SAR TEST REPORT

Equipment Under Test	:	Intel Dual Band Wireless-N7260, 802.11ABGN+BT M.2
Model No.	:	7260SDW
Host PC Name	:	NP900X3G
Applicant	:	Intel Mobile Communications
Address of Applicant	:	Intel Mobile Communications 100 Center Point Circle Suite 200 Columbia, SC 29210 USA
FCC ID	:	PD97260SD
IC ID		1000M-7260SD
Device Category	:	Portable Device
Exposure Category	:	General Population/Uncontrolled Exposure
Date of Receipt	:	2013-09-24
Date of Test(s)	:	2013-10-23 ~ 2013-10-28
Date of Issue	:	2013-11-25

Standards:

FCC OET Bulletin 65 supplement C
IEEE 1528, 2003
ANSI/IEEE C95.1, C95.3

In the configuration tested, the EUT complied with the standards specified above.

Remarks:

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.
This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Korea Co., Ltd. or testing done by SGS Korea Co., Ltd. in connection with distribution or use of the product described in this report must be approved by SGS Korea Co., Ltd. in writing.

Tested by	:	**Minhyuk Han**		**2013-11-25**
Approved by	:	**Nicky You**		**2013-11-25**

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APPENDIX

A. DASY4 SAR Report

B. Uncertainty Analysis

C. Calibration certificate

1. General Information

1.1 Testing Laboratory

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1.2 Details of Manufacturer

Applicant : Intel Mobile Communications
Address : Intel Mobile Communications 100 Center Point Circle Suite 200 Columbia, SC 29210 USA
Email : steven.c.hackett@intel.com
Phone No. : 803-216-2344

1.3 Version of Report

Version Number	Date	Revision
00	2013-11-01	Initial issue
01	2013-11-25	Revision 01

1.4 Description of EUT(s)

EUT Type	: Intel Dual Band Wireless-N7260, 802.11ABGN+BT M.2
Model	: 7260SDW
Host PC Name	: NP900X3G
Serial Number	: JJK691DD900132Y
Mode of Operation	: WLAN, Bluetooth
Duty Cycle	: 1(WLAN)
Body worn Accessory	: None
Tx Frequency Range	: 2412 ㎒ ~ 2462 ㎒ (WLAN_11b/g/n) 5180 ㎒ ~ 5240 ㎒, 5260 ㎒ ~ 5320 ㎒ (WLAN_11a/n/ac) 5500 ㎒ ~ 5700 ㎒, 5745 ㎒ ~ 5825 ㎒ (WLAN_11a/n/ac) 2402 ㎒ ~ 2480 ㎒ (Bluetooth)
Battery Type	: 7.5 V d.c. (Lithum-ion Battery)

The highest reported SAR values

Equipment Class	Band	Reported SAR 1g Body-Worn (W/kg)
DTS	2.45 ㎓ WLAN	0.533
	5.8 ㎓ WLAN	0.665
NII	5.2 ㎓ WLAN	1.006
	5.3 ㎓ WLAN	0.973
	5.5 ㎓ WLAN	0.962
DSS	Bluetooth	N/A
Simultaneous SAR per KDB 690783 D01v01r02		0.769

1.5 Maximum Output Power Specifications

This device operates using the following maximum output power specifications. SAR values were scaled to the maximum allowed power to determine compliance per KDB Publication 44798 D01v05.

Average power for Production (dB m)							
Band (MHz)	Frequency (MHz)	Chain1			Chain2		
		11b	11g	11n	11b	11g	11n
2450	2412	15.5	13.5		15.5	13.5	15.5
	2437	16.5			16.5		16.0
	2462	15.5	13.5		15.5	13.5	15.5
	2422			13.5			13.5
	2452						
Tune-up Tolerance: -1.5 dB / + 1.5 dB							

Average power for Production (dB m)									
Band (MHz)	Frequency (MHz)	Chain1				Chain2			
		11a	HT20	HT40	VTH80	11a	HT20	HT40	VTH80
5200	5180	16.0	16.0			15.5	15.5		
	5200					16.0	16.0		
	5220								
	5240								
	5190			10.0				10.0	
	5230			16.0				16.0	
	5210				8.5				8.5
5300	5260	16.0	16.0			15.5	15.5		
	5280					16.0	16.0		
	5300								
	5320					15.5			
	5270			10.0				10.0	
	5310			11.0				11.0	
	5290				11.0				11.0
5800	5745	16.5	16.5			16.5	16.5		
	5765								
	5785								
	5805								
	5825								
	5755			16.5				16.5	
	5795								
	5775				14.0				14.0
Tune-up Tolerance: -1.5 dB / + 1.5 dB									

Average power for Production (dBm)													
Band (MHz)	Frequency (MHz)	Chain1						Chain2					
		11a	HT20	HT40	VTH20	VTH40	VTH80	11a	HT20	HT40	VTH20	VTH40	VTH80
5600	5500	15.5	15.5					15.5	15.5				
	5520	16.5	16.5					16.5	16.5				
	5540												
	5560												
	5580												
	5660												
	5680												
	5700	15.5	15.5					15.5	15.5				
	5510			10.5						10.5			
	5550			16.5						16.5			
	5570												
	5720				16.5						16.5		
	5710					16.5						16.5	
	5530						9.0						9.0
	5690						14.0						14.0
Tune-up Tolerance: -1.5 dB / + 1.5 dB													

Average power for Production (dBm)				
Mode	GFSK	PI/4DQPSK	8DPSK	LE
Bluetooth	2.5	2.5	1.5	5.5
Tune-up Tolerance: -1.5 dB / + 1.5 dB				

+

1.6 Test Environment

Ambient temperature	: (22 ± 2) ° C
Tissue Simulating Liquid	: (22 ± 2) ° C
Relative Humidity	: (55 ± 5) % R.H.

1.7 Operation Configuration

The client provided a special driver and test program which can control the frequency and power of the WLAN module. The EUT was set to maximum power level during all tests and at the beginning of each test the battery was fully charged.

The DASY4 system measures power drift during SAR testing by comparing E-field in the same location at the beginning and at the end of measurement. Based on the RF Power and antenna separation distance, stand-alone BT SAR and simultaneous SAR evaluation are not required.

1.8 Host PC Information

Model Name	NP900X3G
Serial No	JJK691DD900132Y
Manufacturer	Samsung Electronics Co., Ltd.

1.9 EVALUATION PROCEDURES

- Power Reference Measurement Procedures

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The Minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 2 ㎜. This distance cannot be smaller than the Distance of sensor calibration points to probe tip as defined in the probe properties (for example, 2.5 ㎜ for an EX3DV4 probe type).

1.10 SAR Measurement Procedures

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The Minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 2 ㎜. This distance cannot be smaller than the Distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2 and 3: Area Scan & Zoom Scan Procedures

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 1 g and 10 g cubes. The algorithm to find the cube

with highest averaged SAR is divided into the following stages:

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

< Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01 >

			≤3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the area scan based *1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

Step 4: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

1.11 The SAR Measurement System

A photograph of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (Speag DASY 4 professional system). A Model EX3DV4 3862 and 3791 E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|Ei|2)/ ρ where σ and ρ are the conductivity and mass density of the tissue-simulant. The DASY4 system for performing compliance tests consists of the following items:

•A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).

•A dosimeter probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.

•A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

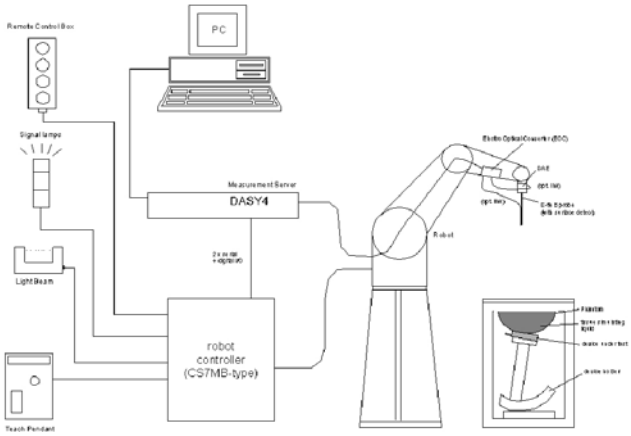


Fig a. The microwave circuit arrangement used for SAR system verification

• The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.

• The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.

• A probe alignment unit which improves the (absolute) accuracy of the probe positioning.

• A computer operating Windows XP.

• DASY4 software: V4.7 Build80.

• Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.

• The SAM phantom enabling testing body usage.

• The device holder for flat phantom.

• Tissue simulating liquid mixed according to the given recipes.

• Validation dipole kits allowing to validate the proper functioning of the system.

1.12 System Components

EX3DV4 E-Field Probe

Construction	:	Symmetrical design with triangular core. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	:	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 835 and HSL1900. Additional CF-Calibration for other liquids and frequencies upon request.
Frequency	:	10 ㎒ to 6 ㎓; Linearity: ± 0.2 ㏈ (30 ㎒ to 6 ㎓)
Directivity	:	± 0.3 ㏈ in HSL (rotation around probe axis) ± 0.5 ㏈ in tissue material (rotation normal to probe axis)
Dynamic Range	:	10μW/g to > 100 m W/g; Linearity: ± 0.2 ㏈(noise: typically < 1 μW/g)
Dimensions	:	Overall length: 337 ㎜ (Tip length: 20 ㎜) Tip diameter: 2.5 ㎜ (Body diameter: 12 ㎜) Distance from probe tip to dipole centers: 1 ㎜
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 ㎓ with precision of better 30%
Construction		Symmetrical design with triangular core. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE)

EX3DV4 E-Field Probe

NOTE:

1. The Probe parameters have been calibrated by the SPEAG. Please reference “APPENDIX C” for the Calibration Certification Report.

ELI Phantom

Construction: Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 ㎒ to 6 ㎓. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.

ELI V5.0 has the same shell geometry and is manufactured from the same material as ELI4, but has reinforced top structure

ELI Phantom

Shell Thickness: 2.0 mm ± 0.2 mm

Dimensions Major axis: 600 ㎜
Minor axis: 400 ㎜

DEVICE HOLDER

Construction Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-2 (a.q.. laptops, Cameras, etc.). It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioned.

Device Holder

1.13 SAR System verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10 % from the target SAR values. These tests were done at 2450 ㎒, 5200 ㎒, 5300 ㎒, 5500 ㎒, 5600 ㎒, 5800 ㎒. The tests for EUT were conducted within 24 hours after each verification. The obtained results from the system accuracy verification are displayed in the table 1. During the tests, the ambient temperature of the laboratory was in the range (22 ± 2) ° C, the relative humidity was in the range (55 ± 5) % R.H. and the liquid depth above the ear reference points was above 15 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

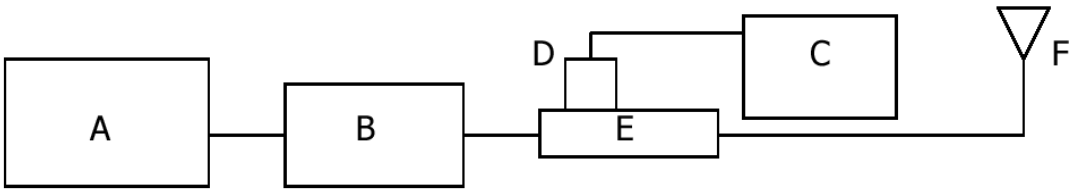


Fig b. The microwave circuit arrangement used for SAR system verification

A. Agilent Model E4438C Signal Generator
B. EMPOWER Model 2001-BBS3Q7ECK Amplifier
C. EMPOWER Model 2092-BBS5K9CAJ Amplifier
D. Agilent Model E4419B Power Meter
E. Agilent Model 9300H Power Sensor
F. Agilent Model 86205A Directional RF Bridges
G. Reference dipole Antenna

Photo of the dipole Antenna

System Verification Results

Verification Kit	Probe S/N	Tissue	Target SAR 1 g from Calibration Certificate (1 W)	Measured SAR 1 g (0.1 W)	Normalized SAR 1 g (1 W)	Deviation (%)	Date	Liquid Temp. (°C)
D2450V2 S/N: 892	3791	2450 MHz Body	50.1 W/kg	5.18 W/kg	**51.8 W/kg**	3.39	2013-10-28	21.1
D5 GHz V2 S/N: 1106	3791	5200 MHz Body	74.9 W/kg	7.85 W/kg	**78.5 W/kg**	4.81	2013-10-24	22.1
D5 GHz V2 S/N: 1106	3791	5300 MHz Body	76.8 W/kg	7.75 W/kg	**77.5 W/kg**	0.91	2013-10-23	22.3
D5 GHz V2 S/N: 1106	3791	5500 MHz Body	80.8 W/kg	8.31 W/kg	**83.1 W/kg**	2.85	2013-10-25	21.5
D5 GHz V2 S/N: 1106	3791	5600 MHz Body	81.4 W/kg	8.25W/kg	**82.5 W/kg**	1.35	2013-10-25	21.5
D5 GHz V2 S/N: 1106	3791	5800 MHz Body	75.1 W/kg	7.68 W/kg	**76.8 W/kg**	2.26	2013-10-26	21.9

Table 1. Results system verification

1.14 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this simulant fluid were measured by using the Speag Model DAK-3.5 Dielectric Probe in conjunction with Agilent E5071C Network Analyzer(300 ㎑ - 6 ㎓) by using a procedure detailed in Section V.

f (㎒)	Tissue type	Limits / Measured	Dielectric Parameters		
			Permittivity	Conductivity	Simulated Tissue Temp(℃)
2450	Body	Measured, 10-28-2013	52.7	1.96	21.1
		Recommended Limits	*52.7*	*1.95*	21.0 ~ 23.0
		Deviation(%)	**0.00**	**0.51**	-
2412		Measured, 10-28-2013	52.8	1.91	21.1
		Deviation(%)	**0.19**	**-2.05**	-
2462		Measured, 10-28-2013	52.6	1.97	21.1
		Deviation(%)	**-0.19**	**1.03**	-
5200	Body	Measured, 10-24-2013	48.9	5.40	22.1
		Recommended Limits	*49.0*	*5.30*	21.0 ~ 23.0
		Deviation(%)	**-0.20**	**1.89**	-
5180		Measured, 10-24-2013	49.0	5.38	22.1
		Deviation(%)	**0.00**	**1.51**	-
5220		Measured, 10-24-2013	48.8	5.43	22.1
		Deviation(%)	**-0.41**	**2.45**	
5240		Measured, 10-24-2013	48.8	5.46	22.1
		Deviation(%)	**-0.41**	**3.02**	-
5300	Body	Measured, 10-23-2013	48.7	5.54	22.3
		Recommended Limits	*48.9*	*5.42*	21.0 ~ 23.0
		Deviation(%)	**-0.41**	**2.21**	-
5260		Measured, 10-23-2013	48.8	5.51	22.3
		Deviation(%)	**-0.20**	**1.66**	-
5280		Measured, 10-23-2013	48.8	5.52	22.3
		Deviation(%)	**-0.20**	**1.85**	
5320		Measured, 10-23-2013	48.7	5.54	22.3
		Deviation(%)	**-0.41**	**2.21**	-
5500	Body	Measured, 10-25-2013	50.1	5.74	21.5
		Recommended Limits	*48.6*	*5.65*	21.0 ~ 23.0
		Deviation(%)	**3.09**	**1.59**	-
5520		Measured, 10-25-2013	50.0	5.76	21.5
		Deviation(%)	**2.88**	**1.95**	-
5580		Measured, 10-25-2013	49.9	5.84	21.5
		Deviation(%)	**2.67**	**3.36**	-
5600	Body	Measured, 10-25-2013	49.9	5.86	21.5
		Recommended Limits	*48.5*	*5.77*	21.0 ~ 23.0
		Deviation(%)	**2.89**	**1.56**	-
5680		Measured, 10-25-2013	49.6	5.97	21.5
		Deviation(%)	**2.27**	**3.47**	-
5700		Measured, 10-25-2013	49.5	6.00	21.5
		Deviation(%)	**2.06**	**3.99**	-

f (MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			Permittivity	Conductivity	Simulated Tissue Temp(℃)
5800	Body	Measured, 10-26-2013	49.2	6.21	21.9
		Recommended Limits	*48.2*	*6.00*	21.0 ~ 23.0
		Deviation(%)	**2.07**	**3.50**	-
5745		Measured, 10-26-2013	49.3	6.13	21.9
		Deviation(%)	**2.28**	**2.17**	-
5785		Measured, 10-26-2013	49.2	6.18	21.9
		Deviation(%)	**2.07**	**3.00**	-
5825		Measured, 10-26-2013	49.1	6.23	21.9
		Deviation(%)	**1.87**	**3.83**	-

The composition of the brain & muscle tissue simulating liquid

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Ingredients (% by weight)	Frequency (MHz)									
	450		835		915		1900		2450	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	38.56	51.16	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2
Salt (NaCl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04
Sugar	56.32	46.78	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0
HEC	0.98	0.52	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7
Dielectric Constant	43.42	58.0	42.54	56.1	42.0	56.8	39.9	54.0	39.8	52.5
Conductivity (S/m)	0.85	0.83	0.91	0.95	1.0	1.07	1.42	1.45	1.88	1.78

Salt: 99 $^{+}$% Pure Sodium Chloride Sugar: 98 $^{+}$% Pure Sucrose

Water: De-ionized, 16 MΩ^{+} resistivity HEC: Hydroxyethyl Cellulose

DGBE: 99 $^{+}$% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]

Triton X-100 (ultra pure): Polyethylene glycol mono [4-(1,1, 3, 3-tetramethylbutyl)phenyl]ether

Simulating Liquids for 5 GHz, Manufactured by SPEAG

Ingredients	(% by weight)
Water	78
Mineral Oil	11
Emulsifiers	9
Additives and Salt	2

1.15 Test System Validation

Per FCC KDB 865664 D02v01, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the require tissue-equivalent media for system validation, according to the procedures outlined in IEEE 1528-2003 and FCC KDB 865664 D01v01. Since frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probe and tissue dielectric parameters has been included.

f (MHz)	Date	Probe S/N	Probe Cal point	Tissue Type	Dielectric Parameters		CW Validation			Modulated Validation		
					Permittivity	Conductivity	Sensitivity	Probe Linearity	Probe Isotropy	Mod. Type	Duty Factor	PAR
2450	06/20/2013	3791	2450	Body	50.9	1.97	PASS	PASS	PASS	OFDM	N/A	PASS
5200	06/16/2013	3791	5200	Body	49.1	5.33	PASS	PASS	PASS	OFDM	N/A	PASS
5300	06/16/2013	3791	5300	Body	48.8	5.45	PASS	PASS	PASS	OFDM	N/A	PASS
5500	06/18/2013	3791	5500	Body	49.6	5.71	PASS	PASS	PASS	OFDM	N/A	PASS
5600	06/18/2013	3791	5600	Body	49.9	5.82	PASS	PASS	PASS	OFDM	N/A	PASS
5800	06/19/2013	3791	5800	Body	48.6	6.20	PASS	PASS	PASS	OFDM	N/A	PASS

< SAR System Validation Summary>

1.16 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (“SAR”) in Section 4.2 of “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 ㎑ to 300 ㎓,” ANSI/IEEE C95.3–2003, Copyright 2003 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in “Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields,” NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 ㎑ to 6 ㎓. Portable devices that transmit at frequencies above 6 ㎓ are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter. Measurements and calculations to

demonstrate compliance with MPE field strength or power density limits for devices operating above 6 ㎓ should be made at a minimum distance of 5 cm from the radiating source.

(1) Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over an 10 grams of tissue (defined as a tissue volume in the shape of a cube). Occupational/Controlled limits apply when persons are exposed as a consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.

(2) Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.(Table .4)

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Partial Peak SAR (Partial)	1.60 m W/g	8.00 m W/g
Partial Average SAR (Whole Body)	0.08 m W/g	0.40 m W/g
Partial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 m W/g	20.00 m W/g

Table .2 RF exposure limits

2. Instruments List

Maunfacturer	Device	Type	Serial Number	Cal Date	Cal Interval	Cal Due
Stäubli	Robot	RX90BL	F03/5W05A1/A/01	N/A	N/A	N/A
Schmid& Partner Engineering AG	Dosimetric E-Field Probe	EX3DV4	3791	06/04/2013	Annual	06/04/2014
Schmid& Partner Engineering AG	2450 ㎒ System Validation Dipole	D2450V2	892	09/26/2013	Biennial	09/26/2015
Schmid& Partner Engineering AG	5000 ㎒ System Validation Dipole	D5GHzV2	1106	03/15/2013	Biennial	03/15/2015
Schmid& Partner Engineering AG	Data acquisition Electronics	DAE3	567	01/25/2013	Annual	01/25/2014
Schmid& Partner Engineering AG	Software	DASY4 V4.7	-	N/A	N/A	N/A
Schmid& Partner Engineering AG	Phantom	ELI Phantom	TP-1169	N/A	N/A	N/A
Agilent	Network Analyzer	E5071C	MY46111535	07/03/2013	Annual	07/03/2014
Schmid& Partner Engineering AG	Dielectric Assessment Kit	DAK-3.5	1108	03/05/2013	Annual	03/05/2014
Agilent	Power Meter	E4419B	GB43311125	06/27/2013	Annual	06/27/2014
Agilent	Power Sensor	E9300H	MY41495314	09/10/2013	Annual	09/10/2014
			MY41495307	09/10/2013	Annual	09/10/2014
Agilent	Signal Generator	E4438C	MY42082477	03/28/2013	Annual	03/28/2014
Empower RF Systems	Power Amplifier	2001-BBS3Q7ECK	1032 D/C 0336	03/29/2013	Annual	03/29/2014
Empower RF Systems	Power Amplifier	2092-BBS5K8CAJ	1010	09/17, 2013	Annual	09/17/2014
Agilent	Directional RF Bridges	86205A	MY31402302	06/29/2013	Annual	06/29/2014
Microlab	LP Filter	LA-15N LA-30N LA-60N	N/A	09/09/2013	Annual	09/09/2014
Agilent	Attenuator	8491B	50566	09/09/2013	Annual	09/09/2014
JUMBP	Hygro-Thermometer	RT-811E	SGS-RSS-TM02	04/01/2013	Annual	04/01/2014
LKM Electronic	Digital Thermometer	DTM3000	3027	07/01/2013	Annual	07/01/2014

3.Summary of Results

3.1 FCC Power Measurement Procedures

The SAR measurement Software calculates a reference point at the start and end of the test to check for power drifts. If conducted power deviations of more than 5 % occurred, the tests were repeated.

3.2 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v05, When SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as reported SAR. Test highest reported SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r02.

3.3 RF Conducted Power

WLAN 2.4 GHz

Mode	Freq. (MHz)	Ch. #	Rate	Measured Power [dB m]	
				Main	AUX
802.11b	2412	1	1	15.34	13.44
	2437	6	1	15.37	13.81
	2462	11	1	15.30	13.73
802.11g	2412	1	6	13.35	11.39
	2437	6	6	16.10	15.34
	2462	11	6	13.21	13.21
802.11n HT20	2412	1	HT4	13.19	11.72
	2437	6	HT4	16.28	15.47
	2462	11	HT4	13.42	13.31
802.11n HT40	2422	3	HT4	11.76	9.84
	2437	6	HT4	16.11	13.30
	2452	9	HT4	12.75	12.81
802.11n HT20_MIMO	2412	1	HT8	9.32	11.27
	2437	6	HT8	10.85	11.15
	2462	11	HT8	9.42	10.31
802.11n HT40_MIMO	2422	3	HT8	5.61	10.32
	2437	6	HT8	6.11	11.00
	2452	9	HT8	9.25	9.62

5.2 GHz

Mode	Freq. (MHz)	Ch. #	Rate	Measured Power [dB m]	
				Main	AUX
802.11a	5180	36	6	13.37	12.65
	5200	40	6	15.69	15.63
	5220	44	6	**15.72**	**15.77**
	5240	48	6	14.88	14.76
802.11n HT20	5180	36	HT4	13.27	12.64
	5200	40	HT4	15.48	15.70
	5220	44	HT4	15.59	15.65
	5240	48	HT4	15.13	15.22
802.11n HT40	5190	38	HT4	9.18	9.80
	5230	46	HT4	15.27	15.21
802.11n HT20_MIMO	5180	36	HT8	8.41	8.18
	5200	40	HT8	9.68	9.66
	5220	44	HT8	10.62	10.25
	5240	48	HT8	10.41	10.09
802.11n HT40_MIMO	5190	38	HT8	5.68	5.24
	5230	46	HT8	9.30	8.75
802.11ac VTH80	5210	42	VHT6	8.10	7.83

5.3 GHz

Mode	Freq. (MHz)	Ch. #	Rate	Measured Power [dB m]	
				Main	AUX
802.11a	5260	52	6	13.31	12.65
	5280	56	6	15.86	15.62
	5300	60	6	**15.92**	**15.76**
	5320	64	6	13.12	12.80
802.11n HT20	5260	52	HT4	13.27	12.69
	5280	56	HT4	15.64	15.73
	5300	60	HT4	15.77	15.82
	5320	64	HT4	13.02	13.12
802.11n HT40	5270	54	HT4	9.23	9.78
	5310	62	HT4	10.81	10.78
802.11n HT20_MIMO	5260	52	HT8	7.77	7.35
	5280	56	HT8	10.31	10.84
	5300	60	HT8	10.21	10.54
	5320	64	HT8	8.59	8.35
802.11n HT40_MIMO	5270	54	HT8	5.67	5.83
	5310	62	HT8	6.63	5.68
802.11ac VTH80	5290	58	VHT6	10.25	10.68

5.5 GHz

Mode	Freq. (MHz)	Ch. #	Rate	Measured Power [dB m]	
				Main	AUX
802.11a	5500	100	6	13.23	12.80
	5520	104	6	16.27	16.31
	5540	108	6	16.12	16.19
	5560	112	6	16.06	16.25
	5580	116	6	**16.40**	**16.39**
	5660	132	6	16.11	16.23
	5680	136	6	16.32	16.28
	5700	140	6	12.76	12.26
802.11n HT20	5500	100	HT4	13.10	12.78
	5520	104	HT4	16.23	16.26
	5540	108	HT4	16.03	16.20
	5560	112	HT4	16.19	16.11
	5580	116	HT4	16.20	16.39
	5660	132	HT4	16.01	16.28
	5680	136	HT4	16.13	16.32
	5700	140	HT4	12.32	12.38
802.11n HT40	5510	102	HT4	10.29	10.22
	5550	110	HT4	16.30	16.17
	5670	134	HT4	16.24	16.09
802.11n HT20_MIMO	5500	100	HT8	11.25	10.66
	5520	104	HT8	10.21	11.15
	5540	108	HT8	13.29	11.31
	5560	112	HT8	13.26	12.87
	5580	116	HT8	13.34	13.09
	5660	132	HT8	11.15	13.37
	5680	136	HT8	10.29	11.12
	5700	140	HT8	10.33	10.31
802.11n HT40_MIMO	5510	102	HT8	8.24	7.74
	5550	110	HT8	12.98	13.35
	5670	134	HT8	13.21	13.72
802.11ac VTH20	5720	144	VHT0	16.28	16.14
802.11ac VTH40	5710	142	VHT0	16.12	16.09
802.11ac VTH80	5530	106	VHT6	8.87	13.67
	5690	138	VHT6	13.76	13.80

5.8 GHz

Mode	Freq. (MHz)	Ch. #	Rate	Measured Power [dB m]	
				Main	AUX
802.11a	5745	149	6	**16.33**	16.26
	5765	153	6	16.07	16.17
	5785	157	6	16.27	16.24
	5805	161	6	16.03	16.06
	5825	165	6	16.21	**16.38**
802.11n HT20	5745	149	HT4	16.18	16.29
	5765	153	HT4	16.00	16.12
	5785	157	HT4	16.06	16.27
	5805	161	HT4	16.21	16.04
	5825	165	HT4	16.02	16.19
802.11n HT40	5755	151	HT4	16.30	16.28
	5795	159	HT4	16.23	16.04
11n HT20_MIMO	5745	149	HT8	13.02	13.20
	5765	153	HT8	13.41	13.19
	5785	157	HT8	13.37	13.28
	5805	161	HT8	13.29	13.21
	5825	165	HT8	13.32	13.17
11n HT40_MIMO	5755	151	HT8	13.44	13.39
	5795	159	HT8	13.31	13.35
11ac VTH80	5775	155	VHT6	13.69	13.75

Bluetooth

Channel	Frequency (MHz)	GFSK (dB m)	4DQPSK (dB m)	8DPSK (dB m)	LE (dB m)
Low	2402	0.34	0.51	-1.37	3.89
Middle	2441	1.19	1.27	-0.66	4.23
High	2480	1.72	1.81	-0.19	**4.78**

Note :

1. The modes with highest output power channel were chosen for the conducted output power.

3.4 SAR Test Configuration

IEEE 802.11 Transmitters

802.11 a/b/g and 4.9 GHz operating modes are tested independently according to the service requirements in each frequency band. 802.11 b/g modes are tested on channel 1, 6, and 11. 802.11a is tested for UNII operations on channels 36 and 48 in the 5.15 ~ 5.25 GHz band, channels 52 and 64 in the 5.25 ~ 5.35 GHz band, channels 104, 116, 124 and 136 in the 5.470 ~ 5.725 GHz band, and channels 149 and 161 in the 5.8 GHz band. When 5.8 GHz §15.247 is also available, channels 149, 157 and 165 should be tested instead of the UNII channels. 802.11g mode was evaluated only if the output power was 0.25 dB higher than the 802.11b mode.

Mode		GHz	Channel	Turbo Channel	"Default Test Channels" §15.247 802.11b	§15.247 802.11g	UNII	
802.11 b/g		2.412	1#		√	∇		
		2.437	6	6	√	∇		
		2.462	11#		√	∇		
802.11a	UNII	5.18	36	42 (5.21 GHz)			√	
		5.20	40					•
		5.22	44					•
		5.24	48	50 (5.25 GHz)			√	
		5.26	52				√	
		5.28	56	58 (5.29 GHz)				•
		5.30	60					•
		5.32	64				√	
		5.500	100	Unknown				•
		5.520	104				√	
		5.540	108					•
		5.560	112					•
		5.580	116				√	
		5.600	120					•
		5.620	124				√	
		5.640	128					•
		5.660	132					•
		5.680	136				√	
		5.700	140					•
	UNII or §15.247	5.745	149		√		√	
		5.765	153	152 (5.76 GHz)		•		•
		5.785	157		√			•
		5.805	161	160 (5.80 GHz)		•	√	
	§15.247	5.825	165		√			

- √ = "default test channels"
- • = possible 802.11a channels with maximum average output > the "default test channels"
- ∇ = possible 802.11g channels with maximum average output ¼ dB ≥ the "default test channels"
- # = when output power is reduced for channel 1 and/or 11 to meet restricted band requirements the highest output channels closest to each of these channels should be tested

3.5 SAR Test Exclusions Applied

Per FCC KDB 447498 D01v05, the SAR exclusion threshold for distances < 50 ㎜ is defined by the following equation:

$$\frac{\text{Max Power of Channel (mW)}}{\text{Test Separation Distance (mm)}} * \sqrt{\text{Frequency(GHz)}} \leq 3.0$$

Based on the maximum tune-up tolerance limit of Bluetooth the antenna to use separation distance, Bluetooth SAR was not required: (3.55/6.45 * √2.480 = 0.87<3.0)

<The Distance information of Antenna to Edges of EUT>

3.6 SAR Data Summary

Ambient Temperature (°C)	22.5
Liquid Temperature (°C)	21.1
Date	10/28/2013

WLAN 2.45 GHz Body SAR

Test Mode	Antenna (Chain)	EUT Position	Traffic Channel		Distance (mm)	Power(dBm)		1-g SAR (W/kg)		1 g SAR Limits (W/kg)
			Frequency (MHz)	Channel		Measured Power	Tune-Up Limit	Measured SAR	Scaled SAR	
802.11b	Main	Base	2437	6	0	15.37	16.5	0.411	0.533	1.6
	Aux		2437	6	0	13.81	16.5	0.240	0.446	
802.11g	Main		2437	6	0	16.10	16.5	0.420	0.461	
	Aux		2437	6	0	15.34	16.5	0.372	0.486	
802.11n HT20	Main		2437	6	0	16.28	16.5	0.397	0.418	
	Aux		2437	6	0	15.47	16.5	0.414	0.525	
802.11n HT40	Main		2437	6	0	16.11	16.5	0.476	0.521	
802.11g	Main	Back Screen	2437	6	10	16.28	16.5	0.049	0.052	
	Aux		2437	6	10	15.47	16.5	0.021	0.027	

Ambient Temperature (°C)	23.6
Liquid Temperature (°C)	22.1
Date	10/24/2013

WLAN 5.2 GHz Body SAR

Test Mode	Antenna (Chain)	EUT Position	Traffic Channel		Distance (mm)	Power(dBm)		1-g SAR (W/kg)		1 g SAR Limits (W/kg)
			Frequency (MHz)	Channel		Measured Power	Tune-Up Limit	Measured SAR	Scaled SAR	
802.11a	Main	Base	5200	40	0	15.69	16.0	0.471	0.506	1.6
			5220	44	0	15.72	16.0	0.351	0.374	
	Aux		5200	40	0	15.63	16.0	0.875	0.953	
			5220	44	0	15.77	16.0	0.954	1.006	
	Main	Back Screen	5220	44	10	15.72	16.0	0.009	0.010	
	Aux		5220	44	10	15.77	16.0	0.077	0.081	
802.11ac	Main	Base	5210	42	0	8.10	8.5	0.062	0.068	
	Aux		5210	42	0	7.83	8.5	0.155	0.181	

Ambient Temperature (°C)	23.2
Liquid Temperature (°C)	22.3
Date	10/23/2013

WLAN 5.3 GHz Body SAR

Test Mode	Antenna (Chain)	EUT Position	Traffic Channel		Distance (mm)	Power(dBm)		1-g SAR (W/kg)		1 g SAR Limits (W/kg)
			Frequency (MHz)	Channel		Measured Power	Tune-Up Limit	Measured SAR	Scaled SAR	
802.11a	Main	Base	5280	56	0	15.86	16.0	0.552	0.570	1.6
			5300	60	0	15.92	16.0	0.604	0.615	
	Aux		5280	56	0	15.62	16.0	0.804	0.878	
			5300	60	0	15.89	16.0	0.949	0.973	
	Main	Back Screen	5300	60	10	15.92	16.0	0.071	0.072	
	Aux		5300	60	10	15.76	16.0	0.064	0.068	
802.11ac	Main	Base	5290	58	0	10.25	11.0	0.168	0.200	
	Aux		5290	58	0	10.68	11.0	0.272	0.293	

Ambient Temperature (°C)	22.9
Liquid Temperature (°C)	21.5
Date	10/25/2013

WLAN 5.5 GHz Body SAR

Test Mode	Antenna (Chain)	EUT Position	Traffic Channel		Distance (mm)	Power(dBm)		1-g SAR (W/kg)		1 g SAR Limits (W/kg)
			Frequency (MHz)	Channel		Measured Power	Tune-Up Limit	Measured SAR	Scaled SAR	
802.11a	Main	Base	5520	104	0	16.27	16.5	0.619	0.653	1.6
			5580	116	0	16.40	16.5	0.367	0.376	
			5680	136	0	16.32	16.5	0.265	0.276	
	Aux		5520	104	0	16.31	16.5	0.721	0.753	
			5580	116	0	16.39	16.5	0.916	0.940	
			5680	136	0	16.28	16.5	0.858	0.903	
	Main	Back Screen	5580	116	10	16.40	16.5	0.149	0.152	
	Aux		5580	116	10	16.39	16.5	0.065	0.067	
802.11ac	Main	Base	5690	138	0	13.84	14.0	0.166	0.172	
	Aux		5690	138	0	13.77	14.0	0.456	0.481	
802.11a	Aux	Base	5580	116	0	16.39	16.5	0.938	0.962	

Ambient Temperature (°C)	23.8
Liquid Temperature (°C)	21.9
Date	10/26/2013

WLAN 5.8 GHz Body SAR

Test Mode	Antenna (Chain)	EUT Position	Traffic Channel		Distance (mm)	Power(dBm)		1-g SAR (W/kg)		1 g SAR Limits (W/kg)
			Frequency (MHz)	Channel		Measured Power	Tune-Up Limit	Measured SAR	Scaled SAR	
802.11a	Main	Base	5745	149	0	16.33	16.5	0.265	0.276	1.6
	Aux		5745	149	0	16.26	16.5	0.629	0.665	
			5785	157	0	16.24	16.5	0.558	0.592	
			5825	165	0	16.38	16.5	0.575	0.591	
	Main	Back Screen	5745	149	10	16.33	16.5	0.045	0.047	
	Aux		5825	165	10	16.38	16.5	0.060	0.062	
802.11ac	Main	Base	5775	155	0	13.69	14.0	0.266	0.286	
	Aux		5775	155	0	13.75	14.0	0.255	0.270	

SAR Test Notes

General Notes :

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2003, FCC/OET Bulletin 65, Supplement C [June 2001] and FCC KDB Publication 447498 D01v05.
2. All modes of operation were investigated, and worst-case results are reported.
3. Battery is fully charged for all readings and the standard batteries are the only options.
4. The EUT is tested 2nd hot-spot peak, if it is less than 2 dB below the highest peak.
5. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
6. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v05.

7. Per FCC KDB Publication 865664 D01v01, variability SAR tests were performed when the measured SAR results for a frequency band were greater than 0.8 W/kg. Repeated SAR measurements are highlighted in the tables above for clarity. Please see section 3.7 for variability analysis.
8. Back screen Position tested according to RSS-102 (Issue 4) standard.

WLAN Notes :

1. For 2.4 GHz, justification for reduced test configuration for WIFI channels per KDB Publication 248227 and April 2010 FCC/TCB Meeting Notes: Highest average RF output power channel for the lowest data rate were selected for SAR evaluation. Other IEEE 802.11 modes (including 802.11g/n) were not investigated since the average output powers were not greater than 0.25 dB than that of the corresponding channel in the lowest data rate IEEE 802.11b modes
2. For 5 GHz, justification for reduced test configuration for WIFI channels per KDB Publication 248227 and April 2010 FCC/TCB Meeting Notes: Highest average RF output power channel for the lowest data rate were selected for SAR evaluation. Other IEEE 802.11 modes (including 802.11n HT20 MHz and HT40, VHT20, VHT40) were not investigated since the average output powers were not greater than 0.25 dB than that of the corresponding channel in the lowest data rate IEEE 802.11a modes
3. For 802.11ac SAR evaluation for each frequency band, 802.11ac VHT80 will verified at the worst case found in 802.11a SAR testing.
4. According to KDB248227 D01v01, when the maximum average output channel in each frequency band is not include in the “default test channels”, the maximum average output power channel should be tested instead of an adjacent “default test channels”.
5. According to KDB447498 D01v05 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.
6. According to KDB447498 D01v05 the 1-g SAR for the highest output channel is less than 0.4 W/kg, where the transmission band corresponding to all channels is ≤ 200 MHz, testing for the other channels is not required.
7. WLAN transmission was verified using a spectrum analyzer.

3.7 FCC Multi-TX SAR considerations

3.7.1 Introduction

The following procedures adopted from FCC KDB Publication 447498 D01v05 are applicable to handsets with built-in unlicensed transmitters such as Bluetooth devices which may simultaneously transmit with the licensed transmitter.

3.7.2 Simultaneous Transmission Procedures

This device contains transmitters that may operate simultaneously. Therefore simultaneous transmission analysis is require. Per FCC KDB 447498 D01v05 IV.C.1,iii, simultaneous transmission SAR test exclusion may be applied when the sum of the 1-g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is ≤ 1.6 W/kg. When standalone SAR is not required to be measured per FCC KDB 447498 D01v05 4.3.2.2), the following equation must be used to estimate the standalone 1g SAR for simultaneous transmission involving that transmitter.

$$\text{Estimated SAR} = \frac{\sqrt{f(GHz)}}{7.5} * \frac{(\text{Max Power of channel, mW})}{\text{Min. Separation Distance, mm}}$$

Mode	Frequency	Maximum Allowed Power	Separation Distance	Estimated SAR
	[MHz]	[dBm]	[mm]	[W/kg]
Bluetooth	2480	5.50	6.45	0.116
			10.00	0.075

<Tablet.3 Estimated SAR >

3.7.3 The Simultaneous Transmission possibilities are listed as below

No	Capable TX Configuration	Body SAR
1	Wi-Fi (Main Antenna) + Bluetooth	Yes
2	Wi-Fi (Aux Antenna) + Bluetooth	N/A

3.7.4 Body SAR Simultaneous Transmission Analysis

Simultaneous Transmission Summation Scenario with Wi-Fi and Bluetooth

Simultaneous TX	configuration	Wi-Fi SAR(W/kg)	Bluetooth SAR (W/kg)	∑SAR (W/kg)
Body	Base	0.653	0.116	0.769
	Back Screen	0.152	0.075	0.227

Notes.

1. The above numerical summed SAR was below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit. Therefore, no volumetric SAR summation is required since the numerical sums are below the limit.
2. Bluetooth SAR was not required to be measured per KDB 447498D01v05.

3.8 Repeated SAR Measurement

Test Mode	Antenna (Chain)	EUT Position	Traffic Channel		Distance (㎜)	Measured 1 g SAR (W/kg)	1st Repeated 1 g SAR (W/kg)	Deviation (%)
			Frequency (㎒)	Channel				
802.11a	Aux	Base	5220	44	0	0.954	0.831	-12.89
802.11a	Aux	Base	5300	60	0	0.949	0.856	-9.80
802.11a	Aux	Base	5580	116	0	0.916	0.938	2.40

<Note>

1. Per KDB 865664 D01v01, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8 W/kg.
2. Per KDB 865664 D01v01, if the deviation among the repeated measurement is ≤ 20% and the measured SAR ＜1.45 W/kg, only one repeated measurement is required.
3. The deviation is the difference in percentage between original and repeated measured SAR.
4. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

Appendix

List

Appendix A	DASY4 Report (Plots of the SAR Measurements)	- 2450 ㎒, 5.2 ㎓, 5.3 ㎓, 5.5 ㎓, 5.6 ㎓, 5.8 ㎓ Verification Test - WLAN Test
Appendix B	Uncertainty Analysis	
Appendix C	Calibration Certificate	- PROBE - DAE - DIPOLE

Appendix A

Test Plot – DASY4 Report

2450 ㎒ Verification Test

Date: 2013-10-28

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Verification 2450 MHz.da4

Input Power : 100 mW

Ambient Temp : 22.5 ℃ Tissue Temp : 21.1 ℃

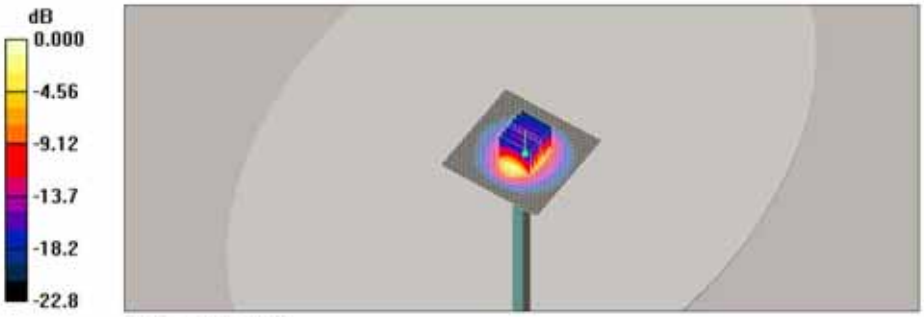
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:892
Program Name: Verification

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.96 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.62, 6.62, 6.62); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Verification/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 8.15 mW/g

Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 62.2 V/m; Power Drift = -0.005 dB
Peak SAR (extrapolated) = 11.0 W/kg
SAR(1 g) = 5.18 mW/g; SAR(10 g) = 2.35 mW/g
Maximum value of SAR (measured) = 8.04 mW/g



0 dB = 8.04mW/g

5200 ㎒ Verification Test

Date: 2013-10-24

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Verification 5200 MHz.da4

Input Power : 100 mW

Ambient Temp : 23.6 ℃ Tissue Temp : 22.1 ℃

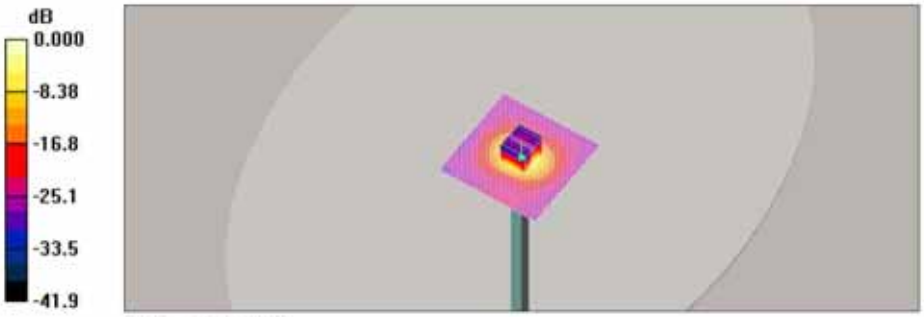
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106
Program Name: Verification

Communication System: CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; σ = 5.4 mho/m; ε_r = 48.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.23, 4.23, 4.23); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Verification/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 16.4 mW/g

Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 57.7 V/m; Power Drift = 0.096 dB
Peak SAR (extrapolated) = 33.2 W/kg
SAR(1 g) = 7.85 mW/g; SAR(10 g) = 2.21 mW/g
Maximum value of SAR (measured) = 16.4 mW/g



0 dB = 16.4mW/g

5300 ㎒ Verification Test

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Verification 5300 MHz.da4

Input Power : 100 mW

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

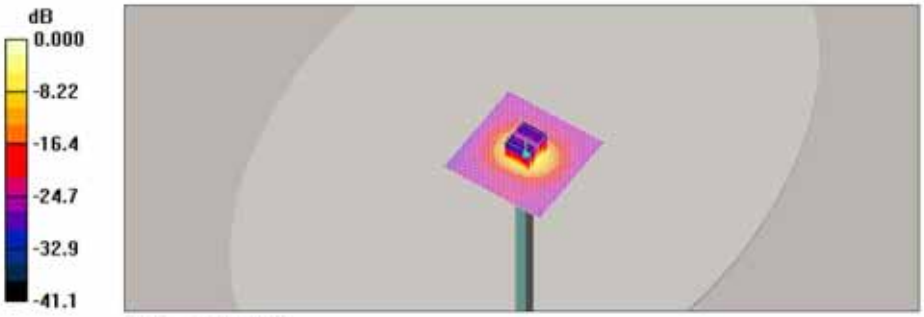
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106
Program Name: Verification

Communication System: CW; Frequency: 5300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5300 MHz; σ = 5.54 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Verification/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 16.3 mW/g

Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 57.1 V/m; Power Drift = 0.006 dB
Peak SAR (extrapolated) = 33.2 W/kg
SAR(1 g) = 7.75 mW/g; SAR(10 g) = 2.17 mW/g
Maximum value of SAR (measured) = 16.2 mW/g



0 dB = 16.2mW/g

5500 ㎒ Verification Test

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Verification 5500 MHz.da4

Input Power : 100 mW

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

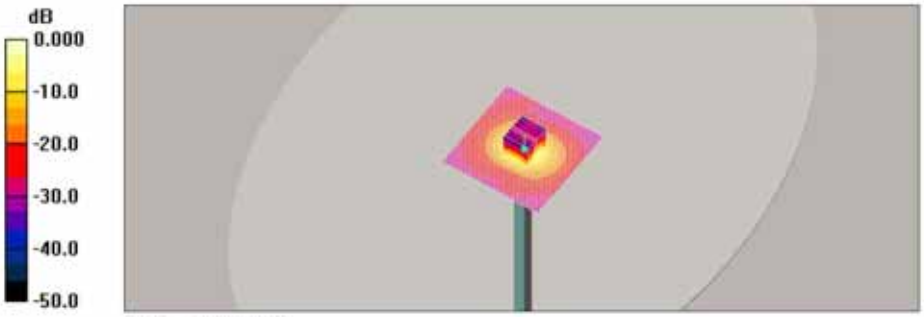
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106
Program Name: Verification

Communication System: CW; Frequency: 5500 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5500 MHz; σ = 5.74 mho/m; ε_r = 50.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.95, 3.95, 3.95); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Verification/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 17.5 mW/g

Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 59.6 V/m; Power Drift = -0.098 dB
Peak SAR (extrapolated) = 38.1 W/kg
SAR(1 g) = 8.31 mW/g; SAR(10 g) = 2.32 mW/g
Maximum value of SAR (measured) = 17.9 mW/g



0 dB = 17.9mW/g

5600 ㎒ Verification Test

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Verification 5600 MHz.da4

Input Power : 100 mW

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

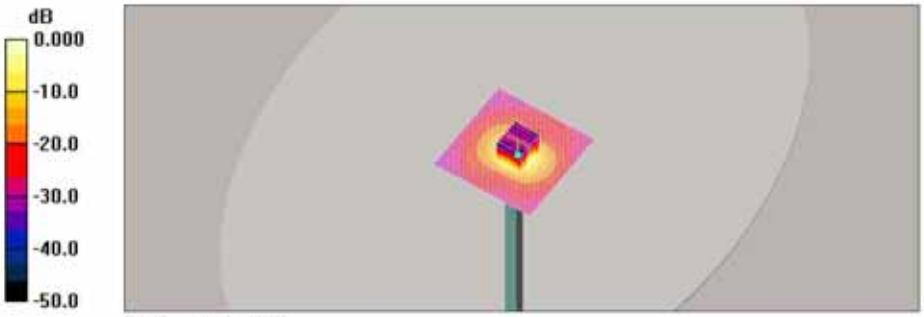
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106
Program Name: Verification

Communication System: CW; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.86 mho/m; ε_r = 49.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.79, 3.79, 3.79); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Verification/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 18.0 mW/g

Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 54.0 V/m; Power Drift = -0.088 dB
Peak SAR (extrapolated) = 37.6 W/kg
SAR(1 g) = 8.25 mW/g; SAR(10 g) = 2.26 mW/g
Maximum value of SAR (measured) = 17.6 mW/g



0 dB = 17.6mW/g

5800 ㎒ Verification Test

Date: 2013-10-26

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Verification 5800 MHz.da4

Input Power : 100 mW

Ambient Temp : 23.8 ℃ Tissue Temp : 21.9 ℃

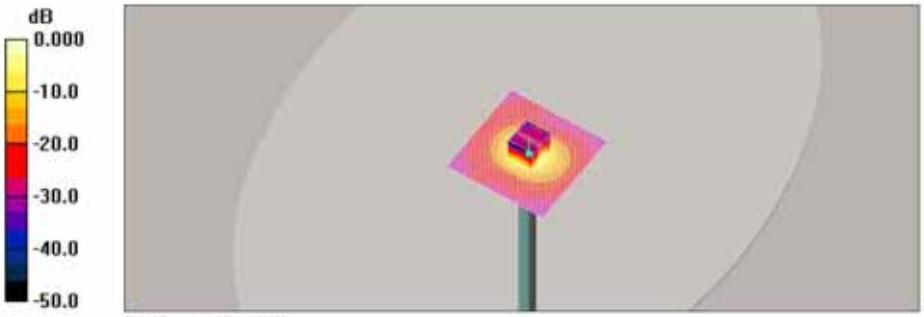
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106
Program Name: Verification

Communication System: CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 6.21 mho/m; ε_r = 49.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4, 4, 4); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Verification/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 16.3 mW/g

Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 55.8 V/m; Power Drift = -0.054 dB
Peak SAR (extrapolated) = 32.9 W/kg
SAR(1 g) = 7.68 mW/g; SAR(10 g) = 2.16 mW/g
Maximum value of SAR (measured) = 16.3 mW/g



0 dB = 16.3mW/g

WLAN 2450 MHz Body SAR Test

Date: 2013-10-28

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11b_1Mbps_CH6_Main ANT.da4

Ambient Temp : 22.5 ℃ Tissue Temp : 21.1 ℃

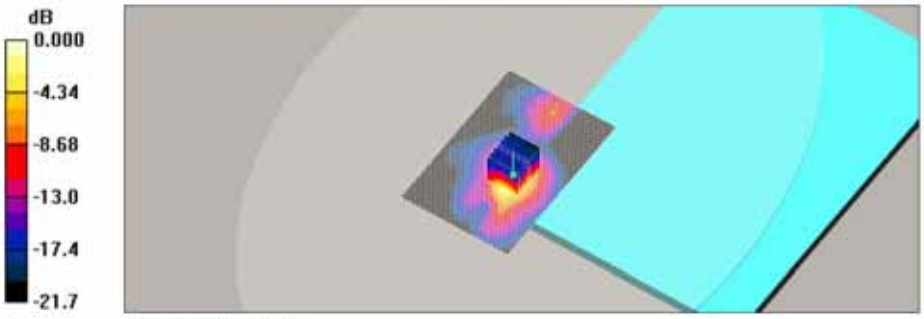
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.94 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.62, 6.62, 6.62); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11b_1Mbps_CH6_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.648 mW/g

WLAN_Base_802.11b_1Mbps_CH6_Main ANT/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.84 V/m; Power Drift = 0.082 dB
Peak SAR (extrapolated) = 1.03 W/kg
SAR(1 g) = 0.411 mW/g; SAR(10 g) = 0.178 mW/g
Maximum value of SAR (measured) = 0.696 mW/g



0 dB = 0.696mW/g

Date: 2013-10-28

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11b_1Mbps_CH6_AUX ANT.da4

Ambient Temp : 22.5 ℃ Tissue Temp : 21.1 ℃

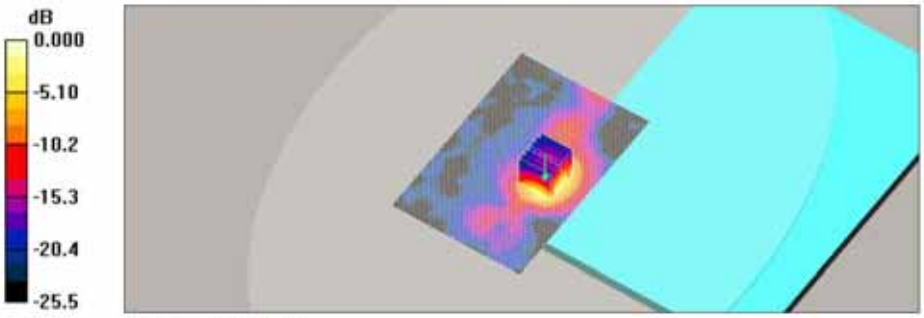
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.94 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.62, 6.62, 6.62); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11b_1Mbps_CH6_AUX ANT/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.425 mW/g

WLAN_Base_802.11b_1Mbps_CH6_AUX ANT/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.8 V/m; Power Drift = -0.025 dB
Peak SAR (extrapolated) = 0.545 W/kg
SAR(1 g) = 0.240 mW/g; SAR(10 g) = 0.106 mW/g
Maximum value of SAR (measured) = 0.372 mW/g



0 dB = 0.372mW/g

Date: 2013-10-28

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11g_6Mbps_CH6_Main ANT.da4

Ambient Temp : 22.5 ℃ Tissue Temp : 21.1 ℃

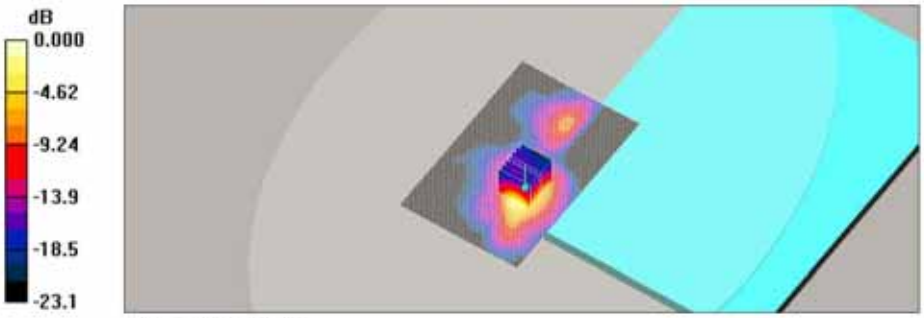
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.94 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.62, 6.62, 6.62); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11g_6Mbps_CH6_Main ANT/Area Scan (111x171x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.705 mW/g

WLAN_Base_802.11g_6Mbps_CH6_Main ANT/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.62 V/m; Power Drift = 0.044 dB
Peak SAR (extrapolated) = 0.999 W/kg
SAR(1 g) = 0.420 mW/g; SAR(10 g) = 0.187 mW/g
Maximum value of SAR (measured) = 0.684 mW/g



0 dB = 0.684mW/g

Date: 2013-10-28

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11g_6Mbps_CH6_AUX ANT.da4

Ambient Temp : 22.5 ℃ Tissue Temp : 21.1 ℃

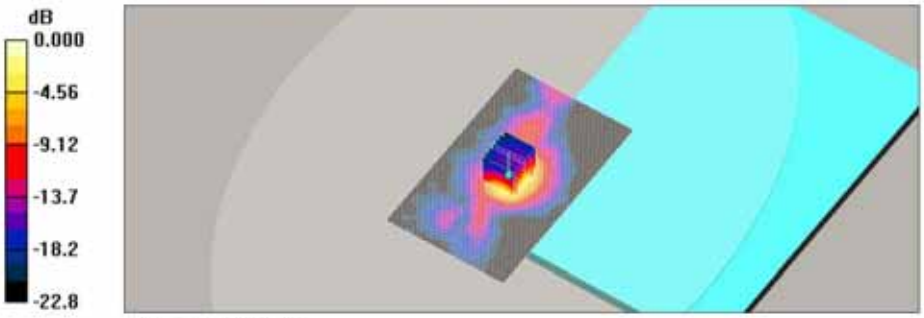
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.94 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.62, 6.62, 6.62); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11g_6Mbps_CH6_AUX ANT/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.627 mW/g

WLAN_Base_802.11g_6Mbps_CH6_AUX ANT/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.2 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 0.837 W/kg
SAR(1 g) = 0.372 mW/g; SAR(10 g) = 0.169 mW/g
Maximum value of SAR (measured) = 0.580 mW/g



0 dB = 0.580mW/g

Date: 2013-10-28

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11nHT20_HT4_CH6_Main ANT.da4

Ambient Temp : 22.5 ℃ Tissue Temp : 21.1 ℃

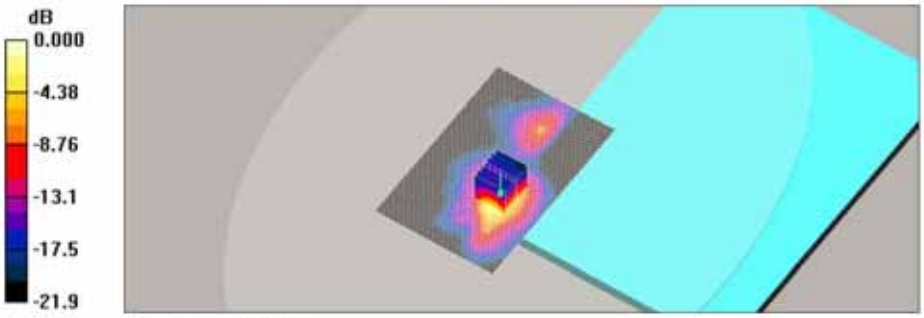
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.94 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.62, 6.62, 6.62); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11n HT20_HT4_CH6_Main ANT/Area Scan (111x171x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.663 mW/g

WLAN_Base_802.11n HT20_HT4_CH6_Main ANT/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.65 V/m; Power Drift = -0.075 dB
Peak SAR (extrapolated) = 0.942 W/kg
SAR(1 g) = 0.397 mW/g; SAR(10 g) = 0.176 mW/g
Maximum value of SAR (measured) = 0.644 mW/g



0 dB = 0.644mW/g

Date: 2013-10-28

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11n HT20_HT4_CH6_AUX ANT.da4

Ambient Temp : 22.5 ℃ Tissue Temp : 21.1 ℃

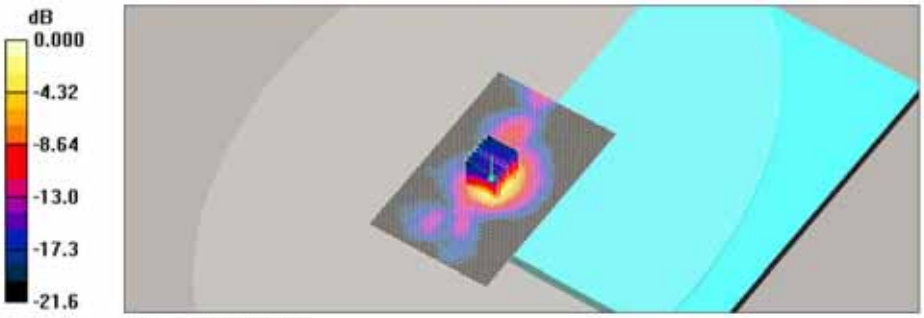
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.94 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.62, 6.62, 6.62); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11n HT20_HT4_CH6_AUX ANT/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.689 mW/g

WLAN_Base_802.11n HT20_HT4_CH6_AUX ANT/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.7 V/m; Power Drift = 0.012 dB
Peak SAR (extrapolated) = 0.933 W/kg
SAR(1 g) = 0.414 mW/g; SAR(10 g) = 0.188 mW/g
Maximum value of SAR (measured) = 0.643 mW/g



0 dB = 0.643mW/g

Date: 2013-10-28

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11n HT40_HT4_CH6_Main ANT.da4

Ambient Temp : 22.5 ℃ Tissue Temp : 21.1 ℃

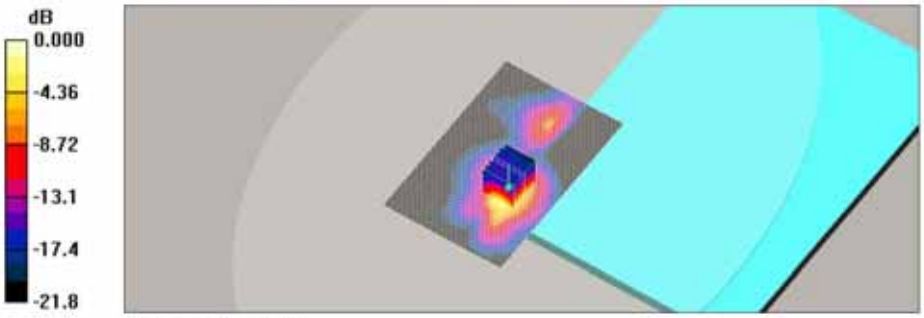
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.94 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.62, 6.62, 6.62); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11n HT40_HT4_CH6_Main ANT/Area Scan (111x171x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.780 mW/g

WLAN_Base_802.11n HT40_HT4_CH6_Main ANT/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.04 V/m; Power Drift = 0.086 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.476 mW/g; SAR(10 g) = 0.211 mW/g
Maximum value of SAR (measured) = 0.786 mW/g



0 dB = 0.786mW/g

Date: 2013-10-28

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Back Screen_802.11n HT20_HT4_CH6_Main ANT.da4

Ambient Temp : 22.5 ℃ Tissue Temp : 21.1 ℃

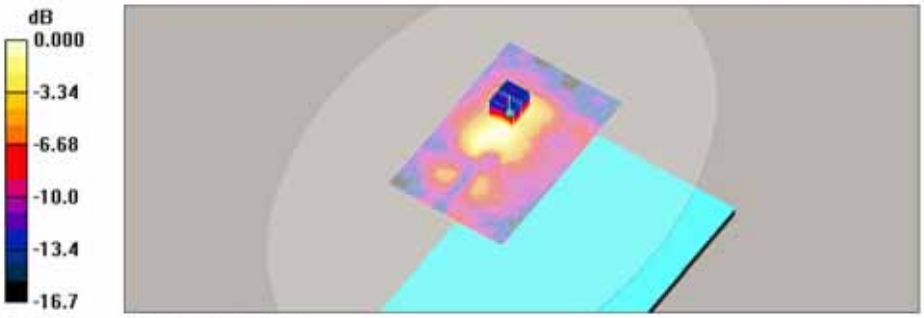
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.94 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.62, 6.62, 6.62); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Back Screen_802.11n HT20_HT4_CH6_Main ANT/Area Scan (141x221x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.069 mW/g

WLAN_Back Screen_802.11n HT20_HT4_CH6_Main ANT/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.32 V/m; Power Drift = -0.102 dB
Peak SAR (extrapolated) = 0.098 W/kg
SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.026 mW/g
Maximum value of SAR (measured) = 0.072 mW/g



0 dB = 0.072mW/g

Date: 2013-10-28

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Back Screen_802.11n HT20_HT4_CH6_AUX ANT.da4

Ambient Temp : 22.5 ℃ Tissue Temp : 21.1 ℃

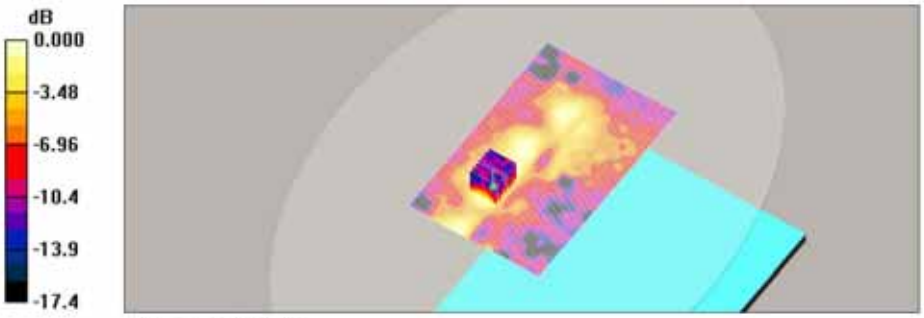
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.94 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.62, 6.62, 6.62); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Back Screen_802.11n HT20_HT4_CH6_AUX ANT/Area Scan (141x221x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.031 mW/g

WLAN_Back Screen_802.11n HT20_HT4_CH6_AUX ANT/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.39 V/m; Power Drift = 0.006 dB
Peak SAR (extrapolated) = 0.042 W/kg
SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.012 mW/g
Maximum value of SAR (measured) = 0.030 mW/g



0 dB = 0.030mW/g

WLAN 5200 MHz Body SAR Test

Date: 2013-10-24

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH40_Main ANT.da4

Ambient Temp : 23.6 ℃ Tissue Temp : 22.1 ℃

DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

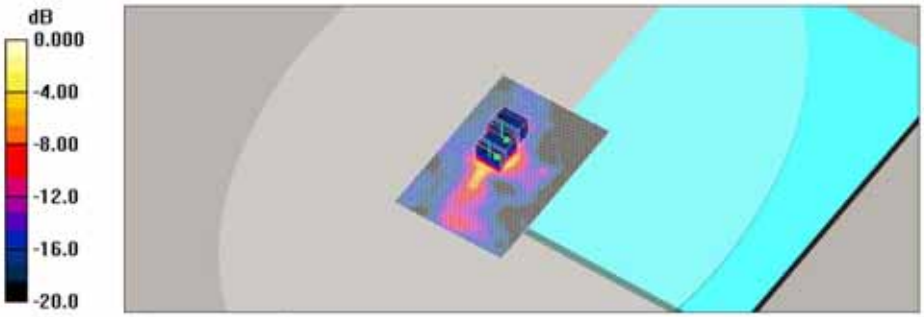
Communication System: WLAN(11a_U-NII Low); Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; σ = 5.4 mho/m; ε_r = 48.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.23, 4.23, 4.23); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH40_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.764 mW/g

WLAN_Base_802.11a_6Mbps_CH40_Main ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 6.67 V/m; Power Drift = -0.074 dB
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 0.417 mW/g; SAR(10 g) = 0.125 mW/g
Maximum value of SAR (measured) = 0.942 mW/g

WLAN_Base_802.11a_6Mbps_CH40_Main ANT/Zoom Scan (7x7x12)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 6.67 V/m; Power Drift = -0.074 dB
Peak SAR (extrapolated) = 1.95 W/kg
SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.096 mW/g
Maximum value of SAR (measured) = 0.736 mW/g



0 dB = 0.736mW/g

Date: 2013-10-24

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH44_Main ANT.da4

Ambient Temp : 23.6 ℃ Tissue Temp : 22.1 ℃

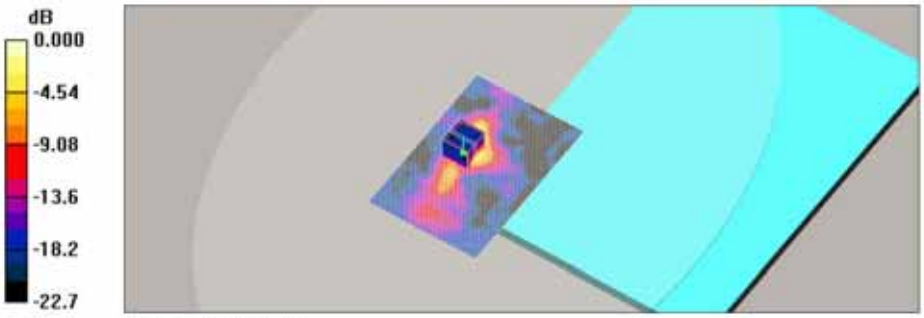
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5220 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5220 MHz; σ = 5.43 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.23, 4.23, 4.23); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH44_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.540 mW/g

WLAN_Base_802.11a_6Mbps_CH44_Main ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 6.16 V/m; Power Drift = 0.043 dB
Peak SAR (extrapolated) = 1.85 W/kg
SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.094 mW/g
Maximum value of SAR (measured) = 0.800 mW/g



0 dB = 0.800mW/g

Date: 2013-10-24

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH40_AUX ANT.da4

Ambient Temp : 23.6 ℃ Tissue Temp : 22.1 ℃

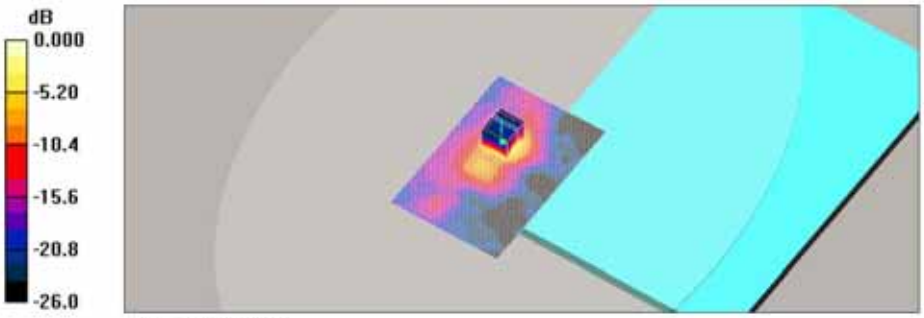
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5200 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5200 MHz; σ = 5.4 mho/m; ε_r = 48.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.23, 4.23, 4.23); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH40_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.51 mW/g

WLAN_Base_802.11a_6Mbps_CH40_AUX ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 10.3 V/m; Power Drift = 0.097 dB
Peak SAR (extrapolated) = 3.91 W/kg
SAR(1 g) = 0.875 mW/g; SAR(10 g) = 0.295 mW/g
Maximum value of SAR (measured) = 1.82 mW/g



0 dB = 1.82mW/g

Date: 2013-10-24

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH44_AUX ANT.da4

Ambient Temp : 23.6 ℃ Tissue Temp : 22.1 ℃

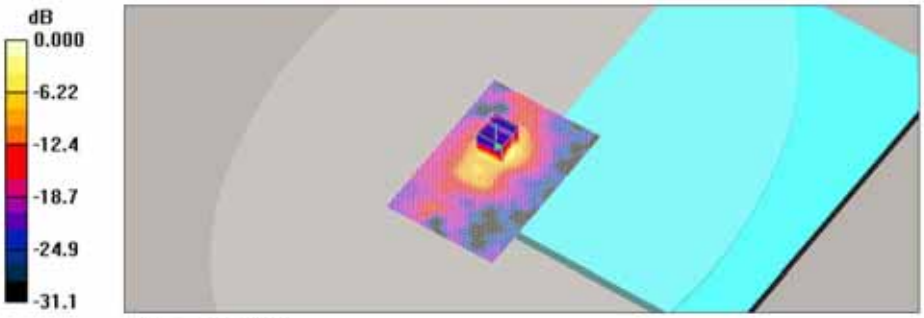
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5220 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5220 MHz; σ = 5.43 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.23, 4.23, 4.23); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH44_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.71 mW/g

WLAN_Base_802.11a_6Mbps_CH44_AUX ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 10.6 V/m; Power Drift = 0.070 dB
Peak SAR (extrapolated) = 4.21 W/kg
SAR(1 g) = 0.954 mW/g; SAR(10 g) = 0.319 mW/g
Maximum value of SAR (measured) = 2.00 mW/g



0 dB = 2.00mW/g

Date: 2013-10-24

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Back Screen_802.11a_6Mbps_CH44_Main ANT.da4

Ambient Temp : 23.6 ℃ Tissue Temp : 22.1 ℃

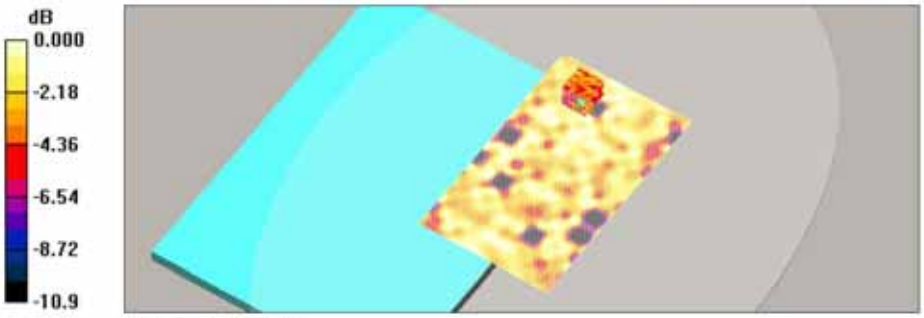
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5220 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5220 MHz; σ = 5.43 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.23, 4.23, 4.23); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Back Screen_802.11a_6Mbps_CH44_Main ANT/Area Scan (121x201x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.029 mW/g

WLAN_Back Screen_802.11a_6Mbps_CH44_Main ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.07 V/m; Power Drift = -0.072 dB
Peak SAR (extrapolated) = 0.111 W/kg
SAR(1 g) = 0.00938 mW/g; SAR(10 g) = 0.00624 mW/g
Maximum value of SAR (measured) = 0.020 mW/g



0 dB = 0.020mW/g

Date: 2013-10-24

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Back Screen_802.11a_6Mbps_CH44_AUX ANT.da4

Ambient Temp : 23.6 ℃ Tissue Temp : 22.1 ℃

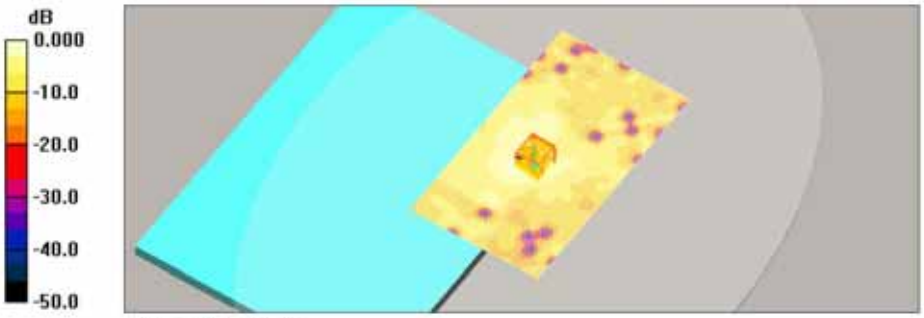
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5220 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5220 MHz; σ = 5.43 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.23, 4.23, 4.23); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Back Screen_802.11a_6Mbps_CH44_AUX ANT/Area Scan (121x211x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.154 mW/g

WLAN_Back Screen_802.11a_6Mbps_CH44_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.29 V/m; Power Drift = 0.015 dB
Peak SAR (extrapolated) = 0.341 W/kg
SAR(1 g) = 0.077 mW/g; SAR(10 g) = 0.029 mW/g
Maximum value of SAR (measured) = 0.136 mW/g



0 dB = 0.136mW/g

Date: 2013-10-24

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11ac_VHT6_CH42_Main ANT.da4

Ambient Temp : 23.6 ℃ Tissue Temp : 22.1 ℃

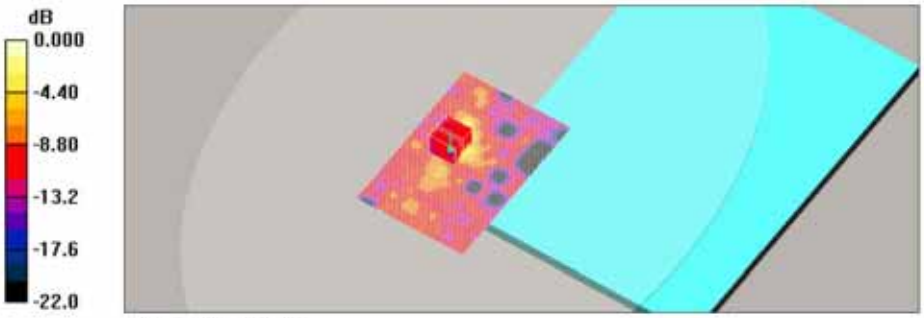
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(802.11ac 80MHz); Frequency: 5210 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5210 MHz; σ = 5.41 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.23, 4.23, 4.23); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11ac_VHT6_CH42_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.098 mW/g

WLAN_Base_802.11ac_VHT6_CH42_Main ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.78 V/m; Power Drift = -0.042 dB
Peak SAR (extrapolated) = 0.258 W/kg
SAR(1 g) = 0.062 mW/g; SAR(10 g) = 0.022 mW/g
Maximum value of SAR (measured) = 0.146 mW/g



0 dB = 0.146mW/g

Date: 2013-10-24

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11ac_VHT6_CH42_AUX ANT.da4

Ambient Temp : 23.6 ℃ Tissue Temp : 22.1 ℃

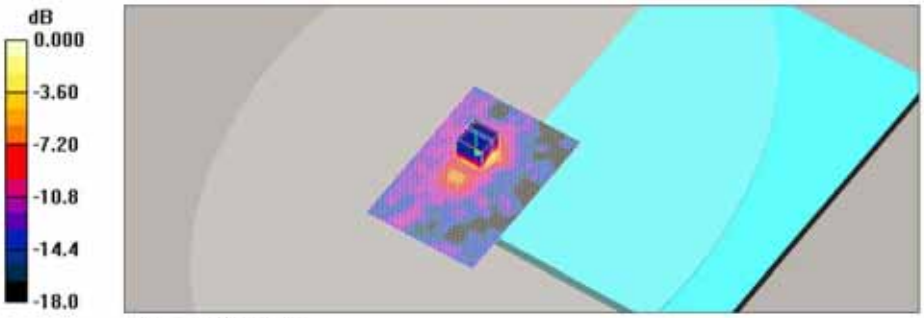
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(802.11ac 80MHz); Frequency: 5210 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5210 MHz; σ = 5.41 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.23, 4.23, 4.23); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11ac_VHT6_CH42_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.272 mW/g

WLAN_Base_802.11ac_VHT6_CH42_AUX ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.21 V/m; Power Drift = 0.162 dB
Peak SAR (extrapolated) = 0.698 W/kg
SAR(1 g) = 0.155 mW/g; SAR(10 g) = 0.057 mW/g
Maximum value of SAR (measured) = 0.298 mW/g



0 dB = 0.298mW/g

LAN 5300 MHz Body SAR Test

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH56_Main ANT.da4

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

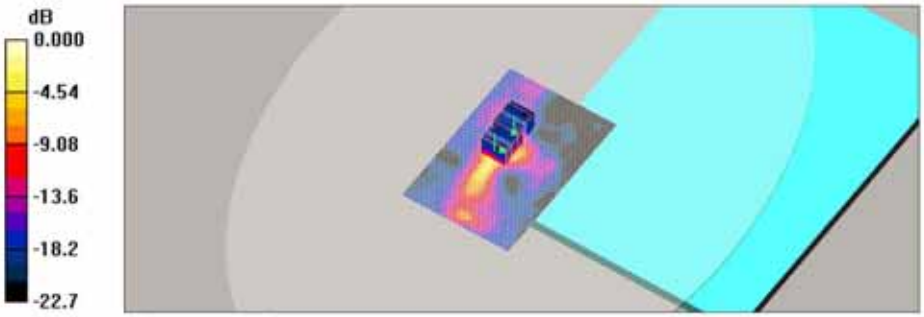
Communication System: WLAN(11a_U-NII Low); Frequency: 5280 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5280 MHz; σ = 5.52 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH56_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.963 mW/g

WLAN_Base_802.11a_6Mbps_CH56_Main ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 6.96 V/m; Power Drift = 0.093 dB
Peak SAR (extrapolated) = 3.04 W/kg
SAR(1 g) = 0.552 mW/g; SAR(10 g) = 0.139 mW/g
Maximum value of SAR (measured) = 1.23 mW/g

WLAN_Base_802.11a_6Mbps_CH56_Main ANT/Zoom Scan (7x7x12)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 6.96 V/m; Power Drift = 0.093 dB
Peak SAR (extrapolated) = 2.81 W/kg
SAR(1 g) = 0.525 mW/g; SAR(10 g) = 0.147 mW/g
Maximum value of SAR (measured) = 1.20 mW/g



0 dB = 1.20mW/g

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH60_Main ANT.da4

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

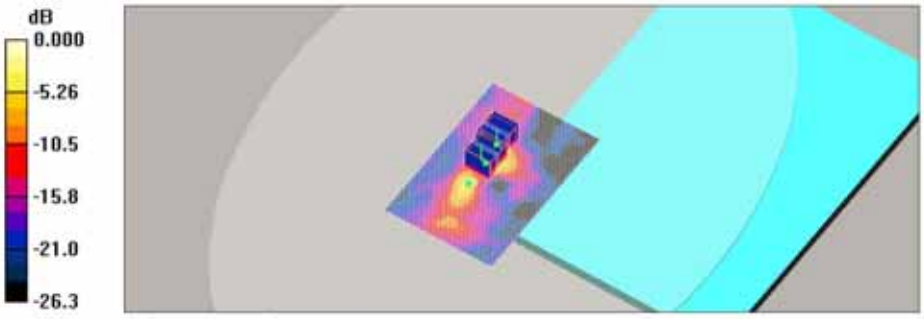
Communication System: WLAN(11a_U-NII Low); Frequency: 5300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5300 MHz; σ = 5.54 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH60_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.983 mW/g

WLAN_Base_802.11a_6Mbps_CH60_Main ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 8.89 V/m; Power Drift = -0.094 dB
Peak SAR (extrapolated) = 3.05 W/kg
SAR(1 g) = 0.551 mW/g; SAR(10 g) = 0.154 mW/g
Maximum value of SAR (measured) = 1.30 mW/g

WLAN_Base_802.11a_6Mbps_CH60_Main ANT/Zoom Scan (7x7x12)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 8.89 V/m; Power Drift = -0.094 dB
Peak SAR (extrapolated) = 3.42 W/kg
SAR(1 g) = 0.604 mW/g; SAR(10 g) = 0.159 mW/g
Maximum value of SAR (measured) = 1.43 mW/g



0 dB = 1.43mW/g

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH60_Main ANT.da4

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

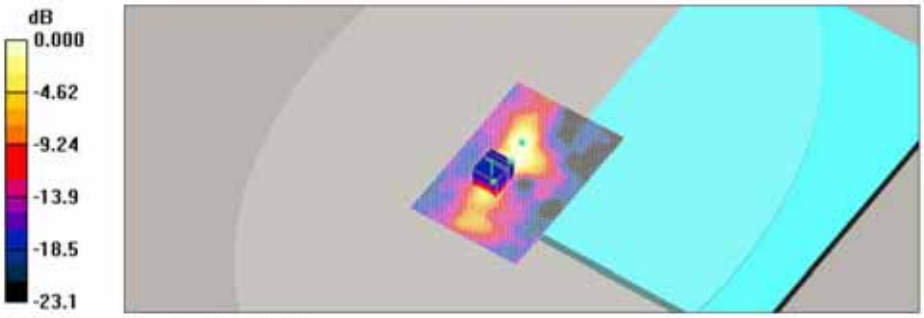
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5300 MHz; σ = 5.54 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH60_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.983 mW/g

WLAN_Base_802.11a_6Mbps_CH60_Main ANT/Zoom Scan (7x7x12)/Cube 2: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 8.89 V/m; Power Drift = -0.094 dB
Peak SAR (extrapolated) = 2.00 W/kg
SAR(1 g) = 0.312 mW/g; SAR(10 g) = 0.089 mW/g
Maximum value of SAR (measured) = 0.702 mW/g



0 dB = 0.702mW/g

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH56_AUX ANT.da4

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

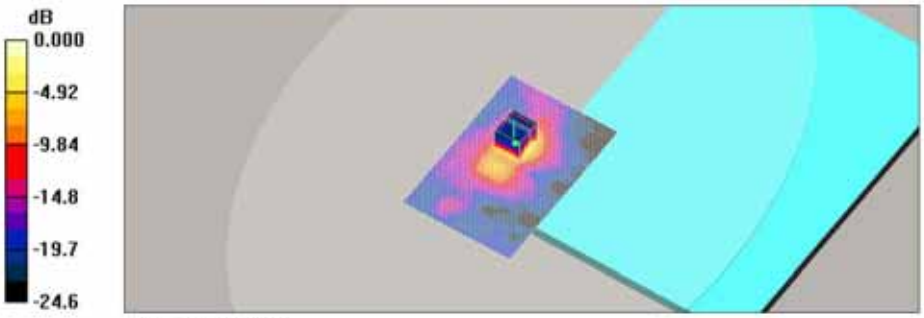
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5280 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5280 MHz; σ = 5.52 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH56_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.54 mW/g

WLAN_Base_802.11a_6Mbps_CH56_AUX ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.4 V/m; Power Drift = -0.115 dB
Peak SAR (extrapolated) = 3.81 W/kg
SAR(1 g) = 0.804 mW/g; SAR(10 g) = 0.272 mW/g
Maximum value of SAR (measured) = 1.67 mW/g



0 dB = 1.67mW/g

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH60_AUX ANT.da4

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

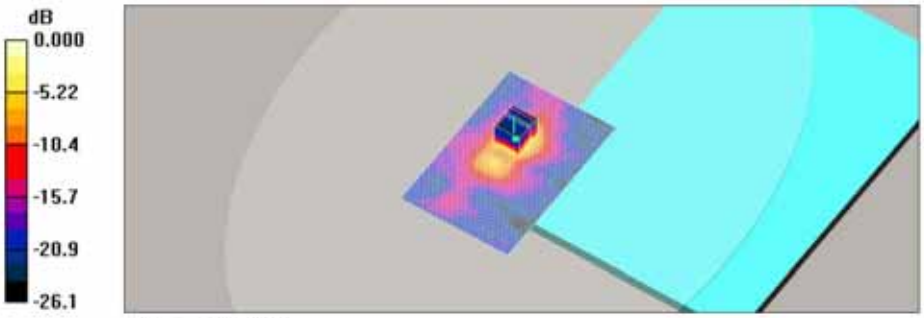
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5300 MHz; σ = 5.54 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH60_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.84 mW/g

WLAN_Base_802.11a_6Mbps_CH60_AUX ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.8 V/m; Power Drift = 0.030 dB
Peak SAR (extrapolated) = 4.58 W/kg
SAR(1 g) = 0.949 mW/g; SAR(10 g) = 0.318 mW/g
Maximum value of SAR (measured) = 2.04 mW/g



0 dB = 2.04mW/g

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Back Screen_802.11a_6Mbps_CH60_Main ANT.da4

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

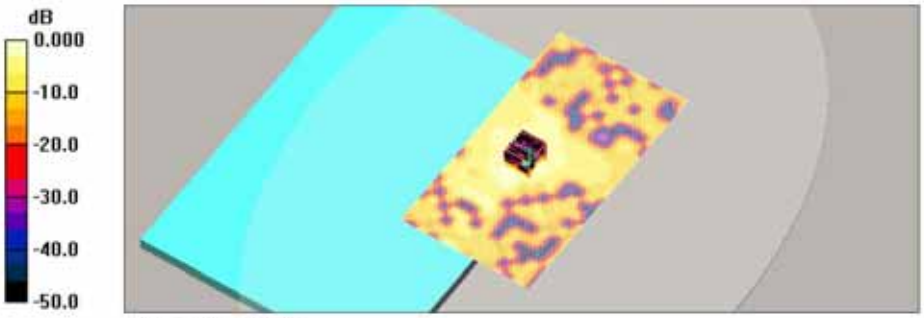
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5300 MHz; σ = 5.54 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Back Screen_802.11a_6Mbps_CH60_Main ANT/Area Scan (121x221x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.130 mW/g

WLAN_Back Screen_802.11a_6Mbps_CH60_Main ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.88 V/m; Power Drift = -0.176 dB
Peak SAR (extrapolated) = 0.318 W/kg
SAR(1 g) = 0.071 mW/g; SAR(10 g) = 0.025 mW/g
Maximum value of SAR (measured) = 0.146 mW/g



0 dB = 0.146mW/g

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Back Screen_802.11a_6Mbps_CH60_AUX ANT.da4

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

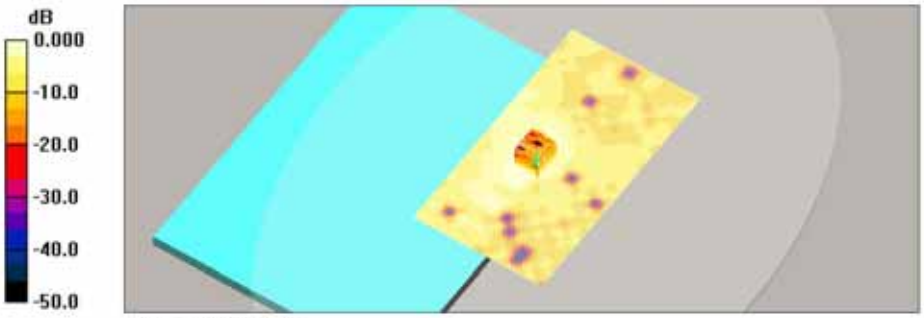
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5300 MHz; σ = 5.54 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Back Screen_802.11a_6Mbps_CH60_AUX ANT/Area Scan (121x221x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.119 mW/g

WLAN_Back Screen_802.11a_6Mbps_CH60_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.99 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 0.297 W/kg
SAR(1 g) = 0.064 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.128 mW/g



0 dB = 0.128mW/g

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11ac_VHT6_CH58_Main ANT.da4

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

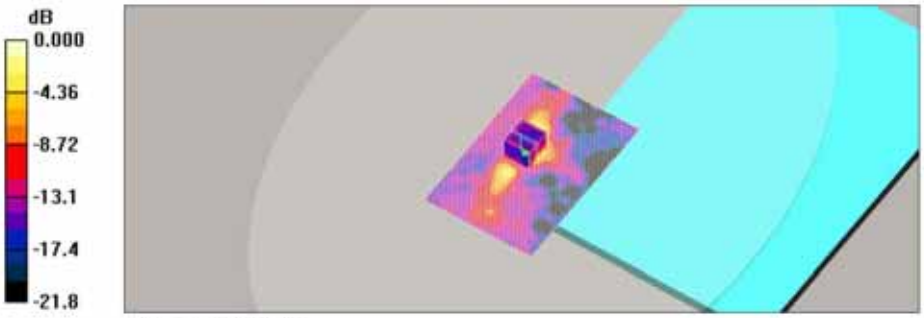
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(802.11ac 80MHz); Frequency: 5290 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5290 MHz; σ = 5.52 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11ac_VHT6_CH58_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.279 mW/g

WLAN_Base_802.11ac_VHT6_CH58_Main ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.77 V/m; Power Drift = -0.199 dB
Peak SAR (extrapolated) = 0.864 W/kg
SAR(1 g) = 0.168 mW/g; SAR(10 g) = 0.054 mW/g
Maximum value of SAR (measured) = 0.376 mW/g



0 dB = 0.376mW/g

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11ac_VHT6_CH58_AUX ANT.da4

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

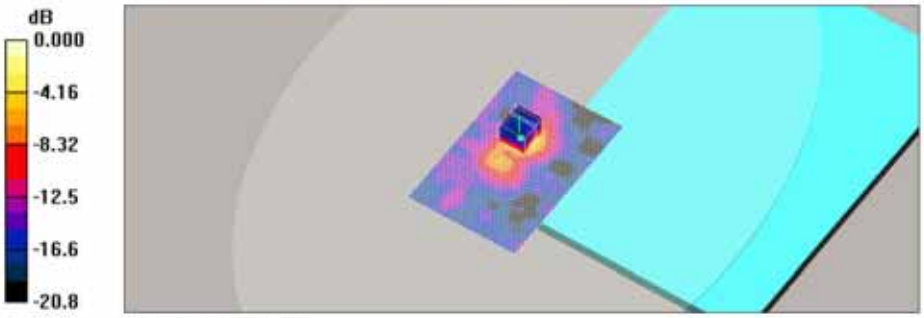
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(802.11ac 80MHz); Frequency: 5290 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5290 MHz; σ = 5.52 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11ac_VHT6_CH58_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.496 mW/g

WLAN_Base_802.11ac_VHT6_CH58_AUX ANT/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 6.53 V/m; Power Drift = -0.103 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.272 mW/g; SAR(10 g) = 0.099 mW/g
Maximum value of SAR (measured) = 0.573 mW/g



0 dB = 0.573mW/g

WLAN 5500 MHz Body SAR Test

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH104_Main ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

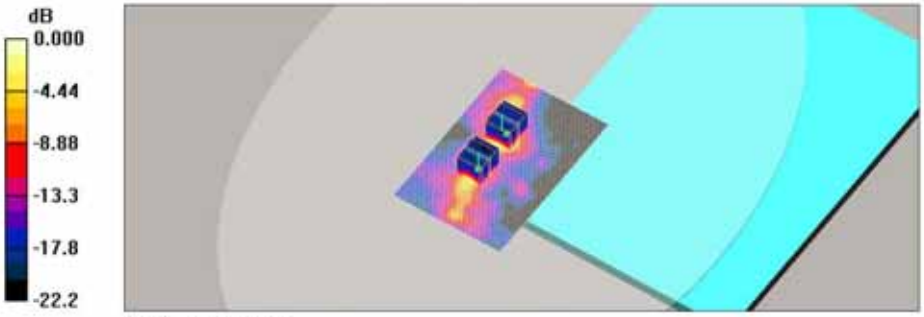
Communication System: WLAN(11a_H or CEPT); Frequency: 5520 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5520 MHz; σ = 5.76 mho/m; ε_r = 50; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.95, 3.95, 3.95); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH104_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.31 mW/g

WLAN_Base_802.11a_6Mbps_CH104_Main ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 7.17 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 3.76 W/kg
SAR(1 g) = 0.604 mW/g; SAR(10 g) = 0.156 mW/g
Maximum value of SAR (measured) = 1.40 mW/g

WLAN_Base_802.11a_6Mbps_CH104_Main ANT/Zoom Scan (7x7x12)/Cube 1:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 7.17 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 3.27 W/kg
SAR(1 g) = 0.619 mW/g; SAR(10 g) = 0.173 mW/g



0 dB = 1.40mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH116_Main ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

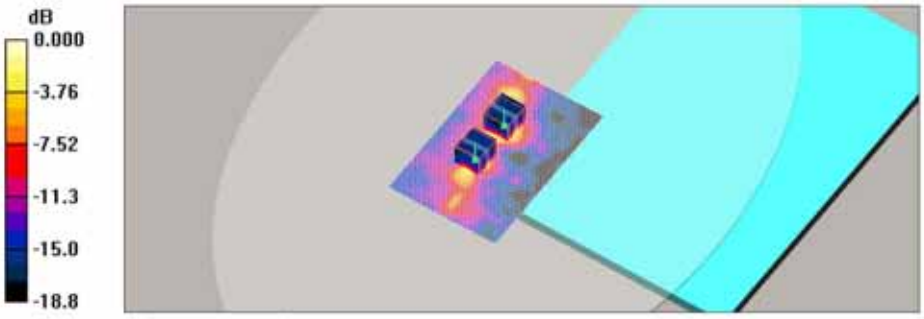
Communication System: WLAN(11a_H or CEPT); Frequency: 5580 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5580 MHz; σ = 5.84 mho/m; ε_r = 49.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.79, 3.79, 3.79); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH116_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.854 mW/g

WLAN_Base_802.11a_6Mbps_CH116_Main ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 7.12 V/m; Power Drift = -0.172 dB
Peak SAR (extrapolated) = 2.18 W/kg
SAR(1 g) = 0.367 mW/g; SAR(10 g) = 0.111 mW/g
Maximum value of SAR (measured) = 0.866 mW/g

WLAN_Base_802.11a_6Mbps_CH116_Main ANT/Zoom Scan (7x7x12)/Cube 1:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 7.12 V/m; Power Drift = -0.172 dB
Peak SAR (extrapolated) = 1.86 W/kg
SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.116 mW/g
Maximum value of SAR (measured) = 0.749 mW/g



0 dB = 0.749mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH136_Main ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

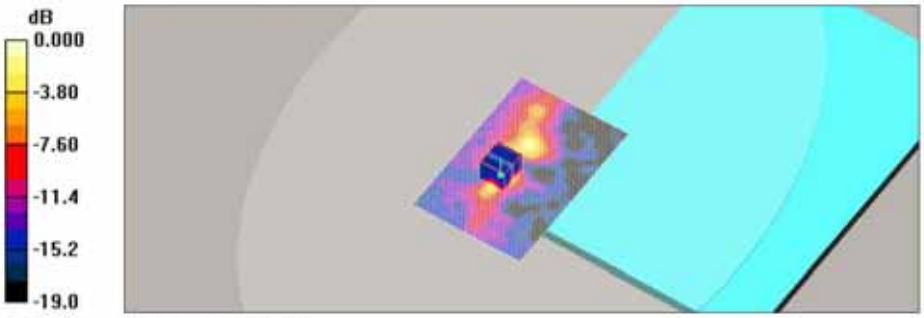
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_H or CEPT); Frequency: 5680 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5680 MHz; σ = 5.97 mho/m; ε_r = 49.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.79, 3.79, 3.79); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH136_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.593 mW/g

WLAN_Base_802.11a_6Mbps_CH136_Main ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 5.56 V/m; Power Drift = -0.182 dB
Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.089 mW/g
Maximum value of SAR (measured) = 0.576 mW/g



0 dB = 0.576mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH104_AUX ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

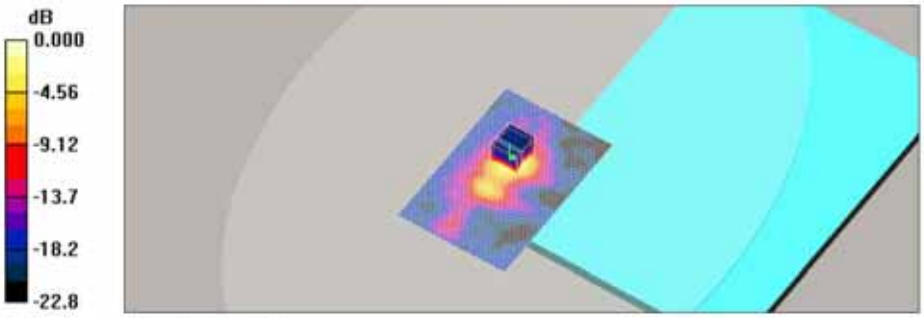
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_H or CEPT); Frequency: 5520 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5520 MHz; σ = 5.76 mho/m; ε_r = 50; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.95, 3.95, 3.95); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH104_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.51 mW/g

WLAN_Base_802.11a_6Mbps_CH104_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 13.7 V/m; Power Drift = -0.050 dB
Peak SAR (extrapolated) = 3.35 W/kg
SAR(1 g) = 0.721 mW/g; SAR(10 g) = 0.247 mW/g
Maximum value of SAR (measured) = 1.41 mW/g



0 dB = 1.41mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH116_AUX ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

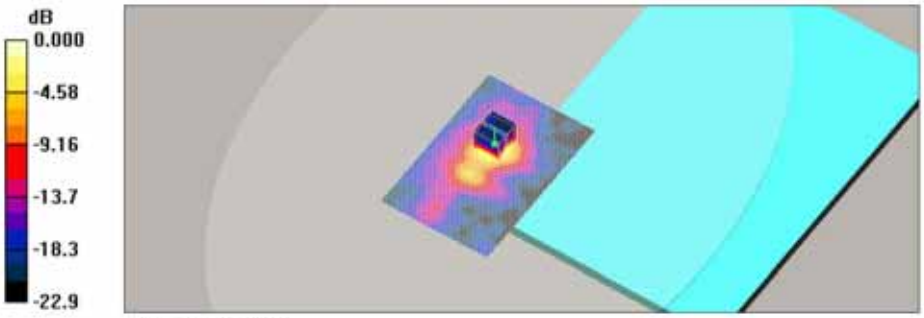
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_H or CEPT); Frequency: 5580 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5580 MHz; σ = 5.84 mho/m; ε_r = 49.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.79, 3.79, 3.79); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH116_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.81 mW/g

WLAN_Base_802.11a_6Mbps_CH116_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 15.5 V/m; Power Drift = -0.089 dB
Peak SAR (extrapolated) = 4.21 W/kg
SAR(1 g) = 0.916 mW/g; SAR(10 g) = 0.317 mW/g
Maximum value of SAR (measured) = 1.79 mW/g



0 dB = 1.79mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH136_AUX ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

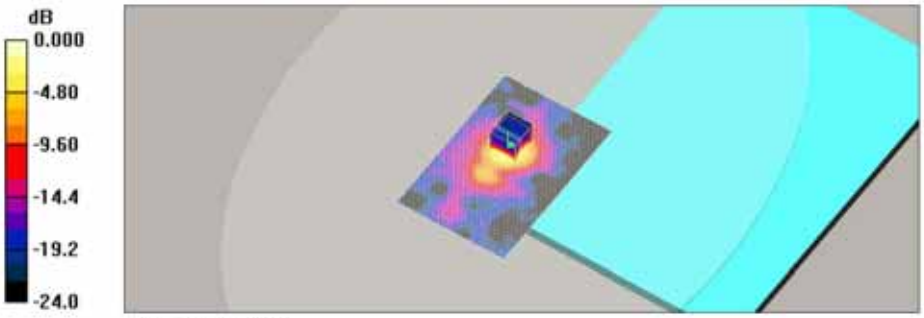
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_H or CEPT); Frequency: 5680 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5680 MHz; σ = 5.97 mho/m; ε_r = 49.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.79, 3.79, 3.79); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH136_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.63 mW/g

WLAN_Base_802.11a_6Mbps_CH136_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 14.4 V/m; Power Drift = -0.108 dB
Peak SAR (extrapolated) = 3.92 W/kg
SAR(1 g) = 0.858 mW/g; SAR(10 g) = 0.291 mW/g
Maximum value of SAR (measured) = 1.66 mW/g



0 dB = 1.66mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Back Screen_802.11a_6Mbps_CH116_Main ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

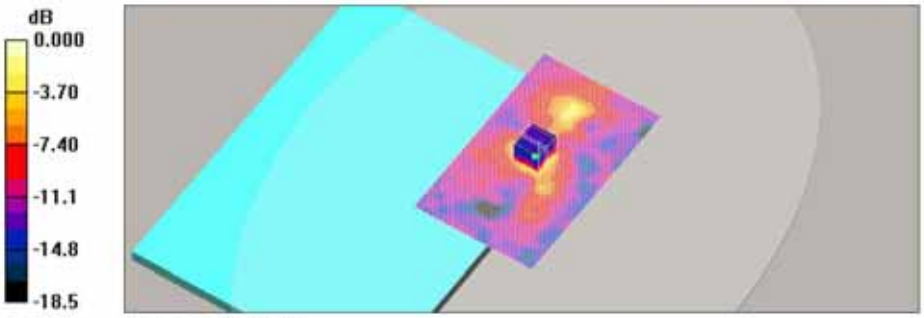
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_H or CEPT); Frequency: 5580 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5580 MHz; σ = 5.84 mho/m; ε_r = 49.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.79, 3.79, 3.79); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Back Screen_802.11a_6Mbps_CH116_Main ANT/Area Scan (111x181x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.263 mW/g

WLAN_Back Screen_802.11a_6Mbps_CH116_Main ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.35 V/m; Power Drift = -0.138 dB
Peak SAR (extrapolated) = 0.642 W/kg
SAR(1 g) = 0.149 mW/g; SAR(10 g) = 0.057 mW/g
Maximum value of SAR (measured) = 0.275 mW/g



0 dB = 0.275mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Back Screen_802.11a_6Mbps_CH116_AUX ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

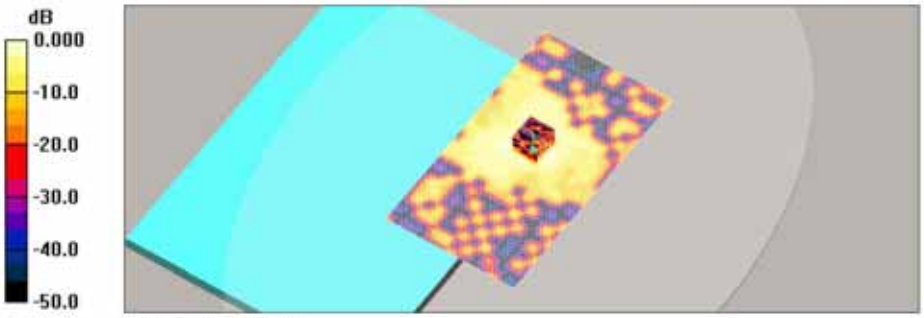
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_H or CEPT); Frequency: 5580 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5580 MHz; σ = 5.84 mho/m; ε_r = 49.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.79, 3.79, 3.79); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Back Screen_802.11a_6Mbps_CH116_AUX ANT/Area Scan (121x221x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.127 mW/g

WLAN_Back Screen_802.11a_6Mbps_CH116_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0.809 V/m; Power Drift = 0.144 dB
Peak SAR (extrapolated) = 0.329 W/kg
SAR(1 g) = 0.065 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.131 mW/g



0 dB = 0.131mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11ac_VHT6_CH138_Main ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

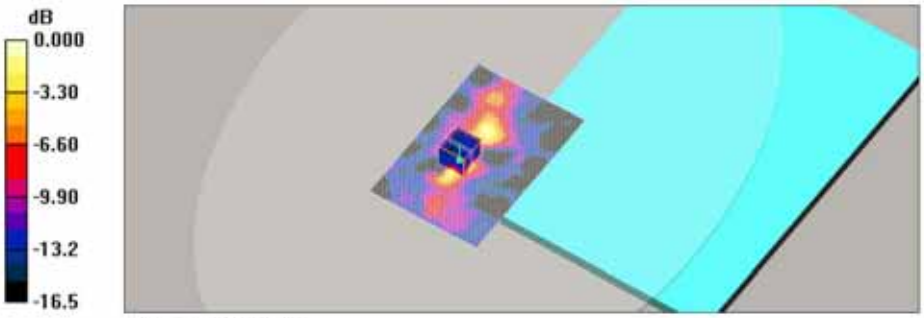
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(802.11ac 80MHz); Frequency: 5690 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5690 MHz; σ = 5.98 mho/m; ε_r = 49.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.79, 3.79, 3.79); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11ac_VHT6_CH138_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.363 mW/g

WLAN_Base_802.11ac_VHT6_CH138_Main ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.56 V/m; Power Drift = -0.160 dB
Peak SAR (extrapolated) = 0.943 W/kg
SAR(1 g) = 0.166 mW/g; SAR(10 g) = 0.059 mW/g
Maximum value of SAR (measured) = 0.352 mW/g



0 dB = 0.352mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11ac_VHT6_CH138_AUX ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

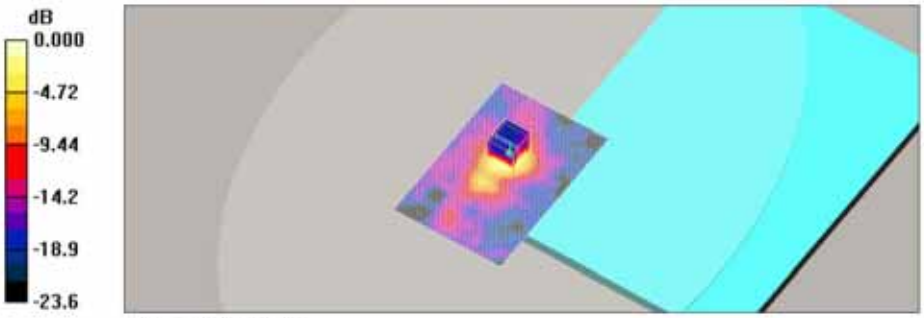
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(802.11ac 80MHz); Frequency: 5690 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5690 MHz; σ = 5.98 mho/m; ε_r = 49.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.79, 3.79, 3.79); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11ac_VHT6_CH138_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.885 mW/g

WLAN_Base_802.11ac_VHT6_CH138_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 10.9 V/m; Power Drift = 0.026 dB
Peak SAR (extrapolated) = 2.19 W/kg
SAR(1 g) = 0.456 mW/g; SAR(10 g) = 0.156 mW/g
Maximum value of SAR (measured) = 0.874 mW/g



0 dB = 0.874mW/g

WLAN 5800 MHz Body SAR Test

Date: 2013-10-26

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH149_Main ANT.da4

Ambient Temp : 23.8 ℃ Tissue Temp : 21.9 ℃

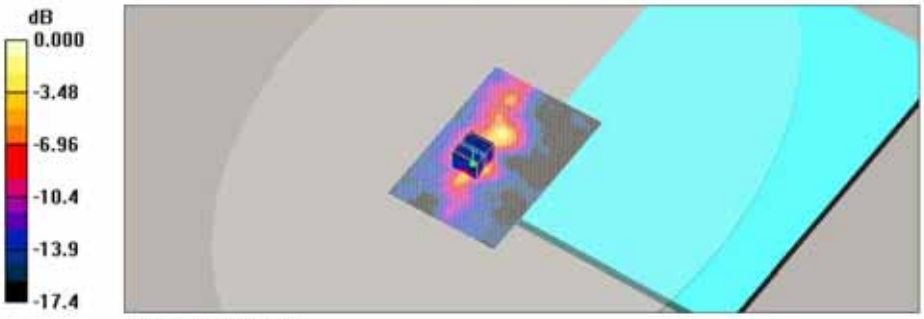
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Upper); Frequency: 5745 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5745 MHz; σ = 6.13 mho/m; ε_r = 49.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4, 4, 4); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH149_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.546 mW/g

WLAN_Base_802.11a_6Mbps_CH149_Main ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.93 V/m; Power Drift = -0.160 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.088 mW/g
Maximum value of SAR (measured) = 0.543 mW/g



0 dB = 0.543mW/g

Date: 2013-10-26

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH149_AUX ANT.da4

Ambient Temp : 23.8 ℃ Tissue Temp : 21.9 ℃

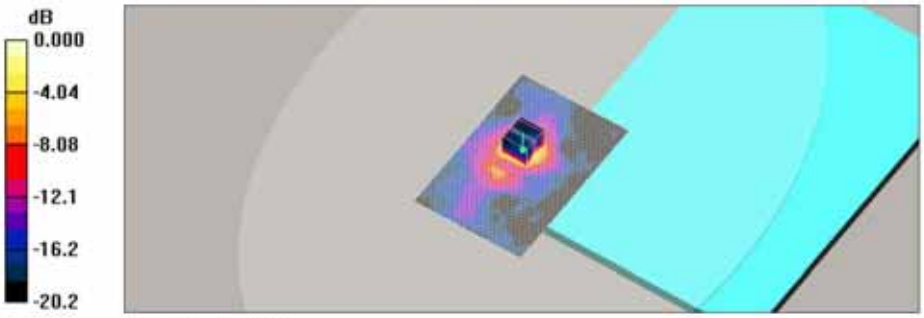
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Upper); Frequency: 5745 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5745 MHz; σ = 6.13 mho/m; ε_r = 49.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4, 4, 4); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH149_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.23 mW/g

WLAN_Base_802.11a_6Mbps_CH149_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.8 V/m; Power Drift = -0.032 dB
Peak SAR (extrapolated) = 2.78 W/kg
SAR(1 g) = 0.629 mW/g; SAR(10 g) = 0.228 mW/g
Maximum value of SAR (measured) = 1.21 mW/g



0 dB = 1.21mW/g

Date: 2013-10-26

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH157_AUX ANT.da4

Ambient Temp : 23.8 ℃ Tissue Temp : 21.9 ℃

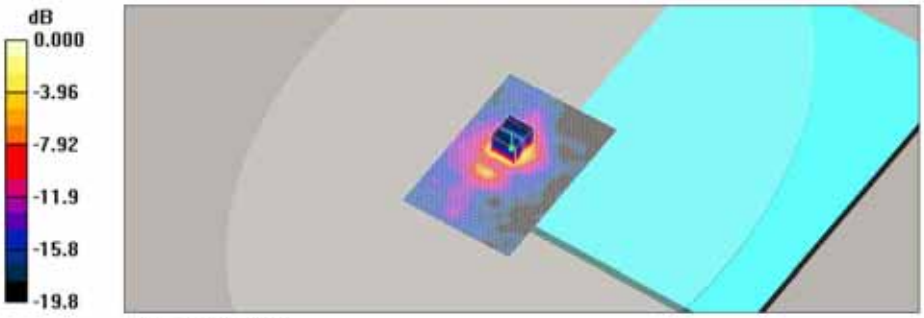
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Upper); Frequency: 5785 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5785 MHz; σ = 6.18 mho/m; ε_r = 49.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4, 4, 4); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH157_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.09 mW/g

WLAN_Base_802.11a_6Mbps_CH157_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.0 V/m; Power Drift = -0.169 dB
Peak SAR (extrapolated) = 2.53 W/kg
SAR(1 g) = 0.558 mW/g; SAR(10 g) = 0.205 mW/g
Maximum value of SAR (measured) = 1.06 mW/g



0 dB = 1.06mW/g

Date: 2013-10-26

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH165_AUX ANT.da4

Ambient Temp : 23.8 ℃ Tissue Temp : 21.9 ℃

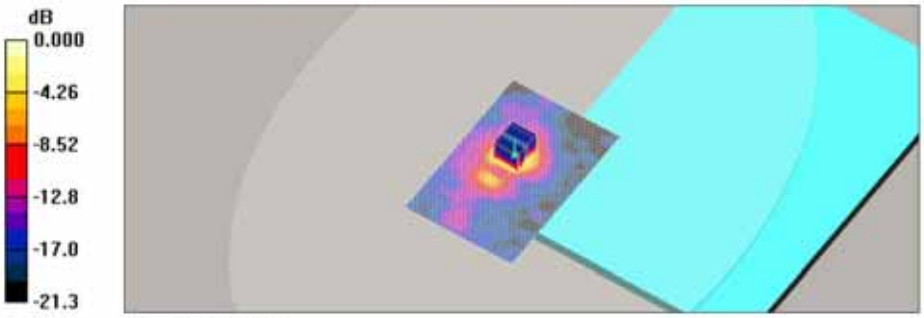
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Upper); Frequency: 5825 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5825 MHz; σ = 6.23 mho/m; ε_r = 49.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4, 4, 4); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH165_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.09 mW/g

WLAN_Base_802.11a_6Mbps_CH165_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.3 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 2.57 W/kg
SAR(1 g) = 0.575 mW/g; SAR(10 g) = 0.207 mW/g
Maximum value of SAR (measured) = 1.12 mW/g



0 dB = 1.12mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Back Screen_802.11a_6Mbps_CH149_Main ANT.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

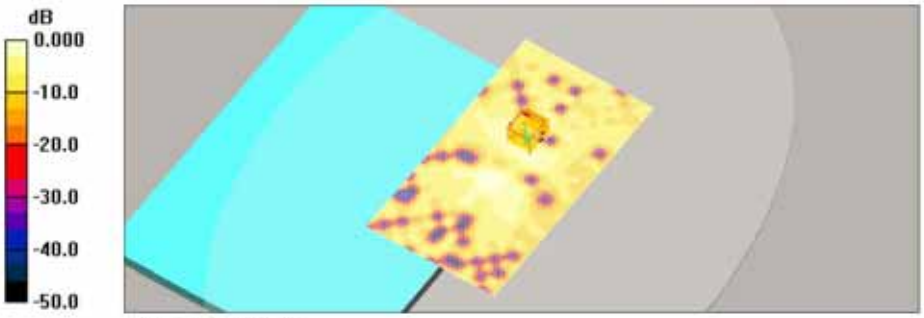
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Upper); Frequency: 5745 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5745 MHz; σ = 6.13 mho/m; ε_r = 49.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4, 4, 4); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Back Screen_802.11a_6Mbps_CH149_Main ANT/Area Scan (121x221x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.105 mW/g

WLAN_Back Screen_802.11a_6Mbps_CH149_Main ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.29 V/m; Power Drift = -0.035 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.017 mW/g
Maximum value of SAR (measured) = 0.088 mW/g



0 dB = 0.088mW/g

Date: 2013-10-26

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Back Screen_802.11a_6Mbps_CH165_AUX ANT.da4

Ambient Temp : 23.8 ℃ Tissue Temp : 21.9 ℃

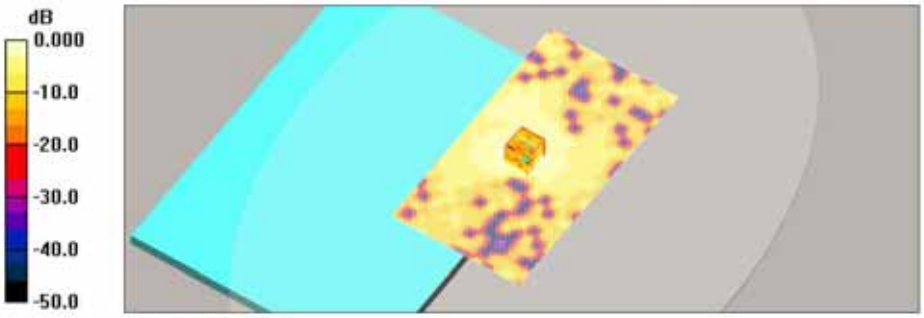
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Upper); Frequency: 5825 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5825 MHz; σ = 6.23 mho/m; ε_r = 49.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4, 4, 4); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Back Screen_802.11a_6Mbps_CH165_AUX ANT/Area Scan (121x221x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.120 mW/g

WLAN_Back Screen_802.11a_6Mbps_CH165_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 1.22 V/m; Power Drift = -0.168 dB
Peak SAR (extrapolated) = 0.241 W/kg
SAR(1 g) = 0.060 mW/g; SAR(10 g) = 0.022 mW/g
Maximum value of SAR (measured) = 0.116 mW/g



0 dB = 0.116mW/g

Date: 2013-10-26

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11ac_VHT6_CH155_Main ANT.da4

Ambient Temp : 23.8 ℃ Tissue Temp : 21.9 ℃

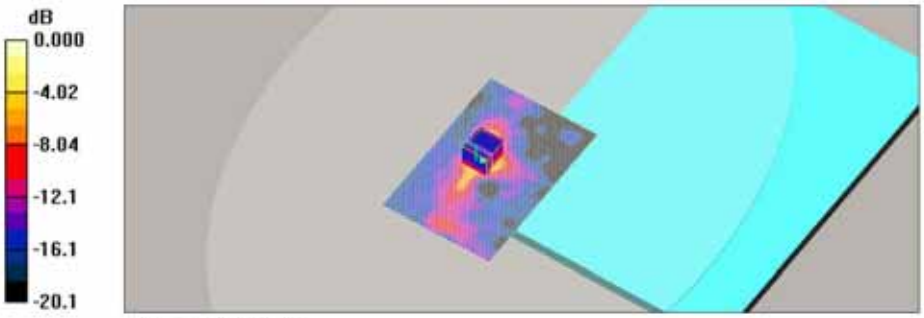
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(802.11ac 80MHz); Frequency: 5775 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5775 MHz; σ = 6.17 mho/m; ε_r = 49.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4, 4, 4); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11ac_VHT6_CH155_Main ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.429 mW/g

WLAN_Base_802.11ac_VHT6_CH155_Main ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 5.06 V/m; Power Drift = -0.096 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.266 mW/g; SAR(10 g) = 0.086 mW/g
Maximum value of SAR (measured) = 0.597 mW/g



0 dB = 0.597mW/g

Date: 2013-10-26

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11ac_VHT6_CH155_AUX ANT.da4

Ambient Temp : 23.8 ℃ Tissue Temp : 21.9 ℃

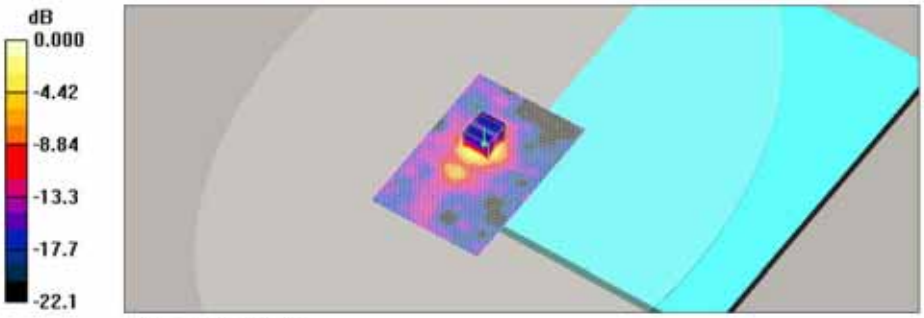
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(802.11ac 80MHz); Frequency: 5775 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5775 MHz; σ = 6.17 mho/m; ε_r = 49.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4, 4, 4); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11ac_VHT6_CH155_AUX ANT/Area Scan (101x151x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.494 mW/g

WLAN_Base_802.11ac_VHT6_CH155_AUX ANT/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 8.14 V/m; Power Drift = -0.130 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.255 mW/g; SAR(10 g) = 0.091 mW/g
Maximum value of SAR (measured) = 0.506 mW/g



0 dB = 0.506mW/g

Repeated SAR Test

Date: 2013-10-24

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH44_AUX ANT_Repeat Test.da4

Ambient Temp : 23.6 ℃ Tissue Temp : 22.1 ℃

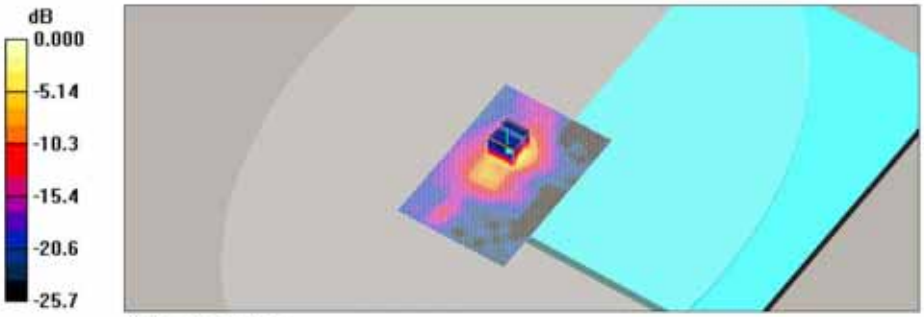
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5220 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5220 MHz; σ = 5.43 mho/m; ε_r = 48.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.23, 4.23, 4.23); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH44_AUX ANT_Repeat Test/Area Scan (101x151x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.47 mW/g

WLAN_Base_802.11a_6Mbps_CH44_AUX ANT_Repeat Test/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 10.6 V/m; Power Drift = -0.100 dB
Peak SAR (extrapolated) = 3.77 W/kg
SAR(1 g) = 0.831 mW/g; SAR(10 g) = 0.282 mW/g
Maximum value of SAR (measured) = 1.75 mW/g



0 dB = 1.75mW/g

Date: 2013-10-23

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH60_AUX ANT_Repeat Test.da4

Ambient Temp : 23.2 ℃ Tissue Temp : 22.3 ℃

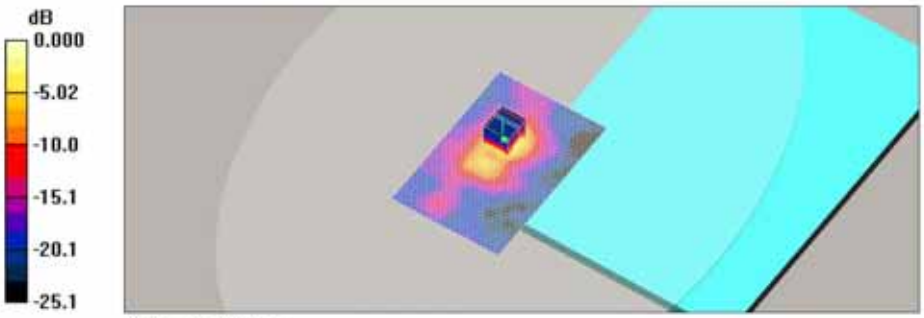
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_U-NII Low); Frequency: 5300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5300 MHz; σ = 5.54 mho/m; ε_r = 48.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(4.07, 4.07, 4.07); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH60_AUX ANT_Repeat Test/Area Scan (101x151x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.67 mW/g

WLAN_Base_802.11a_6Mbps_CH60_AUX ANT_Repeat Test/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.5 V/m; Power Drift = -0.044 dB
Peak SAR (extrapolated) = 3.97 W/kg
SAR(1 g) = 0.856 mW/g; SAR(10 g) = 0.296 mW/g
Maximum value of SAR (measured) = 1.77 mW/g



0 dB = 1.77mW/g

Date: 2013-10-25

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: WLAN_Base_802.11a_6Mbps_CH116_AUX ANT_Repeat Test.da4

Ambient Temp : 22.9 ℃ Tissue Temp : 21.5 ℃

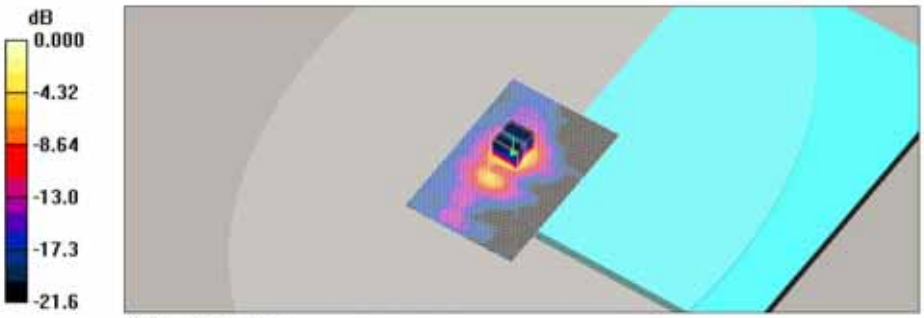
DUT: NP900X3G; Type: Notebook; Serial: JJK691DD900132Y
Program Name: WLAN_Body

Communication System: WLAN(11a_H or CEPT); Frequency: 5580 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5580 MHz; σ = 5.84 mho/m; ε_r = 49.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(3.79, 3.79, 3.79); Calibrated: 2013-06-04
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2013-01-25
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1169
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

WLAN_Base_802.11a_6Mbps_CH116_AUX ANT_Repeat Test/Area Scan (101x151x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 1.71 mW/g

WLAN_Base_802.11a_6Mbps_CH116_AUX ANT_Repeat Test/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 13.5 V/m; Power Drift = 0.137 dB
Peak SAR (extrapolated) = 4.31 W/kg
SAR(1 g) = 0.938 mW/g; SAR(10 g) = 0.329 mW/g
Maximum value of SAR (measured) = 1.86 mW/g



0 dB = 1.86mW/g