Specific Absorption Rate (SAR) Test Report

for

D-Link Co.

on the

Xtreme N Dual Band USB Adapter

Report No.	:	FA7D1705
Trade Name	:	D-Link
Model Name	:	DWA-160
FCC ID	:	KA2WA160B1
Date of Testing	:	Feb. 14, and 18~19, 2008
Date of Report	:	Feb. 25, 2008
Date of Review	:	Feb. 25, 2008

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- Report Version: Rev. 01

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1. Statement of Compliance

The Specific Absorption Rate (SAR) maximum result found during testing for the **D-Link Co. Xtreme N Dual Band USB Adapter D-Link DWA-160** on the 2.4GHz band and 5GHz band body SAR are as follows (with expanded uncertainty 21.9% for 2.4GHz Band and 25.9% for 5GHz Band):

802.11b/g/n (2400MHz ~ 2483.5MHz) Body SAR (W/kg)	802.11a/n (5150MHz ~ 5250MHz) Body SAR (W/kg)	802.11a/n (5250MHz ~ 5350MHz) Body SAR (W/kg)	802.11a/n (5470MHz ~ 5720MHz) Body SAR (W/kg)	802.11a/n (5725MHz ~ 5850MHz) Body SAR (W/kg)
1.35	0.423	1.02	0.806	0.599

They are in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1999 and had been tested in accordance with the measurement methods and procedures specified in OET Bulletin 65 Supplement C (Edition 01-01).

Approved by

Roy Wu
Manager

2. Administration Data

2.1 Testing Laboratory

Company Name : Sporton International Inc.
Department : Antenna Design/SAR
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Telephone Number : 886-3-327-3456
Fax Number : 886-3-328-4978

2.2 Detail of Applicant

Company Name : D-Link Co.
Address : D-Link: No.289, Shinhu 3rd Rd., Neihu District, Taipei City 114, Taiwan, R.O.C.

2.3 Detail of Manufacturer

Company Name : Alpha Networks Inc
Address :
1. No.8 Li-shing 7th Rd., Science-based Industrial Park, Hsinchu, Taiwan, R.O.C.
2. Jiekou Administration Zone, Canghan Town, Dongguan City, Guangdong Province, China

2.4 Application Details

Date of reception of application: Dec. 17, 2007
Start of test : Feb. 14, 2008
End of test : Feb. 19, 2008

3. General Information

3.1 Description of Device Under Test (DUT)

Product Feature & Specification	
DUT Type :	Xtreme N Dual Band USB Adapter
Trade Name :	D-Link
Model Name :	DWA-160
FCC ID :	KA2WA160B1
Frequency Range :	802.11b/g/n : 2400 MHz ~ 2483.5 MHz 802.11a/n : 5150 MHz ~ 5250 MHz, 5250 MHz ~ 5350 MHz 5470 MHz ~ 5725 MHz, 5725 MHz ~ 5850 MHz
Maximum Output Power to Antenna :	**<2400 MHz ~ 2483.5 MHz>** 802.11b : 16.90 dBm 802.11g : 16.51 dBm 802.11n (BW 20MHz) : 15.43 dBm 802.11n (BW 40MHz) : 17.00 dBm **<5150 MHz ~ 5250 MHz>** 802.11a : 15.06 dBm 802.11n (BW 20MHz) : 14.65 dBm 802.11n (BW 40MHz) : 15.88 dBm **<5250 MHz ~ 5350 MHz>** 802.11a : 16.56 dBm 802.11n (BW 20MHz) : 16.21 dBm 802.11n (BW 40MHz) : 15.36 dBm **<5470 MHz ~ 5725 MHz>** 802.11a : 15.15 dBm 802.11n (BW 20MHz) : 16.91 dBm 802.11n (BW 40MHz) : 16.32 dBm **<5725 MHz ~ 5850 MHz>** 802.11a : 15.39 dBm 802.11n (BW 20MHz) : 15.79 dBm 802.11n (BW 40MHz) : 15.83 dBm
Type of Antenna Connector :	N/A
Antenna Type :	Ant.-A : Printed Antenna Ant.-B : Printed Antenna
Antenna Gain :	Ant.-A : 2.27 dBi for 802.11b/g/n 3.88 dBi for 802.11a/n Ant.-B : 2.27 dBi for 802.11b/g/n 3.88 dBi for 802.11a/n
Type of Modulation :	DSSS / OFDM
DUT Stage :	Production Unit
Application Type :	Certification

Remark: 1. For 802.11a/b/g, Ant.-A is for Tx, and Ant.-B is for Rx only.
2. For 802.11n, Ant.-A and Ant.-B can transmit simultaneously.

3.2 Product Photo

Please refer to Appendix D

3.3 Applied Standards

The Specific Absorption Rate (SAR) testing specification, method and procedure for this Xtreme N Dual Band USB Adapter is in accordance with the following standards:

47 CFR Part 2 (2.1093),
IEEE C95.1-1999,
IEEE C95.3-2002,
IEEE P1528 -2003, and
OET Bulletin 65 Supplement C (Edition 01-01)

3.4 Device Category and SAR Limits

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user.

Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

3.5 Test Conditions

3.5.1 Ambient Condition

Item	MSL_2450	MSL_5200	MSL_5300	MSL_5500	MSL_5800
Ambient Temperature (°C)	20 ~ 24℃				
Tissue simulating liquid temperature (°C)	21.4℃	21.3℃	21.1℃	21.3℃	21.3℃
Humidity (%)	< 60%				

3.5.2 Test Configuration

For WLAN link mode, engineering testing software installed on the EUT can provide continuous transmitting RF signal. This RF signal utilized in SAR measurement has almost 100% duty cycle and its crest factor is 1. Measurements were performed on the lowest, middle, and highest channel for each testing position. However, measurements were performed only on the middle channel if the SAR is below 3 dB of limit for body SAR testing.

The data rates for WLAN SAR testing were set in 1Mbps for 802.11b, 6Mbps for 802.11g, 6Mbps for 802.11a, 13Mbps for 802.11n BW 20MHz and 27Mbps for 802.11n BW 40MHz due to the highest RF output power.

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 FCC 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:

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

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

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

$$\mathbf{SAR} = C\frac{\delta T}{\delta t}$$

, where C is the specific head capacity, δT is the temperature rise and δt the exposure duration,

or related to the electrical field in the tissue by

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

, where σ is the conductivity of the tissue, ρ is the mass density of the tissue and $\boldsymbol{E}$ is the rms electrical field strength.

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

5. SAR Measurement Setup

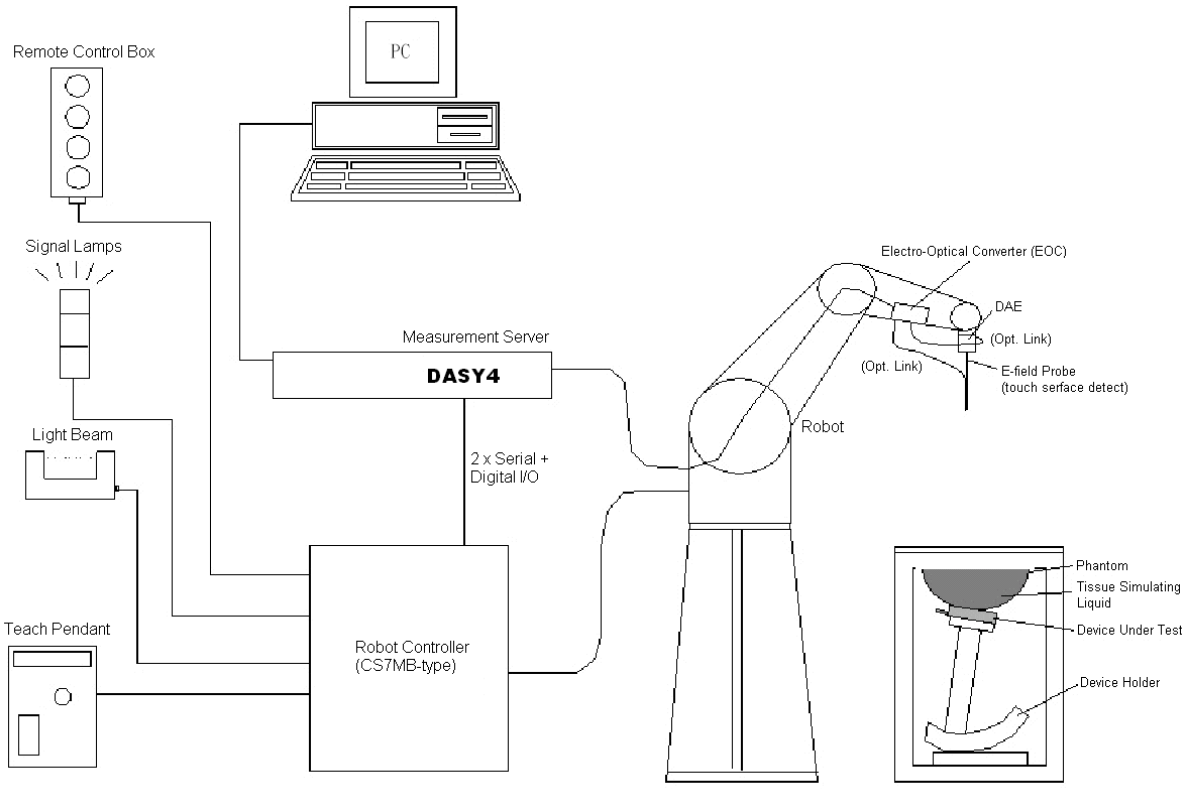


Fig. 5.1 DASY4 system

The DASY4 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 (ECO) 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
- DASY4 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 DASY4 E-Field Probe System

The SAR measurement is conducted with the dosimetric probe ET3DV6 and EX3DV3 (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 ET3DV6 E-Field Probe Specification

<ET3DV6>

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)
Frequency	10 MHz to 3 GHz
Directivity	± 0.2 dB in brain tissue (rotation around probe axis) ± 0.4 dB in brain tissue (rotation perpendicular to probe axis)
Dynamic Range	5 μ W/g to 100mW/g; Linearity: ±0.2dB
Surface Detection	± 0.2 mm repeatability in air and clear liquids on reflecting surface
Dimensions	Overall length: 330mm Tip length: 16mm Body diameter: 12mm Tip diameter: 6.8mm Distance from probe tip to dipole centers: 2.7mm
Application	General dosimetry up to 3GHz Compliance tests for mobile phones and Wireless LAN Fast automatic scanning in arbitrary phantoms

Fig. 5.2 Probe Setup on Robot

<EX3DV3 Probe>

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents)
Frequency	10 MHz to 6 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)
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
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

Fig. 5.3 EX3DV3 E-field Probe

5.1.2 ET3DV6 and EX3DV3 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 ± 0.25dB. 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 are as below:

- **ET3DV6 sn1788**

Sensitivity	X axis : 1.72 µV		Y axis : 1.66 µV	Z axis : 1.70 µV
Diode compression point	X axis : 91 mV		Y axis : 93 mV	Z axis : 94 mV
Conversion factor (Body)	**Frequency (MHz)**	**X axis**	**Y axis**	**Z axis**
	2350~2550	4.17	4.17	4.17
Boundary effect (Body)	**Frequency (MHz)**	**Alpha**	**Depth**	
	2350~2550	0.61	2.58	

➢ **EX3DV3 sn3514**

Sensitivity	X axis : 0.650 μV		Y axis : 0.690 μV	Z axis : 0.580 μV
Diode compression point	X axis : 95 mV		Y axis : 93 mV	Z axis : 96 mV
Conversion factor (Body)	**Frequency (MHz)**	**X axis**	**Y axis**	**Z axis**
	5100~5300	4.34	4.34	4.34
	5200~5400	4.06	4.06	4.06
	5400~5600	3.98	3.98	3.98
	5500~5700	4.19	4.19	4.19
	5700~5900	4.20	4.20	4.20
Boundary effect (Body)	**Frequency (MHz)**	**Alpha**	**Depth**	
	5100~5300	0.35	1.70	
	5200~5400	0.38	1.70	
	5400~5600	0.43	1.70	
	5500~5700	0.35	1.70	
	5700~5900	0.30	1.70	

NOTE: The probe parameters have been calibrated by the SPEAG.

5.2 DATA Acquisition Electronics (DAE)

The data acquisition electronics (DAE4) 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 mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of the DAE4 is 200M Ohm; the inputs are symmetrical and floating. Common mode rejection is above 80dB.

5.3 Robot

The DASY4 system uses the high precision robots RX90BL type out of the newer series from Stäubli SA (France). For the 6-axis controller DASY4 system, the CS7MB robot controller version from Stäubli is used. The RX robot series have many features that are important for our application:

- High precision (repeatability 0.02 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)
- 6-axis controller

5.4 Measurement Server

The DASY4 measurement server is based on a PC/104 CPU board with
166 MHz CPU
32 MB chipset and
64 MB RAM.

Communication with
the DAE4 electronic box
the 16-bit AD-converter system for optical detection and digital I/O interface.

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

5.5 SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:

- Left head
- Right head
- Flat 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.

The phantom can be used with the following tissue simulating liquids:
*Water-sugar based liquid
*Glycol based liquids

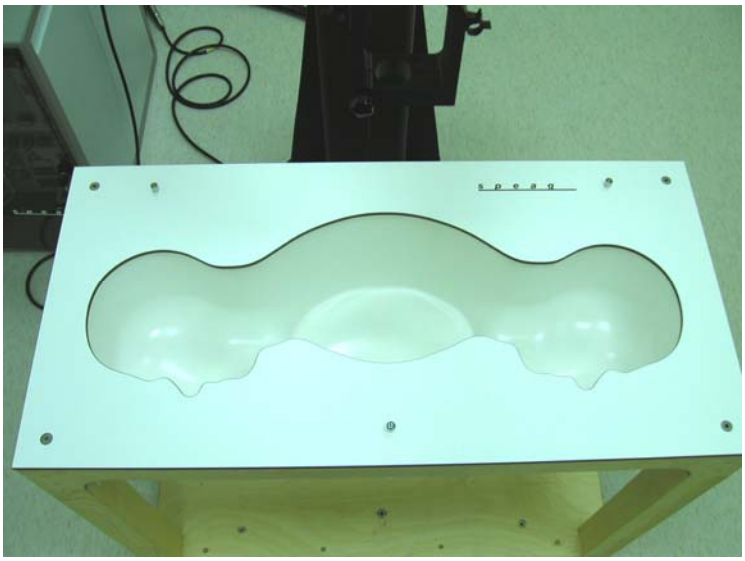


Fig. 5.3 Top View of Twin Phantom

Fig. 5.4 Bottom View of Twin Phantom

5.6 Data Storage and Evaluation

5.6.1 Data Storage

The DASY4 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 with the extension .DA4. 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-louse media, will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

5.6.2 Data Evaluation

The DASY4 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：

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

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： $E_i = \sqrt{\frac{V_i}{Norm_i ConvF}}$

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

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

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

$$E_{tot} = \sqrt{E_X^2 + E_Y^2 + E_Z^2}$$

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

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

with
SAR = local specific absorption rate in mW/g
Etot = 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.

The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = \frac{E_{tot}^2}{3770} \quad \text{or} \quad P_{pwe} = H_{tot}^2 \cdot 37.7$$

with
P_{pwe} = equivalent power density of a plane wave in mW/cm^2
E_{tot} = total electric field strength in V/m
H_{tot} = total magnetic field strength in A/m

5.7 Test Equipment List

Manufacture	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	Dosimetric E-Filed Probe	ET3DV6	1788	Sep. 26, 2007	Sep. 26, 2008
SPEAG	Dosimetric E-Filed Probe	EX3DV3	3514	Jan. 31, 2008	Jan. 31, 2009
SPEAG	2450MHz System Validation Kit	D2450V2	736	Jul. 12, 2007	Jul. 12, 2009
SPEAG	5GHz System Validation Kit	D5GHzV2	1006	Jan. 24, 2008	Jan. 24, 2010
SPEAG	Data Acquisition Electronics	DAE4	778	Sep. 17, 2007	Sep. 17, 2008
SPEAG	Device Holder	N/A	N/A	NCR	NCR
SPEAG	Phantom	QD 000 P40 C	TP-1303	NCR	NCR
SPEAG	Phantom	QD 000 P40 C	TP-1383	NCR	NCR
SPEAG	Phantom	QD 0VA 001 BB	1029	NCR	NCR
SPEAG	Robot	Staubli RX90BL	F03/5W15A1/A/01	NCR	NCR
SPEAG	Software	DASY4 V4.7 Build 55	N/A	NCR	NCR
SPEAG	Software	SEMCAD V1.8 Build 176	N/A	NCR	NCR
SPEAG	Measurement Server	SE UMS 001 BA	1021	NCR	NCR
Agilent	ENA Series Network Analyzer	E5071C	MY46100746	Feb. 21, 2007	Feb. 21, 2008
Agilent	Wireless Communication Test Set	E5515C	GB46311322	Dec. 22, 2006	Dec. 22, 2008
Agilent	Dielectric Probe Kit	85070D	US01440205	NCR	NCR
Agilent	Dual Directional Coupler	778D	50422	NCR	NCR
Agilent	Power Amplifier	8449B	3008A01917	NCR	NCR
R&S	Power Meter	NRVS	100444	Jun. 27, 2007	Jun. 27, 2008
R&S	Power Sensor	NRV-Z32	100057	Jun. 27, 2007	Jun. 27, 2008
Agilent	Signal Generator	E8247C	MY43320596	Mar. 01, 2006	Mar. 01, 2008

Table 5.1 Test Equipment List

6. Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY4, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. The liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is (head SAR) or from the flat phantom to the liquid top surface (body SAR) is 15.2cm.

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.

Table 6.1 shows the measuring results for muscle simulating liquid.

Bands	Frequency (MHz)	Permittivity (ε_r)	Conductivity (σ)	Measurement date
802.11b/g/n (2400~2450 MHz)	2412	53.8	1.92	Feb. 14, 2008
	2437	53.6	1.95	
	2462	53.5	1.98	
802.11a/n (5150~5250 MHz)	5180	48.7	5.30	Feb. 18, 2008
	5190	48.7	5.31	
	5200	48.6	5.33	
	5240	48.6	5.39	
802.11a/n (5250~5350 MHz)	5260	48.6	5.42	Feb. 18, 2008
	5270	48.5	5.44	
	5300	48.5	5.47	
	5320	48.4	5.50	
802.11a/n (5470~5725 MHz)	5500	48.1	5.74	Feb. 19, 2008
	5590	47.7	5.84	
	5600	47.7	5.85	
	5700	47.4	5.93	
802.11a/n (5725~5850 MHz)	5745	47.5	6.05	Feb. 19, 2008
	5755	47.5	6.09	
	5785	47.4	6.09	
	5825	47.2	6.13	

Table 6.1 Measuring Results for Muscle Simulating Liquid

The measuring data are consistent with ε r = 52.7 ± 5%, σ = 1.95 ± 5% for 2400~2483.5MHz, ε r = 49.0 ± 5% and σ = 5.30 ± 5% for 5150~5350MHz, ε_r = 48.6 ± 5% and σ = 5.65 ± 5% for 5470~5725MHz and ε r = 48.2 ±5%, 6 = 6.00 ± 5% for body 5725~5850MHz.

7. 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 A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

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

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

Uncertainty Distributions	Normal	Rectangular	Triangular	U-shape
Multiplying 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 7.1 Standard Uncertainty for Assumed Distribution

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

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY4 uncertainty Budget is showed in Table 7.2.

Error Description	Uncertainty Value ± %	Probability Distribution	Divisor	Ci (1g)	Standard Unc. (1g)	vi or Veff
Measurement Equipment						
Probe Calibration	±5.9 %	Normal	1	1	±5.9 %	∞
Axial Isotropy	±4.7 %	Rectangular	√3	0.7	±1.9 %	∞
Hemispherical Isotropy	±9.6 %	Rectangular	√3	0.7	±3.9 %	∞
Boundary Effects	±1.0 %	Rectangular	√3	1	±0.6 %	∞
Linearity	±4.7 %	Rectangular	√3	1	±2.7 %	∞
System Detection Limits	±1.0 %	Rectangular	√3	1	±0.6 %	∞
Readout Electronics	±0.3 %	Normal	1	1	±0.3 %	∞
Response Time	±0.8 %	Rectangular	√3	1	±0.5 %	∞
Integration Time	±2.6 %	Rectangular	√3	1	±1.5 %	∞
RF Ambient Noise	±3.0 %	Rectangular	√3	1	±1.7 %	∞
RF Ambient Reflections	±3.0 %	Rectangular	√3	1	±1.7 %	∞
Probe Positioner	±0.4 %	Rectangular	√3	1	±0.2 %	∞
Probe Positioning	±2.9 %	Rectangular	√3	1	±1.7 %	∞
Max. SAR Eval.	±1.0 %	Rectangular	√3	1	±0.6 %	∞
Test Sample Related						
Device Positioning	±2.9 %	Normal	1	1	±2.9	145
Device Holder	±3.6 %	Normal	1	1	±3.6	5
Power Drift	±5.0 %	Rectangular	√3	1	±2.9	∞
Phantom and Setup						
Phantom Uncertainty	±4.0 %	Rectangular	√3	1	±2.3	∞
Liquid Conductivity (target)	±5.0 %	Rectangular	√3	0.64	±1.8	∞
Liquid Conductivity (meas.)	±2.5 %	Normal	1	0.64	±1.6	∞
Liquid Permittivity (target)	±5.0 %	Rectangular	√3	0.6	±1.7	∞
Liquid Permittivity (meas.)	±2.5 %	Normal	1	0.6	±1.5	∞
Combined Standard Uncertainty					**±10.9**	**387**
Coverage Factor for 95 %		**K=2**				
Expanded uncertainty (Coverage factor = 2)					**±21.9**	

Table 7.2 Uncertainty Budget of DASY4 for 2.4GHz

Error Description	Uncertainty Value	Probability Distribution	Divisor	Ci (1g)	Standard Unc. (1g)	vi or Veff
Measurement System						
Probe Calibration	±6.8 %	Normal	1	1	±6.8 %	∞
Axial Isotropy	±4.7 %	Rectangular	√3	0.7	±1.9 %	∞
Hemispherical Isotropy	±9.6 %	Rectangular	√3	0.7	±3.9 %	∞
Boundary Effect	±2.0 %	Rectangular	√3	1	±1.2 %	∞
Linearity	±4.7 %	Rectangular	√3	1	±2.7 %	∞
System Detection Limit	±1.0 %	Rectangular	√3	1	±0.6 %	∞
Readout Electronics	±0.3 %	Normal	1	1	±0.3 %	∞
Response Time	±0.8 %	Rectangular	√3	1	± 0.5 %	∞
Integration Time	±2.6 %	Rectangular	√3	1	± 1.5 %	∞
RF Ambient Noise	±3.0 %	Rectangular	√3	1	±1.7 %	∞
RF Ambient Reflections	±3.0 %	Rectangular	√3	1	±1.7 %	∞
Probe Positioner	±0.8 %	Rectangular	√3	1	±0.5 %	∞
Probe Positioning	±9.9 %	Rectangular	√3	1	±5.7 %	∞
Max. SAR Eval.	±4.0 %	Rectangular	√3	1	±2.3 %	∞
Test Sample Related						
Device Positioning	±2.9 %	Normal	1	1	±2.9 %	145
Device Holder	±3.6 %	Normal	1	1	±3.6 %	5
Power Drift	±5.0 %	Rectangular	√3	1	±2.9 %	∞
Phantom and Setup						
Phantom Uncertainty	±4.0 %	Rectangular	√3	1	±2.3 %	∞
Liquid Conductivity (target)	±5.0 %	Rectangular	√3	0.64	±1.8 %	∞
Liquid Conductivity (meas.)	±2.5 %	Normal	1	0.64	±1.6 %	∞
Liquid Permittivity (target)	±5.0 %	Rectangular	√3	0.6	±1.7 %	∞
Liquid Permittivity (meas.)	±2.5 %	Normal	1	0.6	±1.5 %	∞
Combined Std. Uncertainty					**±12.9 %**	**330**
Coverage Factor for 95%	**Kp=2**					
Expanded STD Uncertainty					**±25.9 %**	

Table 7.3 Uncertainty Budget of DASY4 for 5GHz Band

8. SAR Measurement Evaluation

Each DASY4 system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the DASY4 software, enable the user to conduct the system performance check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

8.1 Purpose of System Performance Check

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

8.2 System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator at frequency 2450 MHz, 5200 MHz, 5500 MHz, and 5800 MHz. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:

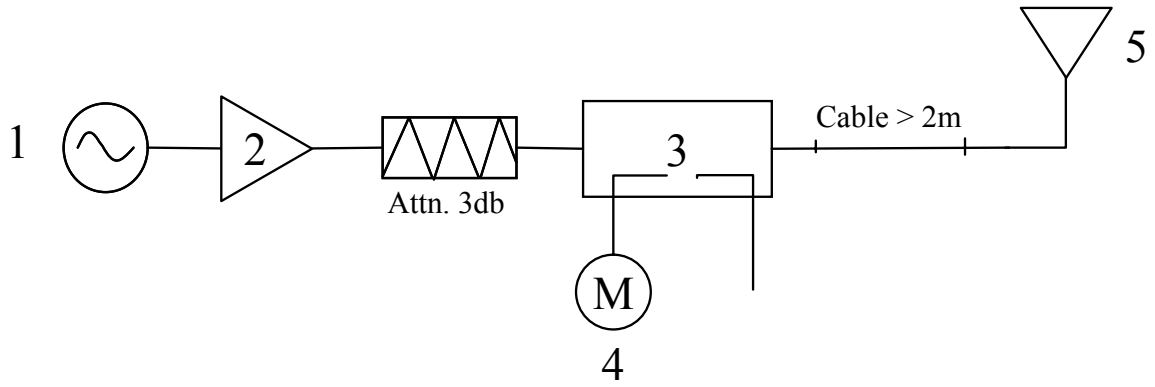


Fig. 8.1 System Setup for System Evaluation

1. Signal Generator
2. Amplifier
3. Directional Coupler
4. Power Meter
5. 2450 or 5200 or 5500 or 5800 MHz Dipole

The output power on dipole port must be calibrated to 100 mW (20 dBm) before dipole is connected.

Fig 8.2 Dipole Setup

8.3 Validation Results

Comparing to the original SAR value provided by SPEAG, the validation data should within its specification of 10 %. Table 8.1 shows the target SAR and measured SAR after normalized to 1W input power.

Band	SAR	Target (W/kg)	Measurement data (W/kg)	Variation	Measurement date
802.11b/g/n (2400~2450 MHz) 2450MHz	SAR (1g)	52.5	48.7	-7.2 %	Feb. 14, 2008
	SAR (10g)	24.4	23.4	-4.1 %	
802.11a/n (5150~5350 MHz) 5200MHz	SAR (1g)	76.8	77.5	0.9 %	Feb. 18, 2008
	SAR (10g)	21.6	21.9	1.4 %	
802.11a/n (5470~5725 MHz) 5500MHz	SAR (1g)	80.1	78.0	-2.6 %	Feb. 19, 2008
	SAR (10g)	22.3	21.8	-2.2 %	
802.11a/n (5725~5850 MHz) 5800MHz	SAR (1g)	69.4	68.5	-1.3 %	Feb. 19, 2008
	SAR (10g)	19.3	18.7	-3.1 %	

Table 8.1 Target and Measured SAR after Normalized

The table above indicates the system performance check can meet the variation criterion.

9. Description for DUT Testing Position

This DUT was tested in 6 different positions. They are “DELL D400 Notebook Bottom with 0cm Gap with Horizontal USB Port”, “DELL D400 Notebook Bottom with 0cm Gap with Vertical USB Port”, “DELL D430 Notebook Bottom with 0cm Gap with Horizontal USB Port”, “DELL D430 Notebook Bottom with 0cm Gap with Vertical USB Port”, “DELL M2300 Notebook Bottom with 0cm Gap with Horizontal USB Port”and “DELL M2300 Notebook Bottom with 0cm Gap with Vertical USB Port”

Remark: Please refer to Appendix E for the test setup photo.

10. Measurement Procedures

The measurement procedures are as follows:

- Using engineering software to transmit RF power continuously (continuous Tx) in the low channel
- Placing the DUT in the positions described in the last section
- Setting scan area, grid size and other setting on the DASY4 software
- Taking data for the low channel
- Repeat the previous steps for the middle and high channels.

According to the IEEE P1528 draft standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- Power reference measurement
- Area scan
- Zoom scan
- Power reference measurement

10.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the IEEE1528-2003 standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY4 software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

Base on the Draft: SCC-34, SC-2, WG-2-Computational Dosimetry, P1528/D1.2 (Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques), a new algorithm has been implemented. The spatial-peak SAR can be computed over any required mass.

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:

- extraction of the measured data (grid and values) from the Zoom Scan
- calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- generation of a high-resolution mesh within the measured volume
- interpolation of all measured values form the measurement grid to the high-resolution grid
- extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- calculation of the averaged SAR within masses of 1g and 10g

10.2 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. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 1 g.

10.3 SAR Averaged Methods

In DASY4, 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.

11.SAR Test Results

11.1 Notebook Bottom with 0cm Gap with Horizontal USB Port

Notebook	Band	Chan.	Freq. (MHz)	Modulation Type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
DELL D400	802.11b	1	2412(Low)	CCK	16.40	-0.012	0.882	1.6	Pass
		6	2437(Mid)	CCK	16.67	-0.168	1	1.6	Pass
		11	2462(High)	CCK	16.90	0.04	1.02	1.6	Pass
	802.11g	1	2412(Low)	OFDM	15.88	-	-	-	-
		6	2437(Mid)	OFDM	16.51	-	-	-	-
		11	2462(High)	OFDM	15.96	-	-	-	-
	802.11n (BW20M)	1	2412(Low)	OFDM	15.31	-	-	-	-
		6	2437(Mid)	OFDM	15.43	-	-	-	-
		11	2462(High)	OFDM	14.91	-	-	-	-
	802.11n (BW40M)	3	2422(Low)	OFDM	15.73	-	-	-	-
		6	2437(Mid)	OFDM	17.00	-	-	-	-
		9	2452(High)	OFDM	12.11	-	-	-	-
	802.11a	36	5180(Low)	OFDM	14.08			-	-
		40	5200(Mid)	OFDM	15.06	0.163	0.203	1.6	Pass
		48	5240(High)	OFDM	14.55	-	-	-	-
	802.11n (BW20M)	36	5180(Low)	OFDM	14.32	-	-	-	-
		40	5200(Mid)	OFDM	14.65	-	-	-	-
		48	5240(High)	OFDM	14.32	-	-	-	-
	802.11n (BW40M)	38	5190(Low)	OFDM	15.18	-	-	-	-
		46	5230(High)	OFDM	15.88	-	-	-	-
	802.11a	52	5260(Low)	OFDM	15.10	-	-	-	-
		60	5300(Mid)	OFDM	16.56	-0.162	0.41	1.6	Pass
		64	5320(High)	OFDM	13.71	-	-	-	-
	802.11n (BW20M)	52	5260(Low)	OFDM	16.21	-	-	-	-
		60	5300(Mid)	OFDM	15.98	-	-	-	-
		64	5320(High)	OFDM	16.19	-	-	-	-
	802.11n (BW40M)	54	5270(Low)	OFDM	15.36	-	-	-	-
		62	5310(High)	OFDM	13.57	-	-	-	-
	802.11a	100	5500(Low)	OFDM	14.42	-	-	-	-
		120	5600(Mid)	OFDM	15.15	-0.168	0.369	1.6	Pass
		140	5700(High)	OFDM	14.18	-	-	-	-
	802.11n (BW20M)	100	5500(Low)	OFDM	15.80	-	-	-	-
		120	5600(Mid)	OFDM	15.77	-	-	-	-
		140	5700(High)	OFDM	16.91	-	-	-	-
	802.11n (BW40M)	102	5670(Low)	OFDM	13.48	-	-	-	-
		118	5745(Mid)	OFDM	16.32	-	-	-	-
		134	5670(High)	OFDM	16.17	-	-	-	-
	802.11a	149	5745(Low)	OFDM	15.39	-	-	-	-
		157	5785(Mid)	OFDM	15.36	0.154	0.171	1.6	Pass
		165	5825(High)	OFDM	14.72	-	-	-	-
	802.11n (BW20M)	149	5745(Low)	OFDM	15.79	-	-	-	-
		157	5785(Mid)	OFDM	15.44	-	-	-	-
		165	5825(High)	OFDM	14.07	-	-	-	-
	802.11n (BW40M)	151	5755(Low)	OFDM	15.44	-	-	-	-
		159	5795(High)	OFDM	15.83	-	-	-	-

Notebook	Band	Chan.	Freq. (MHz)	Modulation Type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
DELL D430	802.11b	1	2412(Low)	CCK	16.40	-	-	-	-
		6	2437(Mid)	CCK	16.67	-0.106	0.679	1.6	Pass
		11	2462(High)	CCK	16.90	-	-	-	-
	802.11g	1	2412(Low)	OFDM	15.88	-	-	-	-
		6	2437(Mid)	OFDM	16.51	-	-	-	-
		11	2462(High)	OFDM	15.96	-	-	-	-
	802.11n (BW20M)	1	2412(Low)	OFDM	15.31	-	-	-	-
		6	2437(Mid)	OFDM	15.43	-	-	-	-
		11	2462(High)	OFDM	14.91	-	-	-	-
	802.11n (BW40M)	3	2422(Low)	OFDM	15.73	-	-	-	-
		6	2437(Mid)	OFDM	17.00	-	-	-	-
		9	2452(High)	OFDM	12.11	-	-	-	-
	802.11a	36	5180(Low)	OFDM	14.08	-	-	-	-
		40	5200(Mid)	OFDM	15.06	-0.133	0.308	1.6	Pass
		48	5240(High)	OFDM	14.55	-	-	-	-
	802.11n (BW20M)	36	5180(Low)	OFDM	14.32	-	-	-	-
		40	5200(Mid)	OFDM	14.65	-	-	-	-
		48	5240(High)	OFDM	14.32	-	-	-	-
	802.11n (BW40M)	38	5190(Low)	OFDM	15.18	-	-	-	-
		46	5230(High)	OFDM	15.88	-	-	-	-
	802.11a	52	5260(Low)	OFDM	15.10	-	-	-	-
		60	5300(Mid)	OFDM	16.56	0.176	0.668	1.6	Pass
		64	5320(High)	OFDM	13.71	-	-	-	-
	802.11n (BW20M)	52	5260(Low)	OFDM	16.21	-	-	-	-
		60	5300(Mid)	OFDM	15.98	-	-	-	-
		64	5320(High)	OFDM	16.19	-	-	-	-
	802.11n (BW40M)	54	5270(Low)	OFDM	15.36	-	-	-	-
		62	5310(High)	OFDM	13.57	-	-	-	-
	802.11a	100	5500(Low)	OFDM	14.42	-	-	-	-
		120	5600(Mid)	OFDM	15.15	-0.089	0.303	1.6	Pass
		140	5700(High)	OFDM	14.18	-	-	-	-
	802.11n (BW20M)	100	5500(Low)	OFDM	15.80	-	-	-	-
		120	5600(Mid)	OFDM	15.77	-	-	-	-
		140	5700(High)	OFDM	16.91	-	-	-	-
	802.11n (BW40M)	102	5670(Low)	OFDM	13.48	-	-	-	-
		118	5745(Mid)	OFDM	16.32	-	-	-	-
		134	5670(High)	OFDM	16.17	-	-	-	-
	802.11a	149	5745(Low)	OFDM	15.39	-	-	-	-
		157	5785(Mid)	OFDM	15.36	-0.104	0.219	1.6	Pass
		165	5825(High)	OFDM	14.72	-	-	-	-
	802.11n (BW20M)	149	5745(Low)	OFDM	15.79	-	-	-	-
		157	5785(Mid)	OFDM	15.44	-	-	-	-
		165	5825(High)	OFDM	14.07	-	-	-	-
	802.11n (BW40M)	151	5755(Low)	OFDM	15.44	-	-	-	-
		159	5795(High)	OFDM	15.83	-	-	-	-

Notebook	Band	Chan.	Freq. (MHz)	Modulation Type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
DELL M2300	802.11b	1	2412(Low)	CCK	16.40	-0.149	0.597	1.6	Pass
		6	2437(Mid)	CCK	16.67	-0.102	0.931	1.6	Pass
		11	2462(High)	CCK	16.90	-0.136	0.64	1.6	Pass
	802.11g	1	2412(Low)	OFDM	15.88	-	-	-	-
		6	2437(Mid)	OFDM	16.51	-	-	-	-
		11	2462(High)	OFDM	15.96	-	-	-	-
	802.11n (BW20M)	1	2412(Low)	OFDM	15.31	-	-	-	-
		6	2437(Mid)	OFDM	15.43	-	-	-	-
		11	2462(High)	OFDM	14.91	-	-	-	-
	802.11n (BW40M)	3	2422(Low)	OFDM	15.73	-	-	-	-
		6	2437(Mid)	OFDM	17.00	-	-	-	-
		9	2452(High)	OFDM	12.11	-	-	-	-
	802.11a	36	5180(Low)	OFDM	14.08	-	-	-	-
		40	5200(Mid)	OFDM	15.06	0.057	0.309	1.6	Pass
		48	5240(High)	OFDM	14.55	-	-	-	-
	802.11n (BW20M)	36	5180(Low)	OFDM	14.32	-	-	-	-
		40	5200(Mid)	OFDM	14.65	-	-	-	-
		48	5240(High)	OFDM	14.32	-	-	-	-
	802.11n (BW40M)	38	5190(Low)	OFDM	15.18	-	-	-	-
		46	5230(High)	OFDM	15.88	-	-	-	-
	802.11a	52	5260(Low)	OFDM	15.10	-	-	-	-
		60	5300(Mid)	OFDM	16.56	-0.139	0.623	1.6	Pass
		64	5320(High)	OFDM	13.71	-	-	-	-
	802.11n (BW20M)	52	5260(Low)	OFDM	16.21	-	-	-	-
		60	5300(Mid)	OFDM	15.98	-	-	-	-
		64	5320(High)	OFDM	16.19	-	-	-	-
	802.11n (BW40M)	54	5270(Low)	OFDM	15.36	-	-	-	-
		62	5310(High)	OFDM	13.57	-	-	-	-
	802.11a	100	5500(Low)	OFDM	14.42	-	-	-	-
		120	5600(Mid)	OFDM	15.15	-0.155	0.282	1.6	Pass
		140	5700(High)	OFDM	14.18	-	-	-	-
	802.11n (BW20M)	100	5500(Low)	OFDM	15.80	-	-	-	-
		120	5600(Mid)	OFDM	15.77	-	-	-	-
		140	5700(High)	OFDM	16.91	-	-	-	-
	802.11n (BW40M)	102	5670(Low)	OFDM	13.48	-	-	-	-
		118	5745(Mid)	OFDM	16.32	-	-	-	-
		134	5670(High)	OFDM	16.17	-	-	-	-
	802.11a	149	5745(Low)	OFDM	15.39	-	-	-	-
		157	5785(Mid)	OFDM	15.36	-0.14	0.196	1.6	Pass
		165	5825(High)	OFDM	14.72	-	-	-	-
	802.11n (BW20M)	149	5745(Low)	OFDM	15.79	-	-	-	-
		157	5785(Mid)	OFDM	15.44	-	-	-	-
		165	5825(High)	OFDM	14.07	-	-	-	-
	802.11n (BW40M)	151	5755(Low)	OFDM	15.44	-	-	-	-
		159	5795(High)	OFDM	15.83	-	-	-	-

11.2 Notebook Bottom with 0cm Gap with Vertical USB Port

Notebook	Band	Chan.	Freq. (MHz)	Modulation Type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
DELL D400	802.11b	1	2412(Low)	CCK	16.40	-0.068	1.11	1.6	Pass
		6	2437(Mid)	CCK	16.67	-0.144	1.24	1.6	Pass
		11	**2462(High)**	**CCK**	**16.90**	**0.02**	**1.35**	**1.6**	**Pass**
	802.11g	1	2412(Low)	OFDM	15.88	0.084	0.627	1.6	Pass
		6	2437(Mid)	OFDM	16.51	-0.161	0.836	1.6	Pass
		11	2462(High)	OFDM	15.96	0.002	0.693	1.6	Pass
	802.11n (BW20M)	1	2412(Low)	OFDM	15.31	-	-	-	-
		6	2437(Mid)	OFDM	15.43	-0.147	0.395	1.6	Pass
		11	2462(High)	OFDM	14.91	-	-	-	-
	802.11n (BW40M)	3	2422(Low)	OFDM	15.73	-	-	-	-
		6	2437(Mid)	OFDM	17.00	-0.104	0.489	1.6	Pass
		9	2452(High)	OFDM	12.11	-	-	-	-
	802.11a	36	5180(Low)	OFDM	14.08	-0.176	0.38	1.6	Pass
		40	**5200(Mid)**	**OFDM**	**15.06**	**-0.124**	**0.423**	**1.6**	**Pass**
		48	5240(High)	OFDM	14.55	0.042	0.363	1.6	Pass
	802.11n (BW20M)	36	5180(Low)	OFDM	14.32	-	-	-	-
		40	5200(Mid)	OFDM	14.65	-0.063	0.307	1.6	Pass
		48	5240(High)	OFDM	14.32	-	-	-	-
	802.11n (BW40M)	38	5190(Low)	OFDM	15.18	0.156	0.291	1.6	Pass
		46	5230(High)	OFDM	15.88	-	-	-	-
	802.11a	52	5260(Low)	OFDM	15.10	0.1	0.909	1.6	Pass
		60	**5300(Mid)**	**OFDM**	**16.56**	**-0.191**	**1.02**	**1.6**	**Pass**
		64	5320(High)	OFDM	13.71	0.157	0.752	1.6	Pass
	802.11n (BW20M)	52	5260(Low)	OFDM	16.21	-	-	-	-
		60	5300(Mid)	OFDM	15.98	-0.152	0.714	1.6	Pass
		64	5320(High)	OFDM	16.19	-	-	-	-
	802.11n (BW40M)	54	5270(Low)	OFDM	15.36	0.045	0.437	1.6	Pass
		62	5310(High)	OFDM	13.57	-	-	-	-
	802.11a	100	5500(Low)	OFDM	14.42	0.145	0.5	1.6	Pass
		120	**5600(Mid)**	**OFDM**	**15.15**	**-0.13**	**0.806**	**1.6**	**Pass**
		140	5700(High)	OFDM	14.18	-0.198	0.237	1.6	Pass
	802.11n (BW20M)	100	5500(Low)	OFDM	15.80	-	-	-	-
		120	5600(Mid)	OFDM	15.77	-0.172	0.342	1.6	Pass
		140	5700(High)	OFDM	16.91	-	-	-	-
	802.11n (BW40M)	102	5670(Low)	OFDM	13.48	-	-	-	-
		118	5745(Mid)	OFDM	16.32	-0.163	0.535	1.6	Pass
		134	5670(High)	OFDM	16.17	-	-	-	-
	802.11a	**149**	**5745(Low)**	**OFDM**	**15.39**	**-0.137**	**0.599**	**1.6**	**Pass**
		157	5785(Mid)	OFDM	15.36	-0.117	0.563	1.6	Pass
		165	5825(High)	OFDM	14.72	-0.115	0.301	1.6	Pass
	802.11n (BW20M)	149	5745(Low)	OFDM	15.79	-	-	-	-
		157	5785(Mid)	OFDM	15.44	-0.148	0.507	1.6	Pass
		165	5825(High)	OFDM	14.07	-	-	-	-
	802.11n (BW40M)	151	5755(Low)	OFDM	15.44	-0.15	0.409	1.6	Pass
		159	5795(High)	OFDM	15.83	-	-	-	-

Notebook	Band	Chan.	Freq. (MHz)	Modulation Type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
DELL D430	802.11b	1	2412(Low)	CCK	16.40	-	-	-	-
		6	2437(Mid)	CCK	16.67	-0.135	0.253	1.6	Pass
		11	2462(High)	CCK	16.90	-	-	-	-
	802.11g	1	2412(Low)	OFDM	15.88	-	-	-	-
		6	2437(Mid)	OFDM	16.51	-	-	-	-
		11	2462(High)	OFDM	15.96	-	-	-	-
	802.11n (BW20M)	1	2412(Low)	OFDM	15.31	-	-	-	-
		6	2437(Mid)	OFDM	15.43	-	-	-	-
		11	2462(High)	OFDM	14.91	-	-	-	-
	802.11n (BW40M)	3	2422(Low)	OFDM	15.73	-	-	-	-
		6	2437(Mid)	OFDM	17.00	-	-	-	-
		9	2452(High)	OFDM	12.11	-	-	-	-
	802.11a	36	5180(Low)	OFDM	14.08	-	-	-	-
		40	5200(Mid)	OFDM	15.06	-0.136	0.141	1.6	Pass
		48	5240(High)	OFDM	14.55	-	-	-	-
	802.11n (BW20M)	36	5180(Low)	OFDM	14.32	-	-	-	-
		40	5200(Mid)	OFDM	14.65	-	-	-	-
		48	5240(High)	OFDM	14.32	-	-	-	-
	802.11n (BW40M)	38	5190(Low)	OFDM	15.18	-	-	-	-
		46	5230(High)	OFDM	15.88	-	-	-	-
	802.11a	52	5260(Low)	OFDM	15.10	-	-	-	-
		60	5300(Mid)	OFDM	16.56	-0.164	0.319	1.6	Pass
		64	5320(High)	OFDM	13.71	-	-	-	-
	802.11n (BW20M)	52	5260(Low)	OFDM	16.21	-	-	-	-
		60	5300(Mid)	OFDM	15.98	-	-	-	-
		64	5320(High)	OFDM	16.19	-	-	-	-
	802.11n (BW40M)	54	5270(Low)	OFDM	15.36	-	-	-	-
		62	5310(High)	OFDM	13.57	-	-	-	-
	802.11a	100	5500(Low)	OFDM	14.42	-	-	-	-
		120	5600(Mid)	OFDM	15.15	0.101	0.082	1.6	Pass
		140	5700(High)	OFDM	14.18	-	-	-	-
	802.11n (BW20M)	100	5500(Low)	OFDM	15.80	-	-	-	-
		120	5600(Mid)	OFDM	15.77	-	-	-	-
		140	5700(High)	OFDM	16.91	-	-	-	-
	802.11n (BW40M)	102	5670(Low)	OFDM	13.48	-	-	-	-
		118	5745(Mid)	OFDM	16.32	-	-	-	-
		134	5670(High)	OFDM	16.17	-	-	-	-
	802.11a	149	5745(Low)	OFDM	15.39	-	-	-	-
		157	5785(Mid)	OFDM	15.36	-0.195	0.153	1.6	Pass
		165	5825(High)	OFDM	14.72	-	-	-	-
	802.11n (BW20M)	149	5745(Low)	OFDM	15.79	-	-	-	-
		157	5785(Mid)	OFDM	15.44	-	-	-	-
		165	5825(High)	OFDM	14.07	-	-	-	-
	802.11n (BW40M)	151	5755(Low)	OFDM	15.44	-	-	-	-
		159	5795(High)	OFDM	15.83	-	-	-	-

Notebook	Band	Chan.	Freq. (MHz)	Modulation Type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
DELL M2300	802.11b	1	2412(Low)	CCK	16.40	-	-	-	-
		6	2437(Mid)	CCK	16.67	-0.09	0.507	1.6	Pass
		11	2462(High)	CCK	16.90	-	-	-	-
	802.11g	1	2412(Low)	OFDM	15.88	-	-	-	-
		6	2437(Mid)	OFDM	16.51	-	-	-	-
		11	2462(High)	OFDM	15.96	-	-	-	-
	802.11n (BW20M)	1	2412(Low)	OFDM	15.31	-	-	-	-
		6	2437(Mid)	OFDM	15.43	-	-	-	-
		11	2462(High)	OFDM	14.91	-	-	-	-
	802.11n (BW40M)	3	2422(Low)	OFDM	15.73	-	-	-	-
		6	2437(Mid)	OFDM	17.00	-	-	-	-
		9	2452(High)	OFDM	12.11	-	-	-	-
	802.11a	36	5180(Low)	OFDM	14.08	-	-	-	-
		40	5200(Mid)	OFDM	15.06	-0.146	0.326	1.6	Pass
		48	5240(High)	OFDM	14.55	-	-	-	-
	802.11n (BW20M)	36	5180(Low)	OFDM	14.32	-	-	-	-
		40	5200(Mid)	OFDM	14.65	-	-	-	-
		48	5240(High)	OFDM	14.32	-	-	-	-
	802.11n (BW40M)	38	5190(Low)	OFDM	15.18	-	-	-	-
		46	5230(High)	OFDM	15.88	-	-	-	-
	802.11a	52	5260(Low)	OFDM	15.10	-	-	-	-
		60	5300(Mid)	OFDM	16.56	-0.149	0.616	1.6	Pass
		64	5320(High)	OFDM	13.71	-	-	-	-
	802.11n (BW20M)	52	5260(Low)	OFDM	16.21	-	-	-	-
		60	5300(Mid)	OFDM	15.98	-	-	-	-
		64	5320(High)	OFDM	16.19	-	-	-	-
	802.11n (BW40M)	54	5270(Low)	OFDM	15.36	-	-	-	-
		62	5310(High)	OFDM	13.57	-	-	-	-
	802.11a	100	5500(Low)	OFDM	14.42	-	-	-	-
		120	5600(Mid)	OFDM	15.15	-0.097	0.368	1.6	Pass
		140	5700(High)	OFDM	14.18	-	-	-	-
	802.11n (BW20M)	100	5500(Low)	OFDM	15.80	-	-	-	-
		120	5600(Mid)	OFDM	15.77	-	-	-	-
		140	5700(High)	OFDM	16.91	-	-	-	-
	802.11n (BW40M)	102	5670(Low)	OFDM	13.48	-	-	-	-
		118	5745(Mid)	OFDM	16.32	-	-	-	-
		134	5670(High)	OFDM	16.17	-	-	-	-
	802.11a	149	5745(Low)	OFDM	15.39	-	-	-	-
		157	5785(Mid)	OFDM	15.36	-0.186	0.384	1.6	Pass
		165	5825(High)	OFDM	14.72	-	-	-	-
	802.11n (BW20M)	149	5745(Low)	OFDM	15.79	-	-	-	-
		157	5785(Mid)	OFDM	15.44	-	-	-	-
		165	5825(High)	OFDM	14.07	-	-	-	-
	802.11n (BW40M)	151	5755(Low)	OFDM	15.44	-	-	-	-
		159	5795(High)	OFDM	15.83	-	-	-	-

Test Engineer：Gordon Lin, Jason Wang, Eric Huang,and Robert Liu

12. Reference

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

[2] IEEE Std. P1528-2003, “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, April 21, 2003.

[3] Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97-01), “Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to RF Emissions”, June 2001

[4] IEEE Std. C95.3-2002, “IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields-RF and Microwave”, 2002

[5] IEEE Std. C95.1-1999, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, 1999

[6] Robert J. Renka, “Multivariate Interpolation Of Large Sets Of Scattered Data”, University of North Texas ACM Transactions on Mathematical Software, vol. 14, no. 2, June 1988, pp. 139-148

[7] DAYS4 System Handbook

Appendix A - System Performance Check Data

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/14

System Check_Body_2450MHz

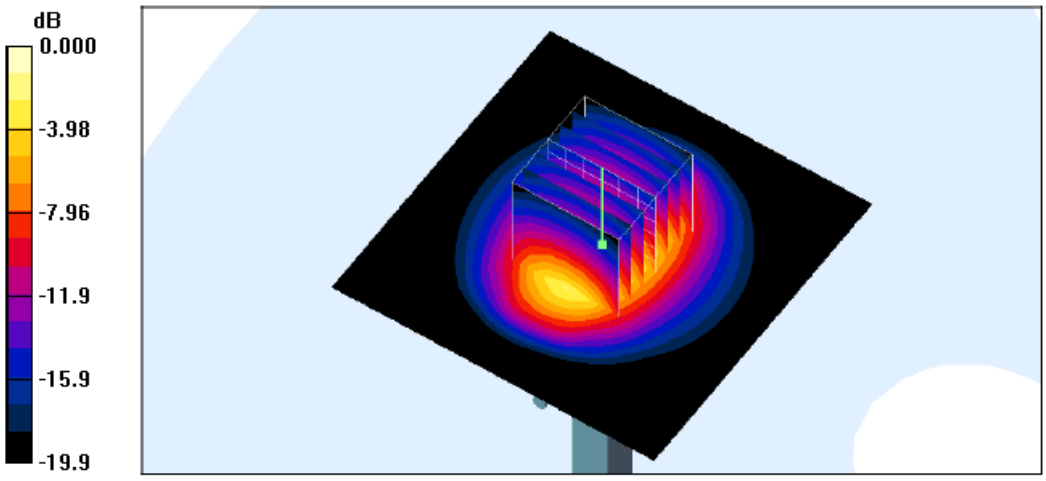
DUT: Dipole 2450 MHz

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2450 MHz; σ = 1.97 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.17, 4.17, 4.17); Calibrated: 2007/9/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Pin=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 5.74 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.1 V/m; Power Drift = 0.007 dB
Peak SAR (extrapolated) = 9.80 W/kg
SAR(1 g) = 4.87 mW/g; SAR(10 g) = 2.34 mW/g
Maximum value of SAR (measured) = 5.53 mW/g



0 dB = 5.53mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

System Check_Body_5200MHz

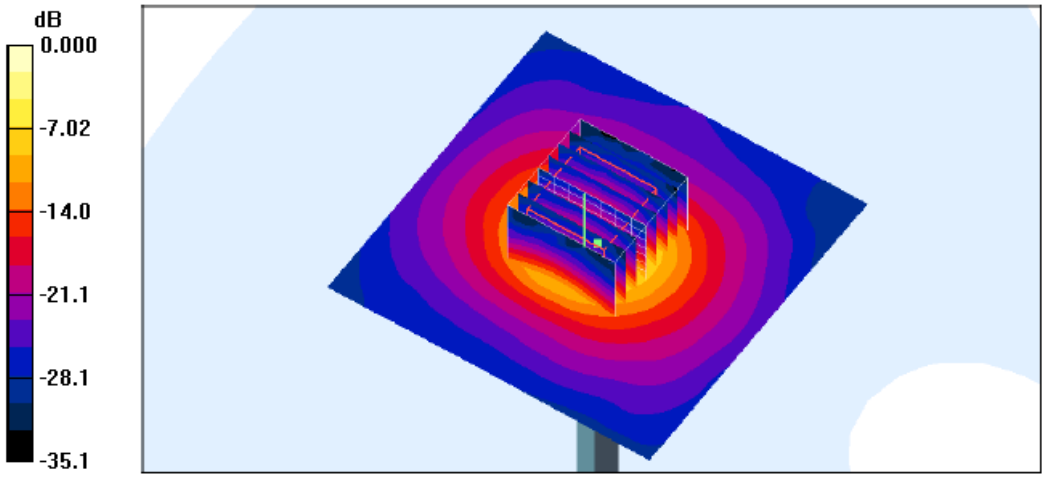
DUT: Dipole 5GHz

Communication System: CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5200 MHz; σ = 5.33 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.34, 4.34, 4.34); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Pin=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 10.6 mW/g

Pin=100mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 45.4 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 31.0 W/kg
SAR(1 g) = 7.75 mW/g; SAR(10 g) = 2.19 mW/g
Maximum value of SAR (measured) = 9.69 mW/g



0 dB = 9.69mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/19

System Check_Body_5500MHz

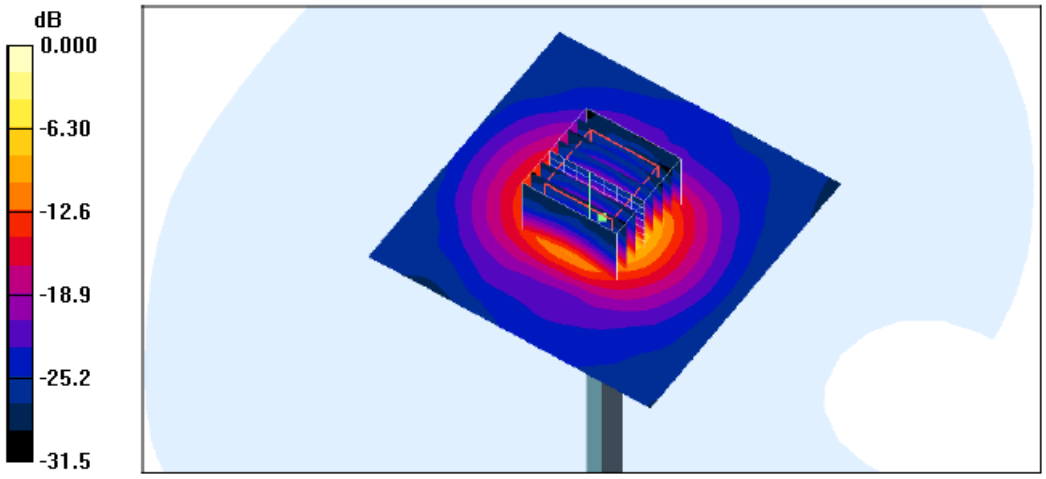
DUT: Dipole 5GHz

Communication System: CW; Frequency: 5500 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5500 MHz; σ = 5.74 mho/m; ε_r = 48.1; ρ = 1000 kg/m^3
Ambient Temperature：22.8 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(3.98, 3.98, 3.98); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Pin=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 15.1 mW/g

Pin=100mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 52.9 V/m; Power Drift = -0.041 dB
Peak SAR (extrapolated) = 29.8 W/kg
SAR(1 g) = 7.8 mW/g; SAR(10 g) = 2.18 mW/g
Maximum value of SAR (measured) = 13.1 mW/g



0 dB = 13.1mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/19

System Check_Body_5800MHz

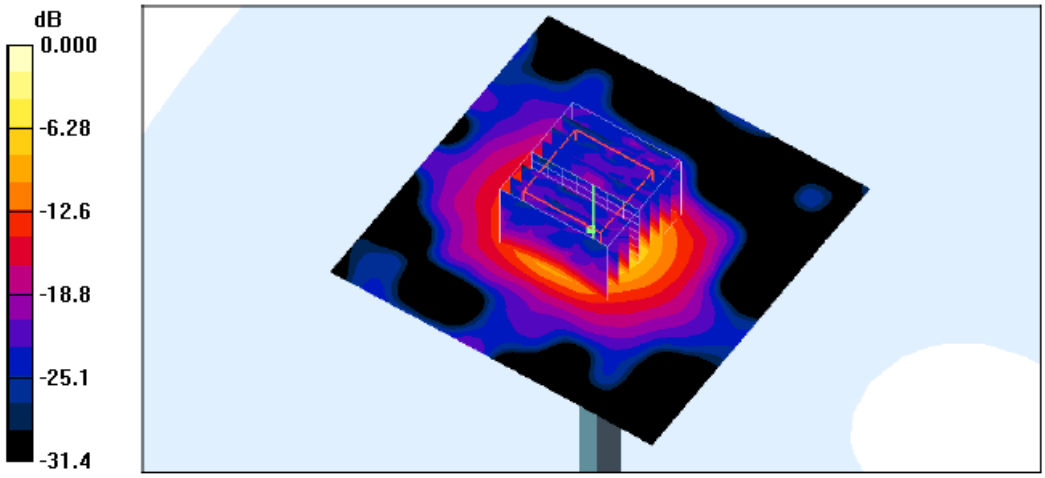
DUT: Dipole 5GHz

Communication System: CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5800 MHz; σ = 6.11 mho/m; ε_r = 47.4; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.2, 4.2, 4.2); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Pin=100mW/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 14.6 mW/g

Pin=100mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 50.4 V/m; Power Drift = -0.098 dB
Peak SAR (extrapolated) = 32.6 W/kg
SAR(1 g) = 6.85 mW/g; SAR(10 g) = 1.87 mW/g
Maximum value of SAR (measured) = 13.9 mW/g



0 dB = 13.9mW/g

Appendix B - SAR Measurement Data

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/14

Body_802.11b Ch11_NB Bottom with 0cm Gap_D400_Horizontal USB_Ant-A

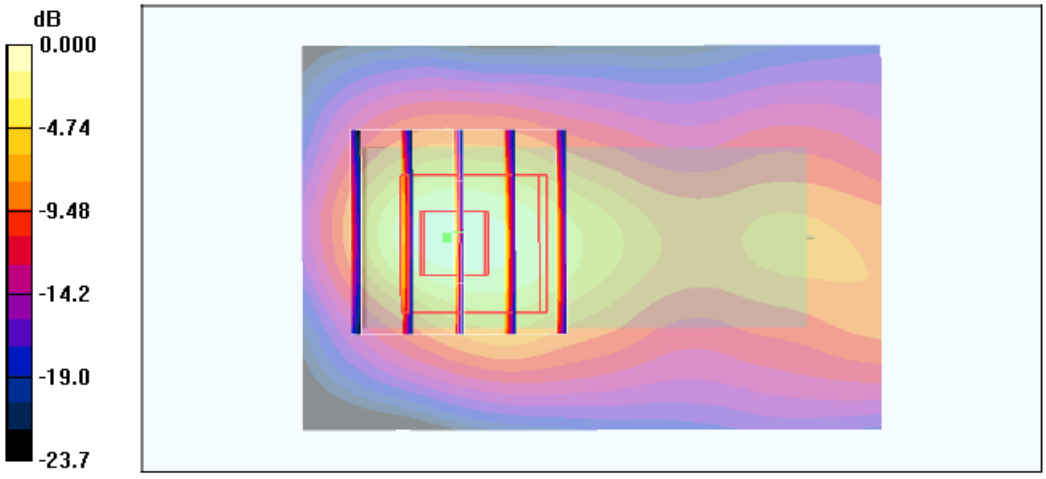
DUT: 7D1705

Communication System: 802.11b ; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2462 MHz; σ = 1.98 mho/m; ε_r = 53.5; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.17, 4.17, 4.17); Calibrated: 2007/9/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch11/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.992 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.9 V/m; Power Drift = 0.040 dB
Peak SAR (extrapolated) = 2.72 W/kg
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.410 mW/g
Maximum value of SAR (measured) = 1.13 mW/g



0 dB = 1.13mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/14

Body_802.11b Ch6_NB Bottom with 0cm Gap_D430_Horizontal USB_Ant-A

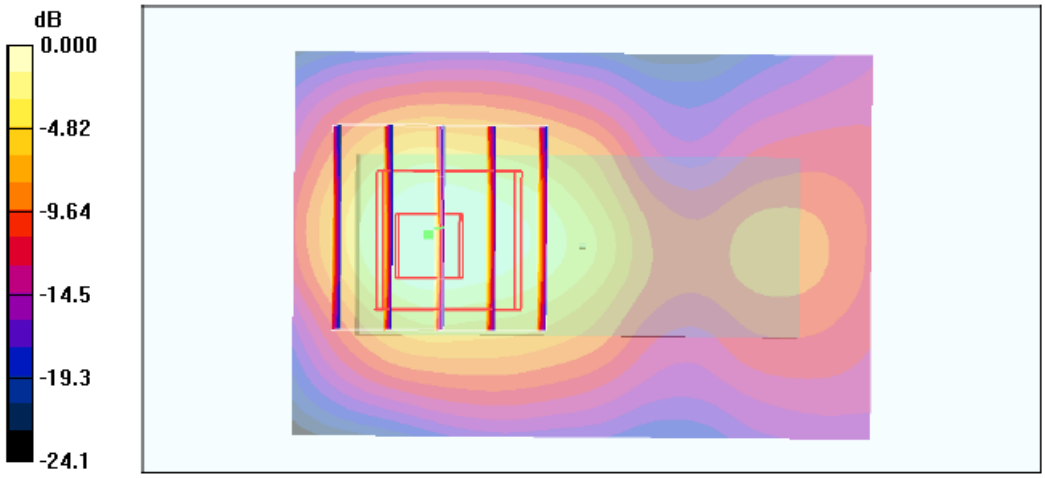
DUT: 7D1705

Communication System: 802.11b ; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.17, 4.17, 4.17); Calibrated: 2007/9/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch6/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.873 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.0 V/m; Power Drift = -0.106 dB
Peak SAR (extrapolated) = 1.69 W/kg
SAR(1 g) = 0.679 mW/g; SAR(10 g) = 0.301 mW/g
Maximum value of SAR (measured) = 0.692 mW/g



0 dB = 0.692mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/14

Body_802.11b Ch6_NB Bottom with 0cm Gap_M2300_Horizontal USB_Ant-A

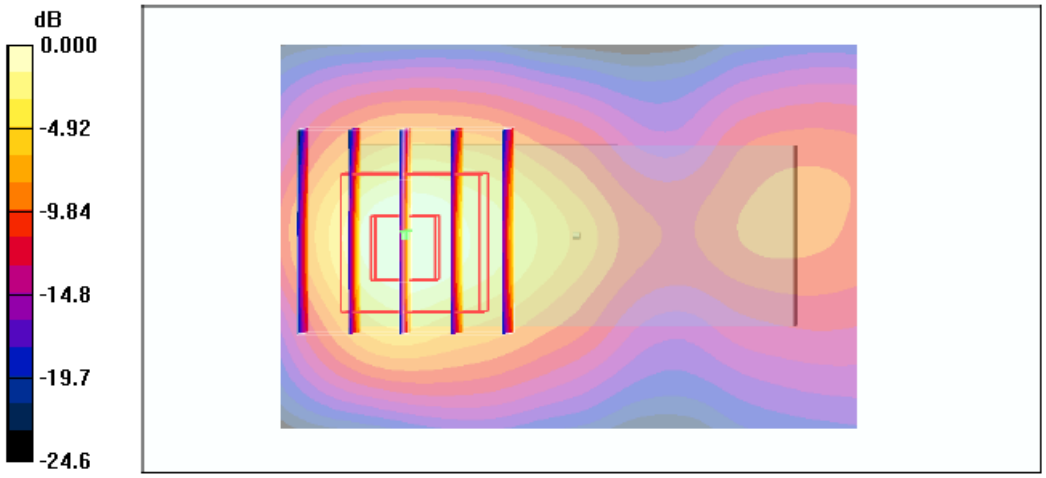
DUT: 7D1705

Communication System: 802.11b ; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.17, 4.17, 4.17); Calibrated: 2007/9/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch6/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.13 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = -0.102 dB
Peak SAR (extrapolated) = 2.40 W/kg
SAR(1 g) = 0.931 mW/g; SAR(10 g) = 0.393 mW/g
Maximum value of SAR (measured) = 0.943 mW/g



0 dB = 0.943mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/14

Body_802.11b Ch11_NB Bottom with 0cm Gap_D400_Vertical USB_Ant-A

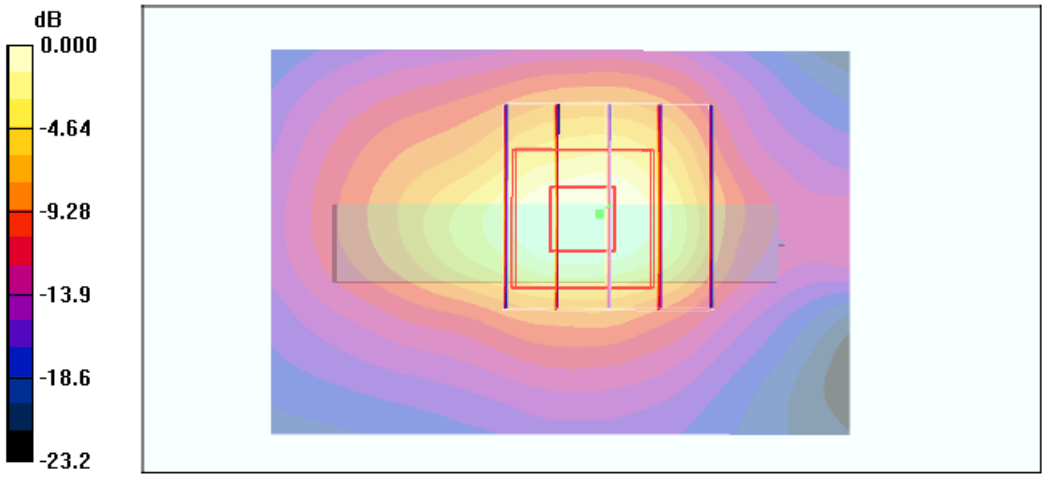
DUT: 7D1705

Communication System: 802.11b ; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2462 MHz; σ = 1.98 mho/m; ε_r = 53.5; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.17, 4.17, 4.17); Calibrated: 2007/9/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch11/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.73 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.89 V/m; Power Drift = 0.020 dB
Peak SAR (extrapolated) = 2.87 W/kg
SAR(1 g) = 1.35 mW/g; SAR(10 g) = 0.613 mW/g
Maximum value of SAR (measured) = 1.45 mW/g



0 dB = 1.45mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/14

Body_802.11g Ch6_NB Bottom with 0cm Gap_D400_Vertical USB_Ant-A

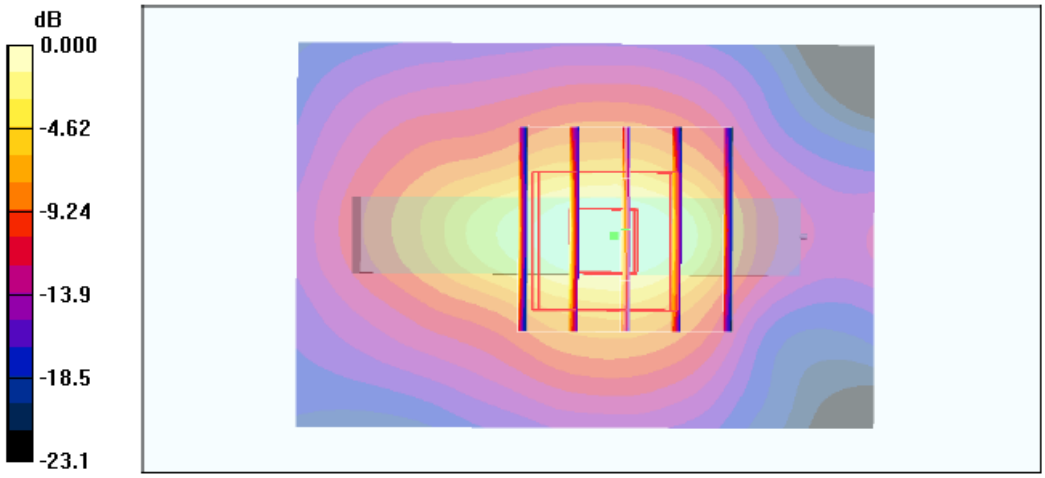
DUT: 7D1705

Communication System: 802.11g; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.17, 4.17, 4.17); Calibrated: 2007/9/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch6/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.990 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.09 V/m; Power Drift = -0.161 dB
Peak SAR (extrapolated) = 1.72 W/kg
SAR(1 g) = 0.836 mW/g; SAR(10 g) = 0.380 mW/g
Maximum value of SAR (measured) = 0.907 mW/g



0 dB = 0.907mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/14

Body_802.11n Ch6_NB Bottom with 0cm Gap_D400_Vertical USB_BW20M_Ant-2Tx

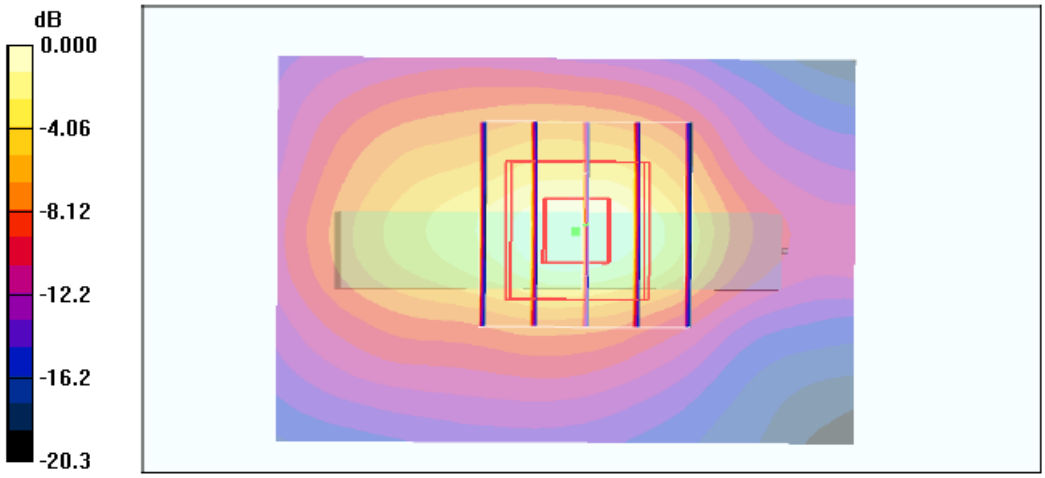
DUT: 7D1705

Communication System: 802.11n; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.17, 4.17, 4.17); Calibrated: 2007/9/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch6/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.467 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.55 V/m; Power Drift = -0.147 dB
Peak SAR (extrapolated) = 0.839 W/kg
SAR(1 g) = 0.395 mW/g; SAR(10 g) = 0.180 mW/g
Maximum value of SAR (measured) = 0.451 mW/g



0 dB = 0.451mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/14

Body_802.11n Ch6_NB Bottom with 0cm Gap_D400_Vertical USB_BW40M_Ant-2Tx

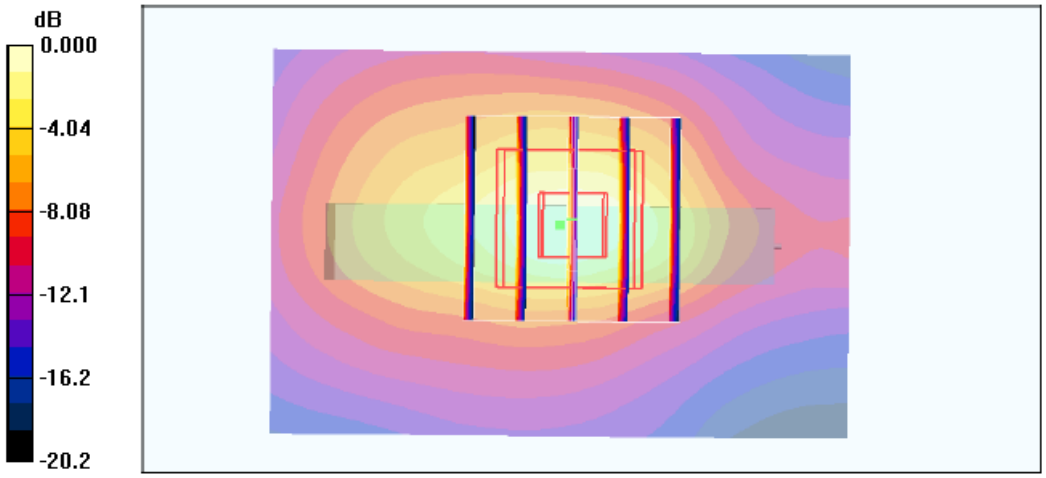
DUT: 7D1705

Communication System: 802.11n; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.17, 4.17, 4.17); Calibrated: 2007/9/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch6/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.580 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.55 V/m; Power Drift = -0.104 dB
Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.489 mW/g; SAR(10 g) = 0.226 mW/g
Maximum value of SAR (measured) = 0.558 mW/g



0 dB = 0.558mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/14

Body_802.11b Ch6_NB Bottom with 0cm Gap_D430_Vertical USB_Ant-A

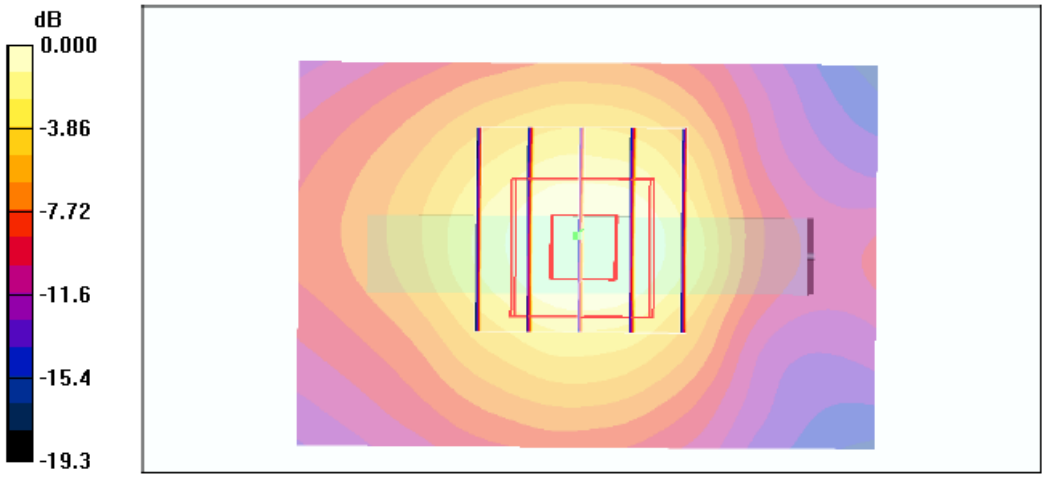
DUT: 7D1705

Communication System: 802.11b ; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.17, 4.17, 4.17); Calibrated: 2007/9/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch6/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.308 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.02 V/m; Power Drift = -0.135 dB
Peak SAR (extrapolated) = 0.502 W/kg
SAR(1 g) = 0.253 mW/g; SAR(10 g) = 0.132 mW/g
Maximum value of SAR (measured) = 0.270 mW/g



0 dB = 0.270mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/14

Body_802.11b Ch6_NB Bottom with 0cm Gap_M2300_Vertical USB_Ant-A

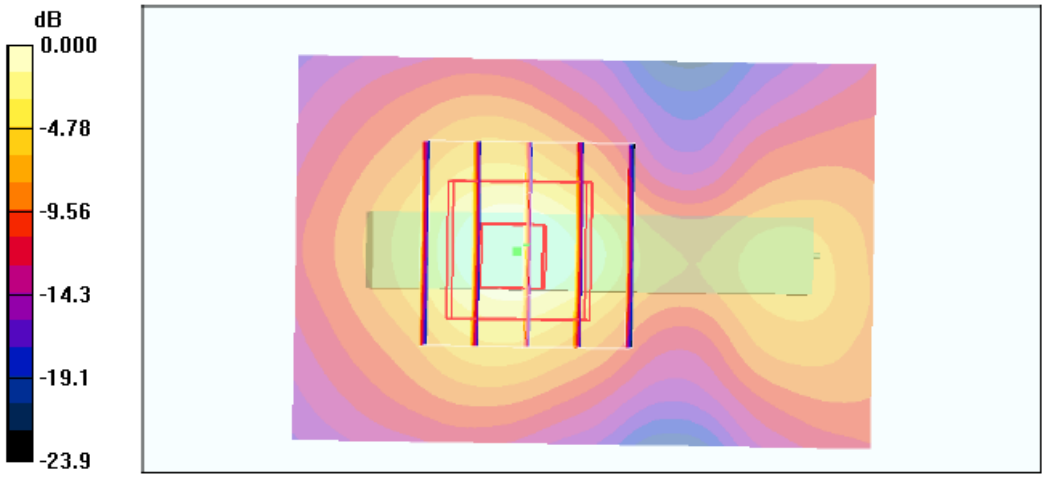
DUT: 7D1705

Communication System: 802.11b ; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2437 MHz; σ = 1.95 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.4 ℃

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(4.17, 4.17, 4.17); Calibrated: 2007/9/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch6/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.602 mW/g

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.3 V/m; Power Drift = -0.090 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.507 mW/g; SAR(10 g) = 0.230 mW/g
Maximum value of SAR (measured) = 0.545 mW/g



0 dB = 0.545mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch40_NB Bottom with 0cm Gap_D400_Horizontal USB_Ant-A

DUT: 7D1705

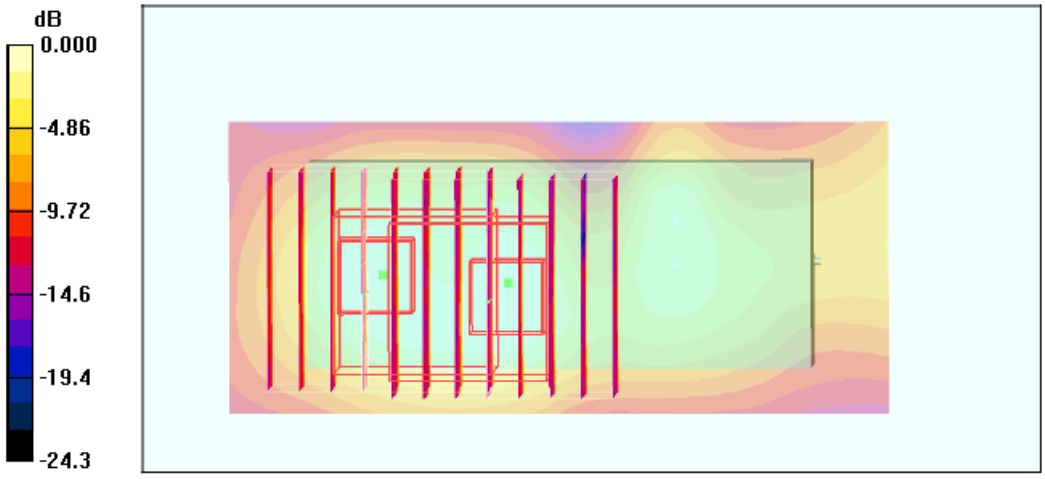
Communication System: 802.11a; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5200 MHz; σ = 5.33 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.34, 4.34, 4.34); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch40/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.419 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 3.37 V/m; Power Drift = 0.163 dB
Peak SAR (extrapolated) = 0.775 W/kg
SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.087 mW/g
Maximum value of SAR (measured) = 0.370 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 3.37 V/m; Power Drift = 0.163 dB
Peak SAR (extrapolated) = 0.718 W/kg
SAR(1 g) = 0.197 mW/g; SAR(10 g) = 0.080 mW/g
Maximum value of SAR (measured) = 0.359 mW/g



0 dB = 0.359mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch40_NB Bottom with 0cm Gap_D430_Horizontal USB_Ant-A

DUT: 7D1705

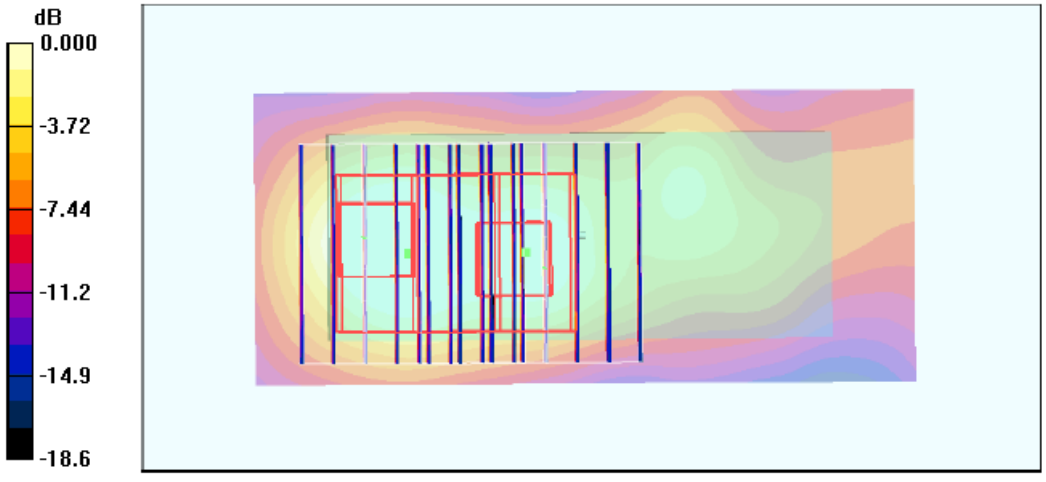
Communication System: 802.11a; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5200 MHz; σ = 5.33 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.34, 4.34, 4.34); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch40/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.579 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 6.13 V/m; Power Drift = -0.133 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.308 mW/g; SAR(10 g) = 0.112 mW/g
Maximum value of SAR (measured) = 0.599 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 6.13 V/m; Power Drift = -0.133 dB
Peak SAR (extrapolated) = 0.882 W/kg
SAR(1 g) = 0.245 mW/g; SAR(10 g) = 0.099 mW/g
Maximum value of SAR (measured) = 0.441 mW/g



0 dB = 0.441mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch40_NB Bottom with 0cm Gap_M2300_Horizontal USB_Ant-A

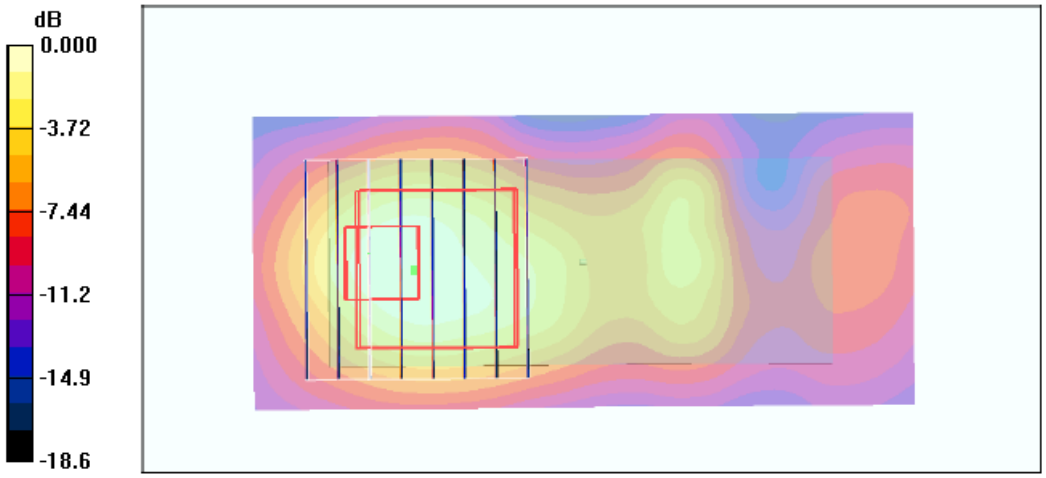
DUT: 7D1705

Communication System: 802.11a; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5200 MHz; σ = 5.33 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.34, 4.34, 4.34); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch40/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.675 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.18 V/m; Power Drift = 0.057 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.309 mW/g; SAR(10 g) = 0.122 mW/g
Maximum value of SAR (measured) = 0.628 mW/g



0 dB = 0.628mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch40_NB Bottom with 0cm Gap_D400_Vertical USB_Ant-A

DUT: 7D1705

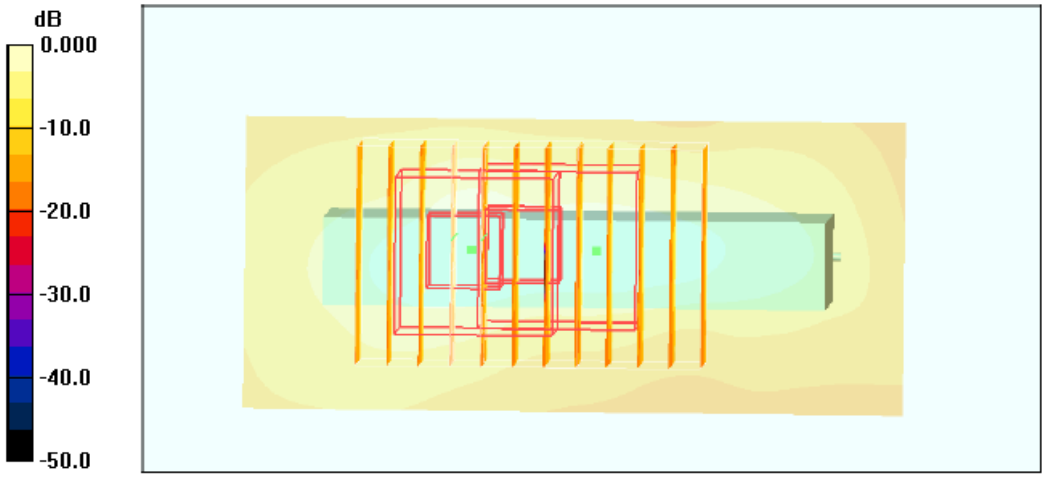
Communication System: 802.11a; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5200 MHz; σ = 5.33 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3
Ambient Temperature：22.6 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.34, 4.34, 4.34); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch40/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.994 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.90 V/m; Power Drift = -0.124 dB
Peak SAR (extrapolated) = 1.72 W/kg
SAR(1 g) = 0.423 mW/g; SAR(10 g) = 0.135 mW/g
Maximum value of SAR (measured) = 0.824 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.90 V/m; Power Drift = -0.124 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.112 mW/g
Maximum value of SAR (measured) = 0.779 mW/g



0 dB = 0.779mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11n Ch40_NB Bottom with 0cm Gap_D400_Vertical USB_BW20M_Ant-2Tx

DUT: 7D1705

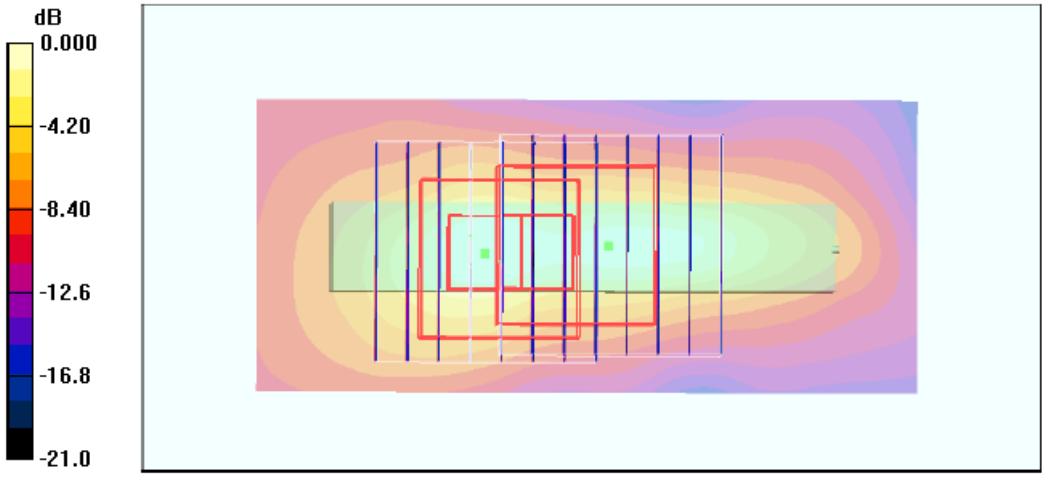
Communication System: 802.11n; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5200 MHz; σ = 5.33 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.34, 4.34, 4.34); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch40/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.695 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.30 V/m; Power Drift = -0.063 dB
Peak SAR (extrapolated) = 1.29 W/kg
SAR(1 g) = 0.307 mW/g; SAR(10 g) = 0.101 mW/g
Maximum value of SAR (measured) = 0.587 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.30 V/m; Power Drift = -0.063 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.091 mW/g
Maximum value of SAR (measured) = 0.586 mW/g



0 dB = 0.586mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11n Ch38_NB Bottom with 0cm Gap_D400_Vertical USB_BW40M_Ant-2Tx

DUT: 7D1705

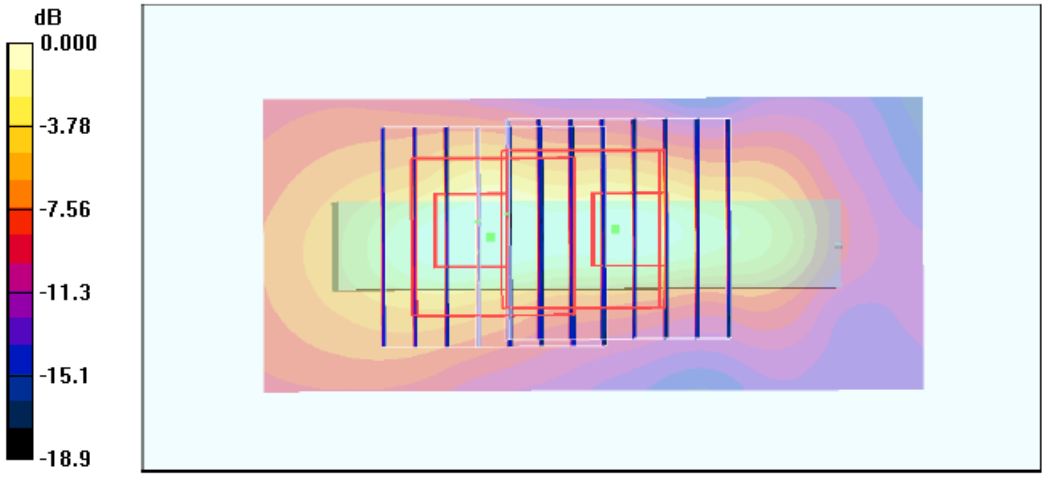
Communication System: 802.11n; Frequency: 5190 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5190 MHz; σ = 5.31 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.34, 4.34, 4.34); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch38/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.564 mW/g

Ch38/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 3.10 V/m; Power Drift = 0.156 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.291 mW/g; SAR(10 g) = 0.094 mW/g
Maximum value of SAR (measured) = 0.590 mW/g

Ch38/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 3.10 V/m; Power Drift = 0.156 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.228 mW/g; SAR(10 g) = 0.084 mW/g
Maximum value of SAR (measured) = 0.489 mW/g



0 dB = 0.489mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch40_NB Bottom with 0cm Gap_D430_Vertical USB_Ant-A

DUT: 7D1705

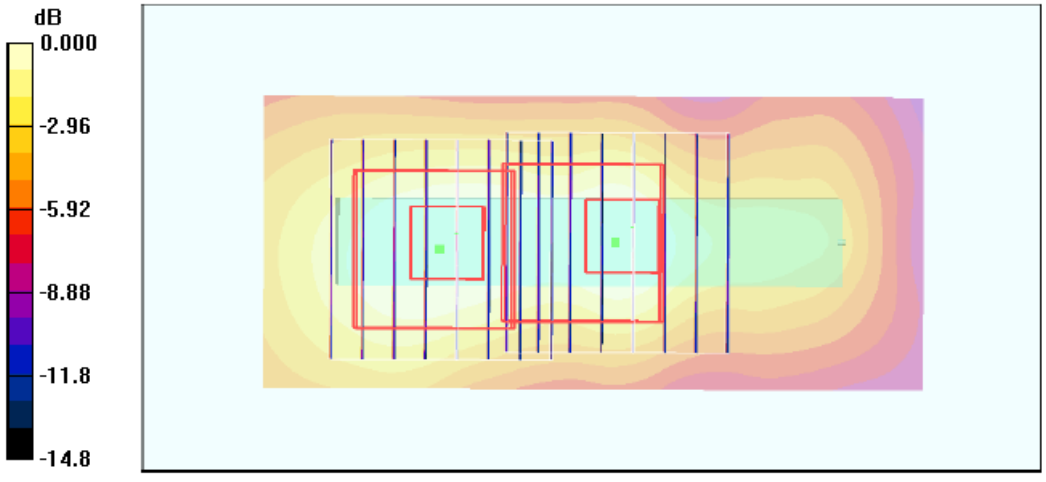
Communication System: 802.11a; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5200 MHz; σ = 5.33 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.34, 4.34, 4.34); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch40/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.277 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 3.67 V/m; Power Drift = -0.136 dB
Peak SAR (extrapolated) = 0.489 W/kg
SAR(1 g) = 0.141 mW/g; SAR(10 g) = 0.063 mW/g
Maximum value of SAR (measured) = 0.256 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 3.67 V/m; Power Drift = -0.136 dB
Peak SAR (extrapolated) = 0.438 W/kg
SAR(1 g) = 0.129 mW/g; SAR(10 g) = 0.057 mW/g
Maximum value of SAR (measured) = 0.218 mW/g



0 dB = 0.218mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch40_NB Bottom with 0cm Gap_M2300_Vertical USB_Ant-A

DUT: 7D1705

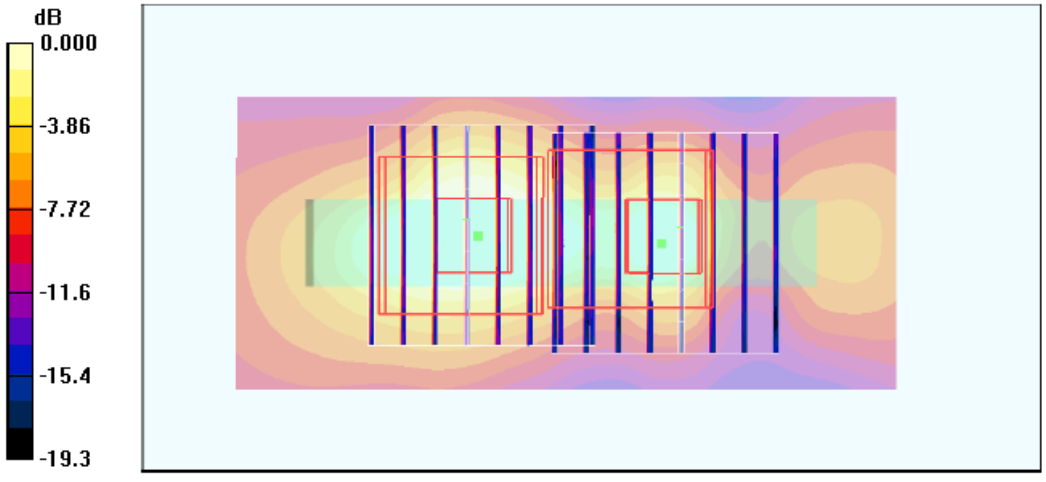
Communication System: 802.11a; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5200 MHz; σ = 5.33 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3
Ambient Temperature：22.7 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.34, 4.34, 4.34); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch40/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.869 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.85 V/m; Power Drift = -0.146 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.326 mW/g; SAR(10 g) = 0.113 mW/g
Maximum value of SAR (measured) = 0.608 mW/g

Ch40/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.85 V/m; Power Drift = -0.146 dB
Peak SAR (extrapolated) = 0.987 W/kg
SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.074 mW/g
Maximum value of SAR (measured) = 0.455 mW/g



0 dB = 0.455mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch60_NB Bottom with 0cm Gap_D400_Horizontal USB_Ant-A

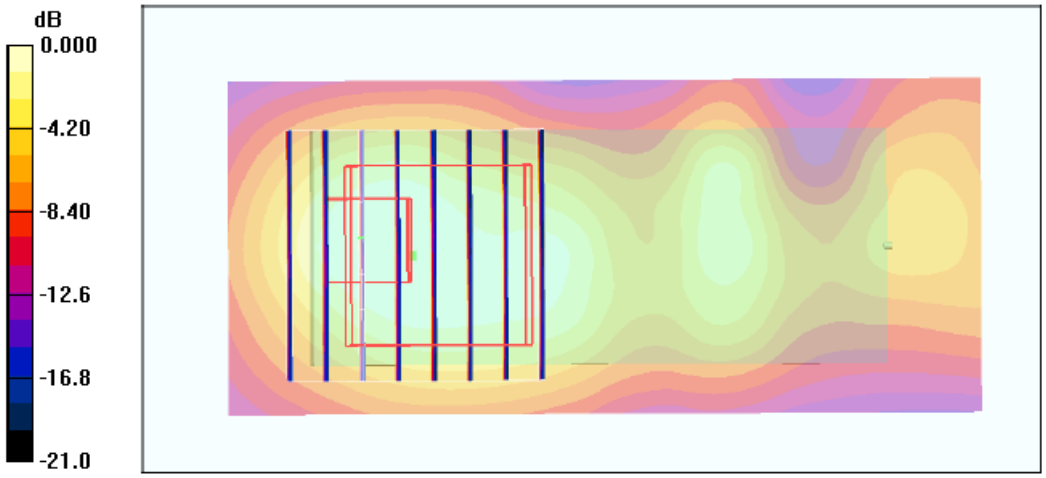
DUT: 7D1705

Communication System: 802.11a; Frequency: 5300 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5300 MHz; σ = 5.47 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature：21.6 ℃; Liquid Temperature：21.1 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.06, 4.06, 4.06); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch60/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.887 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.55 V/m; Power Drift = -0.162 dB
Peak SAR (extrapolated) = 1.64 W/kg
SAR(1 g) = 0.410 mW/g; SAR(10 g) = 0.159 mW/g
Maximum value of SAR (measured) = 0.811 mW/g



0 dB = 0.811mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch60_NB Bottom with 0 cm Gap_D430_Horizontal USB_Ant-A

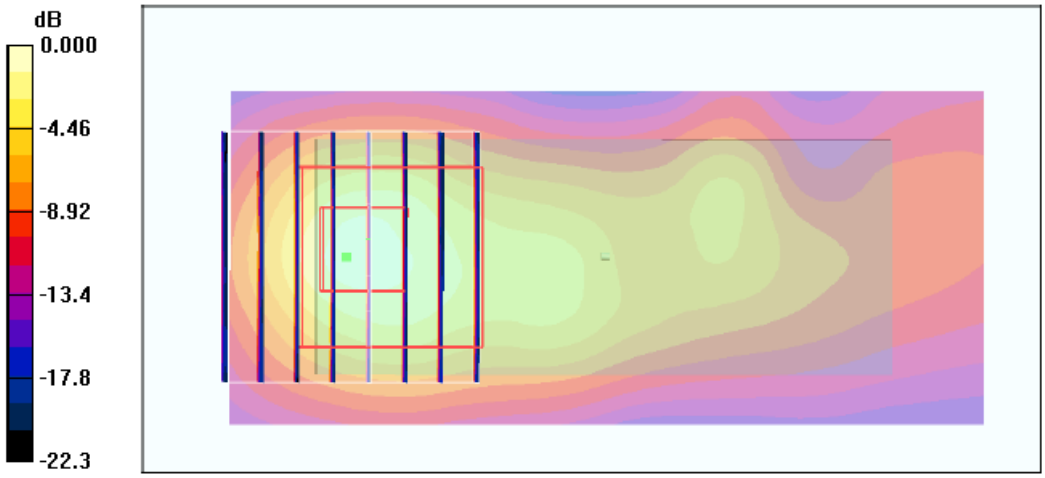
DUT: 7D1705

Communication System: 802.11a; Frequency: 5300 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5300 MHz; σ = 5.47 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature：21.6 ℃; Liquid Temperature：21.1 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.06, 4.06, 4.06); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch60/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.18 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 6.58 V/m; Power Drift = 0.176 dB
Peak SAR (extrapolated) = 2.89 W/kg
SAR(1 g) = 0.668 mW/g; SAR(10 g) = 0.214 mW/g
Maximum value of SAR (measured) = 1.42 mW/g



0 dB = 1.42mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch60_NB Bottom with 0 cm Gap_M2300_Horizontal USB_Ant-A

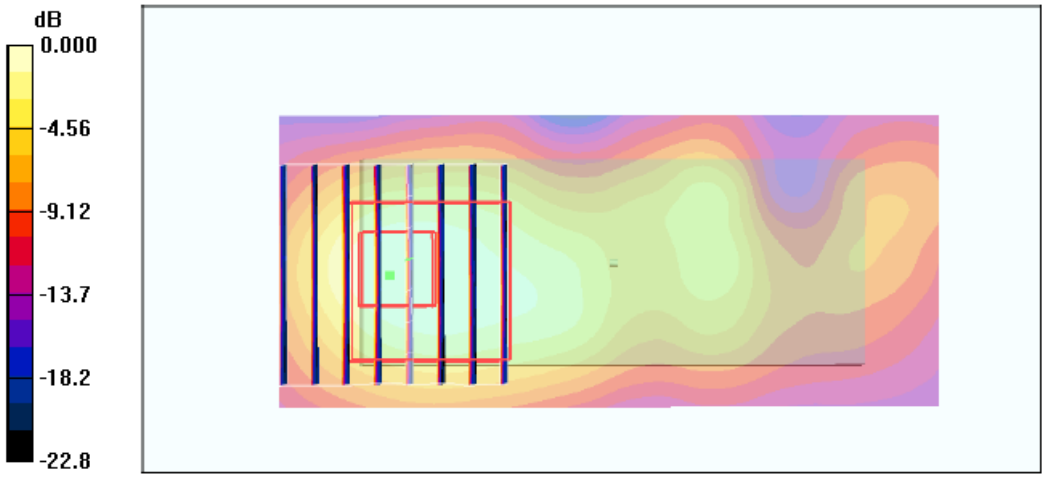
DUT: 7D1705

Communication System: 802.11a; Frequency: 5300 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5300 MHz; σ = 5.47 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature：21.6 ℃; Liquid Temperature：21.1 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.06, 4.06, 4.06); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch60/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.37 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.69 V/m; Power Drift = -0.139 dB
Peak SAR (extrapolated) = 2.72 W/kg
SAR(1 g) = 0.623 mW/g; SAR(10 g) = 0.208 mW/g
Maximum value of SAR (measured) = 1.28 mW/g



0 dB = 1.28mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch60_NB Bottom with 0cm Gap_D400_Vertical USB_Ant-A

DUT: 7D1705

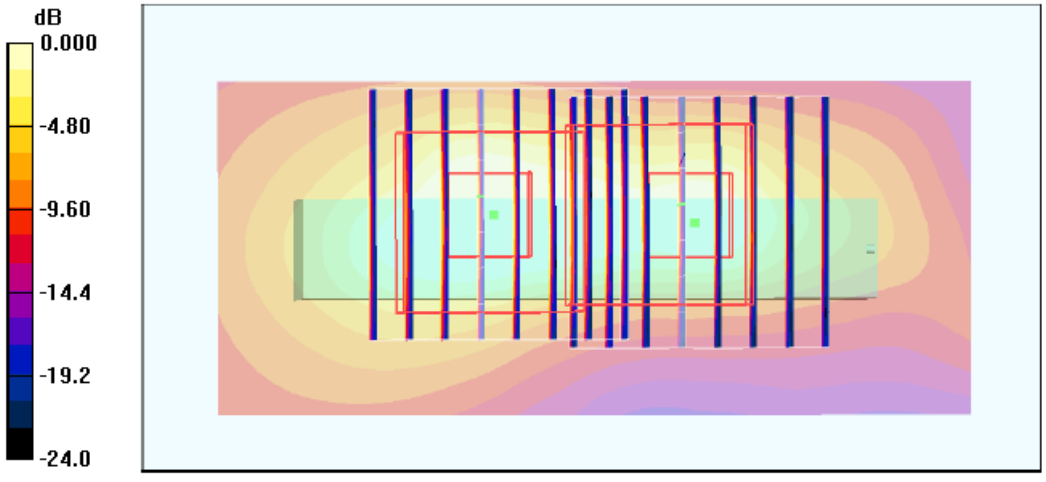
Communication System: 802.11a; Frequency: 5300 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5300 MHz; σ = 5.47 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature：21.6 ℃; Liquid Temperature：21.1 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.06, 4.06, 4.06); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch60/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 2.15 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.83 V/m; Power Drift = -0.191 dB
Peak SAR (extrapolated) = 4.21 W/kg
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.315 mW/g
Maximum value of SAR (measured) = 1.94 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.83 V/m; Power Drift = -0.191 dB
Peak SAR (extrapolated) = 2.90 W/kg
SAR(1 g) = 0.692 mW/g; SAR(10 g) = 0.218 mW/g
Maximum value of SAR (measured) = 1.38 mW/g



0 dB = 1.38mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11n Ch60_NB Bottom with 0cm Gap_D400_Vertical USB_BW20M_Ant-2Tx

DUT: 7D1705

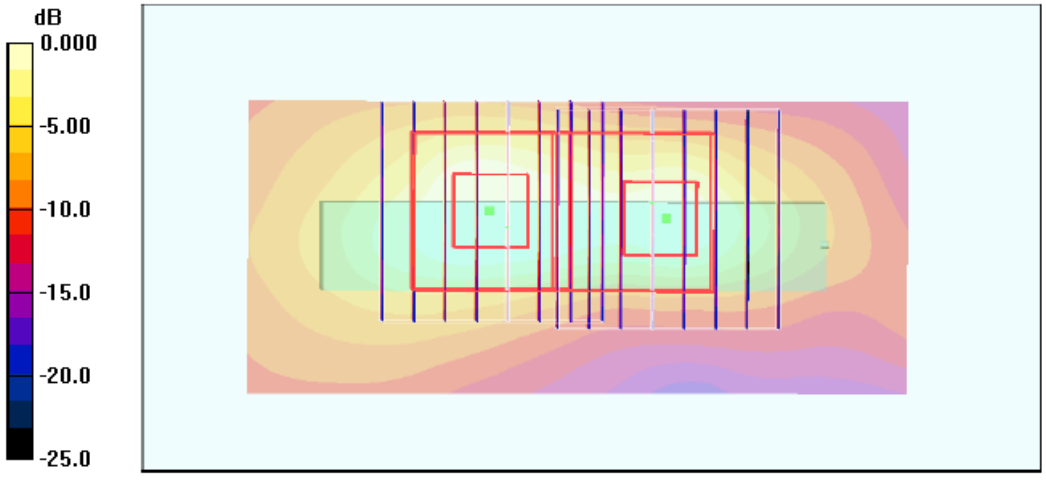
Communication System: 802.11n; Frequency: 5300 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5300 MHz; σ = 5.47 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature：21.6 ℃; Liquid Temperature：21.1 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.06, 4.06, 4.06); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch60/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.41 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.74 V/m; Power Drift = -0.152 dB
Peak SAR (extrapolated) = 2.93 W/kg
SAR(1 g) = 0.714 mW/g; SAR(10 g) = 0.220 mW/g
Maximum value of SAR (measured) = 1.39 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.74 V/m; Power Drift = -0.152 dB
Peak SAR (extrapolated) = 2.30 W/kg
SAR(1 g) = 0.528 mW/g; SAR(10 g) = 0.164 mW/g
Maximum value of SAR (measured) = 1.04 mW/g



0 dB = 1.04mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11n Ch54_NB Bottom with 0cm Gap_D400_Vertical USB_BW40M_Ant-2Tx

DUT: 7D1705

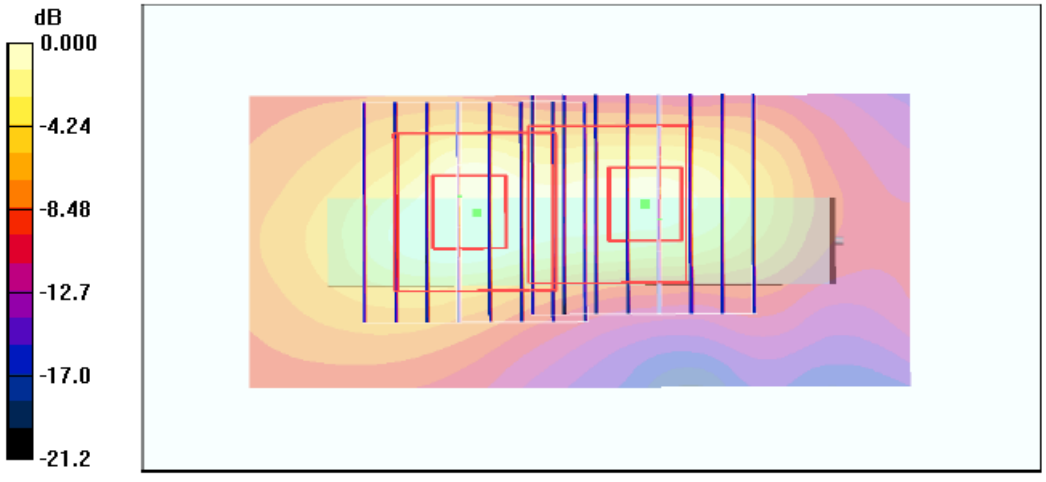
Communication System: 802.11n; Frequency: 5270 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters use: f = 5270 MHz; σ = 5.44 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature : 21.6 ℃; Liquid Temperature : 21.1 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.06, 4.06, 4.06); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch54/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.821 mW/g

Ch54/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 3.28 V/m; Power Drift = 0.045 dB
Peak SAR (extrapolated) = 1.72 W/kg
SAR(1 g) = 0.437 mW/g; SAR(10 g) = 0.142 mW/g
Maximum value of SAR (measured) = 0.828 mW/g

Ch54/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 3.28 V/m; Power Drift = 0.045 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 0.339 mW/g; SAR(10 g) = 0.110 mW/g
Maximum value of SAR (measured) = 0.650 mW/g



0 dB = 0.650mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch60_NB Bottom with 0 cm Gap_D430_Vertical USB_Ant-A

DUT: 7D1705

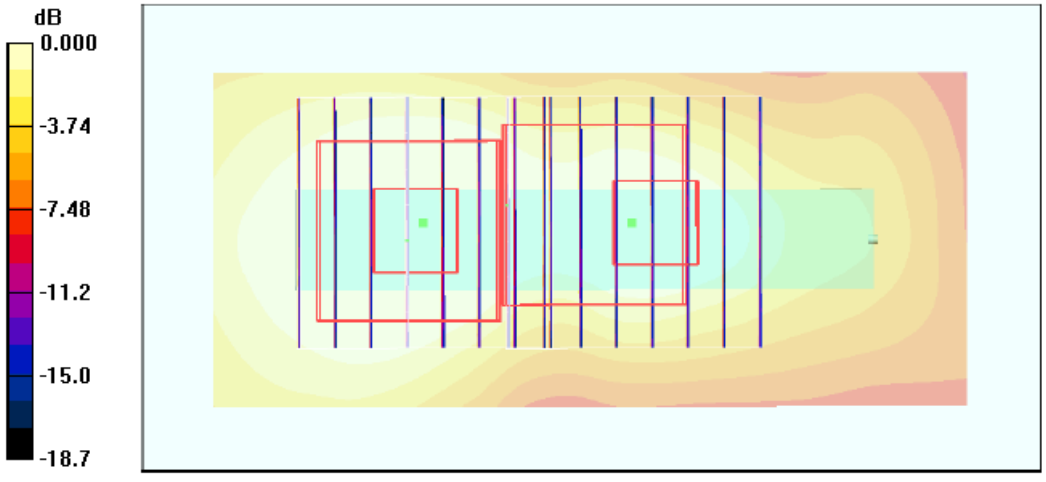
Communication System: 802.11a; Frequency: 5300 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5300 MHz; σ = 5.47 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature：21.6 ℃; Liquid Temperature：21.1 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.06, 4.06, 4.06); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch60/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.766 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.75 V/m; Power Drift = -0.164 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.319 mW/g; SAR(10 g) = 0.128 mW/g
Maximum value of SAR (measured) = 0.577 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.75 V/m; Power Drift = -0.164 dB
Peak SAR (extrapolated) = 0.761 W/kg
SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.083 mW/g
Maximum value of SAR (measured) = 0.389 mW/g



0 dB = 0.389mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/18

Body_802.11a Ch60_NB Bottom with 0 cm Gap_M2300_Vertical USB_Ant-A

DUT: 7D1705

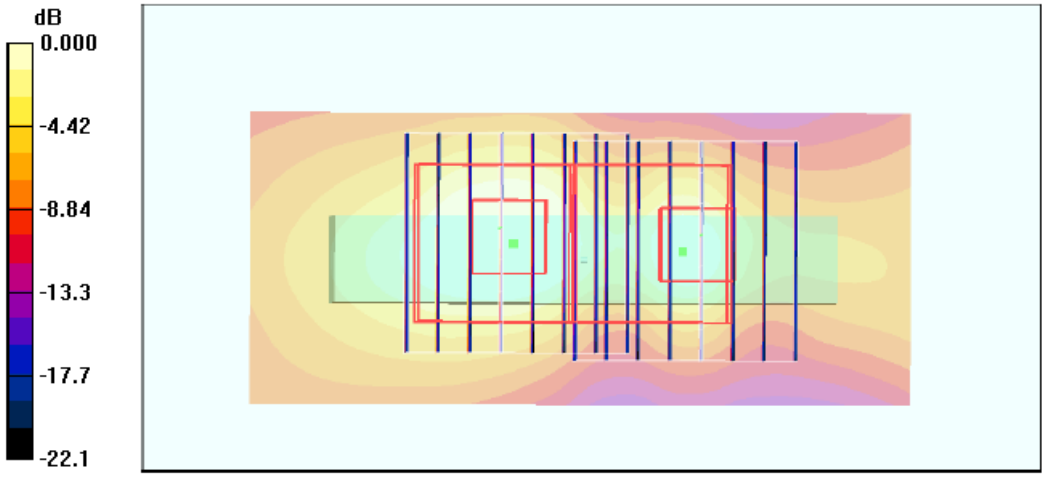
Communication System: 802.11a; Frequency: 5300 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5300 MHz; σ = 5.47 mho/m; ε_r = 48.5; ρ = 1000 kg/m^3
Ambient Temperature：21.6 ℃; Liquid Temperature：21.1 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.06, 4.06, 4.06); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch60/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.58 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 8.97 V/m; Power Drift = -0.149 dB
Peak SAR (extrapolated) = 2.29 W/kg
SAR(1 g) = 0.616 mW/g; SAR(10 g) = 0.216 mW/g
Maximum value of SAR (measured) = 1.16 mW/g

Ch60/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 8.97 V/m; Power Drift = -0.149 dB
Peak SAR (extrapolated) = 2.13 W/kg
SAR(1 g) = 0.494 mW/g; SAR(10 g) = 0.151 mW/g
Maximum value of SAR (measured) = 1.02 mW/g



0 dB = 1.02mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/19

Body_802.11a Ch120_NB Bottom with 0cm Gap_D400_Horizontal USB_Ant-A

DUT: 7D1705

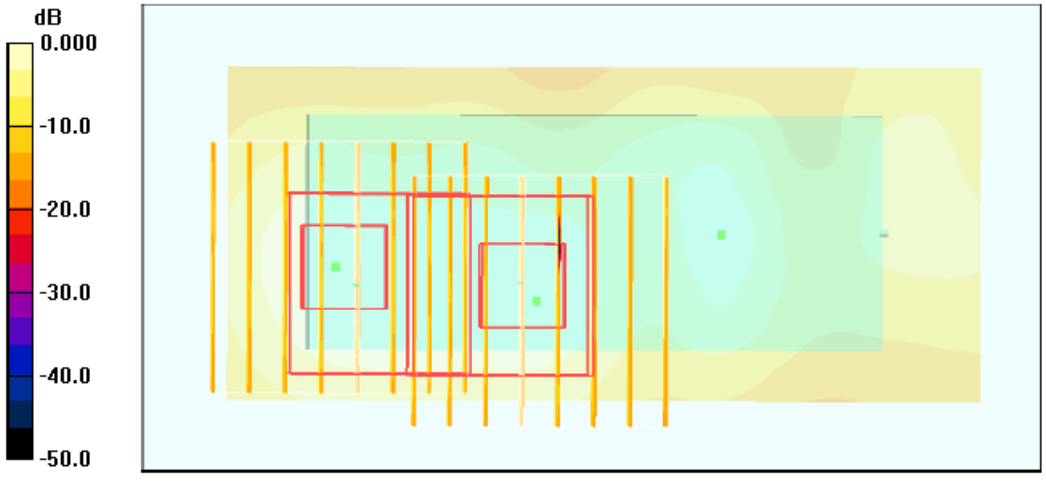
Communication System: 802.11a; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5600 MHz; σ = 5.85 mho/m; ε_r = 47.7; ρ = 1000 kg/m^3
Ambient Temperature：22.8 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.19, 4.19, 4.19); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch120/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.733 mW/g

Ch120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.87 V/m; Power Drift = -0.168 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.369 mW/g; SAR(10 g) = 0.137 mW/g
Maximum value of SAR (measured) = 0.713 mW/g

Ch120/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.87 V/m; Power Drift = -0.168 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.352 mW/g; SAR(10 g) = 0.128 mW/g
Maximum value of SAR (measured) = 0.686 mW/g



0 dB = 0.686mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/19

Body_802.11a Ch120_NB Bottom with 0cm Gap_D430_Horizontal USB_Ant-A

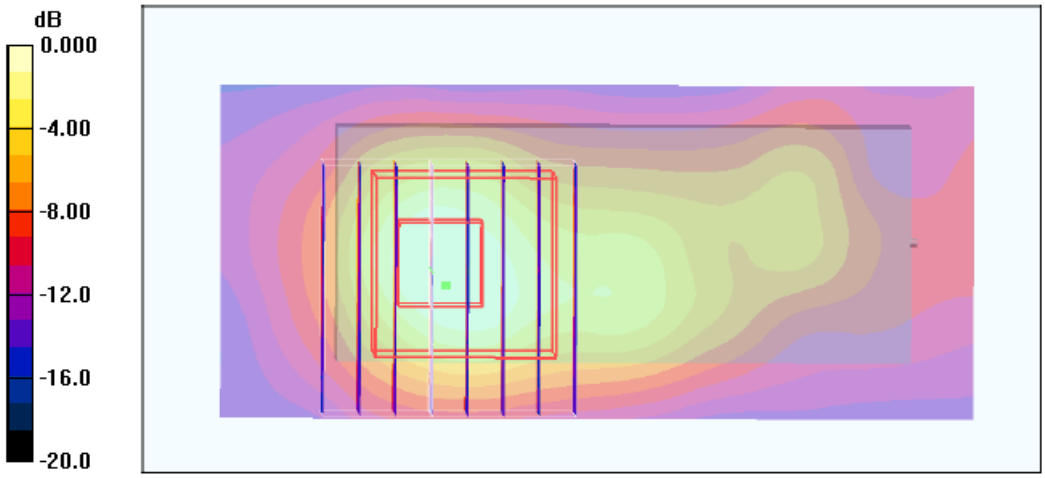
DUT: 7D1705

Communication System: 802.11a; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5600 MHz; σ = 5.85 mho/m; ε_r = 47.7; ρ = 1000 kg/m^3
Ambient Temperature：22.8 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.19, 4.19, 4.19); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch120/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.642 mW/g

Ch120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.62 V/m; Power Drift = -0.089 dB
Peak SAR (extrapolated) = 1.38 W/kg
SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.106 mW/g
Maximum value of SAR (measured) = 0.594 mW/g



0 dB = 0.594mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/19

Body_802.11a Ch120_NB Bottom with 0cm Gap_M2300_Horizontal USB_Ant-A

DUT: 7D1705

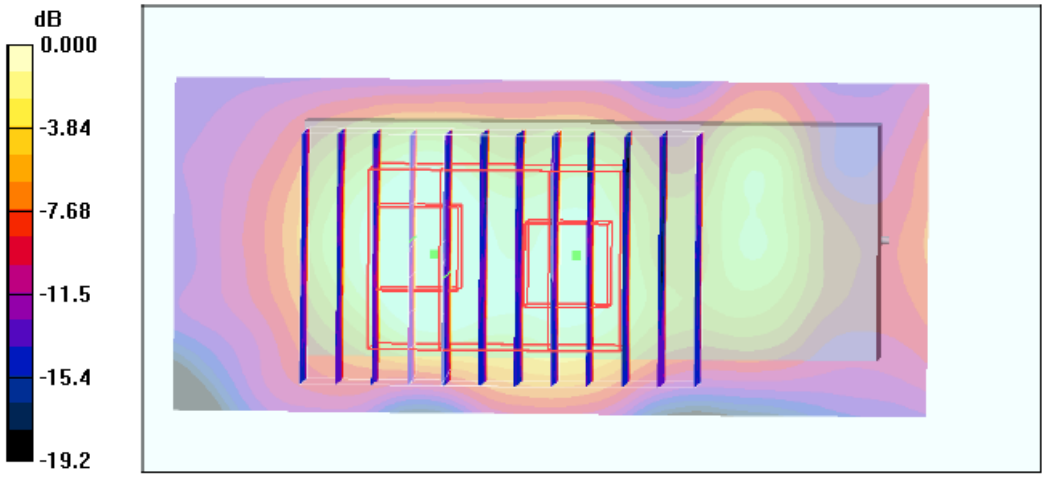
Communication System: 802.11a; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5600 MHz; σ = 5.85 mho/m; ε_r = 47.7; ρ = 1000 kg/m^3
Ambient Temperature：22.8 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.19, 4.19, 4.19); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch120/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.678 mW/g

Ch120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.62 V/m; Power Drift = -0.155 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.282 mW/g; SAR(10 g) = 0.099 mW/g
Maximum value of SAR (measured) = 0.577 mW/g

Ch120/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.62 V/m; Power Drift = -0.155 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.207 mW/g; SAR(10 g) = 0.081 mW/g
Maximum value of SAR (measured) = 0.428 mW/g



0 dB = 0.428mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/19

Body_802.11a Ch120_NB Bottom with 0cm Gap_D400_Vertical USB_Ant-A

DUT: 7D1705

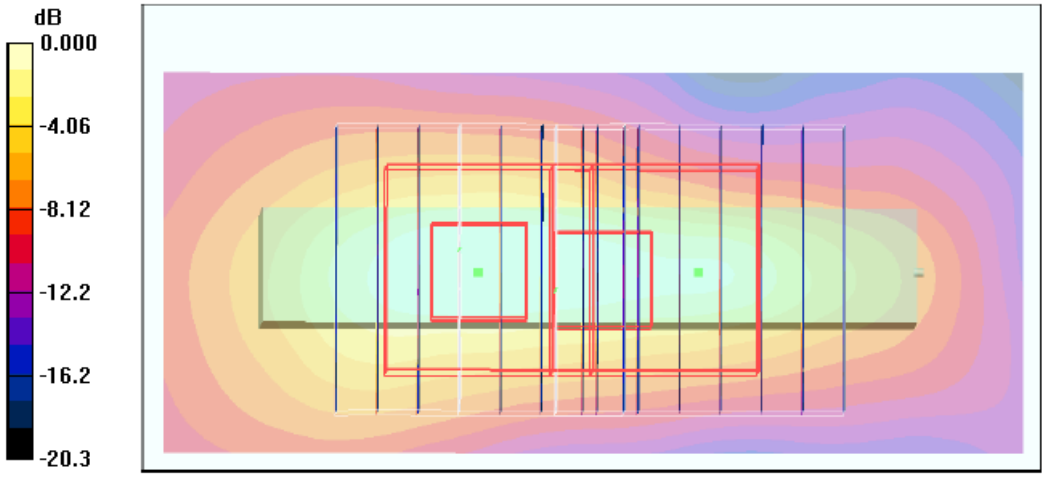
Communication System: 802.11a; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5600 MHz; σ = 5.85 mho/m; ε_r = 47.7; ρ = 1000 kg/m^3
Ambient Temperature：22.8 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.19, 4.19, 4.19); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch120/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.75 mW/g

Ch120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.56 V/m; Power Drift = -0.130 dB
Peak SAR (extrapolated) = 3.47 W/kg
SAR(1 g) = 0.806 mW/g; SAR(10 g) = 0.280 mW/g
Maximum value of SAR (measured) = 1.53 mW/g

Ch120/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.56 V/m; Power Drift = -0.130 dB
Peak SAR (extrapolated) = 3.22 W/kg
SAR(1 g) = 0.662 mW/g; SAR(10 g) = 0.216 mW/g
Maximum value of SAR (measured) = 1.43 mW/g



0 dB = 1.43mW/g

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2008/2/19

Body_802.11n Ch120_NB Bottom with 0cm Gap_D400_Vertical USB_BW20M_Ant-2Tx

DUT: 7D1705

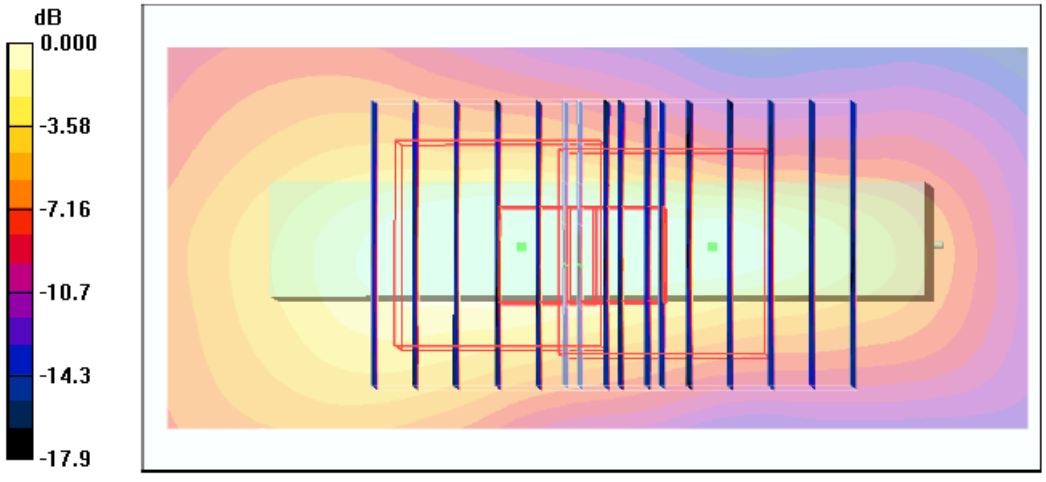
Communication System: 802.11n; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: MSL_5G Medium parameters used: f = 5600 MHz; σ = 5.85 mho/m; ε_r = 47.7; ρ = 1000 kg/m^3
Ambient Temperature：22.8 ℃; Liquid Temperature：21.3 ℃

DASY4 Configuration:
- Probe: EX3DV3 - SN3514; ConvF(4.19, 4.19, 4.19); Calibrated: 2008/1/31
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2007/9/17
- Phantom: SAM-A; Type: QD 000 P40 C; Serial: TP-1303
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Ch120/Area Scan (41x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.885 mW/g

Ch120/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.70 V/m; Power Drift = -0.172 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.342 mW/g; SAR(10 g) = 0.121 mW/g
Maximum value of SAR (measured) = 0.653 mW/g

Ch120/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.70 V/m; Power Drift = -0.172 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.092 mW/g
Maximum value of SAR (measured) = 0.629 mW/g



0 dB = 0.629mW/g