
Ch165/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 7.078 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 4.1390

SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.327 mW/g

Maximum value of SAR (measured) = 2.101 mW/g



0 dB = 2.100mW/g = 6.44 dB mW/g

#75 802.11a_Horizontal Up_0.5cm_Ch44_Ant B**DUT: 220705-04**

Communication System: 802.11a; Frequency: 5220 MHz; Duty Cycle: 1:1

Medium: MSL_5G_121015 Medium parameters used: $f = 5220$ MHz; $\sigma = 5.309$ mho/m; $\epsilon_r = 48.504$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.2, 4.2, 4.2); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Ch44/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.704 mW/g

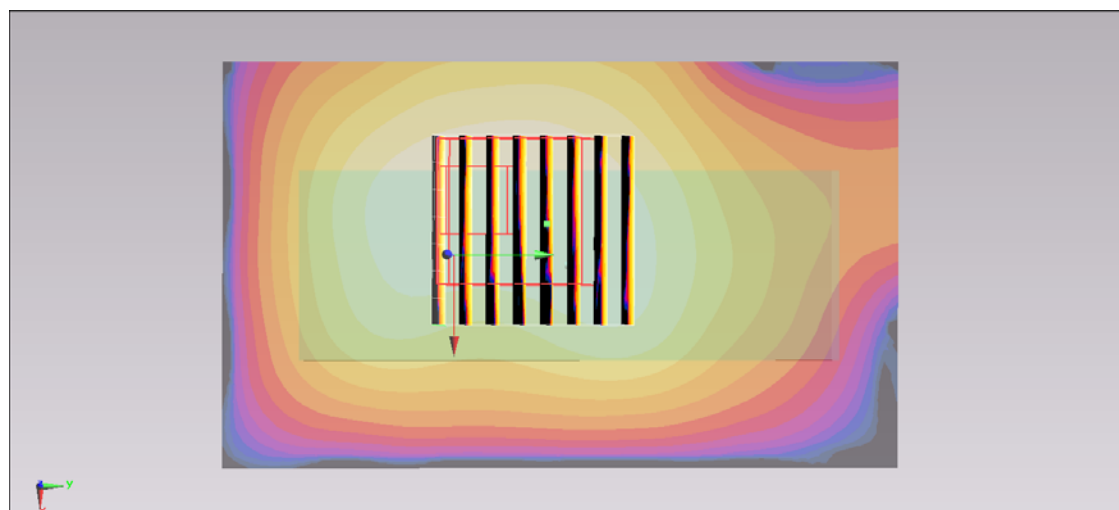
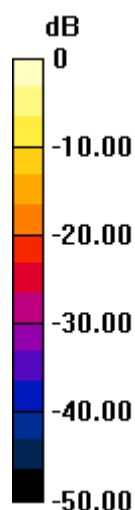
Ch44/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.560 V/m; Power Drift = 0.122 dB

Peak SAR (extrapolated) = 1.093 mW/g

SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.091 mW/g

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



0 dB = 0.640 mW/g = -3.88 dB mW/g

#76 802.11a_Horizontal Down_0.5cm_Ch44_Ant B**DUT: 220705-04**

Communication System: 802.11a; Frequency: 5220 MHz; Duty Cycle: 1:1

Medium: MSL_5G_121015 Medium parameters used: $f = 5220$ MHz; $\sigma = 5.309$ mho/m; $\epsilon_r = 48.504$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.2, 4.2, 4.2); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Ch44/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm

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

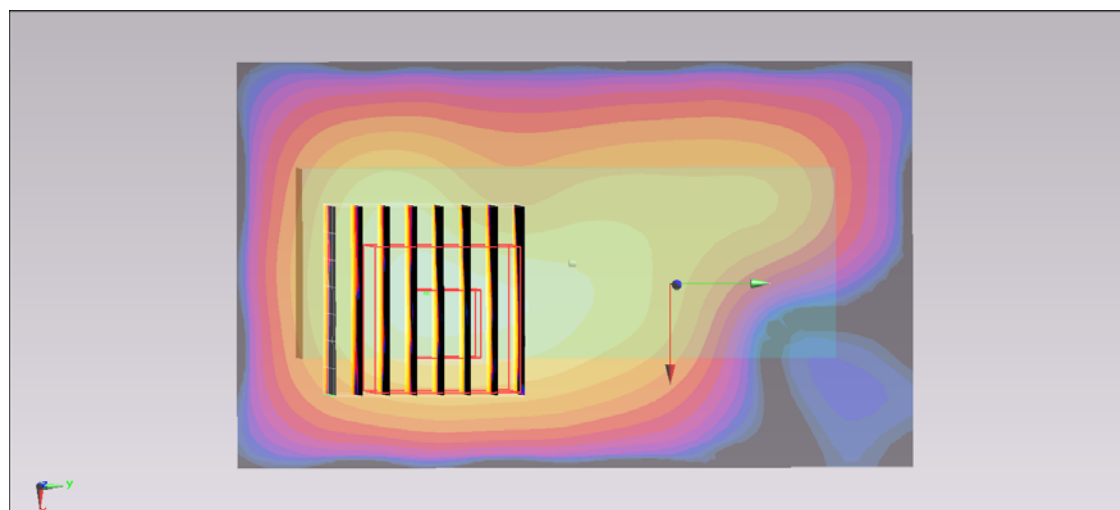
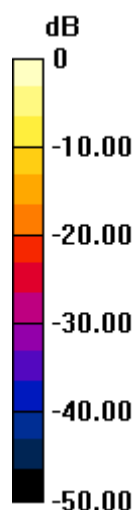
Ch44/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 3.208 V/m; Power Drift = 0.134 dB

Peak SAR (extrapolated) = 1.053 mW/g

SAR(1 g) = 0.292 mW/g; SAR(10 g) = 0.099 mW/g

Maximum value of SAR (measured) = 0.554 mW/g



0 dB = 0.554 mW/g = -5.13 dB mW/g

#77 802.11a_Vertical Front_0.5cm_Ch44_Ant B**DUT: 220705-04**

Communication System: 802.11a; Frequency: 5220 MHz; Duty Cycle: 1:1

Medium: MSL_5G_121015 Medium parameters used : $f = 5220$ MHz; $\sigma = 5.309$ mho/m; $\epsilon_r = 48.504$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.2, 4.2, 4.2); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Ch44/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0461 mW/g

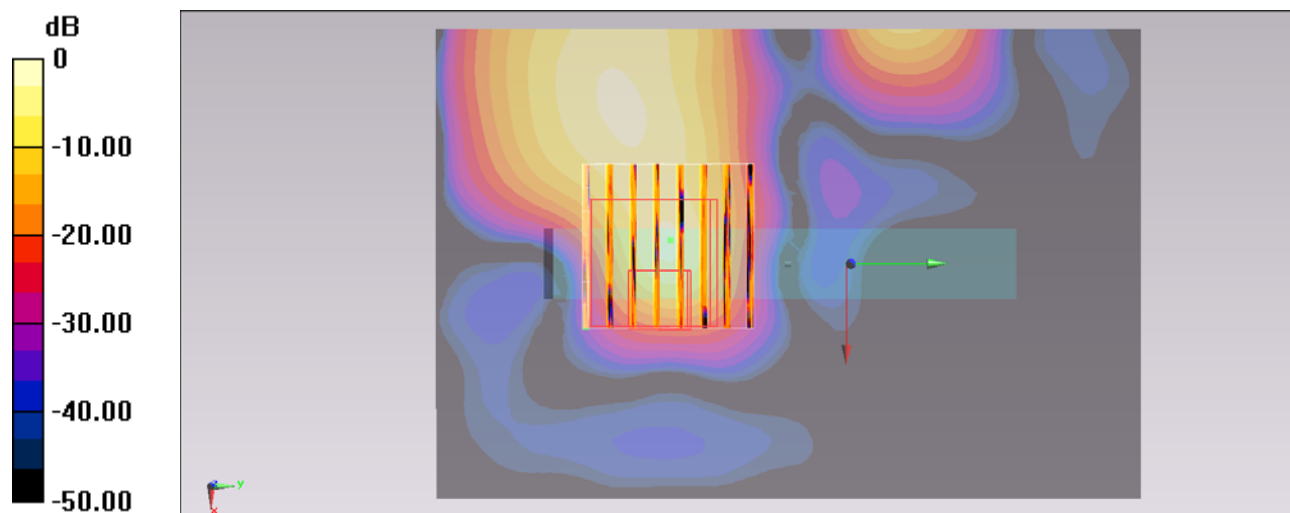
Ch44/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.257 V/m; Power Drift = 0.071 dB

Peak SAR (extrapolated) = 0.259 mW/g

SAR(1 g) = 0.035 mW/g; SAR(10 g) = 0.013 mW/g

Maximum value of SAR (measured) = 0.0818 mW/g



0 dB = 0.0818 mW/g = -21.74 dB mW/g

#78 802.11a_Vertical Back_0.5cm_Ch44_Ant B**DUT: 220705-04**

Communication System: 802.11a; Frequency: 5220 MHz; Duty Cycle: 1:1

Medium: MSL_5G_121015 Medium parameters used : $f = 5220$ MHz; $\sigma = 5.309$ mho/m; $\epsilon_r = 48.504$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.2, 4.2, 4.2); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Ch44/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

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

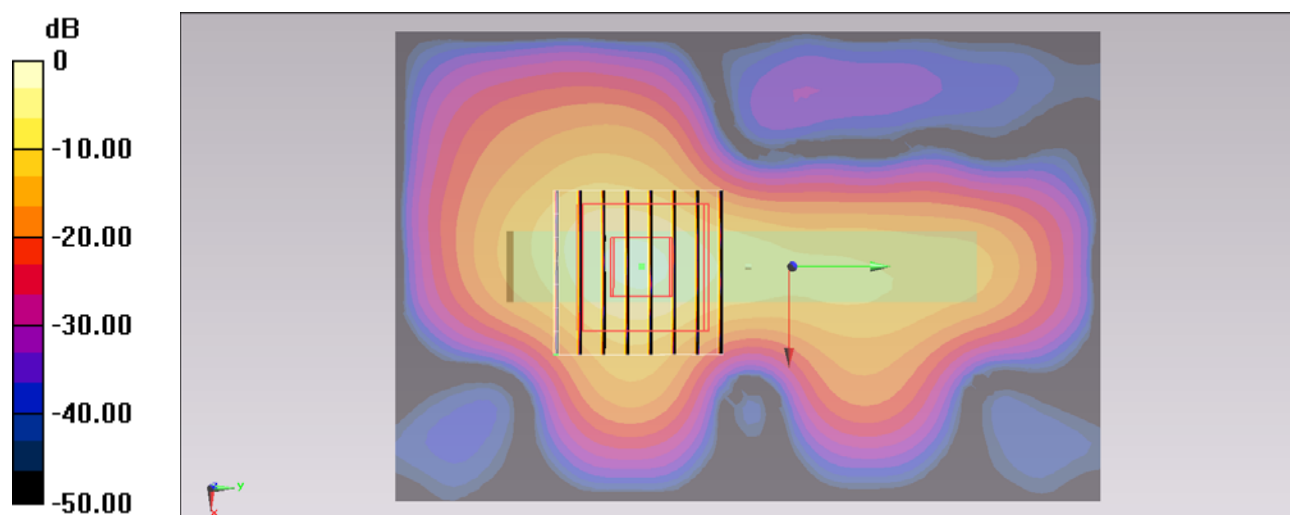
Ch44/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 6.410 V/m; Power Drift = 0.090 dB

Peak SAR (extrapolated) = 2.067 mW/g

SAR(1 g) = 0.587 mW/g; SAR(10 g) = 0.193 mW/g

Maximum value of SAR (measured) = 1.11 mW/g



#78 802.11a_Vertical Back_0.5cm_Ch44_Ant B_2D**DUT: 220705-04**

Communication System: 802.11a; Frequency: 5220 MHz; Duty Cycle: 1:1

Medium: MSL_5G_121015 Medium parameters used: $f = 5220$ MHz; $\sigma = 5.309$ mho/m; $\epsilon_r = 48.504$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.2, 4.2, 4.2); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Ch44/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

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

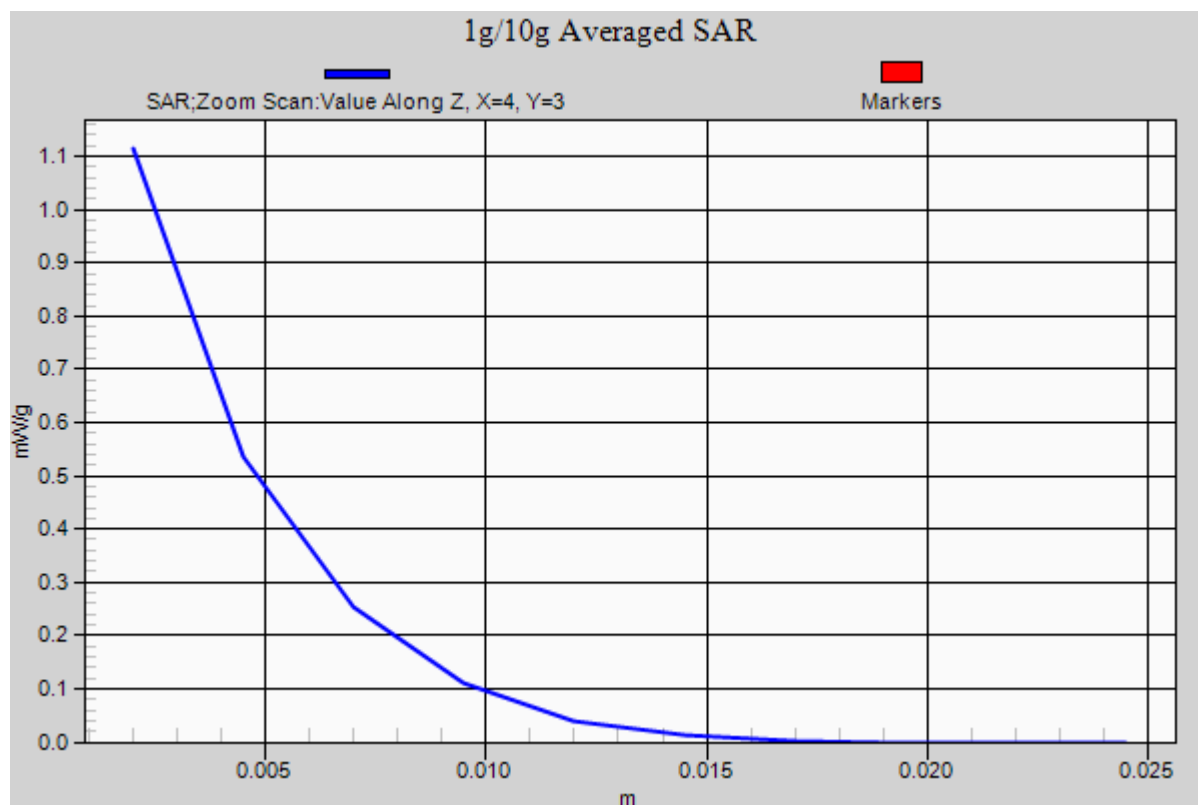
Ch44/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 6.410 V/m; Power Drift = 0.090 dB

Peak SAR (extrapolated) = 2.067 mW/g

SAR(1 g) = 0.587 mW/g; SAR(10 g) = 0.193 mW/g

Maximum value of SAR (measured) = 1.11 mW/g



#79 802.11a_Tip Mode_0.5cm_Ch44_Ant B**DUT: 220705-04**

Communication System: 802.11a; Frequency: 5220 MHz; Duty Cycle: 1:1

Medium: MSL_5G_121015 Medium parameters used: $f = 5220$ MHz; $\sigma = 5.309$ mho/m; $\epsilon_r = 48.504$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.2, 4.2, 4.2); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Ch44/Area Scan (61x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0908 mW/g

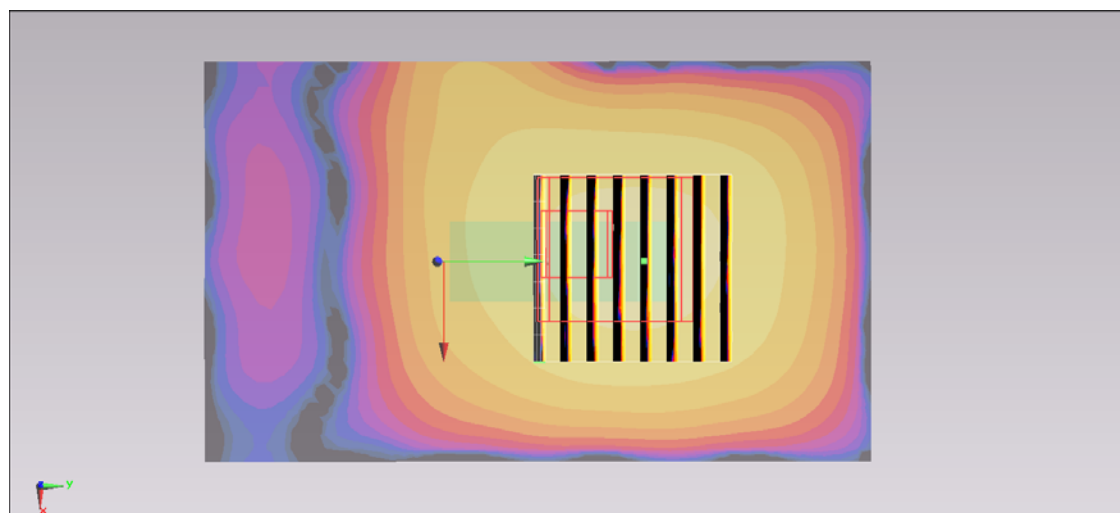
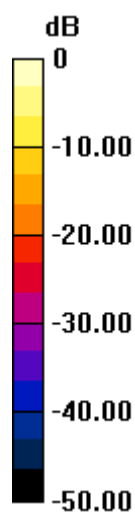
Ch44/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 5.784 V/m; Power Drift = 0.133 dB

Peak SAR (extrapolated) = 0.551 mW/g

SAR(1 g) = 0.138 mW/g; SAR(10 g) = 0.046 mW/g

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



0 dB = 0.309 mW/g = -10.20 dB mW/g

68 802.11a_Horizontal Up_0.5cm_Ch161_Ant 2**DUT: 220705-04**

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

Medium: MSL_5G_121006 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.121$ mho/m; $\epsilon_r = 47.135$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(3.43, 3.43, 3.43); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

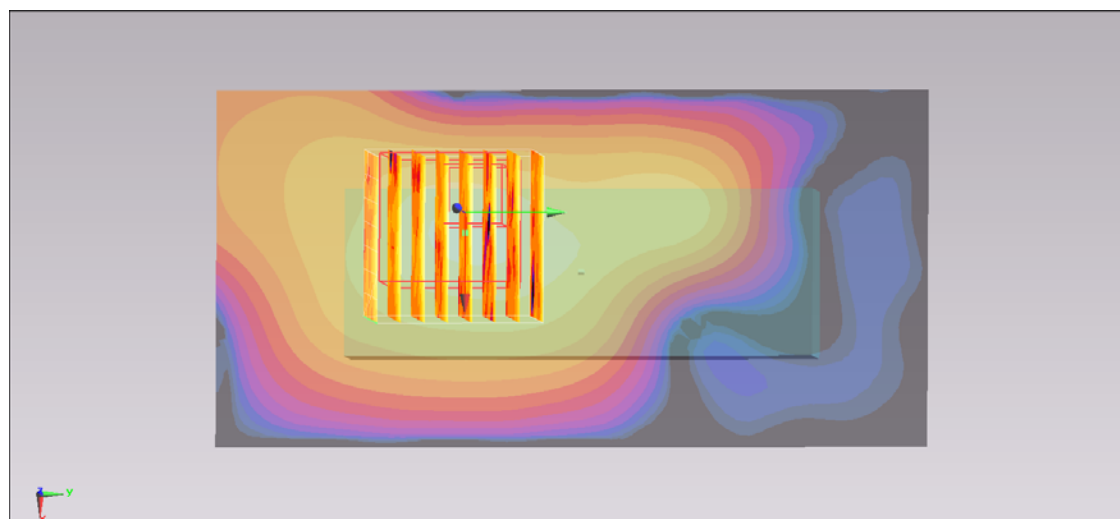
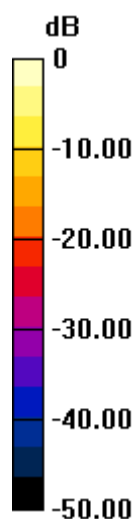
Ch161/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.197 mW/g**Ch161/Zoom Scan (8x8x10)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 3.002 V/m; Power Drift = 0.141 dB

Peak SAR (extrapolated) = 1.046 mW/g

SAR(1 g) = 0.151 mW/g; SAR(10 g) = 0.050 mW/g

Maximum value of SAR (measured) = 0.322 mW/g



0 dB = 0.322 mW/g = -9.84 dB mW/g

69 802.11a_Horizontal Down_0.5cm_Ch161_Ant 2**DUT: 220705-04**

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

Medium: MSL_5G_121006 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.121$ mho/m; $\epsilon_r = 47.135$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(3.43, 3.43, 3.43); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Ch161/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.157 mW/g

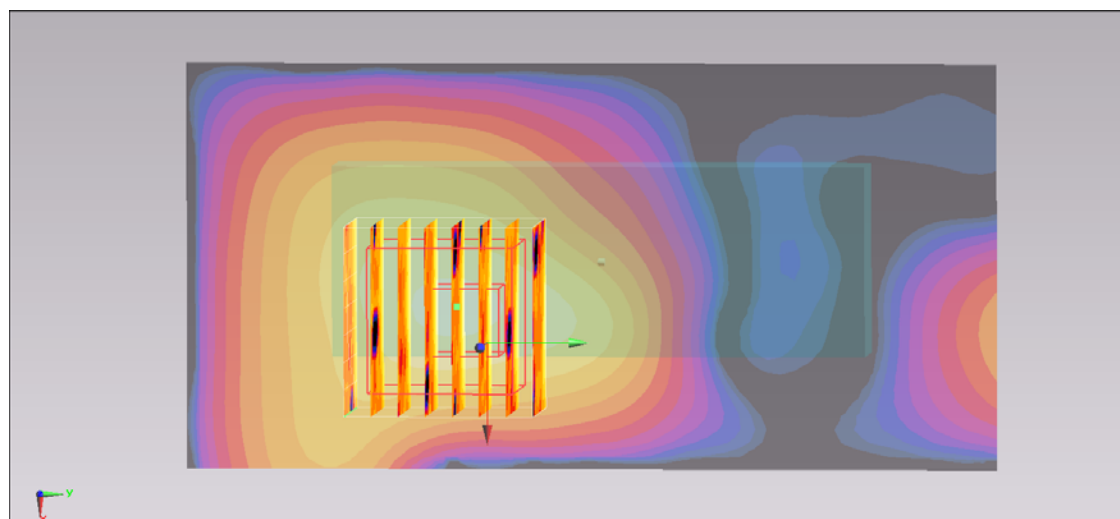
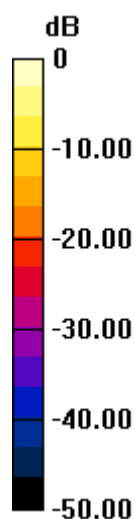
Ch161/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.165 V/m; Power Drift = 0.166 dB

Peak SAR (extrapolated) = 0.488 mW/g

SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.043 mW/g

Maximum value of SAR (measured) = 0.264 mW/g



0 dB = 0.264 mW/g = -11.57 dB mW/g

70 802.11a_Vertical Front_0.5cm_Ch161_Ant 2**DUT: 220705-04**

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

Medium: MSL_5G_121006 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.121$ mho/m; $\epsilon_r = 47.135$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

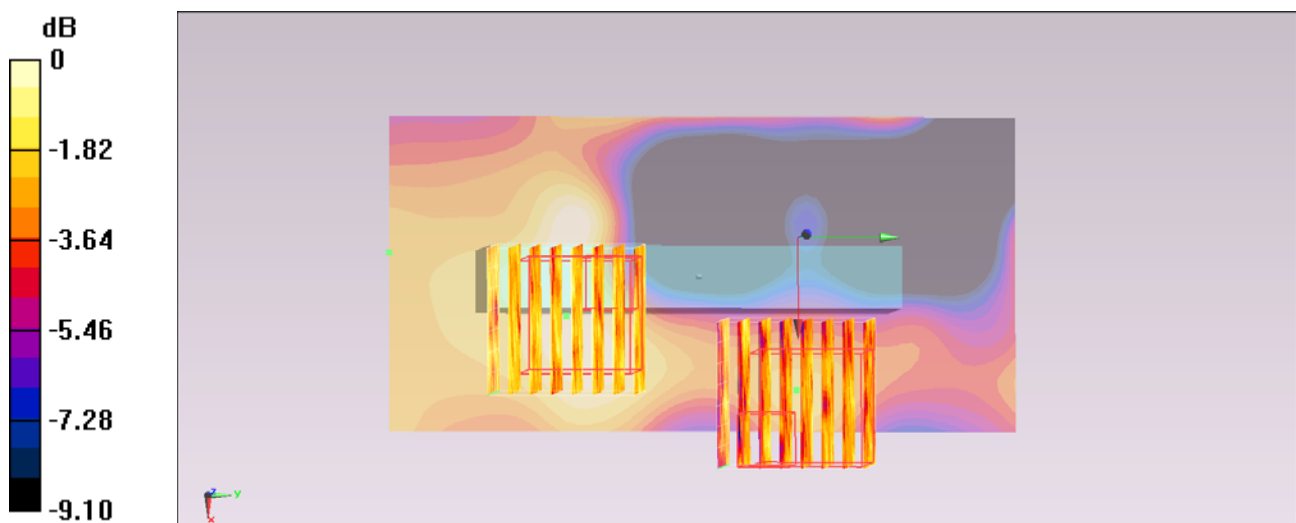
DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(3.43, 3.43, 3.43); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Ch161/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.0376 mW/g

Ch161/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 1.219 V/m; Power Drift = 0.155 dB
Peak SAR (extrapolated) = 0.114 mW/g
SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.025 mW/g
Maximum value of SAR (measured) = 0.0654 mW/g

Ch161/Zoom Scan (8x8x10)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 1.219 V/m; Power Drift = 0.155 dB
Peak SAR (extrapolated) = 0.052 mW/g
SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.018 mW/g
Maximum value of SAR (measured) = 0.0365 mW/g



0 dB = 0.0365 mW/g = -28.75 dB mW/g

71 802.11a_Vertical Back_0.5cm_Ch161_Ant 2**DUT: 220705-04**

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

Medium: MSL_5G_121006 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.121$ mho/m; $\epsilon_r = 47.135$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(3.43, 3.43, 3.43); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

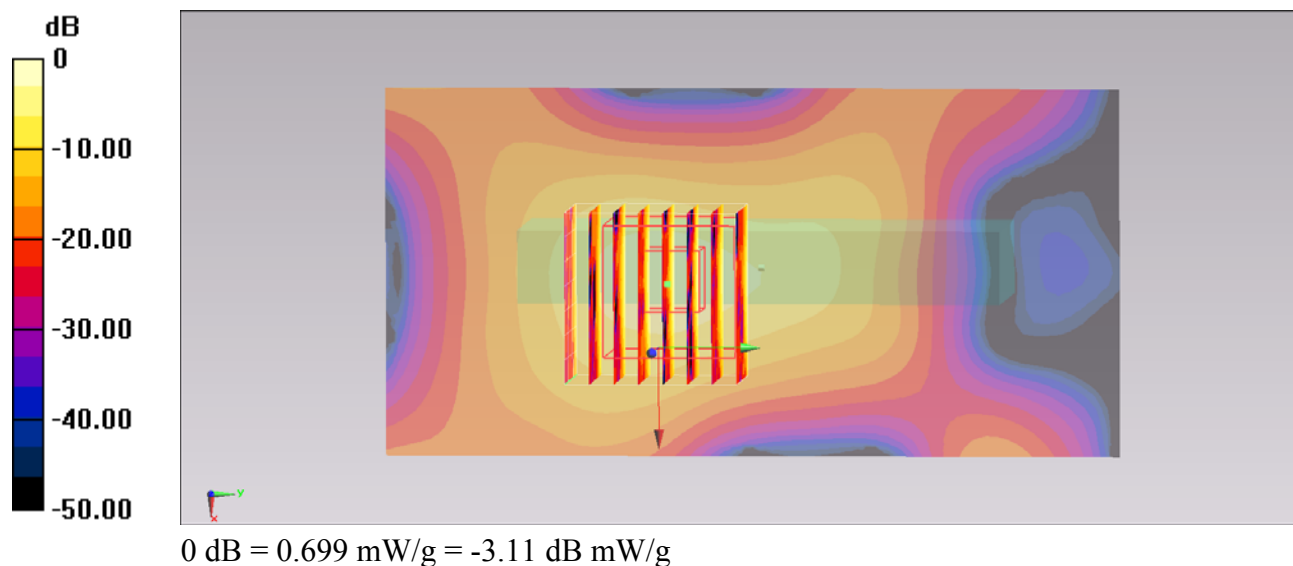
Ch161/Area Scan (61x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.278 mW/g**Ch161/Zoom Scan (8x8x10)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 5.204 V/m; Power Drift = 0.127 dB

Peak SAR (extrapolated) = 1.329 mW/g

SAR(1 g) = 0.348 mW/g; SAR(10 g) = 0.110 mW/g

Maximum value of SAR (measured) = 0.699 mW/g



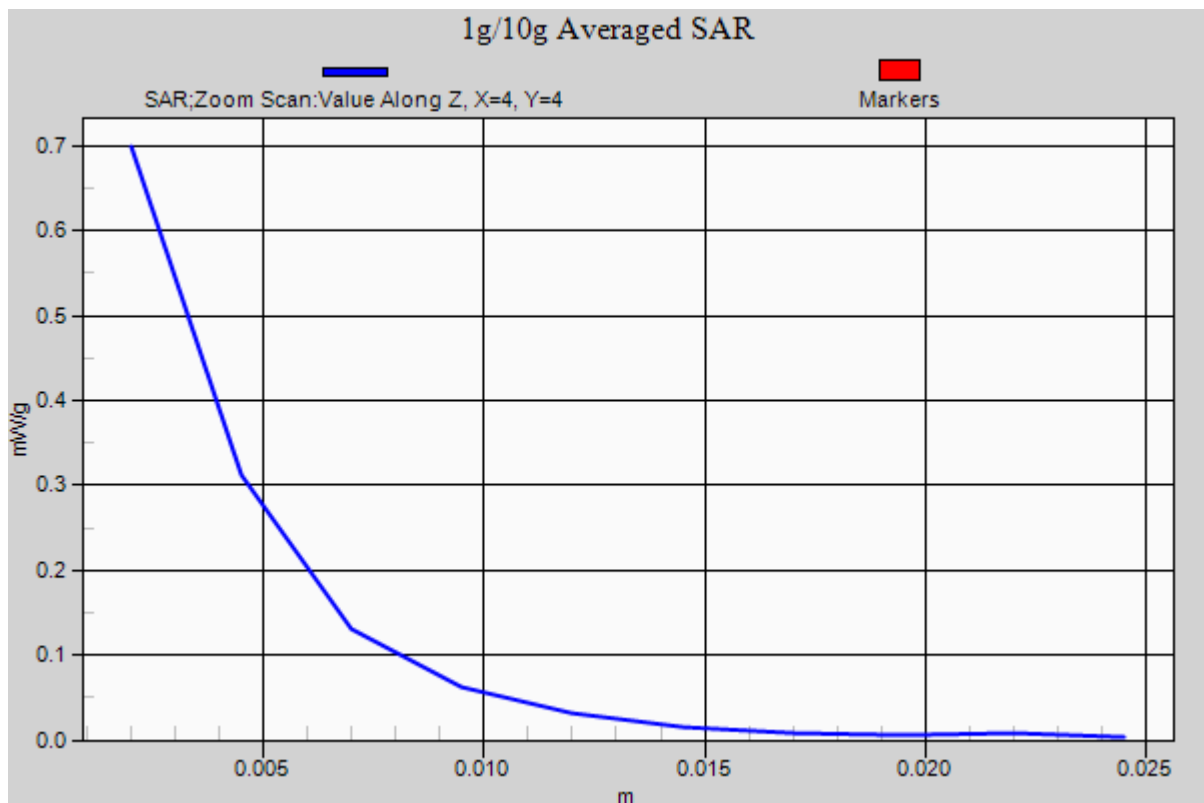
71 802.11a_Vertical Back_0.5cm_Ch161_Ant 2_2D**DUT: 220705-04**

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

Medium: MSL_5G_121006 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.121$ mho/m; $\epsilon_r = 47.135$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.5°C ; Liquid Temperature : 21.5°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(3.43, 3.43, 3.43); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Ch161/Area Scan (61x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$ Maximum value of SAR (interpolated) = 0.278 mW/g **Ch161/Zoom Scan (8x8x10)/Cube 0:** Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$ Reference Value = 5.204 V/m ; Power Drift = 0.127 dB Peak SAR (extrapolated) = 1.329 mW/g **SAR(1 g) = 0.348 mW/g ; SAR(10 g) = 0.110 mW/g** Maximum value of SAR (measured) = 0.699 mW/g 

72 802.11a_Tip Mode_0.5cm_Ch161_Ant 2**DUT: 220705-04**

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

Medium: MSL_5G_121006 Medium parameters used: $f = 5805$ MHz; $\sigma = 6.121$ mho/m; $\epsilon_r = 47.135$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3578; ConvF(3.43, 3.43, 3.43); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

Ch161/Area Scan (61x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0986 mW/g

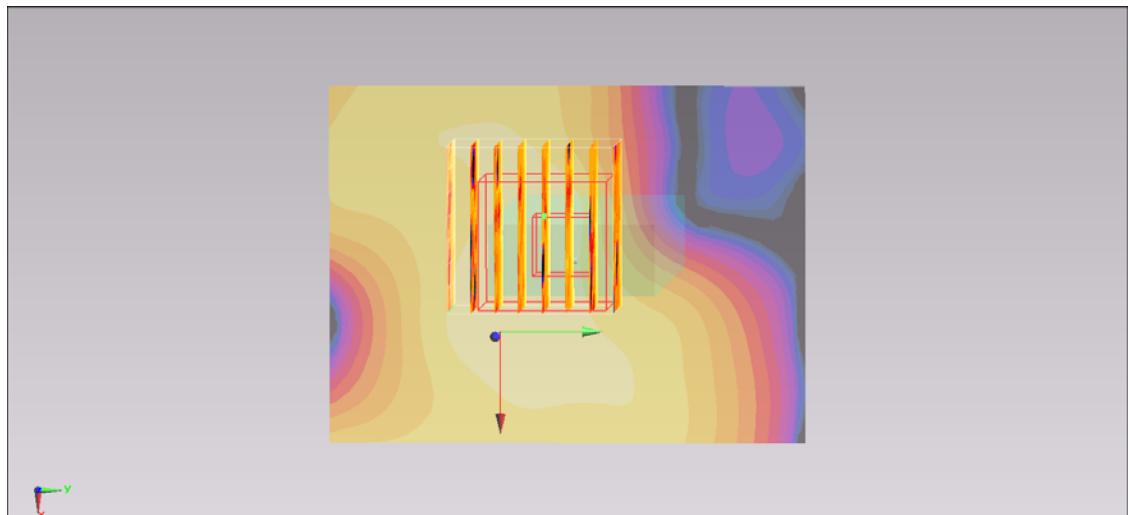
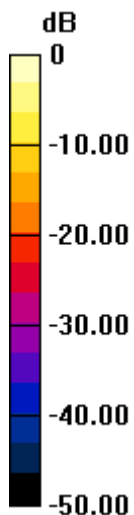
Ch161/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 4.101 V/m; Power Drift = 0.183 dB

Peak SAR (extrapolated) = 0.442 mW/g

SAR(1 g) = 0.100 mW/g; SAR(10 g) = 0.030 mW/g

Maximum value of SAR (measured) = 0.211 mW/g



0 dB = 0.211 mW/g = -13.51 dB mW/g

39 802.11n_Horizontal Up_0.5cm_Ch48_Ant 1+2**DUT: 220705-04**

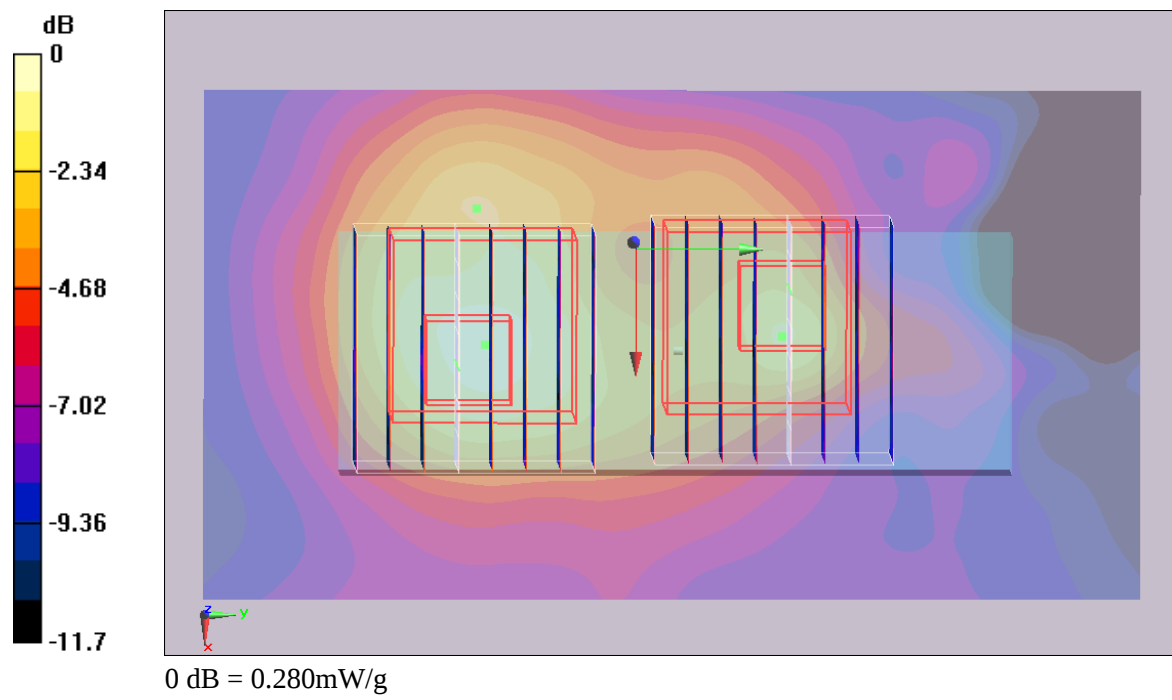
Communication System: 802.11n; Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120317 Medium parameters used : $f = 5240 \text{ MHz}$; $\sigma = 5.35 \text{ mho/m}$; $\epsilon_r = 48.7$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$ Maximum value of SAR (interpolated) = 0.254 mW/g **Ch48/Zoom Scan (8x8x10)/Cube 0:** Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$ Reference Value = 5.91 V/m ; Power Drift = -0.02 dB Peak SAR (extrapolated) = 0.686 W/kg **SAR(1 g) = 0.200 mW/g ; SAR(10 g) = 0.103 mW/g** Maximum value of SAR (measured) = 0.342 mW/g **Ch48/Zoom Scan (8x8x10)/Cube 1:** Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$ Reference Value = 5.91 V/m ; Power Drift = -0.02 dB Peak SAR (extrapolated) = 0.563 W/kg **SAR(1 g) = 0.166 mW/g ; SAR(10 g) = 0.079 mW/g** Maximum value of SAR (measured) = 0.280 mW/g



40 802.11n_Horizontal Down_0.5cm_Ch48_Ant 1+2

DUT: 220705-04

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

Medium: MSL_5G_120317 Medium parameters used : $f = 5240 \text{ MHz}$; $\sigma = 5.35 \text{ mho/m}$; $\epsilon_r = 48.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.280 mW/g

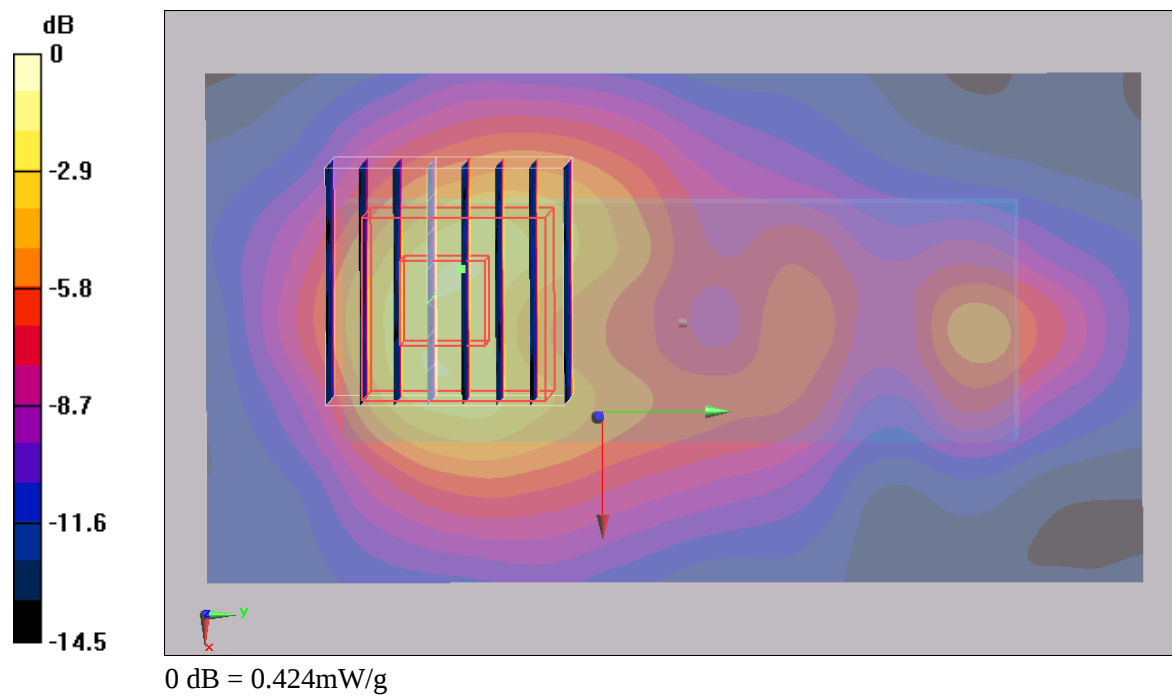
Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 4.34 V/m ; Power Drift = -0.151 dB

Peak SAR (extrapolated) = 0.791 W/kg

SAR(1 g) = 0.239 mW/g ; SAR(10 g) = 0.107 mW/g

Maximum value of SAR (measured) = 0.424 mW/g



41 802.11n_Vertical Front_0.5cm_Ch48_Ant 1+2

DUT: 220705-04

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

Medium: MSL_5G_120317 Medium parameters used : $f = 5240 \text{ MHz}$; $\sigma = 5.35 \text{ mho/m}$; $\epsilon_r = 48.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.718 mW/g

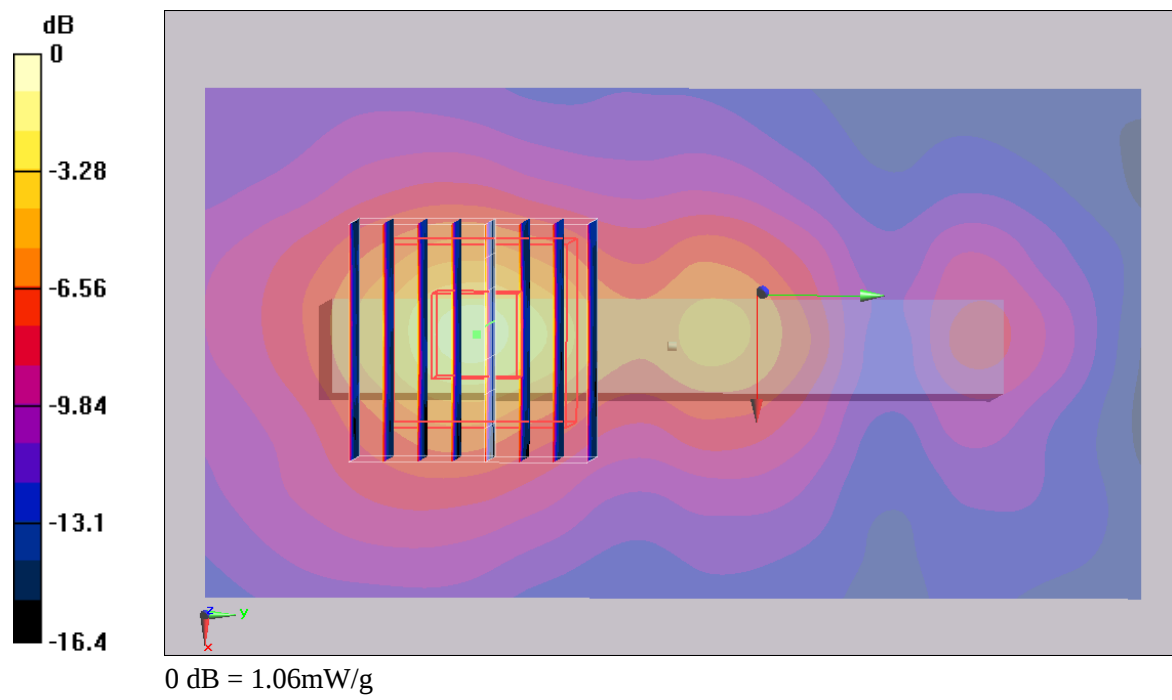
Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 7.17 V/m ; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 2 W/kg

SAR(1 g) = 0.569 mW/g ; SAR(10 g) = 0.219 mW/g

Maximum value of SAR (measured) = 1.06 mW/g



41 802.11n_Vertical Front_0.5cm_Ch48_Ant 1+2_2D**DUT: 220705-04**

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

Medium: MSL_5G_120317 Medium parameters used : $f = 5240$ MHz; $\sigma = 5.35$ mho/m; $\epsilon_r = 48.7$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.718 mW/g

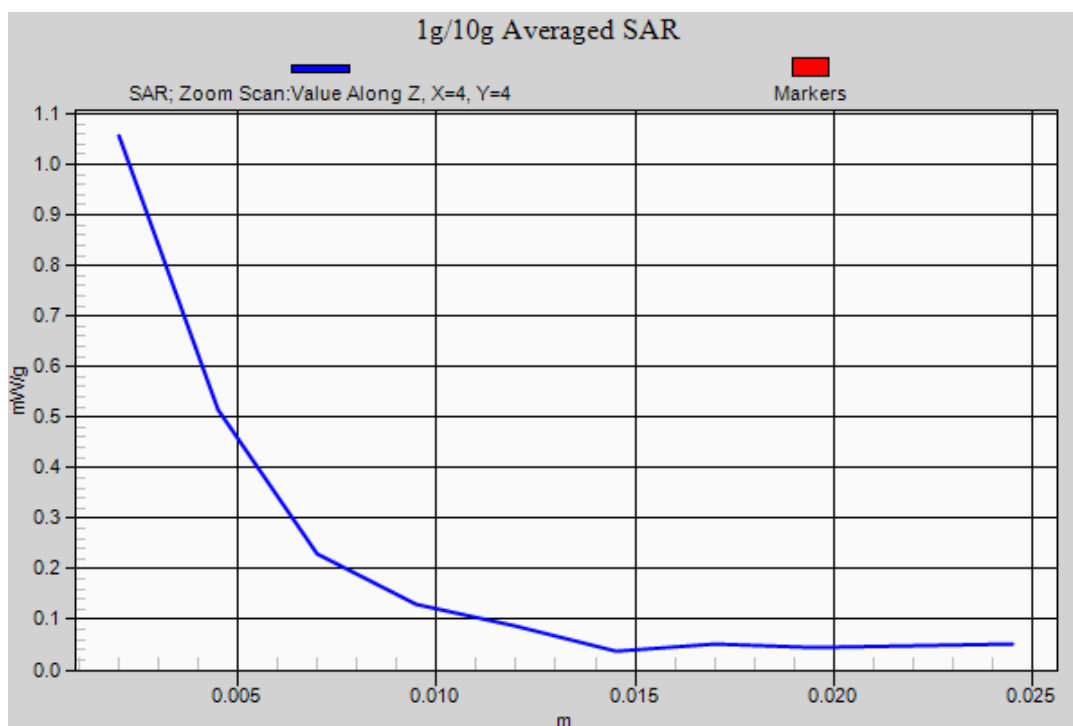
Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 7.17 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 2 W/kg

SAR(1 g) = 0.569 mW/g; SAR(10 g) = 0.219 mW/g

Maximum value of SAR (measured) = 1.06 mW/g



42 802.11n_Vertical Back_0.5cm_Ch48_Ant 1+2

DUT: 220705-04

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

Medium: MSL_5G_120317 Medium parameters used : $f = 5240 \text{ MHz}$; $\sigma = 5.35 \text{ mho/m}$; $\epsilon_r = 48.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.445 mW/g

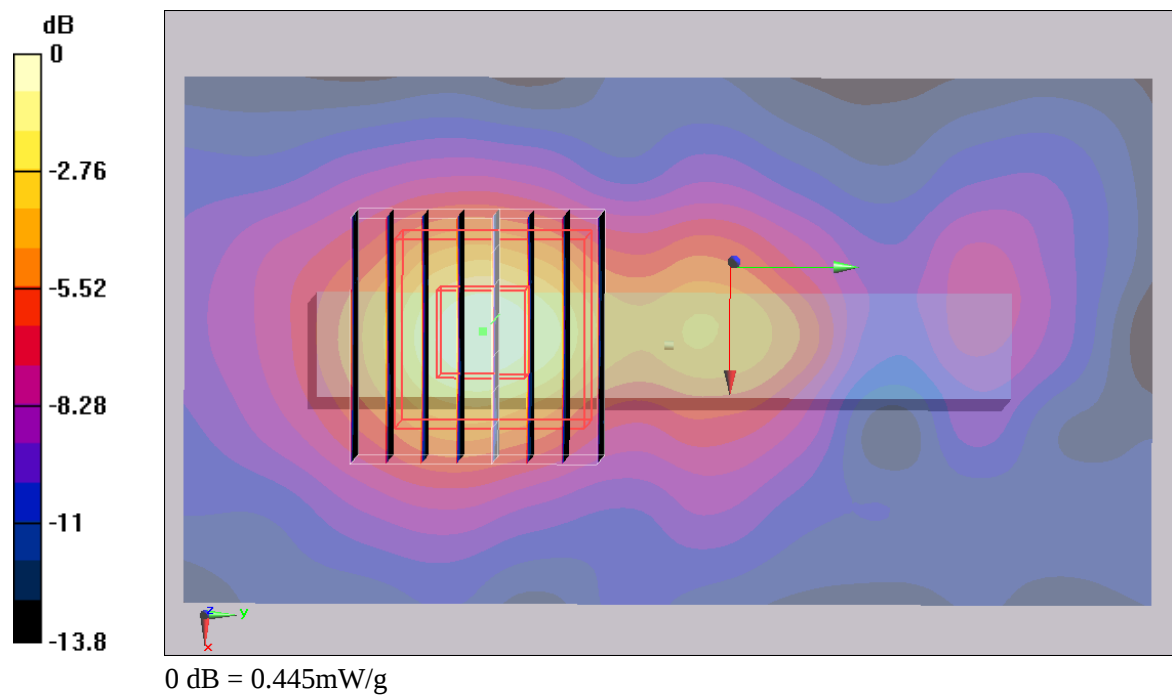
Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.66 V/m ; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.281 mW/g ; SAR(10 g) = 0.102 mW/g

Maximum value of SAR (measured) = 0.528 mW/g



43 802.11n_Tip Mode_0.5cm_Ch48_Ant 1+2

DUT: 220705-04

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

Medium: MSL_5G_120317 Medium parameters used : $f = 5240 \text{ MHz}$; $\sigma = 5.35 \text{ mho/m}$; $\epsilon_r = 48.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch48/Area Scan (61x61x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.222 mW/g

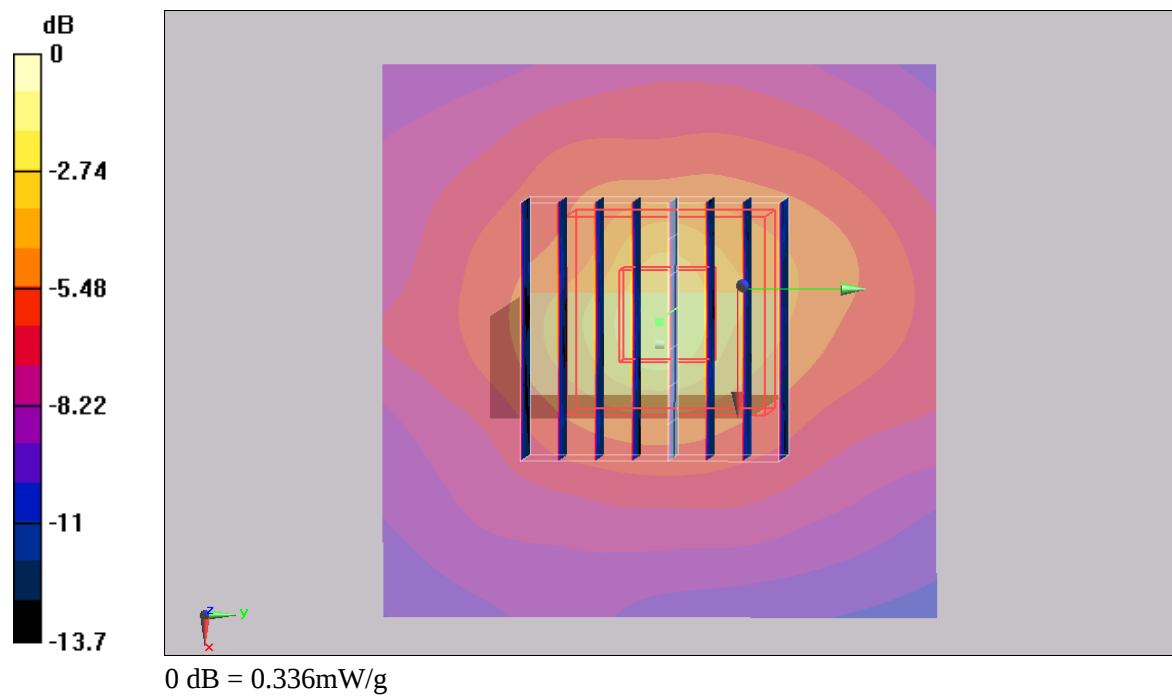
Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.21 V/m ; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.675 W/kg

SAR(1 g) = 0.178 mW/g ; SAR(10 g) = 0.073 mW/g

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



56 802.11n_20M_Horizontal Up_0.5cm_Ch165_Ant 1+2

DUT: 220705-04

Communication System: 802.11n; Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5825 \text{ MHz}$; $\sigma = 6.22 \text{ mho/m}$; $\epsilon_r = 46.4$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch165/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.528 mW/g

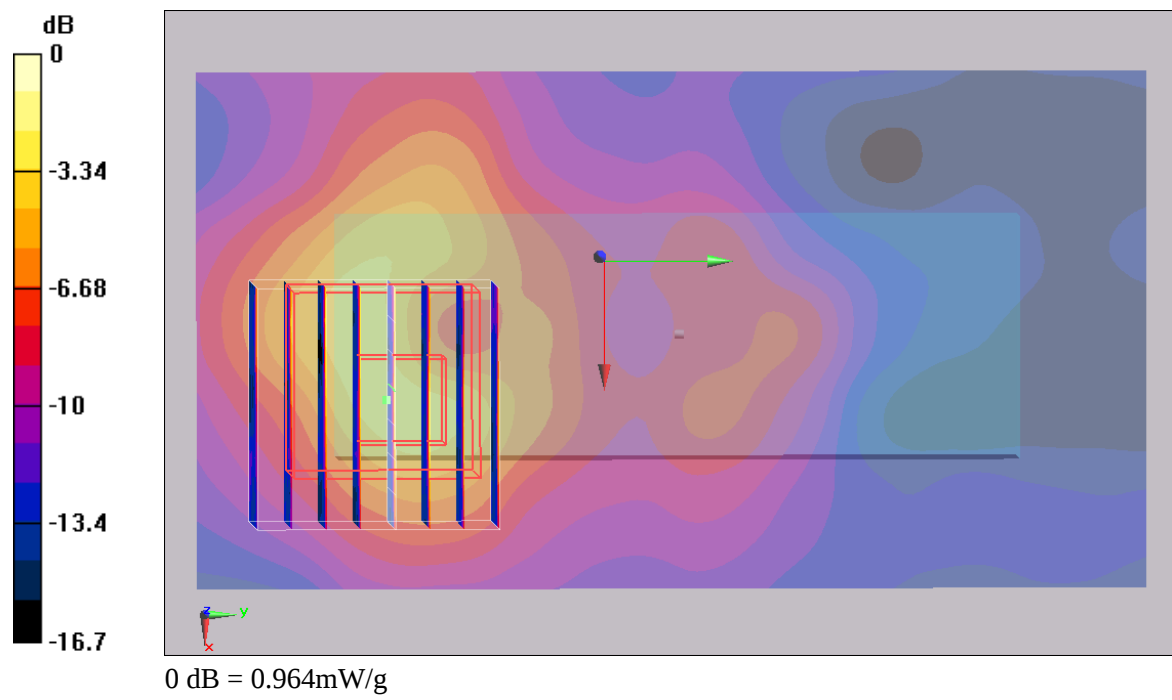
Ch165/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 4.22 V/m ; Power Drift = -0.130 dB

Peak SAR (extrapolated) = 2.06 W/kg

SAR(1 g) = 0.505 mW/g ; SAR(10 g) = 0.205 mW/g

Maximum value of SAR (measured) = 0.964 mW/g



57 802.11n_20M_Horizontal Down_0.5cm_Ch165_Ant 1+2

DUT: 220705-04

Communication System: 802.11n; Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5825 \text{ MHz}$; $\sigma = 6.22 \text{ mho/m}$; $\epsilon_r = 46.4$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch165/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.511 mW/g

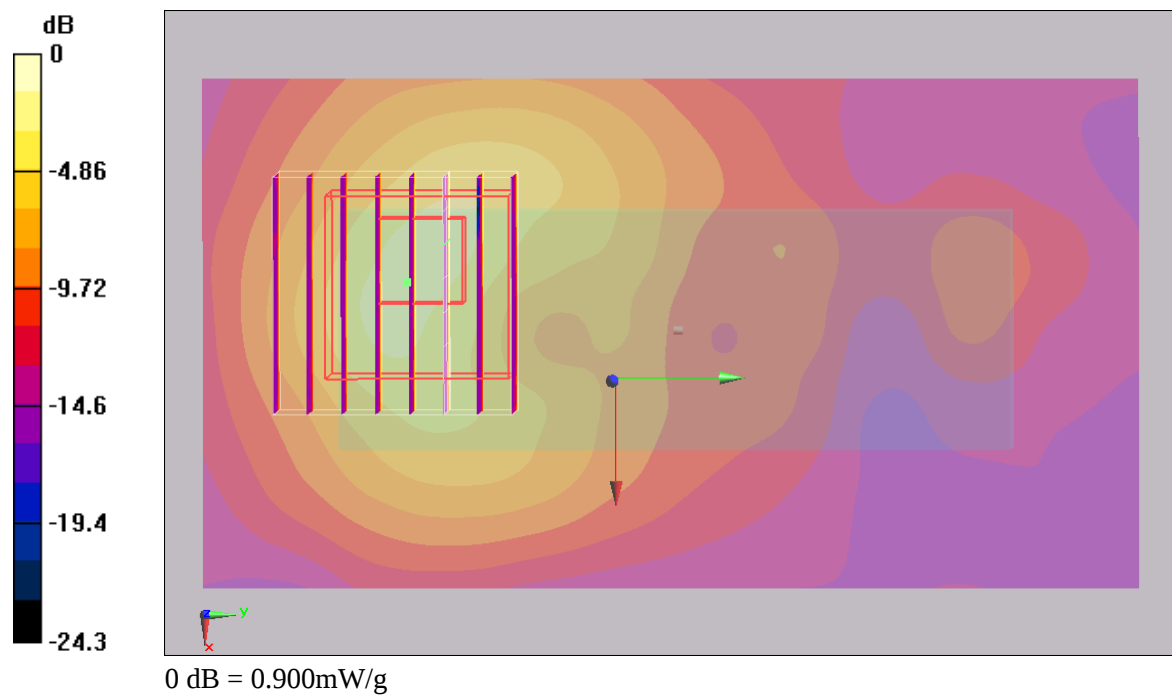
Ch165/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 3.8 V/m ; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.81 W/kg

SAR(1 g) = 0.474 mW/g ; SAR(10 g) = 0.199 mW/g

Maximum value of SAR (measured) = 0.900 mW/g



58 802.11n_20M_Vertical Front_0.5cm_Ch165_Ant 1+2

DUT: 220705-04

Communication System: 802.11n; Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5825 \text{ MHz}$; $\sigma = 6.22 \text{ mho/m}$; $\epsilon_r = 46.4$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch165/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.22 mW/g

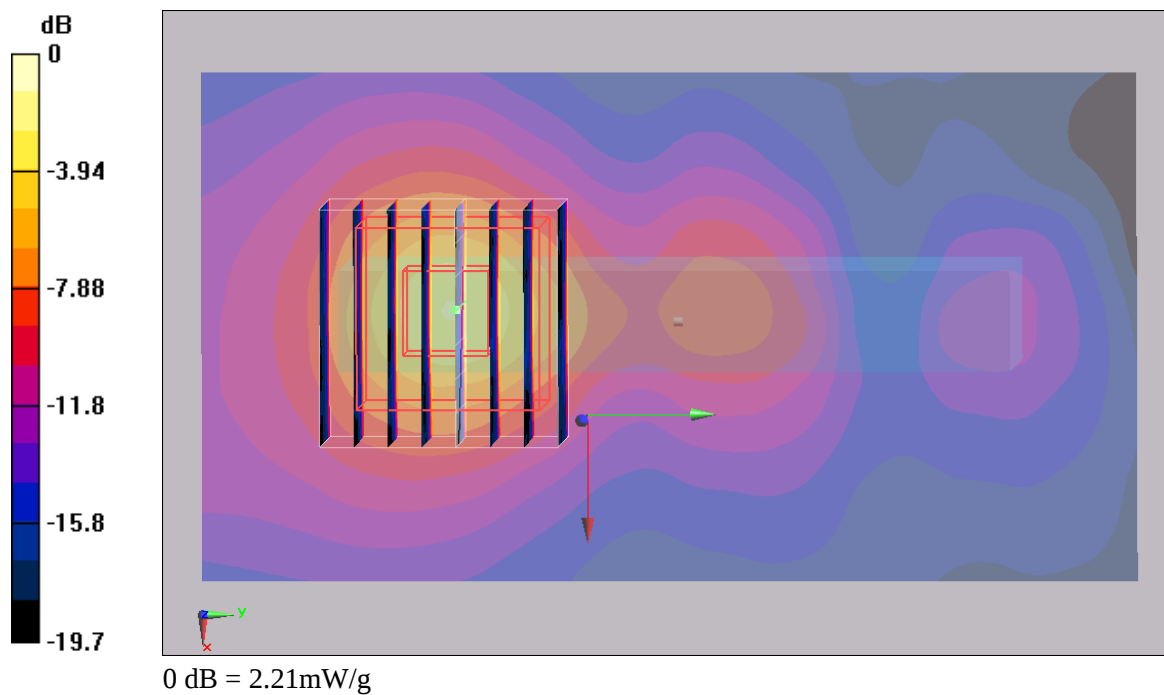
Ch165/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.76 V/m ; Power Drift = 0.113 dB

Peak SAR (extrapolated) = 4.53 W/kg

SAR(1 g) = 1.13 mW/g ; SAR(10 g) = 0.389 mW/g

Maximum value of SAR (measured) = 2.21 mW/g



59 802.11n_20M_Vertical Back_0.5cm_Ch165_Ant 1+2

DUT: 220705-04

Communication System: 802.11n; Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5825 \text{ MHz}$; $\sigma = 6.22 \text{ mho/m}$; $\epsilon_r = 46.4$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch165/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.899 mW/g

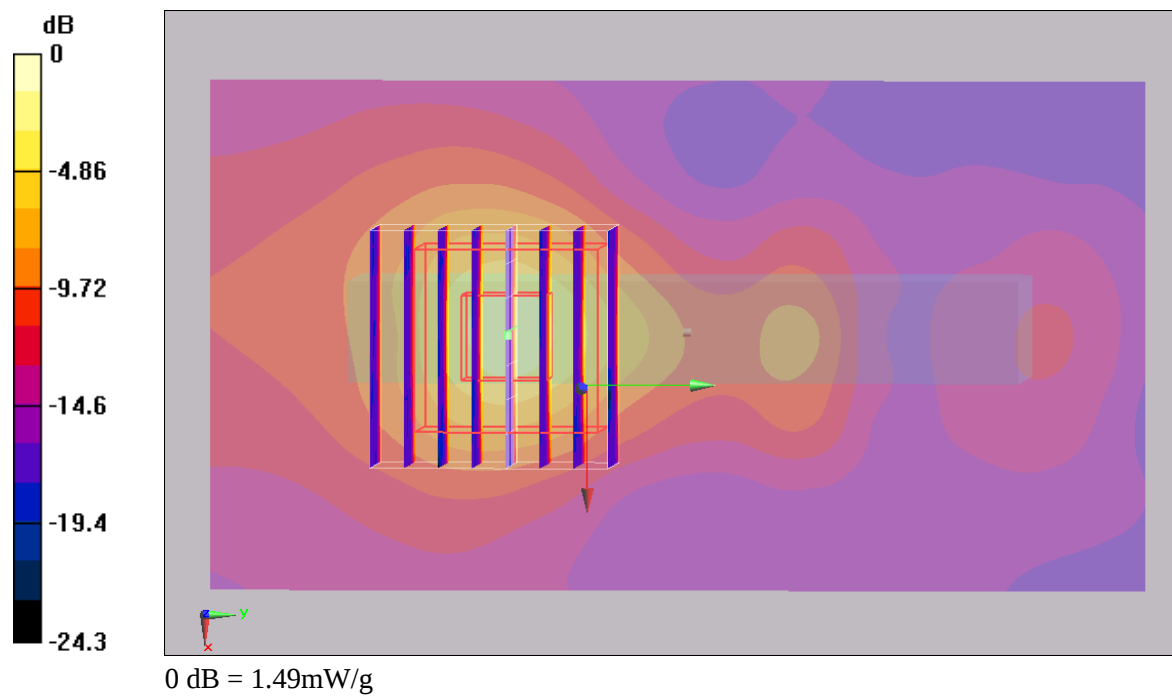
Ch165/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 5.09 V/m ; Power Drift = -0.119 dB

Peak SAR (extrapolated) = 3.09 W/kg

SAR(1 g) = 0.731 mW/g ; SAR(10 g) = 0.241 mW/g

Maximum value of SAR (measured) = 1.49 mW/g



60 802.11n_20M_Tip Mode_0.5cm_Ch165_Ant 1+2

DUT: 220705-04

Communication System: 802.11n; Frequency: 5825 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5825 \text{ MHz}$; $\sigma = 6.22 \text{ mho/m}$; $\epsilon_r = 46.4$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch165/Area Scan (61x61x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.546 mW/g

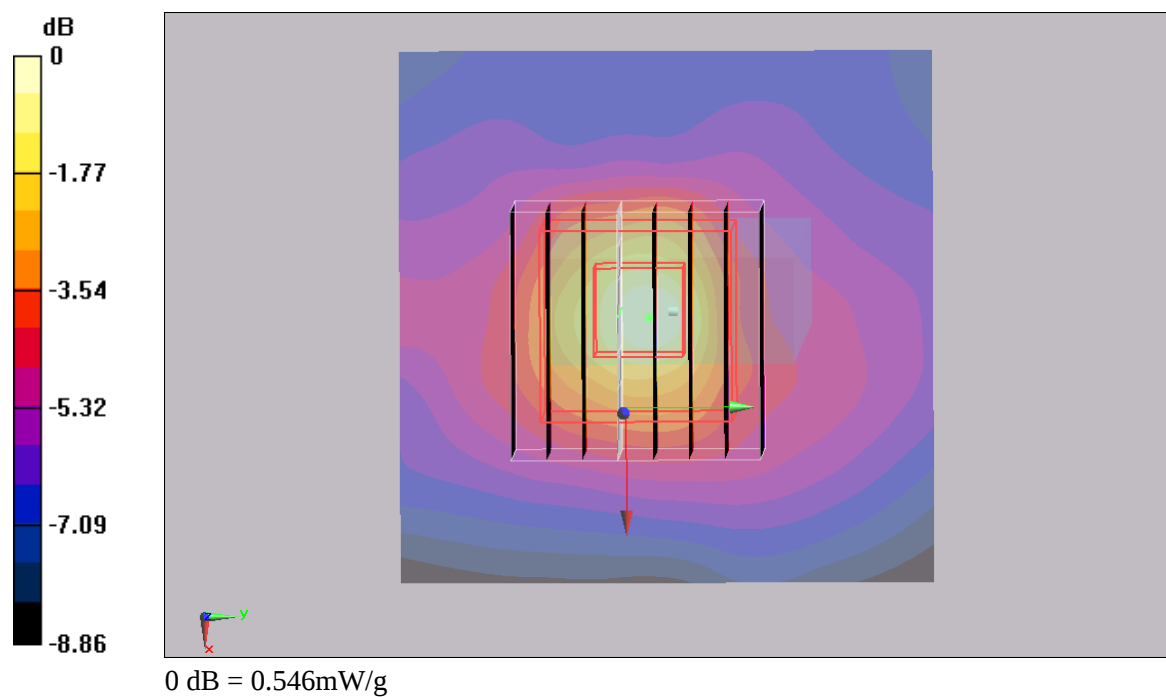
Ch165/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.33 V/m ; Power Drift = 0.121 dB

Peak SAR (extrapolated) = 2.22 W/kg

SAR(1 g) = 0.519 mW/g ; SAR(10 g) = 0.184 mW/g

Maximum value of SAR (measured) = 1.03 mW/g



61 802.11n_20M_Vertical Front_0.5cm_Ch149_Ant 1+2

DUT: 220705-04

Communication System: 802.11n; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5745 \text{ MHz}$; $\sigma = 6.09 \text{ mho/m}$; $\epsilon_r = 46.7$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch149/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

Ch149/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.74 V/m ; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 3.01 W/kg

SAR(1 g) = 0.757 mW/g ; SAR(10 g) = 0.305 mW/g

Maximum value of SAR (measured) = 1.4 mW/g

62 802.11n_20M_Vertical Front_0.5cm_Ch157_Ant 1+2

DUT: 220705-04

Communication System: 802.11n; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.14 \text{ mho/m}$; $\epsilon_r = 46.5$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : 22.7°C ; Liquid Temperature : 21.7°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch157/Area Scan (61x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.28 mW/g

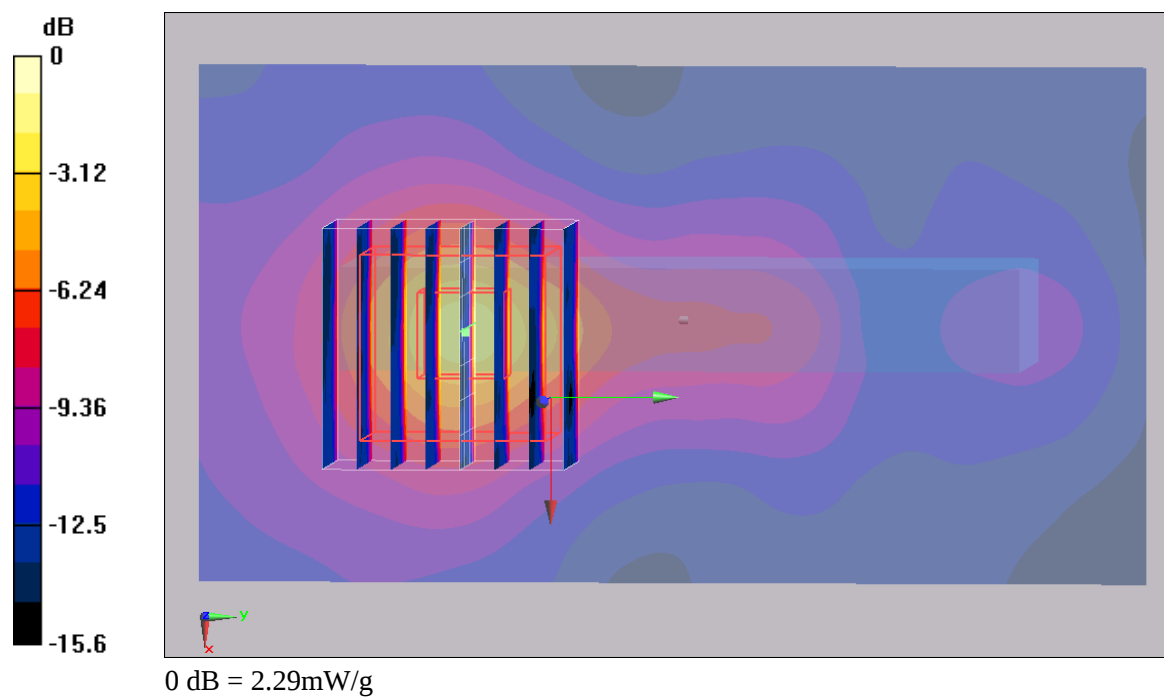
Ch157/Zoom Scan (8x8x10)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.17 V/m ; Power Drift = -0.183 dB

Peak SAR (extrapolated) = 4.71 W/kg

SAR(1 g) = 1.19 mW/g ; SAR(10 g) = 0.446 mW/g

Maximum value of SAR (measured) = 2.29 mW/g



62 802.11n_20M_Veritical Front_0.5cm_Ch157_Ant 1+2_2D**DUT: 220705-04**

Communication System: 802.11n; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: MSL_5G_120318 Medium parameters used: $f = 5785$ MHz; $\sigma = 6.14$ mho/m; $\epsilon_r = 46.5$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.7 °C; Liquid Temperature : 21.7 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 2011/6/20
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1029
- Software: DASY5 Version; SEMCAD X Version 13.4 Build 45

Ch157/Area Scan (61x111x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.28 mW/g

Ch157/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 8.17 V/m; Power Drift = -0.183 dB

Peak SAR (extrapolated) = 4.71 W/kg

SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.446 mW/g

Maximum value of SAR (measured) = 2.29 mW/g

