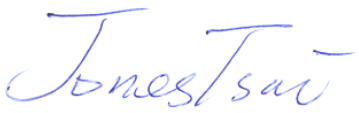
FCC SAR Test Report

APPLICANT	**:**	**Dodds LLC**
EQUIPMENT	**:**	**Tablet PC**
MODEL NAME	**:**	**3HT7G**
FCC ID	**:**	**ZHS-1013**
STANDARD	**:**	**FCC 47 CFR Part 2 (2.1093)** **ANSI/IEEE C95.1-1992** **IEEE 1528-2003** **FCC OET Bulletin 65 Supplement C (Edition 01-01)**

The product was completely tested on Jul. 07, 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

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA1O2041	Rev. 01	Initial issue of report	Jul. 23, 2012
FA1O2041	Rev. 02	Add the statement in section 3.1 1. No power reduction is implemented in this device for SAR compliance 2. All SAR tests were performed with the device operating at maximum power.	Aug. 22, 2012

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Dodds LLC, Tablet PC, 3HT7G,** are as follows.

Band	Position	SAR_{1g} (W/kg)
WLAN 2.4G	**Body (Bottom Face_0 cm Gap)**	**1.260**
WLAN 5G	**Body (Bottom Face_0 cm Gap)**	**1.301**

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 C95.1-1992, 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 1st 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	Dodds LLC
Address	Suite 400, 8040 Excelsior Drive Madison, WI 53717

2.3 Application Details

Date of Start during the Test	May 04, 2012
Date of End during the Test	Jul. 07, 2012

3. General Information

3.1 Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT	Tablet PC
Model Name	3HT7G
FCC ID	ZHS-1013
Tx Frequency	WLAN2.4G: 2412 MHz ~ 2462 MHz WLAN5G: 5180 MHz ~ 5240 MHz; 5745 MHz ~ 5805 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Rx Frequency	WLAN2.4G: 2412 MHz ~ 2462 MHz WLAN5G: 5180 MHz ~ 5240 MHz; 5745 MHz ~ 5805 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Maximum Average Output Power to Antenna	802.11b: 17.78 dBm 802.11g: 16.64 dBm 802.11n (2.4GHz): 17.75 dBm (BW 20MHz) 802.11a: 11.45 dBm 802.11n (5GHz): 14.48 dBm (BW 20MHz) 802.11n (5GHz): 13.44 dBm (BW 40MHz) Bluetooth: 8.06 dBm
Antenna Type	WLAN: PIFA Antenna Bluetooth: PIFA Antenna
Type of Modulation	802.11b: DSSS (BPSK / QPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth (1Mbps) : GFSK Bluetooth EDR (2Mbps) : π/4-DQPSK Bluetooth EDR (3Mbps) : 8-DPSK
EUT Stage	Production Unit

Remark:

1. The above EUT'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. This device does not employ any type of power reduction (through sensing or determined by operation mode or orientation) to meet SAR requirements
4. All SAR tests were performed with the device operating at maximum power.

3.2 Applied Standard

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)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2003
- FCC OET Bulletin 65 Supplement C (Edition 01-01)
- FCC KDB 447498 D01 v04
- FCC KDB 616217 D03 v01
- FCC KDB 248227 D01 v01r02

3.3 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.

3.4 Test Conditions

3.4.1 Ambient Condition

Ambient Temperature	20 to 24 ℃
Humidity	< 60 %

3.4.2 Test Configuration

For WLAN SAR testing, WLAN engineering testing software installed on the EUT can provide continuous transmitting RF signal.

2.4G	Mode	Duty Cycle
11b	Legacy	97.65%
11n(20M)	MIMO	75.90%
5G	Mode	Duty Cycle
11a 5.2G	Legacy	87.50%
11a 5.8G	Legacy	86.50%
11n(20M) 5.2G	MIMO	76.42%
11n(20M) 5.8G	MIMO	75.46%

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:

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

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

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

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

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

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

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

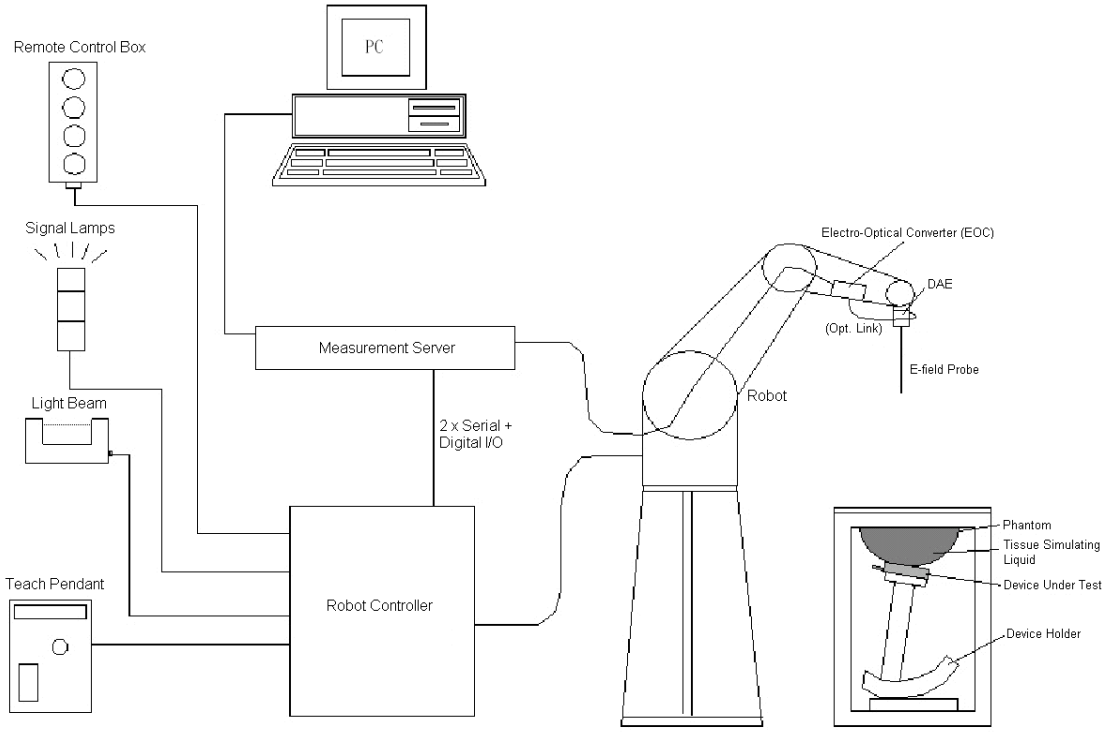

Fig 5.1 SPEAG DASY System Configurations

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
- Remove control with teach pendant and additional circuitry for robot safety such as warming 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 µW/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

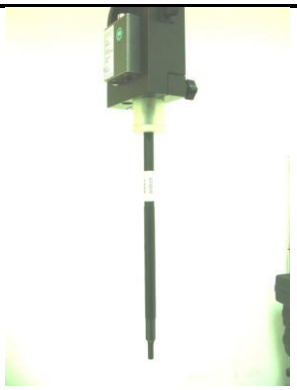

Fig 5.2 Photo of ET3DV6/ET3DV6R

<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 µW/g to 100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 µW/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 ± 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)

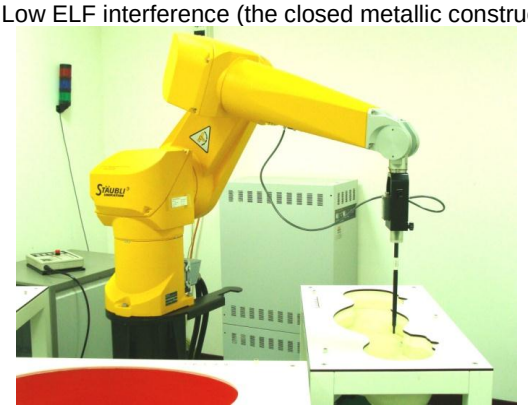

Fig 5.5 Photo of DASY4

Fig 5.6 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 5.7 Photo of Server for DASY4

Fig 5.8 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 5.9 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

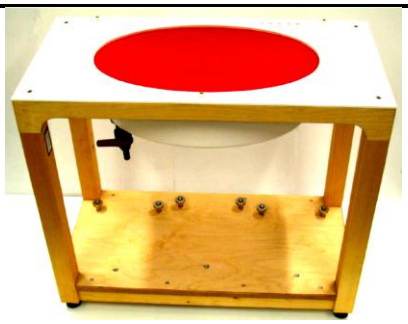

Fig 5.10 Photo of ELI4 Phantom

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 ε = 3 and loss tangent δ = 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 5.11 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.

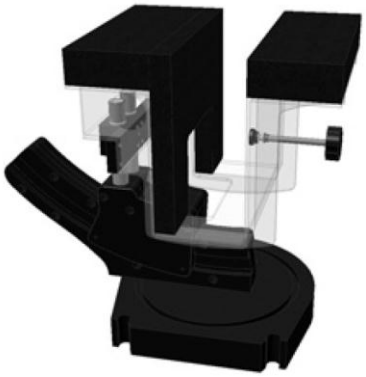

Fig 5.12 Laptop Extension Kit

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-lose 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	$Norm_i$, 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：

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

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：

E-field Probes：$\mathbf{E_i = \sqrt{\frac{V_i}{Norm_i \cdot ConvF}}}$

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

with V_i = compensated signal of channel i, (i = x, y, z)
$Norm_i$ = sensor sensitivity of channel i, (i = x, y, z), μV/(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)：

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

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

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

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	2450MHz System Validation Kit	D2450V2	736	Jul. 25, 2011	Jul. 24, 2012
SPEAG	5GHz System Validation Kit	D5GHzV2	1006	Jan. 18, 2012	Jan. 17, 2013
SPEAG	Data Acquisition Electronics	DAE4	913	Dec. 23, 2011	Dec. 22, 2012
SPEAG	Data Acquisition Electronics	DAE3	495	Apr. 23, 2012	Apr. 22, 2013
SPEAG	Data Acquisition Electronics	DAE4	1279	May 03, 2012	May 02, 2013
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	3819	Nov. 16, 2011	Nov. 15, 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 002 AA	TP-1127	NCR	NCR
Agilent	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	Radio Communication Analyzer	MT8820C	6201074414	Dec. 21, 2011	Dec. 20, 2012
R&S	Spectrum Analyzer	FSP7	101131	Jul. 29, 2011	Jul. 28, 2012

Table 5.1 Test Equipment List

Note: The calibration certificate of DASY can be referred to appendix C of this report.

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.

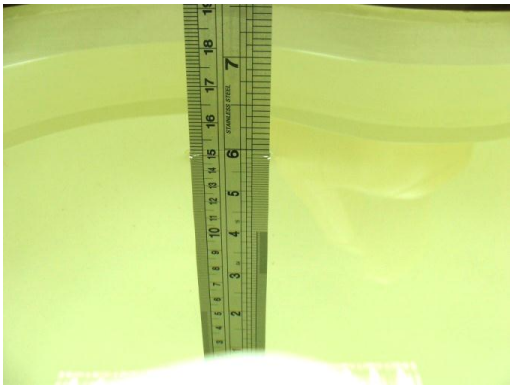

Fig 6.1 Photo of Liquid Height for Head SAR

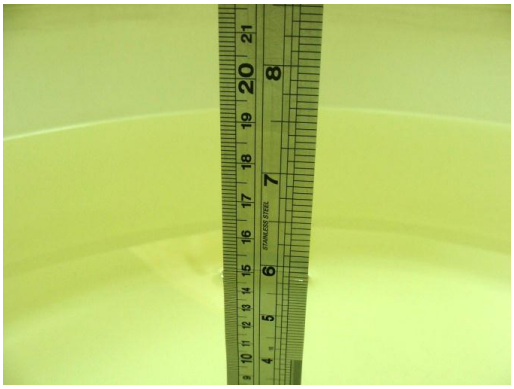

Fig 6.2 Photo of Liquid Height for Body SAR

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. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
2450	Body	21.6	1.966	52.714	1.95	52.7	0.82	0.03	±5	May 07, 2012
2450	Body	21.3	2.02	53.886	1.95	52.7	3.59	2.25	±5	Jul. 07, 2012
5200	Body	21.2	5.114	47.437	5.3	49	-3.51	-3.19	±5	May 04, 2012
5200	Body	21.4	5.363	48.689	5.3	49	1.19	-0.63	±5	May 05, 2012
5200	Body	21.5	5.37	48.5	5.3	49	1.32	-1.02	±5	Jul. 03, 2012
5200	Body	21.3	5.264	48.303	5.3	49	-0.68	-1.42	±5	Jul. 06, 2012
5800	Body	21.2	5.956	46.473	6	48.2	-0.73	-3.58	±5	May 04, 2012
5800	Body	21.4	6.228	47.321	6	48.2	3.80	-1.82	±5	May 05, 2012
5800	Body	21.5	5.976	47.158	6	48.2	-0.40	-2.16	±5	Jun. 21, 2012
5800	Body	21.3	6.096	46.929	6	48.2	1.60	-2.64	±5	Jul. 06, 2012

Table 6.2 Measuring Results for Simulating Liquid

7. 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.

7.1 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.

7.2 System Setup

In the simplified setup for system evaluation, the EUT 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:

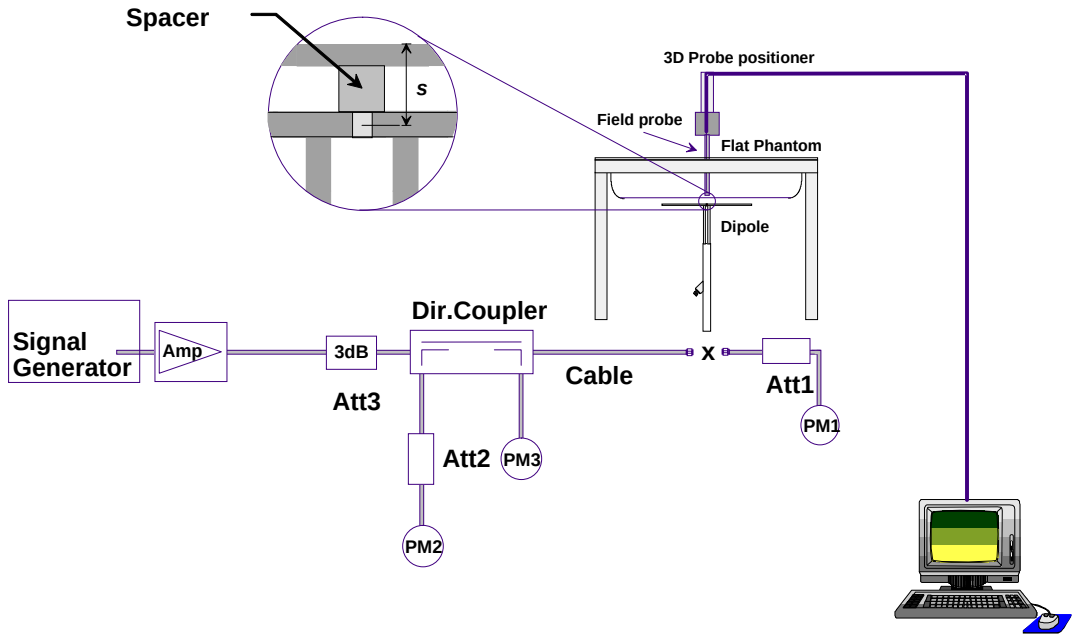

Fig 7.1 System Setup for System Evaluation

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.

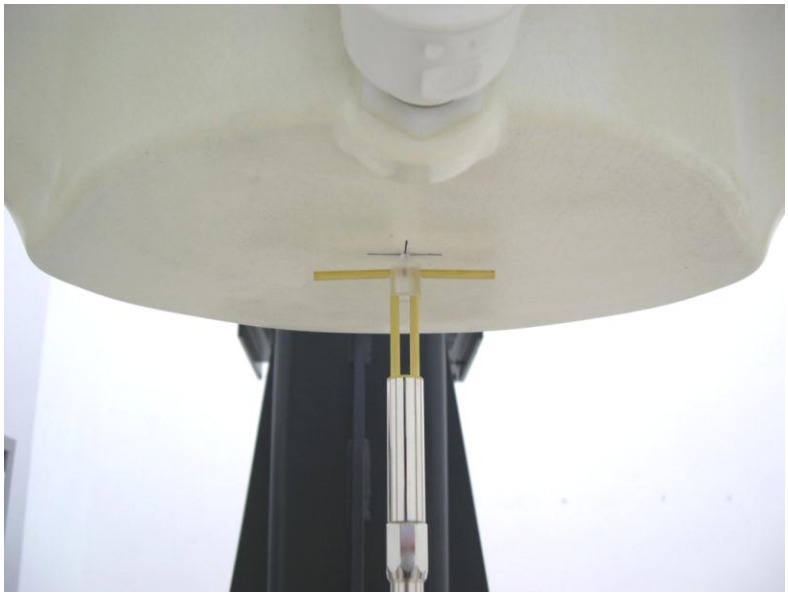

Fig 7.2 Photo of Dipole Setup

7.3 Validation Results

Comparing to the original SAR value provided by SPEAG, the validation data should be within its specification of 10 %. Table 7.1 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 (%)
May 07, 2012	2450	Body	52.3	13.2	52.80	0.96
Jul. 07, 2012	2450	Body	52.3	13.8	55.20	5.54
May 04, 2012	5200	Body	72.6	19.2	76.80	5.79
May 05, 2012	5200	Body	72.6	18.1	72.40	-0.28
Jul. 03, 2012	5200	Body	72.6	17.3	69.20	-4.68
Jul. 06, 2012	5200	Body	72.6	17.9	71.60	-1.38
May 04, 2012	5800	Body	73.1	18.6	74.40	1.78
May 05, 2012	5800	Body	73.1	19.2	76.80	5.06
Jun. 21, 2012	5800	Body	73.1	17.9	71.60	-2.05
Jul. 06, 2012	5800	Body	73.1	18.6	74.40	1.78

Table 7.1 Target and Measurement SAR after Normalized

8. EUT Testing Position

This EUT was tested in three different positions. They are bottom face of tablet PC, Secondary Landscape, and Secondary Portrait. In these positions, the surface of EUT is touching with phantom 0 cm gap.

9. 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 EUT to radiate maximum output power or 100% duty factor (if applicable)
(c) Measure output power through RF cable and power meter.
(d) Set scan area, grid size and other setting on the DASY software.
(e) Measure SAR results for the highest power channel on each testing position.
(f) Find out the largest SAR result on these testing positions of each band
(g) 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

9.1 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 form 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

9.2 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.

9.3 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 EUT 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.

9.4 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.

9.5 Power Drift Monitoring

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

10. SAR Test Results

Antenna configuration

Band \ Antenna	Ant1	Ant2	Ant1+2
Bluetooth	Yes	No	No
2.4GHz 802.11b/g	No	Yes	No
2.4GHz 802.11n	No	Yes	Yes
5GHz 802.11a	No	Yes	No
5GHz 802.11n	No	Yes	Yes

Sides for SAR tests; Tablet mode						
	Bottom Face	Front Face	Secondary Landscape	Primary Landscape	Secondary Portrait	Primary Portrait
Antenna 2	✓(0 cm)	x	✓(0 cm)	x	✓(0 cm)	x
Antenna 1+2	✓(0 cm)	x	✓(0 cm)	x	✓(0 cm)	x

Note:

1. Ant.1+2 represents antennas simultaneous transmission at MIMO mode.
2. Per KDB 941225 D07, the EUT diagonal > 20 cm and Mini-Tablet procedure is not applied. Therefore, SAR tests follow the Tablet Mode in KDB 447498.
3. There is no screen orientation limitation in EUT; that is 4 orientations are supported.
4. As in (1), the test distance is 0 mm to the flat phantom; SAR evaluation is required for Bottom Face and each applicable Edge with the antenna within 5 cm to the user.
5. Per KDB 447498 D01, the distance from Antenna 1 and Antenna 2 to the Primary Landscape / Primary Portrait edge > 5 cm, therefore the stand-alone in these configurations SAR are not required.

11. SAR Test Configurations

11.1 Conducted Power (Unit: dBm)

<WLAN 2.4G>
<Antenna 2>

WLAN 2.4G 802.11b Average Power (dBm)						
Power vs Channel			Power vs Data Rate			
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)		
		1M		2M	5.5M	11M
CH 01	2412	**17.78**	CH 01	17.74	17.75	17.74
CH 06	2437	17.73				
CH 11	2462	17.75				

WLAN 2.4G 802.11g Average Power (dBm)									
Power vs Channel			Power vs Data Rate						
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)					
		6M		9M	12M	18M	24M	36M	48M	54M
CH 01	2412	13.32	CH 06	16.46	16.53	16.62	16.64	16.62	16.63	16.63
CH 06	2437	**16.64**								
CH 11	2462	14.61								

WLAN 2.4G 802.11n (BW 20MHz) Average Power (dBm)									
Power vs Channel			Power vs Data Rate						
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)					
		MCS0		MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412	13.42	CH 06	13.59	13.59	13.59	13.60	13.57	13.60	13.56
CH 06	2437	**13.63**								
CH 11	2462	13.53								

Note:

1. Output average power here has been compensated by duty cycle.
2. Per KDB 248227, choose the highest output power channel to test SAR and determine further SAR exclusion
3. Per KDB 248227, 11g and 11n output power is less than 1/4 dB higher than 11b mode, thus the SAR can be excluded.
4. For each frequency band, testing at higher data rates and higher order modulations is not requirement when the maximum average output power for each of these configurations is less than 1/4 dB higher than those measured at the lowest data rate.

<MIMO Antenna 1+2>

WLAN 2.4G 802.11n (BW 20MHz) Average Power (dBm)									
Power vs Channel			Power vs Data Rate						
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)					
		MCS8		MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
CH 01	2412	16.78	CH 06	17.61	17.67	17.55	17.63	17.64	17.54	17.62
CH 06	2437	**17.75**								
CH 11	2462	16.42								

Note:

1. Output average power here has been compensated by duty cycle.
2. MIMO mode power is the summation of each chain output power.
3. For each frequency band, testing at higher data rates and higher order modulations is not requirement when the maximum average output power for each of these configurations is less than 1/4 dB higher than those measured at the lowest data rate.

<WLAN 5G>
<Antenna 2>

WLAN 5G 802.11a Average Power (dBm)											
Power vs Channel			Power vs Data Rate								
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)							
		6M		9M	12M	18M	24M	36M	48M	54M
CH 36	5180	10.16	CH 44	11.44	11.41	11.36	11.37	11.37	11.43	11.42
CH 40	5200	10.57								
CH 44	5220	**11.45**								
CH 48	5240	11.27								
CH 149	5745	9.22	CH 153	9.92	9.91	9.91	9.89	9.87	9.86	9.86
CH 153	5765	**9.94**								
CH 157	5785	9.77								
CH 161	5805	9.85								

WLAN 5G 802.11n (BW 20M) Average Power (dBm)											
Power vs Channel			Power vs Data Rate								
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)							
		MCS0		MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 36	5180	9.43	CH 48	11.23	11.25	11.24	11.20	11.25	11.25	11.21
CH 40	5200	11.26								
CH 44	5220	11.26								
CH 48	5240	**11.28**								
CH 149	5745	9.42	CH 157	9.89	9.73	9.63	9.82	10.03	9.97	9.98
CH 153	5765	9.69								
CH 157	5785	**10.07**								
CH 161	5805	9.94								

WLAN 5G 802.11n (BW 40M) Average Power (dBm)											
Power vs Channel			Power vs Data Rate								
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)							
		MCS0		MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 38	5190	10.07	CH 46	11.25	11.12	11.12	11.21	11.24	11.09	11.19
CH 46	5230	**11.28**								
CH 151	5755	9.44	CH 159	9.88	9.93	9.81	9.75	9.90	9.91	9.90
CH 159	5795	**9.94**								

Note:

1. Output average power here has been compensated by duty cycle.
2. Per KDB 248227, choose the highest output power channel to test SAR and determine further SAR exclusion
3. Per KDB 248227, 11n output power is less than 1/4 dB higher than 11a in WLAN5.2G, thus the 11n SAR in WLAN5.2G can be excluded.
4. Per KDB 248227, 11n output power is less than 1/4 dB higher than 11a in WLAN5.8G, thus the 11n SAR in WLAN5.8G can be excluded.
5. For each frequency band, testing at higher data rates and higher order modulations is not requirement when the maximum average output power for each of these configurations is less than 1/4 dB higher than those measured at the lowest data rate.

<WLAN 5G>
<MIMO Antenna 1+2>

WLAN 5G 802.11n (BW 20M) Average Power (dBm)										
Power vs Channel			Power vs Data Rate							
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)						
		MCS8		MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
CH 36	5180	**14.48**	CH 36	14.37	14.29	14.40	14.43	14.44	14.46	14.44
CH 40	5200	14.28								
CH 44	5220	14.44								
CH 48	5240	14.40								
CH 149	5745	**13.08**	CH 149	13.07	13.06	13.06	13.05	13.07	13.07	13.06
CH 153	5765	12.69								
CH 157	5785	12.97								
CH 161	5805	12.56								

WLAN 5G 802.11n (BW 40M) Average Power (dBm)										
Power vs Channel			Power vs Data Rate							
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)						
		MCS8		MCS9	MCS10	MCS11	MCS12	MCS13	MCS14	MCS15
CH 38	5190	10.91	CH 46	13.16	13.28	13.26	13.28	13.37	13.19	13.29
CH 46	5230	**13.44**								
CH 151	5755	**12.70**	CH 151	12.69	12.68	12.65	12.67	12.67	12.67	12.69
CH 159	5795	12.69								

Note:

1. Output average power here has been compensated by duty cycle.
2. MIMO mode power is the summation of each chain output power.
3. Per KDB 248227, choose the highest output power channel to test SAR and determine further SAR exclusion
4. Per KDB 248227, 11n(40M) output power is less than 1/4 dB higher than 11n(20M) in WLAN5.2G, thus the 11n(40M) SAR can be excluded in WLAN5.2G.
5. Per KDB 248227, 11n(40M) output power is less than 1/4 dB higher than 11n(20M) in WLAN5.8G, thus the 11n(40M) SAR can be excluded in WLAN5.8G.
6. For each frequency band, testing at higher data rates and higher order modulations is not requirement when the maximum average output power for each of these configurations is less than 1/4 dB higher than those measured at the lowest data rate.

Bluetooth

<Antenna 1>

Band	Bluetooth		
Channel	0	39	78
Frequency (MHz)	2402	2441	2480
Average Power (dBm)	**8.06**	7.78	7.92

Note:

1. Per KDB 447498, Bluetooth SAR is excluded due to highest output power ≤ 60/f (GHz) mW, where 60/f (GHz) = 24mW = 13.8dBm.

12. SAR Test Results

12.1 Test Records for Body SAR Test

Plot No.	Band	Mode	Test Position	Gap (cm)	Ch.	Ant.	Average Output Power (dBm)	SAR_{1g} (W/kg)	Duty Cycle	Scaling Factor	Scaled 1g SAR
94	WLAN2.4G	802.11b	Bottom Face	0	1	2	17.78	1.08	97.65%	1.02	1.106
95	WLAN2.4G	802.11b	Secondary Landscape	0	1	2	17.78	0.94	97.65%	1.02	0.963
96	WLAN2.4G	802.11b	Secondary Portrait	0	1	2	17.78	0.126	97.65%	1.02	0.129
97	WLAN2.4G	802.11b	Bottom Face	0	6	2	17.73	1.16	97.65%	1.02	1.188
98	WLAN2.4G	802.11b	Bottom Face	0	11	2	17.75	1.23	97.65%	1.02	**1.260**
99	WLAN2.4G	802.11b	Secondary Landscape	0	6	2	17.73	0.764	97.65%	1.02	0.782
100	WLAN2.4G	802.11b	Secondary Landscape	0	11	2	17.75	0.781	97.65%	1.02	0.800
13	WLAN2.4G	802.11n 20M	Bottom Face	0	6	1+2	17.75	0.9	75.90%	1.32	1.186
10	WLAN2.4G	802.11n 20M	Secondary Landscape	0	6	1+2	17.75	0.453	75.90%	1.32	0.597
11	WLAN2.4G	802.11n 20M	Secondary Portrait	0	6	1+2	17.75	0.176	75.90%	1.32	0.232
12	WLAN2.4G	802.11n 20M	Bottom Face	0	1	1+2	16.78	0.92	75.90%	1.32	1.212
9	WLAN2.4G	802.11n 20M	Bottom Face	0	11	1+2	16.42	0.785	75.90%	1.32	1.034
44	WLAN5.2G	802.11a	Bottom Face	0	44	2	11.45	1.1	87.50%	1.14	1.257
45	WLAN5.2G	802.11a	Secondary Landscape	0	44	2	11.45	1.13	87.50%	1.14	1.291
46	WLAN5.2G	802.11a	Secondary Portrait	0	44	2	11.45	0.05	87.50%	1.14	0.057
47	WLAN5.2G	802.11a	Bottom Face	0	36	2	10.16	0.724	87.50%	1.14	0.827
48	WLAN5.2G	802.11a	Secondary Landscape	0	36	2	10.16	0.857	87.50%	1.14	0.979
60	WLAN5.8G	802.11a	Bottom Face	0	153	2	9.94	1.01	86.50%	1.16	1.168
61	WLAN5.8G	802.11a	Secondary Landscape	0	153	2	9.94	0.59	86.50%	1.16	0.682
62	WLAN5.8G	802.11a	Secondary Portrait	0	153	2	9.94	0.00139	86.50%	1.16	0.002
65	WLAN5.8G	802.11a	Bottom Face	0	161	2	9.85	1.03	86.50%	1.16	1.191
66	WLAN5.2G	802.11n 20M	Bottom Face	0	36	1+2	14.48	0.951	76.42%	1.31	1.244
67	WLAN5.2G	802.11n 20M	Secondary Landscape	0	36	1+2	14.48	0.468	76.42%	1.31	0.612
68	WLAN5.2G	802.11n 20M	Secondary Portrait	0	36	1+2	14.48	0.92	76.42%	1.31	1.204
86	WLAN5.2G	802.11n 20M	Bottom Face	0	48	1+2	14.4	0.95	76.42%	1.31	1.243
87	WLAN5.2G	802.11n 20M	Secondary Portrait	0	48	1+2	14.4	0.98	76.42%	1.31	1.282
77	WLAN5.8G	802.11n 20M	Bottom Face	0	149	1+2	13.08	0.98	75.46%	1.33	1.299
78	WLAN5.8G	802.11n 20M	Secondary Landscape	0	149	1+2	13.08	0.55	75.46%	1.33	0.729
79	WLAN5.8G	802.11n 20M	Secondary Portrait	0	149	1+2	13.08	0.963	75.46%	1.33	1.276
80	WLAN5.8G	802.11n 20M	Bottom Face	0	157	1+2	12.97	0.956	75.46%	1.33	1.267
81	WLAN5.8G	802.11n 20M	Bottom Face	0	161	1+2	12.56	0.982	75.46%	1.33	**1.301**
83	WLAN5.8G	802.11n 20M	Secondary Portrait	0	157	1+2	12.97	0.646	75.46%	1.33	0.856
84	WLAN5.8G	802.11n 20M	Secondary Portrait	0	161	1+2	12.56	0.53	75.46%	1.33	0.702

Note:

1. Ant.1+2 represents antennas simultaneous transmission at MIMO mode.
2. Per KDB 447498, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.
3. Output average power here has been compensated by duty cycle.
4. MIMO mode power is the summation of each chain output power.
5. Per KDB248227, measured SAR is scaled-up for non-100% duty factor. Scaling Factor = 1/[duty factor(%)]

12.2 Simultaneous Transmission SAR Analysis and Measurements

No.	Applicable Simultaneous Transmission Combination
1.	WLAN MIMO

Note:

1. WLAN and BT cannot transmit simultaneously.
2. EUT will choose either WLAN2.4G or WLAN5G according to the network signal condition, therefore, they will not transmit simultaneously.
3. WLAN MIMO SAR data is included in section 12.1 in page 28..

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13. Uncertainty Assessment

The component of uncertainly may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainly by the statistical analysis of a series of observations is termed a Type An 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 12.1

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) κ is the coverage factor

Table 13.1 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 shown in the following tables:

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)
Measurement System							
Probe Calibration	6.0	Normal	1	1	1	± 6.0 %	± 6.0 %
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	± 1.9 %	± 1.9 %
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	± 3.9 %	± 3.9 %
Boundary Effects	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Linearity	4.7	Rectangular	√3	1	1	± 2.7 %	± 2.7 %
System Detection Limits	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Readout Electronics	0.3	Normal	1	1	1	± 0.3 %	± 0.3 %
Response Time	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Integration Time	2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %
RF Ambient Noise	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
RF Ambient Reflections	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Probe Positioner	0.4	Rectangular	√3	1	1	± 0.2 %	± 0.2 %
Probe Positioning	2.9	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Max. SAR Eval.	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Test Sample Related							
Device Positioning	2.9	Normal	1	1	1	± 2.9 %	± 2.9 %
Device Holder	3.6	Normal	1	1	1	± 3.6 %	± 3.6 %
Power Drift	5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %
Phantom and Setup							
Phantom Uncertainty	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Liquid Conductivity (Target)	5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %
Liquid Conductivity (Meas.)	2.5	Normal	1	0.64	0.43	± 1.6 %	± 1.1 %
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	0.49	± 1.7 %	± 1.4 %
Liquid Permittivity (Meas.)	2.5	Normal	1	0.6	0.49	± 1.5 %	± 1.2 %
Combined Standard Uncertainty						± 11.0 %	± 10.8 %
Coverage Factor for 95 %						K=2	
Expanded Uncertainty						**± 22.0 %**	**± 21.5 %**

Table 13.2 Uncertainty Budget of DASY for frequency range 300 MHz to 3 GHz

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)
Measurement System							
Probe Calibration	6.55	Normal	1	1	1	± 6.55 %	± 6.55 %
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	± 1.9 %	± 1.9 %
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	± 3.9 %	± 3.9 %
Boundary Effects	2.0	Rectangular	√3	1	1	± 1.2 %	± 1.2 %
Linearity	4.7	Rectangular	√3	1	1	± 2.7 %	± 2.7 %
System Detection Limits	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Readout Electronics	0.3	Normal	1	1	1	± 0.3 %	± 0.3 %
Response Time	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Integration Time	2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %
RF Ambient Noise	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
RF Ambient Reflections	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Probe Positioner	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Probe Positioning	9.9	Rectangular	√3	1	1	± 5.7 %	± 5.7 %
Max. SAR Eval.	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Test Sample Related							
Device Positioning	2.9	Normal	1	1	1	± 2.9 %	± 2.9 %
Device Holder	3.6	Normal	1	1	1	± 3.6 %	± 3.6 %
Power Drift	5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %
Phantom and Setup							
Phantom Uncertainty	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Liquid Conductivity (Target)	5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %
Liquid Conductivity (Meas.)	2.5	Normal	1	0.64	0.43	± 1.6 %	± 1.1 %
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	0.49	± 1.7 %	± 1.4 %
Liquid Permittivity (Meas.)	2.5	Normal	1	0.6	0.49	± 1.5 %	± 1.2 %
Combined Standard Uncertainty						± 12.8 %	± 12.6 %
Coverage Factor for 95 %						K=2	
Expanded Uncertainty						**± 25.6 %**	**± 25.2 %**

Table 13.3 Uncertainty Budget of DASY for frequency range 3 GHz to 6 GHz

14. References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, Septemper 1992

[3] IEEE Std. 1528-2003, “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, December 2003

[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

Appendix A. Plots of System Performance Check

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/7

System Check_Body_2450MHz_120507

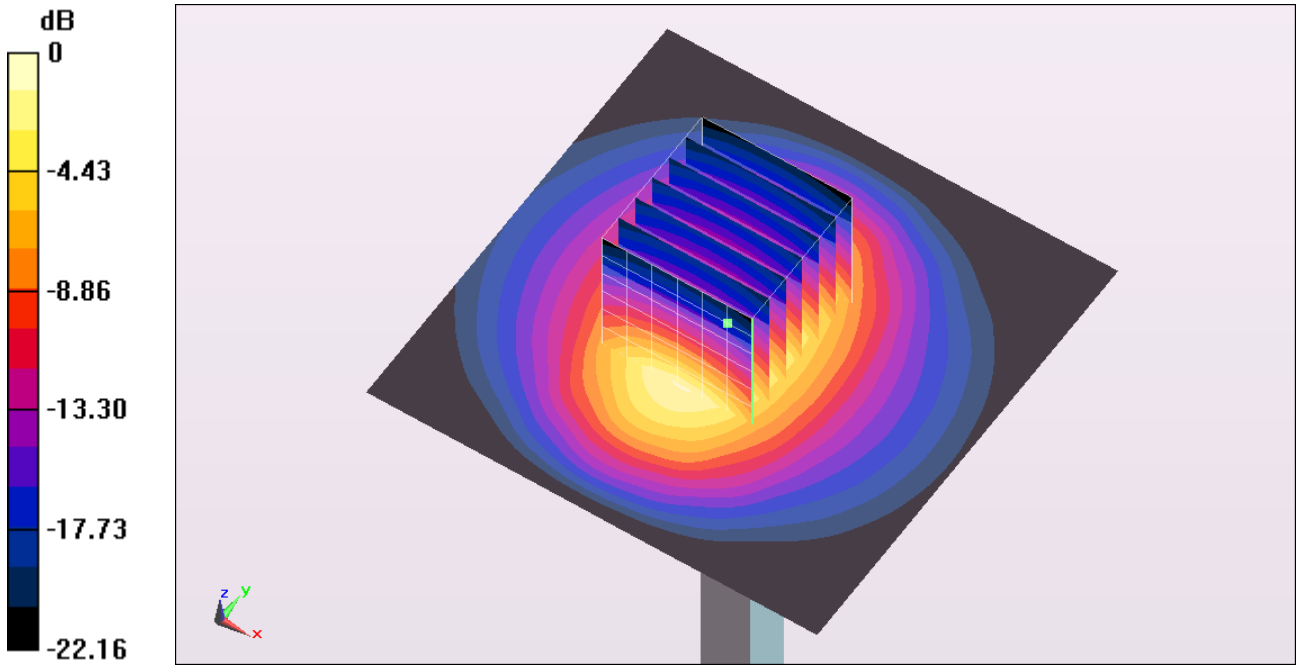
DUT: D2450V2-SN:736

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: MSL_2450_120507 Medium parameters used: f = 2450 MHz; σ = 1.966 mho/m; ε_r = 52.714; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 14.9 mW/g

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 84.532 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 29.036 mW/g
SAR(1 g) = 13.2 mW/g; SAR(10 g) = 6.27 mW/g
Maximum value of SAR (measured) = 14.6 mW/g



0 dB = 14.6 mW/g = 23.29 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/7/7

System Check_Body_2450MHz_120707

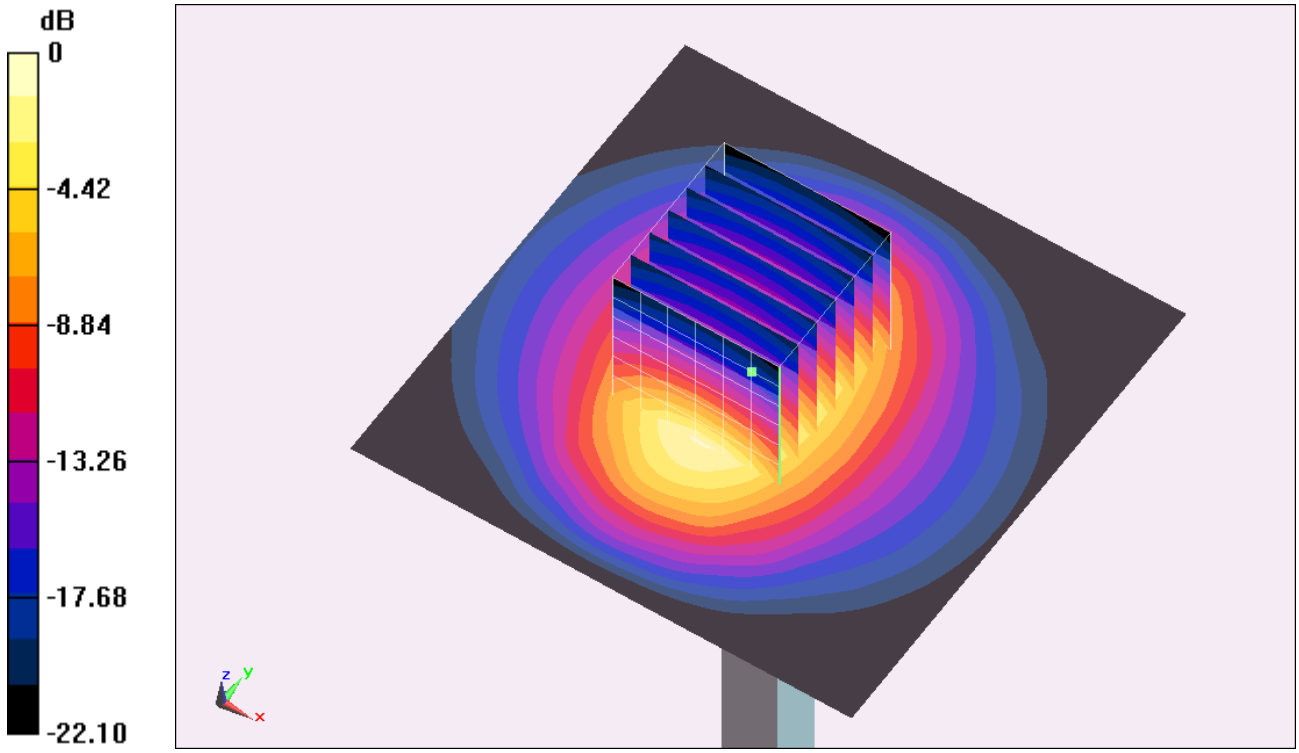
DUT: D2450V2-SN:736

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: MSL_2450_120707 Medium parameters used: f = 2450 MHz; σ = 2.02 mho/m; ε_r = 53.886; ρ = 1000 kg/m^3
Ambient Temperature：22.3 ℃； Liquid Temperature：21.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(7.1, 7.1, 7.1); Calibrated: 2012/6/21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2012/4/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 15.6 mW/g

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 85.433 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 30.107 mW/g
SAR(1 g) = 13.8 mW/g; SAR(10 g) = 6.55 mW/g
Maximum value of SAR (measured) = 15.3 mW/g



0 dB = 15.3 mW/g = 23.69 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/4

System Check_Body_5200MHz_120504

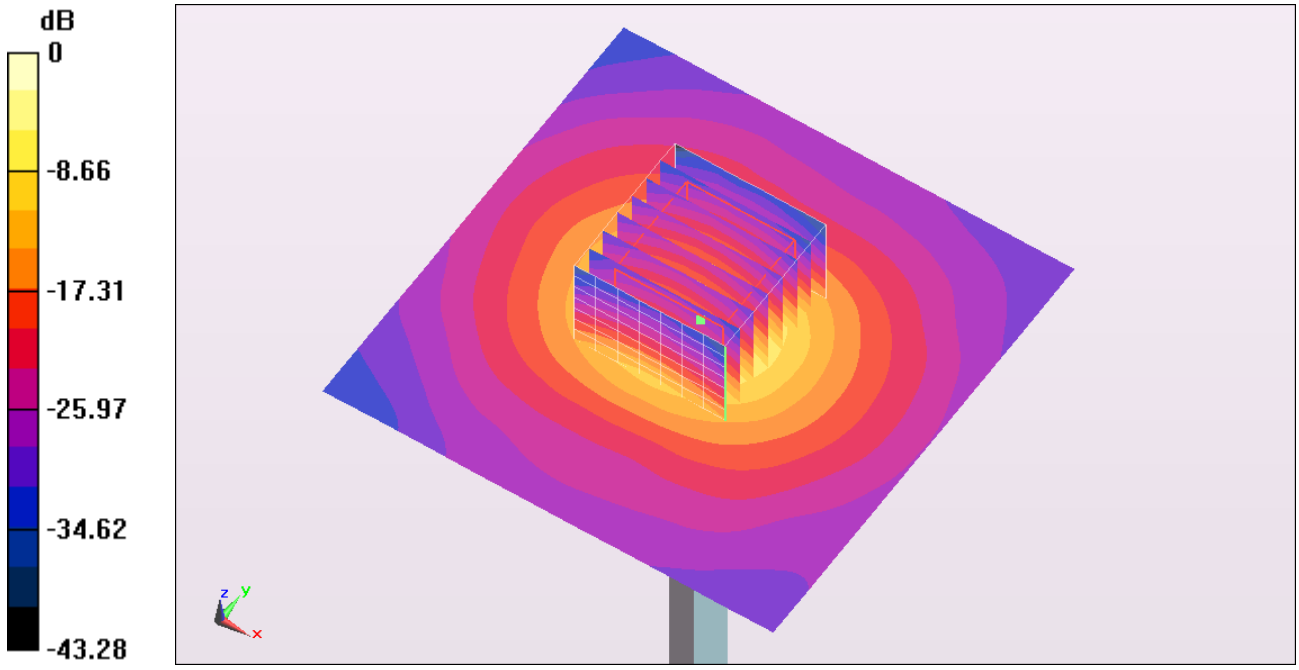
DUT: D5GHzV2-SN:1006

Communication System: CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G_120504 Medium parameters used: f = 5200 MHz; σ = 5.114 mho/m; ε_r = 47.437; ρ = 1000 kg/m^3
Ambient Temperature：22.2 ℃； Liquid Temperature：21.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20;
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 34.7 mW/g

Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 86.820 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 63.099 mW/g
SAR(1 g) = 19.2 mW/g; SAR(10 g) = 5.4 mW/g
Maximum value of SAR (measured) = 32.7 mW/g



0 dB = 32.7 mW/g = 30.29 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/5

System Check_Body_5200MHz_120505

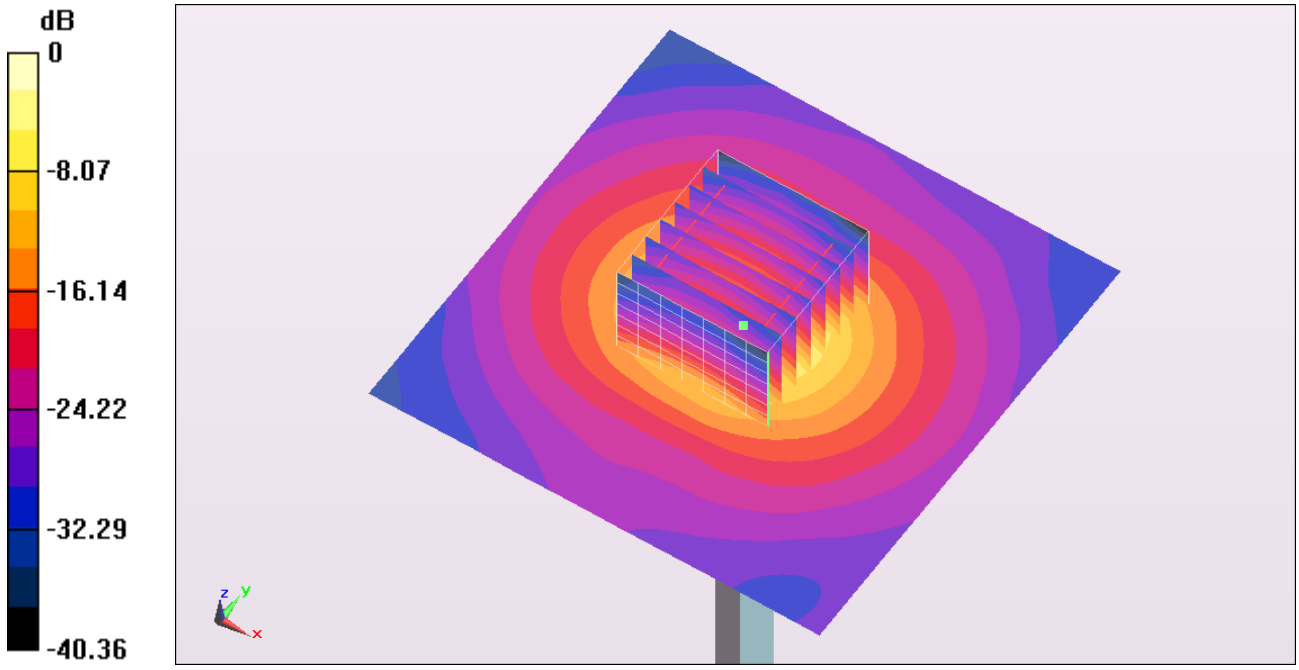
DUT: D5GHzV2-SN:1006

Communication System: CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G_120505 Medium parameters used: f = 5200 MHz; σ = 5.363 mho/m; ε_r = 48.689; ρ = 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: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

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 = 89.303 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 60.431 mW/g
SAR(1 g) = 18.1 mW/g; SAR(10 g) = 5.15 mW/g
Maximum value of SAR (measured) = 29.8 mW/g



0 dB = 29.8 mW/g = 29.48 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/7/3

System Check_Body_5200MHz_120703

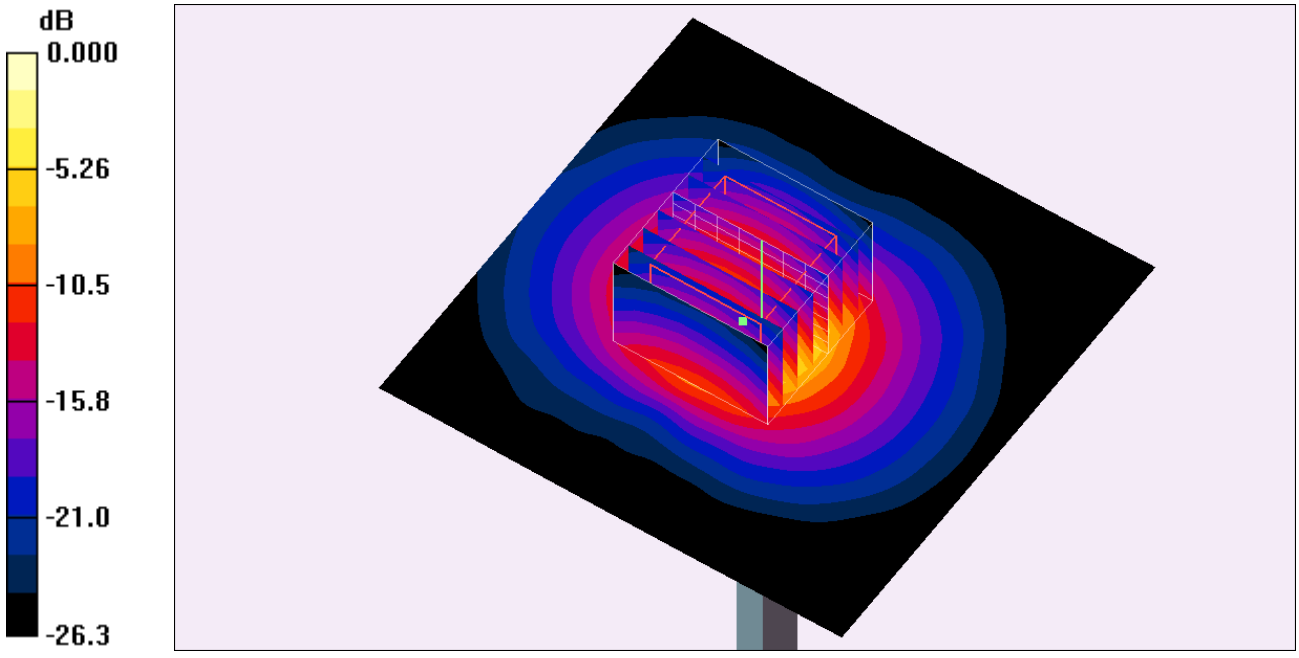
DUT: D5GHzV2-SN:1006

Communication System: CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G_120703 Medium parameters used: f = 5200 MHz; σ = 5.37 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature：22.5 ℃; Liquid Temperature：21.5 ℃

DASY4 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.48, 4.48, 4.48); Calibrated: 2011/11/16
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2012/5/3
- 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) = 28.3 mW/g

Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 71.5 V/m; Power Drift = 0.130 dB
Peak SAR (extrapolated) = 43.0 W/kg
SAR(1 g) = 17.3 mW/g; SAR(10 g) = 5.82 mW/g
Maximum value of SAR (measured) = 26.0 mW/g



0 dB = 26.0mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/7/6

System Check_Body_5200MHz_120706

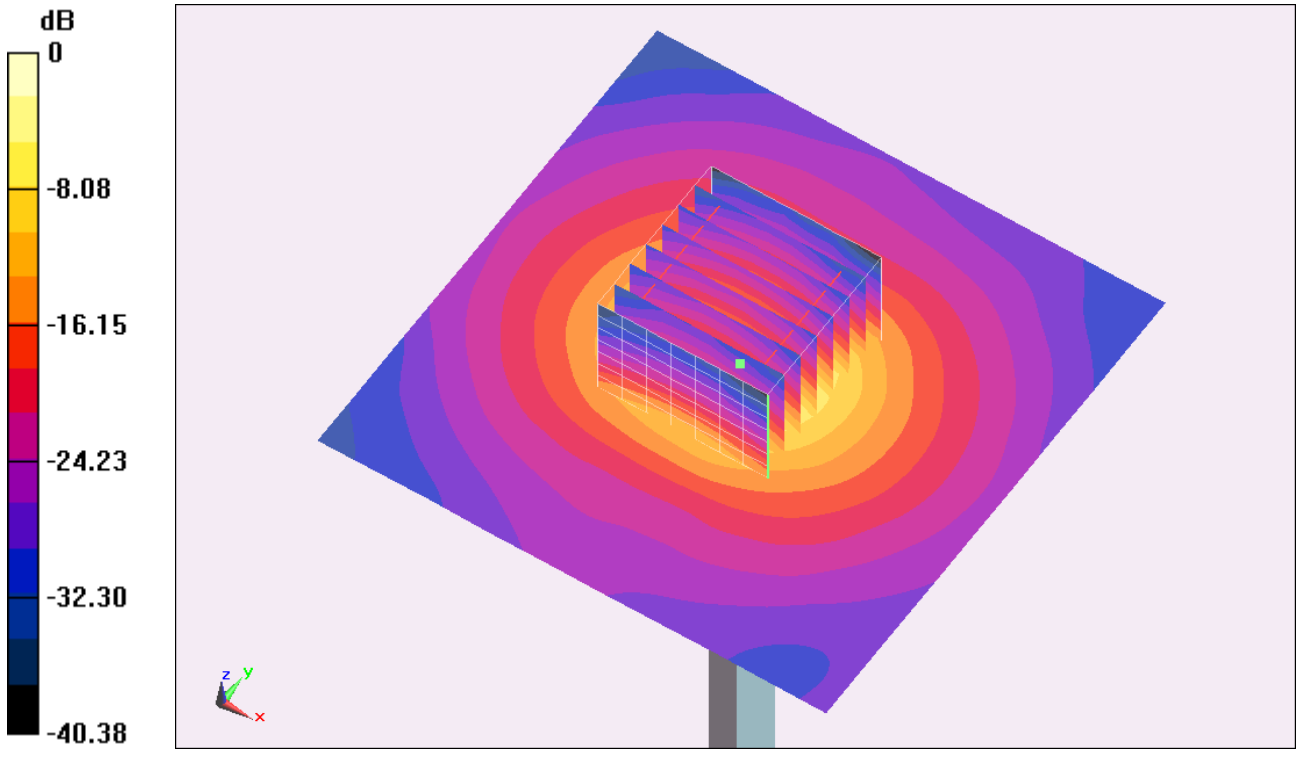
DUT: D5GHzV2-SN:1006

Communication System: CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G_120706 Medium parameters used: f = 5200 MHz; σ = 5.264 mho/m; ε_r = 48.303; ρ = 1000 kg/m^3
Ambient Temperature：22.3 ℃; Liquid Temperature：21.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(4.2, 4.2, 4.2); Calibrated: 2012/6/21;
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2012/4/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 32.6 mW/g

Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 89.582 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 59.672 mW/g
SAR(1 g) = 17.9 mW/g; SAR(10 g) = 5.08 mW/g
Maximum value of SAR (measured) = 29.5 mW/g



0 dB = 29.5 mW/g = 29.40 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/4

System Check_Body_5800MHz_120504

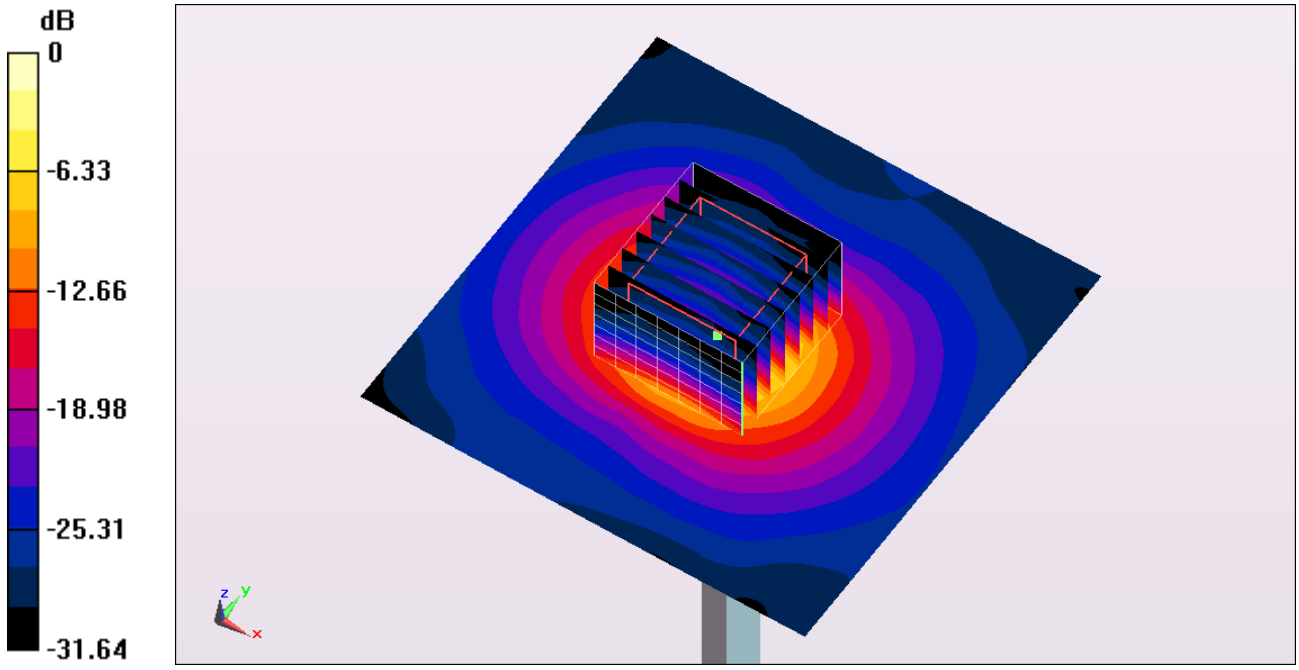
DUT: D5GHzV2-SN:1006

Communication System: CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: MSL_5G_120504 Medium parameters used: f = 5800 MHz; σ = 5.956 mho/m; ε_r = 46.473; ρ = 1000 kg/m^3
Ambient Temperature：22.2 ℃； Liquid Temperature：21.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20;
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 33.3 mW/g

Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 81.263 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 72.496 mW/g
SAR(1 g) = 18.6 mW/g; SAR(10 g) = 5.22 mW/g
Maximum value of SAR (measured) = 32.2 mW/g



0 dB = 32.2 mW/g = 30.16 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/5

System Check_Body_5800MHz_120505

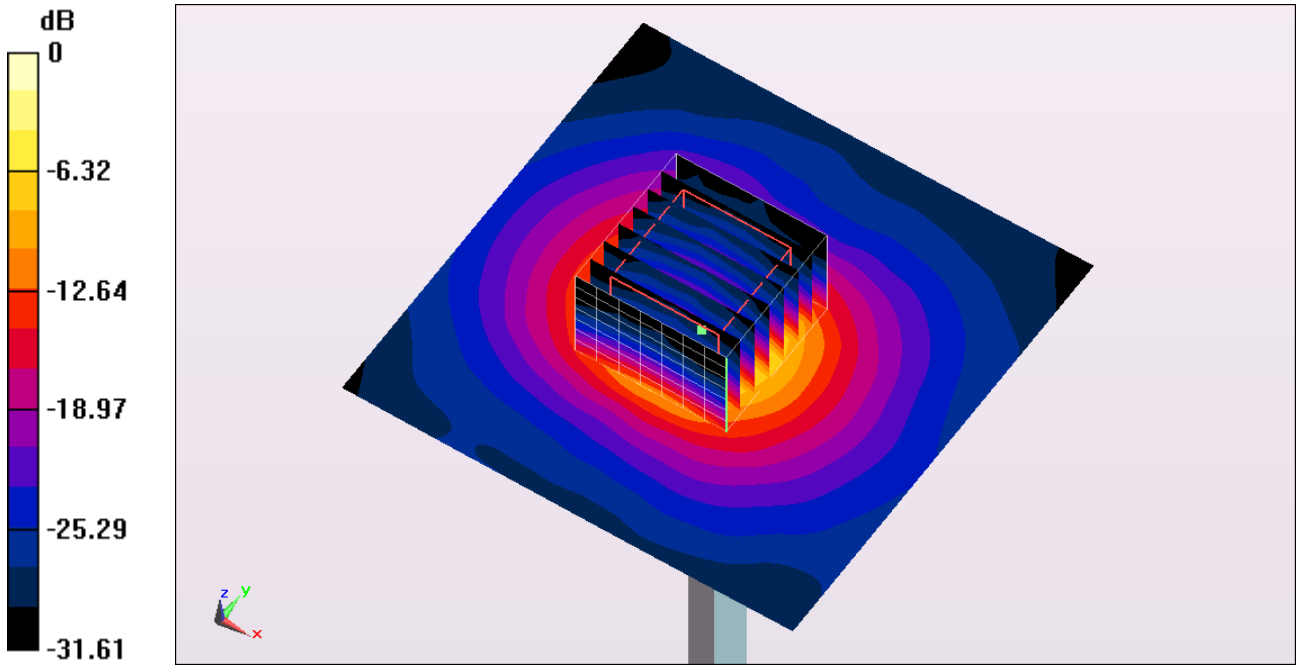
DUT: D5GHzV2-SN:1006

Communication System: CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: MSL_5G_120505 Medium parameters used: f = 5800 MHz; σ = 6.228 mho/m; ε_r = 47.321; ρ = 1000 kg/m^3
Ambient Temperature：22.4 ℃； Liquid Temperature：21.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20;
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 34.1 mW/g

Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 80.185 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 74.395 mW/g
SAR(1 g) = 19.2 mW/g; SAR(10 g) = 5.38 mW/g
Maximum value of SAR (measured) = 33.4 mW/g



0 dB = 33.4 mW/g = 30.47 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/6/21

System Check_Body_5800MHz_120621

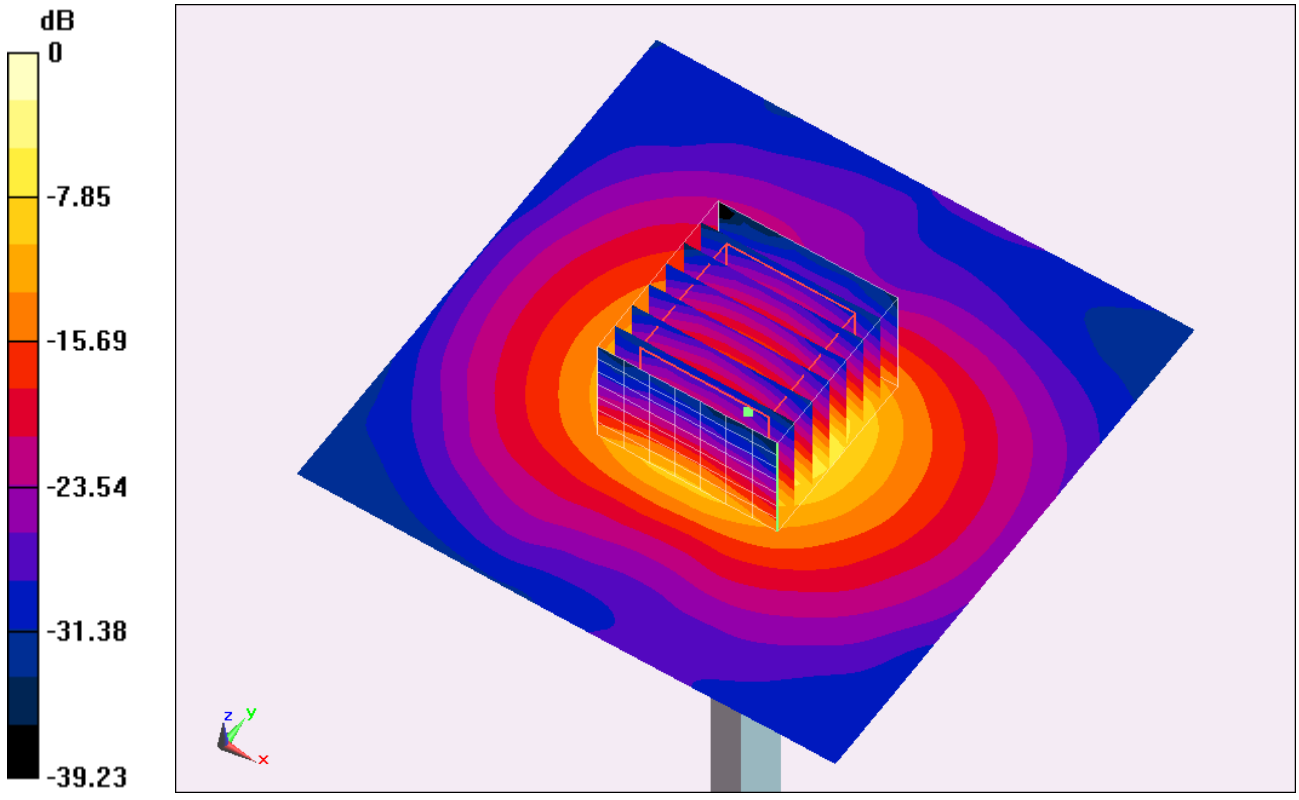
DUT: D5GHzV2-SN:1006

Communication System: CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: MSL_5G_120621 Medium parameters used: f = 5800 MHz; σ = 5.976 mho/m; ε_r = 47.158; ρ = 1000 kg/m^3
Ambient Temperature：22.5 ℃; Liquid Temperature：21.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.02, 4.02, 4.02); Calibrated: 2011/11/16;
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2012/5/3
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 32.3 mW/g

Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 79.086 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 54.348 mW/g
SAR(1 g) = 17.9 mW/g; SAR(10 g) = 5.19 mW/g
Maximum value of SAR (measured) = 29.8 mW/g



0 dB = 29.8 mW/g = 29.48 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/7/6

System Check_Body_5800MHz_120706

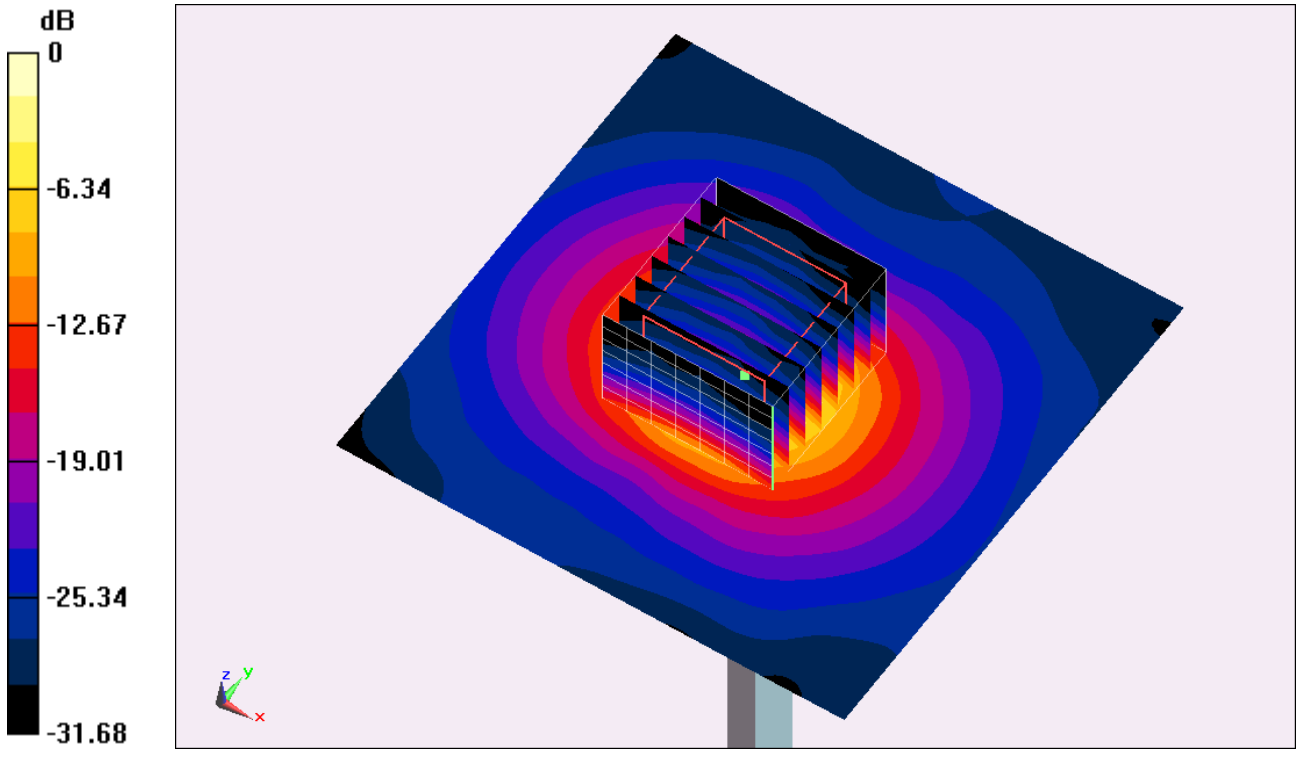
DUT: D5GHzV2-SN:1006

Communication System: CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: MSL_5G_120706 Medium parameters used: f = 5800 MHz; σ = 6.096 mho/m; ε_r = 46.929; ρ = 1000 kg/m^3
Ambient Temperature：22.3 ℃; Liquid Temperature：21.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.89, 3.89, 3.89); Calibrated: 2012/6/21;
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2012/4/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 33.3 mW/g

Pin=250mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 80.164 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 73.275 mW/g
SAR(1 g) = 18.6 mW/g; SAR(10 g) = 5.2 mW/g
Maximum value of SAR (measured) = 32.1 mW/g



0 dB = 32.1 mW/g = 30.13 dB mW/g

Appendix B. Plots of SAR Measurement

The plots are shown as follows.

#94 802.11b_Bottom Face_0cm_Ch1_Ant 2

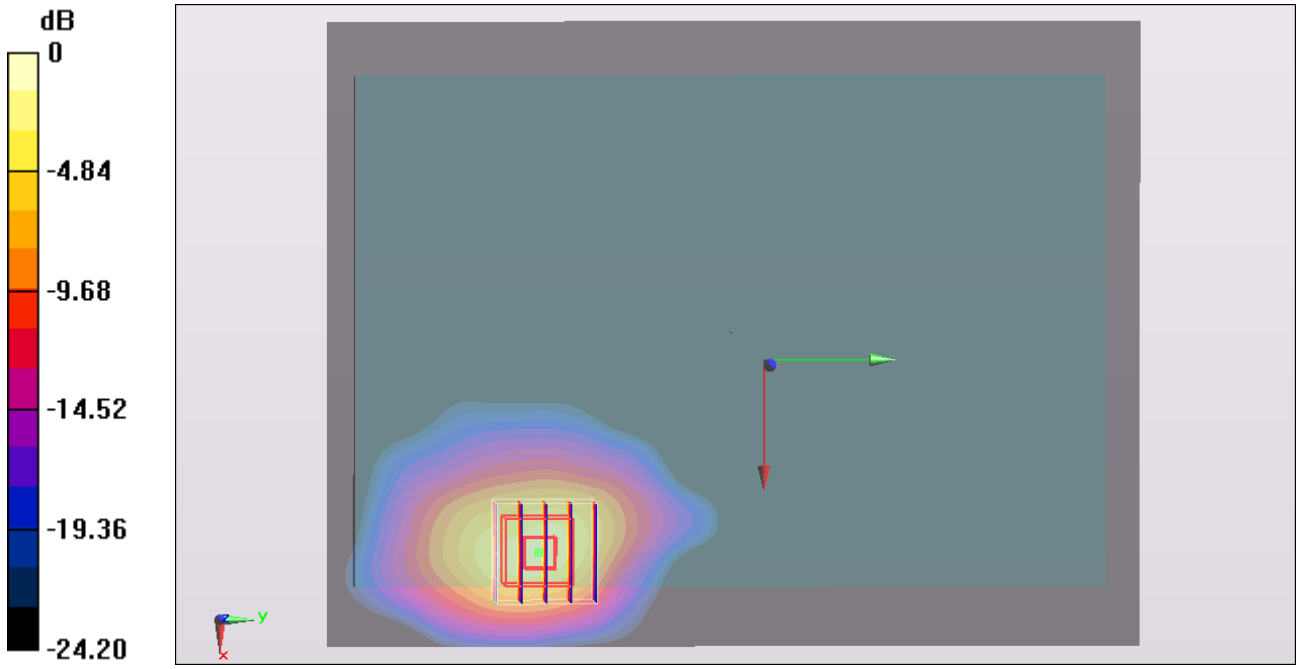
DUT: 1O2041

Communication System: 802.11b ; Frequency: 2412 MHz;Duty Cycle: 1:1.02
Medium: MSL_2450_120507 Medium parameters used: f = 2412 MHz; σ = 1.914 mho/m; ε_r = 52.837; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch1/Area Scan (101x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.883 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.472 V/m; Power Drift = 0.123 dB
Peak SAR (extrapolated) = 2.724 mW/g
SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.457 mW/g
Maximum value of SAR (measured) = 1.28 mW/g



0 dB = 1.28 mW/g = 2.14 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/7

#95 802.11b_Secondary Landscape_0cm_Ch1_Ant 2

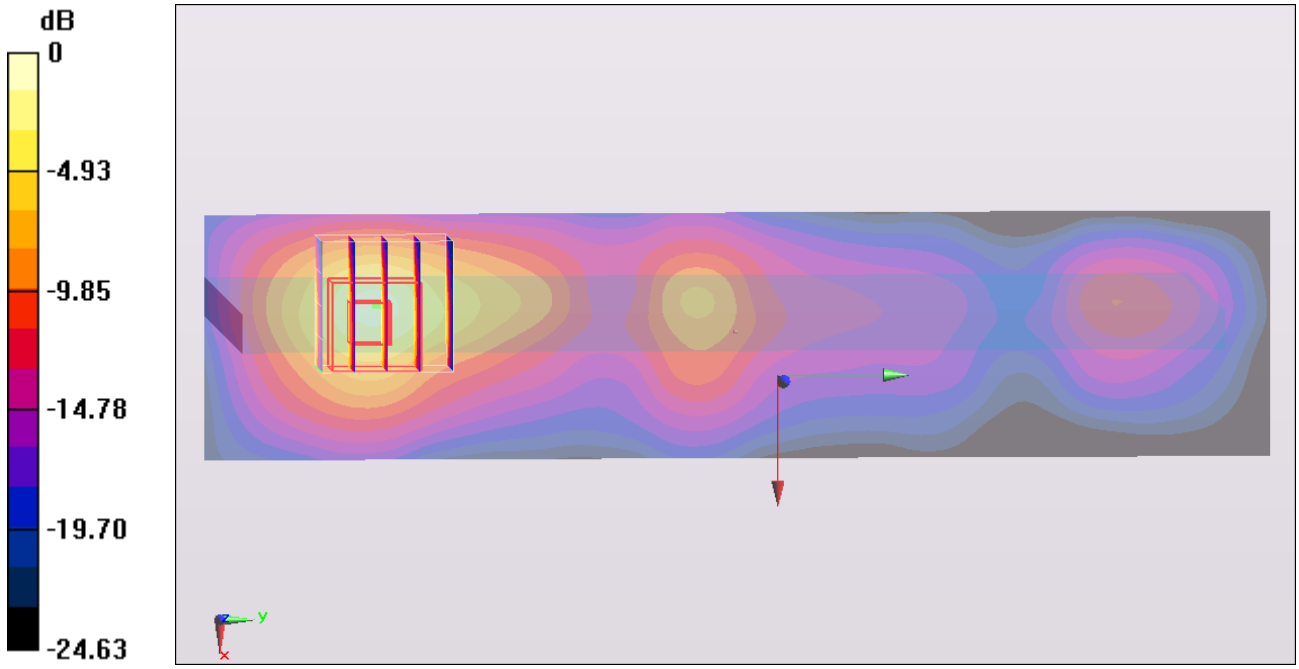
DUT: 1O2041

Communication System: 802.11b ; Frequency: 2412 MHz;Duty Cycle: 1:1.02
Medium: MSL_2450_120507 Medium parameters used: f = 2412 MHz; σ = 1.914 mho/m; ε_r = 52.837; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch1/Area Scan (31x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.855 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.659 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.216 mW/g
SAR(1 g) = 0.940 mW/g; SAR(10 g) = 0.401 mW/g
Maximum value of SAR (measured) = 1.03 mW/g



0 dB = 1.03 mW/g = 0.26 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/7

#96 802.11b_Secondary Portrait_0cm_Ch1_Ant 2

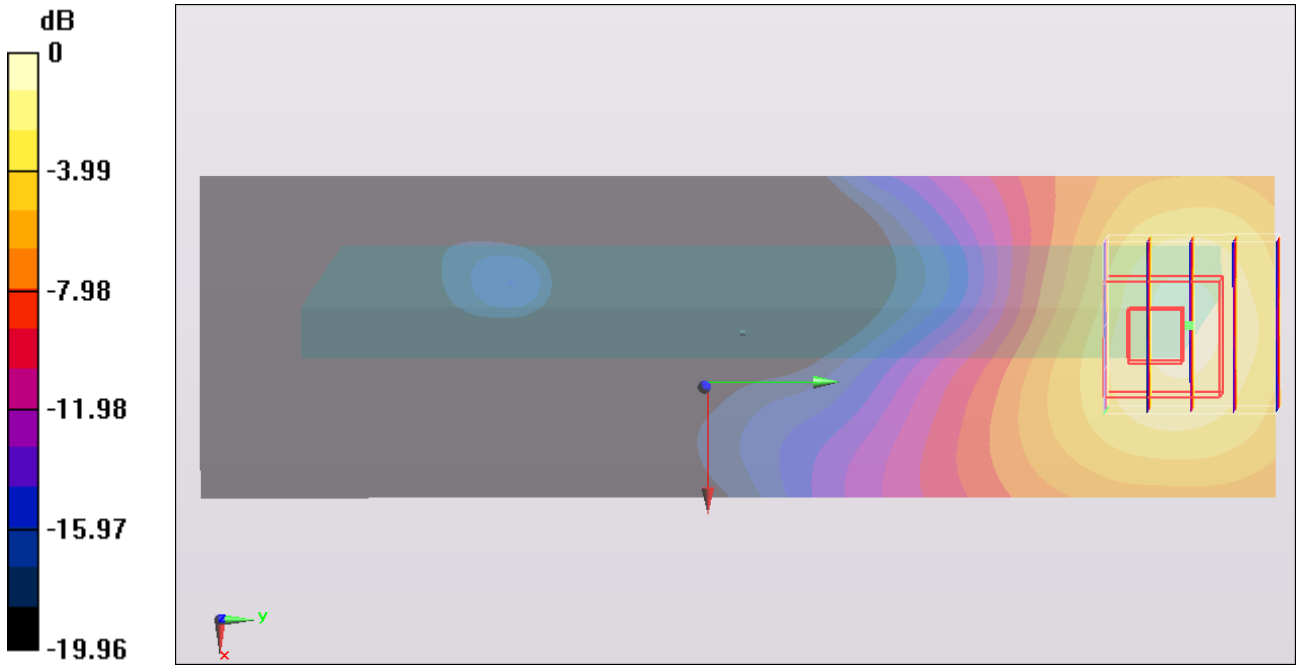
DUT: 1O2041

Communication System: 802.11b ; Frequency: 2412 MHz;Duty Cycle: 1:1.02
Medium: MSL_2450_120507 Medium parameters used: f = 2412 MHz; σ = 1.914 mho/m; ε_r = 52.837; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch1/Area Scan (31x101x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.114 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.744 V/m; Power Drift = 0.171 dB
Peak SAR (extrapolated) = 0.252 mW/g
SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.064 mW/g
Maximum value of SAR (measured) = 0.140 mW/g



0 dB = 0.140 mW/g = -17.08 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/7

#97 802.11b_Bottom Face_0cm_Ch6_Ant 2

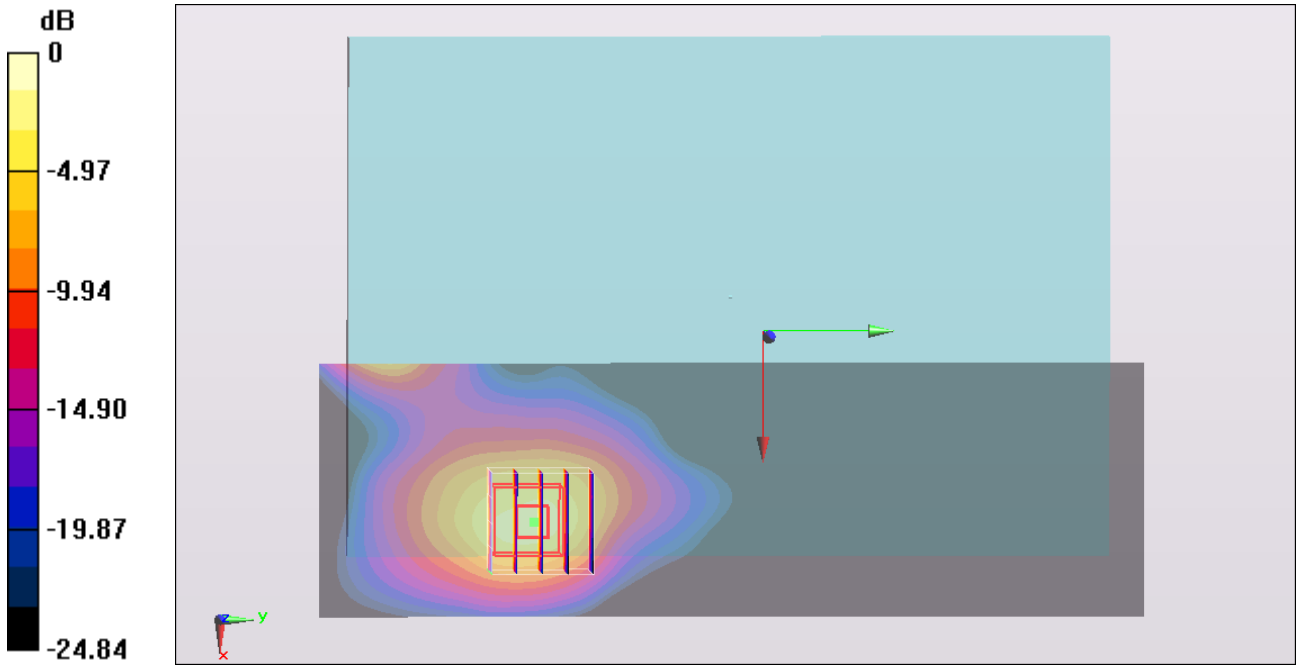
DUT: 1O2041

Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1.02
Medium: MSL_2450_120507 Medium parameters used: f = 2437 MHz; σ = 1.948 mho/m; ε_r = 52.756; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch6/Area Scan (41x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.889 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 3.136 mW/g
SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.474 mW/g
Maximum value of SAR (measured) = 1.42 mW/g



0 dB = 1.42 mW/g = 3.05 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/7

#98 802.11b_Bottom Face_0cm_Ch11_Ant 2

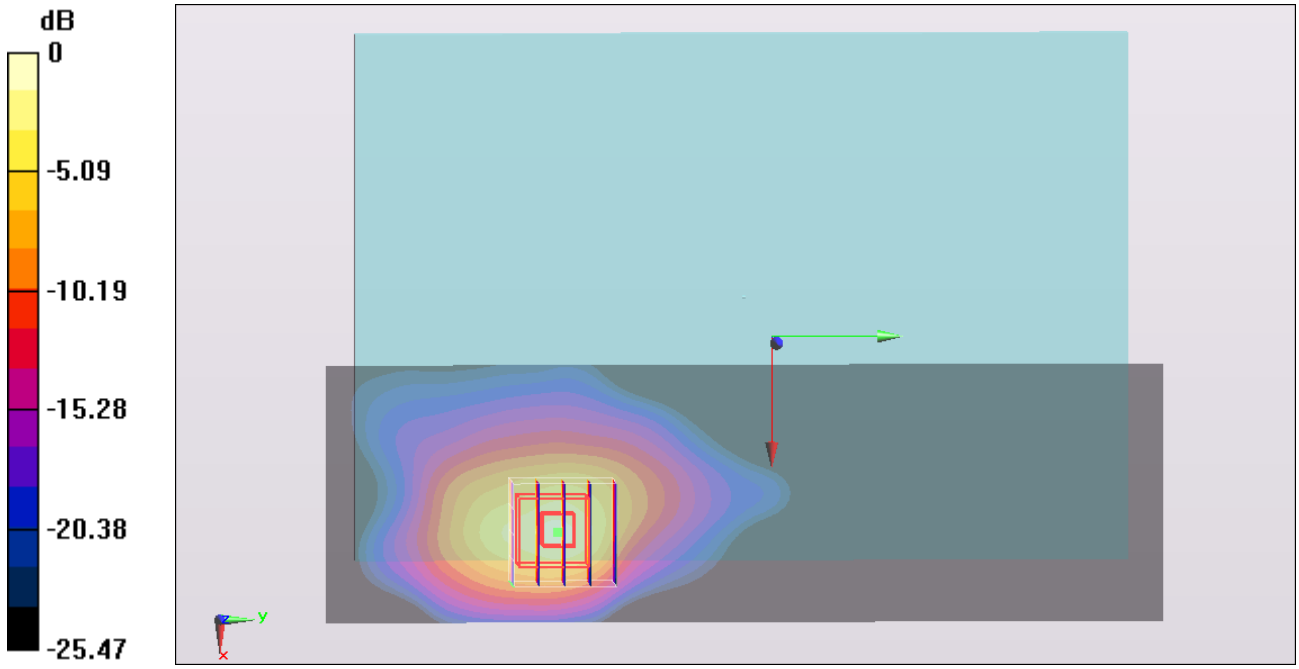
DUT: 1O2041

Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1.02
Medium: MSL_2450_120507 Medium parameters used: f = 2462 MHz; σ = 1.983 mho/m; ε_r = 52.67; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch11/Area Scan (41x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.14 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.420 V/m; Power Drift = 0.179 dB
Peak SAR (extrapolated) = 3.430 mW/g
SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.502 mW/g
Maximum value of SAR (measured) = 1.47 mW/g



0 dB = 1.47 mW/g = 3.35 dB mW/g

#98 802.11b_Bottom Face_0cm_Ch11_Ant 2_2D

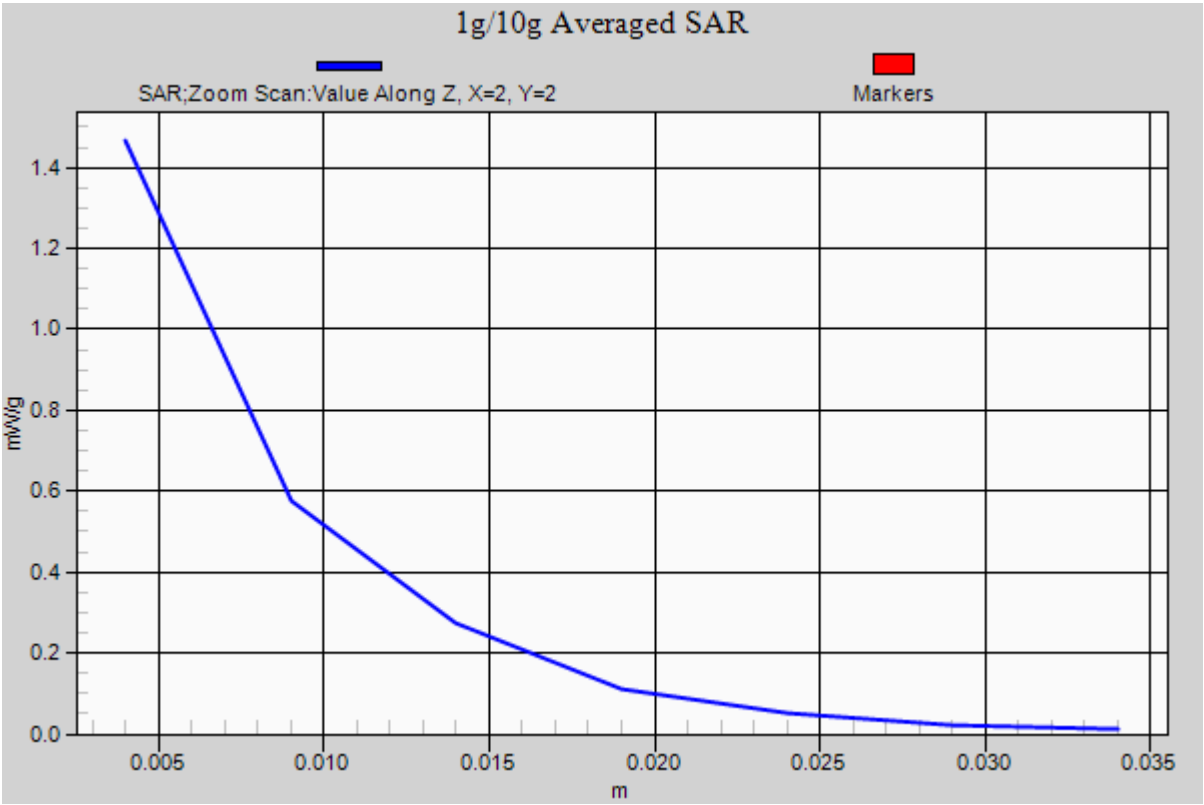
DUT: 1O2041

Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1.02
Medium: MSL_2450_120507 Medium parameters used: f = 2462 MHz; σ = 1.983 mho/m; ε_r = 52.67; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃； Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch11/Area Scan (41x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.14 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.420 V/m; Power Drift = 0.179 dB
Peak SAR (extrapolated) = 3.430 mW/g
SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.502 mW/g
Maximum value of SAR (measured) = 1.47 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/7

#99 802.11b_Secondary Landscape_0cm_Ch6_Ant 2

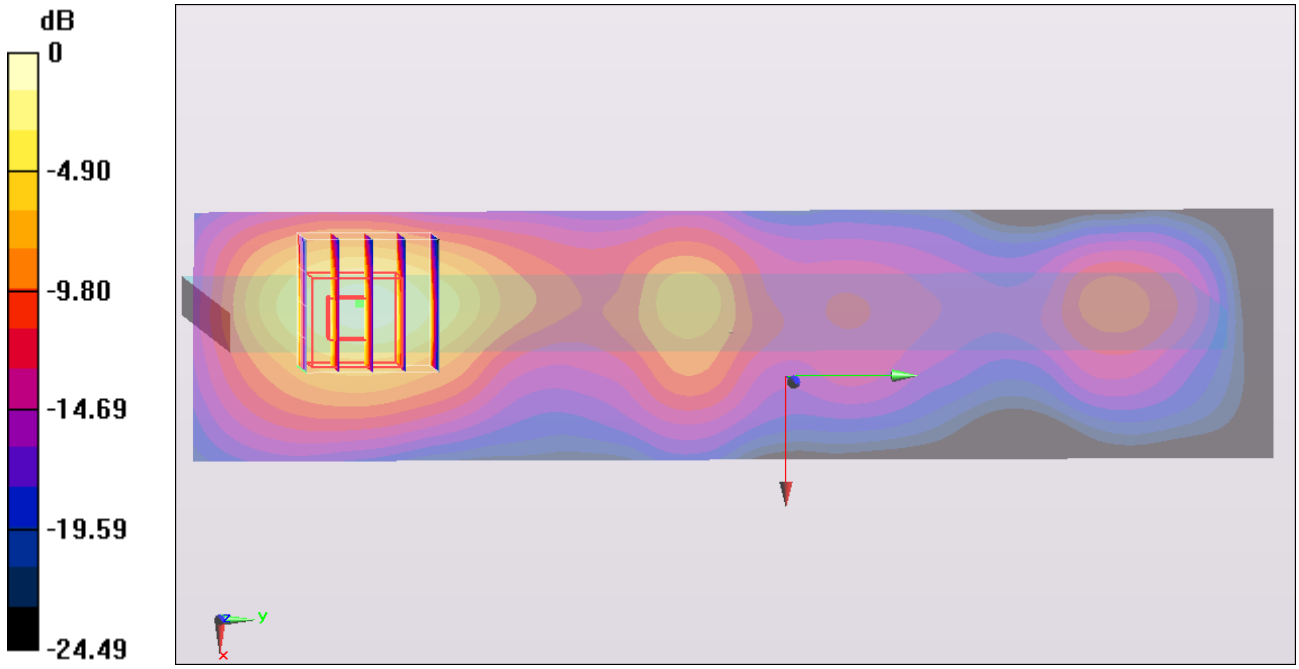
DUT: 1O2041

Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1.02
Medium: MSL_2450_120507 Medium parameters used: f = 2437 MHz; σ = 1.948 mho/m; ε_r = 52.756; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch6/Area Scan (31x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.682 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.061 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 1.620 mW/g
SAR(1 g) = 0.764 mW/g; SAR(10 g) = 0.340 mW/g
Maximum value of SAR (measured) = 0.782 mW/g



0 dB = 0.782 mW/g = -2.14 dB mW/g

#100 802.11b_Secondary Landscape_0cm_Ch11_Ant 2

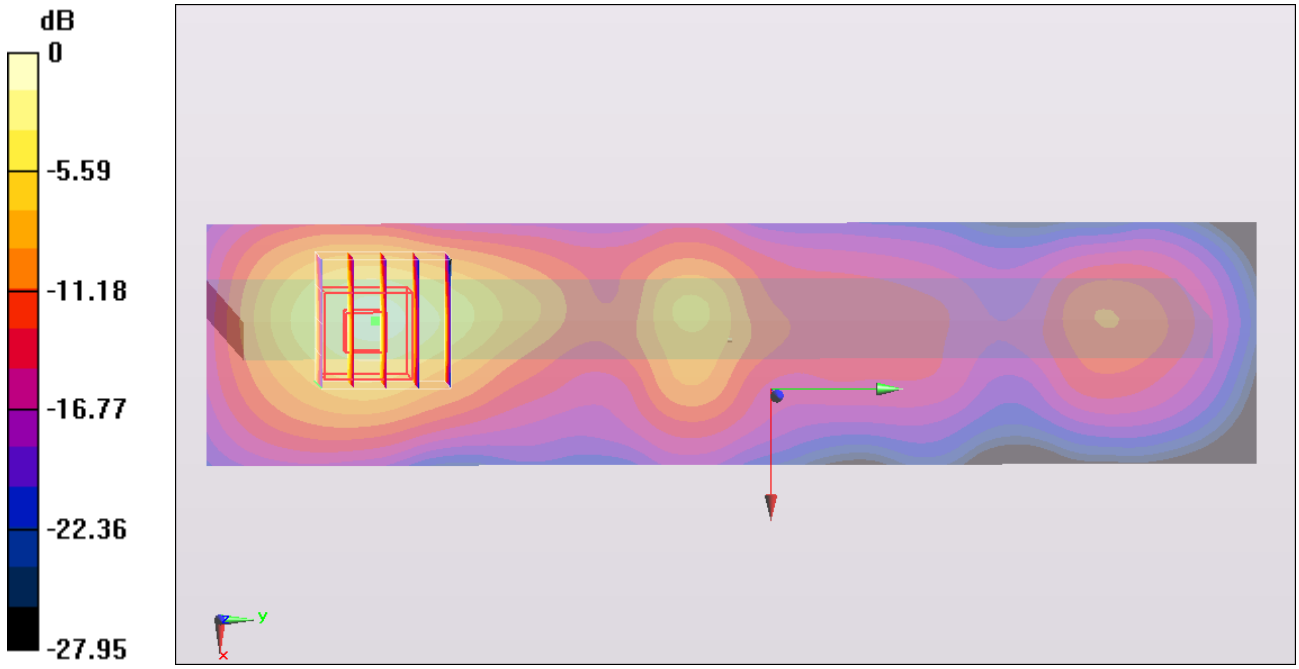
DUT: 1O2041

Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1.02
Medium: MSL_2450_120507 Medium parameters used: f = 2462 MHz; σ = 1.983 mho/m; ε_r = 52.67; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch11/Area Scan (31x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.623 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.895 V/m; Power Drift = -0.198 dB
Peak SAR (extrapolated) = 1.665 mW/g
SAR(1 g) = 0.781 mW/g; SAR(10 g) = 0.345 mW/g
Maximum value of SAR (measured) = 0.767 mW/g



0 dB = 0.767 mW/g = -2.30 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/7

#13 802.11n_20M_Bottom Face_0cm_Ch6_Ant 1+2

DUT: 1O2041

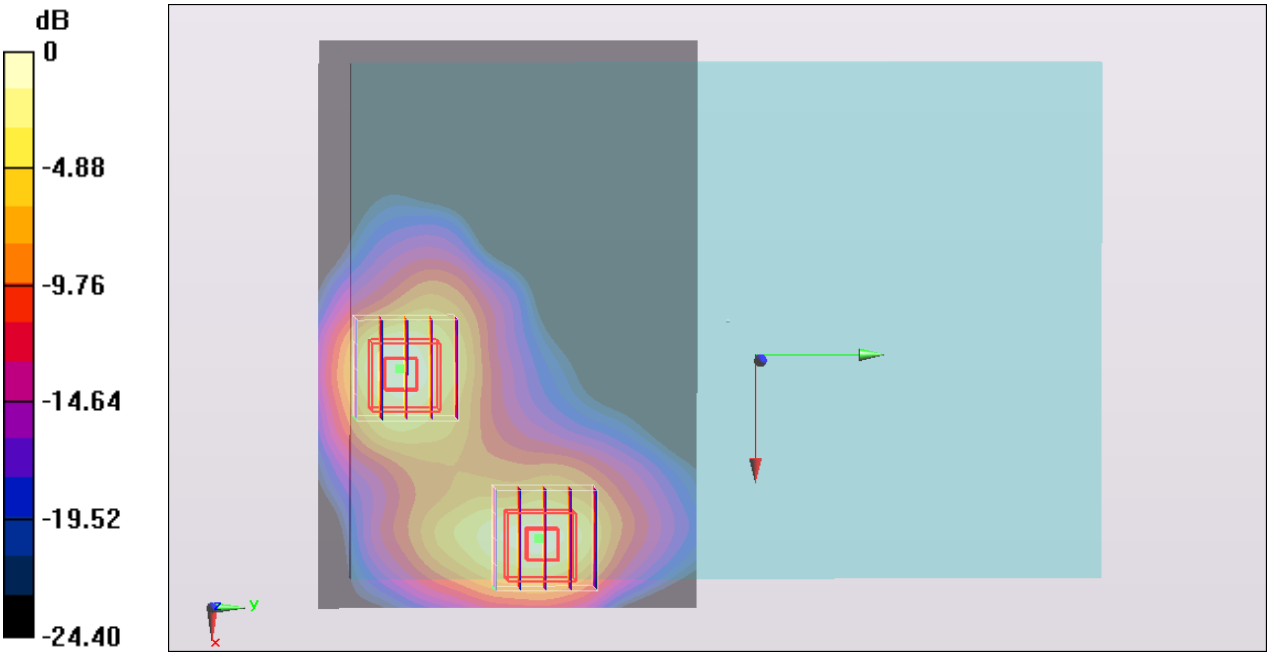
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1.31
Medium: MSL_2450_120507 Medium parameters used: f = 2437 MHz; σ = 1.948 mho/m; ε_r = 52.756; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch6/Area Scan (91x61x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.08 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 2.551 mW/g
SAR(1 g) = 0.9 mW/g; SAR(10 g) = 0.469 mW/g
Maximum value of SAR (measured) = 1.15 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 2.475 mW/g
SAR(1 g) = 0.842 mW/g; SAR(10 g) = 0.336 mW/g
Maximum value of SAR (measured) = 0.963 mW/g



0 dB = 0.963 mW/g = -0.33 dB mW/g

#13 802.11n_20M_Bottom Face_0cm_Ch6_Ant 1+2_2D

DUT: 1O2041

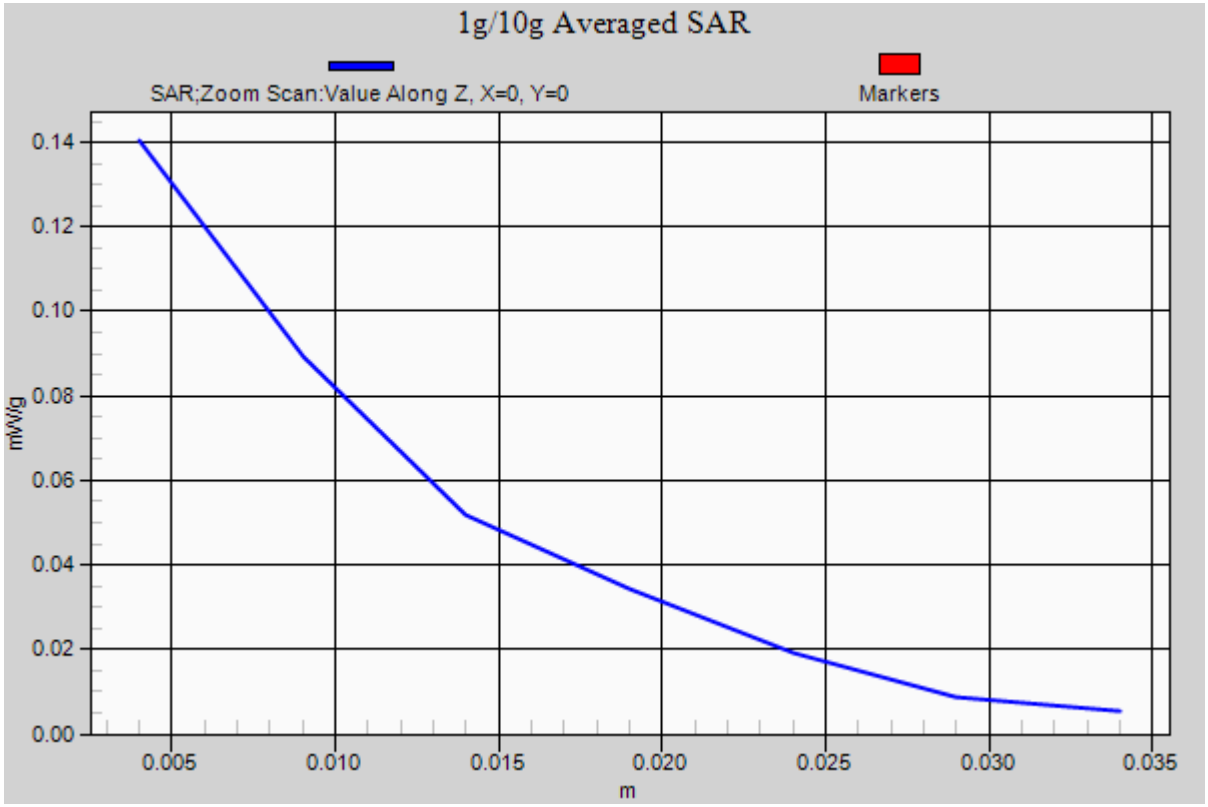
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1.31
Medium: MSL_2450_120507 Medium parameters used: f = 2437 MHz; σ = 1.948 mho/m; ε_r = 52.756; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch6/Area Scan (91x61x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.08 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 2.551 mW/g
SAR(1 g) = 0.9 mW/g; SAR(10 g) = 0.469 mW/g
Maximum value of SAR (measured) = 1.15 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 2.475 mW/g
SAR(1 g) = 0.842 mW/g; SAR(10 g) = 0.336 mW/g
Maximum value of SAR (measured) = 0.963 mW/g


1g/10g Averaged SAR
SAR;Zoom Scan:Value Along Z, X=0, Y=0
Markers
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
mW/g
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

#10 802.11n_20M_Secondary Landscape_0cm_Ch6_Ant 1+2

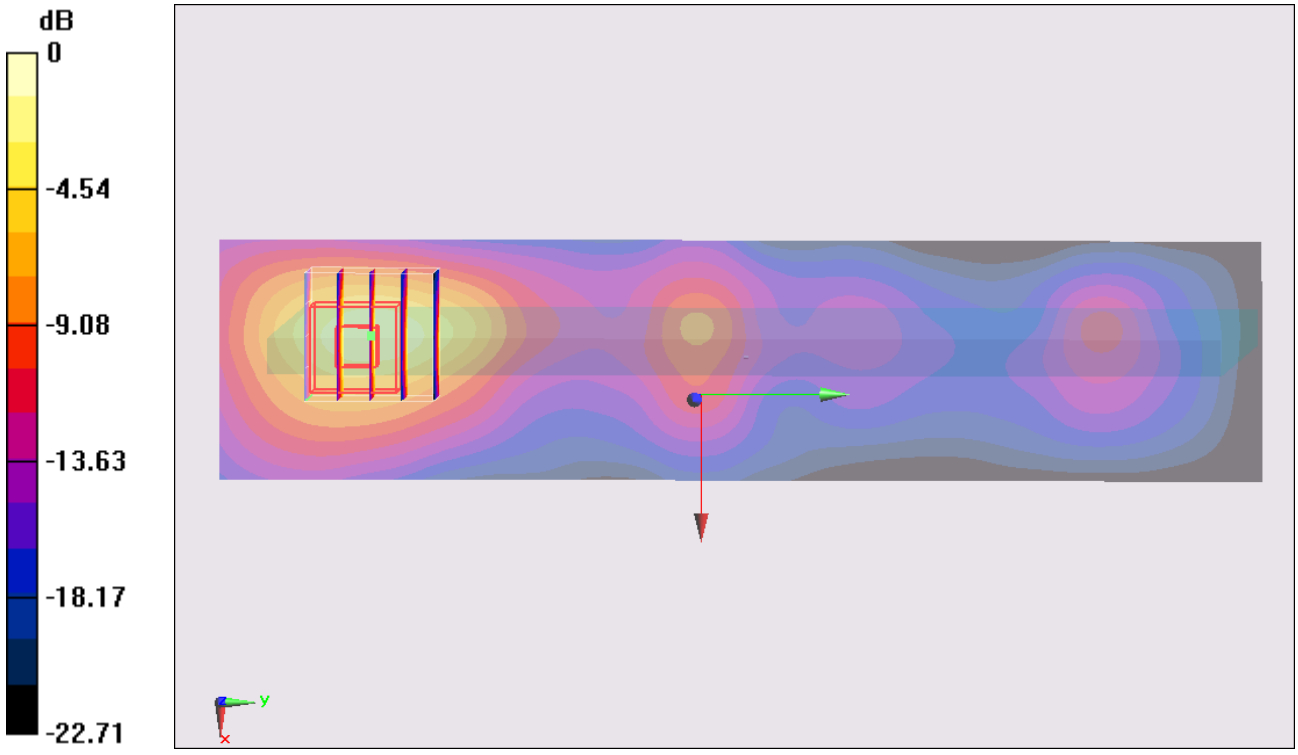
DUT: 1O2041

Communication System: 802.11n; Frequency: 2437 MHz;Duty Cycle: 1:1.31
Medium: MSL_2450_120707 Medium parameters used: f = 2437 MHz; σ = 2.001 mho/m; ε_r = 53.912; ρ = 1000 kg/m^3
Ambient Temperature：22.3 ℃; Liquid Temperature：21.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(7.1, 7.1, 7.1); Calibrated: 2012/6/21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2012/4/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch6/Area Scan (31x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.341 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.020 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.923 mW/g
SAR(1 g) = 0.453 mW/g; SAR(10 g) = 0.200 mW/g
Maximum value of SAR (measured) = 0.489 mW/g



0 dB = 0.489 mW/g = -6.21 dB mW/g

#11 802.11n_20M_Secondary Portrait_0cm_Ch6_Ant 1+2

DUT: 1O2041

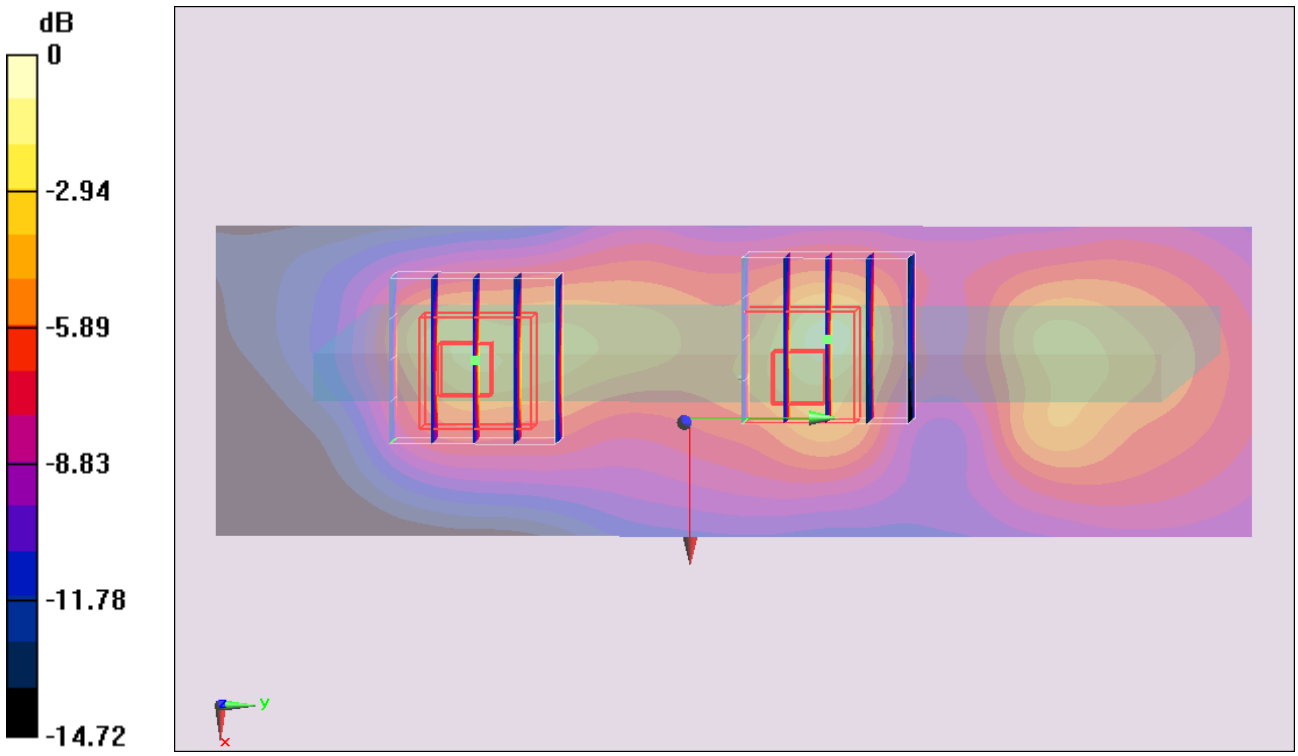
Communication System: 802.11n; Frequency: 2437 MHz;Duty Cycle: 1:1.31
Medium: MSL_2450_120707 Medium parameters used: f = 2437 MHz; σ = 2.001 mho/m; ε_r = 53.912; ρ = 1000 kg/m^3
Ambient Temperature：22.3 ℃; Liquid Temperature：21.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(7.1, 7.1, 7.1); Calibrated: 2012/6/21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2012/4/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch6/Area Scan (31x101x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.142 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.679 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.445 mW/g
SAR(1 g) = 0.176 mW/g; SAR(10 g) = 0.078 mW/g
Maximum value of SAR (measured) = 0.176 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.679 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.512 mW/g
SAR(1 g) = 0.175 mW/g; SAR(10 g) = 0.076 mW/g
Maximum value of SAR (measured) = 0.195 mW/g



0 dB = 0.195 mW/g = -14.20 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/7

#12 802.11n_20M_Bottom Face_0cm_Ch1_Ant 1+2

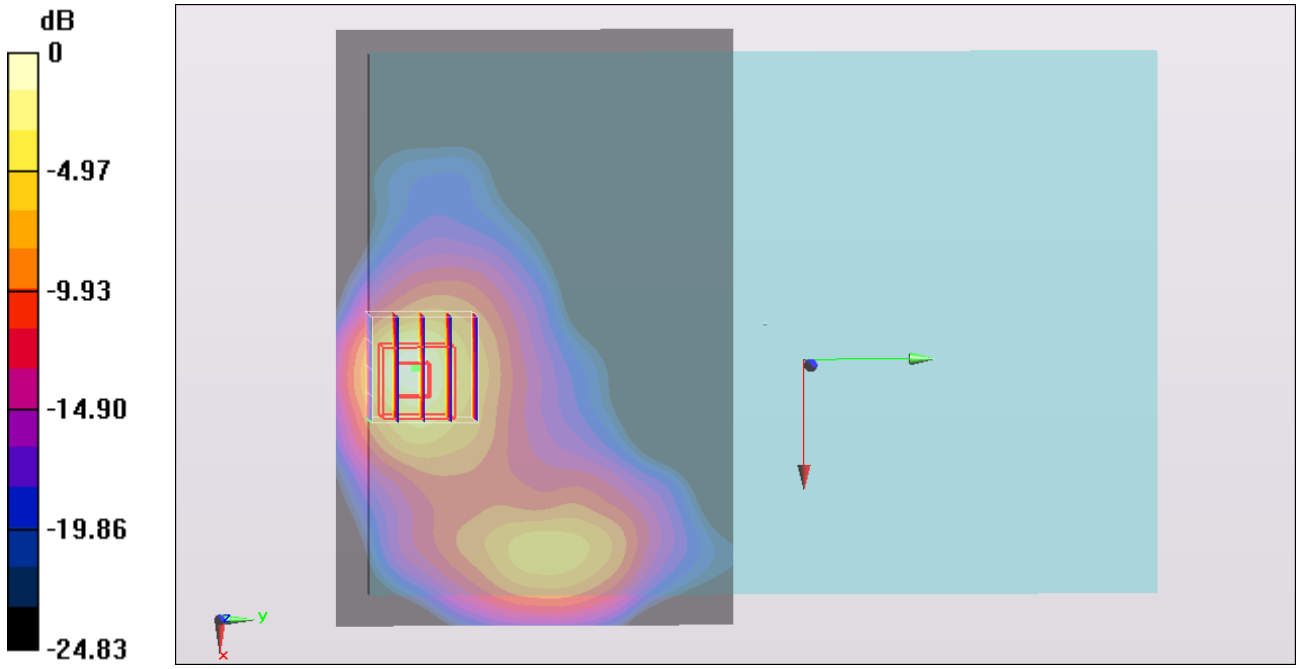
DUT: 1O2041

Communication System: 802.11n; Frequency: 2412 MHz;Duty Cycle: 1:1.31
Medium: MSL_2450_120507 Medium parameters used: f = 2412 MHz; σ = 1.914 mho/m; ε_r = 52.837; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(6.67, 6.67, 6.67); Calibrated: 2011/6/20;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch1/Area Scan (91x61x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 1.01 mW/g

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 2.647 mW/g
SAR(1 g) = 0.92 mW/g; SAR(10 g) = 0.422 mW/g
Maximum value of SAR (measured) = 1.02 mW/g



0 dB = 1.02 mW/g = 1.44 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/7/7

#09 802.11n_20M_Bottom Face_0cm_Ch11_Ant 1+2

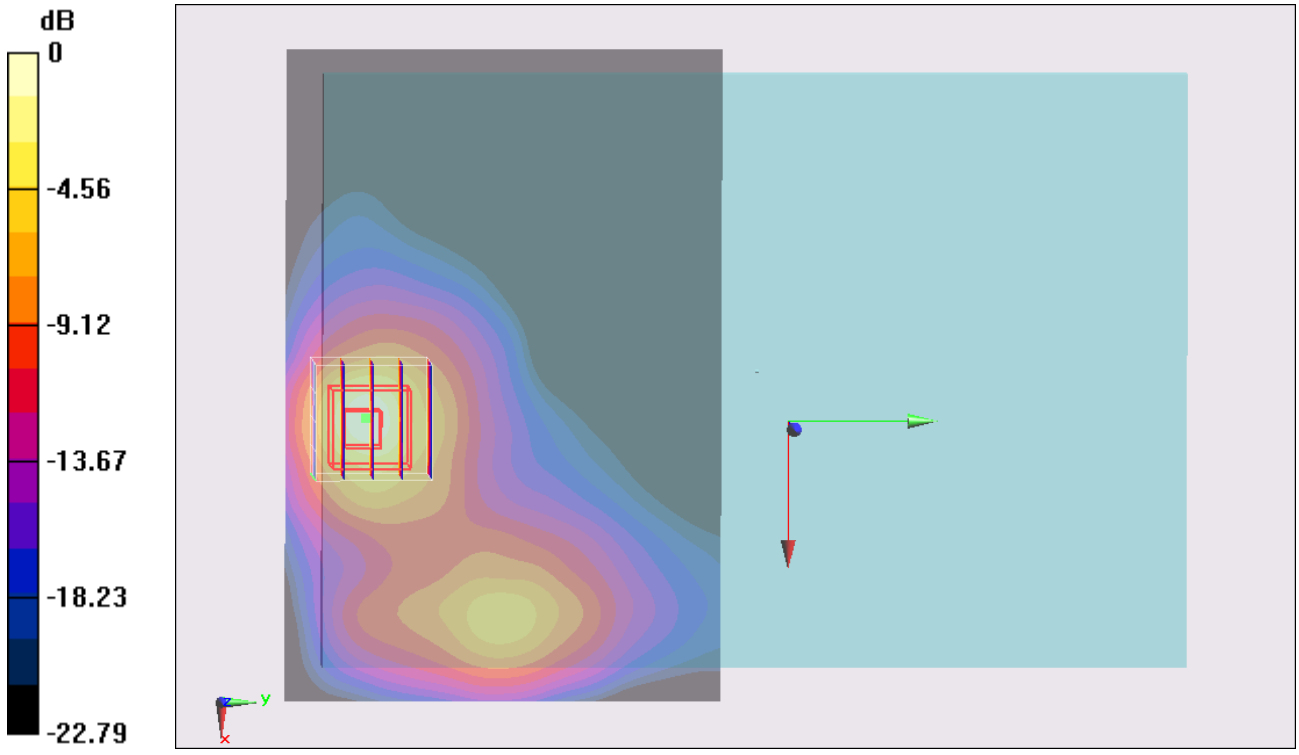
DUT: 1O2041

Communication System: 802.11n; Frequency: 2462 MHz;Duty Cycle: 1:1.31
Medium: MSL_2450_120707 Medium parameters used: f = 2462 MHz; σ = 2.038 mho/m; ε_r = 53.877; ρ = 1000 kg/m^3
Ambient Temperature：22.3 ℃; Liquid Temperature：21.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(7.1, 7.1, 7.1); Calibrated: 2012/6/21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2012/4/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch11/Area Scan (91x61x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 0.809 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.620 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 2.062 mW/g
SAR(1 g) = 0.785 mW/g; SAR(10 g) = 0.316 mW/g
Maximum value of SAR (measured) = 0.828 mW/g



0 dB = 0.828 mW/g = -1.64 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/4

#44 802.11a_Bottom Face_0cm_Ch44_Ant 2

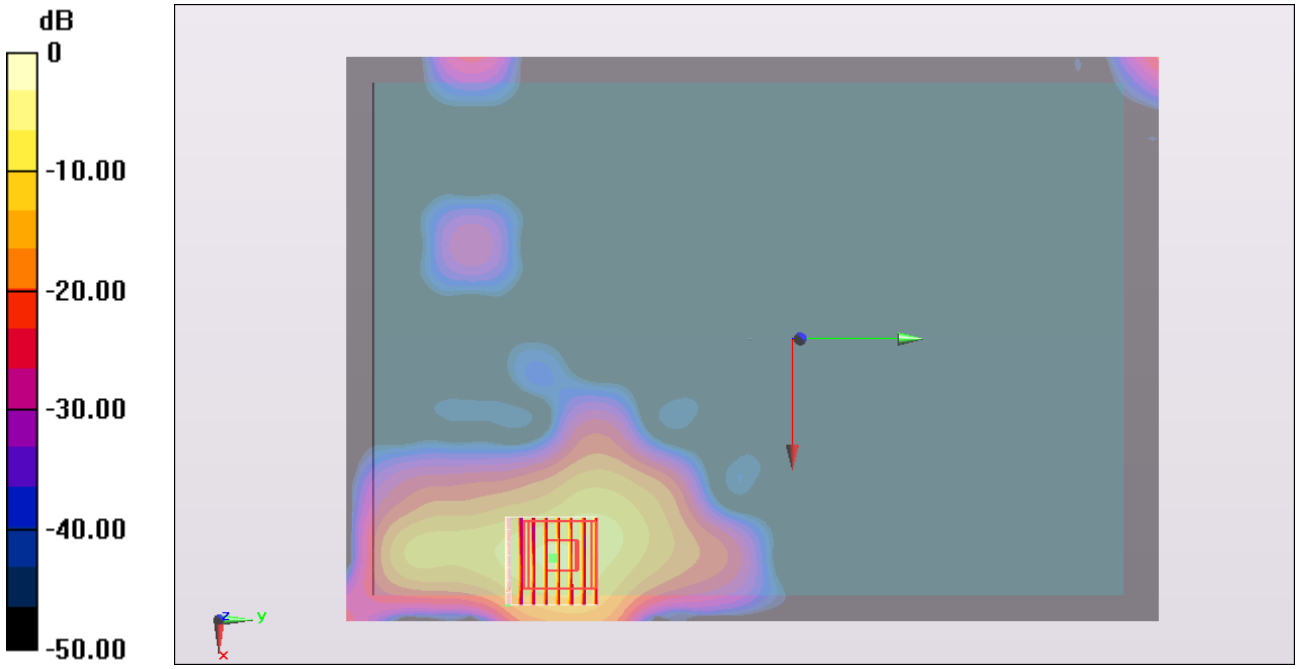
DUT: 1O2041

Communication System: 802.11a; Frequency: 5220 MHz;Duty Cycle: 1:1.14
Medium: MSL_5G_120504 Medium parameters used: f = 5220 MHz; σ = 5.127 mho/m; ε_r = 47.381; ρ = 1000 kg/m^3
Ambient Temperature：22.2 ℃; Liquid Temperature：21.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch44/Area Scan (181x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.649 mW/g

Ch44/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0 V/m; Power Drift = 0.125 dB
Peak SAR (extrapolated) = 5.110 mW/g
SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.358 mW/g
Maximum value of SAR (measured) = 2.47 mW/g



0 dB = 2.47 mW/g = 8.20 dB mW/g

#45 802.11a_Secondary Landscape_0cm_Ch44_Ant 2

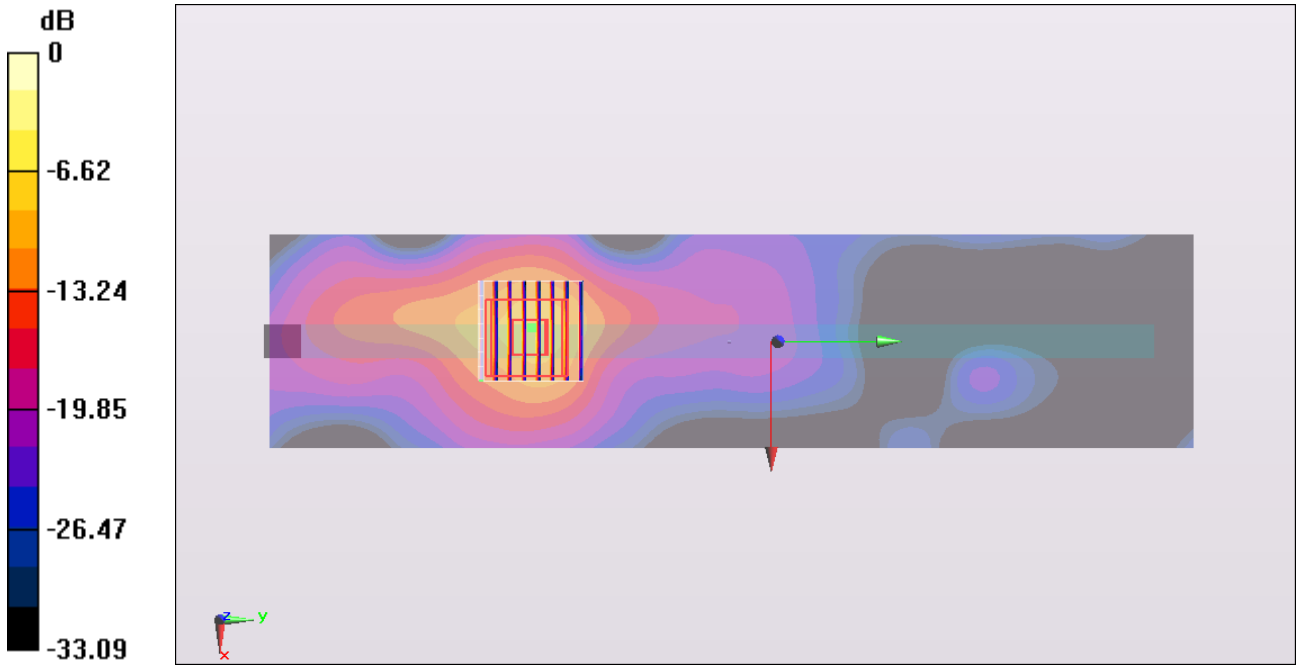
DUT: 1O2041

Communication System: 802.11a; Frequency: 5220 MHz;Duty Cycle: 1:1.14
Medium: MSL_5G_120504 Medium parameters used: f = 5220 MHz; σ = 5.127 mho/m; ε_r = 47.381; ρ = 1000 kg/m^3
Ambient Temperature：22.2 ℃; Liquid Temperature：21.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch44/Area Scan (61x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.530 mW/g

Ch44/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 6.574 V/m; Power Drift = 0.131 dB
Peak SAR (extrapolated) = 4.969 mW/g
SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.373 mW/g
Maximum value of SAR (measured) = 2.58 mW/g



0 dB = 2.58 mW/g = 8.56 dB mW/g

#45 802.11a_Secondary Landscape_0cm_Ch44_Ant 2_2D

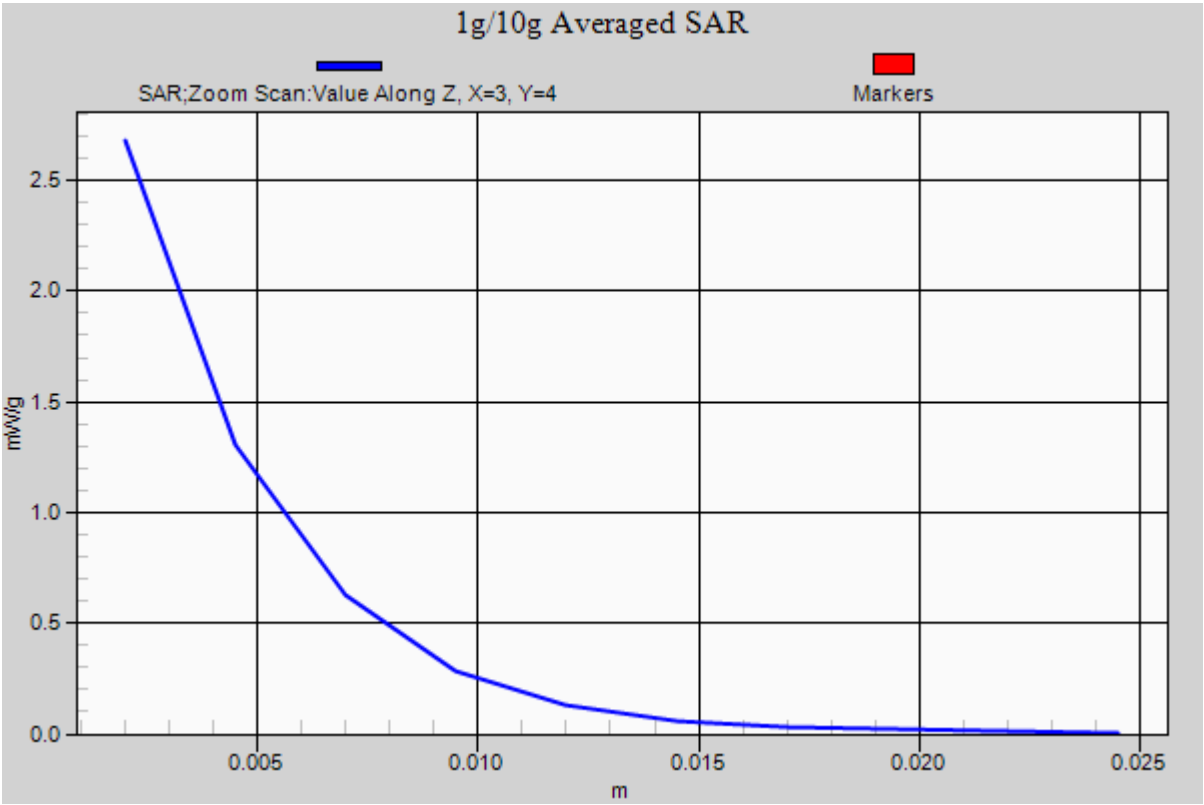
DUT: 1O2041

Communication System: 802.11a; Frequency: 5220 MHz;Duty Cycle: 1:1.14
Medium: MSL_5G_120504 Medium parameters used : f = 5220 MHz; σ = 5.127 mho/m; ε_r = 47.381; ρ = 1000 kg/m^3
Ambient Temperature：22.2 ℃； Liquid Temperature：21.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(4.22, 4.22, 4.22); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch44/Area Scan (61x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.530 mW/g

Ch44/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 6.574 V/m; Power Drift = 0.131 dB
Peak SAR (extrapolated) = 4.969 mW/g
SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.373 mW/g
Maximum value of SAR (measured) = 2.58 mW/g



#46 802.11a_Secondary Portrait_0cm_Ch44_Ant 2

DUT: 1O2041

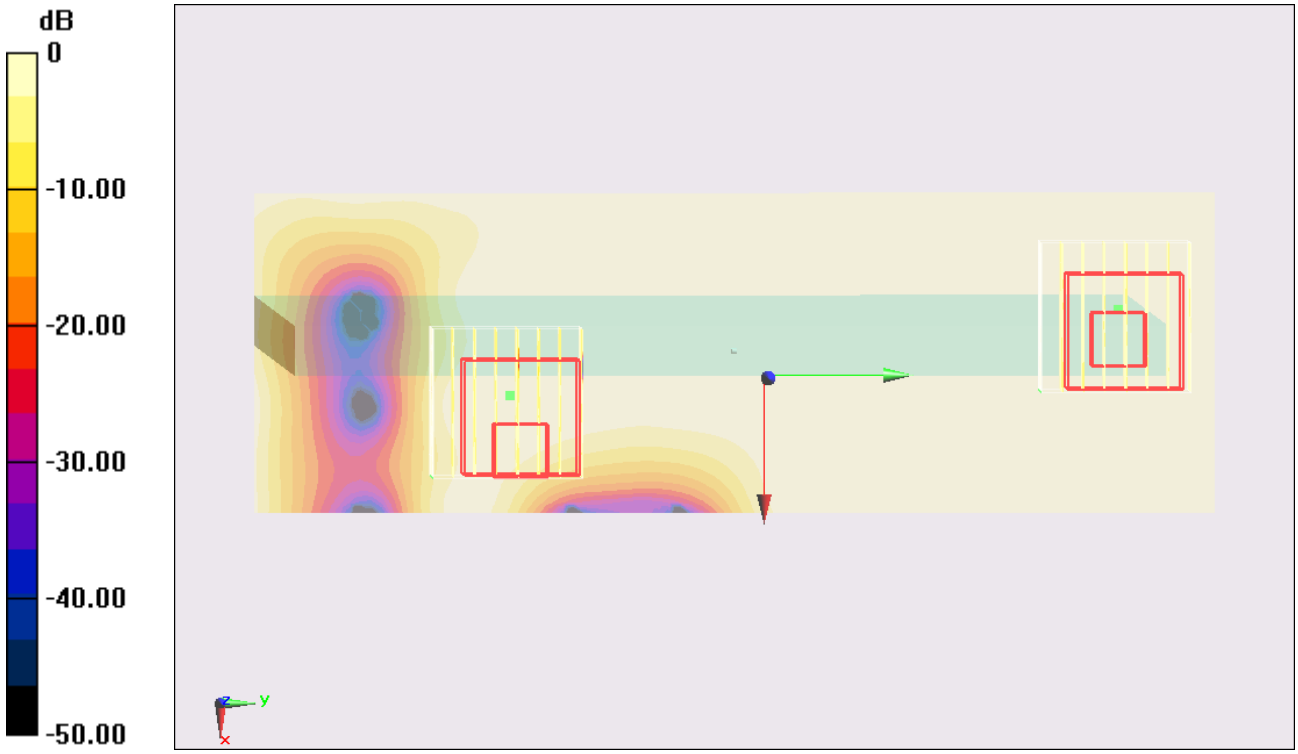
Communication System: 802.11a; Frequency: 5220 MHz;Duty Cycle: 1:1.14
Medium: MSL_5G_120706 Medium parameters used : f = 5220 MHz; σ = 5.295 mho/m; ε_r = 48.271; ρ = 1000 kg/m^3
Ambient Temperature：22.3 ℃; Liquid Temperature：21.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(4.2, 4.2, 4.2); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2012/4/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch44/Area Scan (61x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.0313 mW/g

Ch44/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 1.493 V/m; Power Drift = -0.185 dB
Peak SAR (extrapolated) = 0.366 mW/g
SAR(1 g) = 0.050 mW/g; SAR(10 g) = 0.019 mW/g
Maximum value of SAR (measured) = 0.0988 mW/g

Ch44/Zoom Scan (8x8x10)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 1.493 V/m; Power Drift = -0.185 dB
Peak SAR (extrapolated) = 0.025 mW/g
SAR(1 g) = 0.00182 mW/g; SAR(10 g) = 0.000305 mW/g
Maximum value of SAR (measured) = 0.0147 mW/g



0 dB = 0.0147 mW/g = -36.65 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/7/3

#47 802.11a_Bottom Face_0cm_Ch36_Ant 2

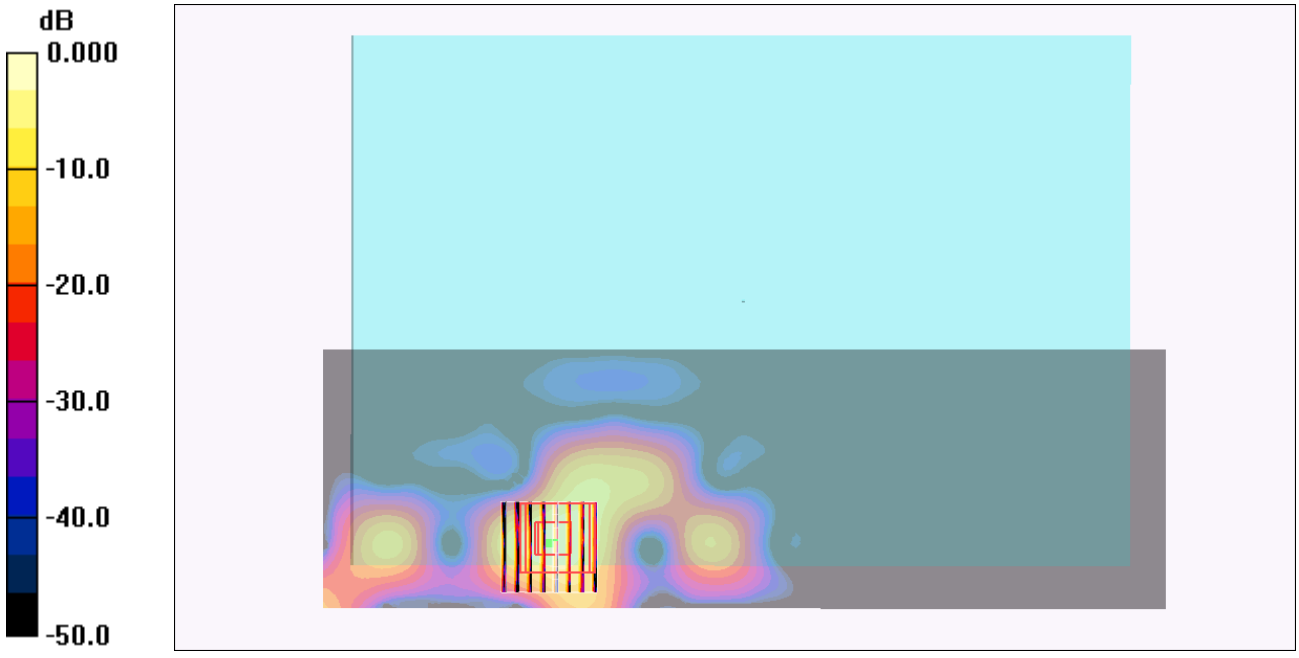
DUT: 1O2041

Communication System: 802.11a; Frequency: 5180 MHz;Duty Cycle: 1:1.14
Medium: MSL_5G_120703 Medium parameters used : f = 5180 MHz; σ = 5.34 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature：22.5 ℃; Liquid Temperature：21.5 ℃

DASY4 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.48, 4.48, 4.48); Calibrated: 2011/11/16
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2012/5/3
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch36/Area Scan (81x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.661 mW/g

Ch36/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 2.61 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 2.37 W/kg
SAR(1 g) = 0.724 mW/g; SAR(10 g) = 0.221 mW/g
Maximum value of SAR (measured) = 1.41 mW/g



0 dB = 1.41mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/7/3

#48 802.11a_Secondary Landscape_0cm_Ch36_Ant 2

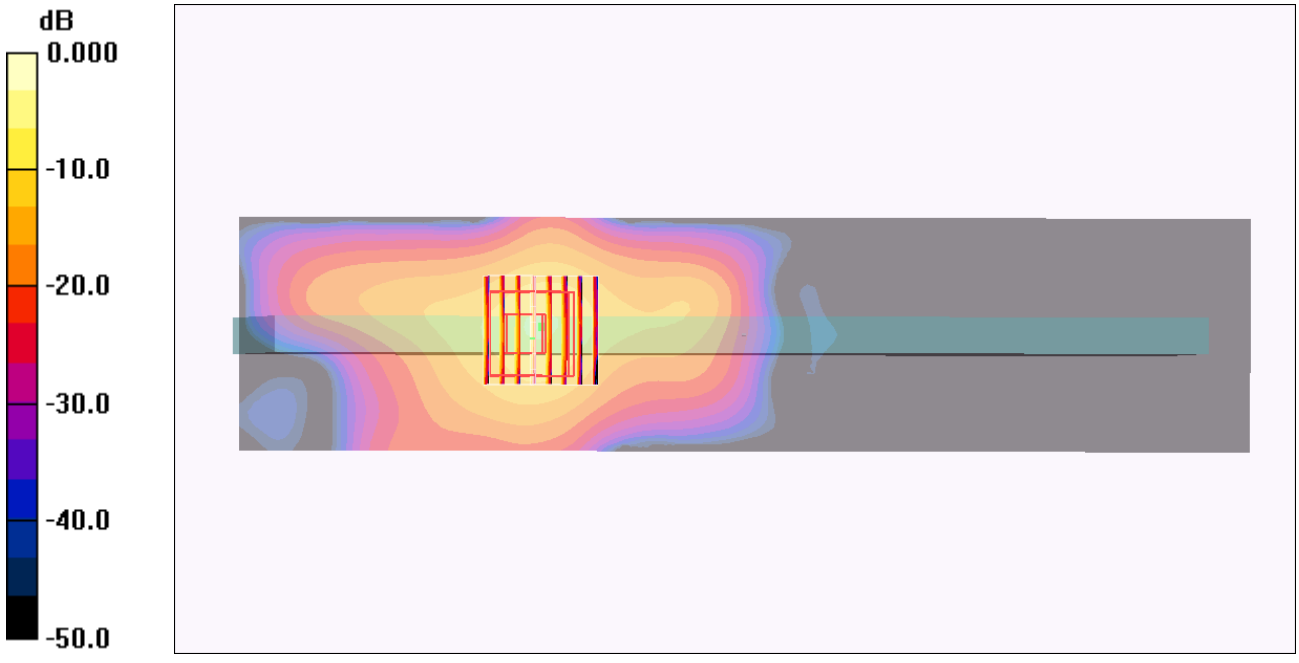
DUT: 1O2041

Communication System: 802.11a; Frequency: 5180 MHz;Duty Cycle: 1:1.14
Medium: MSL_5G_120703 Medium parameters used : f = 5180 MHz; σ = 5.34 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature：22.5 ℃; Liquid Temperature：21.5 ℃

DASY4 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.48, 4.48, 4.48); Calibrated: 2011/11/16
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2012/5/3
- Phantom: ELI 4.0_Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Ch36/Area Scan (61x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.435 mW/g

Ch36/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 5.28 V/m; Power Drift = 0.151 dB
Peak SAR (extrapolated) = 2.83 W/kg
SAR(1 g) = 0.857 mW/g; SAR(10 g) = 0.253 mW/g
Maximum value of SAR (measured) = 1.81 mW/g



0 dB = 1.81mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/4

#60 802.11a_Bottom Face_0cm_Ch153_Ant 2

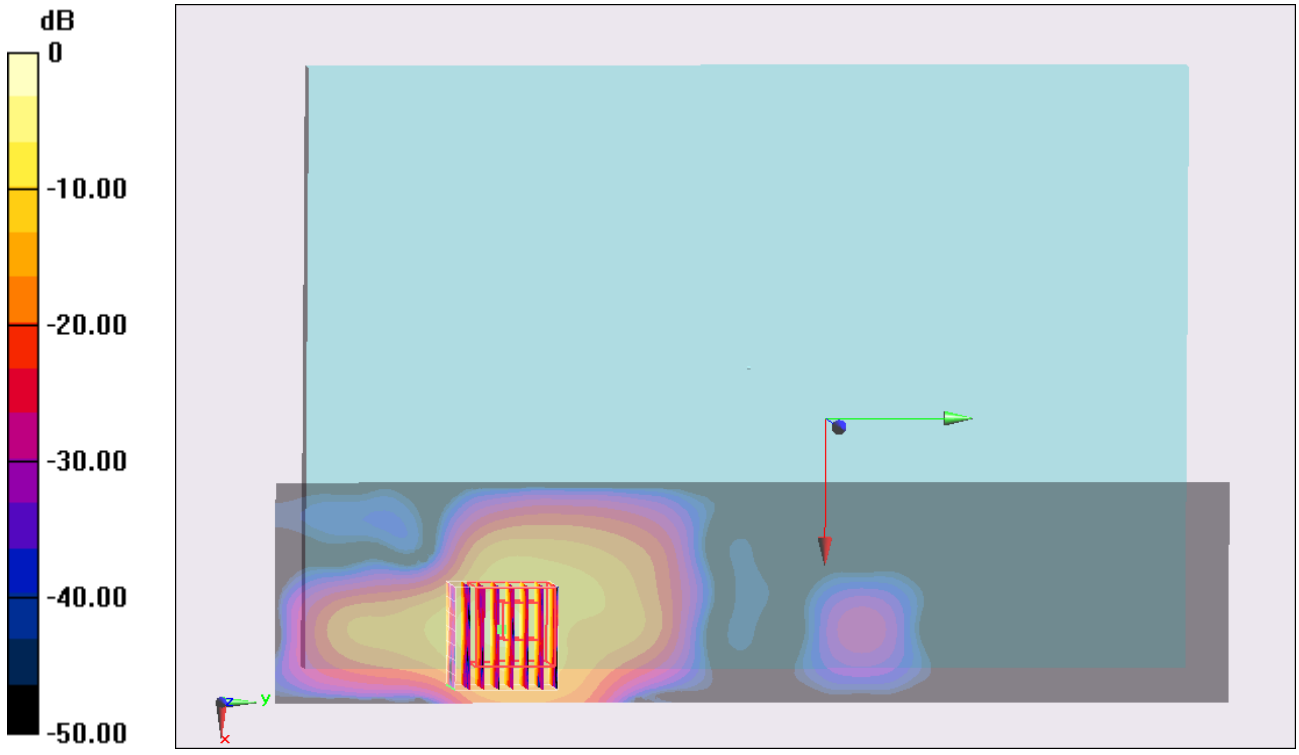
DUT: 1O2041

Communication System: 802.11a; Frequency: 5765 MHz;Duty Cycle: 1:1.15
Medium: MSL_5G_120504 Medium parameters used: f = 5765 MHz; σ = 5.926 mho/m; ε_r = 46.62; ρ = 1000 kg/m^3
Ambient Temperature：22.2 ℃; Liquid Temperature：21.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch153/Area Scan (61x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.726 mW/g

Ch153/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 4.931 mW/g
SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.315 mW/g
Maximum value of SAR (measured) = 2.37 mW/g



0 dB = 2.37 mW/g = 7.85 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/4

#61 802.11a_Secondary Landscape_0cm_Ch153_Ant 2

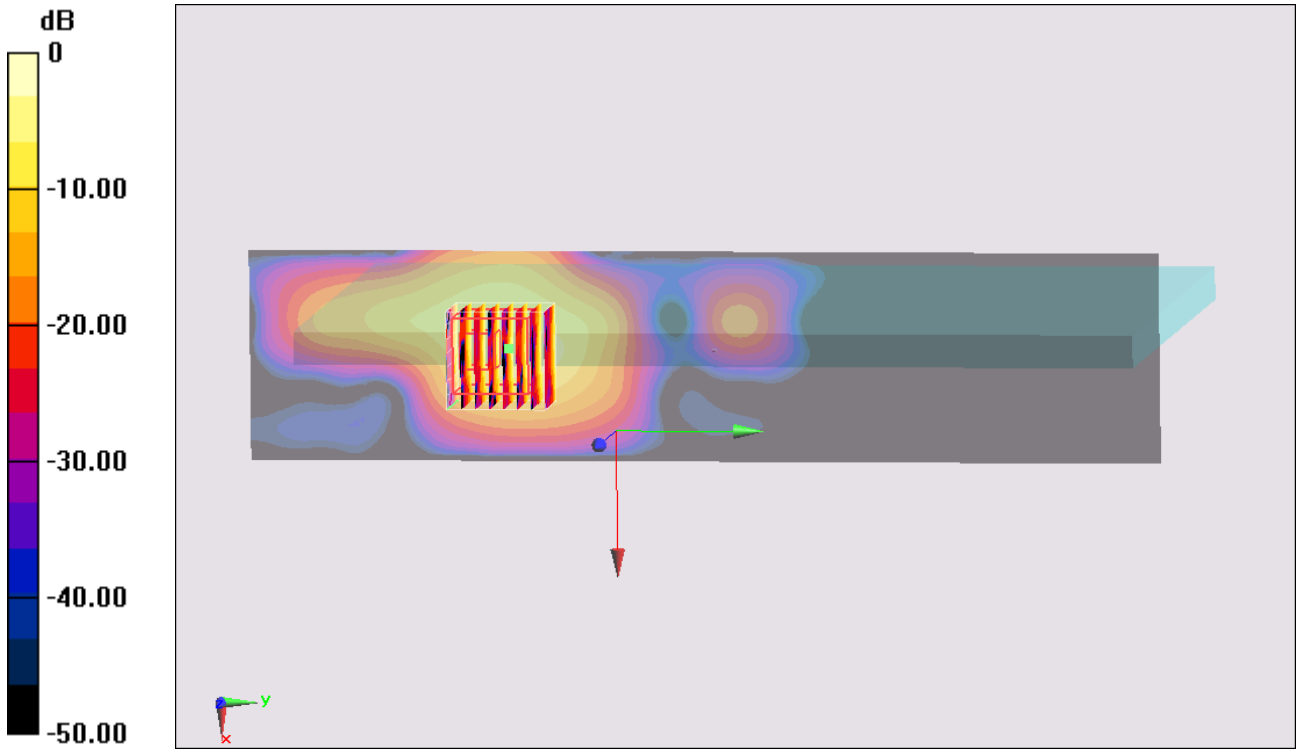
DUT: 1O2041

Communication System: 802.11a; Frequency: 5765 MHz;Duty Cycle: 1:1.15
Medium: MSL_5G_120504 Medium parameters used: f = 5765 MHz; σ = 5.926 mho/m; ε_r = 46.62; ρ = 1000 kg/m^3
Ambient Temperature：22.2 ℃； Liquid Temperature：21.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch153/Area Scan (61x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.495 mW/g

Ch153/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 4.801 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 2.640 mW/g
SAR(1 g) = 0.590 mW/g; SAR(10 g) = 0.200 mW/g
Maximum value of SAR (measured) = 1.27 mW/g



0 dB = 1.27 mW/g = 2.08 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/4

#62 802.11a_Secondary Portrait_0cm_Ch153_Ant 2

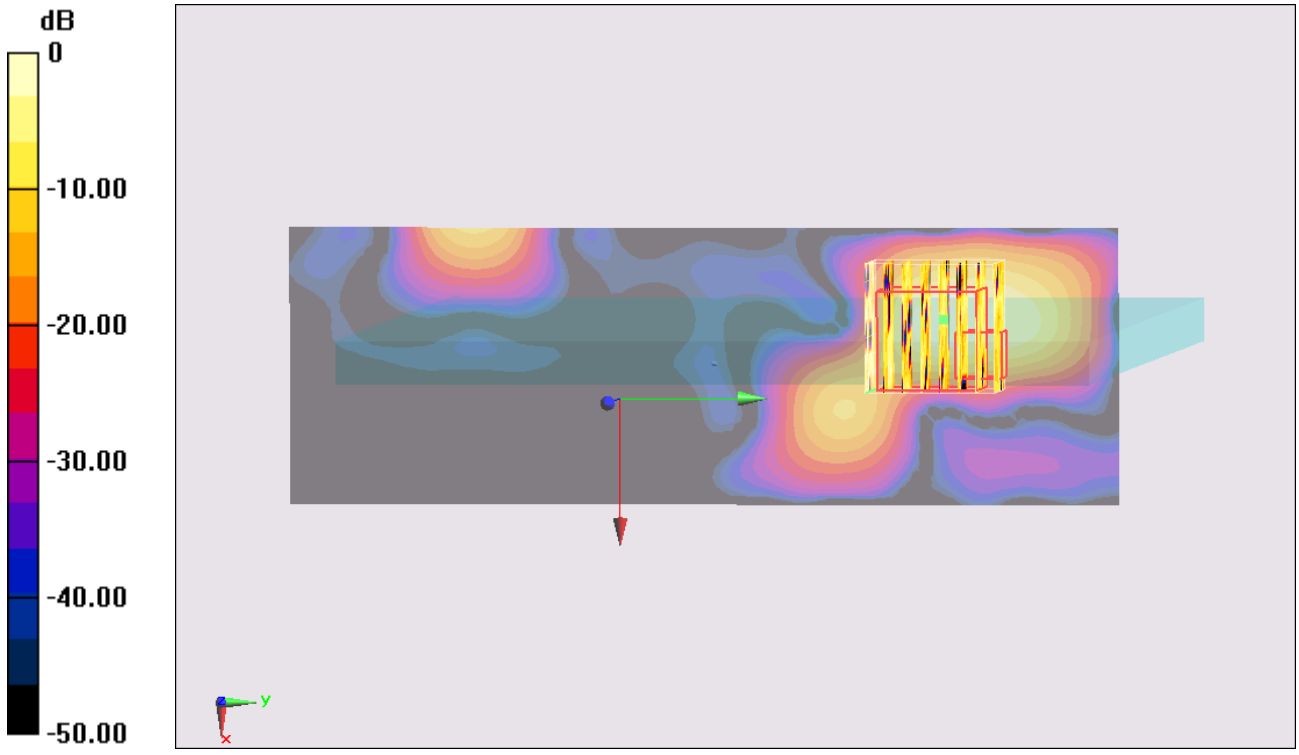
DUT: 1O2041

Communication System: 802.11a; Frequency: 5765 MHz;Duty Cycle: 1:1.15
Medium: MSL_5G_120504 Medium parameters used: f = 5765 MHz; σ = 5.926 mho/m; ε_r = 46.62; ρ = 1000 kg/m^3
Ambient Temperature：22.2 ℃; Liquid Temperature：21.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch153/Area Scan (61x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.0295 mW/g

Ch153/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.058 mW/g
SAR(1 g) = 0.00139 mW/g; SAR(10 g) = 0.000275 mW/g
Maximum value of SAR (measured) = 0.0219 mW/g



0 dB = 0.0219 mW/g = -33.19 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/4

#65 802.11a_Bottom Face_0cm_Ch161_Ant 2

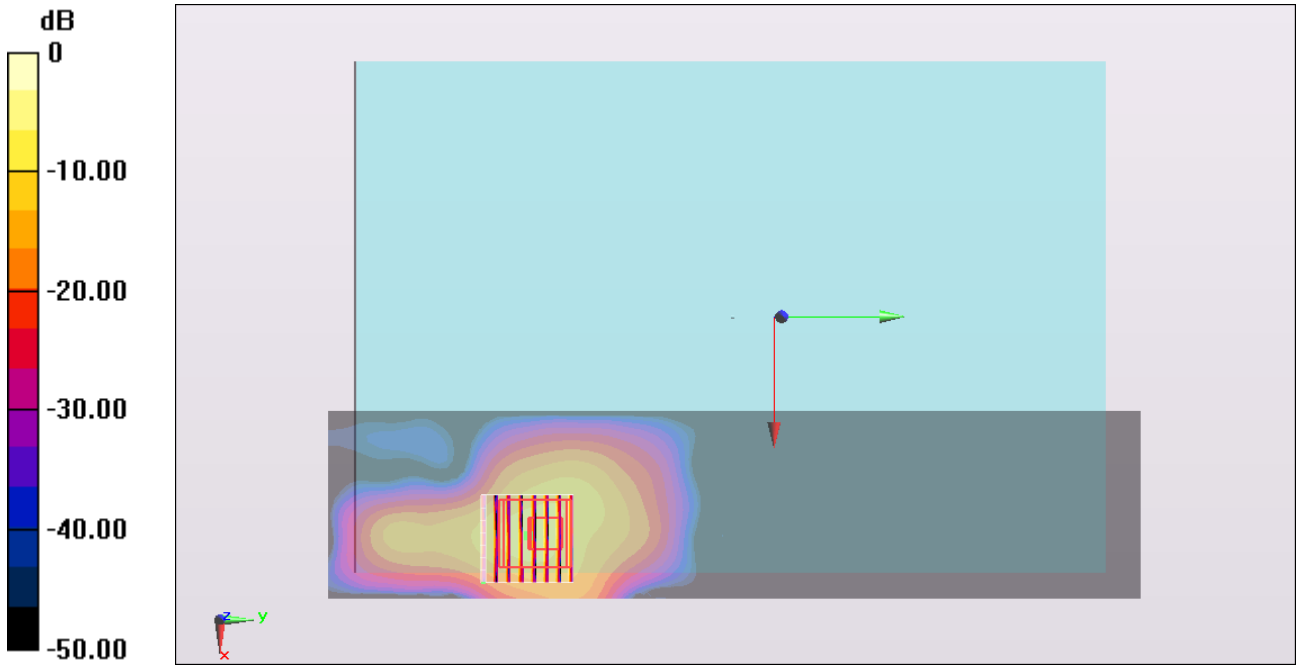
DUT: 1O2041

Communication System: 802.11a; Frequency: 5805 MHz;Duty Cycle: 1:1.15
Medium: MSL_5G_120504 Medium parameters used: f = 5805 MHz; σ = 5.968 mho/m; ε_r = 46.462; ρ = 1000 kg/m^3
Ambient Temperature：22.2 ℃; Liquid Temperature：21.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch161/Area Scan (61x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.477 mW/g

Ch161/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0 V/m; Power Drift = 0.001 dB
Peak SAR (extrapolated) = 6.678 mW/g
SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.305 mW/g
Maximum value of SAR (measured) = 2.58 mW/g



0 dB = 2.58 mW/g = 8.88 dB mW/g

#65 802.11a_Bottom Face_0cm_Ch161_Ant 2_2D

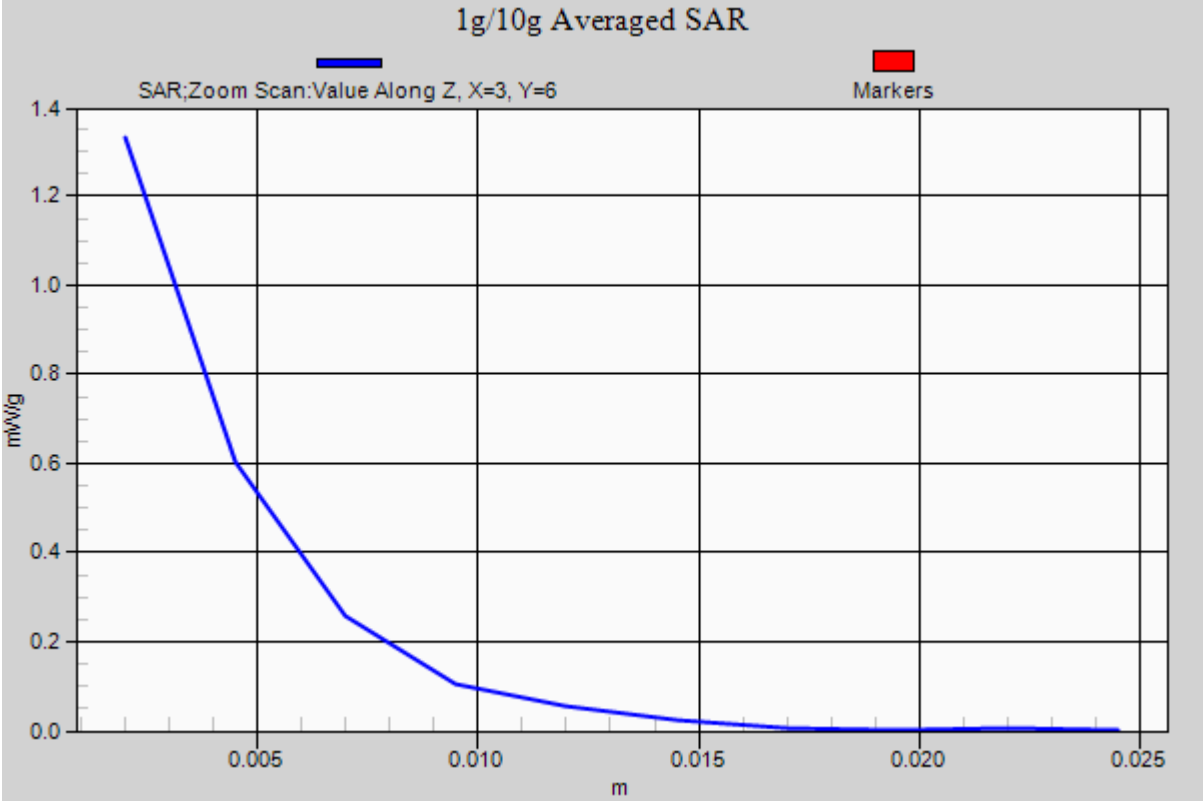
DUT: 1O2041

Communication System: 802.11a; Frequency: 5805 MHz;Duty Cycle: 1:1.15
Medium: MSL_5G_120504 Medium parameters used: f = 5805 MHz; σ = 5.968 mho/m; ε_r = 46.462; ρ = 1000 kg/m^3
Ambient Temperature：22.2 ℃; Liquid Temperature：21.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch161/Area Scan (61x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.477 mW/g

Ch161/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0 V/m; Power Drift = 0.001 dB
Peak SAR (extrapolated) = 6.678 mW/g
SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.305 mW/g
Maximum value of SAR (measured) = 2.58 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/5

#66 802.11n_20M_Bottom Face_0cm_Ch36_Ant 1+2

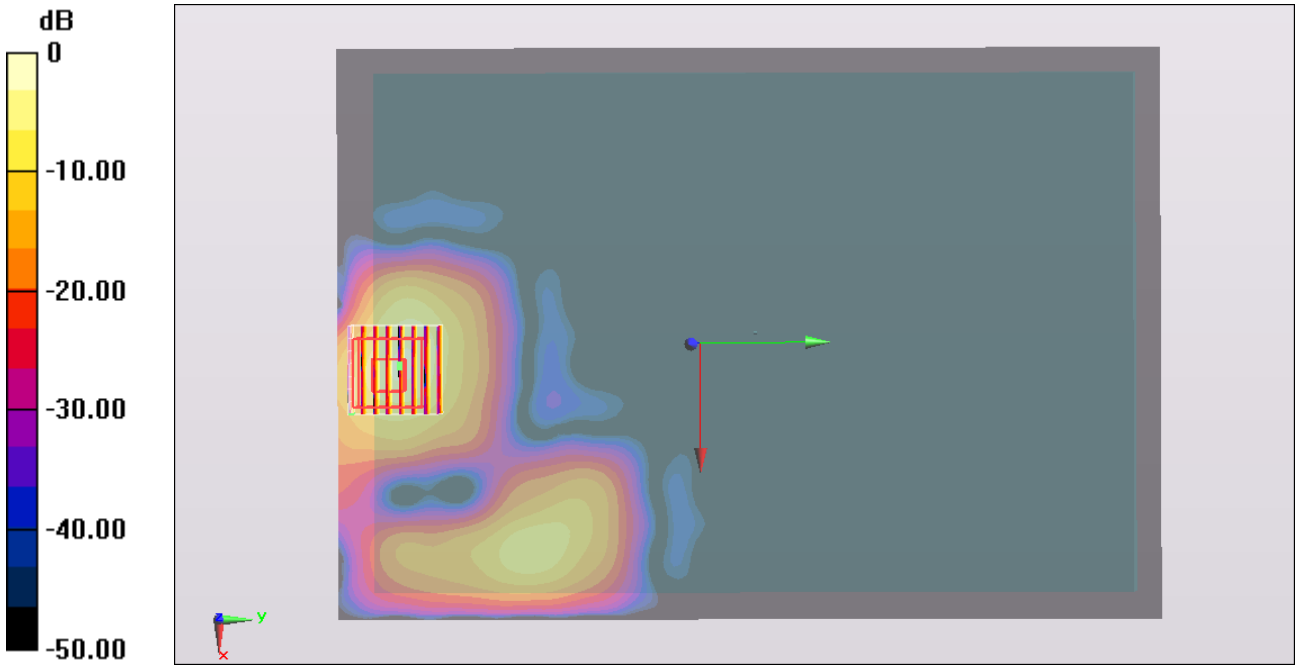
DUT: 1O2041

Communication System: 802.11n; Frequency: 5180 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120505 Medium parameters used : f = 5180 MHz; σ = 5.331 mho/m; ε_r = 48.708; ρ = 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: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch36/Area Scan (181x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.00 mW/g

Ch36/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 3.673 mW/g
SAR(1 g) = 0.951 mW/g; SAR(10 g) = 0.303 mW/g
Maximum value of SAR (measured) = 1.92 mW/g



0 dB = 1.92 mW/g = 5.67 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/5

#67 802.11n_20M_Secondary Landscape_0cm_Ch36_Ant 1+2

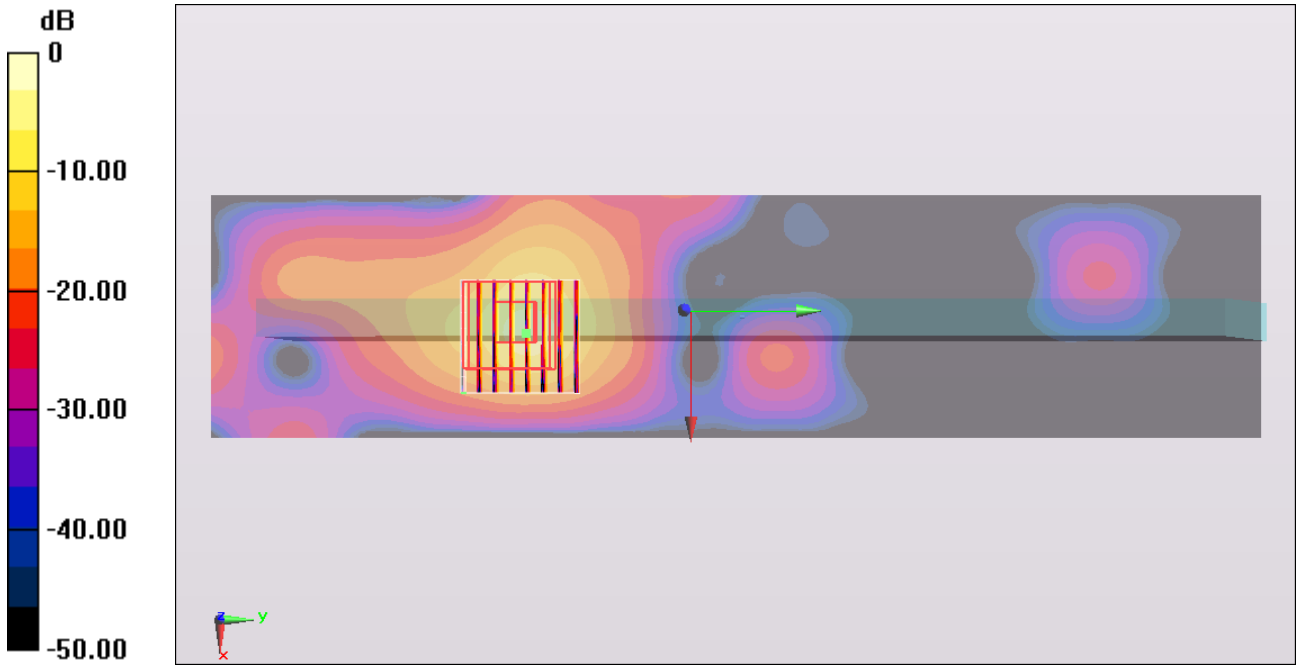
DUT: 1O2041

Communication System: 802.11n; Frequency: 5180 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120505 Medium parameters used : f = 5180 MHz; σ = 5.331 mho/m; ε_r = 48.708; ρ = 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: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch36/Area Scan (61x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.360 mW/g

Ch36/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 4.298 V/m; Power Drift = -0.180 dB
Peak SAR (extrapolated) = 2.155 mW/g
SAR(1 g) = 0.468 mW/g; SAR(10 g) = 0.130 mW/g
Maximum value of SAR (measured) = 1.13 mW/g



0 dB = 1.13 mW/g = 1.06 dB mW/g

#68 802.11n_20M_Secondary Portrait_0cm_Ch36_Ant 1+2

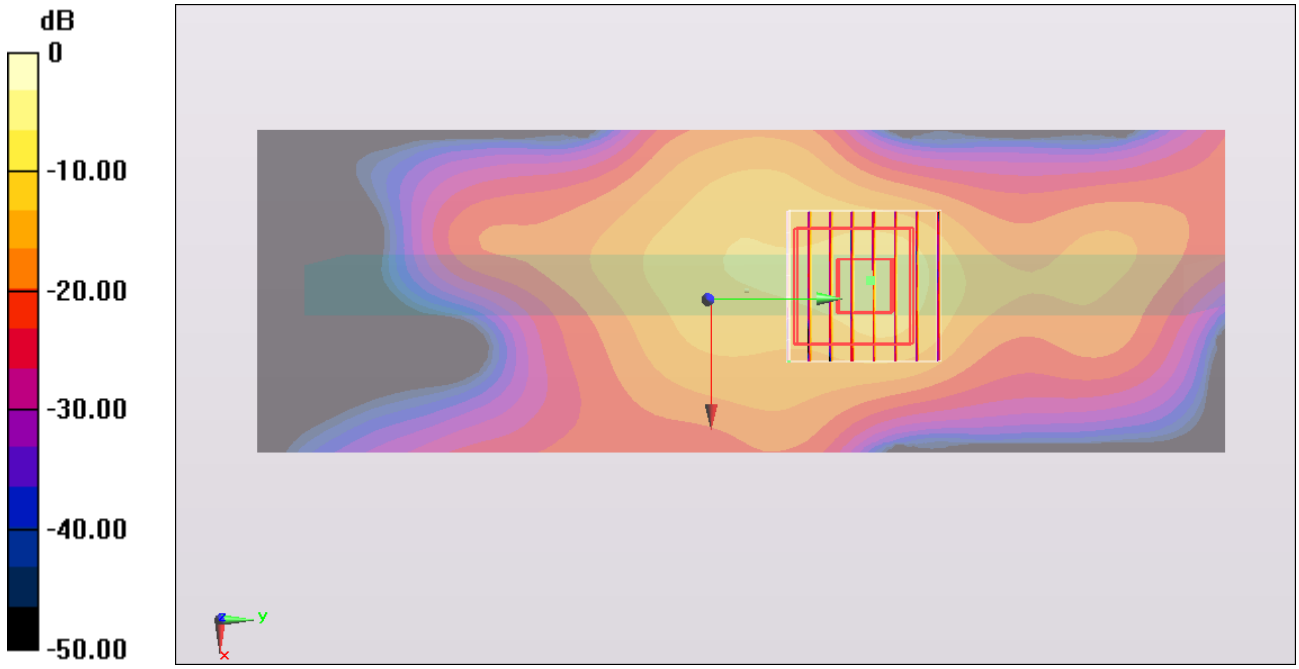
DUT: 1O2041

Communication System: 802.11n; Frequency: 5180 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120505 Medium parameters used : f = 5180 MHz; σ = 5.331 mho/m; ε_r = 48.708; ρ = 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: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch36/Area Scan (61x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.413 mW/g

Ch36/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 8.137 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 4.552 mW/g
SAR(1 g) = 0.92 mW/g; SAR(10 g) = 0.306 mW/g
Maximum value of SAR (measured) = 2.08 mW/g



0 dB = 2.08 mW/g = 7.16 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/5

#86 802.11n_20M_Bottom Face_0cm_Ch48_Ant 1+2

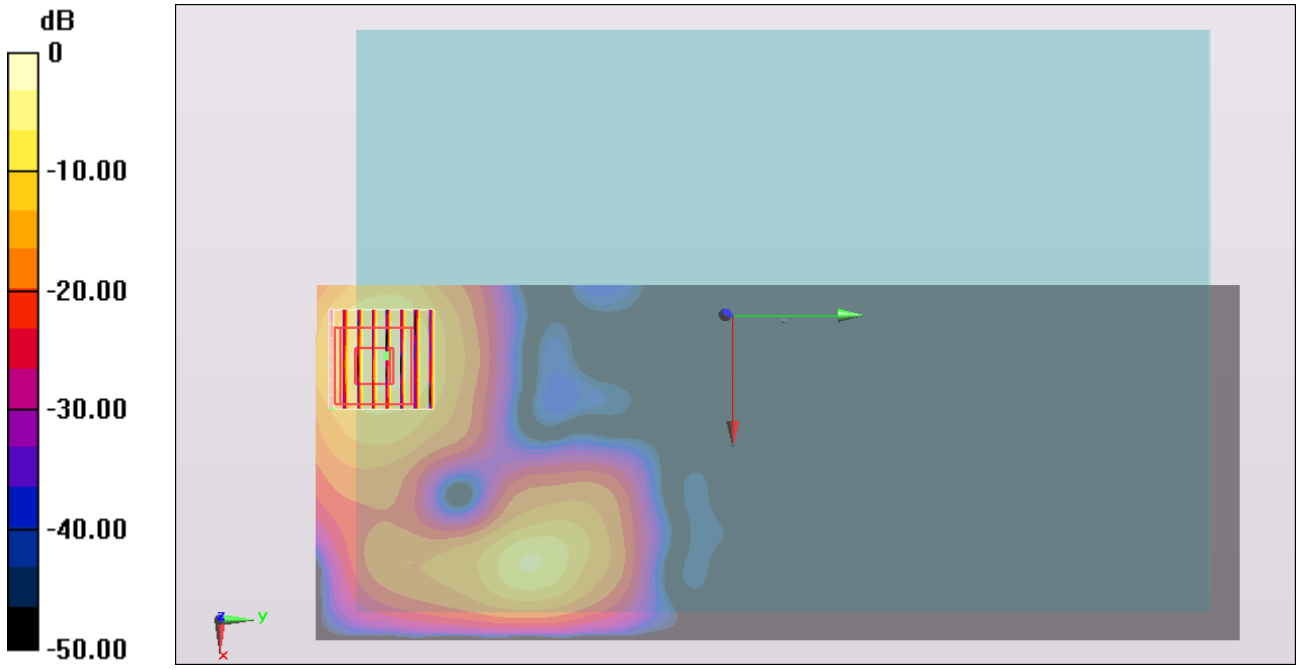
DUT: 1O2041

Communication System: 802.11n; Frequency: 5240 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120505 Medium parameters used : f = 5240 MHz; σ = 5.414 mho/m; ε_r = 48.588; ρ = 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: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch48/Area Scan (101x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.914 mW/g

Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 4.052 mW/g
SAR(1 g) = 0.95 mW/g; SAR(10 g) = 0.346 mW/g
Maximum value of SAR (measured) = 2.10 mW/g



0 dB = 2.10 mW/g = 7.23 dB mW/g

#87 802.11n_20M_Secondary Portrait_0cm_Ch48_Ant 1+2

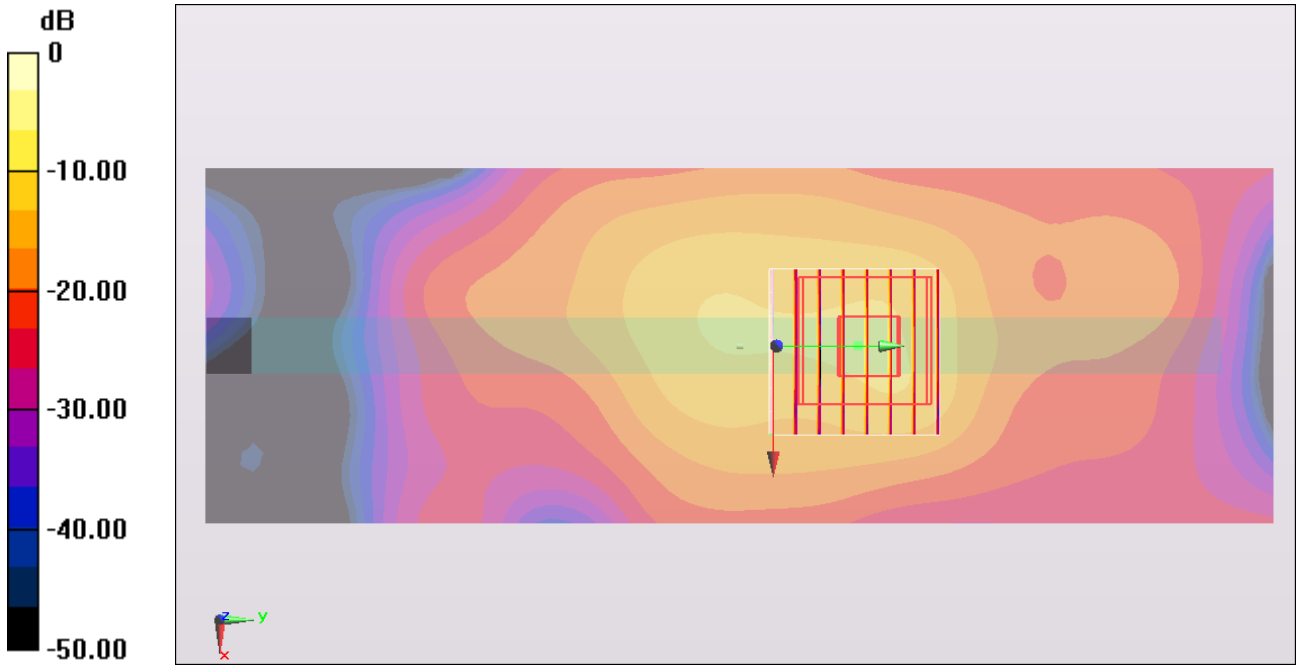
DUT: 1O2041

Communication System: 802.11n; Frequency: 5240 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120505 Medium parameters used : f = 5240 MHz; σ = 5.414 mho/m; ε_r = 48.588; ρ = 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: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch48/Area Scan (61x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.329 mW/g

Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 9.406 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 4.738 mW/g
SAR(1 g) = 0.98 mW/g; SAR(10 g) = 0.341 mW/g
Maximum value of SAR (measured) = 2.52 mW/g



0 dB = 2.52 mW/g = 8.69 dB mW/g

#87 802.11n_20M_Secondary Portrait_0cm_Ch48_Ant 1+2_2D

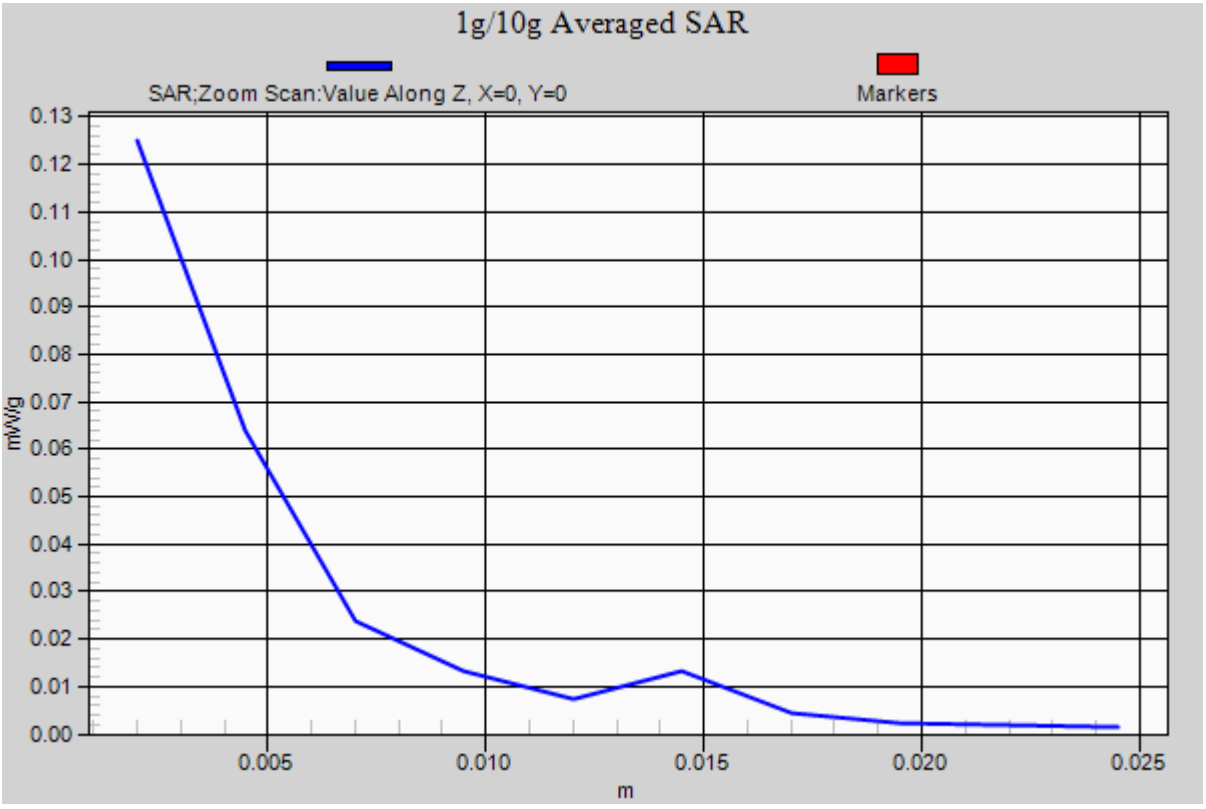
DUT: 1O2041

Communication System: 802.11n; Frequency: 5240 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120505 Medium parameters used : f = 5240 MHz; σ = 5.414 mho/m; ε_r = 48.588; ρ = 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: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch48/Area Scan (61x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.329 mW/g

Ch48/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 9.406 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 4.738 mW/g
SAR(1 g) = 0.98 mW/g; SAR(10 g) = 0.341 mW/g
Maximum value of SAR (measured) = 2.52 mW/g



#77 802.11n_20M_Bottom Face_0cm_Ch149_Ant 1+2

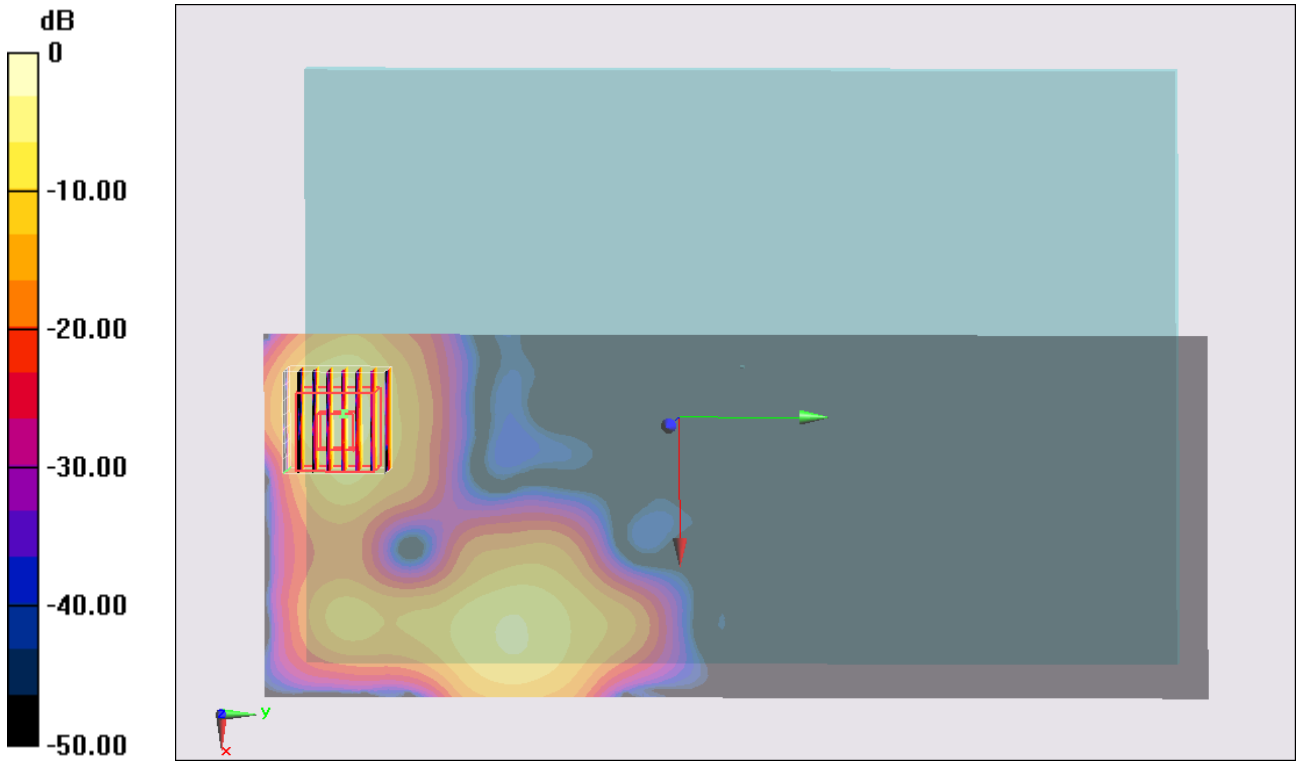
DUT: 1O2041

Communication System: 802.11n; Frequency: 5745 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120621 Medium parameters used: f = 5745 MHz; σ = 5.919 mho/m; ε_r = 47.376; ρ = 1000 kg/m^3
Ambient Temperature：22.5 ℃； Liquid Temperature：21.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.02, 4.02, 4.02); Calibrated: 2011/11/16;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2012/5/3
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch149/Area Scan (101x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.14 mW/g

Ch149/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 5.300 mW/g
SAR(1 g) = 0.98 mW/g; SAR(10 g) = 0.387 mW/g
Maximum value of SAR (measured) = 2.48 mW/g



0 dB = 2.48 mW/g = 8.56 dB mW/g

#78 802.11n_20M_Secondary Landscape_0cm_Ch149_Ant 1+2

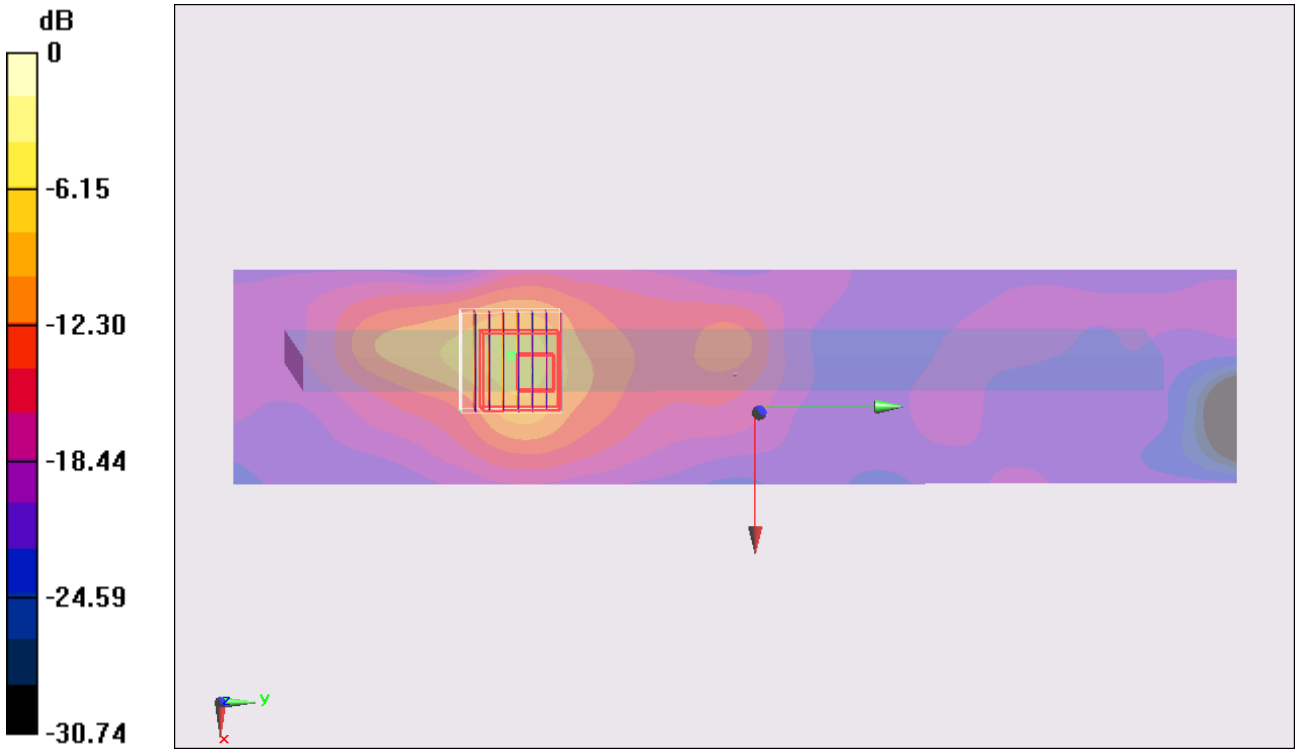
DUT: 1O2041

Communication System: 802.11n; Frequency: 5745 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120706 Medium parameters used: f = 5745 MHz; σ = 6.035 mho/m; ε_r = 47.138; ρ = 1000 kg/m^3
Ambient Temperature：22.3 ℃; Liquid Temperature：21.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.89, 3.89, 3.89); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2012/4/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch149/Area Scan (61x281x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.308 mW/g

Ch149/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 4.909 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 3.023 mW/g
SAR(1 g) = 0.55 mW/g; SAR(10 g) = 0.202 mW/g
Maximum value of SAR (measured) = 1.22 mW/g



0 dB = 1.22 mW/g = 3.05 dB mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/5

#79 802.11n_20M_Secondary Portrait_0cm_Ch149_Ant 1+2

DUT: 1O2041

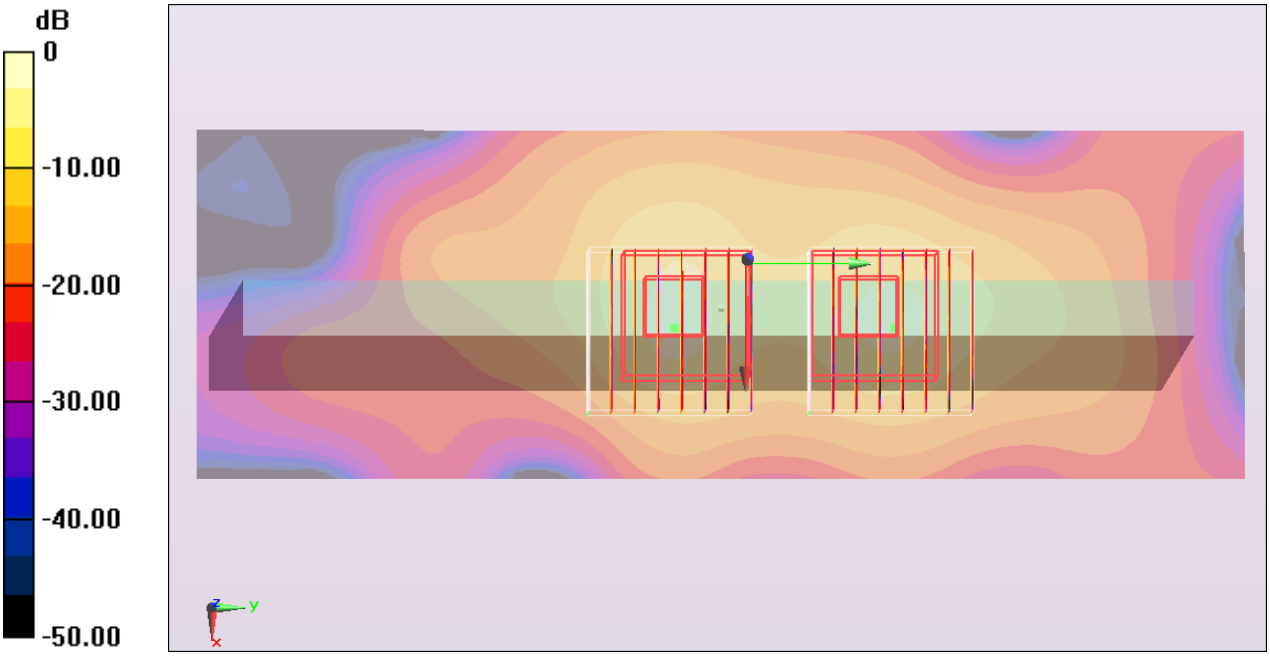
Communication System: 802.11n; Frequency: 5745 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120505 Medium parameters used: f = 5745 MHz; σ = 6.173 mho/m; ε_r = 47.501; ρ = 1000 kg/m^3
Ambient Temperature：22.4 ℃; Liquid Temperature：21.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch149/Area Scan (61x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.453 mW/g

Ch149/Zoom Scan (8x8x10)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 9.411 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 4.164 mW/g
SAR(1 g) = 0.963 mW/g; SAR(10 g) = 0.269 mW/g
Maximum value of SAR (measured) = 2.24 mW/g

Ch149/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 9.411 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 3.684 mW/g
SAR(1 g) = 0.739 mW/g; SAR(10 g) = 0.200 mW/g
Maximum value of SAR (measured) = 1.68 mW/g



0 dB = 1.68 mW/g = 4.51 dB mW/g

#80 802.11n_20M_Bottom Face_0cm_Ch157_Ant 1+2

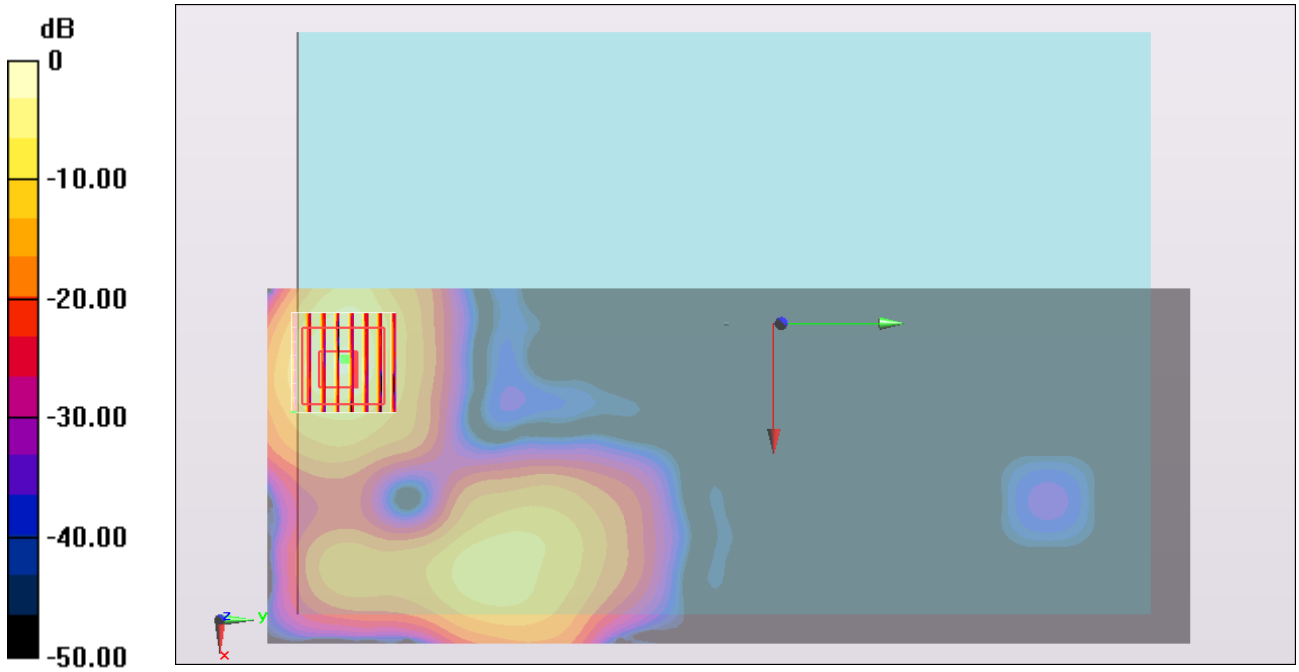
DUT: 1O2041

Communication System: 802.11n; Frequency: 5785 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120621 Medium parameters used: f = 5785 MHz; σ = 5.961 mho/m; ε_r = 47.221; ρ = 1000 kg/m^3
Ambient Temperature：22.5 ℃； Liquid Temperature：21.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.02, 4.02, 4.02); Calibrated: 2011/11/16;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2012/5/3
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch157/Area Scan (101x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.54 mW/g

Ch157/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 4.408 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 6.117 mW/g
SAR(1 g) = 0.956 mW/g; SAR(10 g) = 0.375 mW/g
Maximum value of SAR (measured) = 2.56 mW/g



0 dB = 2.56 mW/g = 12.19 dB mW/g

#80 802.11n_20M_Bottom Face_0cm_Ch157_Ant 1+2_2D

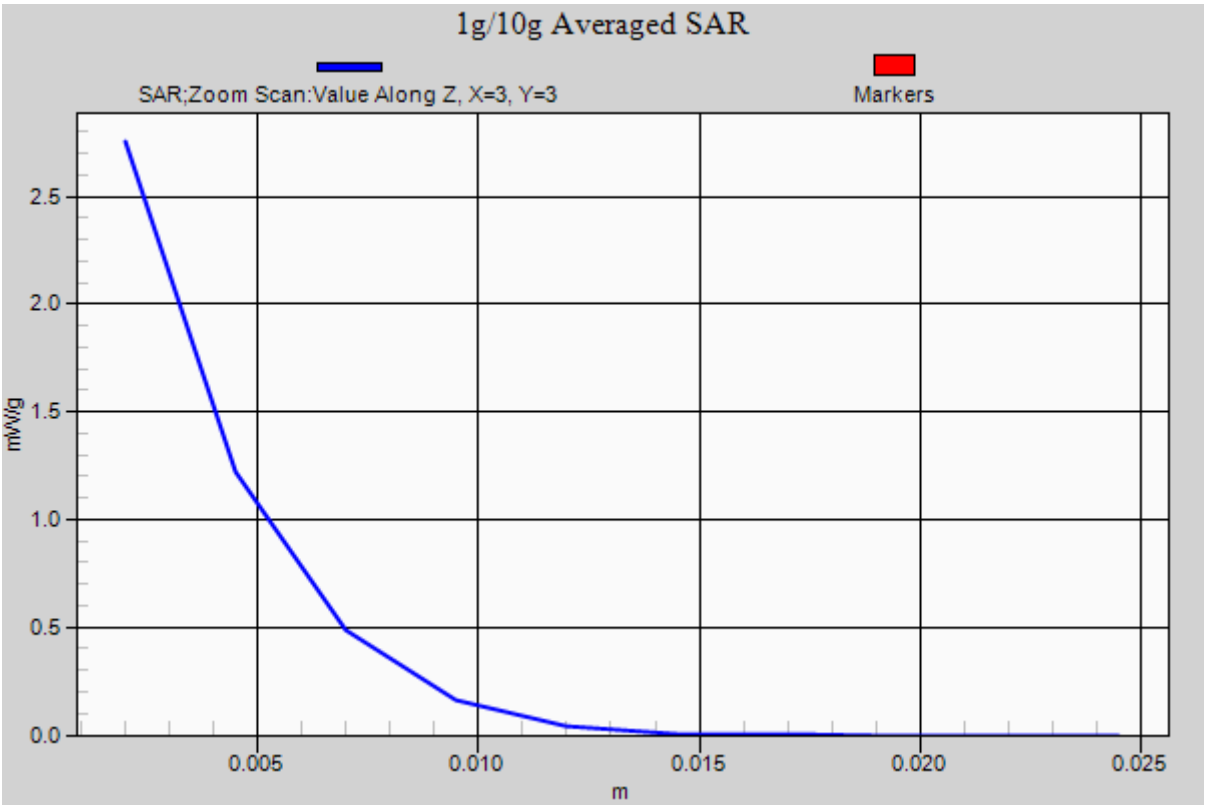
DUT: 1O2041

Communication System: 802.11n; Frequency: 5785 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120621 Medium parameters used: f = 5785 MHz; σ = 5.961 mho/m; ε_r = 47.221; ρ = 1000 kg/m^3
Ambient Temperature：22.5 ℃; Liquid Temperature：21.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3819; ConvF(4.02, 4.02, 4.02); Calibrated: 2011/11/16;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2012/5/3
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch157/Area Scan (101x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.54 mW/g

Ch157/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 4.408 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 6.117 mW/g
SAR(1 g) = 0.956 mW/g; SAR(10 g) = 0.375 mW/g
Maximum value of SAR (measured) = 2.56 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2012/5/5

#81 802.11n_20M_Bottom Face_0cm_Ch161_Ant 1+2

DUT: 1O2041

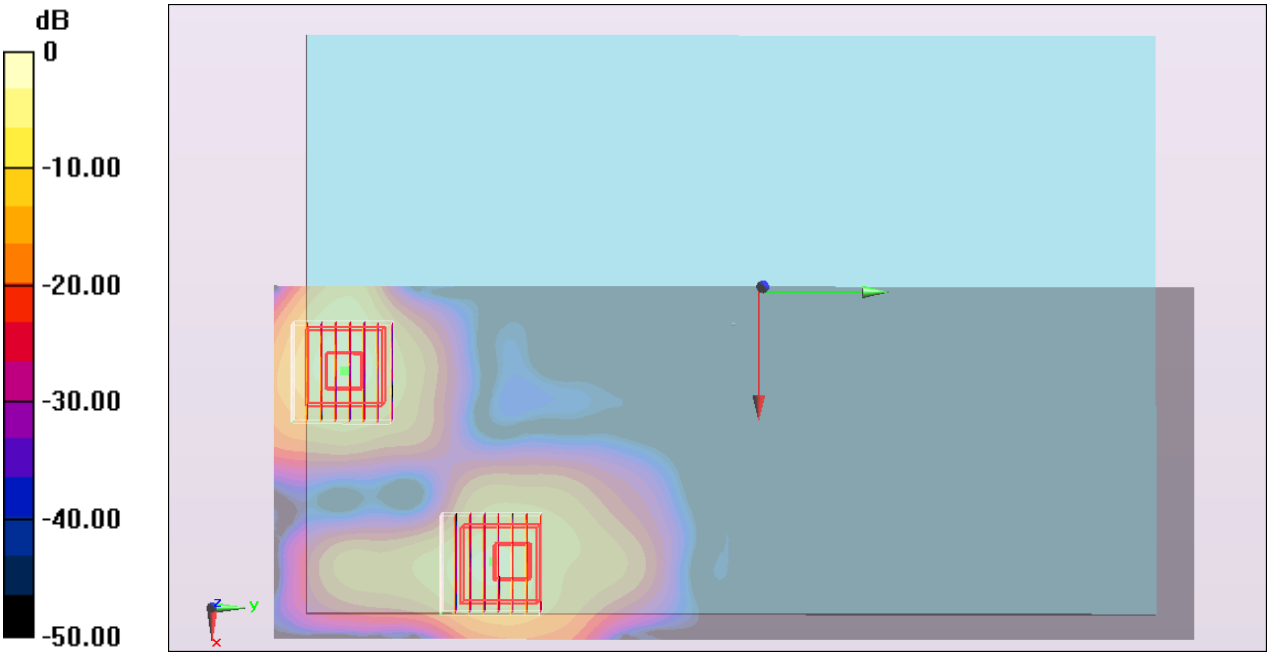
Communication System: 802.11n; Frequency: 5805 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120505 Medium parameters used: f = 5805 MHz; σ = 6.237 mho/m; ε_r = 47.305; ρ = 1000 kg/m^3
Ambient Temperature：22.4 ℃; Liquid Temperature：21.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch161/Area Scan (101x261x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.684 mW/g

Ch161/Zoom Scan (8x8x10)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 5.457 mW/g
SAR(1 g) = 0.982 mW/g; SAR(10 g) = 0.288 mW/g
Maximum value of SAR (measured) = 2.08 mW/g

Ch161/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 0 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 4.607 mW/g
SAR(1 g) = 0.739 mW/g; SAR(10 g) = 0.206 mW/g
Maximum value of SAR (measured) = 1.93 mW/g



0 dB = 1.93 mW/g = 5.71 dB mW/g

#83 802.11n_20M_Secondary Portrait_0cm_Ch157_Ant 1+2

DUT: 1O2041

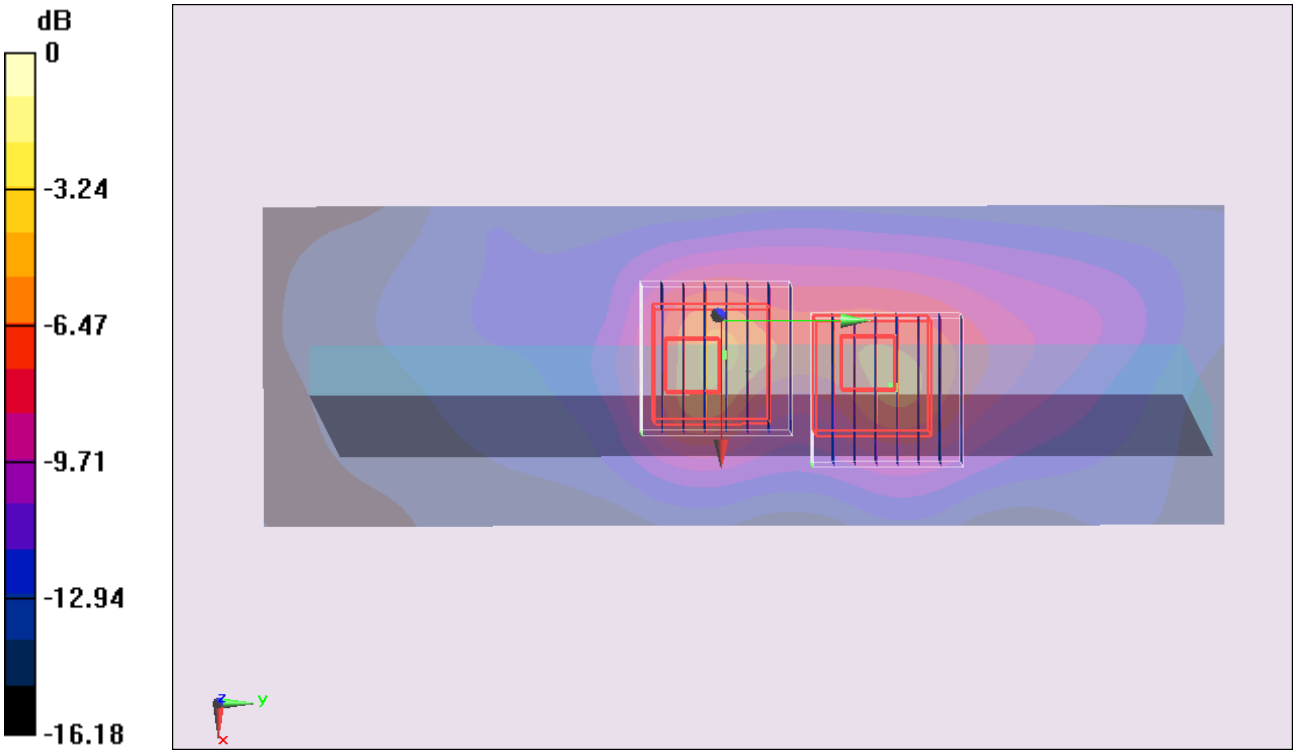
Communication System: 802.11n; Frequency: 5785 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120706 Medium parameters used: f = 5785 MHz; σ = 6.079 mho/m; ε_r = 46.989; ρ = 1000 kg/m^3
Ambient Temperature：22.3 ℃; Liquid Temperature：21.3 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.89, 3.89, 3.89); Calibrated: 2012/6/21;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2012/4/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch157/Area Scan (61x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.353 mW/g

Ch157/Zoom Scan (8x8x10)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 8.587 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 2.472 mW/g
SAR(1 g) = 0.646 mW/g; SAR(10 g) = 0.218 mW/g
Maximum value of SAR (measured) = 1.30 mW/g

Ch157/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 8.587 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 2.108 mW/g
SAR(1 g) = 0.555 mW/g; SAR(10 g) = 0.185 mW/g
Maximum value of SAR (measured) = 1.13 mW/g



0 dB = 1.13 mW/g = 1.06 dB mW/g

#84 802.11n_20M_Secondary Portrait_0cm_Ch161_Ant 1+2

DUT: 1O2041

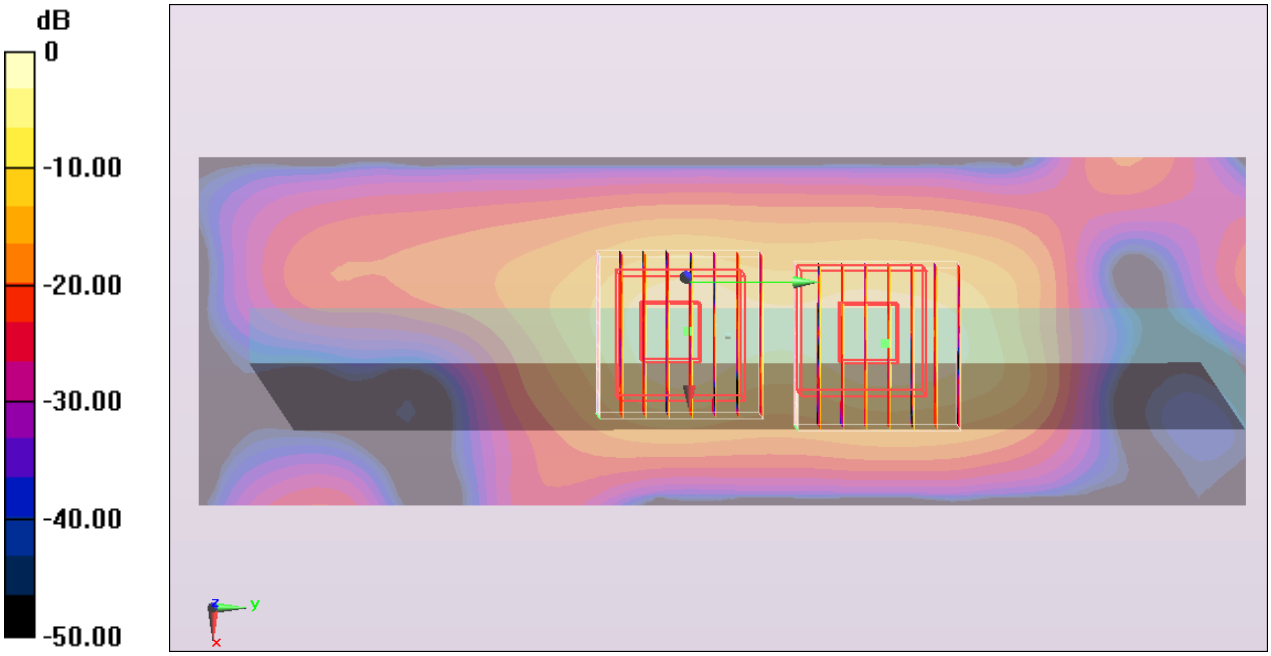
Communication System: 802.11n; Frequency: 5805 MHz;Duty Cycle: 1:1.31
Medium: MSL_5G_120505 Medium parameters used: f = 5805 MHz; σ = 6.237 mho/m; ε_r = 47.305; ρ = 1000 kg/m^3
Ambient Temperature：22.4 ℃; Liquid Temperature：21.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3792; ConvF(3.78, 3.78, 3.78); Calibrated: 2011/6/20;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn913; Calibrated: 2011/12/23
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP1127
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

Ch161/Area Scan (61x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.448 mW/g

Ch161/Zoom Scan (8x8x10)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 6.715 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 2.766 mW/g
SAR(1 g) = 0.530 mW/g; SAR(10 g) = 0.157 mW/g
Maximum value of SAR (measured) = 1.25 mW/g

Ch161/Zoom Scan (8x8x10)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 6.715 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.705 mW/g
SAR(1 g) = 0.452 mW/g; SAR(10 g) = 0.121 mW/g
Maximum value of SAR (measured) = 0.974 mW/g



0 dB = 0.974 mW/g = -0.23 dB mW/g

Appendix C. DASY Calibration Certificate

The DASY calibration certificates are shown as follows.