

SAR TEST REPORT

Equipment Under Test	: Tablet PC
Model No.	: XE300T ZC
Applicant	: Samsung Electronics Co., Ltd
Address of Applicant	: 129, Samsung-Ro, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, KR
FCC ID	: A3LXE300T ZC
IC ID	: 649E-XE300T ZC
Device Category	: Portable Device
Exposure Category	: General Population/Uncontrolled Exposure
Date of Receipt	: 2013-06-25
Date of Test(s)	: 2013-06-28 ~ 2013-08-15
Date of Issue	: 2013-08-28

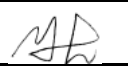
Standards:

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	: Jongwon Ma		2013-08-28
Approved by	: Nicky You		2013-08-28

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APPENDIX

A. DASY5 SAR Report

B. Uncertainty Analysis

C. Calibration certificate

1. General Information

1.1 Testing Laboratory

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1.2 Details of Manufacturer

Manufacturer : Samsung Electronics Co., Ltd.
 Address : 129, Samsung-Ro, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, KR
 E-mail : johnlee@samsung.com
 Phone No. : 82-31-277-4784

1.3 Version of Report

Version Number	Date	Revision
00	2013-07-17	Initial issue
01	2013-07-25	Revision 01
02	2013-08-02	Revision 02
03	2013-08-16	Revision 03
04	2013-08-28	Revision 04

1.4 Description of EUT(s)

Description of EUT(s)		
EUT Type	: Tablet PC	
Model	: XE300TZC	
Serial Number	: JGDL91AD600178P	
Mode of Operation	: WLAN, Bluetooth	
Duty Cycle	: 1(WLAN)	
Body wornAccessory	: None	
Tx Frequency Range	: 2412 Mhz ~ 2462 Mhz (WLAN_11b/g/n) 5180 Mhz ~ 5240 Mhz, 5260 Mhz ~ 5320 Mhz (WLAN_11a/n) 5500 Mhz ~ 5700 Mhz, 5745 Mhz ~ 5825 Mhz (WLAN_11a/n) 2402 Mhz ~ 2480 Mhz (Bluetooth)	
Battery Type	: 7.6 V d.c. (Lithium-ion Battery)	
The highest reported SAR values		
Equipment Class	Band	Reported SAR 1g Body-Worn (W/kg)
DTS	2.45 GHz WLAN	1.150
	5.8 GHz WLAN	0.707
NII	5.2 GHz WLAN	1.076
	5.3 GHz WLAN	1.125
	5.5 GHz WLAN	1.083
DSS	Bluetooth	N/A
Simultaneous SAR KDB per 690783 D01		1.538

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 KDB Publication 44798 v05r01.

Average power for Production (dBm)									
Band (MHz)	Frequency (MHz)	Chain1(Main)				Chain2(Aux)			
		11b	11g	HT20	HT40	11b	11g	HT20	HT40
2450	2412	15.0	8.5	6.5	10.5	15.0	10.0	7.5	10.5
	2437	15.0	14.5	12.5	10.5	15.0	14.0	12.0	10.5
	2462	14.0	9.0	7.0	10.5	14.0	9.0	6.5	10.5
Band (MHz)	Frequency (MHz)	Chain1(Main)				Chain2(Aux)			
		11a	HT20	HT40		11a	HT20	HT40	
5200	5180	11.5	11.0			11.0	10.0		
	5200	11.5	11.0			11.0	10.0		
	5220	11.5	11.0			11.0	10.0		
	5240	11.5	11.0			11.0	10.0		
	5190			8.0				7.0	
	5230			8.0				7.0	
5300	5260	11.5	11.0			11.0	10.0		
	5280	11.5	11.0			11.0	10.0		
	5300	11.5	11.0			11.0	10.0		
	5320	11.5	11.0			11.0	10.0		
	5270			8.0				7.0	
	5310			8.0				7.0	
5600	5500	12.0	11.5			12.5	12.0		
	5520	12.0	11.5			12.5	12.0		
	5540	12.0	11.5			12.5	12.0		
	5560	12.0	11.5			12.5	12.0		
	5580	12.0	11.5			12.5	12.0		
	5660	12.0	11.5			12.5	12.0		
	5680	12.0	11.5			12.5	12.0		
	5700	12.0	11.5			12.5	12.0		
	5510			9.0				10.0	
	5550			9.0				10.0	
5800	5745	12.5	12.0			12.5	12.0		
	5765	12.5	12.0			12.5	12.0		
	5785	12.5	12.0			12.5	12.0		
	5805	12.5	12.0			12.5	12.0		
	5825	12.5	12.0			12.5	12.0		
	5755			10.0				10.0	
	5795			10.0				10.0	
Mode		GFSK		PI/4DQPSK		8DPSK		LE	
Bluetooth		7.0		7.0		7.0		6.5	

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. Measurements were performed at the lowest, middle and highest channels of the operating band. The EUT was set to maximum power level during all tests and at the beginning of each test the battery was fully charged.

The DASY5 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 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 mm. 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 mm for an EX3DV4 probe type).

1.9 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 mm. 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 FCC KDB Publication 865664 D01 v01 >

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	$\frac{1}{2} \delta \ln(2) \pm 0.5$ 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 1 st 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 <u>reported</u> SAR from the area scan based <i>I-g SAR estimation</i> 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.

1.10 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 5 professional system). A Model EX3DV4 3862 E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation $SAR = \sigma (|E|^2) / \rho$ where σ and ρ are the conductivity and mass density of the tissue-simulant. The DASY5 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.

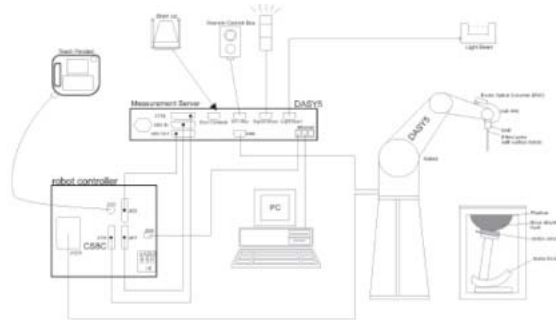


Fig a. The microwave circuit arrangement used for SAR system verification

- 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 7.
- DASY5 Version 52.8.4.1052
- 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.

1.11 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 MHz to 6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	: ± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	: $10 \mu\text{W/g}$ to $> 100 \text{ mW/g}$; Linearity: ± 0.2 dB (noise: typically $< 1 \mu\text{W/g}$)
Dimensions	: Overall length: 337 mm (Tip length: 20 mm) Tip diameter: 2.5 mm (Body diameter: 12 mm) Distance from probe tip to dipole centers: 1 mm
Application	: High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%
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 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.

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



ELI Phantom

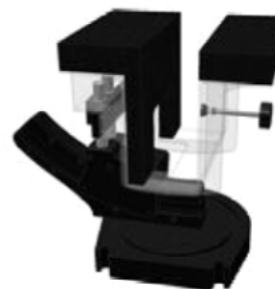
Shell Thickness: 2.0 mm ± 0.2 mm

Dimensions Major axis: 600 mm
Minor axis: 400 mm

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

1.12 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 MHz, 5200 MHz, 5500 MHz, 5600 MHz, 5800 MHz. 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.

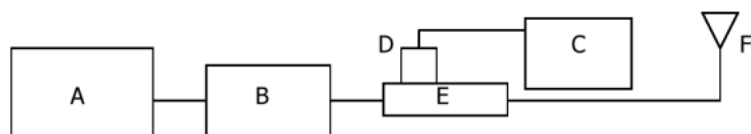


Fig b. The microwave circuit arrangement used for SAR system verification

- A. Agilent Model E4438C Signal Generator
B. EMPOWER Model 2001-BBS3Q7ECK and 2092-BBS5K8CAJ Amplifier
C. Agilent Model E4419B Power Meter
D. Agilent Model 9300H Power Sensor
E. Agilent Model 86205A Directional RF Bridges
F. Reference dipole Antenna

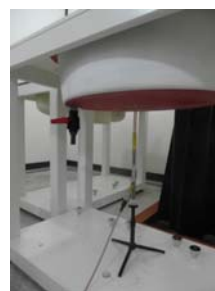


Photo of the dipole Antenna

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	3862	2450 MHz Body	52.1 W/kg	5.37 W/kg	53.7 W/kg	3.07	07/04/2013	21.4
D2450V2 S/N: 892	3862	2450 MHz Body	52.1 W/kg	5.35 W/kg	53.5 W/kg	2.62	08/16/2013	21.1
D5GHzV2 S/N: 1106	3862	5200 MHz Body	74.9 W/kg	7.84 W/kg	78.4 W/kg	4.46	08/15/2013	21.5
D5GHzV2 S/N: 1106	3862	5300 MHz Body	76.8 W/kg	7.93 W/kg	79.3 W/kg	3.26	07/03/2013	21.1
D5GHzV2 S/N: 1106	3862	5300 MHz Body	76.8 W/kg	7.99 W/kg	79.9 W/kg	3.88	08/15/2013	21.5
D5GHzV2 S/N: 1106	3862	5500 MHz Body	80.8 W/kg	8.26 W/kg	82.6 W/kg	2.23	06/28/2013	22.5
D5GHzV2 S/N: 1106	3862	5500 MHz Body	80.8 W/kg	7.84 W/kg	78.4 W/kg	-3.06	08/14/2013	21.2
D5GHzV2 S/N: 1106	3862	5600 MHz Body	81.4 W/kg	8.28 W/kg	82.8 W/kg	1.72	06/28/2013	22.5
D5GHzV2 S/N: 1106	3862	5800 MHz Body	75.1 W/kg	7.80 W/kg	78.0 W/kg	3.86	07/02/2013	22.7
D5GHzV2 S/N: 1106	3862	5800 MHz Body	75.1 W/kg	7.30 W/kg	73.0 W/kg	-2.88	08/14/2013	21.2

Table 1. Results system verification

1.13 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this simulant fluid were measured by using the Speag Model DAK-35 Dielectric Probe in conjunction with Agilent E5071C Network Analyzer(300 kHz - 6 GHz) by using a procedure detailed in Section V.

f(MHz)	Tissue type	Limits / Measured	Dielectric Parameters			
			Permittivity	Conductivity	Simulated Tissue Temp(°C)	
2450	Body	Measured, 07/04/2013	50.9	2.00	21.4	
		Recommended Limits	52.7	1.95	21.0 ~ 23.0	
		Deviation(%)	-3.42	2.56	-	
2412		Measured, 07/04/2013	51.0	1.95	21.4	
		Deviation(%)	-3.23	0.00	-	
2462		Measured, 07/04/2013	50.8	2.02	21.4	
		Deviation(%)	-3.61	3.59	-	
2450		Body	Measured, 08/16/2013	51.8	1.96	21.1
			Recommended Limits	52.7	1.95	21.0 ~ 23.0
			Deviation(%)	-1.71	0.51	-
2412	Measured, 08/16/2013		52.0	1.91	21.1	
	Deviation(%)		-1.33	-2.05	-	
2462	Measured, 08/16/2013		51.8	1.98	21.1	
	Deviation(%)		-1.71	1.54	-	
5200	Body		Measured, 08/15/2013	47.4	5.19	21.5
			Recommended Limits	49.0	5.30	21.0 ~ 23.0
			Deviation(%)	-3.27	-2.08	-
5180		Measured, 08/15/2013	47.5	5.16	21.5	
		Deviation(%)	-3.06	-2.64	-	
5220		Measured, 08/15/2013	47.4	5.22	21.5	
		Deviation(%)	-3.27	-1.51	-	
5300		Body	Measured, 07/03/2013	47.70	5.41	21.1
			Recommended Limits	48.9	5.42	21.0 ~ 23.0
			Deviation(%)	-2.45	-0.18	-
5260	Measured, 07/03/2013		47.8	5.37	21.1	
	Deviation(%)		-2.25	-0.92	-	
5320	Measured, 07/03/2013		47.7	5.43	21.1	
	Deviation(%)		-2.45	0.18	-	
5300	Body		Measured, 08/15/2013	47.2	5.31	21.5
			Recommended Limits	48.9	5.42	21.0 ~ 23.0
			Deviation(%)	-3.48	-2.03	-
5260		Measured, 08/15/2013	47.3	5.28	21.5	
		Deviation(%)	-3.27	-2.58	-	
5320		Measured, 08/15/2013	47.2	5.35	21.5	
		Deviation(%)	-3.48	-1.29	-	
5500		Body	Measured, 06/28/2013	48.6	5.80	22.5
			Recommended Limits	48.6	5.65	21.0 ~ 23.0
			Deviation(%)	0.00	2.65	-
5520	Measured, 06/28/2013		48.6	5.82	22.5	
	Deviation(%)		0.00	3.01	-	
5580	Measured, 06/28/2013		48.4	5.85	22.5	
	Deviation(%)		-0.41	3.54	-	
5600	Body		Measured, 06/28/2013	48.4	5.88	22.5
			Recommended Limits	48.5	5.77	21.0 ~ 23.0
			Deviation(%)	-0.21	1.91	-
5680		Measured, 06/28/2013	48.3	5.89	22.5	
		Deviation(%)	-0.41	2.08	-	
5700		Measured, 06/28/2013	48.2	6.01	22.5	
		Deviation(%)	-0.62	4.16	-	

f(MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			Permittivity	Conductivity	Simulated Tissue Temp(°C)
5500	Body	Measured, 08/14/2013	49.0	5.46	21.2
		Recommended Limits	48.6	5.65	21.0 ~ 23.0
		Deviation(%)	0.82	-3.36	-
5520		Measured, 08/14/2013	49.0	5.48	21.2
		Deviation(%)	0.82	-3.01	-
5800	Body	Measured, 07/02/2013	49.2	6.21	22.7
		Recommended Limits	48.2	6.00	21.0 ~ 23.0
		Deviation(%)	2.07	3.50	-
5765		Measured, 07/02/2013	49.3	6.16	22.7
		Deviation(%)	2.28	2.67	-
5825		Measured, 07/02/2013	49.1	6.23	22.7
		Deviation(%)	1.87	3.83	-
5800	Body	Measured, 08/14/2013	48.6	5.82	21.2
		Recommended Limits	48.2	6.00	21.0 ~ 23.0
		Deviation(%)	0.83	-3.00	-
5765		Measured, 08/14/2013	48.65	5.77	21.2
		Deviation(%)	0.93	-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 (ultrapure): Polyethylene glycol mono [4-(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

1.14 Test System Validation

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		
					Permitt ivity	Condu ctivity	Sensitivity	Probe Linearity	Probe Isotropy	Mod. Type	Duty Factor	PAR
2450	04/11/2013	3862	2450	Body	51.84	2.02	PASS	PASS	PASS	OFDM	N/A	PASS
5200	04/07/2013	3862	5200	Body	48.15	5.37	PASS	PASS	PASS	OFDM	N/A	PASS
5300	04/07/2013	3862	5300	Body	47.87	5.49	PASS	PASS	PASS	OFDM	N/A	PASS
5500	04/01/2013	3862	5500	Body	47.86	5.55	PASS	PASS	PASS	OFDM	N/A	PASS
5600	04/01/2013	3682	5600	Body	47.73	5.69	PASS	PASS	PASS	OFDM	N/A	PASS
5800	04/01/2013	3682	5800	Body	47.32	5.91	PASS	PASS	PASS	OFDM	N/A	PASS

< SAR System Validation Summary >

1.15 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 kHz to 300 GHz,” 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 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz 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 GHz

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 any 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 mW/g	8.00 mW/g
Partial Average SAR (Whole Body)	0.08 mW/g	0.40 mW/g
Partial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 mW/g	20.00 mW/g

Table 2. RF exposure limits

2. Instruments List

Manufacturer	Device	Type	Serial Number	Cal Date	Cal Interval	Cal Due
Stäubli	Robot	RX90BL	F12/5LP8A1/01	N/A	N/A	N/A
Schmid & Partner Engineering AG	Dosimetric E-Field Probe	EX3DV3	3862	02/04/2013	Annual	02/04/2014
Schmid & Partner Engineering AG	2450 Mhz System Validation Dipole	D2450V2	892	07/09/2012	Biennial	07/09/2014
Schmid & Partner Engineering AG	5000 Mhz System Validation Dipole	D5GHzV2	1106	03/15/2013	Biennial	03/15/2015
Schmid & Partner Engineering AG	Data acquisition Electronics	DAE4	1340	05/28/2013	Annual	05/28/2014
Schmid & Partner Engineering AG	Software	DASY52 V52.8.02	-	N/A	N/A	N/A
Schmid & Partner Engineering AG	Phantom	ELI Phantom	TP-1200	N/A	N/A	N/A
Agilent	Network Analyzer	E5071C	MY46111535	06/27/2013	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	09/18/2012	Annual	09/18/2013
			MY41495307	09/18/2012	Annual	09/18/2013
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	09/17/2012	Annual	09/17/2013
Agilent	Directional RF Bridges	86205A	MY31402302	06/28/2013	Annual	06/28/2014
Microlab	LP Filter	LA-30N LA-60N	N/A	09/14/2012	Annual	09/14/2013
Agilent	Attenuator	8491B	50566	09/14/2012	Annual	09/14/2013

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

FCC KDB Publication 447498 v05r01, 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 per 690783 D01.

3.3 RF Conducted Power

WLAN

Mode	Freq. (MHz)	Ch. #	Rate	Measured Power [dB m]	
				Main	AUX
802.11b	2412	1	1	<u>14.58</u>	<u>14.42</u>
	2437	6	1	<u>14.52</u>	<u>13.78</u>
	2462	11	1	<u>13.86</u>	<u>13.51</u>
802.11g	2412	1	6	7.55	8.95
	2437	6	6	13.66	13.06
	2462	11	6	8.02	7.89
802.11n HT20	2412	1	MCS0	5.17	6.71
	2437	6	MCS0	11.27	10.81
	2462	11	MCS0	5.61	5.11
802.11n HT40	2422	3	MCS0	8.86	9.36
	2437	6	MCS0	9.75	9.59
	2452	9	MCS0	9.91	9.61
802.11n HT20_MIMO	2412	1	MCS8	5.12	6.64
	2437	6	MCS8	<u>10.77</u>	<u>10.34</u>
	2462	11	MCS8	5.23	4.88
802.11n HT40_MIMO	2422	3	MCS8	8.84	8.96
	2437	6	MCS8	9.73	9.04
	2452	9	MCS8	9.94	9.05

5.2 GHz

Mode	Freq. (MHz)	Ch. #	Rate	Measured Power [dB m]	
				Main	AUX
802.11a	5180	36	6	10.37	<u>10.28</u>
	5200	40	6	<u>10.39</u>	9.52
	5220	44	6	10.24	9.57
	5240	48	6	10.10	9.58
802.11n HT20	5180	36	MCS0	9.59	9.68
	5200	40	MCS0	9.61	9.05
	5220	44	MCS0	9.13	8.90
	5240	48	MCS0	9.48	8.51
802.11n HT40	5190	38	MCS0	6.09	6.68
	5230	46	MCS0	6.62	5.41
802.11n HT20_MIMO	5180	36	MCS8	6.73	7.18
	5200	40	MCS8	6.54	5.12
	5220	44	MCS8	6.01	5.27
	5240	48	MCS8	6.04	5.07
802.11n HT40_MIMO	5190	38	MCS8	6.73	7.30
	5230	46	MCS8	6.67	5.63

5.3 GHz

Mode	Freq. (MHz)	Ch. #	Rate	Measured Power [dB m]	
				Main	AUX
802.11a	5260	52	6	<u>10.51</u>	9.35
	5280	56	6	10.26	9.44
	5300	60	6	10.28	9.39
	5320	64	6	10.38	<u>10.11</u>
802.11n HT20	5260	52	MCS0	9.77	8.12
	5280	56	MCS0	9.26	8.18
	5300	60	MCS0	9.24	8.28
	5320	64	MCS0	9.75	9.05
802.11n HT40	5270	54	MCS0	6.44	5.16
	5310	62	MCS0	6.73	6.16
802.11n HT20_MIMO	5260	52	MCS8	6.07	4.72
	5280	56	MCS8	5.95	5.54
	5300	60	MCS8	6.13	6.01
	5320	64	MCS8	6.25	9.37
802.11n HT40_MIMO	5270	54	MCS8	6.74	6.01
	5310	62	MCS8	6.81	6.34

5.5 GHz

Mode	Freq. (MHz)	Ch. #	Rate	Measured Power [dB m]	
				Main	AUX
802.11a	5500	100	6	11.52	12.32
	5520	104	6	11.98	12.18
	5540	108	6	11.85	12.11
	5560	112	6	11.46	12.08
	5580	116	6	11.52	11.83
	5660	132	6	11.19	11.63
	5680	136	6	11.57	11.59
802.11n HT20	5700	140	6	11.32	11.86
	5500	100	MCS0	10.55	11.97
	5520	104	MCS0	10.72	11.82
	5540	108	MCS0	10.54	11.71
	5560	112	MCS0	10.52	11.65
	5580	116	MCS0	10.42	11.38
	5660	132	MCS0	10.31	10.45
802.11n HT40	5680	136	MCS0	10.71	11.07
	5700	140	MCS0	10.47	11.37
	5510	102	MCS0	7.19	9.72
802.11n HT20_MIMO	5550	110	MCS0	7.59	9.51
	5670	134	MCS0	7.44	8.27
	5500	100	MCS8	7.08	9.05
	5520	104	MCS8	7.03	9.08
	5540	108	MCS8	7.18	8.97
	5560	112	MCS8	6.99	8.84
	5580	116	MCS8	6.68	8.28
802.11n HT40_MIMO	5660	132	MCS8	7.09	8.43
	5680	136	MCS8	7.24	8.35
	5700	140	MCS8	7.47	8.63
	5510	102	MCS8	7.35	9.89
	5550	110	MCS8	7.34	9.87
	5670	134	MCS8	7.41	9.14

5.8GHz

Mode	Freq. (MHz)	Ch. #	Rate	Measured Power [dB m]	
				Main	AUX
802.11a	5745	149	6	11.75	12.09
	5765	153	6	12.37	12.22
	5785	157	6	11.86	11.73
	5805	161	6	12.19	11.28
	5825	165	6	11.92	10.76
802.11n HT20	5745	149	MCS0	11.06	11.22
	5765	153	MCS0	11.85	11.39
	5785	157	MCS0	11.13	10.92
	5805	161	MCS0	11.52	10.44
	5825	165	MCS0	10.87	10.03
802.11n HT40	5755	151	MCS0	8.45	8.91
	5795	159	MCS0	9.19	8.28
11n HT20_MIMO	5745	149	MCS8	7.98	9.02
	5765	153	MCS8	8.47	9.06
	5785	157	MCS8	8.71	8.58
	5805	161	MCS8	9.23	7.97
	5825	165	MCS8	9.15	7.47
11n HT40_MIMO	5755	151	MCS8	8.48	9.85
	5795	159	MCS8	9.38	9.12

Notes

KDB 248227 D01v01r02choose the highest output power channel to test SAR and determine further SAR exclusion.

Bluetooth

Channel	Frequency (MHz)	GFSK (dB m)	4DQ PSK (dB m)	8DPSK (dB m)	LE (dB m)
Low	2402	5.73	5.96	5.95	4.94
Middle	2441	5.49	5.72	5.70	4.86
High	2480	5.47	5.66	5.66	5.01

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	802.11g
802.11 b/g	2.412	1 [#]		✓	✓	
	2.437	6		✓	✓	
	2.462	11 [#]		✓	✓	
802.11a	5.18	36				✓
	5.20	40	42 (5.21 GHz)			•
	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				•
	5.520	104				✓
	5.540	108				•
	5.560	112				•
	5.580	116				✓
	5.600	120	Unknown			•
	5.620	124				✓
	5.640	128				•
	5.660	132				•
	5.680	136				✓
	5.700	140				•
	5.745	149		✓		✓
	5.765	153	152 (5.76 GHz)		•	•
UNII or §15.247	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

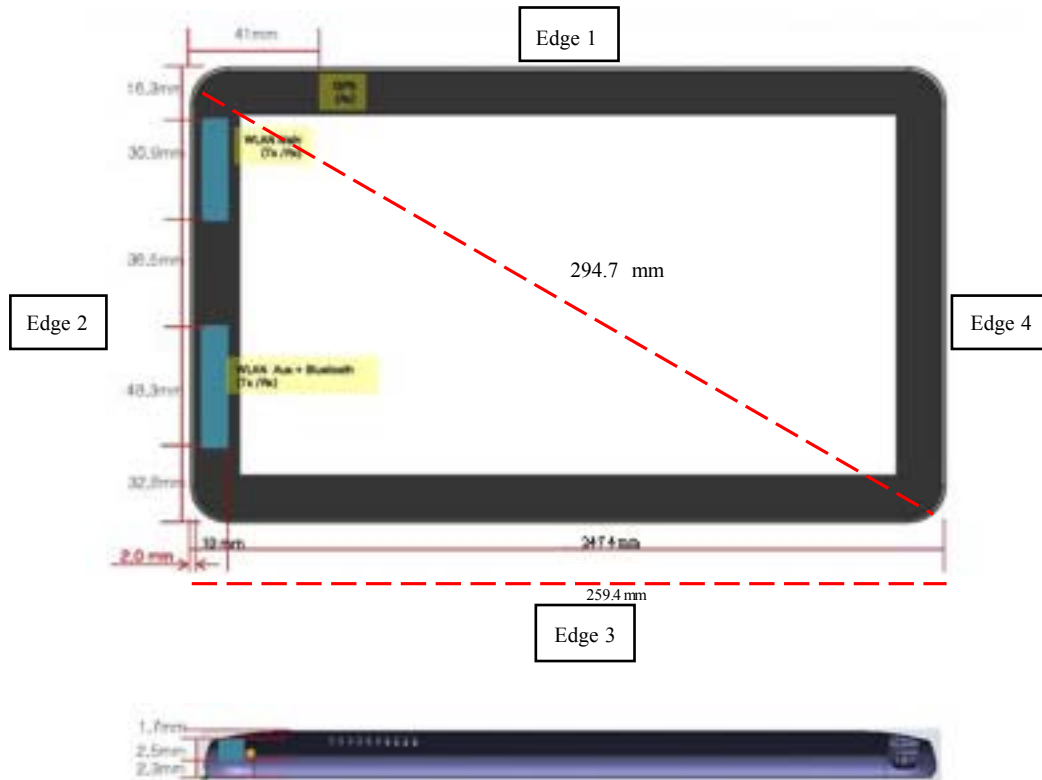
FCC KDB 447498 v05r01, the SAR exclusion threshold for distances < 50 mm is defined by the following equation:

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

FCC KDB 447498 v05r01, At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following

$$[(\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) * 10] \text{ mW}$$

at > 1500 MHz and ≤ 6 GHz



Exclusion table of RF Exposure.

Based on the maximum tune-up tolerance limit of WWAN and WLAN, Bluetooth the antenna to use separation distance, Table "EXEMPT" SAR was not required and Table "Measure" SAR was required.

Antenna	Tx	Frequency (MHz)	Output power ^{NOTE 2, 3}		Separation distances (mm) ^{NOTE 2, 3, 4, 5}					Front	SAR Exemption ^{NOTE 2, 3, 4, 5}					
			dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4		Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front
Main	WIFI	2437	15.00	32	5	16.3	5	117.6	247.4		Measure	Measure	Measure	772mW EXEMPT	2070mW EXEMPT	N/A
	WIFI	5240	11.50	14	5	16.3	5	117.6	247.4		Measure	2.00 EXEMPT	Measure	742mW EXEMPT	2040mW EXEMPT	N/A
	WIFI	5320	11.50	14	5	16.3	5	117.6	247.4		Measure	2.02 EXEMPT	Measure	741mW EXEMPT	2039mW EXEMPT	N/A
	WIFI	5700	12.00	16	5	16.3	5	117.6	247.4		Measure	2.39 EXEMPT	Measure	739mW EXEMPT	2037mW EXEMPT	N/A
	WIFI	5825	12.50	18	5	16.3	5	117.6	247.4		Measure	2.72 EXEMPT	Measure	738mW EXEMPT	2036mW EXEMPT	N/A
Aux	WIFI	2412	15.00	32	5	83.7	5	32.8	247.4		Measure	434mW EXEMPT	Measure	1.51 EXEMPT	2071mW EXEMPT	N/A
	WIFI	5240	10.28	11	5	83.7	5	32.8	247.4		Measure	403mW EXEMPT	Measure	0.76 EXEMPT	2040mW EXEMPT	N/A
	WIFI	5320	11.00	13	5	83.7	5	32.8	247.4		Measure	402mW EXEMPT	Measure	0.91 EXEMPT	2039mW EXEMPT	N/A
	WIFI	5700	12.50	18	5	83.7	5	32.8	247.4		Measure	400mW EXEMPT	Measure	1.30 EXEMPT	2037mW EXEMPT	N/A
	WIFI	5825	12.50	18	5	83.7	5	32.8	247.4		Measure	399mW EXEMPT	Measure	1.32 EXEMPT	2036mW EXEMPT	N/A
Bluetooth - Antenna																
Bluetooth	B.T	2480	7.00	5	5	83.7	5	32.8	247.4		1.57 EXEMPT	432mW EXEMPT	1.57 EXEMPT	0.24 EXEMPT	2069mW EXEMPT	N/A

Notes

- Maximum power is the source-based time-average power and represents the maximum RF output power among production units.
- For distances < 5mm, a distance of 5mm is used to determine SAR exclusion and estimated SAR value.
- Output power is the maximum rated power (including tune-up or manufacturing tolerances).
- If the antenna separation distance is > 50mm then the value listed is the output power threshold, above which SAR measurement is required. For separation ≤ 50mm the value is the KDB 447498 calculated value and must be less than 3 for SAR exemption.
- Formulas round separation distance to nearest mm and power to nearest mW before calculating thresholds or exemption values.

3.6 SAR Data Summary

WLAN 2.45 GHz Body SAR

Ambient Temperature (°C)	22.9	21.8
Liquid Temperature (°C)	21.4	21.1
Date	07/04/2013	08/16/2013

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	Rear	2412	1	0	14.58	15.0	0.923	1.017	1.6
			2437	6	0	14.52	15.0	1.03	1.150	
			2462	11	0	13.86	14.0	0.981	1.013	
	Aux	Rear	2412	1	0	14.42	15.0	0.738	0.843	
	Main	Edge 1	2412	1	0	14.58	15.0	0.052	0.057	
	Main	Edge 2	2412	1	0	14.58	15.0	0.472	0.520	
	Aux	Edge 2	2412	1	0	14.42	15.0	0.404	0.462	
802.11n HT20	MIMO	Rear	2437	6	0	13.57	14.0	0.448	0.495	

Ambient Temperature (°C)	22.1
Liquid Temperature (°C)	21.5
Date	08/15/2013

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	Rear	5200	40	0	10.39	11.5	0.833	1.076	1.6
			5220	44	0	10.24	11.5	0.802	1.072	
	Aux	Rear	5180	36	0	10.28	11.0	0.189	0.223	
	Main	Edge 2	5200	40	0	10.39	11.5	0.209	0.270	
	Aux	Edge 2	5180	36	0	10.28	11.0	0.112	0.132	

Ambient Temperature (°C)	22.6	22.1
Liquid Temperature (°C)	21.1	21.5
Date	07/03/2013	08/15/2013

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	Rear	5260	52	0	10.51	11.5	0.817	1.026	1.6
			5320	64	0	10.38	11.5	0.869	1.125	
	Aux	Rear	5320	64	0	10.11	11.0	0.702	0.862	
	Main	Edge 2	5260	52	0	10.51	11.5	0.103	0.129	
	Aux	Edge 2	5320	64	0	10.11	11.0	0.497	0.611	
802.11n HT20	MIMO	Rear	5320	64	0	11.09	13.0	0.093	0.144	

WLAN 5.5 GHz Body SAR

Ambient Temperature (°C)	23.2	21.7
Liquid Temperature (°C)	22.5	21.2
Date	06/28/2013	08/14/2013

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	Rear	5520	104	0	11.98	12.0	0.953	0.957	1.6
			5580	116	0	11.52	12.0	0.970	1.083	
			5680	136	0	11.57	12.0	0.808	0.892	
	Aux	Rear	5520	104	0	12.18	12.5	0.308	0.332	
	Main	Edge 2	5520	104	0	11.98	12.0	0.097	0.097	
	Aux	Edge 2	5520	104	0	12.18	12.5	0.300	0.323	

WLAN 5.8 GHz Body SAR

Ambient Temperature (°C)	22.8	21.7
Liquid Temperature (°C)	21.8	21.2
Date	07/02/2013	08/14/2013

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	Rear	5765	153	0	12.37	12.5	0.686	0.707	1.6
	Aux	Rear	5765	153	0	12.22	12.5	0.033	0.035	
	Main	Edge 2	5765	153	0	12.37	12.5	0.093	0.096	
	Aux	Edge 2	5765	153	0	12.22	12.5	0.026	0.028	

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 v05r01.
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 FCC KDB Publication 447498 v05r01.
7. 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 3.8 for variability analysis.

WLAN Notes :

1. For 2.4 GHz, justification for reduced test configuration for WIFI channels 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 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) 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. 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"
4. According to KDB447498 v05r01 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.
5. According to KDB447498 v05r01 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.
6. WLAN transmission was verified using a spectrum analyzer.

3.7 FCC Multi-TXSAR considerations

3.7.1 Introduction

The following procedures adopted from FCC KDB Publication 447498 v05r01 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. FCC KDB 447498 v05r01 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 FCC KDB 447498 v05r01 4.3.2.2), the following equation must be used to estimate the standalone 1g SAR for simultaneous transmission involving that transmitter.

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

Antenna	Tx	Frequency (MHz)	Output power ^{Note 2, 4}		Separation distances (mm) ^{Note 1 and 4}						Estimated SAR Value ^{Note 3 and 4}						
			dBm	mW	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	Rear	Edge 1	Edge 2	Edge 3	Edge 4	Front	
WiFi - Main Antenna - Zero separation from tablet																	
Main	WiFi	2437	15.00	32	5	16.3	5	117.6	247.4		Measure	Measure	Measure	0.133	0.133	N/A	
	WiFi	5240	11.50	14	5	16.3	5	117.6	247.4		Measure	0.267	Measure	0.085	0.085	N/A	
	WiFi	5320	11.50	14	5	16.3	5	117.6	247.4		Measure	0.269	Measure	0.086	0.086	N/A	
	WiFi	5700	12.00	16	5	16.3	5	117.6	247.4		Measure	0.318	Measure	0.102	0.102	N/A	
	WiFi	5825	12.50	18	5	16.3	5	117.6	247.4		Measure	0.362	Measure	0.116	0.116	N/A	
WiFi - Aux Antenna - Zero separation from tablet																	
Aux	WiFi	2412	15.00	32	5	83.7	5	32.8	247.4		Measure	0.133	Measure	0.201	0.133	N/A	
	WiFi	5240	10.28	11	5	83.7	5	32.8	247.4		Measure	0.067	Measure	0.102	0.067	N/A	
	WiFi	5320	11.00	13	5	83.7	5	32.8	247.4		Measure	0.080	Measure	0.121	0.080	N/A	
	WiFi	5700	12.50	18	5	83.7	5	32.8	247.4		Measure	0.115	Measure	0.174	0.115	N/A	
	WiFi	5825	12.50	18	5	83.7	5	32.8	247.4		Measure	0.116	Measure	0.176	0.116	N/A	
B.T- Aux Antenna - Zero separation from tablet																	
Bluetooth	B.T	2480	7.00	5	5	83.7	5	32.8	247.4		0.210	0.021	0.210	0.032	0.021	N/A	

<Tablet3 Estimated SAR >

Notes

1. For distances < 5mm, a distance of 5mm is used to determine SAR exclusion and estimated SAR value.
2. Output power is the maximum rated power (including tune-up or manufacturing tolerances) and includes source-based averaging.
3. If the antenna separation distance is > 50mm then the estimated SAR value is the lesser of the estimated value at 50mm or 0.4 W/Kg.
4. Formulas round separation distance to nearest mm and power to nearest mW before calculating estimated SAR or determining if SAR is excluded.

3.7.3 The Simultaneous Transmission possibilities are listed as below

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

3.7.4 Body SAR Simultaneous Transmission Analysis

Simultaneous Transmission Summation Scenario with Wi-Fi and Bluetooth

<2.45 GHz + Bluetooth>

Simultaneous TX	configuration	Wi-Fi 2.45 GHz SAR(W/kg) Main Antenna	Bluetooth SAR (W/kg) Aux Antenna	ΣSAR (W/kg)
Body	Rear	1.150	0.210	1.360
	Edge 1	0.057	0.021	0.078
	Edge 2	0.520	0.210	0.730

<5.2 GHz + Bluetooth>

Simultaneous TX	configuration	Wi-Fi 5.2 GHz SAR(W/kg) Main Antenna	Bluetooth SAR (W/kg) Aux Antenna	ΣSAR (W/kg)
Body	Rear	1.24	0.210	1.450
	Edge 2	0.270	0.210	0.480

<5.3 GHz + Bluetooth>

Simultaneous TX	configuration	Wi-Fi 5.3 GHz SAR(W/kg) Main Antenna	Bluetooth SAR (W/kg) Aux Antenna	ΣSAR (W/kg)
Body	Rear	1.138	0.210	1.348
	Edge 2	0.129	0.210	0.339

<5.5 GHz + Bluetooth>

Simultaneous TX	configuration	Wi-Fi 5.5 GHz SAR(W/kg) Main Antenna	Bluetooth SAR (W/kg) Aux Antenna	ΣSAR (W/kg)
Body	Rear	1.206	0.210	1.416
	Edge 2	0.097	0.210	0.307

<5.8 GHz + Bluetooth>

Simultaneous TX	configuration	Wi-Fi 5.8 GHz SAR(W/kg) Main Antenna	Bluetooth SAR (W/kg) Aux Antenna	ΣSAR (W/kg)
Body	Rear	0.707	0.210	0.917
	Edge 2	0.096	0.210	0.306

Simultaneous Transmission Summation Scenario with Wi-Fi MIMO

Simultaneous TX	configuration	Wi-Fi 2.45 GHz SAR(W/kg) Main Antenna	Wi-Fi 2.45 GHz SAR(W/kg) Aux Antenna	ΣSAR (W/kg)
Body	Measured SAR	0.495 W/kg		
	Edge 1	0.057	0.133	0.190
	Edge 2	0.520	0.462	0.982
	configuration	Wi-Fi 5.2 GHz SAR(W/kg) Main Antenna	Wi-Fi 5.2 GHz SAR(W/kg) Aux Antenna	ΣSAR (W/kg)
	Rear	1.24	0.223	1.463
	Edge 2	0.270	0.132	0.402
	configuration	Wi-Fi 5.3 GHz SAR(W/kg) Main Antenna	Wi-Fi 5.3 GHz SAR(W/kg) Aux Antenna	ΣSAR (W/kg)
	Measured SAR	0.144 W/kg		
	Edge 2	0.129	0.611	0.740
	configuration	Wi-Fi 5.5 GHz SAR(W/kg) Main Antenna	Wi-Fi 5.5 GHz SAR(W/kg) Aux Antenna	ΣSAR (W/kg)
	Rear	1.206	0.332	1.538
	Edge 2	0.097	0.323	0.420
	configuration	Wi-Fi 5.8 GHz SAR(W/kg) Main Antenna	Wi-Fi 5.8 GHz SAR(W/kg) Aux Antenna	ΣSAR (W/kg)
	Rear	0.707	0.035	0.742
	Edge 2	0.096	0.028	0.124

Notes.

1. The reported stand-alone values for 1Tx mode(SISO) are used to cover simultaneous conditions.
2. When reported stand-alone values for 1Tx mode(SISO) summation was over 1.6 W/kg, additional were of SAR evaluation for 802.11n(MIMO) Mode.
3. Please refer to EMC report for combined high average power of 802.11n(MIMO) mode.

3.8 Repeated SAR Measurement

Test Mode	EUT Position	Traffic Channel		Distance (mm)	Measured 1 g SAR (W/kg)	1 st Repeated 1 g SAR (W/kg)		Deviation (%)
		Frequency (MHz)	Channel			Measured	Scaled SAR	
802.11b	Rear	2437	6	0	1.03	1.01	1.128	-1.94
802.11a	Rear	5200	40	0	0.833	0.960	1.24	13.23
802.11a	Rear	5320	64	0	0.869	0.879	1.138	1.15
802.11a	Rear	5580	116	0	0.970	1.08	1.206	11.34

<Note>

1. KDB 865664 D01v01, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.
2. KDB 865664 D01v01, if the deviation among the repeated measurement is $\leq 20\%$ 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	DASY5 Report (Plots of the SAR Measurements)	- 2.45 GHz, 5.2 GHz, 5.3 GHz, 5.5 GHz, 5.6 GHz, 5.8 GHz Verification Test - WLANTest
Appendix B	Uncertainty Analysis	
Appendix C	Calibration Certificate	- PROBE - DAE - DIPOLE



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Appendix A

Test Plot - DAS Y5 Report

2450 MHz Verification Test

Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [2450MHz Validation.da53:0](#)

Input Power : 100 mW

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: 892

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 2.002 \text{ S/m}$; $\epsilon_r = 50.867$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

2450MHz System Verification/2450MHz System Verification/Area Scan (91x91x1): Interpolated grid:

$dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 8.26 W/kg

2450MHz System Verification/2450MHz System Verification/Zoom Scan (7x7x7)/Cube 0:

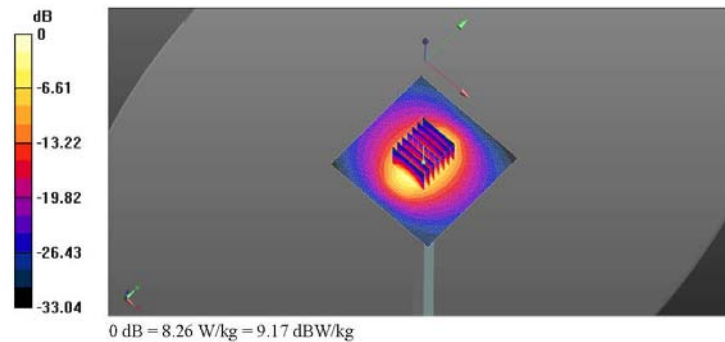
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 64.127 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 5.37 W/kg; SAR(10 g) = 2.51 W/kg

Maximum value of SAR (measured) = 8.12 W/kg



2450 MHz Verification Test

Date: 2013-08-16

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [2450MHz Validation.da53-0](#)

Input Power : 100 mW

Ambient Temp : 21.8 °C Tissue Temp : 21.1 °C

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: 892

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.958 \text{ S/m}$; $\epsilon_r = 51.847$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

2450MHz System Verification/2450MHz System Verification/Area Scan (91x91x1): Interpolated grid:

$dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 7.90 W/kg

2450MHz System Verification/2450MHz System Verification/Zoom Scan (7x7x7)/Cube 0:

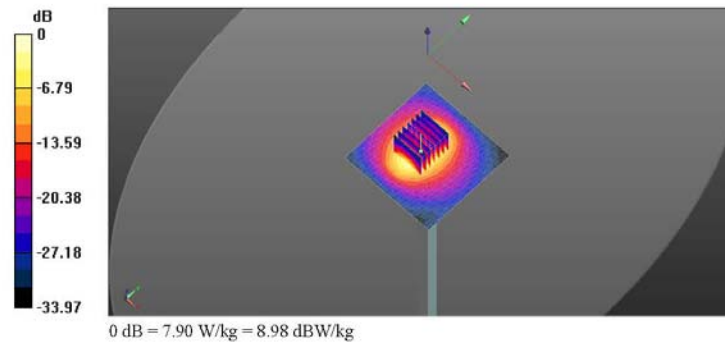
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 49.868 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 5.35 W/kg; SAR(10 g) = 2.53 W/kg

Maximum value of SAR (measured) = 8.11 W/kg



5200 Mhz Verification Test

Date: 2013-08-15

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5200MHz Verification.da53:0](#)

Input Power : 100 mW

Ambient Temp : 22.1 °C Tissue Temp : 21.5 °C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106

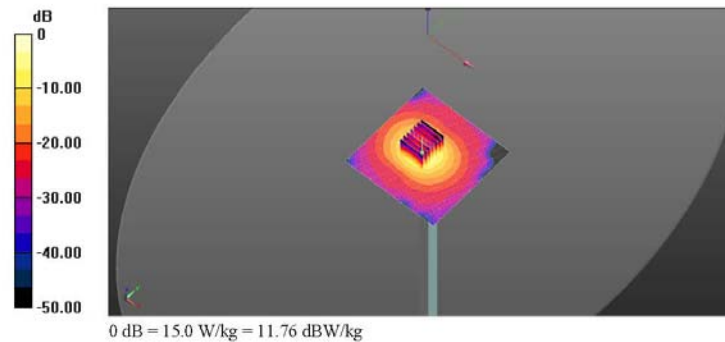
Communication System: UID 0, CW; Frequency: 5200 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.19 \text{ S/m}$; $\epsilon_r = 47.385$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.26, 4.26, 4.26); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

5200MHz Verification/5200MHz Verification/Area Scan (91x91x1): Interpolated grid: $dx=1.000 \text{ mm}$,
 $dy=1.000 \text{ mm}$
Maximum value of SAR (interpolated) = 15.0 W/kg

5200MHz Verification/5200MHz Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid:
 $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
Reference Value = 45.926 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 29.8 W/kg
SAR(1 g) = 7.84 W/kg; SAR(10 g) = 2.22 W/kg
Maximum value of SAR (measured) = 16.3 W/kg



5300 MHz Verification Test

Date: 2013-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5300MHz Verification.da53:0](#)

Input Power : 100 mW

Ambient Temp : 22.6 °C Tissue Temp : 21.1 °C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106

Communication System: UID 0, CW (0); Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 5.41 \text{ S/m}$; $\epsilon_r = 47.697$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.18, 4.18, 4.18); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

5300MHz Verification/5300MHz Verification/Area Scan (91x91x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 15.4 W/kg

5300MHz Verification/5300MHz Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid:

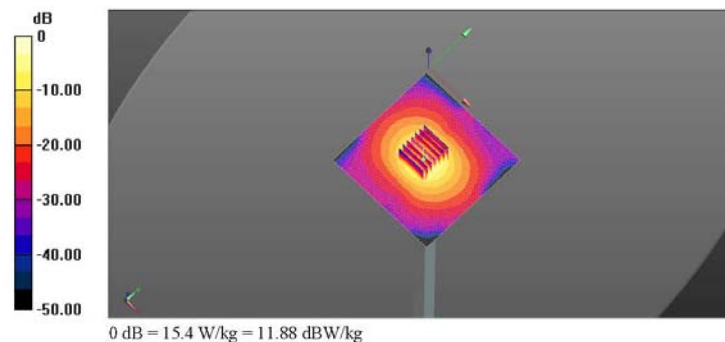
 $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 60.488 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 30.9 W/kg

SAR(1 g) = 7.93 W/kg; SAR(10 g) = 2.21 W/kg

Maximum value of SAR (measured) = 16.6 W/kg



5300 MHz Verification Test

Date: 2013-08-15

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5300MHz Verification.da53.0](#)

Ambient Temp : 22.1 °C Tissue Temp : 21.5 °C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106

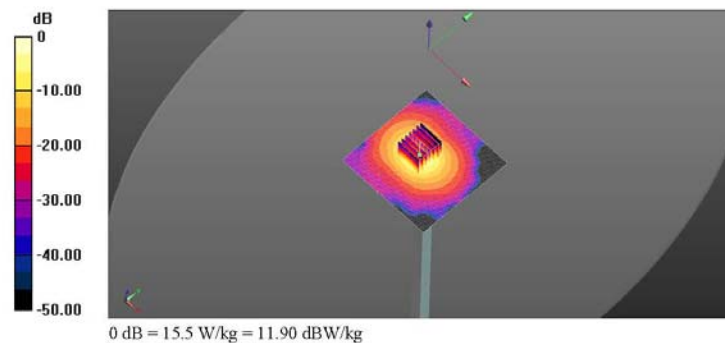
Communication System: UID 0, CW (0); Frequency: 5300 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5300$ MHz; $\sigma = 5.312$ S/m; $\epsilon_r = 47.213$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.18, 4.18, 4.18); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

5300MHz Verification/5300MHz Verification/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.5 W/kg

5300MHz Verification/5300MHz Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 44.980 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 31.7 W/kg
SAR(1 g) = 7.99 W/kg; SAR(10 g) = 2.24 W/kg
Maximum value of SAR (measured) = 16.8 W/kg



5500 Mhz Verification Test

Date: 2013-06-28

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5500MHz Verification.da53:0](#)

Input Power : 100 mW

Ambient Temp : 23.2 °C Tissue Temp : 22.5 °C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106

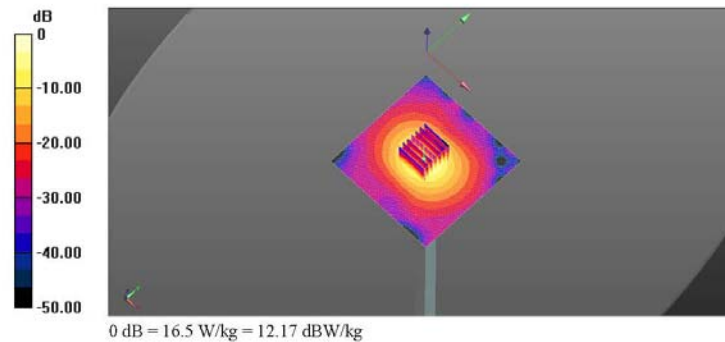
Communication System: UID 0, CW (0); Frequency: 5500 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5500 \text{ MHz}$; $\sigma = 5.803 \text{ S/m}$; $\epsilon_r = 48.615$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(3.89, 3.89, 3.89); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

5500MHz Verification/5500MHz Verification/Area Scan (91x91x1): Interpolated grid: $dx=1.000 \text{ mm}$,
 $dy=1.000 \text{ mm}$
Maximum value of SAR (interpolated) = 16.5 W/kg

5500MHz Verification/5500MHz Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid:
 $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
Reference Value = 59.232 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 33.2 W/kg
SAR(1 g) = 8.26 W/kg; SAR(10 g) = 2.32 W/kg
Maximum value of SAR (measured) = 17.6 W/kg



5500 Mhz Verification Test

Date: 2013-08-14

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5800MHz Verification.da53:0](#)

Input Power : 100 mW

Ambient Temp : 21.7 °C Tissue Temp : 21.2 °C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106

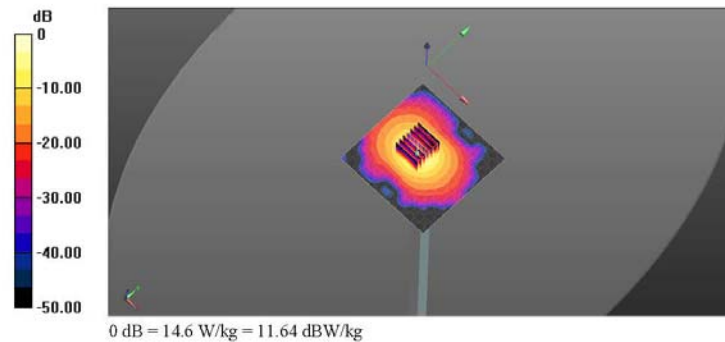
Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 5.821 \text{ S/m}$; $\epsilon_r = 48.63$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.04, 4.04, 4.04); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

5800MHz Verification/5800MHz Verification/Area Scan (91x91x1): Interpolated grid: $dx=1.000 \text{ mm}$,
 $dy=1.000 \text{ mm}$
Maximum value of SAR (interpolated) = 14.6 W/kg

5800MHz Verification/5800MHz Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid:
 $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
Reference Value = 43.333 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 31.0 W/kg
SAR(1 g) = 7.3 W/kg; SAR(10 g) = 2.04 W/kg
Maximum value of SAR (measured) = 15.6 W/kg



5600 Mhz Verification Test

Date: 2013-06-28

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5600MHz Verification.da53:0](#)

Input Power : 100 mW

Ambient Temp : 23.2 °C Tissue Temp : 22.5 °C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106

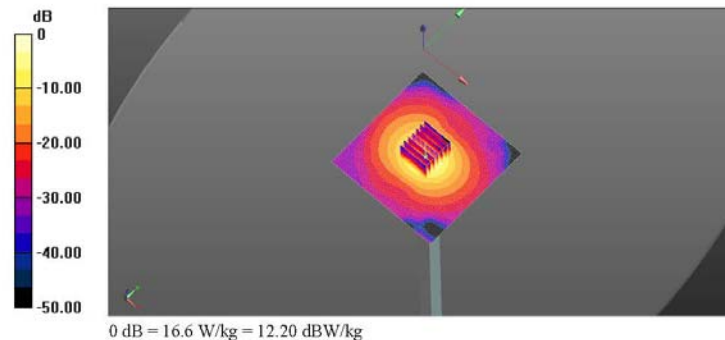
Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5600$ MHz; $\sigma = 5.88$ S/m; $\epsilon_r = 48.373$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(3.73, 3.73, 3.73); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

5600MHz Verification/5600MHz Verification/Area Scan (91x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 16.6 W/kg

5600MHz Verification/5600MHz Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm
Reference Value = 59.743 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 34.2 W/kg
SAR(1 g) = 8.28 W/kg; SAR(10 g) = 2.28 W/kg
Maximum value of SAR (measured) = 17.9 W/kg



5800 Mhz Verification Test

Date: 2013-07-02

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5800MHz Verification.da53.0](#)

Input Power : 100 mW

Ambient Temp : 23.4 °C Tissue Temp : 22.7 °C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106

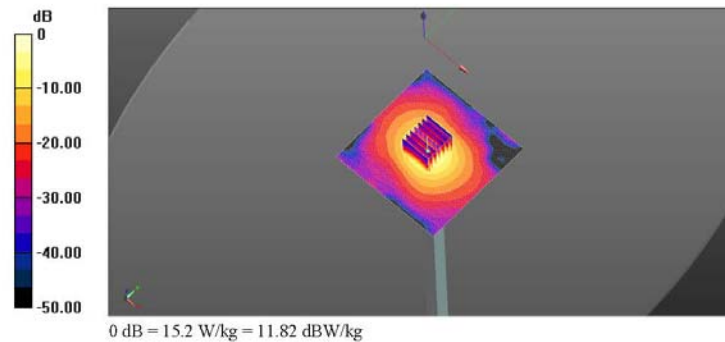
Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.205 \text{ S/m}$; $\epsilon_r = 49.182$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.04, 4.04, 4.04); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

5800MHz Verification/5800MHz Verification/Area Scan (91x91x1): Interpolated grid: $dx=1.000 \text{ mm}$,
 $dy=1.000 \text{ mm}$
Maximum value of SAR (interpolated) = 15.2 W/kg

5800MHz Verification/5800MHz Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid:
 $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
Reference Value = 55.706 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 32.8 W/kg
SAR(1 g) = 7.8 W/kg; SAR(10 g) = 2.18 W/kg
Maximum value of SAR (measured) = 16.9 W/kg



5800 Mhz Verification Test

Date: 2013-08-14

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5800MHz Verification.da53:0](#)

Input Power : 100 mW

Ambient Temp : 21.7 °C Tissue Temp : 21.2 °C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1106

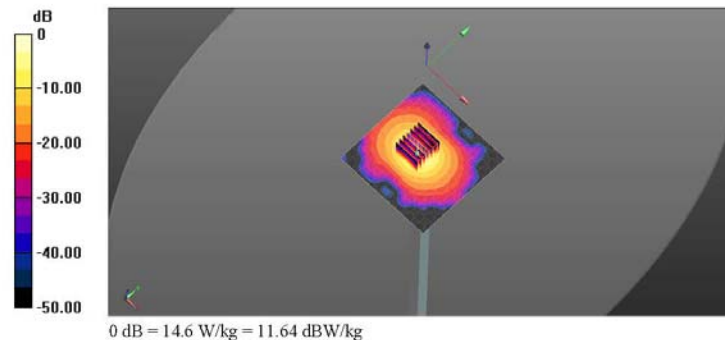
Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 5.821 \text{ S/m}$; $\epsilon_r = 48.63$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.04, 4.04, 4.04); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

5800MHz Verification/5800MHz Verification/Area Scan (91x91x1): Interpolated grid: $dx=1.000 \text{ mm}$,
 $dy=1.000 \text{ mm}$
Maximum value of SAR (interpolated) = 14.6 W/kg

5800MHz Verification/5800MHz Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid:
 $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$
Reference Value = 43.333 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 31.0 W/kg
SAR(1 g) = 7.3 W/kg; SAR(10 g) = 2.04 W/kg
Maximum value of SAR (measured) = 15.6 W/kg



WLAN 2450 Mhz Body SAR Test

Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [2.45GHz WLAN_11b_1Mbps_Rear_CH1_Main.da53.0](#)

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.947 \text{ S/m}$; $\epsilon_r = 50.996$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;

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

- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013

- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200

- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

WLAN/2.45GHz WLAN_11b_1Mbps_Rear_CH1_Main/Area Scan (161x141x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.54 W/kg

WLAN/2.45GHz WLAN_11b_1Mbps_Rear_CH1_Main/Zoom Scan (7x7x7)/Cube 0: Measurement

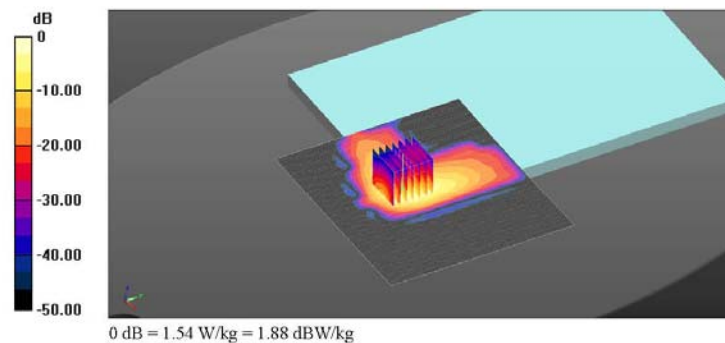
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.245 V/m; Power Drift = -0.20 dB

Peak SAR (extrapolated) = 2.62 W/kg

SAR(1 g) = 0.923 W/kg; SAR(10 g) = 0.373 W/kg

Maximum value of SAR (measured) = 1.60 W/kg



Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name : [2.45GHz WLAN_11b_1Mbps_Rear_CH6_Main.da53:0](#)

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.983 \text{ S/m}$; $\epsilon_r = 50.907$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

WLAN/2.45GHz WLAN_11b_1Mbps_Rear_CH6_Main/Area Scan (141x121x1): Interpolated grid:

$dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.73 W/kg

WLAN/2.45GHz WLAN_11b_1Mbps_Rear_CH6_Main/Zoom Scan (7x7x7)/Cube 0: Measurement

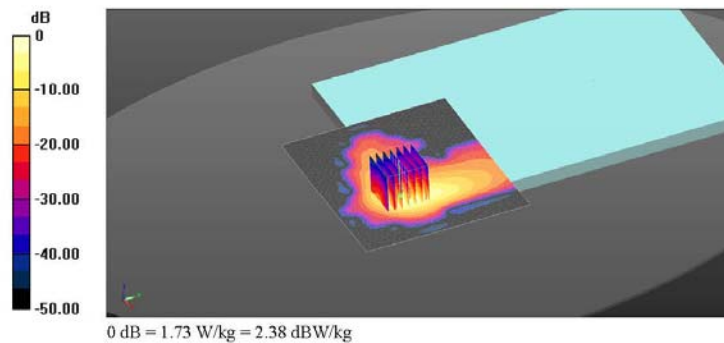
grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.137 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 2.84 W/kg

SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.414 W/kg

Maximum value of SAR (measured) = 1.83 W/kg



Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [2.45GHz WLAN_11b_1Mbps_Rear_CH11_Main.da53:0](#)

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 2.018 \text{ S/m}$; $\epsilon_r = 50.824$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;

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

- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013

- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200

- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

WLAN/2.45GHz WLAN_11b_1Mbps_Rear_CH11_Main/Area Scan (101x101x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.63 W/kg

WLAN/2.45GHz WLAN_11b_1Mbps_Rear_CH11_Main/Zoom Scan (7x7x7)/Cube 0: Measurement

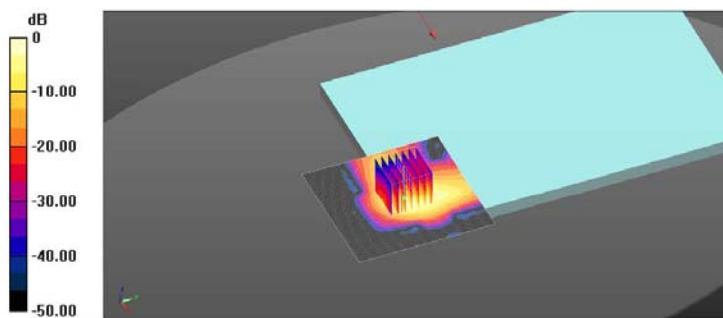
grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.035 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 2.84 W/kg

SAR(1 g) = 0.981 W/kg; SAR(10 g) = 0.387 W/kg

Maximum value of SAR (measured) = 1.76 W/kg



Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name : [2.45GHz WLAN_11b_1Mbps_Rear_CH1_AUX.da53:0](#)

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.947 \text{ S/m}$; $\epsilon_r = 50.996$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

WLAN/2.45GHz WLAN_11b_1Mbps_Rear_CH1_AUX/Area Scan (121x151x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.14 W/kg

WLAN/2.45GHz WLAN_11b_1Mbps_Rear_CH1_AUX/Zoom Scan (7x7x7)/Cube 0: Measurement

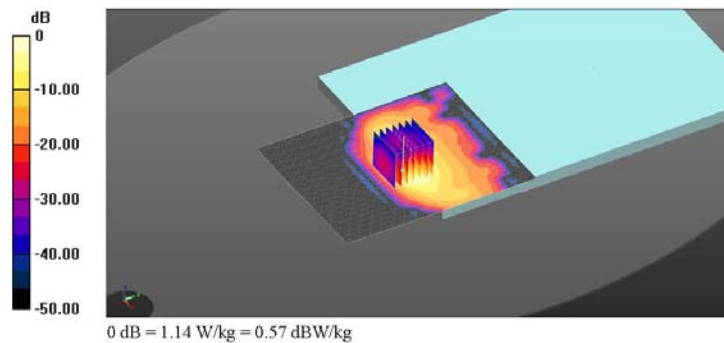
grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.087 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 2.09 W/kg

SAR(1 g) = 0.738 W/kg; SAR(10 g) = 0.268 W/kg

Maximum value of SAR (measured) = 1.38 W/kg



Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name : [2.45GHz WLAN_11b_1Mbps_Edge 1_CH6_Main.da53:0](#)

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.983 \text{ S/m}$; $\epsilon_r = 50.907$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

WLAN/2.45GHz WLAN_11b_1Mbps_Edge 1_CH6_Main/Area Scan (101x161x1): Interpolated grid:
 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.0871 W/kg

WLAN/2.45GHz WLAN_11b_1Mbps_Edge 1_CH6_Main/Zoom Scan (7x7x7)/Cube 0: Measurement

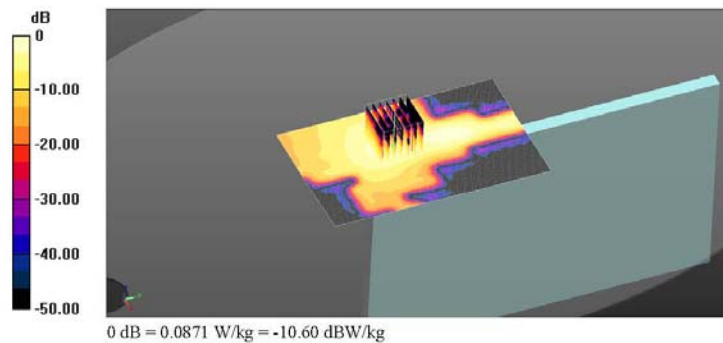
grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 4.093 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.126 W/kg

SAR(1 g) = 0.052 W/kg; SAR(10 g) = 0.023 W/kg

Maximum value of SAR (measured) = 0.0846 W/kg



Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name : [2.45GHz WLAN_11b_1Mbps_Edge 2_CH1_Main.da53:0](#)

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.947 \text{ S/m}$; $\epsilon_r = 50.996$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

WLAN/2.45GHz WLAN_11b_1Mbps_Edge 2_CH1_Main/Area Scan (101x121x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.882 W/kg

WLAN/2.45GHz WLAN_11b_1Mbps_Edge 2_CH1_Main/Zoom Scan (7x7x7)/Cube 0: Measurement

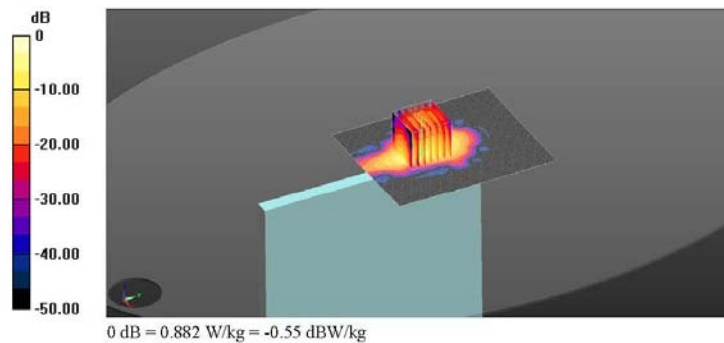
grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.878 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.472 W/kg; SAR(10 g) = 0.163 W/kg

Maximum value of SAR (measured) = 0.888 W/kg



Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [2.45GHz WLAN_11b_1Mbps_Edge 2_CH6_Main.da53:0](#)

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.983 \text{ S/m}$; $\epsilon_r = 50.907$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

WLAN/2.45GHz WLAN_11b_1Mbps_Edge 2_CH6_Main/Area Scan (101x121x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.59 W/kg

WLAN/2.45GHz WLAN_11b_1Mbps_Edge 2_CH6_Main/Zoom Scan (7x7x7)/Cube 0: Measurement

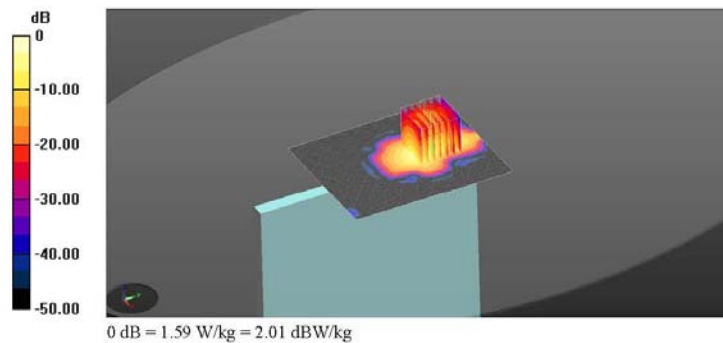
grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.279 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 2.15 W/kg

SAR(1 g) = 0.806 W/kg; SAR(10 g) = 0.278 W/kg

Maximum value of SAR (measured) = 1.52 W/kg



Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name : [2.45GHz WLAN_11b_1Mbps_Edge 2_CH11_Main.da53:0](#)

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 2.018 \text{ S/m}$; $\epsilon_r = 50.824$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

WLAN/2.45GHz WLAN_11b_1Mbps_Edge 2_CH11_Main/Area Scan (101x121x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.15 W/kg

WLAN/2.45GHz WLAN_11b_1Mbps_Edge 2_CH11_Main/Zoom Scan (7x7x7)/Cube 0:

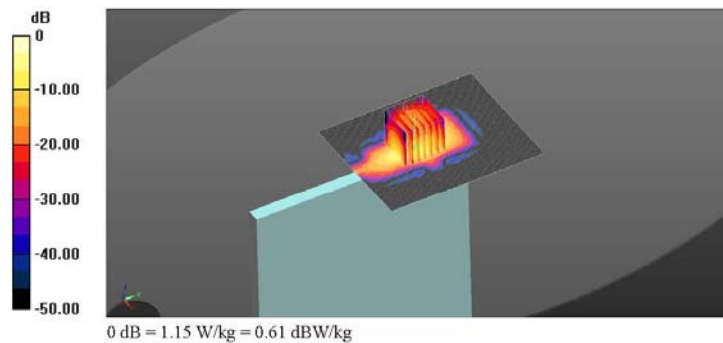
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.207 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.73 W/kg

SAR(1 g) = 0.635 W/kg; SAR(10 g) = 0.214 W/kg

Maximum value of SAR (measured) = 1.21 W/kg



Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [2.45GHz WLAN_11b_1Mbps_Edge 2_CH1_AUX.da53:0](#)

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.947 \text{ S/m}$; $\epsilon_r = 50.996$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

WLAN/2.45GHz WLAN_11b_1Mbps_Edge 2_CH1_AUX/Area Scan (101x121x1): Interpolated grid:
 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.641 W/kg

WLAN/2.45GHz WLAN_11b_1Mbps_Edge 2_CH1_AUX/Zoom Scan (7x7x7)/Cube 0: Measurement
grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.332 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.404 W/kg; SAR(10 g) = 0.133 W/kg

Maximum value of SAR (measured) = 0.740 W/kg

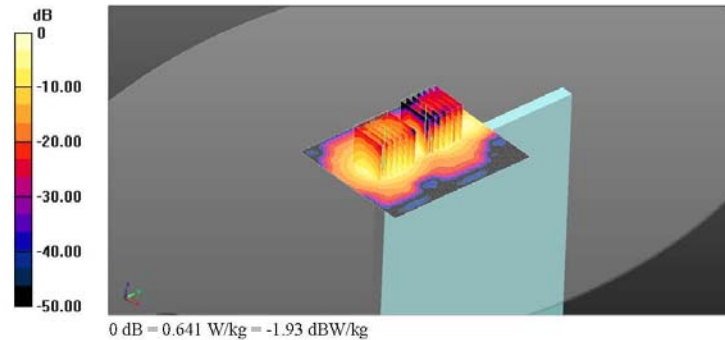
WLAN/2.45GHz WLAN_11b_1Mbps_Edge 2_CH1_AUX/Zoom Scan (7x7x7)/Cube 1: Measurement
grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.332 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.815 W/kg

SAR(1 g) = 0.391 W/kg; SAR(10 g) = 0.173 W/kg

Maximum value of SAR (measured) = 0.605 W/kg



Date: 2013-08-16

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name : [2.45GHz WLAN HT20 MCS8 Rear CH6 MIMO.da53.0](#)

Ambient Temp : 21.8 °C Tissue Temp : 21.1 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.94 \text{ S/m}$; $\epsilon_r = 51.893$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/2.45GHz WLAN HT20 MCS8 Rear CH6 MIMO/Area Scan (181x91x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.787 W/kg

Body/2.45GHz WLAN HT20 MCS8 Rear CH6 MIMO/Zoom Scan (7x7x7)/Cube 0: Measurement

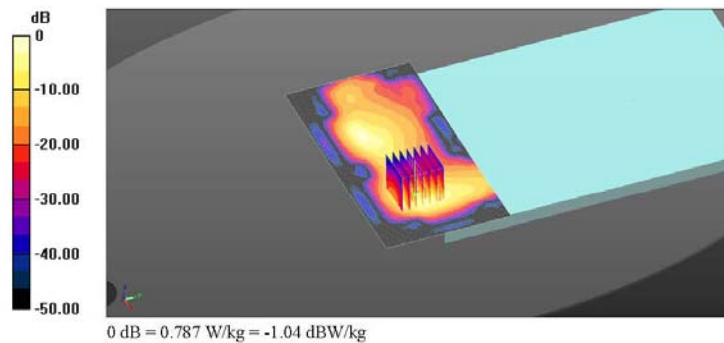
grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.517 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.448 W/kg; SAR(10 g) = 0.179 W/kg

Maximum value of SAR (measured) = 0.795 W/kg



WLAN 5200 MHz Body SAR Test

Date: 2013-08-15

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.2GHz WLAN_11a_6Mbps_Rear_CH40_Main.da53.0](#)

Ambient Temp : 22.1 °C Tissue Temp : 21.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.19$ S/m; $\epsilon_r = 47.385$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.26, 4.26, 4.26); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SnI340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.2GHz WLAN_11a_6Mbps_Rear_CH40_Main/Area Scan (101x91x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.89 W/kg

Body/5.2GHz WLAN_11a_6Mbps_Rear_CH40_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

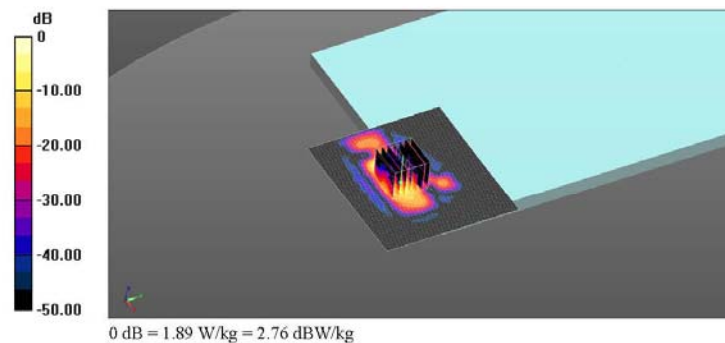
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 12.849 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 4.83 W/kg

SAR(1 g) = 0.833 W/kg; SAR(10 g) = 0.156 W/kg

Maximum value of SAR (measured) = 2.10 W/kg



Date: 2013-08-15

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5.2GHz WLAN_11a_6Mbps_Rear_CH44_Main.da53:0](#)

Ambient Temp : 22.1 °C Tissue Temp : 21.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5220 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5220 \text{ MHz}$; $\sigma = 5.222 \text{ S/m}$; $\epsilon_r = 47.352$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.26, 4.26, 4.26); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.2GHz WLAN_11a_6Mbps_Rear_CH44_Main/Area Scan (101x91x1): Interpolated grid:

$dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.73 W/kg

Body/5.2GHz WLAN_11a_6Mbps_Rear_CH44_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

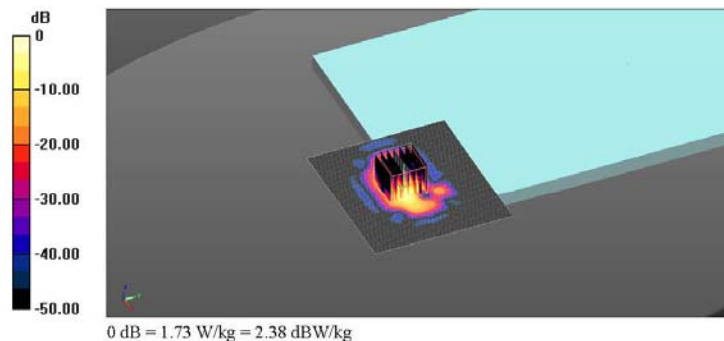
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 13.610 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 4.86 W/kg

SAR(1 g) = 0.802 W/kg; SAR(10 g) = 0.151 W/kg

Maximum value of SAR (measured) = 2.09 W/kg



Date: 2013-08-15

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5.2GHz WLAN_11a_6Mbps_Rear_CH36_AUX.da53:0](#)

Ambient Temp : 22.1 °C Tissue Temp : 21.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5180 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.159 \text{ S/m}$; $\epsilon_r = 47.452$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.26, 4.26, 4.26); Calibrated: 04.02.2013;

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

- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013

- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200

- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.2GHz WLAN_11a_6Mbps_Rear_CH36_AUX/Area Scan (101x101x1): Interpolated grid:

$dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.397 W/kg

Body/5.2GHz WLAN_11a_6Mbps_Rear_CH36_AUX/Zoom Scan (7x7x12)/Cube 0: Measurement

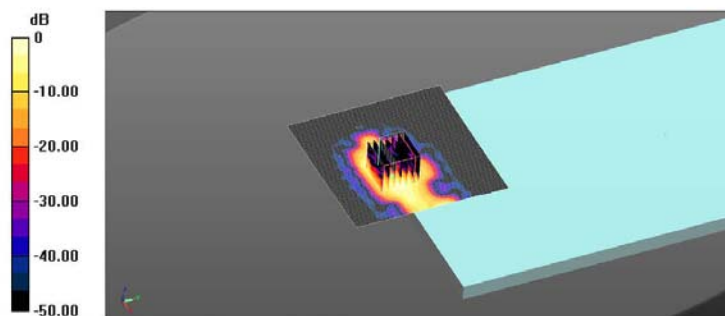
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 1.418 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.189 W/kg; SAR(10 g) = 0.050 W/kg

Maximum value of SAR (measured) = 0.548 W/kg



Date: 2013-08-15

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.2GHz WLAN_11a_6Mbps_Edge 2_CH40_Main.da53:0](#)

Ambient Temp : 22.1 °C Tissue Temp : 21.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.19 \text{ S/m}$; $\epsilon_r = 47.385$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.26, 4.26, 4.26); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.2GHz WLAN_11a_6Mbps_Edge 2_CH40_Main/Area Scan (61x101x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.588 W/kg

Body/5.2GHz WLAN_11a_6Mbps_Edge 2_CH40_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

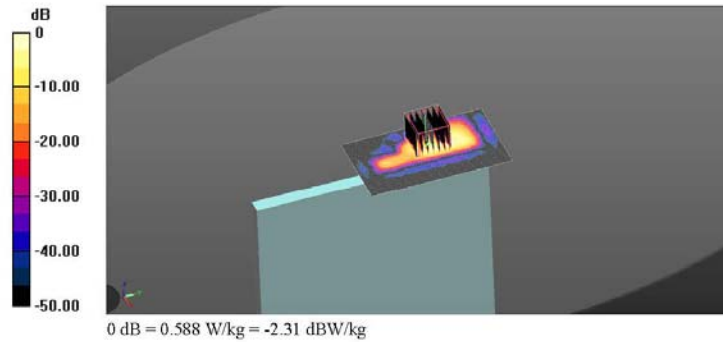
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 4.445 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.871 W/kg

SAR(1 g) = 0.209 W/kg; SAR(10 g) = 0.052 W/kg

Maximum value of SAR (measured) = 0.475 W/kg



Date: 2013-08-15

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.2GHz WLAN_11a_6Mbps_Edge 2_CH36_AUX.da53:0](#)

Ambient Temp : 22.1 °C Tissue Temp : 21.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5180 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.159 \text{ S/m}$; $\epsilon_r = 47.452$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.26, 4.26, 4.26); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.2GHz WLAN_11a_6Mbps_Edge 2_CH36_AUX/Area Scan (61x101x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.258 W/kg

Body/5.2GHz WLAN_11a_6Mbps_Edge 2_CH36_AUX/Zoom Scan (7x7x12)/Cube 0: Measurement

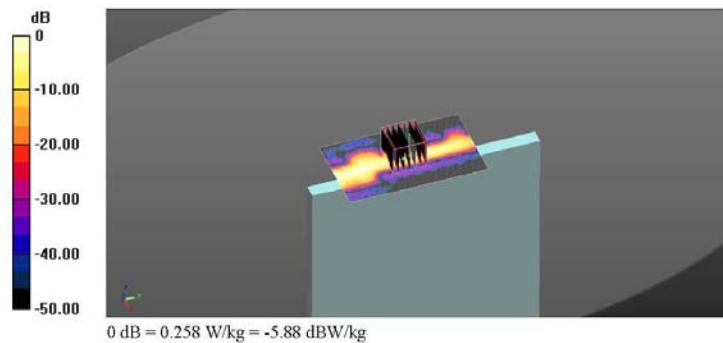
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 3.227 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.497 W/kg

SAR(1 g) = 0.112 W/kg; SAR(10 g) = 0.023 W/kg

Maximum value of SAR (measured) = 0.287 W/kg



WLAN 5300 Mhz Body SAR Test

Date: 2013-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.3GHz WLAN_11a_6Mbps_Rear_CH52_Main.da53:0](#)

Ambient Temp : 22.6 °C Tissue Temp : 21.1 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 5.374$ S/m; $\epsilon_r = 47.773$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.18, 4.18, 4.18); Calibrated: 04.02.2013;

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

- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013

- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200

- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.3GHz WLAN_11a_6Mbps_Rear_CH52_Main/Area Scan (111x101x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 2.03 W/kg

Body/5.3GHz WLAN_11a_6Mbps_Rear_CH52_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.090 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 5.15 W/kg

SAR(1 g) = 0.817 W/kg; SAR(10 g) = 0.154 W/kg

Maximum value of SAR (measured) = 1.95 W/kg

Body/5.3GHz WLAN_11a_6Mbps_Rear_CH52_Main/Zoom Scan (7x7x12)/Cube 1: Measurement

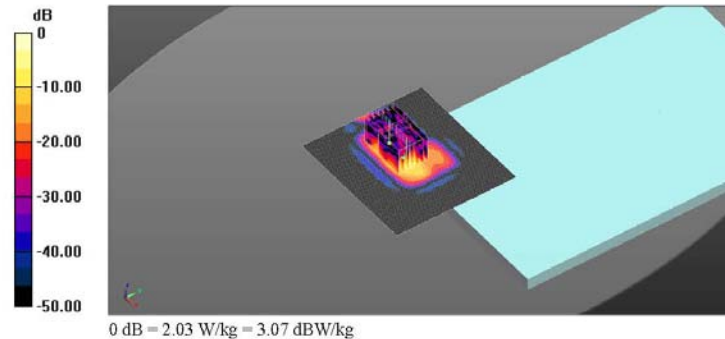
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.090 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 4.23 W/kg

SAR(1 g) = 0.577 W/kg; SAR(10 g) = 0.102 W/kg

Maximum value of SAR (measured) = 1.49 W/kg



Date: 2013-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5.3GHz WLAN_11a_6Mbps_Rear_CH64_Main.da53:0](#)

Ambient Temp : 22.6 °C Tissue Temp : 21.1 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5320$ MHz; $\sigma = 5.434$ S/m; $\epsilon_r = 47.672$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.18, 4.18, 4.18); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.3GHz WLAN_11a_6Mbps_Rear_CH64_Main/Area Scan (111x101x1): Interpolated grid:

$dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 1.34 W/kg

Body/5.3GHz WLAN_11a_6Mbps_Rear_CH64_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

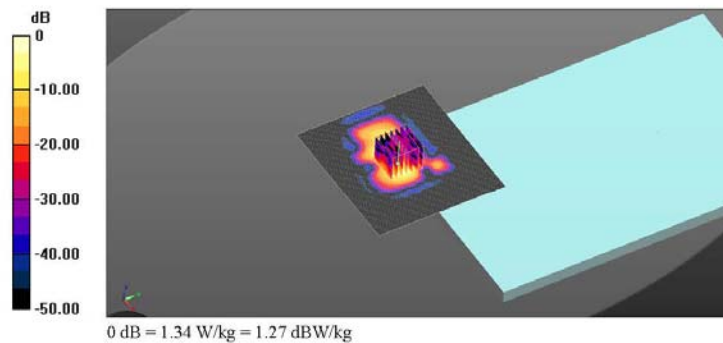
grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 3.103 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 5.53 W/kg

SAR(1 g) = 0.869 W/kg; SAR(10 g) = 0.156 W/kg

Maximum value of SAR (measured) = 2.27 W/kg



Date: 2013-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [5.3GHz WLAN_11a_6Mbps_Rear_CH64_AUX.da53:0](#)

Ambient Temp : 22.6 °C Tissue Temp : 21.1 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5320$ MHz; $\sigma = 5.434$ S/m; $\epsilon_r = 47.672$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.18, 4.18, 4.18); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.3GHz WLAN_11a_6Mbps_Rear_CH64_AUX/Area Scan (121x151x1): Interpolated grid:
dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.28 W/kg

Body/5.3GHz WLAN_11a_6Mbps_Rear_CH64_AUX/Zoom Scan (7x7x12)/Cube 0: Measurement

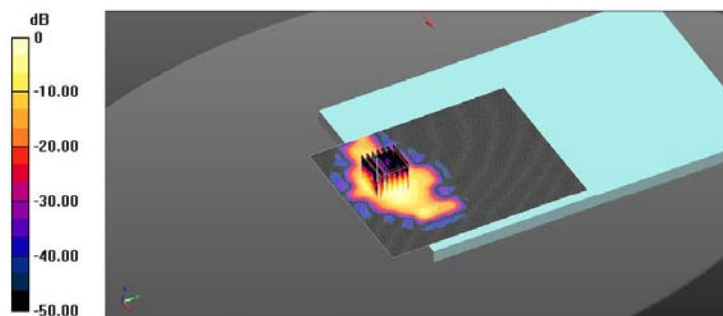
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 11.528 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.36 W/kg

SAR(1 g) = 0.702 W/kg; SAR(10 g) = 0.184 W/kg

Maximum value of SAR (measured) = 1.90 W/kg



Date: 2013-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.3GHz WLAN_11a_6Mbps_Edge 2_CH52_Main.da53:0](#)

Ambient Temp : 22.6 °C Tissue Temp : 21.1 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.374 \text{ S/m}$; $\epsilon_r = 47.773$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.18, 4.18, 4.18); Calibrated: 04.02.2013;

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

- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013

- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200

- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.3GHz WLAN_11a_6Mbps_Edge 2_CH52_Main/Area Scan (111x131x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.282 W/kg

Body/5.3GHz WLAN_11a_6Mbps_Edge 2_CH52_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

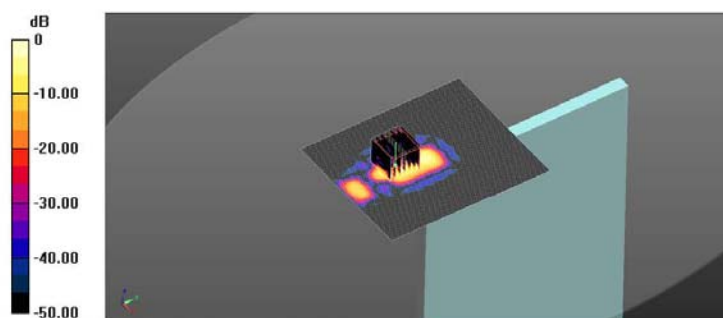
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.310 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.454 W/kg

SAR(1 g) = 0.103 W/kg; SAR(10 g) = 0.024 W/kg

Maximum value of SAR (measured) = 0.254 W/kg



0 dB = 0.282 W/kg = -5.50 dBW/kg

Date: 2013-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.3GHz WLAN_11a_6Mbps_Edge 2_CH64_AUX.da53:0](#)

Ambient Temp : 22.6 °C Tissue Temp : 21.1 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5320 \text{ MHz}$; $\sigma = 5.434 \text{ S/m}$; $\epsilon_r = 47.672$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.18, 4.18, 4.18); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.3GHz WLAN_11a_6Mbps_Edge 2_CH64_AUX/Area Scan (111x151x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.04 W/kg

Body/5.3GHz WLAN_11a_6Mbps_Edge 2_CH64_AUX/Zoom Scan (7x7x12)/Cube 0: Measurement

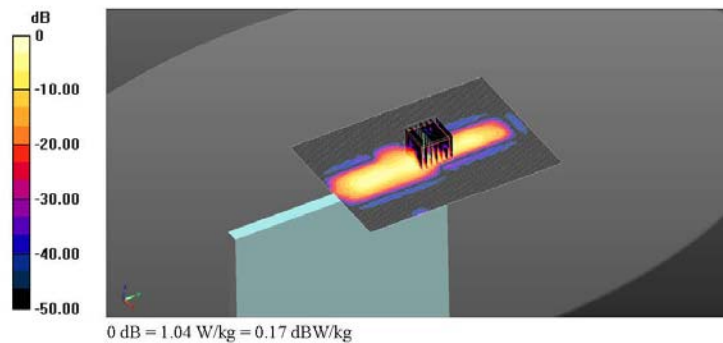
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 8.929 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 2.80 W/kg

SAR(1 g) = 0.497 W/kg; SAR(10 g) = 0.103 W/kg

Maximum value of SAR (measured) = 1.39 W/kg



Date: 2013-08-15

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.2GHz WLAN_HT20_MCS8_Rear_CH64_MIMO.da53.0](#)

Ambient Temp : 22.1 °C Tissue Temp : 21.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5320$ MHz; $\sigma = 5.345$ S/m; $\epsilon_r = 47.169$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.18, 4.18, 4.18); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.2GHz WLAN_HT20_MCS8_Rear_CH64_MIMO/Area Scan (181x91x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.286 W/kg

Body/5.2GHz WLAN_HT20_MCS8_Rear_CH64_MIMO/Zoom Scan (7x7x12)/Cube 0: Measurement

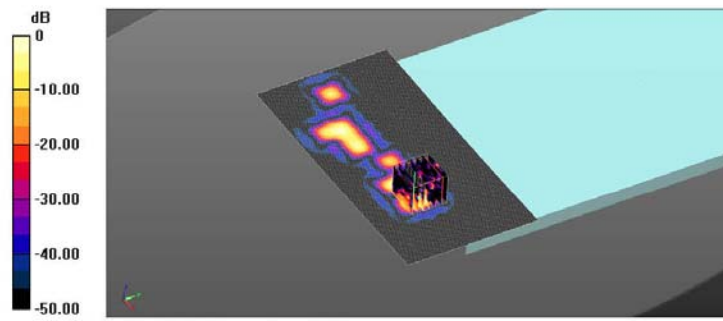
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.093 W/kg; SAR(10 g) = 0.012 W/kg

Maximum value of SAR (measured) = 0.318 W/kg



WLAN 5500 MHz Body SAR Test

Date: 2013-06-28

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.5GHz WLAN_11a_6Mbps_Rear_CH104_Main.da53.0](#)

Ambient Temp : 23.2 °C Tissue Temp : 22.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520 \text{ MHz}$; $\sigma = 5.823 \text{ S/m}$; $\epsilon_r = 48.566$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(3.89, 3.89, 3.89); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SnI 340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.5GHz WLAN_11a_6Mbps_Rear_CH104_Main/Area Scan (111x101x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 2.38 W/kg

Body/5.5GHz WLAN_11a_6Mbps_Rear_CH104_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

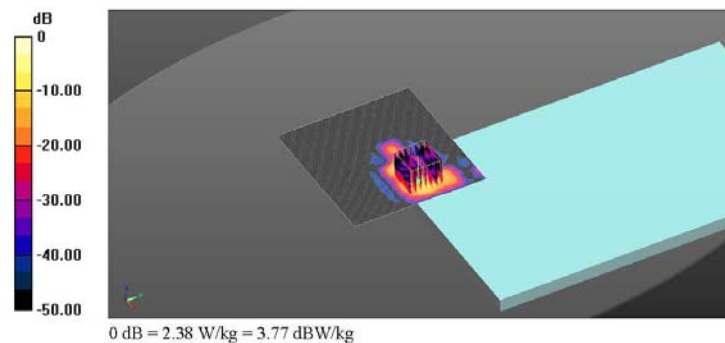
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 10.067 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 6.47 W/kg

SAR(1 g) = 0.953 W/kg; SAR(10 g) = 0.164 W/kg

Maximum value of SAR (measured) = 2.59 W/kg



Date: 2013-08-14

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.5GHz WLAN_11a_6Mbps_Rear_CH116_Main.da53:0](#)

Ambient Temp : 21.7 °C Tissue Temp : 21.2 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.56$ S/m; $\epsilon_r = 48.925$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(3.73, 3.73, 3.73); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.5GHz WLAN_11a_6Mbps_Rear_CH116_Main/Area Scan (101x91x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 2.02 W/kg

Body/5.5GHz WLAN_11a_6Mbps_Rear_CH116_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

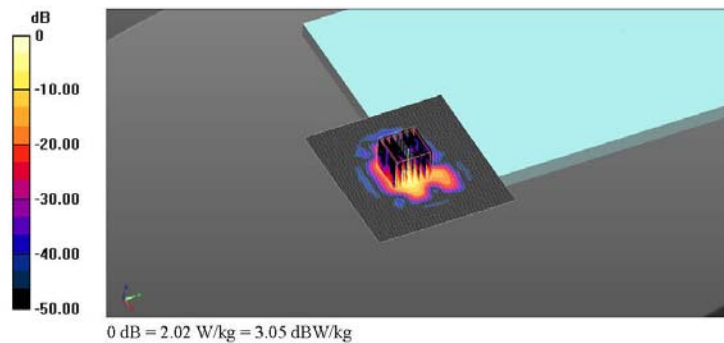
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.930 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 7.23 W/kg

SAR(1 g) = 0.970 W/kg; SAR(10 g) = 0.162 W/kg

Maximum value of SAR (measured) = 2.51 W/kg



Date: 2013-06-28

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name : 5.5GHz WLAN_11a_6Mbps_Rear_CH136_Main.da53:0

Ambient Temp : 23.2 °C Tissue Temp : 22.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5680 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5680 \text{ MHz}$; $\sigma = 5.981 \text{ S/m}$; $\epsilon_r = 48.325$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(3.73, 3.73, 3.73); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.5GHz WLAN_11a_6Mbps_Rear_CH136_Main/Area Scan (111x101x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.22 W/kg

Body/5.5GHz WLAN_11a_6Mbps_Rear_CH136_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

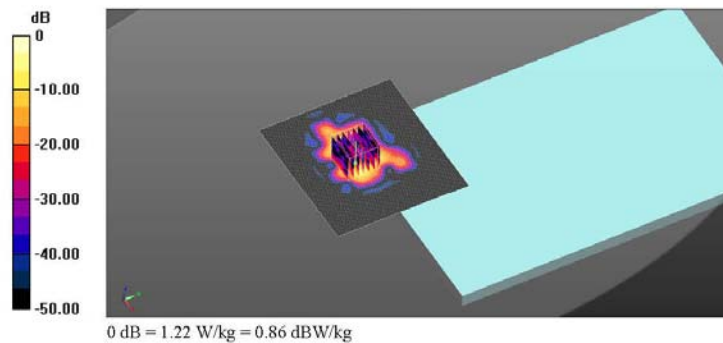
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 2.756 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 5.97 W/kg

SAR(1 g) = 0.808 W/kg; SAR(10 g) = 0.136 W/kg

Maximum value of SAR (measured) = 2.26 W/kg



Date: 2013-06-28

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.5GHz WLAN_11a_6Mbps_Rear_CH104_AUX.da53:0](#)

Ambient Temp : 23.2 °C Tissue Temp : 22.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.823$ S/m; $\epsilon_r = 48.566$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(3.89, 3.89, 3.89); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.5GHz WLAN_11a_6Mbps_Rear_CH104_Aux/Area Scan (111x101x1): Interpolated grid:

dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.483 W/kg

Body/5.5GHz WLAN_11a_6Mbps_Rear_CH104_Aux/Zoom Scan (7x7x12)/Cube 0: Measurement

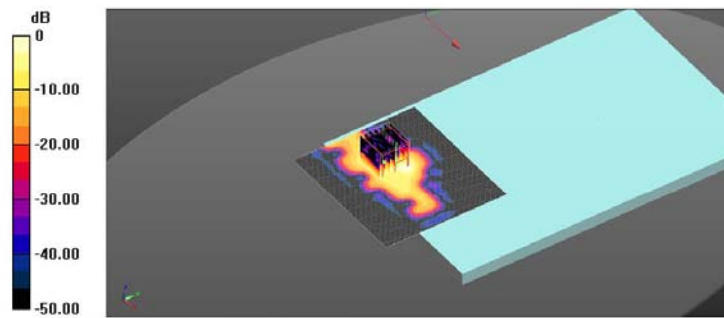
grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.422 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 0.308 W/kg; SAR(10 g) = 0.069 W/kg

Maximum value of SAR (measured) = 0.764 W/kg



0 dB = 0.483 W/kg = -3.16 dBW/kg

Date: 2013-06-28

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.5GHz WLAN_11a_6Mbps_Edge 2_CH104_Main.da53.0](#)

Ambient Temp : 23.2 °C Tissue Temp : 22.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520 \text{ MHz}$; $\sigma = 5.823 \text{ S/m}$; $\epsilon_r = 48.566$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(3.89, 3.89, 3.89); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.5GHz WLAN_11a_6Mbps_Edge 2_CH104_Main/Area Scan (111x101x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.304 W/kg

Body/5.5GHz WLAN_11a_6Mbps_Edge 2_CH104_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

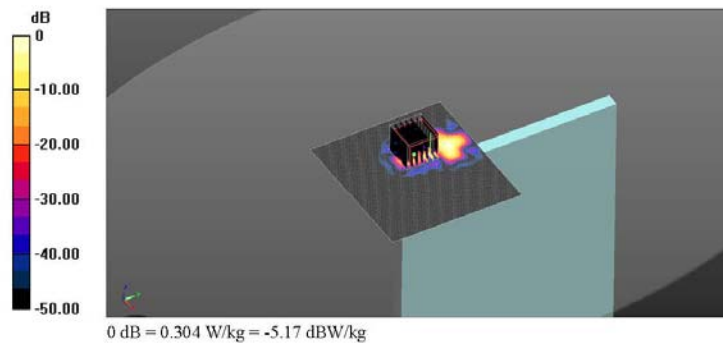
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 1.571 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.568 W/kg

SAR(1 g) = 0.097 W/kg; SAR(10 g) = 0.020 W/kg

Maximum value of SAR (measured) = 0.284 W/kg



Date: 2013-08-14

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.5GHz WLAN_11a_6Mbps_Edge 2_CH104_AUX.da53:0](#)

Ambient Temp : 21.7 °C Tissue Temp : 21.2 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520 \text{ MHz}$; $\sigma = 5.484 \text{ S/m}$; $\epsilon_r = 49.003$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(3.89, 3.89, 3.89); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.5GHz WLAN_11a_6Mbps_Edge 2_CH104_Aux/Area Scan (61x101x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.675 W/kg

Body/5.5GHz WLAN_11a_6Mbps_Edge 2_CH104_Aux/Zoom Scan (7x7x12)/Cube 0: Measurement

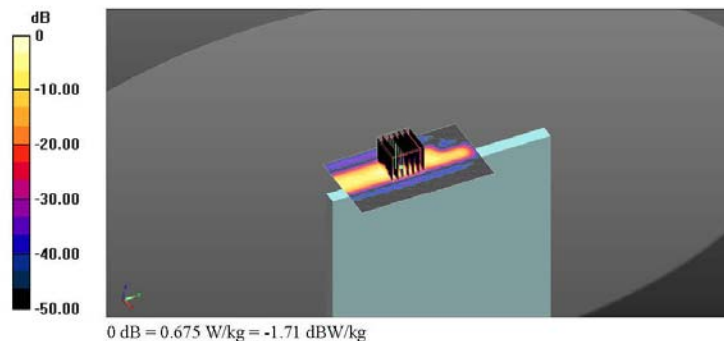
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 4.477 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 0.300 W/kg; SAR(10 g) = 0.050 W/kg

Maximum value of SAR (measured) = 0.814 W/kg



WLAN 5800 MHz Body SAR Test

Date: 2013-07-02

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: 5.8GHz WLAN_11a_6Mbps_Rear_CH153_Main.da53.0

Ambient Temp : 23.4 °C Tissue Temp : 22.7 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765 \text{ MHz}$; $\sigma = 6.156 \text{ S/m}$; $\epsilon_r = 49.257$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.04, 4.04, 4.04); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.8GHz WLAN_11a_6Mbps_Rear_CH153_Main/Area Scan (141x101x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.27 W/kg

Body/5.8GHz WLAN_11a_6Mbps_Rear_CH153_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

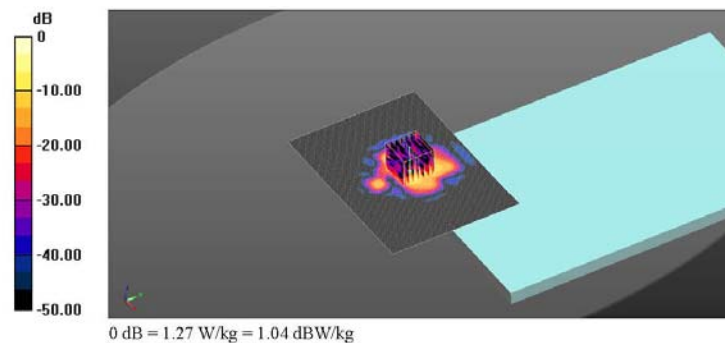
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 14.872 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.92 W/kg

SAR(1 g) = 0.686 W/kg; SAR(10 g) = 0.100 W/kg

Maximum value of SAR (measured) = 2.09 W/kg



Date: 2013-07-02

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.8GHz WLAN_11a_6Mbps_Rear_CH153_AUX.da53:0](#)

Ambient Temp : 23.4 °C Tissue Temp : 22.7 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765 \text{ MHz}$; $\sigma = 6.156 \text{ S/m}$; $\epsilon_r = 49.257$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.04, 4.04, 4.04); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.8GHz WLAN_11a_6Mbps_Rear_CH153_AUX/Area Scan (141x101x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.0682 W/kg

Body/5.8GHz WLAN_11a_6Mbps_Rear_CH153_AUX/Zoom Scan (7x7x12)/Cube 0: Measurement

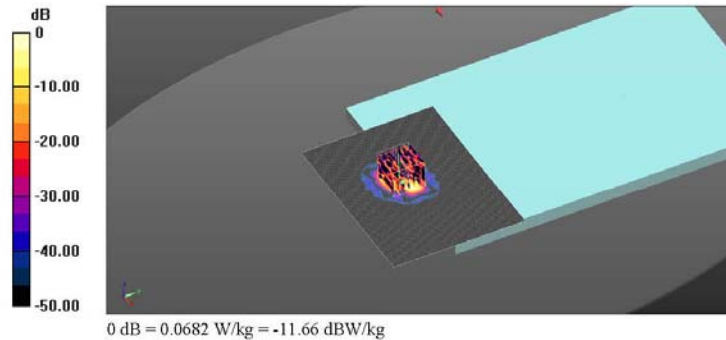
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 0.748 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.282 W/kg

SAR(1 g) = 0.033 W/kg; SAR(10 g) = 0.00586 W/kg

Maximum value of SAR (measured) = 0.0909 W/kg



Date: 2013-08-14

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.8GHz WLAN_11a_6Mbps_Edge 2_CH153_Main.da53.0](#)

Ambient Temp : 21.7 °C Tissue Temp : 21.2 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765 \text{ MHz}$; $\sigma = 5.774 \text{ S/m}$; $\epsilon_r = 48.703$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.04, 4.04, 4.04); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.8GHz WLAN_11a_6Mbps_Edge 2_CH153_Main/Area Scan (61x101x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.263 W/kg

Body/5.8GHz WLAN_11a_6Mbps_Edge 2_CH153_Main/Zoom Scan (7x7x12)/Cube 0: Measurement

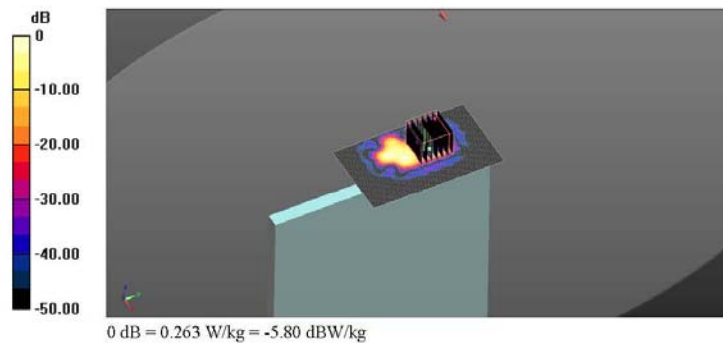
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 3.707 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.093 W/kg; SAR(10 g) = 0.014 W/kg

Maximum value of SAR (measured) = 0.327 W/kg



Date: 2013-07-02

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.8GHz WLAN_11a_6Mbps_Edge 2_CH153_AUX.da53:0](#)

Ambient Temp : 23.4 °C Tissue Temp : 22.7 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5765 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5765 \text{ MHz}$; $\sigma = 6.156 \text{ S/m}$; $\epsilon_r = 49.257$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.04, 4.04, 4.04); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.8GHz WLAN_11a_6Mbps_Edge 2_CH153_AUX/Area Scan (81x131x1): Interpolated grid:

 $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.0617 W/kg

Body/5.8GHz WLAN_11a_6Mbps_Edge 2_CH153_AUX/Zoom Scan (7x7x12)/Cube 0: Measurement

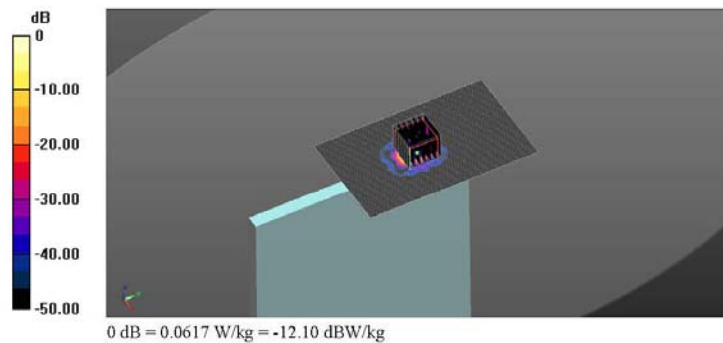
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 2.570 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.671 W/kg

SAR(1 g) = 0.026 W/kg; SAR(10 g) = 0.00275 W/kg

Maximum value of SAR (measured) = 0.284 W/kg



Repeated SAR Test

Date: 2013-07-04

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [2.45GHz WLAN_11b_1Mbps_Rear_CH6_Main_RepeatTest.da53.0](#)

Ambient Temp : 22.9 °C Tissue Temp : 21.4 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.983 \text{ S/m}$; $\epsilon_r = 50.907$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(7.25, 7.25, 7.25); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

WLAN/2.45GHz WLAN_11b_1Mbps_Rear_CH6_Main_Repeat Test/Area Scan (141x121x1):

Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.69 W/kg

WLAN/2.45GHz WLAN_11b_1Mbps_Rear_CH6_Main_Repeat Test/Zoom Scan (7x7x7)/Cube 0:

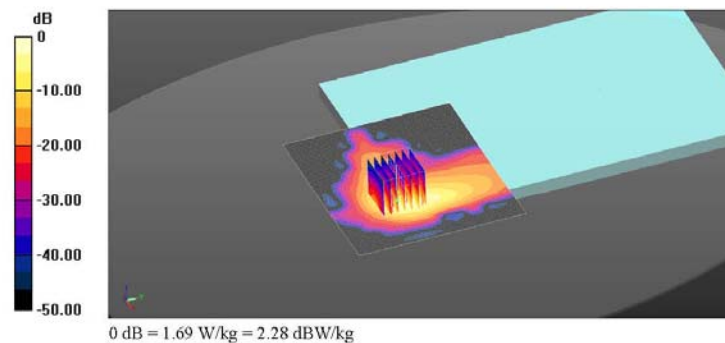
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.705 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 2.78 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.404 W/kg

Maximum value of SAR (measured) = 1.78 W/kg



Date: 2013-08-15

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.2GHz WLAN_11a_6Mbps_Rear_CH40_Main_Repeat Test.da53:0](#)

Ambient Temp : 22.1 °C Tissue Temp : 21.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.19 \text{ S/m}$; $\epsilon_r = 47.385$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.26, 4.26, 4.26); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.2GHz WLAN_11a_6Mbps_Rear_CH40_Main_Repeat Test/Area Scan (101x91x1):

Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.75 W/kg

Body/5.2GHz WLAN_11a_6Mbps_Rear_CH40_Main_Repeat Test/Zoom Scan (7x7x12)/Cube 0:

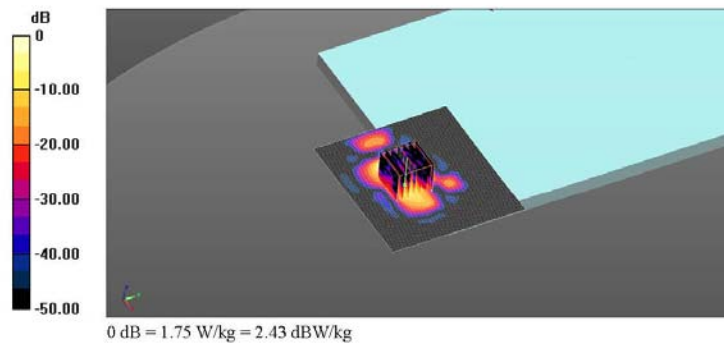
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 12.071 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 5.83 W/kg

SAR(1 g) = 0.960 W/kg; SAR(10 g) = 0.177 W/kg

Maximum value of SAR (measured) = 2.35 W/kg



Date: 2013-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.3GHz WLAN_11a_6Mbps_Rear_CH64_Main_Repeat Test.da53:0](#)

Ambient Temp : 22.6 °C Tissue Temp : 21.1 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5320$ MHz; $\sigma = 5.434$ S/m; $\epsilon_r = 47.672$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(4.18, 4.18, 4.18); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.3GHz WLAN_11a_6Mbps_Rear_CH64_Main_Repeat Test/Area Scan (111x101x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.30 W/kg

Body/5.3GHz WLAN_11a_6Mbps_Rear_CH64_Main_Repeat Test/Zoom Scan (7x7x12)/Cube 0:

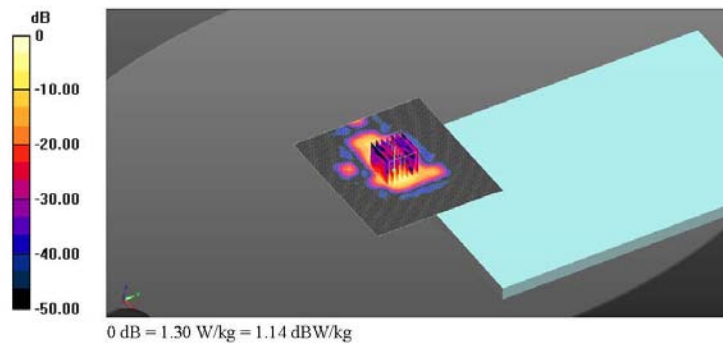
Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.148 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 5.57 W/kg

SAR(1 g) = 0.879 W/kg; SAR(10 g) = 0.157 W/kg

Maximum value of SAR (measured) = 2.34 W/kg



Date: 2013-06-28

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [5.5GHz WLAN_11a_6Mbps_Rear_CH116_Main_Repeat Test.da53:0](#)

Ambient Temp : 23.2 °C Tissue Temp : 22.5 °C

DUT: XE300TZC; Type: Tablet PC; Serial: JGPL91AD600178P

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580 \text{ MHz}$; $\sigma = 5.854 \text{ S/m}$; $\epsilon_r = 48.431$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3862; ConvF(3.73, 3.73, 3.73); Calibrated: 04.02.2013;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1340; Calibrated: 28.05.2013
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1200
- DASY52 52.8.7(1137)SEMCAD X 14.6.10(7164)

Body/5.5GHz WLAN_11a_6Mbps_Rear_CH116_Main_Repeat Test/Area Scan (111x101x1):

Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 1.69 W/kg

Body/5.5GHz WLAN_11a_6Mbps_Rear_CH116_Main_Repeat Test/Zoom Scan (7x7x12)/Cube 0:

Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 2.241 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 7.82 W/kg

SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.185 W/kg

Maximum value of SAR (measured) = 3.10 W/kg

