

SAR EVALUATION REPORT

Test Report No.	W153R-D007
Applicant	Bluebird Inc. (Dogok-dong, SEI Tower 13,14)39, Eonjuro30-gil, Gangnam-gu, Seoul, South Korea
Model Name	ET100
DUT Type	Business Tablet
Application Type	Certification
FCC ID	SS4ET100
Date of Report	Mar 30, 2015
Date of Test	Mar 03, 2015 ~ Mar 30, 2015
Test Laboratory	ONETECH 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862, Korea
Procedures	KDB 865664 IEEE 1528-2003 ANSI/IEEE C95.1, C95.3 FCC CFR §2.1093 RSS-102 Issue 4
Max SAR(1g)	1.209 W/kg
Test Opinion	Satisfied to FCC requirements
Report Author	Jungwook Kim  Mar 31, 2015
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1. DUT INFORMATION

DUT Description	Business Tablet
Model Name	ET100
Serial Number	Identical Prototype
Mode of Operation	GSM 850, GSM 1900, WCDMA Band II, WCDMA Band V, WLAN, Bluetooth
TX Frequency Range	824.2 MHz ~ 848.8 MHz (GSM 850) 1 850.2 MHz ~ 1 909.8 MHz (GSM 1900) 826.4 MHz ~ 846.6 MHz (WCDMA Band V) 1 852.4 MHz ~ 1 907.6 MHz (WCDMA Band II) 2 412 MHz ~ 2 462 MHz (802.11 b/g/n_HT20) 2 422 MHz ~ 2 452 MHz (802.11n_HT40) 5 180 MHz ~ 5 240 MHz (802.11 a/n_HT20) 5 260 MHz ~ 5 320 MHz (802.11 a/n_HT20) 5 500 MHz ~ 5 700 MHz (802.11 a/n_HT20) 5 745 MHz ~ 5 825 MHz (802.11 a/n_HT20) 5 190 MHz ~ 5 230 MHz (802.11a/n_HT40) 5 270 MHz ~ 5 310 MHz (802.11a/n_HT40) 5 510 MHz ~ 5 670 MHz (802.11a/n_HT40) 5 755 MHz ~ 5 795 MHz (802.11a/n_HT40) 5 170 MHz ~ 5 250 MHz (802.11ac_VHT80) 5 240 MHz ~ 5 290 MHz (802.11ac_VHT80) 5 490 MHz ~ 5 730 MHz (802.11ac_VHT80) 5 735 MHz ~ 5 815 MHz (802.11ac_VHT80) 2 402 MHz ~ 2 480 MHz (Bluetooth)
Maximum Average Conducted Power	GSM 850 : 33.49 dBm (ch 128) GSM 1900 : 30.45 dBm (ch 810) WCDMA Band V : 23.28 dBm (ch 4183) WCDMA Band II : 23.20 dBm (ch 9262) 802.11b : 17.29 dBm (ch 6) 802.11a U-NII 1 : 14.42 dBm (ch48) 802.11a U-NII 2A : 15.46 dBm (ch56) 802.11a U-NII 2C : 15.43 dBm (ch124) 802.11a U-NII 3 : 15.52 dBm (ch157) Bluetooth : 5.73 dBm (ch 78)

Summery of peak SAR	GSM 850 : 0.737 W/kg GSM 1900 : 1.039 W/kg WCDMA Band II : 0.997 W/kg WCDMA Band V : 0.980 W/kg 802.11b : 0.630 W/kg 802.11a U-NII 1 : 1.142 W/kg 802.11a U-NII 2A : 1.209 W/kg 802.11a U-NII 2C : 0.386 W/kg 802.11a U-NII 3 : 0.146 W/kg
Body Worn Accessory	Barcode & IC reader
Antenna Type & Gain	WWAN Antenna Type : PIFA WLAN Antenna Type : PIFA 824 MHz : -4.6 dBi / 880 MHz : 0.6 dBi 894 MHz : 1.1 dBi / 960 MHz : -3.4 dBi 1 710 MHz : -2.9 dBi / 1 850 MHz : 1.3 dBi / 1 880 MHz : 1.4 dBi 2 400 MHz : 1.3 dBi / 2 480 MHz : 2.6 dBi 5 200 MHz : 1.7 dBi / 5 800 MHz : 3.6 dBi
Antenna Operation	2 Antenna Transmit Together
USED AC/DC ADAPTER	DC 12V, 3.5 A

2. INTRODUCTION

The FCC and Industry Canada have adopted the guidelines for evaluating the environmental effects of radio frequency (RF) radiation in ET Docket 93-62 on Aug. 6, 1996 and Health Canada Safety Code 6 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices.

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz and Health Canada RF Exposure Guidelines Safety Code 6. The measurement procedure described in IEEE/ANSI C95.3-2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave is used for guidance in measuring the Specific Absorption Rate (SAR) due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the International Committee for Non-Ionizing Radiation Protection (ICNIRP) in Biological Effects and "Exposure Criteria for Radiofrequency Electromagnetic Fields," Report No. Vol 74. 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.

2.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ).

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

SAR is expressed in units of watts per kilogram (W/kg). SAR can be related to the electric field at a point by

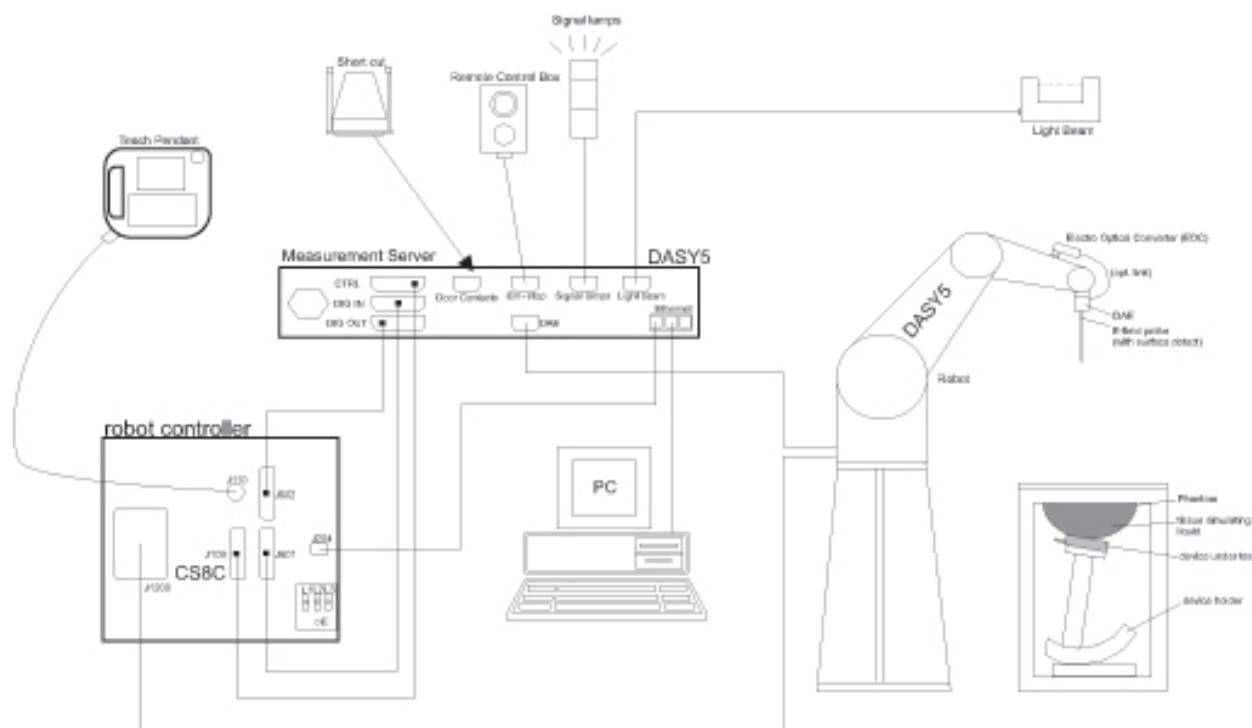
$$SAR = \frac{\sigma |E|^2}{\rho}$$

where:

- σ = conductivity of the tissue (S/m)
- ρ = mass density of the tissue (kg/m³)
- E = rms electric field strength (V/m)

3. SAR MEASUREMENT SETUP

- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- 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.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted 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.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.



3.1 Dasy 5 system

DASY52 SAR	
	DASY52 SAR is a cost-effective package for demonstration of compliance of mobile phones with specific absorption rate (SAR) limits. The fastest and most accurate scanner on the market, it is fully compatible with all worldwide standards for transmitters operating at the ear or near the body (<200 mm from the skin).
Components (typical configuration)	<ul style="list-style-type: none">1 TX90XL Stäubli Robot and Controller CS8c incl. Cabinet1 EOCx Electro Optical Converter (mounted on robot arm)1 Robot Stand for TX90XL1 Robot Arm Extension and Adaptors1 Robot Remote Control1 LB5 Light Beam Switch for Probe Tooling (incl. LB Adaptor)1 Light Beam Mounting Plate1 DASY5 Measurement Server1 PC Intel Core 2 Dual / 3.16 GHz (or higher) incl. Color-Monitor 23" - 4 GB RAM, 220 GB HD (or larger) / Win71 SAM Twin Phantom V5.0 incl. Support DASY51 MD4HHTV5 Mounting Device for Hand-Held Transmitters1 DAEx Data Acquisition Electronics1 ES3DVx SAR Probe (incl. ConvF for HSL at 900 and 1750 MHz)

3.2 E-Field Probe (EX3DV4)

EX3DV4 Smallest Isotropic E-Field Probe for Dosimetric Measurements (Preliminary Specifications)	
	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

3.3 E-Field Probe(ES3DV3)

ES3DV3 Isotropic E-Field Probe for Dosimetric Measurements	
	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	10 MHz to 4 GHz; Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Directivity	± 0.2 dB in TSL (rotation around probe axis) ± 0.3 dB in TSL (rotation normal to probe axis)
Dynamic Range	5 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 4 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones
Compatibility	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

3.4 ELI Phantom

ELI	
	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.
Material	Vinylester, glass fiber reinforced (VE-GF)
Liquid Compatibility	Compatible with all SPEAG tissue simulating liquids (incl. DGBE type)
Shell Thickness	2.0 ± 0.2 mm (bottom plate)
Dimensions	Major axis: 600 mm Minor axis: 400 mm
Filling Volume	approx. 30 liters
Wooden Support	SPEAG standard phantom table

3.5 Mounting Device



Mounting Device for Laptops

MD4LAPV5 - Mounting Device for Laptops and other Body-Worn Transmitters

In combination with the Twin SAM V5.0/V5.0c or ELI Phantoms, the Mounting Device (Body-Worn) enables testing of transmitter devices according to IEC 62209-2 specifications. The device holder can be locked for positioning at flat phantom section.

Material: Polyoxyethylene (POM), PET-G, Foam

4. MEASUREMENT UNCERTAINTY

Uncertainty of SAR equipment for measurement Body 0.3 GHz to 3 GHz

No.	Error Description	Uncertainty Value (1 g) (%)	Uncertainty Value (10 g) (%)	Probe Dist.	Div.	C_t (1 g)	C_t (10 g)	$U_t(y)$ (1 g)	$U_t(y)$ (10 g)	V_t or V_{eff}
1	$U_{(PR_z)}$ Probe Calibration	6.30	6.30	N	1.00	1.00	1.00	6.30	6.30	∞
2	$U_{(PR_r)}$ Isotropy	1.87	1.87	R	$\sqrt{3}$	1.00	1.00	1.08	1.08	∞
3	$U_{(L)}$ Linearity	0.60	0.60	R	$\sqrt{3}$	1.00	1.00	0.35	0.35	∞
4	$U_{(PR_{int})}$ Probe modulation response	2.40	2.40	R	$\sqrt{3}$	1.00	1.00	1.39	1.39	∞
6	$U_{(DL)}$ Detection Limits	1.00	1.00	R	$\sqrt{3}$	1.00	1.00	0.58	0.58	∞
5	$U_{(BE)}$ Boundary effect	1.00	1.00	R	$\sqrt{3}$	1.00	1.00	0.58	0.58	∞
7	$U_{(RE)}$ Readout Electronics	0.30	0.30	N	1.00	1.00	1.00	0.30	0.30	∞
8	$U_{(T_{int})}$ Response Time	0.80	0.80	R	$\sqrt{3}$	1.00	1.00	0.46	0.46	∞
9	$U_{(T_{int})}$ Integration Time	2.60	2.60	R	$\sqrt{3}$	1.00	1.00	1.50	1.50	∞
10	$U_{(A_{av})}$ RF ambient conditions-noise	3.00	3.00	R	$\sqrt{3}$	1.00	1.00	1.73	1.73	∞
11	$U_{(A_{av})}$ RF ambient conditions-reflections	3.00	3.00	R	$\sqrt{3}$	1.00	1.00	1.73	1.73	∞
12	$U_{(PR_{IT})}$ Probe positioner mech. Restrictions	0.40	0.40	R	$\sqrt{3}$	1.00	1.00	0.23	0.23	∞
13	$U_{(PR_{IT})}$ Probe positioning with respect to phantom	2.90	2.90	R	$\sqrt{3}$	1.00	1.00	1.67	1.67	∞
14	$U_{(PP_{int})}$ Post-processing(for max. SAR evaluation)	2.00	2.00	R	$\sqrt{3}$	1.00	1.00	1.15	1.15	∞
15	$U_{(DU)}$ Device Holder Uncertainty	3.60	3.60	N	1.00	1.00	1.00	3.60	3.60	5.00
16	$U_{(PO_{ext})}$ Test sample positioning	8.32	6.37	N	1.00	1.00	1.00	8.32	6.37	9.00
17	$U_{(PS)}$ Power scaling	0.00	0.00	R	$\sqrt{3}$	1.00	1.00	0.00	0.00	∞
18	$U_{(DP)}$ Drift of output power(measured SAR drift)	5.00	5.00	R	$\sqrt{3}$	1.00	1.00	2.89	2.89	∞
19	$U_{(PU)}$ Phantom Uncertainty	6.10	6.10	R	$\sqrt{3}$	1.00	1.00	3.52	3.52	∞
20	$U_{(CS_{avg})}$ Algorithm for correcting SAR for deviations in permittivity and	1.90	1.90	N	1.00	1.00	0.84	1.90	1.60	∞
21	$U_{(LC_{meas})}$ Liquid Conductivity(meas.)	1.53	1.53	N	1.00	0.78	0.71	1.19	1.09	5.00
22	$U_{(LP_{meas})}$ Liquid Permittivity(meas.)	3.07	3.07	N	1.00	0.23	0.26	0.71	0.80	5.00
23	$U_{(LC_{temp})}$ Liquid conductivity(temperature uncertain	4.16	4.16	R	$\sqrt{3}$	0.78	0.71	1.87	1.71	∞
24	$U_{(LP_{temp})}$ Liquid permittivity(temperature uncertain	0.84	0.84	R	$\sqrt{3}$	0.23	0.26	0.11	0.13	∞
$U_{(sar)}$ Combined standard uncertainty (%)								12.97	11.74	50
Extended uncertainty U (%)								25.94	23.48	

Uncertainty of SAR equipment for measurement Body 3 GHz to 6 GHz

No.		Error Description	Uncertainty Value (1 g) (%)	Uncertainty Value (10 g) (%)	Probe Dist.	Div.	C_t (1 g)	C_t (10 g)	$U_t(y)$ (1 g)	$U_t(y)$ (10 g)	V_t or V_{eff}
1	$U_{(PR_e)}$	Probe Calibration	6.30	6.30	N	1.00	1.00	1.00	6.30	6.30	∞
2	$U_{(PR_f)}$	Isotropy	1.87	1.87	R	$\sqrt{3}$	1.00	1.00	1.08	1.08	∞
3	$U_{(L)}$	Linearity	0.60	0.60	R	$\sqrt{3}$	1.00	1.00	0.35	0.35	∞
4	$U_{(PR_{int})}$	Probe modulation response	2.40	2.40	R	$\sqrt{3}$	1.00	1.00	1.39	1.39	∞
6	$U_{(DL)}$	Detection Limits	1.00	1.00	R	$\sqrt{3}$	1.00	1.00	0.58	0.58	∞
5	$U_{(BE)}$	Boundary effect	2.00	2.00	R	$\sqrt{3}$	1.00	1.00	1.15	1.15	∞
7	$U_{(RE)}$	Readout Electronics	0.30	0.30	N	1.00	1.00	1.00	0.30	0.30	∞
8	$U_{(T_{rt})}$	Response Time	0.80	0.80	R	$\sqrt{3}$	1.00	1.00	0.46	0.46	∞
9	$U_{(T_{ir})}$	Integration Time	2.60	2.60	R	$\sqrt{3}$	1.00	1.00	1.50	1.50	∞
10	$U_{(A_{iso})}$	RF ambient conditions—noise	3.00	3.00	R	$\sqrt{3}$	1.00	1.00	1.73	1.73	∞
11	$U_{(A_{ref})}$	RF ambient conditions—reflections	3.00	3.00	R	$\sqrt{3}$	1.00	1.00	1.73	1.73	∞
12	$U_{(PR_{mech})}$	Probe positioner mech. Restrictions	0.80	0.80	R	$\sqrt{3}$	1.00	1.00	0.46	0.46	∞
13	$U_{(PR_{ph})}$	Probe positioning with respect to phantom	6.70	6.70	R	$\sqrt{3}$	1.00	1.00	3.87	3.87	∞
14	$U_{(PP_{int})}$	Post-processing(for max. SAR evaluation)	4.00	4.00	R	$\sqrt{3}$	1.00	1.00	2.31	2.31	∞
15	$U_{(DU)}$	Device Holder Uncertainty	3.60	3.60	N	1.00	1.00	1.00	3.60	3.60	5.00
16	$U_{(PO_{ext})}$	Test sample positioning	7.76	6.03	N	1.00	1.00	1.00	7.76	6.03	9.00
17	$U_{(PS)}$	Power scaling	0.00	0.00	R	$\sqrt{3}$	1.00	1.00	0.00	0.00	∞
18	$U_{(PO)}$	Drift of output power(measured SAR drift)	5.00	5.00	R	$\sqrt{3}$	1.00	1.00	2.89	2.89	∞
19	$U_{(PU)}$	Phantom Uncertainty	6.60	6.60	R	$\sqrt{3}$	1.00	1.00	3.81	3.81	∞
20	$U_{(CS_{avg})}$	Algorithm for correcting SAR for deviations in permittivity and	1.90	1.90	N	1.00	1.00	0.84	1.90	1.60	∞
21	$U_{(LC_{me})}$	Liquid Conductivity (meas.)	1.50	1.50	N	1.00	0.78	0.71	1.17	1.07	5.00
22	$U_{(LP_{me})}$	Liquid Permittivity (meas.)	2.23	2.23	N	1.00	0.23	0.26	0.51	0.58	5.00
23	$U_{(LC_{tu})}$	Liquid conductivity(temperature uncertain)	2.12	2.12	R	$\sqrt{3}$	0.78	0.71	0.95	0.87	∞
24	$U_{(LP_{tu})}$	Liquid permittivity(temperature uncertain)	0.40	0.40	R	$\sqrt{3}$	0.23	0.26	0.05	0.06	∞
$U_{(sar)}$ Combined standard uncertainty (%)									13.26	12.27	71
Extended uncertainty U(%)									26.52	24.54	

5. ANSI/IEEE C95.1-2005 RF EXPOSURE LIMIT

In order for users to be aware of the body-worn operating requirements for meeting RF exposure compliance, operating instructions and cautions statements are included in the user's manual.

5.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

5.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Human Exposure Limits

	UNCONTROLLED ENVIRONMENT General Population (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT Professional Population (W/kg) or (mW/g)
SPATIAL PEAK SAR ¹ Brain	1.60	8.00
SPATIAL AVERAGE SAR ² Whole Body	0.08	0.40
SPATIAL PEAK SAR ³ Hands, Feet, Ankles, Wrists	4.00	20.00

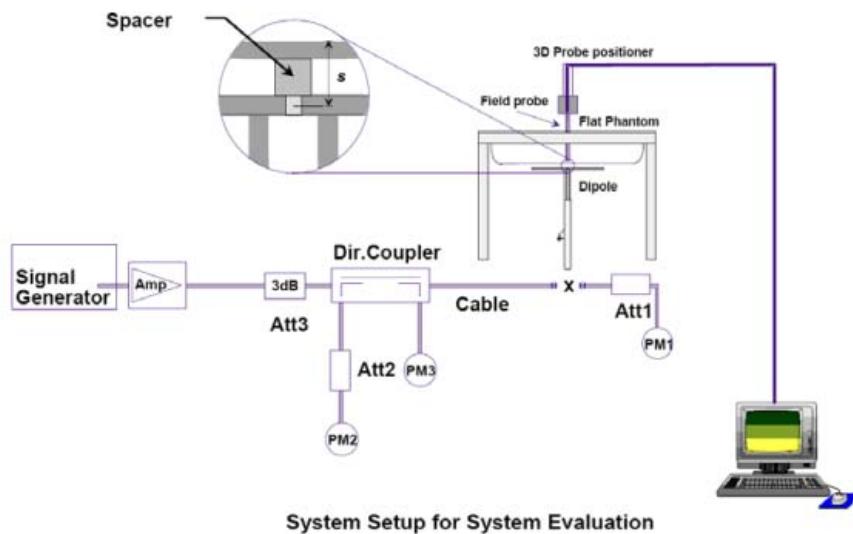
¹ The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

² The Spatial Average value of the SAR averaged over the whole body.

³ The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

6. SYSTEM AND LIQUID VERIFICATION

6.1 System Verification setup



System Setup for System Evaluation

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

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

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

The output power on dipole port must be calibrated to 30 dBm (1000 mW) before dipole is connected.

Numerical reference SAR values (W/kg) for reference dipole and flat phantom

1	2	3	4	5	6
Frequency MHz	Phantom shell thickness mm	1 g SAR W/kg	10 g SAR W/kg	Local SAR at surface (above feedpoint) W/kg	Local SAR at surface ($y = 2$ cm offset from feedpoint) W/kg
300	6,3	3,02	2,04	4,40	2,10
300	2,0	2,85	1,94	4,14	2,00
450	6,3	4,92	3,28	7,20	3,20
450	2,0	4,58	3,06	6,75	2,98
750	2,0	8,49	5,55	12,6	4,59
835	2,0	9,56	6,22	14,1	4,90
900	2,0	10,9	6,99	16,4	5,40
1 450	2,0	29,0	16,0	50,2	6,50
1 800	2,0	38,4	20,1	69,5	6,80
1 900	2,0	39,7	20,5	72,1	6,80
1 950	2,0	40,5	20,9	72,7	6,80
2 000	2,0	41,1	21,1	74,6	6,80
2 450	2,0	52,4	24,0	104	7,70
2 585	2,0	55,9	24,4	119	7,90
2 600	2,0	56,3	24,6	113	8,29
3 000	2,0	69,8	25,7	140	9,50
3 500	2,0	67,1	25,0	169	12,1
3 700	2,0	67,4	24,2	178	12,7
5 000	2,0	77,9	22,1	305	15,1
5 200	2,0	76,5	21,6	310	15,9
5 500	2,0	89,3	23,4	349	18,1
5 800	2,0	78,0	21,9	341	20,3

6.2 Liquid Validation

The dielectric parameters were checked prior to assessment using the DAK dielectric probe kit. The dielectric parameters measured are reported in each correspondent section.

6.3 Recommended Tissue Dielectric Parameters

The head and body tissue dielectric parameters recommended by KDB865664 have been incorporated in the following table.

Target Frequency (MHz)	Head		Body	
	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

(ϵ_r = relative permittivity, σ = conductivity and $\rho = 1000 \text{ kg/m}^3$)

6.4 Liquid Confirmation Results

6.4.1 System Verification

Frequency (MHz)	Tissue Type	Liquid Temp.(°C)	Parameter	Target Value	Measured Value	Deviation	Limit (%)	Date
2 450	Body	21.3	Permitivity	52.70	53.59	1.68%	± 5	03/27/2015
			Conductivity	1.95	1.95	-0.08%	± 5	
5 200	Body	21.7	Permitivity	49.03	48.25	-1.60%	± 5	03/28/2015
			Conductivity	5.35	5.48	2.36%	± 5	
5 300	Body	22.0	Permitivity	48.90	48.02	-1.79%	± 5	03/29/2015
			Conductivity	5.46	5.58	2.06%	± 5	
5 600	Body	21.1	Permitivity	48.48	46.63	-3.82%	± 5	03/03/2015
			Conductivity	5.79	5.97	3.17%	± 5	
		22.0	Permitivity	48.48	47.53	-1.95%	± 5	03/29/2015
			Conductivity	5.79	5.96	3.03%	± 5	
5 800	Body	20.3	Permitivity	48.20	48.45	0.52%	± 5	03/06/2015
			Conductivity	6.00	6.03	0.51%	± 5	
		22.0	Permitivity	48.20	47.17	-2.14%	± 5	03/29/2015
			Conductivity	6.00	6.21	3.55%	± 5	
835 (GSM)	Body	21.2	Permitivity	55.20	54.53	-1.21%	± 5	03/11/2015
			Conductivity	0.97	0.95	-2.27%	± 5	
		21.7	Permitivity	55.20	54.75	-0.81%	± 5	03/30/2015
			Conductivity	0.97	0.95	-2.27%	± 5	
835 (WCDMA)	Body	20.9	Permitivity	55.20	54.88	-0.58%	± 5	03/12/2015
			Conductivity	0.97	0.96	-1.01%	± 5	
		21.7	Permitivity	55.20	54.75	-0.81%	± 5	03/30/2015
			Conductivity	0.97	0.95	-2.27%	± 5	
1 950 (GSM)	Body	20.4	Permitivity	53.30	54.30	1.88%	± 5	03/14/2015
			Conductivity	1.51	1.58	4.64%	± 5	
		20.2	Permitivity	53.30	54.18	1.65%	± 5	03/26/2015
			Conductivity	1.51	1.57	4.24%	± 5	
1 950 (WCDMA)	Body	20.2	Permitivity	53.30	54.18	1.65%	± 5	03/26/2015
			Conductivity	1.51	1.57	4.24%	± 5	

6.5 System Verification Results

Freq. (MHz)	Tissue Type	Amb. Temp (°C)	Liquid Temp (°C)	Input Power (mW)	Dipole S/N	Probe S/N	Measured SAR 1g	1W Normalized SAR 1g	1W Target SAR 1g	Deviation	Date
2 450	Body	21.3	21.1	250	1094	3716	11.8	47.2	50.6	-6.72%	03/27/2015
5 200	Body	21.7	21.3	250	1094	3716	17.9	71.6	74.6	-4.02%	03/28/2015
5 300	Body	22.4	22.2	250	1094	3716	17.6	70.4	76.3	-7.73%	03/29/2015
5 600	Body	21.3	21.1	250	1094	3716	18.8	75.2	80.8	-6.93%	03/03/2015
		22.4	22.0	250	1094	3716	19.7	78.8	80.8	-2.48%	03/29/2015
5 800	Body	20.5	20.3	250	1094	3716	18.1	72.4	75.2	-3.72%	03/06/2015
		22.4	22.0	250	1094	3716	18.1	72.4	75.2	-3.72%	03/29/2015
835 (GSM)	Body	21.4	21.2	250	4d172	3171	2.36	9.4	9.58	-1.46%	03/11/2015
		21.9	21.7	250	4d172	3171	2.39	9.6	9.58	-0.21%	03/30/2015
835 (WCDMA)	Body	21.1	20.9	250	4d172	3171	2.47	9.9	9.58	3.13%	03/12/2015
		21.9	21.7	250	4d172	3171	2.39	9.6	9.58	-0.21%	03/30/2015
1 950 (GSM)	Body	20.5	20.4	250	1156	3171	9.41	37.6	39.1	-3.73%	03/14/2015
		20.5	20.2	250	1156	3171	9.42	37.7	39.1	-3.63%	03/26/2015
1 950 (WCDMA)	Body	20.5	20.2	250	1156	3171	9.42	37.7	39.1	-3.63%	03/26/2015

7. 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: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing.

For example, a 2 dB range is required in IEEE Standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan). If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly.

Step 3: Zoom Scan

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The Zoom Scan measures 5x5x7 points within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1 g and 10 g and displays these values next to the job's label.

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.

Step 5: Z-Scan

The Z Scan measures points along a vertical straight line. The line runs along the Z-axis of a one dimensional grid. In order to get a reasonable extrapolation, the extrapolated distance should not be larger than the step size in Z-direction.

* Z Scan Report on Liquid Measure the height ANNEX C. Liquid Depth photo to replace

		$\leq 3 \text{ GHz}$	$> 3 \text{ GHz}$
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		$5 \pm 1 \text{ mm}$	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location		$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
		$\leq 2 \text{ GHz}: \leq 15 \text{ mm}$ $2 - 3 \text{ GHz}: \leq 12 \text{ mm}$	$3 - 4 \text{ GHz}: \leq 12 \text{ mm}$ $4 - 6 \text{ GHz}: \leq 10 \text{ mm}$
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$		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 \leq 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: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$		$\leq 2 \text{ GHz}: \leq 8 \text{ mm}$ $2 - 3 \text{ GHz}: \leq 5 \text{ mm}^*$	$3 - 4 \text{ GHz}: \leq 5 \text{ mm}^*$ $4 - 6 \text{ GHz}: \leq 4 \text{ mm}^*$
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$	$\leq 5 \text{ mm}$	$3 - 4 \text{ GHz}: \leq 4 \text{ mm}$ $4 - 5 \text{ GHz}: \leq 3 \text{ mm}$ $5 - 6 \text{ GHz}: \leq 2 \text{ mm}$
	graded grid	$\Delta z_{\text{Zoom}}(1): \text{between } 1^\pi \text{ two points closest to phantom surface}$ $\Delta z_{\text{Zoom}}(n>1): \text{between subsequent points}$	$\leq 4 \text{ mm}$ $\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$
Minimum zoom scan volume	x, y, z	$\geq 30 \text{ mm}$	$3 - 4 \text{ GHz}: \geq 28 \text{ mm}$ $4 - 5 \text{ GHz}: \geq 25 \text{ mm}$ $5 - 6 \text{ GHz}: \geq 22 \text{ mm}$

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

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

8. TEST EQUIPMENT LIST

Manufacturer	Model	Serial No.	Cal.Due	Used
STAUBLI	RX90XL	F07/56X0A1/A/01	N/A	V
STAUBLI	CS8C Speag TX90XL	F07/56X0A1/C/01	N/A	V
SPEAG	SE UMS 011 AA	1019	N/A	V
STAUBLI	RX90BL	F01/5J92A1/A/01	N/A	
STAUBLI	CS7MBsp RX90BL	F01/5J92A1/C/01	N/A	
SPEAG	SE UMS 001 BC	1164	N/A	
STAUBLI	SP1	D 211 421 02	N/A	V
STAUBLI	Manual Control III Operator	D 221 340 01	N/A	V
Di-Soric	LB5	80	N/A	
Di-Soric	LB2	270	N/A	
SPEAG	Twin Phantom	TP-1069	N/A	
SPEAG	Twin Phantom	TP-1086	N/A	
SPEAG	Twin Phantom	TP-1112	N/A	
SPEAG	Twin Phantom	TP-1155	N/A	
SPEAG	ELI4 Phantom	S 000 T01 DA	N/A	V
SPEAG	Triple Phantom	QD 000 P51 CA	N/A	
SPEAG	Mounting Device	N/A	N/A	V
SPEAG	Mounting Device	SM LH1 001 AC	N/A	
Agilent	85033E	N/A	N/A	V
SPEAG	DAE4	444	11/11/2015	V
SPEAG	DAE3	383	12/01/2014	
SPEAG	EX3DV4	3666	11/26/2014	
SPEAG	ES3DV3	3171	07/17/2015	V
SPEAG	EX3DV4	3716	11/17/2015	V
SPEAG	D2450V2	923	11/12/2015	V
SPEAG	D5GHzV2	1094	12/15/2015	V
SPEAG	D835V2	4d172	07/08/2016	V
SPEAG	D1750V2	1122	07/08/2016	
SPEAG	D1950V3	1156	07/08/2016	V
SPEAG	DAK-3.5	1140	11/10/2015	V
HP	8665B	3744A01333	10/09/2015	V
EMPOWER	BBS3Q7ELU-2001	1009D/C0105	10/09/2015	V
VARIAN	VZC6961K11212	6673	10/09/2015	V
HP	778D	12679	10/07/2015	V
Agilent	772D	2839A01119	10/07/2015	V
Agilent	E4419B	MY41291366	10/07/2015	V
HP	437B	3125U25121	04/29/2015	V
HP	8481H	3318A18722	10/12/2015	V
HP	8481H	3318A17600	10/12/2015	V
HP	8481A	1550A14928	10/12/2015	
WAAINWRIGHT	WLJS1500-6EF	1	10/07/2015	
WAAINWRIGHT	WLJS3000-6EF	1	10/07/2015	
WAAINWRIGHT	WLJS6000-7EF	1	10/12/2015	V
Agilent	E8357A	US41070399	10/09/2015	V

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Rohde-Schwarz	FSP	100017	10/08/2015	V
LKM Electronic GmbH	DTM3000-spezial	3247	10/10/2015	V
CAS	TE-201	14011777-2	10/09/2015	V
CAS	TE-201	14011777-1	10/10/2015	
Bird	50-6A-MFN-30	14100882-1	10/12/2015	
Bird	50-6A-MFN-30	14100882-2	10/12/2015	V
ANRITSU	MT8820A	6200270787	08/20/2015	V

9. RF CONDUCTED POWER

9.1 GSM 850

Mode	Freq. (MHz)	CH	Conducted Power (dBm)		Tolerance (dBm)
			GPRS	EGPRS	
GSM 850	824.2	128	33.49	33.37	33.0 -1/+0.5
	836.6	190	33.47	33.32	33.0 -1/+0.5
	848.8	251	33.43	33.29	33.0 -1/+0.5

9.2 GSM 1900

Mode	Freq. (MHz)	CH	Conducted Power (dBm)		Tolerance (dBm)
			GPRS	EGPRS	
GSM 1900	1 850.2	512	30.32	30.22	30.0 -1/+0.5
	1 880.0	661	30.26	30.17	30.0 -1/+0.5
	1 909.8	810	30.45	30.32	30.0 -1/+0.5

9.3 WCDMA Band II

Mode	Freq. (MHz)	CH	Conducted Power (dBm)		Tolerance (dBm)
			RMC	HSPA	
WCDMA Band II	1 852.4	9262	23.20	23.15	24.0 -1/+0.5
	1 880.0	9400	23.17	23.11	24.0 -1/+0.5
	1 907.6	9538	23.05	23.02	24.0 -1/+0.5

9.4 WCDMA Band V

Mode	Freq. (MHz)	CH	Conducted Power (dBm)		Tolerance (dBm)
			RMC	HSPA	
WCDMA Band V	826.4	4132	23.16	23.12	24.0 -1/+0.5
	836.6	4183	23.28	23.19	24.0 -1/+0.5
	846.6	4233	23.22	23.03	24.0 -1/+0.5

9.5 802.11b

Ant 0

Mode	Freq. (MHz)	CH	Conducted Power (dBm)				Tolerance (dBm)	
			Data Rate (Mbps)					
			1	2	5.5	11		
802.11b	2 412	1	16.33	16.23	16.11	16.05	16.0 ± 2 (Band edge -4)	
	2 437	6	17.29	17.15	17.03	16.91		
	2 462	11	16.24	16.11	16.03	15.95		

Ant 1

Mode	Freq. (MHz)	CH	Conducted Power (dBm)				Tolerance (dBm)	
			Data Rate (Mbps)					
			1	2	5.5	11		
802.11b	2 412	1	16.31	16.22	16.16	16.08	16.0 ± 2 (Band edge -4)	
	2 437	6	17.03	16.93	16.85	16.77		
	2 462	11	16.11	16.04	15.96	15.88		

9.6 802.11g

Ant 0

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			6	9	12	18	24	36	48	54		
802.11g	2 412	1	13.67	13.62	13.57	13.49	13.42	13.38	13.33	13.27	16.0 ± 2 (Band edge -4)	
	2 437	6	17.17	17.11	17.06	17.02	16.96	16.91	16.85	16.81		
	2 462	11	12.11	12.08	12.03	11.97	11.93	11.87	11.82	11.75		

Ant 1

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			6	9	12	18	24	36	48	54		
802.11g	2 412	1	13.43	13.37	13.33	13.28	13.22	13.17	13.12	13.03	16.0 ± 2 (Band edge -4)	
	2 437	6	16.96	16.91	16.83	16.76	16.72	16.62	16.53	16.44		
	2 462	11	12.25	12.19	12.13	12.06	12.01	11.93	11.85	11.77		

9.7 802.11n HT20

Ant 0

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			6.5	13	19.5	26	39	52	58.5	65		
802.11n HT20	2 412	1	13.88	13.82	13.77	13.73	13.65	13.61	13.56	13.52	16.0 ± 2 (Band edge -4)	
	2 437	6	17.08	17.03	16.99	16.96	16.92	16.85	16.81	16.77		
	2 462	11	12.24	12.19	12.16	12.11	12.05	12.02	11.98	11.93		

Ant 1

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			6.5	13	19.5	26	39	52	58.5	65		
802.11n HT20	2 412	1	13.42	13.35	13.31	13.26	12.19	12.14	12.07	12.03	16.0 ± 2 (Band edge -4)	
	2 437	6	16.87	16.83	16.75	16.68	16.62	16.55	16.47	16.41		
	2 462	11	12.32	12.28	12.23	12.16	12.11	12.06	12.02	11.96		

9.8 802.11n HT40

Ant 0

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			13.5	27	40.5	54	81	108	121.5	135		
802.11n HT40	2 422	3	13.15	13.11	13.06	13.02	12.96	12.91	12.84	12.77	16.0 ± 2 (Band edge -4)	
	2 437	6	17.22	17.17	17.11	17.05	17.01	16.93	16.85	16.79		
	2 452	9	12.44	12.39	12.33	12.26	12.21	12.18	12.12	12.07		

Ant 1

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			13.5	27	40.5	54	81	108	121.5	135		
802.11n HT40	2 422	3	12.56	12.51	12.43	12.36	12.32	12.26	12.21	12.14	16.0 ± 2 (Band edge -4)	
	2 437	6	16.45	16.40	16.36	16.29	16.23	16.17	16.12	16.08		
	2 452	9	11.58	11.53	11.46	11.42	11.36	11.31	11.24	11.17		

9.9 802.11a

Ant 0

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			6	9	12	18	24	36	48	54		
U-NII 1	5 180	36	13.60	13.55	13.51	13.46	13.43	13.38	13.33	13.26	15.0 ± 2 (Band edge -4)	
	5 200	40	14.08	14.01	13.96	13.93	13.86	13.79	13.74	11.06		
	5 220	44	14.21	14.16	14.12	14.07	14.01	13.94	13.86	10.98		
	5 240	48	14.42	14.36	14.31	14.26	14.21	14.13	14.05	10.94		
U-NII 2A	5 260	52	15.45	15.39	15.33	15.26	15.22	15.16	15.11	15.04	15.0 ± 2 (Band edge -4)	
	5 280	56	15.46	15.41	15.36	15.31	15.24	15.18	15.12	15.04		
	5 300	60	15.29	15.23	15.14	15.06	15.02	14.96	14.93	14.85		
	5 320	64	13.41	13.33	13.27	13.21	13.13	13.11	13.02	12.96		
U-NII 2C	5 500	100	13.10	13.02	12.95	12.88	12.83	12.75	12.68	12.61	15.0 ± 2 (Band edge -4)	
	5 520	104	15.15	15.10	15.01	14.93	14.88	14.79	14.73	14.68		
	5 540	108	15.22	15.17	15.09	15.02	14.93	14.85	14.77	14.72		
	5 560	112	15.09	15.01	14.96	14.88	14.82	14.73	14.66	14.59		
	5 580	116	15.20	15.13	15.06	14.99	14.93	14.86	14.79	14.72		
	5 600	120	15.37	15.31	15.26	15.18	15.11	15.03	14.94	14.85		
	5 620	124	15.43	15.38	15.33	15.24	15.17	15.09	15.02	14.93		
	5 640	128	15.31	15.25	15.18	15.13	15.04	14.96	14.89	14.83		
	5 660	132	15.11	15.03	14.96	14.89	14.83	14.78	14.73	14.63		
	5 680	136	15.17	15.11	15.05	14.96	14.86	14.78	14.69	14.63		
U-NII 3	5 700	140	12.68	12.61	12.52	12.46	12.39	12.32	12.22	12.15	15.0 ± 2 (Band edge -4)	
	5 745	149	15.12	15.05	14.98	14.90	14.81	14.73	14.66	14.59		
	5 765	153	15.34	15.23	15.15	15.08	15.01	14.93	14.86	14.77		
	5 785	157	15.52	15.44	15.38	15.31	15.22	15.16	15.07	14.99		
	5 805	161	15.33	15.26	15.19	15.13	15.04	14.96	14.88	14.81		
	5 825	165	15.23	15.17	15.12	15.04	14.97	14.89	14.72	14.61		

Ant 1

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			6	9	12	18	24	36	48	54		
U-NII 1	5 180	36	13.43	13.38	13.33	13.26	13.21	13.14	13.07	13.01	15.0 ± 2 (Band edge -4)	
	5 200	40	13.89	13.81	13.73	13.63	13.58	13.51	13.43	13.38		
	5 220	44	14.11	14.02	13.96	13.88	13.83	13.75	13.67	13.59		
	5 240	48	14.24	14.19	14.12	14.05	13.98	13.90	13.83	13.76		
U-NII 2A	5 260	52	15.35	15.28	15.21	15.17	15.09	15.02	14.96	14.88	15.0 ± 2 (Band edge -4)	
	5 280	56	15.32	15.25	15.19	15.14	15.06	14.99	14.92	14.87		
	5 300	60	15.13	15.05	14.96	14.89	14.83	14.76	14.67	14.58		
	5 320	64	13.21	13.14	13.07	13.01	12.96	12.89	12.81	12.71		
U-NII 2C	5 500	100	13.22	13.14	13.05	12.96	12.89	12.79	12.72	12.66		
	5 520	104	15.27	15.21	15.13	15.07	15.00	14.92	14.83	14.77		
	5 540	108	15.32	15.23	15.14	15.19	15.12	15.06	15.01	14.93		
	5 560	112	15.12	15.05	14.98	14.92	14.83	14.77	14.71	14.63		
	5 580	116	15.22	15.17	15.11	15.03	14.96	14.88	14.81	14.74		
	5 600	120	15.31	15.23	15.17	15.09	15.02	14.96	14.89	14.83		
	5 620	124	15.41	15.33	15.27	15.22	15.17	15.09	15.03	14.96		
	5 640	128	15.24	15.17	15.08	15.00	14.92	14.86	14.79	14.73		
	5 660	132	15.14	15.08	15.01	14.91	14.83	14.76	14.68	14.61		
	5 680	136	15.21	15.15	15.06	14.98	14.93	14.86	14.81	14.73		
U-NII 3	5 700	140	12.98	12.91	12.83	12.77	12.71	12.62	12.56	12.49		
	5 745	149	15.22	15.17	15.09	15.02	14.93	14.86	14.77	14.71		
	5 765	153	15.28	15.21	15.16	15.08	15.01	14.88	14.84	14.77		
	5 785	157	15.38	15.33	15.27	15.19	15.12	15.04	14.96	14.88		
	5 805	161	15.14	15.07	15.01	14.96	14.88	14.79	14.71	14.63		
	5 825	165	15.21	15.17	15.09	15.03	14.96	14.88	14.79	14.73		

9.10 802.11an HT20
Ant 0

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			6.5	13	19.5	26	39	52	58.5	65		
U-NII 1	5 180	36	13.68	13.62	13.55	13.51	13.46	13.41	13.33	13.28	15.0 ± 2 (Band edge -4)	
	5 200	40	14.46	14.41	14.34	14.28	14.22	14.18	14.13	14.09		
	5 220	44	14.14	14.08	14.03	13.97	13.92	13.86	13.79	13.73		
	5 240	48	14.09	14.04	13.99	13.96	13.89	13.83	13.76	13.69		
U-NII 2A	5 260	52	15.45	15.39	15.33	15.27	15.23	15.16	15.09	15.03	15.0 ± 2 (Band edge -4)	
	5 280	56	15.42	15.35	15.30	15.24	15.17	15.12	15.06	14.99		
	5 300	60	15.35	15.28	15.23	15.16	15.11	15.04	14.97	14.93		
	5 320	64	15.39	15.33	15.27	15.22	15.16	15.10	15.04	14.98		
U-NII 2C	5 500	100	13.14	13.08	13.03	12.97	12.89	12.84	12.79	12.72	15.0 ± 2 (Band edge -4)	
	5 520	104	15.06	15.01	14.93	14.85	14.79	14.73	14.67	14.59		
	5 540	108	15.22	15.13	15.07	15.02	14.96	14.89	14.83	14.76		
	5 560	112	15.42	15.37	15.33	15.29	15.23	15.16	15.09	15.01		
	5 580	116	15.40	15.32	15.28	15.23	15.17	15.10	15.03	14.97		
	5 600	120	15.29	15.23	15.18	15.12	15.04	14.96	14.89	14.82		
	5 620	124	15.46	15.41	15.36	15.29	15.22	15.16	15.09	15.03		
	5 640	128	15.12	15.06	15.01	14.93	14.86	14.81	14.73	14.67		
	5 660	132	15.30	15.24	15.19	15.13	15.06	14.98	14.89	14.83		
	5 680	136	15.25	15.17	15.11	15.04	14.96	14.91	14.85	14.79		
U-NII 3	5 700	140	12.69	12.62	12.57	12.52	12.43	12.36	12.28	12.21	15.0 ± 2 (Band edge -4)	
	5 745	149	15.32	15.28	15.22	15.16	15.09	15.03	14.96	14.88		
	5 765	153	15.13	15.07	15.00	14.92	14.87	14.79	14.72	14.63		
	5 785	157	15.15	15.08	15.02	14.94	14.86	14.79	14.71	14.65		
	5 805	161	15.28	15.21	15.16	15.09	15.01	14.92	14.83	14.75		
U-NII 3	5 825	165	15.26	15.17	15.12	15.05	14.98	14.92	14.85	14.79	15.0 ± 2 (Band edge -4)	

Ant 1

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			6.5	13	19.5	26	39	52	58.5	65		
U-NII 1	5 180	36	13.66	13.61	13.53	13.48	13.44	13.36	13.32	13.26	15.0 ± 2 (Band edge -4)	
	5 200	40	14.25	14.19	14.12	14.08	14.01	13.94	13.88	13.83		
	5 220	44	14.12	14.06	14.00	13.93	13.88	13.83	13.76	13.71		
	5 240	48	14.13	14.07	14.02	13.96	13.89	13.81	13.75	13.69		
U-NII 2A	5 260	52	15.32	15.24	15.19	15.13	15.08	15.03	14.96	14.88	15.0 ± 2 (Band edge -4)	
	5 280	56	15.29	15.23	15.19	15.11	15.06	15.02	14.96	14.89		
	5 300	60	15.25	15.19	15.16	15.11	15.04	14.98	14.93	14.87		
	5 320	64	15.19	15.12	15.06	15.01	14.93	14.86	14.81	14.73		
U-NII 2C	5 500	100	13.24	13.18	13.13	13.07	13.02	12.96	12.88	12.82		
	5 520	104	15.12	15.07	15.01	14.93	14.87	14.83	14.76	14.71		
	5 540	108	15.23	15.17	15.11	15.06	15.01	14.94	14.89	14.83		
	5 560	112	15.35	15.31	15.24	15.17	15.11	15.06	15.02	14.96		
	5 580	116	15.32	15.28	15.21	15.16	15.11	15.07	15.02	14.97		
	5 600	120	15.24	15.18	15.11	15.04	14.96	14.88	14.82	14.73		
	5 620	124	15.39	15.33	15.27	15.23	15.16	15.11	15.04	14.98		
	5 640	128	15.08	15.06	15.01	14.93	14.87	14.79	14.72	14.65		
	5 660	132	15.34	15.29	15.21	15.14	15.08	15.02	14.96	14.89		
	5 680	136	15.17	15.11	15.05	14.98	14.90	14.83	14.78	14.69		
U-NII 3	5 700	140	12.87	12.81	12.77	12.71	12.65	12.59	12.53	12.47		
	5 745	149	15.31	15.25	15.21	15.14	15.07	15.02	14.96	14.89		
	5 765	153	15.21	15.16	15.11	15.04	14.96	14.87	14.81	14.74		
	5 785	157	15.16	15.09	15.03	14.94	14.86	14.79	14.73	14.68		
	5 805	161	15.19	15.11	15.05	14.97	14.92	14.84	14.77	14.73		
	5 825	165	15.16	15.09	15.04	14.95	14.87	14.83	14.77	14.72		

9.11 802.11an HT40
Ant 0

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			13.5	27	40.5	54	81	108	121.5	135		
U-NII 1	5 190	38	11.88	11.82	11.76	11.71	11.66	11.62	11.56	11.50	15.0 ± 2 (Band edge -4)	
	5 230	46	14.38	14.33	14.28	14.23	14.18	14.13	14.08	14.02		
U-NII 2A	5 270	54	15.38	15.34	15.29	15.22	15.17	15.13	15.09	15.03	15.0 ± 2 (Band edge -4)	
	5 310	62	13.10	13.03	12.97	12.93	12.89	12.84	12.79	12.74		
U-NII 2C	5 510	102	13.12	13.07	13.02	12.96	12.89	12.83	12.76	12.70	15.0 ± 2 (Band edge -4)	
	5 550	110	15.25	15.19	15.13	15.07	15.03	14.98	14.93	14.87		
	5 590	118	15.38	15.33	15.26	15.21	15.17	15.12	15.06	15.01		
	5 630	126	15.34	15.30	15.25	15.19	15.12	15.06	14.99	14.96		
	5 670	134	15.30	15.22	15.17	15.11	15.06	15.00	14.94	14.89		
U-NII 3	5 755	151	15.25	15.19	15.16	15.09	15.02	14.94	14.86	14.81	15.0 ± 2 (Band edge -4)	
	5 795	159	15.21	15.16	15.12	15.06	15.01	14.93	14.86	14.78		

Ant 1

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			13.5	27	40.5	54	81	108	121.5	135		
U-NII 1	5 190	38	12.12	12.07	12.02	11.96	11.91	11.85	11.79	11.73	15.0 ± 2 (Band edge -4)	
	5 230	46	14.21	14.16	14.12	14.05	14.01	13.95	13.88	13.82		
U-NII 2A	5 270	54	15.25	15.20	15.13	15.07	15.02	14.96	14.88	14.84	15.0 ± 2 (Band edge -4)	
	5 310	62	13.21	13.18	13.12	13.06	13.02	12.94	12.87	12.83		
U-NII 2C	5 510	102	13.23	13.19	13.13	13.08	13.04	12.98	12.92	12.88	15.0 ± 2 (Band edge -4)	
	5 550	110	15.21	15.16	15.09	15.04	14.97	14.91	14.83	14.75		
	5 590	118	15.32	15.27	15.21	15.13	15.08	15.02	14.95	14.89		
	5 630	126	15.30	15.23	15.18	15.12	15.07	15.03	14.96	14.87		
	5 670	134	15.25	15.17	15.11	15.03	14.96	14.91	14.83	14.77		
U-NII 3	5 755	151	15.12	15.06	14.99	14.93	14.87	14.83	14.76	14.71	15.0 ± 2 (Band edge -4)	
	5 795	159	15.13	15.07	15.02	14.95	14.89	14.83	14.77	14.72		

9.12 802.11ac VHT80
Ant 0

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			29.3	58.5	87.8	117	175.5	234	263.3	292.5		
U-NII 1	5 210	42	13.42	13.38	13.33	13.29	13.21	13.12	13.03	12.94	15.0 ± 2 (Band edge -4)	
U-NII 2A	5 290	58	13.12	13.01	12.92	12.81	12.73	12.65	12.57	12.50		
U-NII 2C	5 530	106	13.25	13.12	13.04	12.95	12.87	12.76	12.65	12.58		
	5 610	122	15.23	15.15	15.04	14.95	14.87	14.79	14.71	14.63		
	5 690	138	15.14	15.05	14.96	14.87	14.76	14.69	14.60	14.53		
U-NII 3	5 775	155	15.07	14.98	14.91	14.83	14.73	14.65	14.57	14.49		

Ant 1

Mode	Freq. (MHz)	CH	Conducted Power (dBm)								Tolerance (dBm)	
			Data Rate (Mbps)									
			29.3	58.5	87.8	117	175.5	234	263.3	292.5		
U-NII 1	5 210	42	13.21	13.12	13.04	12.96	12.86	12.78	12.69	12.61	15.0 ± 2 (Band edge -4)	
U-NII 2A	5 290	58	13.32	13.26	13.18	13.09	13.01	12.93	12.85	12.78		
U-NII 2C	5 530	106	13.43	13.37	13.29	13.21	13.13	13.05	12.96	12.87		
	5 610	122	15.11	15.03	14.95	14.87	14.79	14.71	14.63	14.58		
	5 690	138	15.10	15.02	14.95	14.84	14.78	14.69	14.61	14.55		
U-NII 3	5 775	155	15.01	14.93	14.85	14.76	14.66	14.58	14.51	14.46		

Justification for reduced test configurations for WIFI channels per KDB Publication 248227 D01v01r02 and October 2012/April 2013 FCC/TCB Meeting Notes:

- For 2.4 GHz, highest average RF output power channel for the lowest data rate for IEEE 802.11b were selected for SAR evaluation. Other IEEE 802.11 modes (including 802.11g/n) were not investigated since the average output powers over all channels and data rates were not more than 0.25 dB higher than the tested channel in the lowest data rate of IEEE 802.11b mode.
- For 5 GHz, highest average RF output power channel for the lowest data rate for IEEE 802.11a were selected for SAR evaluation. Other IEEE 802.11 modes (including 802.11n 20 MHz and 40 MHz) were not investigated since the average output powers over all channels and data rates were not more than 0.25 dB higher than the tested channel in the lowest data rate of IEEE 802.11a mode.
- When the maximum extrapolated peak SAR of the zoom scan for the maximum output channel is <1.6 W/kg and the reported 1g averaged SAR is <0.8 W/kg, SAR testing on other channels is not required. Otherwise, the other default (or corresponding required) test channels were additionally tested using the lowest data rate.
- The bolded data rate and channel above were tested for SAR.

9.13 Bluetooth®

BDR

Mode	Freq. (MHz)	CH	DH1	DH3	DH5	Tolerance (dBm)
BDR (1M)	2402	0	1.25	4.68	5.24	5.0 ± 1
	2441	39	1.67	4.98	5.68	
	2480	78	1.79	5.04	5.73	

EDR

Mode	Freq. (MHz)	CH	DH1	DH3	DH5	Tolerance (dBm)
EDR (2M)	2402	0	-1.83	1.47	2.13	2.0 ± 1
	2441	39	-1.59	1.73	2.43	
	2480	78	-1.32	1.87	2.62	
EDR (3M)	2402	0	-2.93	0.15	1.02	2.0 ± 1
	2441	39	-2.65	0.67	1.37	
	2480	78	-2.54	0.83	1.54	

LE

Mode	Freq. (MHz)	CH		Tolerance (dBm)
LE	2402	0	2.97	3.0 ± 1
	2441	39	3.27	
	2480	78	3.18	

10. SAR TEST RESULTS

< GSM 850 Body SAR >

Mode	Position	Freq. (MHz)	CH	Conducted Power (dBm)	Max Allowed Power (dBm)	Scaling Factor	Measured 1g SAR (W/kg)	Reported SAR (W/kg)
GPRS	Back	824.2	128	33.49	33.5	1.00	0.502	0.503
		836.6	190	33.47	33.5	1.01	0.649	0.653
		848.8	251	33.43	33.5	1.02	0.725	0.737
	Front	836.6	190	33.47	33.5	1.01	0.285	0.287
	Top	836.6	190	33.47	33.5	1.01	0.266	0.268
Bar Code- IC	Back	848.8	251	33.43	33.5	1.02	0.036	0.037

< GSM 1900 Body SAR >

Mode	Position	Freq. (MHz)	CH	Conducted Power (dBm)	Max Allowed Power (dBm)	Scaling Factor	Measured 1g SAR (W/kg)	Reported SAR (W/kg)
GPRS	Back	1 850.2	512	30.32	30.50	1.04	0.997	1.039
		1 880.0	661	30.26	30.50	1.06	0.974	1.015
		1 909.8	810	30.45	30.50	1.01	0.828	0.849
	Front	1 880.0	661	30.26	30.50	1.06	0.742	0.773
	Top	1 880.0	661	30.26	30.50	1.06	0.152	0.158
Repeated	Back	1 850.2	512	30.26	30.50	1.06	0.997	1.030
Bar Code-IC	Back	1 850.2	512	30.26	30.50	1.06	0.102	0.105

< WCDMA Band II Body SAR >

Mode	Position	Freq. (MHz)	CH	Conducted Power (dBm)	Max Allowed Power (dBm)	Scaling Factor	Measured 1g SAR (W/kg)	Reported SAR (W/kg)
RMC	Back	1 852.4	9262	23.20	24.50	1.35	0.659	0.889
		1 880.0	9400	23.17	24.50	1.36	0.733	0.996
		1 907.6	9538	23.05	24.50	1.40	0.620	0.866
	Front	1 880.0	9400	23.17	24.50	1.36	0.454	0.617
	Top	1 880.0	9400	23.17	24.50	1.36	0.220	0.299
Repeated	Back	1 880.0	9400	23.17	24.50	1.36	0.734	0.997
Bar Code-IC	Back	1 880.0	9400	23.17	24.50	1.36	0.149	0.202

< WCDMA Band V Body SAR >

Mode	Position	Freq. (MHz)	CH	Conducted Power (dBm)	Max Allowed Power (dBm)	Scaling Factor	Measured 1g SAR (W/kg)	Reported SAR (W/kg)
RMC	Back	826.4	4132	23.16	24.50	1.36	0.574	0.781
		836.6	4183	23.28	24.50	1.32	0.740	0.980
		846.6	4233	23.22	24.50	1.34	0.713	0.957
	Front	836.6	4183	23.28	24.50	1.32	0.490	0.657
	Top	836.6	4183	23.28	24.50	1.32	0.556	0.736
Repeated	Back	836.6	4183	23.28	24.50	1.32	0.696	0.922
Bar Code-IC	Back	836.6	4183	23.28	24.50	1.32	0.041	0.055

< 802.11b Body SAR >

Mode	Position	Freq. (MHz)	CH	Conducted Power (dBm)	Max Allowed Power (dBm)	Scaling Factor	Measured 1g SAR (W/kg)	Reported SAR (W/kg)
802.11b	Front	2 412	1	16.33	18.00	1.47	0.429	0.630
		2 437	6	17.29	18.00	1.18	0.345	0.406
		2 462	11	16.24	18.00	1.50	0.339	0.508
	Back	2 437	6	17.29	18.00	1.18	0.336	0.396
	Right	2 437	6	17.29	18.00	1.18	0.153	0.180
Bar Code-IC	Front	2 412	1	16.33	18.00	1.47	0.354	0.520
802.11n HT20 MIMO	Front	2 412	1	16.38	18.00	1.45	0.179	0.260

< 802.11a Body SAR >

Mode	Position	Freq. (MHz)	CH	Conducted Power (dBm)	Max Allowed Power (dBm)	Scaling Factor	Measured 1g SAR (W/kg)	Reported SAR (W/Kg)
U-NII 1	Back	5 180	36	13.60	17.00	2.19	0.522	1.142
		5 240	48	14.42	17.00	1.81	0.521	0.944
	Front	5 240	48	14.42	17.00	1.81	0.440	0.797
	Right	5 240	48	14.42	17.00	1.81	0.416	0.754
Repeated	Back	5 180	36	13.60	17.00	2.19	0.522	1.142
Bar Code- IC	Back	5 180	36	13.60	17.00	2.19	0.085	0.186
802.11an HT20 MIMO	Back	5 180	36	16.31	17.00	1.17	0.222	0.260
U-NII 2A	Back	5 260	52	15.45	17.00	1.43	0.679	0.970
		5 320	64	13.41	17.00	2.29	0.379	0.866
	Front	5 260	52	15.45	17.00	1.43	0.486	0.694
	Right	5 260	52	15.45	17.00	1.43	0.751	1.073
Repeated	Right	5 260	52	15.45	17.00	1.43	0.826	1.180
Bar Code- IC	Right	5 260	52	15.45	17.00	1.43	0.846	1.209
802.11an HT20 MIMO	Right	5 260	52	16.34	17.00	1.16	0.316	0.368
U-NII 2C	Front	5 520	104	15.20	17.00	1.51	0.099	0.150
		5 580	116	15.20	17.00	1.51	0.136	0.206
		5 620	124	15.43	17.00	1.44	0.095	0.136
		5 680	136	15.17	17.00	1.52	0.073	0.111
		5 580	116	15.20	17.00	1.51	0.255	0.386
	Right	5 580	116	15.20	17.00	1.51	0.238	0.360
Bar Code- IC	Back	5 580	116	15.20	17.00	1.51	0.076	0.115
802.11an HT20 MIMO	Back	5 580	116	16.29	17.00	1.18	0.028	0.033
U-NII 3	Back	5 745	149	15.12	17.00	1.54	0.074	0.114
		5 805	161	15.33	17.00	1.47	0.061	0.090
	Front	5 745	149	15.12	17.00	1.54	0.067	0.103
	Right	5 745	149	15.12	17.00	1.54	0.095	0.146
Bar Code- IC	Right	5 745	149	15.12	17.00	1.54	0.080	0.123
802.11an HT20 MIMO	Right	5 745	149	15.92	17.00	1.28	0.012	0.015

ANNEX A. SYSTEM VERIFICATION PLOTS

< 835 MHz Body / Date : Mar 11, 2015 >

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d172

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.948 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

835 MHz SPC/Area Scan (71x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 2.69 mW/g

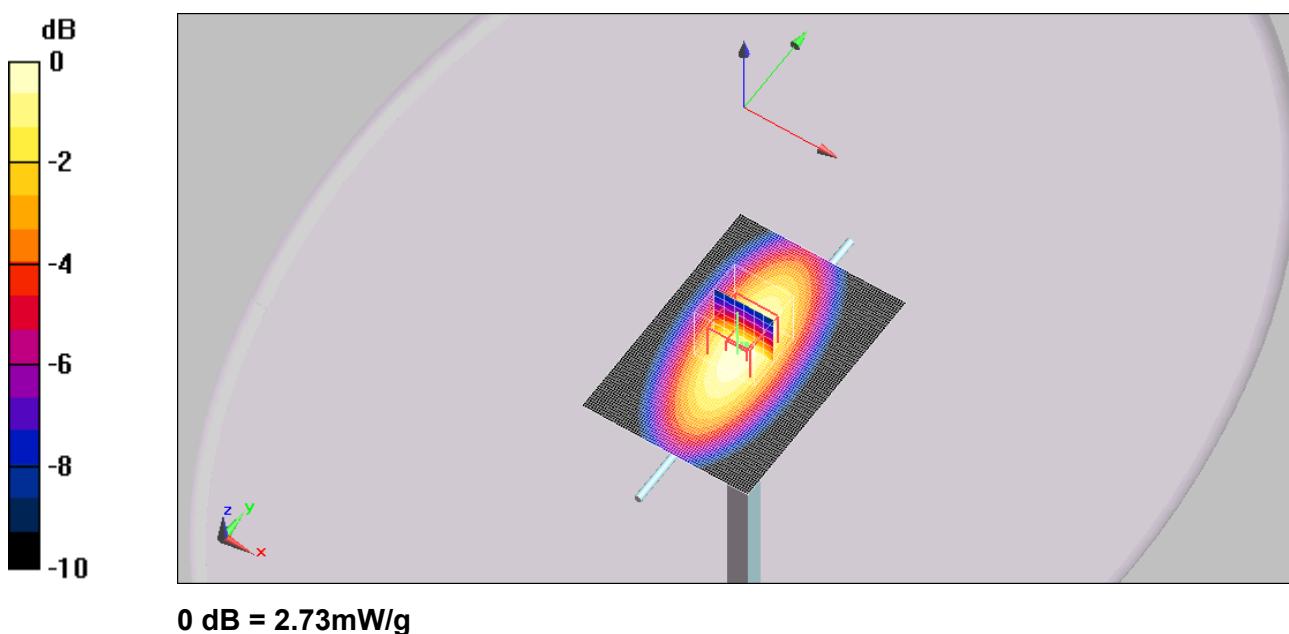
835 MHz SPC/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.6 V/m; Power Drift = 0.139 dB

Peak SAR (extrapolated) = 3.4 W/kg

SAR(1 g) = 2.36 mW/g; SAR(10 g) = 1.59 mW/g

Maximum value of SAR (measured) = 2.73 mW/g



< 835 MHz Body / Date : Mar 30, 2015 >

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d172

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.959 \text{ mho/m}$; $\epsilon_r = 54.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

835MHz SPC/Area Scan (71x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 2.72 mW/g

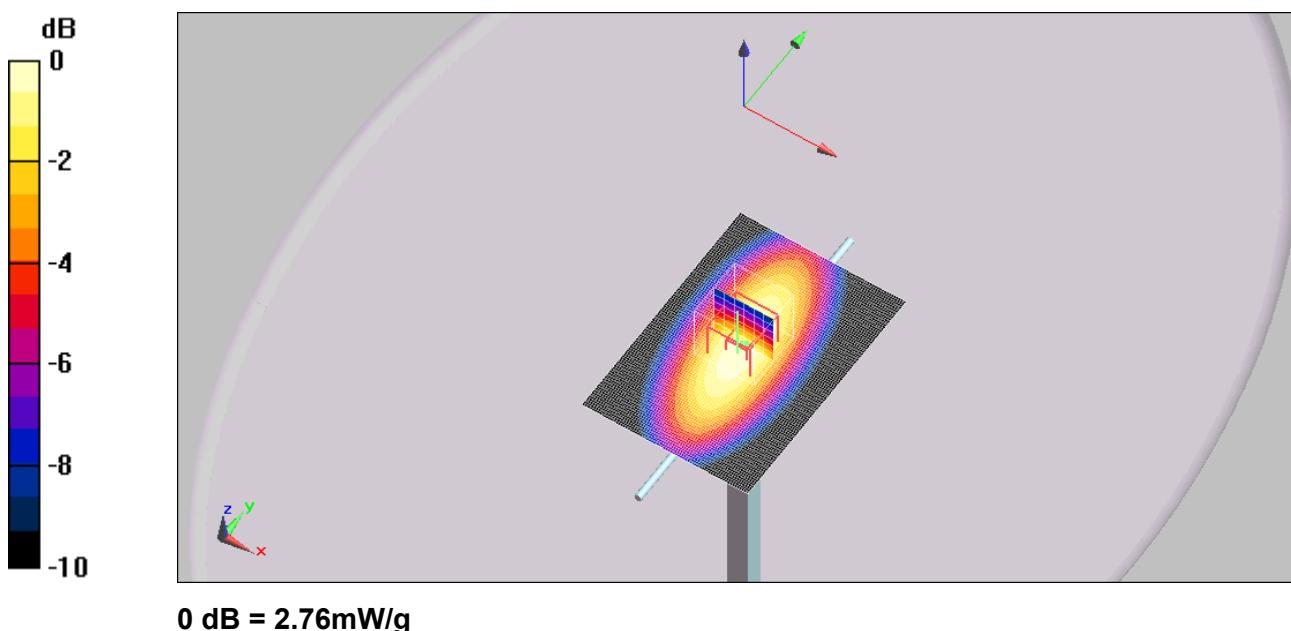
835MHz SPC/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.6 V/m; Power Drift = 0.139 dB

Peak SAR (extrapolated) = 3.44 W/kg

SAR(1 g) = 2.39 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.76 mW/g



< 835 MHz Body / Date : Mar 12, 2015 >

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d172

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 54.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

835 MHz SPC/Area Scan (71x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 2.71 mW/g

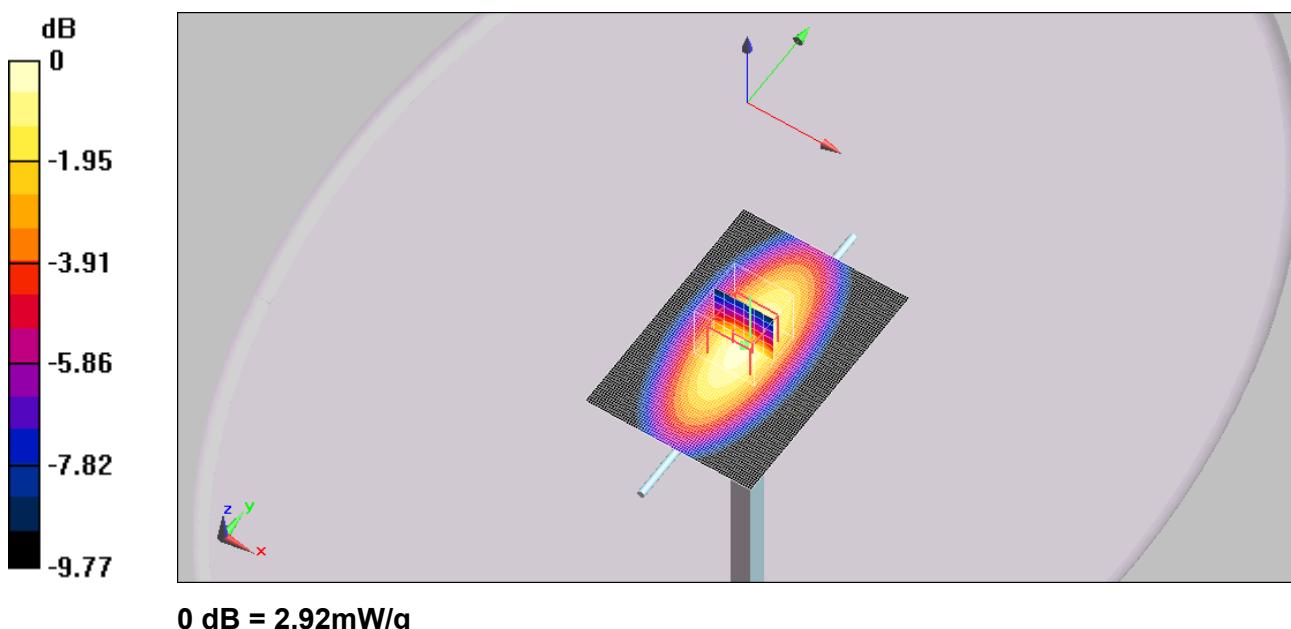
835 MHz SPC/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54 V/m; Power Drift = -0.00269 dB

Peak SAR (extrapolated) = 3.61 W/kg

SAR(1 g) = 2.47 mW/g; SAR(10 g) = 1.64 mW/g

Maximum value of SAR (measured) = 2.92 mW/g



< 835 MHz Body / Date : Mar 30, 2015 >

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d172

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.959 \text{ mho/m}$; $\epsilon_r = 54.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

835MHz SPC/Area Scan (71x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 2.72 mW/g

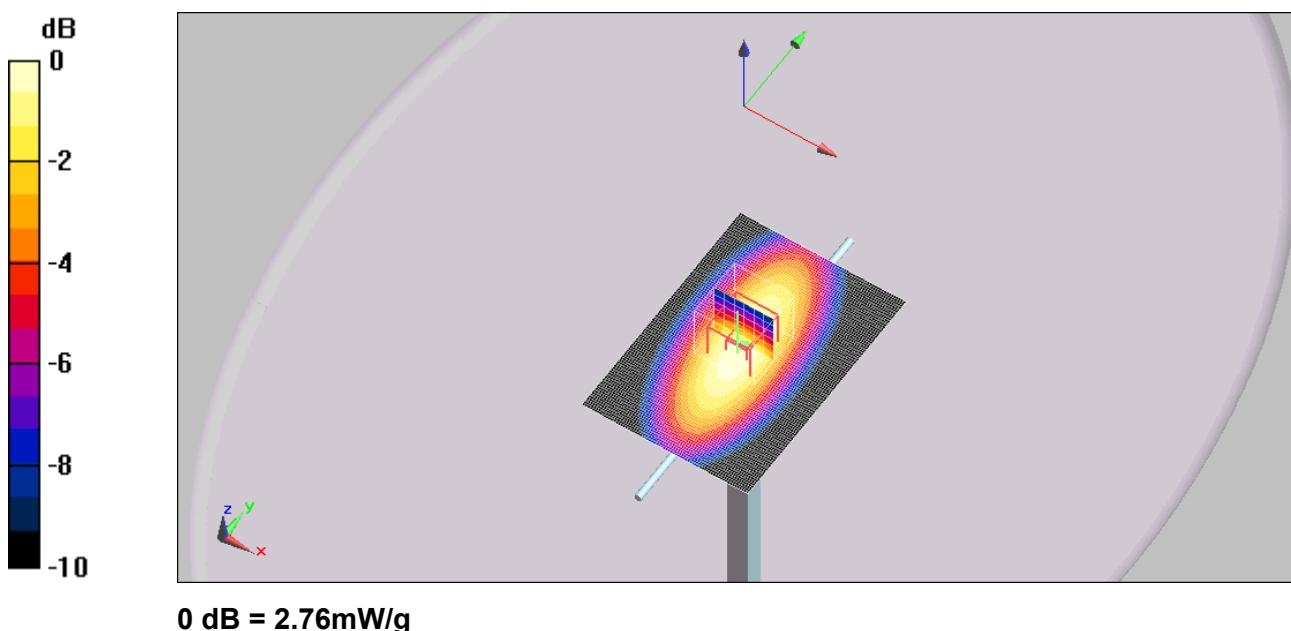
835MHz SPC/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.6 V/m; Power Drift = 0.139 dB

Peak SAR (extrapolated) = 3.44 W/kg

SAR(1 g) = 2.39 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.76 mW/g



< 1 950 MHz Body / Date : Mar 14, 2015 >

DUT: Dipole 1950 MHz; Type: D1950V3; Serial: D1950V3 - SN:1156

Communication System: CW; Frequency: 1950 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1950 \text{ MHz}$; $\sigma = 1.58 \text{ mho/m}$; $\epsilon_r = 54.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

1 950 MHz SPC/Area Scan (71x101x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR = 12.7 mW/g

1 950 MHz SPC/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 90.6 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 9.72 mW/g; SAR(10 g) = 5.11 mW/g

Maximum value of SAR (measured) = 12.3 mW/g



< 1 950 MHz Body / Date : Mar 26, 2015 >

DUT: Dipole 1950 MHz; Type: D1950V3; Serial: D1950V3 - SN:1156

Communication System: CW; Frequency: 1950 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1950 \text{ MHz}$; $\sigma = 1.57 \text{ mho/m}$; $\epsilon_r = 54.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

1 950MHz SPC/Area Scan (71x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 12.2 mW/g

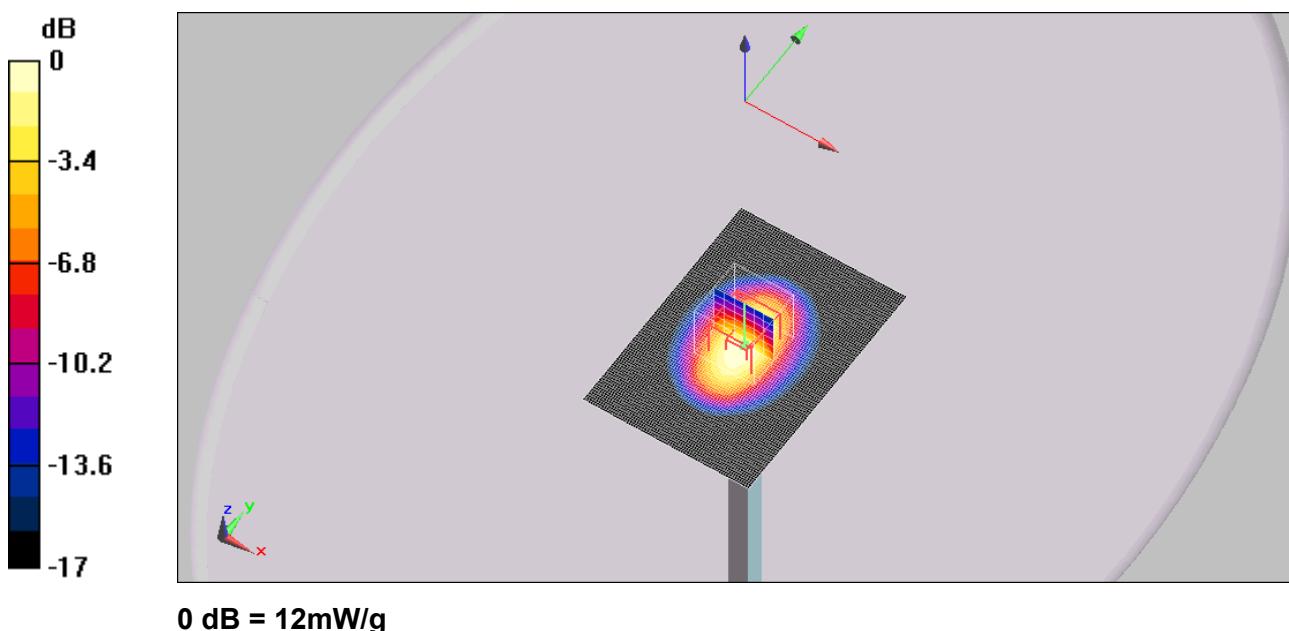
1 950MHz SPC/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 90.2 V/m; Power Drift = 0.040 dB

Peak SAR (extrapolated) = 16.7 W/kg

SAR(1 g) = 9.42 mW/g; SAR(10 g) = 4.94 mW/g

Maximum value of SAR (measured) = 12 mW/g



< 2450 MHz Body / Date : Mar 27, 2015 >

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:923

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

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.95 \text{ mho/m}$; $\epsilon_r = 53.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(7.13, 7.13, 7.13); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

2450MHz SPC/Area Scan (71x101x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR = 18.5 mW/g

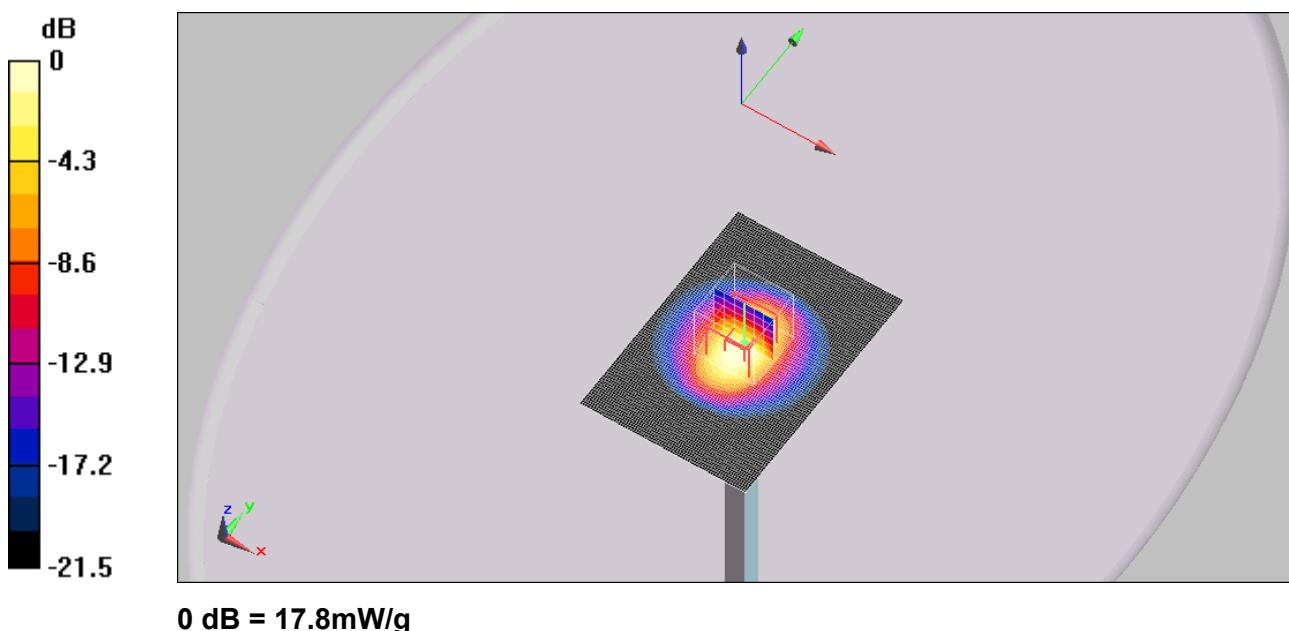
2450MHz SPC/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 96.6 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 23.9 W/kg

SAR(1 g) = 11.8 mW/g; SAR(10 g) = 5.55 mW/g

Maximum value of SAR (measured) = 17.8 mW/g



< 5 200 MHz Body / Date : Mar 28, 2015 >

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1094

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

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.48 \text{ mho/m}$; $\epsilon_r = 48.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.41, 4.41, 4.41); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

5200MHz SPC/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 37.4 mW/g

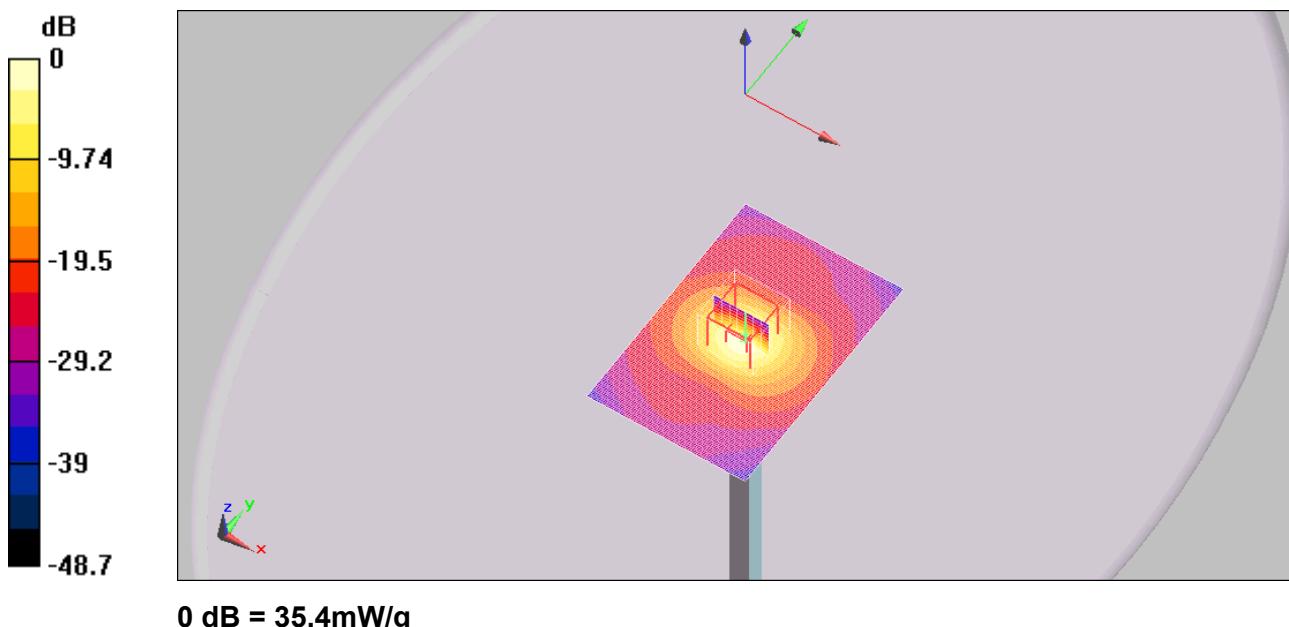
5200MHz SPC/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 87.6 V/m; Power Drift = 0.00377 dB

Peak SAR (extrapolated) = 72.8 W/kg

SAR(1 g) = 17.9 mW/g; SAR(10 g) = 5.08 mW/g

Maximum value of SAR (measured) = 35.4 mW/g



< 5 300 MHz Body / Date : Mar 29, 2015 >

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1094

Communication System: CW; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 5.58 \text{ mho/m}$; $\epsilon_r = 48$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.22, 4.22, 4.22); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

5300MHz SPC/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 37.5 mW/g

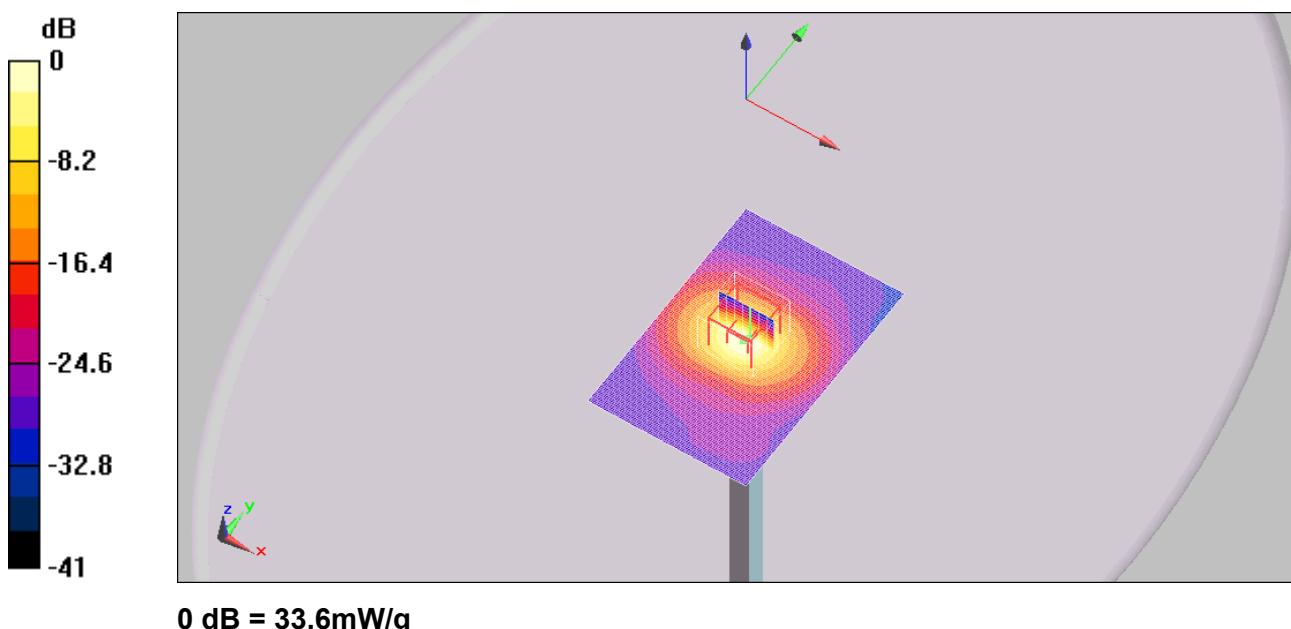
5300MHz SPC/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 78.5 V/m; Power Drift = 0.079 dB

Peak SAR (extrapolated) = 73.3 W/kg

SAR(1 g) = 17.6 mW/g; SAR(10 g) = 5.02 mW/g

Maximum value of SAR (measured) = 33.6 mW/g



< 5 600 MHz Body / Date : Mar 03, 2015 >

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1094

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600 \text{ MHz}$; $\sigma = 5.97 \text{ mho/m}$; $\epsilon_r = 46.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(3.85, 3.85, 3.85); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

5 600 MHz SPC/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 40.4 mW/g

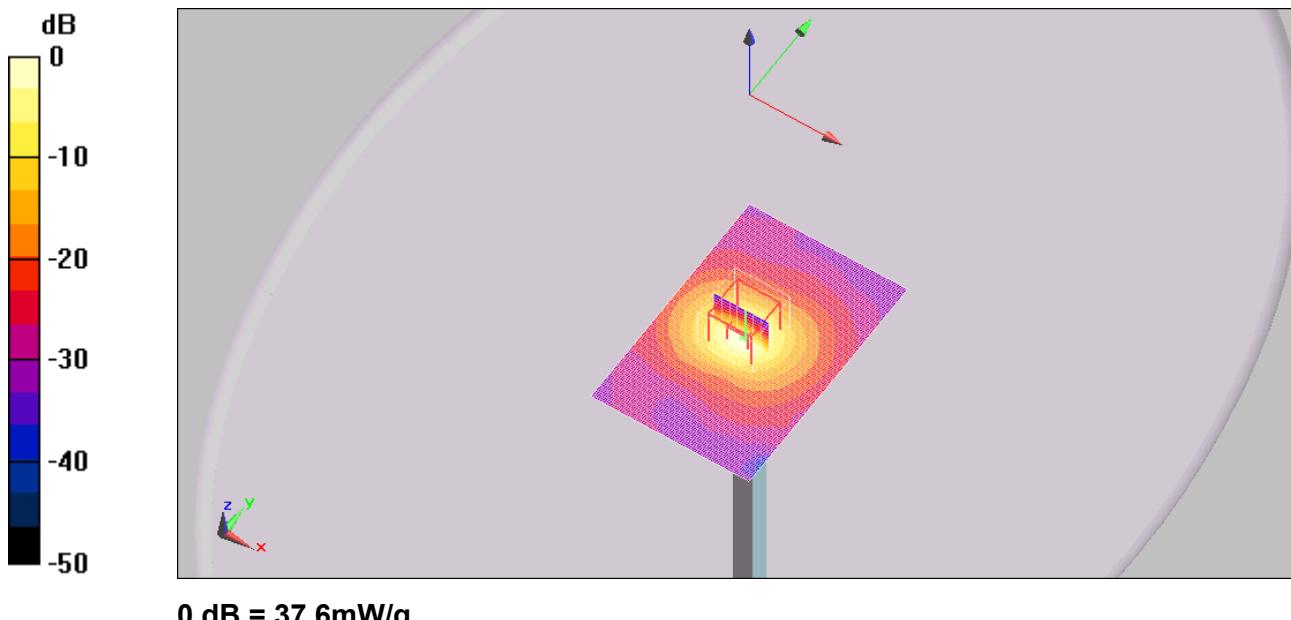
5 600 MHz SPC/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 78.2 V/m; Power Drift = 0.218 dB

Peak SAR (extrapolated) = 85.8 W/kg

SAR(1 g) = 18.8 mW/g; SAR(10 g) = 5.25 mW/g

Maximum value of SAR (measured) = 37.6 mW/g



< 5 600 MHz Body / Date : Mar 29, 2015 >

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1094

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600 \text{ MHz}$; $\sigma = 5.96 \text{ mho/m}$; $\epsilon_r = 47.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(3.85, 3.85, 3.85); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

5600MHz SPC/Area Scan (81x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 42 mW/g

5600MHz SPC/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 86.4 V/m; Power Drift = 0.144 dB

Peak SAR (extrapolated) = 84.4 W/kg

SAR(1 g) = 19.7 mW/g; SAR(10 g) = 5.55 mW/g

Maximum value of SAR (measured) = 39.7 mW/g



< 5 800 MHz Body / Date : Mar 06, 2015 >

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1094

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

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.03 \text{ mho/m}$; $\epsilon_r = 48.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.03, 4.03, 4.03); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

5 800 MHz SPC/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 39.9 mW/g

5 800 MHz SPC/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 76.7 V/m; Power Drift = 0.104 dB

Peak SAR (extrapolated) = 81.7 W/kg

SAR(1 g) = 18.1 mW/g; SAR(10 g) = 5.09 mW/g

Maximum value of SAR (measured) = 36.2 mW/g



< 5 800 MHz Body / Date : Mar 29, 2015 >

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1094

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

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.21 \text{ mho/m}$; $\epsilon_r = 47.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.03, 4.03, 4.03); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

5800MHz SPC/Area Scan (81x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 39.4 mW/g

5800MHz SPC/Zoom Scan (8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 82.7 V/m; Power Drift = 0.123 dB

Peak SAR (extrapolated) = 79.5 W/kg

SAR(1 g) = 18.1 mW/g; SAR(10 g) = 5.12 mW/g

Maximum value of SAR (measured) = 36.7 mW/g



ANNEX B. SAR TEST PLOTS

< GMS 850 CH128 824.2 MHz Back Body / Date : Mar 11, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 825 \text{ MHz}$; $\sigma = 0.938 \text{ mho/m}$; $\epsilon_r = 54.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 850_ch128_824.2 MHz_Back/Area Scan (51x81x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.645 mW/g

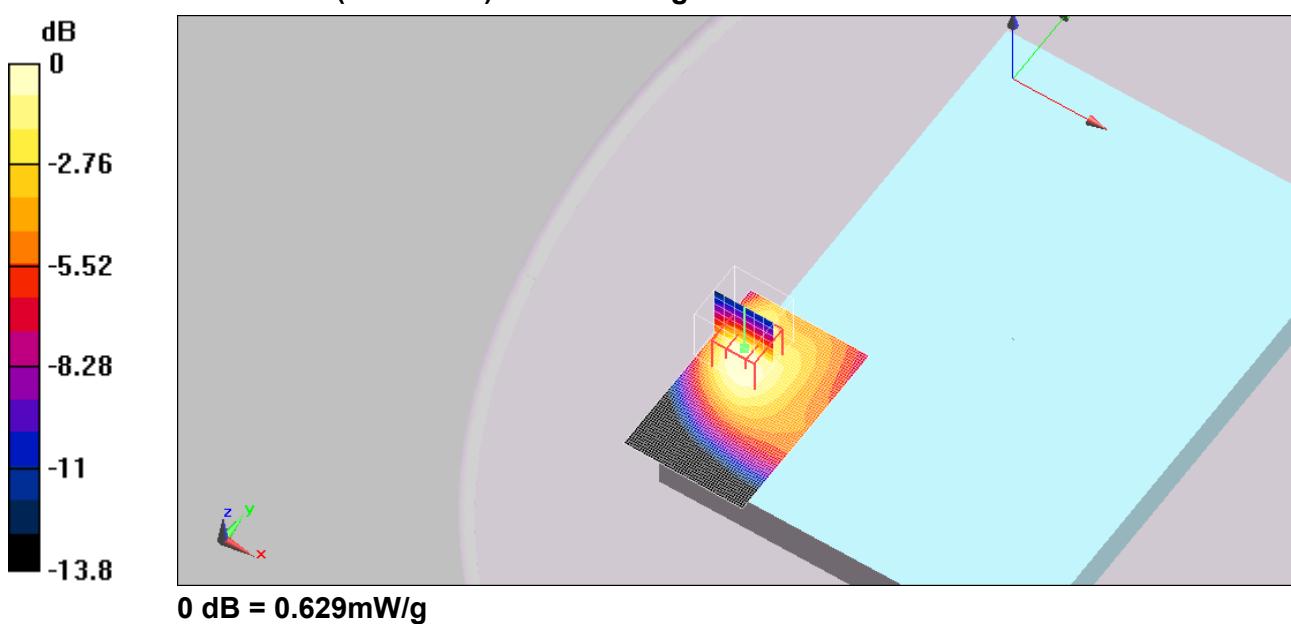
GSM 850_ch128_824.2 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 26.6 V/m; Power Drift = -0.337 dB

Peak SAR (extrapolated) = 0.936 W/kg

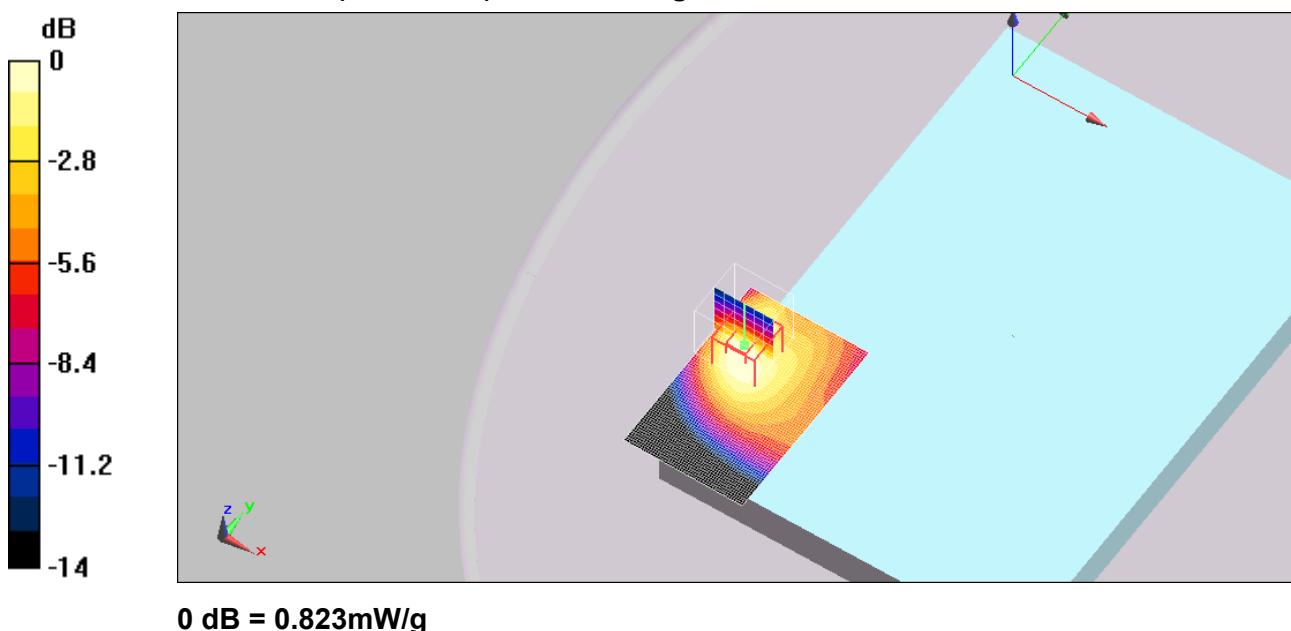
SAR(1 g) = 0.502 mW/g; SAR(10 g) = 0.297 mW/g

Maximum value of SAR (measured) = 0.629 mW/g



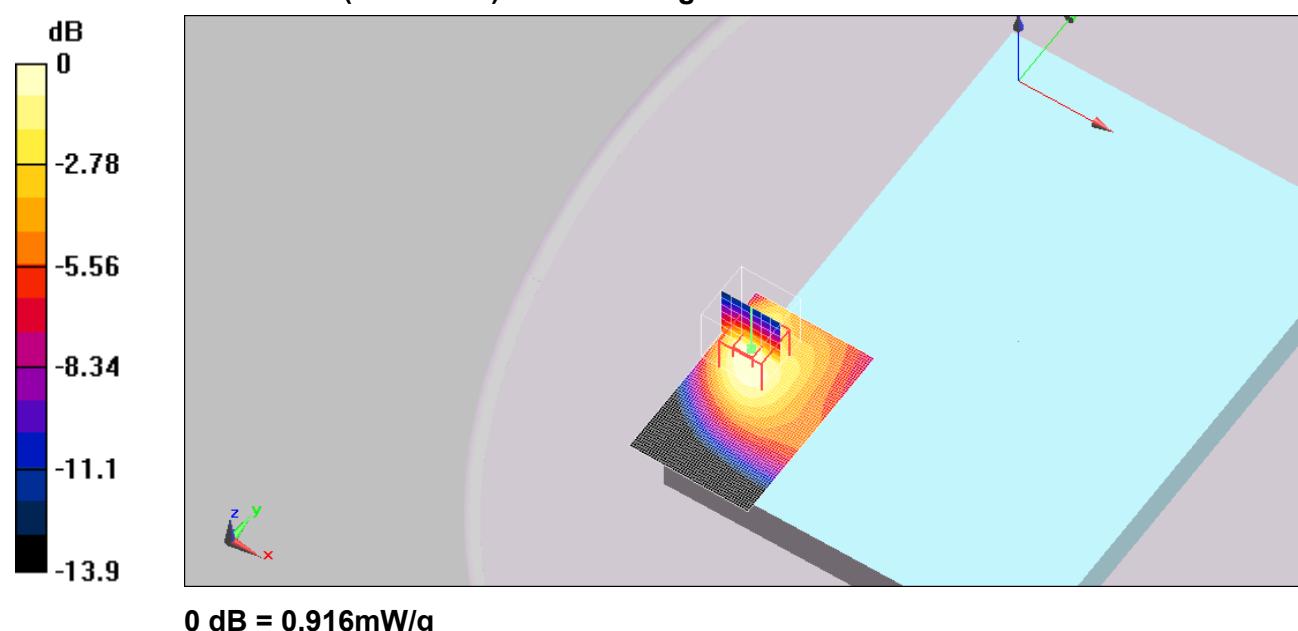
< GSM 850 CH190 836.6 MHz Back Body / Date : Mar 11, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3****Medium parameters used : $f = 836.6 \text{ MHz}$; $\sigma = 0.949 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 850_ch190_836.6 MHz_Back/Area Scan (51x81x1): Measurement grid: dx=12mm, dy=12mm**Maximum value of SAR = 0.830 mW/g****GSM 850_ch190_836.6 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 30.3 V/m; Power Drift = -0.108 dB****Peak SAR (extrapolated) = 1.22 W/kg****SAR(1 g) = 0.649 mW/g; SAR(10 g) = 0.381 mW/g****Maximum value of SAR (measured) = 0.823 mW/g**

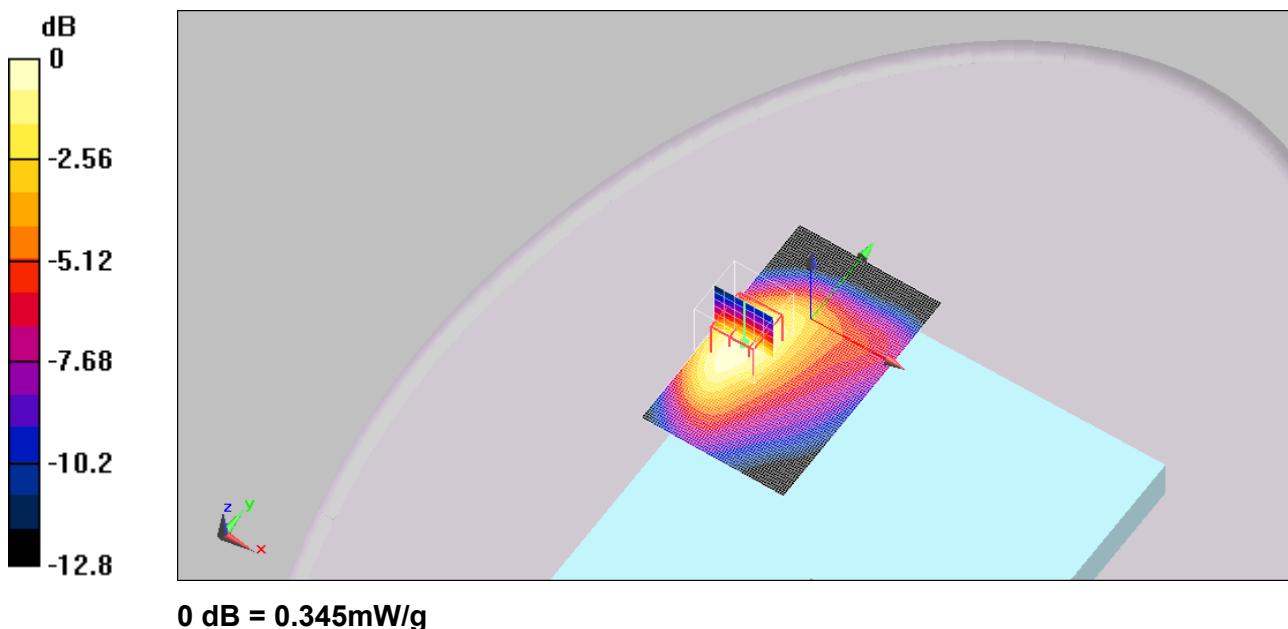
< GSM 850 CH251 848.8 MHz Back Body / Date : Mar 11, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3****Medium parameters used : $f = 848.8 \text{ MHz}$; $\sigma = 0.958 \text{ mho/m}$; $\epsilon_r = 54.4$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 850_ch251_848.8 MHz_Back/Area Scan (51x81x1): Measurement grid: dx=12mm, dy=12mm**Maximum value of SAR = 0.936 mW/g****GSM 850_ch251_848.8 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 31.8 V/m; Power Drift = -0.212 dB****Peak SAR (extrapolated) = 1.37 W/kg****SAR(1 g) = 0.725 mW/g; SAR(10 g) = 0.421 mW/g****Maximum value of SAR (measured) = 0.916 mW/g**

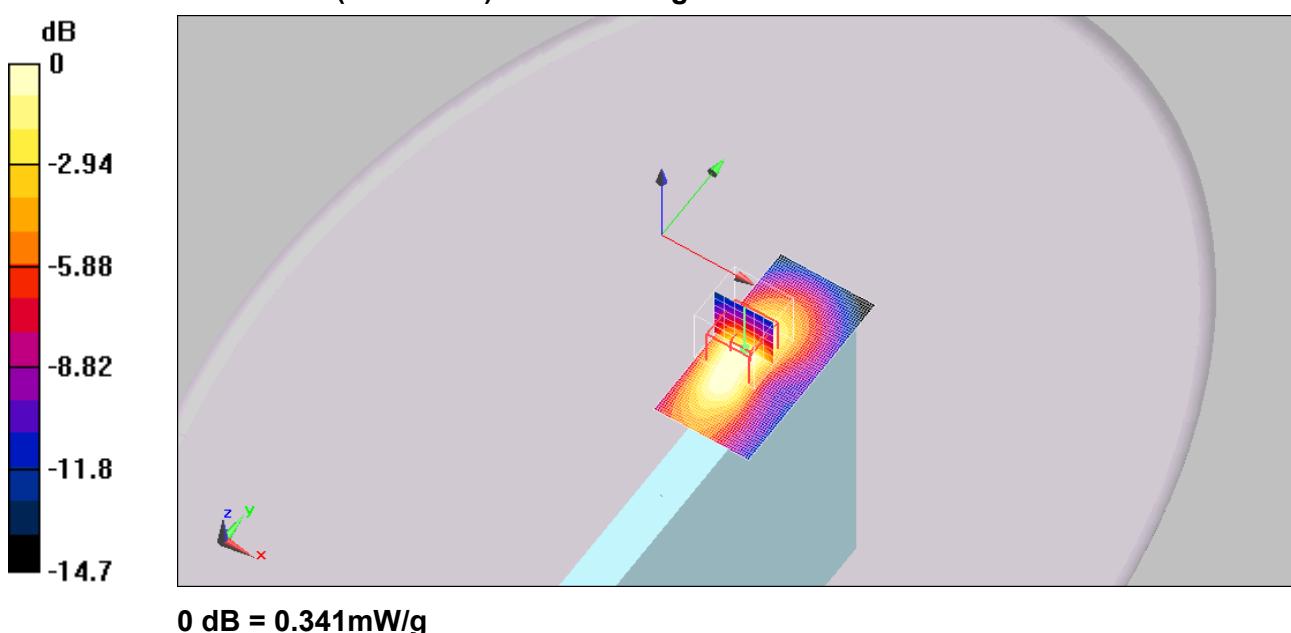
< GSM 850 CH190 836.6 MHz Front Body / Date : Mar 11, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3****Medium parameters used : $f = 836.6 \text{ MHz}$; $\sigma = 0.949 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 850_ch190_836.6 MHz_Front/Area Scan (61x101x1): Measurement grid: dx=12mm, dy=12mm**Maximum value of SAR = 0.351 mW/g****GSM 850_ch190_836.6 MHz_Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 20.9 V/m; Power Drift = 0.237 dB****Peak SAR (extrapolated) = 0.492 W/kg****SAR(1 g) = 0.285 mW/g; SAR(10 g) = 0.171 mW/g****Maximum value of SAR (measured) = 0.345 mW/g**

< GSM 850 CH190 836.6 MHz Top Body / Date : Mar 11, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:8.3****Medium parameters used : $f = 836.6 \text{ MHz}$; $\sigma = 0.949 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 850_ch190_836.6 MHz_Top/Area Scan (41x81x1): Measurement grid: dx=12mm, dy=12mm**Maximum value of SAR = 0.416 mW/g****GSM 850_ch190_836.6 MHz_Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 21.2 V/m; Power Drift = 0.156 dB****Peak SAR (extrapolated) = 0.540 W/kg****SAR(1 g) = 0.266 mW/g; SAR(10 g) = 0.141 mW/g****Maximum value of SAR (measured) = 0.341 mW/g**

< GSM 850 CH251 848.8 MHz Back Body with Bar Code-IC / Date : Mar 30, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium parameters used : $f = 848.8 \text{ MHz}$; $\sigma = 0.971 \text{ mho/m}$; $\epsilon_r = 54.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 850_ch251_848.8 MHz_Back_Bar Code-IC /Area Scan (51x81x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.023 mW/g

GSM 850_ch251_848.8 MHz_Back_Bar Code-IC /Zoom Scan (7x7x7)/Cube 0:

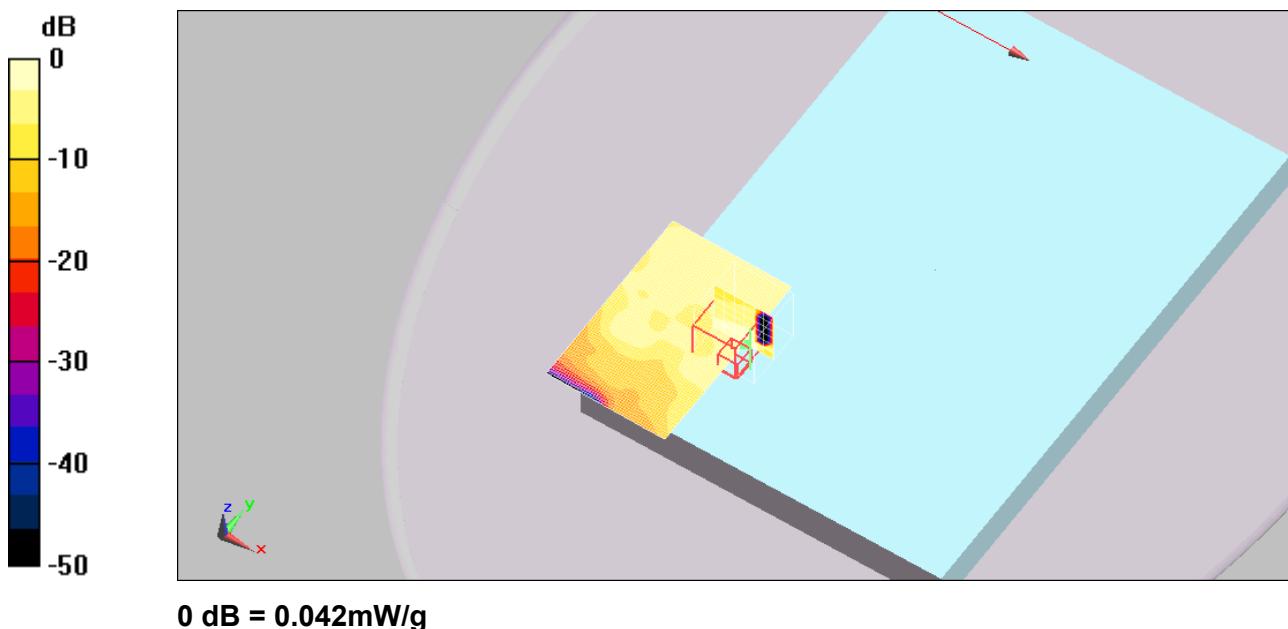
Measurementgrid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4 V/m; Power Drift = -0.100 dB

Peak SAR (extrapolated) = 0.120 W/kg

SAR(1 g) = 0.036 mW/g; SAR(10 g) = 0.025 mW/g

Maximum value of SAR (measured) = 0.042 mW/g



< GSM 1900 CH512 1 850.2 MHz Back Body / Date : Mar 14, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used : $f = 1850.2 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 54.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 1900_ch512_1 850.2 MHz_Back/Area Scan (51x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 1.29 mW/g

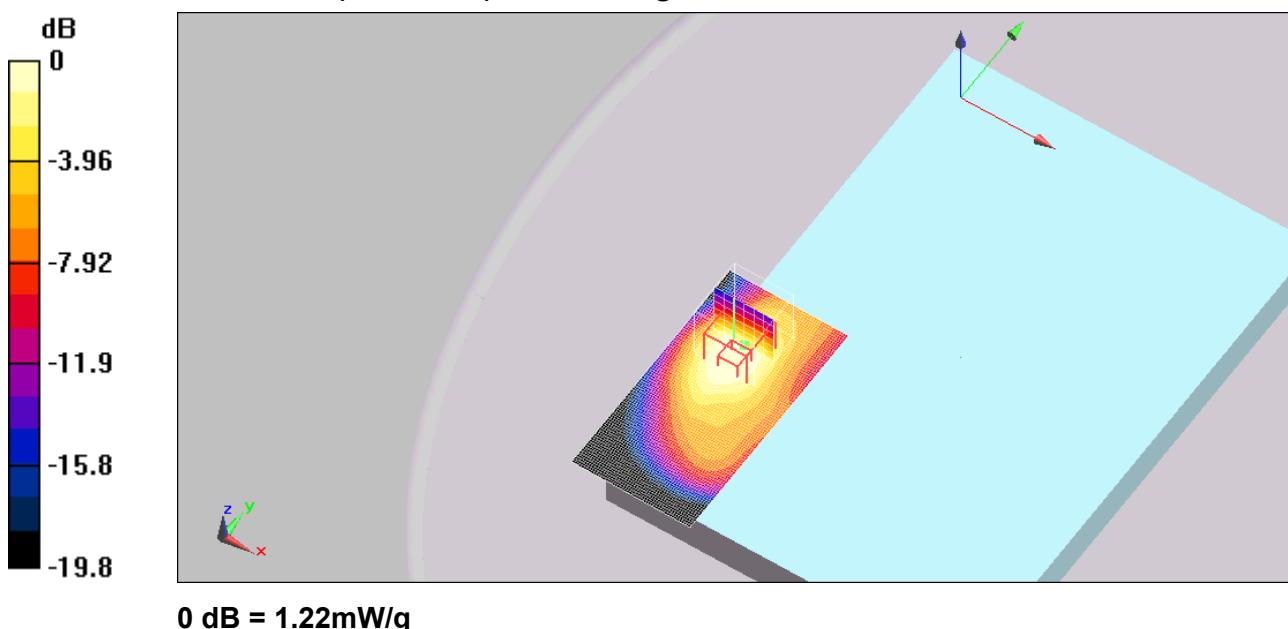
GSM 1900_ch512_1 850.2 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.5 V/m; Power Drift = 0.051 dB

Peak SAR (extrapolated) = 1.98 W/kg

SAR(1 g) = 0.997 mW/g; SAR(10 g) = 0.558 mW/g

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



< GSM 1900 CH661 1 880.0 MHz Back Body / Date : Mar 14, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.5 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 1900_ch661_1 880.0 MHz_Back/Area Scan (51x101x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR = 1.32 mW/g

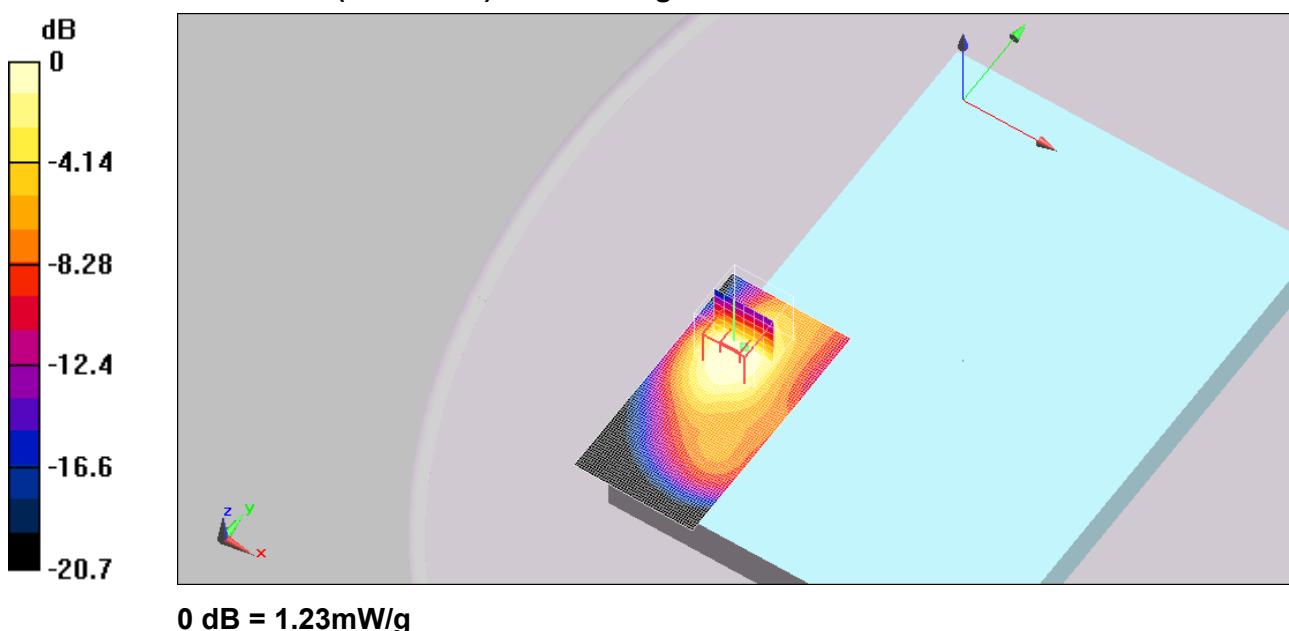
GSM 1900_ch661_1 880.0 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.3 V/m; Power Drift = -0.365 dB

Peak SAR (extrapolated) = 2.02 W/kg

SAR(1 g) = 0.974 mW/g; SAR(10 g) = 0.567 mW/g

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



< GSM 1900 CH810 1 909.8 MHz Back Body / Date : Mar 14, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: GSM 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910 \text{ MHz}$; $\sigma = 1.54 \text{ mho/m}$; $\epsilon_r = 54.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 1900_ch810_1 909.8 MHz_Back/Area Scan (51x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 1.08 mW/g

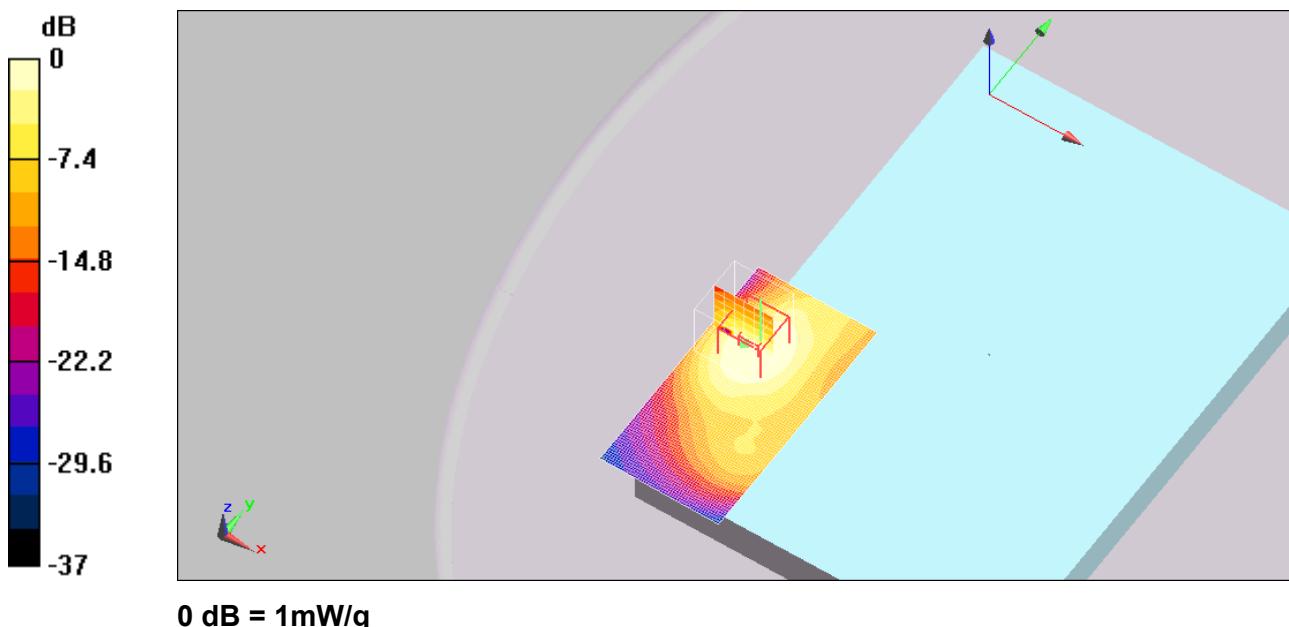
GSM 1900_ch810_1 909.8 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.8 V/m; Power Drift = -0.064 dB

Peak SAR (extrapolated) = 1.66 W/kg

SAR(1 g) = 0.828 mW/g; SAR(10 g) = 0.468 mW/g

Maximum value of SAR (measured) = 1 mW/g



< GSM 1900 CH661 1 880.0 MHz Front Body / Date : Mar 14, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.5 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 1900_ch661_1 880.0 MHz_Front/Area Scan (51x101x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR = 0.937 mW/g

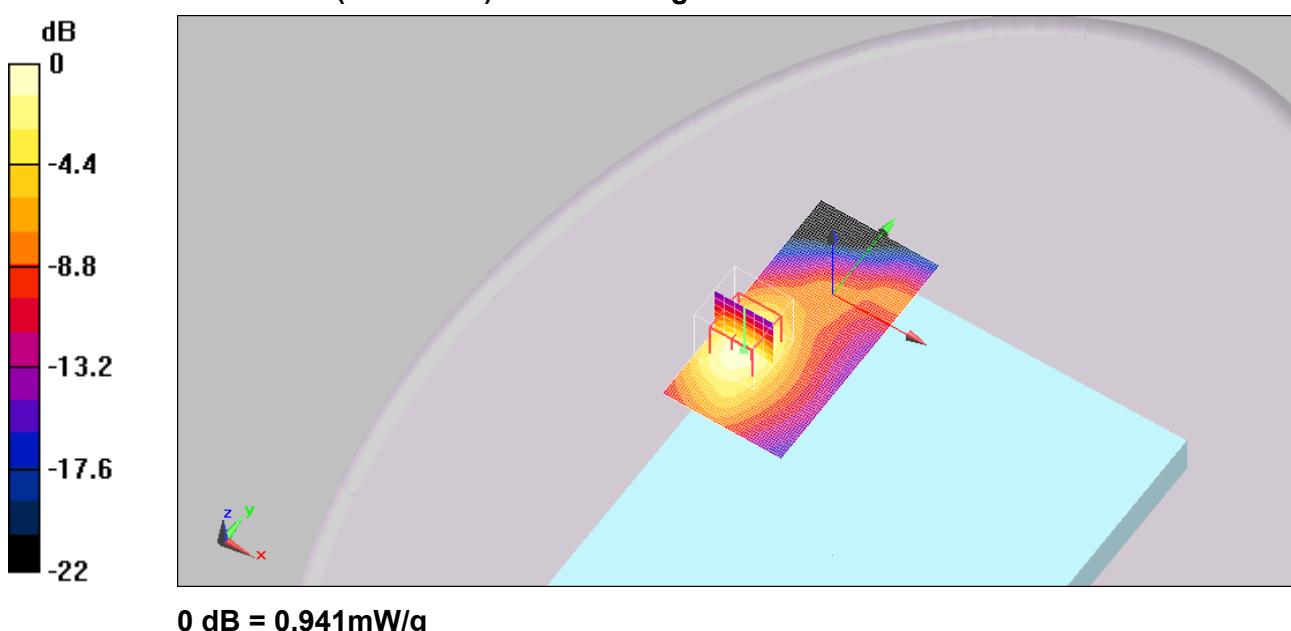
GSM 1900_ch661_1 880.0 MHz_Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.9 V/m; Power Drift = -0.409 dB

Peak SAR (extrapolated) = 1.36 W/kg

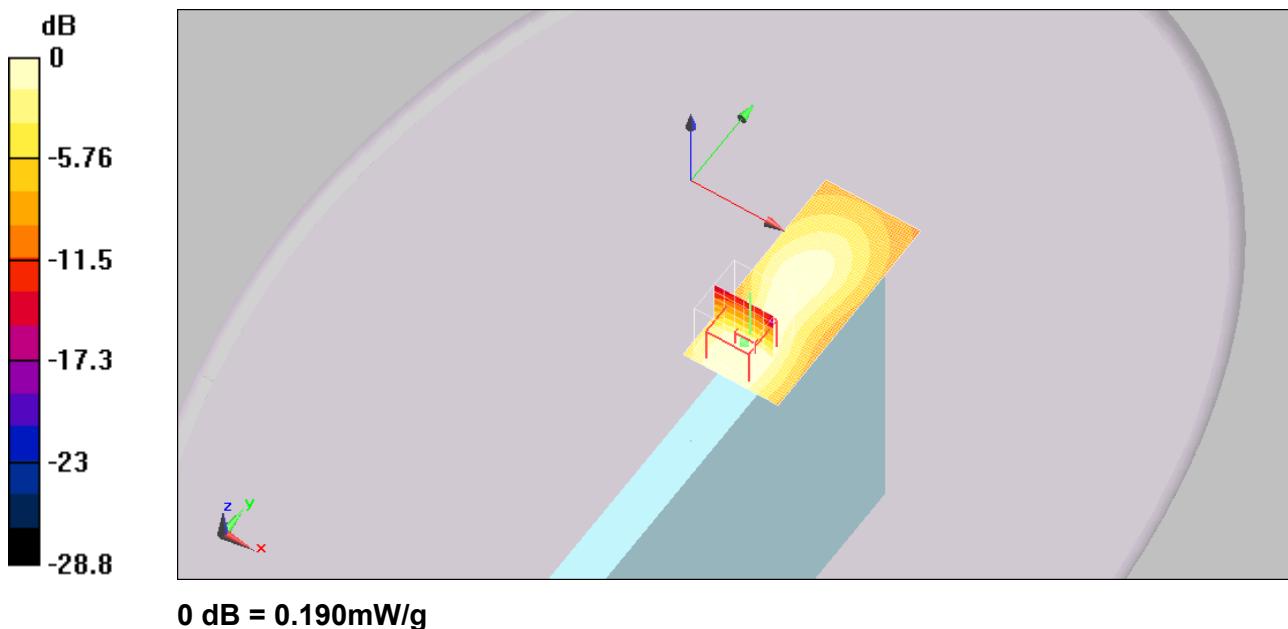
SAR(1 g) = 0.742 mW/g; SAR(10 g) = 0.385 mW/g

Maximum value of SAR (measured) = 0.941 mW/g



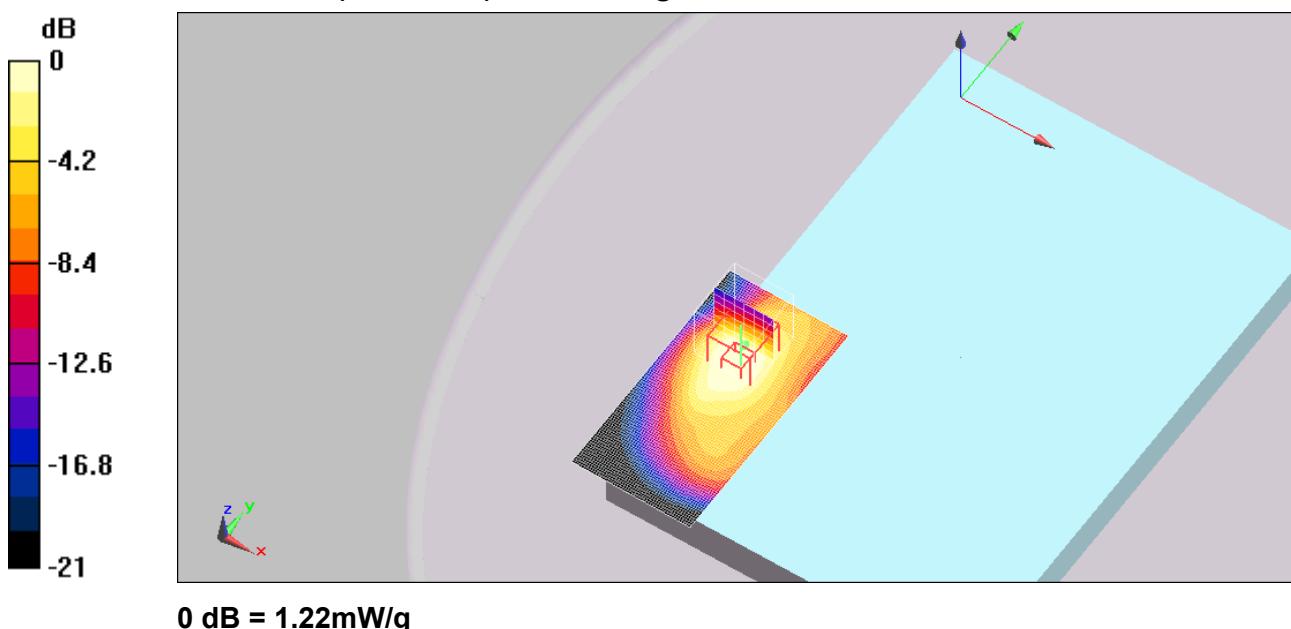
< GSM 1900 CH661 1 880.0 MHz Top Body / Date : Mar 14, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3****Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.5 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 1900_ch661_1 880.0 MHz_Top/Area Scan (41x91x1): Measurement grid: dx=12mm, dy=12mm**Maximum value of SAR = 0.209 mW/g****GSM 1900_ch661_1 880.0 MHz_Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 8.44 V/m; Power Drift = -0.168 dB****Peak SAR (extrapolated) = 0.288 W/kg****SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.092 mW/g****Maximum value of SAR (measured) = 0.190 mW/g**

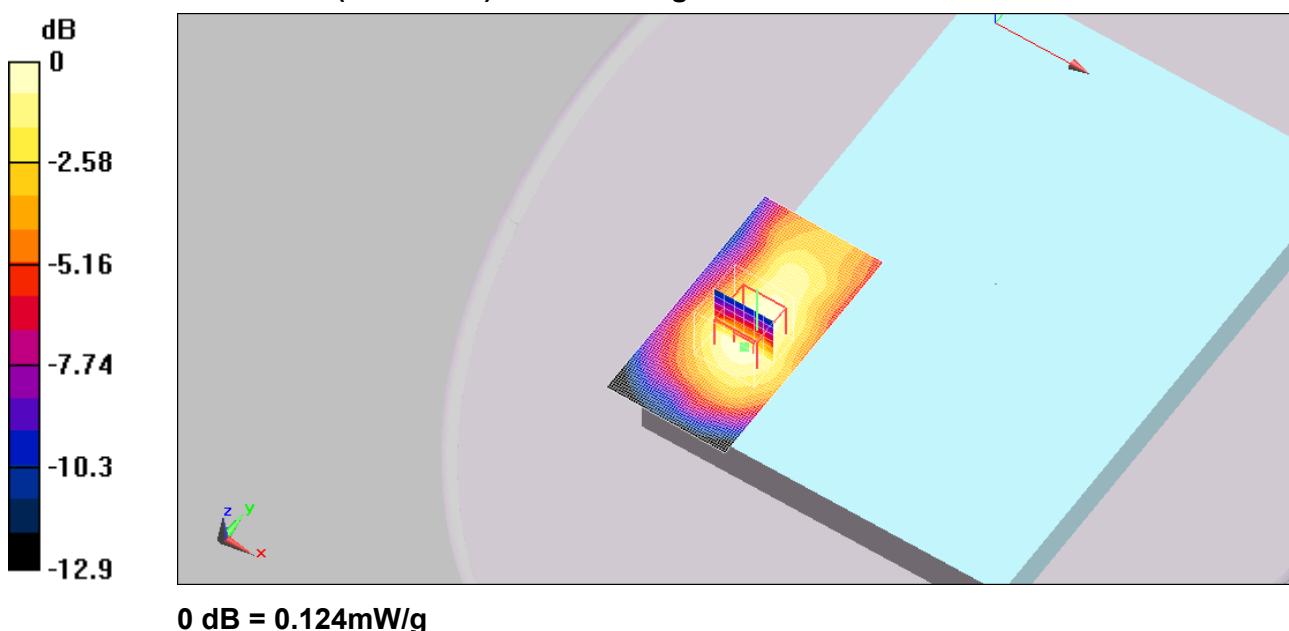
< GSM 1900 CH512 1 850.2 MHz Back Body Repeated / Date : Mar 14, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: GSM 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3****Medium parameters used : $f = 1850.2 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 54.6$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

GSM 1900_ch512_1 850.2 MHz_Back_Repeated/Area Scan (51x101x1): Measurement grid: dx=12mm, dy=12mm**Maximum value of SAR = 1.47 mW/g****GSM 1900_ch512_1 850.2 MHz_Back_Repeated/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 29.4 V/m; Power Drift = -0.280 dB****Peak SAR (extrapolated) = 2.01 W/kg****SAR(1 g) = 0.997 mW/g; SAR(10 g) = 0.574 mW/g****Maximum value of SAR (measured) = 1.22 mW/g**

< GSM 1900 CH512 1 850.2 MHz Back Body with Bar Code-IC / Date : Mar 26, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: PCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3****Medium parameters used : $f = 1850.2 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

PCS_ch512_1 850.2 MHz_Back_Bar Code-IC /Area Scan (51x101x1): Measurement**grid:dx=12mm, dy=12mm****Maximum value of SAR = 0.120 mW/g****PCS_ch512_1 850.2 MHz_Back_Bar Code-IC /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 8.99 V/m; Power Drift = -0.153 dB****Peak SAR (extrapolated) = 0.151 W/kg****SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.067 mW/g****Maximum value of SAR (measured) = 0.124 mW/g**

< WCDMA Band II CH9262 1 852.4 MHz Back Body / Date : Mar 26, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: W-CDMA 1850 (Band 2); Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium parameters used : $f = 1852.4 \text{ MHz}$; $\sigma = 1.46 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch9262_1 852.4 MHz_Back/Area Scan (51x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.885 mW/g

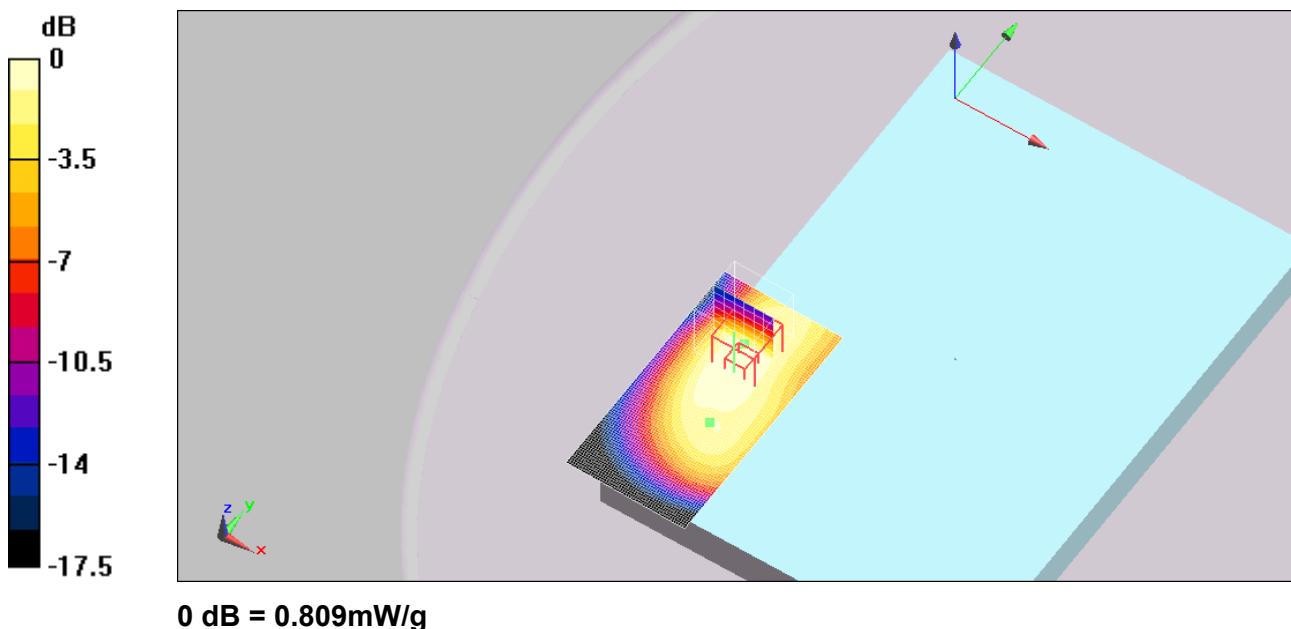
WCDMA_ch9262_1 852.4 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 26.3 V/m; Power Drift = -0.087 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.659 mW/g; SAR(10 g) = 0.396 mW/g

Maximum value of SAR (measured) = 0.809 mW/g



< WCDMA Band II CH9400 1 880.0 MHz Back Body / Date : Mar 26, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: W-CDMA 1850 (Band 2); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch9400_1 880.0 MHz_Back/Area Scan (51x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 1.08 mW/g

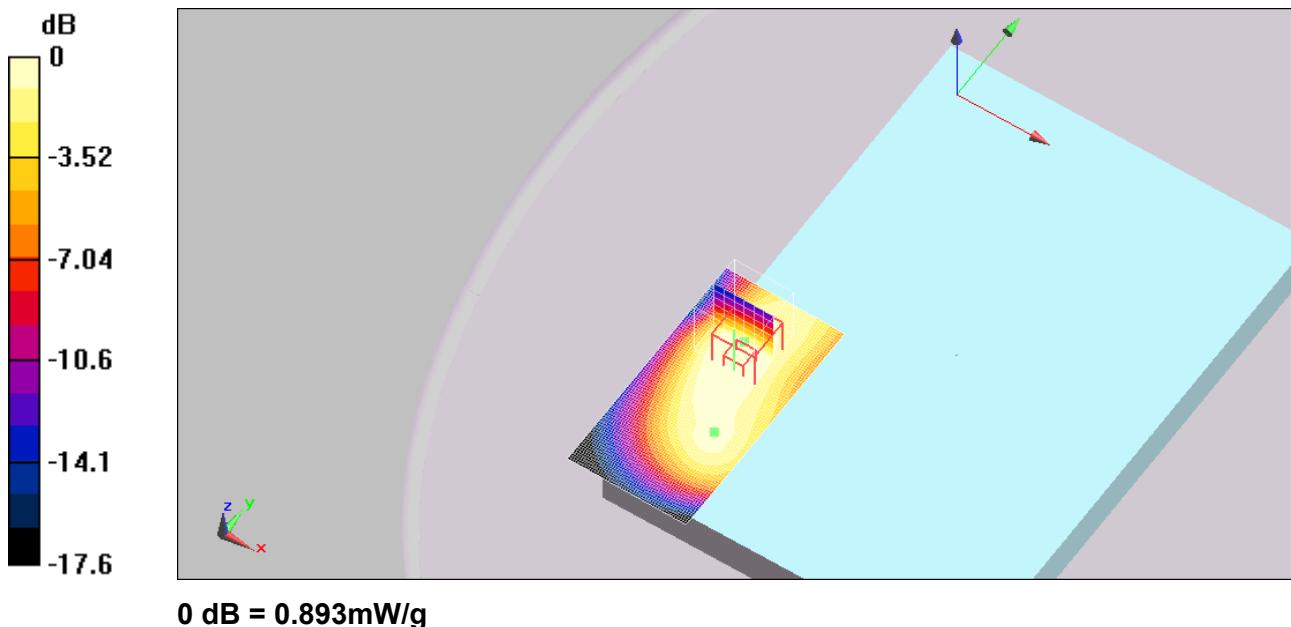
WCDMA_ch9400_1 880.0 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.1 V/m; Power Drift = 0.00258 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.733 mW/g; SAR(10 g) = 0.444 mW/g

Maximum value of SAR (measured) = 0.893 mW/g



< WCDMA Band II CH9538 1 907.6 MHz Back Body / Date : Mar 26, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: W-CDMA 1850 (Band 2); Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used : $f = 1907.6 \text{ MHz}$; $\sigma = 1.53 \text{ mho/m}$; $\epsilon_r = 54.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch9538_1 907.6 MHz_Back/Area Scan (51x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.978 mW/g

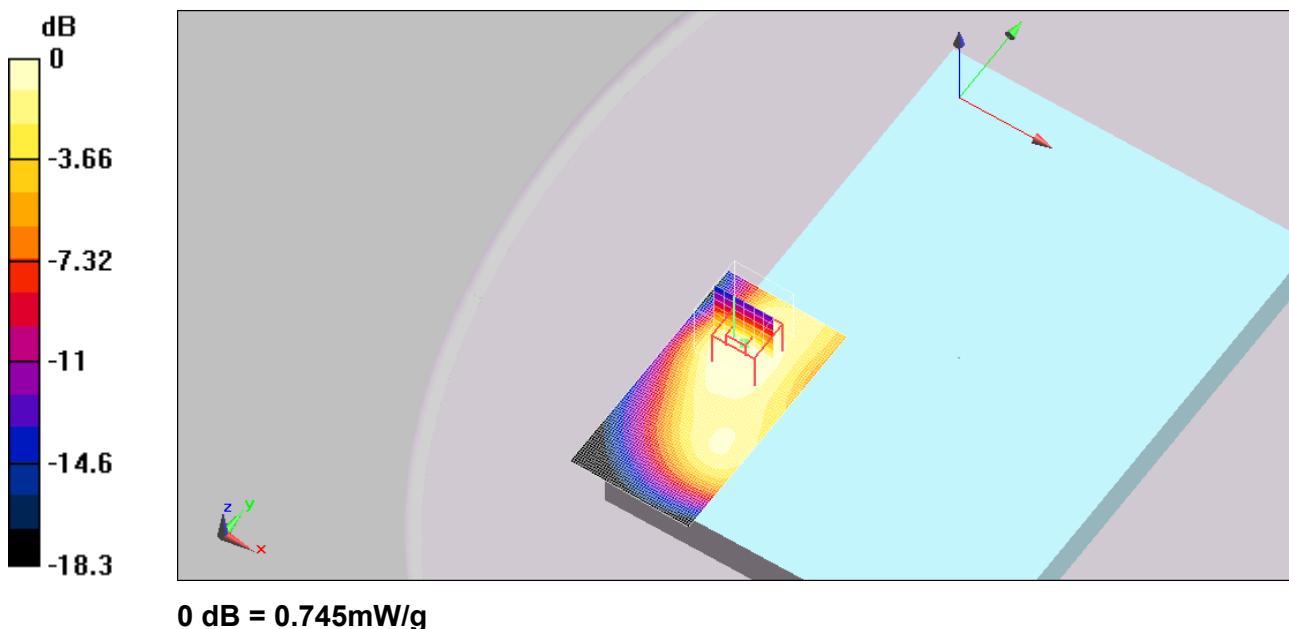
WCDMA_ch9538_1 907.6 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 26.3 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 1.14 W/kg

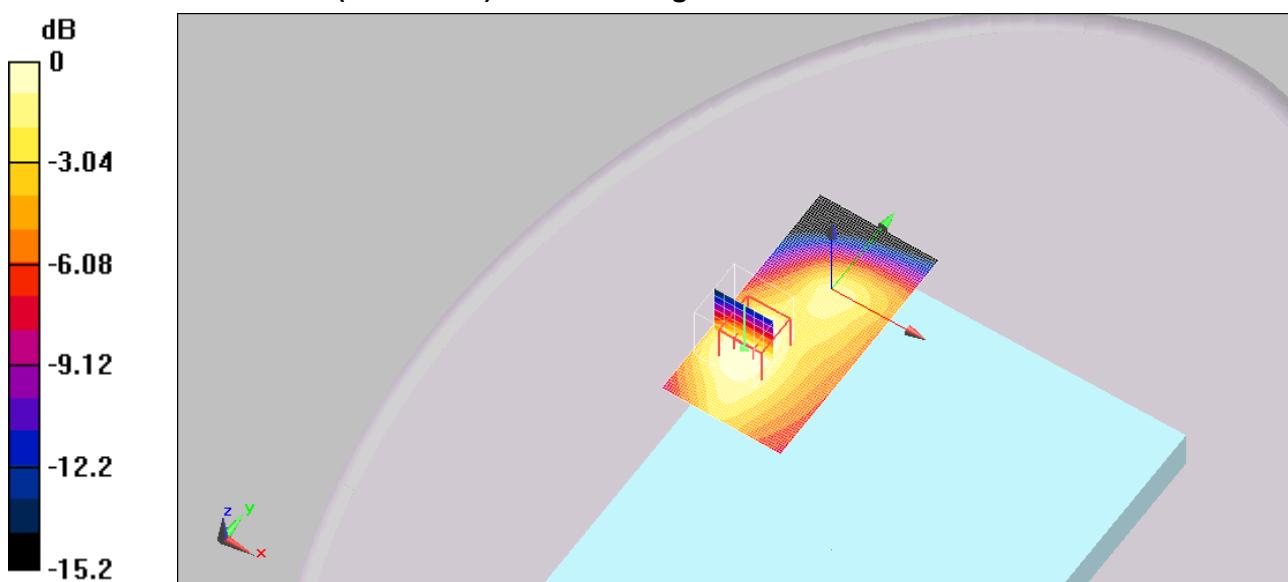
SAR(1 g) = 0.620 mW/g; SAR(10 g) = 0.381 mW/g

Maximum value of SAR (measured) = 0.745 mW/g



< WCDMA Band II CH9400 1 880.0 MHz Front Body / Date : Mar 26, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: W-CDMA 1850 (Band 2); Frequency: 1880 MHz; Duty Cycle: 1:1****Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch9400_1 880.0 MHz_Front/Area Scan (51x101x1): Measurement grid: dx=12mm, dy=12mm**Maximum value of SAR = 0.618 mW/g****WCDMA_ch9400_1 880.0 MHz_Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 7.55 V/m; Power Drift = 0.030 dB****Peak SAR (extrapolated) = 0.736 W/kg****SAR(1 g) = 0.454 mW/g; SAR(10 g) = 0.271 mW/g****Maximum value of SAR (measured) = 0.547 mW/g**

< WCDMA Band II CH9400 1 880.0 MHz Top Body / Date : Mar 26, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: W-CDMA 1850 (Band 2); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch9400_1 880.0 MHz_Front/Area Scan (41x91x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.323 mW/g

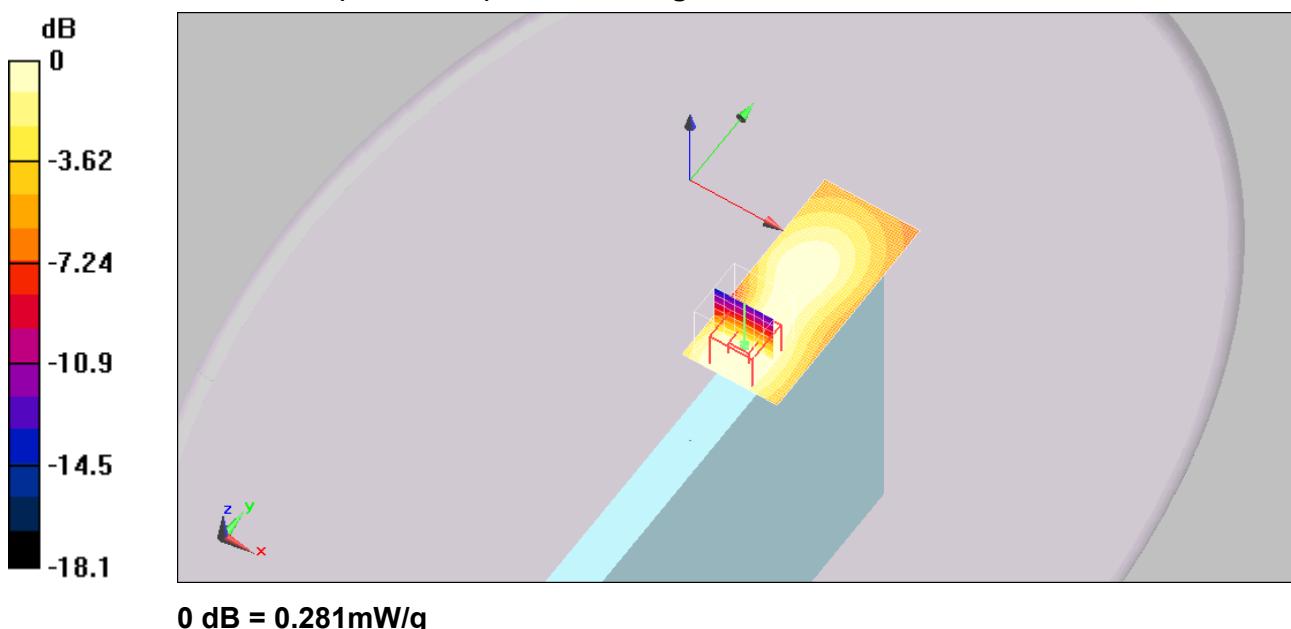
WCDMA_ch9400_1 880.0 MHz_Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.8 V/m; Power Drift = -0.206 dB

Peak SAR (extrapolated) = 0.389 W/kg

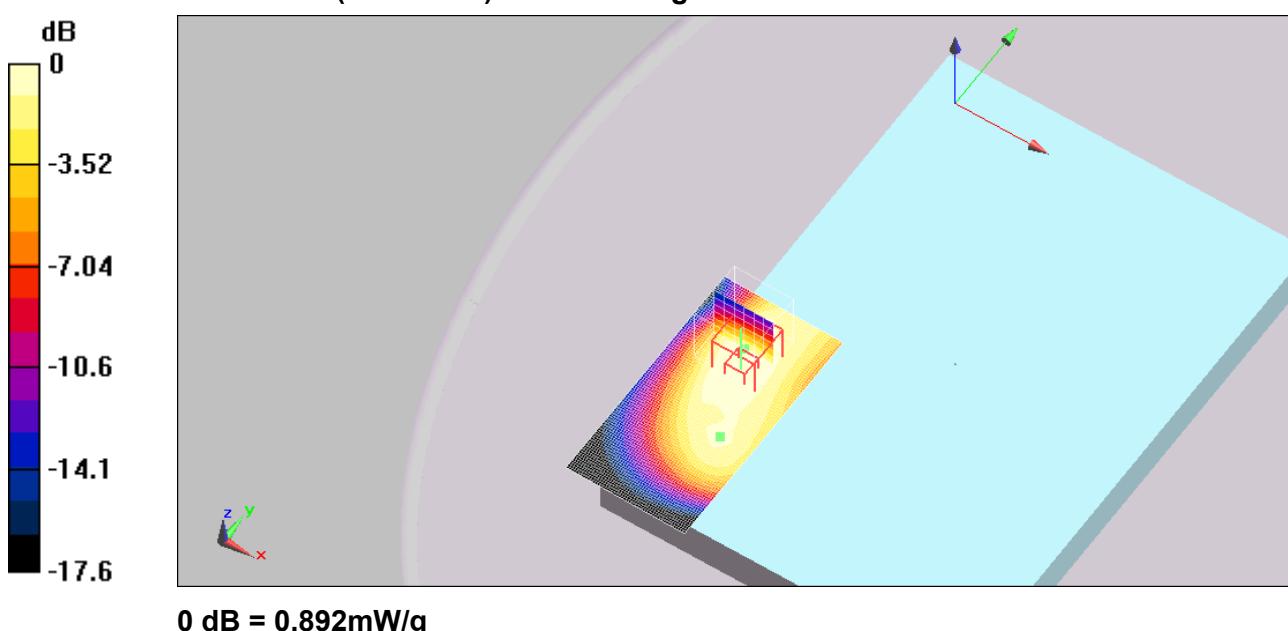
SAR(1 g) = 0.220 mW/g; SAR(10 g) = 0.137 mW/g

Maximum value of SAR (measured) = 0.281 mW/g



< WCDMA Band II CH9400 1 1880.0 MHz Back Body Repeated / Date : Mar 26, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: W-CDMA 1850 (Band 2); Frequency: 1880 MHz; Duty Cycle: 1:1****Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch9400_1 1880.0 MHz_Back_Repeated/Area Scan (51x101x1): Measurement grid: dx=12mm, dy=12mm**Maximum value of SAR = 1.05 mW/g****WCDMA_ch9400_1 1880.0 MHz_Back_Repeated/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 26.9 V/m; Power Drift = 0.00449 dB****Peak SAR (extrapolated) = 1.2 W/kg****SAR(1 g) = 0.734 mW/g; SAR(10 g) = 0.446 mW/g****Maximum value of SAR (measured) = 0.892 mW/g**

< WCDMA Band II CH9400 1 880.0 MHz Back Body with Bar Code-IC / Date : Mar 26, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: W-CDMA 1850 (Band 2); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(4.86, 4.86, 4.86); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch9400_1 880.0 MHz_Back_Bar Code-IC/Area Scan (51x101x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.207 mW/g

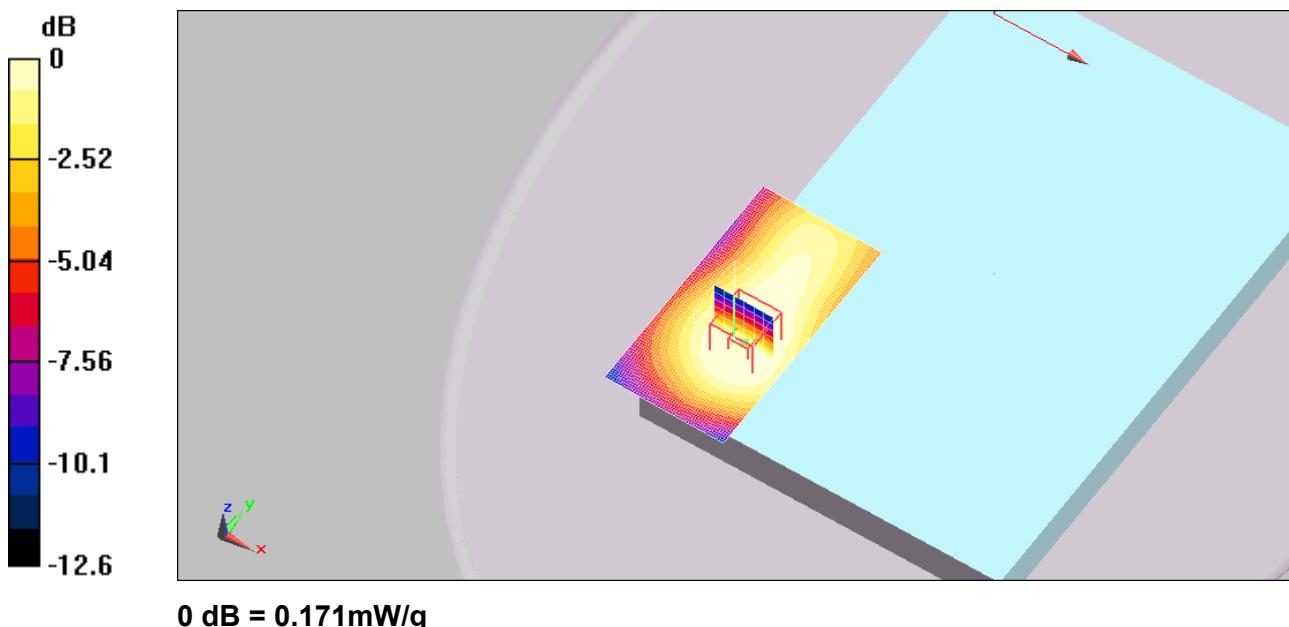
WCDMA_ch9400_1 880.0 MHz_Back_Bar Code-IC/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 0.217 W/kg

SAR(1 g) = 0.149 mW/g; SAR(10 g) = 0.099 mW/g

Maximum value of SAR (measured) = 0.171 mW/g



< WCDMA Band V CH4132 826.4 MHz Back Body / Date : Mar 12, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: W-CDMA 850 (Band 5); Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used : $f = 826.4 \text{ MHz}$; $\sigma = 0.952 \text{ mho/m}$; $\epsilon_r = 55$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch4132_826.4 MHz_Back/Area Scan (51x81x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.657 mW/g

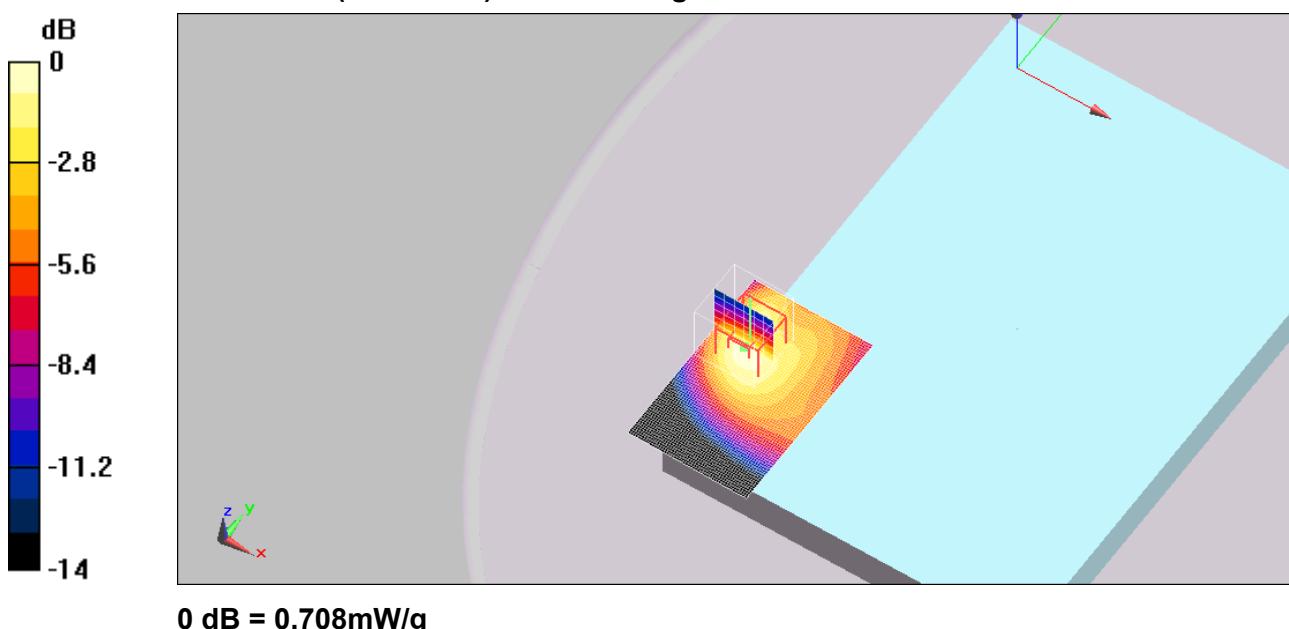
WCDMA_ch4132_826.4 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 26.4 V/m; Power Drift = -0.259 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.574 mW/g; SAR(10 g) = 0.344 mW/g

Maximum value of SAR (measured) = 0.708 mW/g



< WCDMA Band V CH4183 836.6 MHz Back Body / Date : Mar 12, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: W-CDMA 850 (Band 5); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used : $f = 836.6 \text{ MHz}$; $\sigma = 0.962 \text{ mho/m}$; $\epsilon_r = 54.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch4183_836.6 MHz_Back/Area Scan (51x81x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.969 mW/g

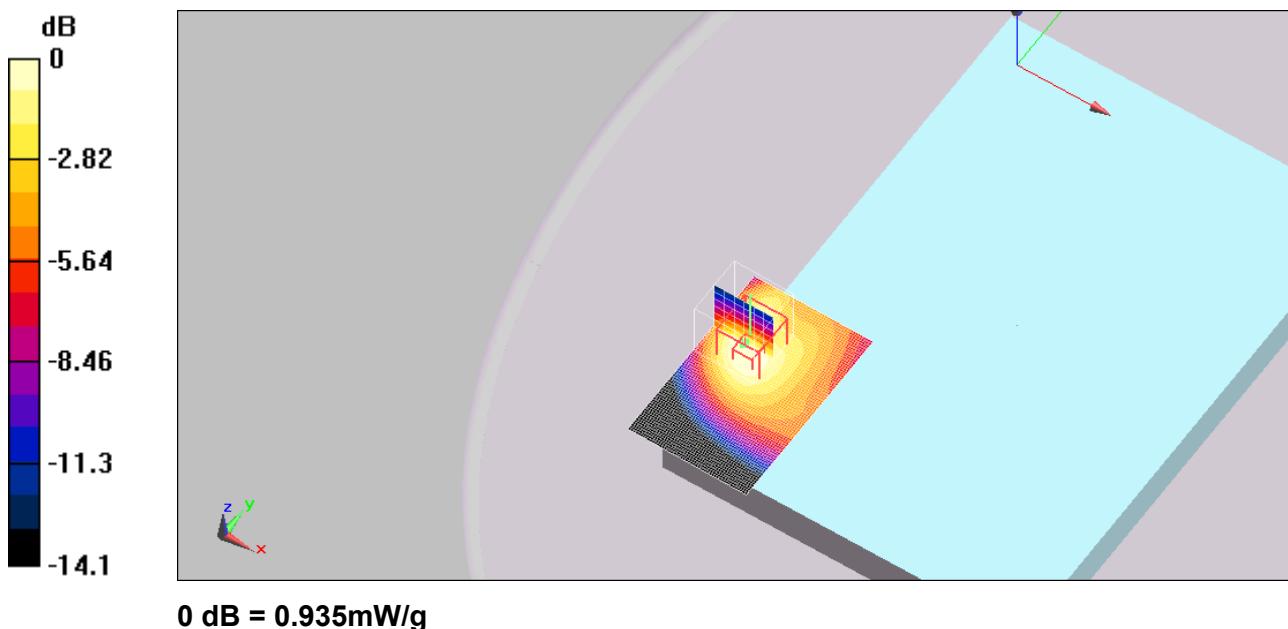
WCDMA_ch4183_836.6 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 32.6 V/m; Power Drift = -0.316 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.740 mW/g; SAR(10 g) = 0.443 mW/g

Maximum value of SAR (measured) = 0.935 mW/g



< WCDMA Band V CH4233 846.6 MHz Back Body / Date : Mar 12, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: W-CDMA 850 (Band 5); Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium parameters used : $f = 846.6 \text{ MHz}$; $\sigma = 0.971 \text{ mho/m}$; $\epsilon_r = 54.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch4233_846.6 MHz_Back/Area Scan (51x81x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.893 mW/g

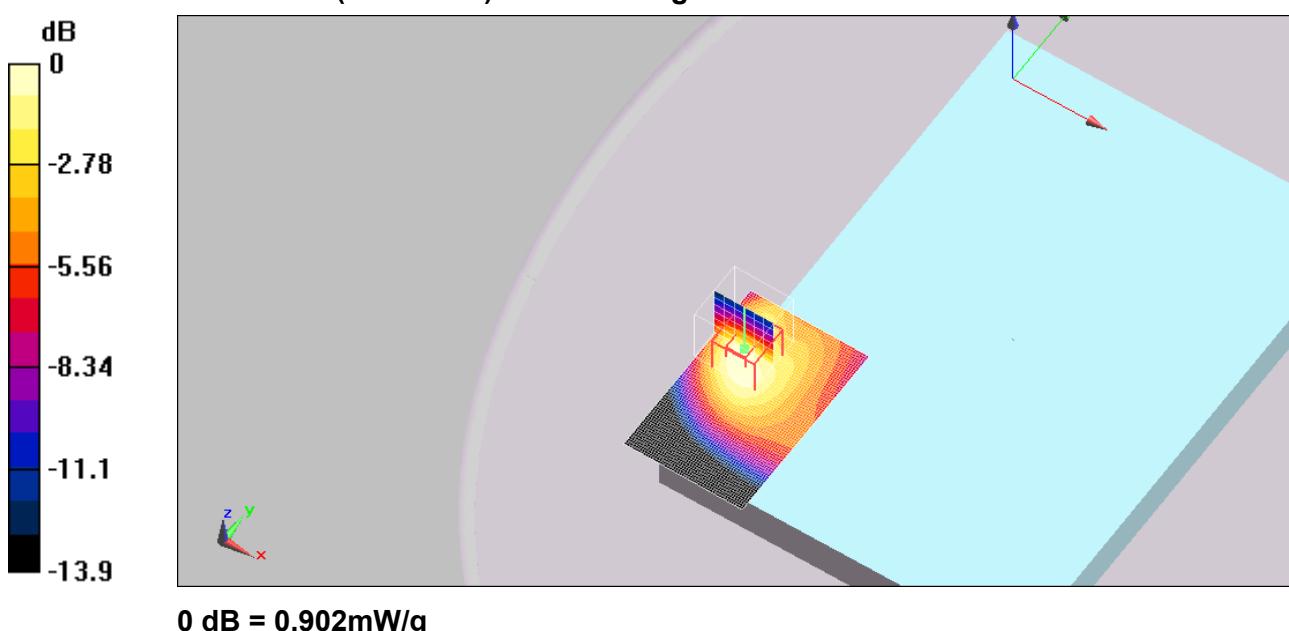
WCDMA_ch4233_846.6 MHz_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 30.7 V/m; Power Drift = -0.171 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.713 mW/g; SAR(10 g) = 0.415 mW/g

Maximum value of SAR (measured) = 0.902 mW/g



< WCDMA Band V CH4183 836.6 MHz Front Body / Date : Mar 12, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: W-CDMA 850 (Band 5); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used : $f = 836.6 \text{ MHz}$; $\sigma = 0.962 \text{ mho/m}$; $\epsilon_r = 54.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch4183_836.6 MHz_Front/Area Scan (51x81x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.658 mW/g

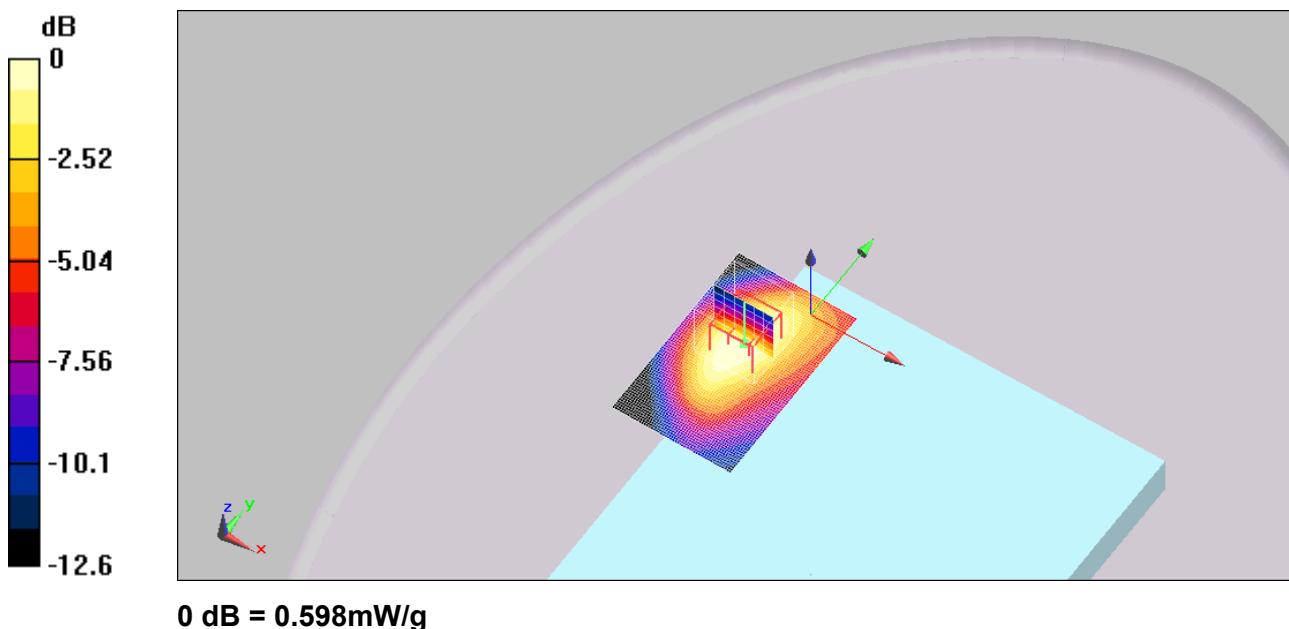
WCDMA_ch4183_836.6 MHz_Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 25.9 V/m; Power Drift = -0.519 dB

Peak SAR (extrapolated) = 0.871 W/kg

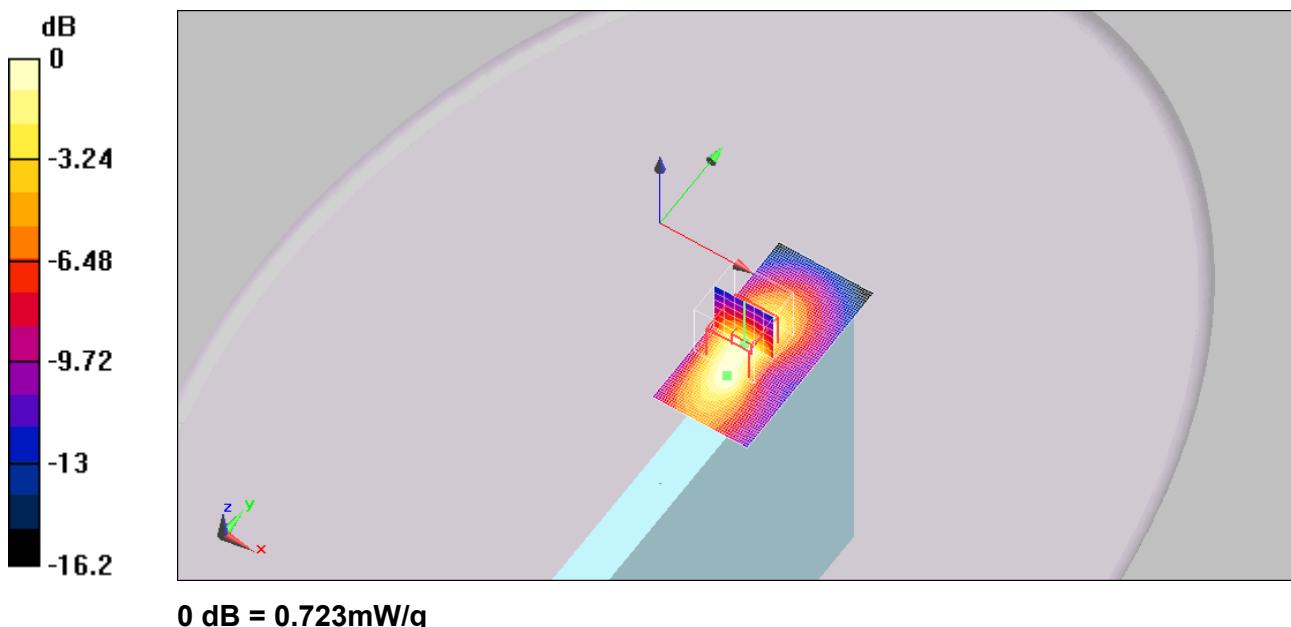
SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.296 mW/g

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



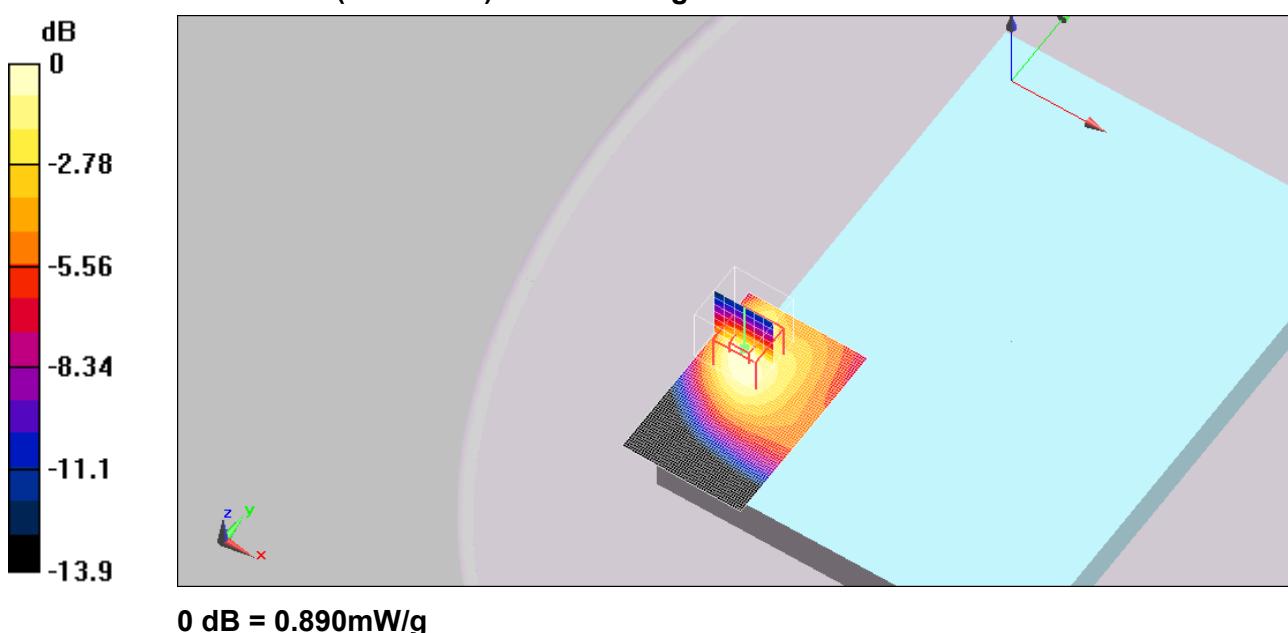
< WCDMA Band V CH4183 836.6 MHz Top Body / Date : Mar 12, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: W-CDMA 850 (Band 5); Frequency: 836.6 MHz; Duty Cycle: 1:1****Medium parameters used : $f = 836.6 \text{ MHz}$; $\sigma = 0.962 \text{ mho/m}$; $\epsilon_r = 54.9$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch4183_836.6 MHz_Top/Area Scan (41x81x1): Measurement grid: dx=12mm, dy=12mm**Maximum value of SAR = 0.758 mW/g****WCDMA_ch4183_836.6 MHz_Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 17.1 V/m; Power Drift = -0.186 dB****Peak SAR (extrapolated) = 1.21 W/kg****SAR(1 g) = 0.556 mW/g; SAR(10 g) = 0.289 mW/g****Maximum value of SAR (measured) = 0.723 mW/g**

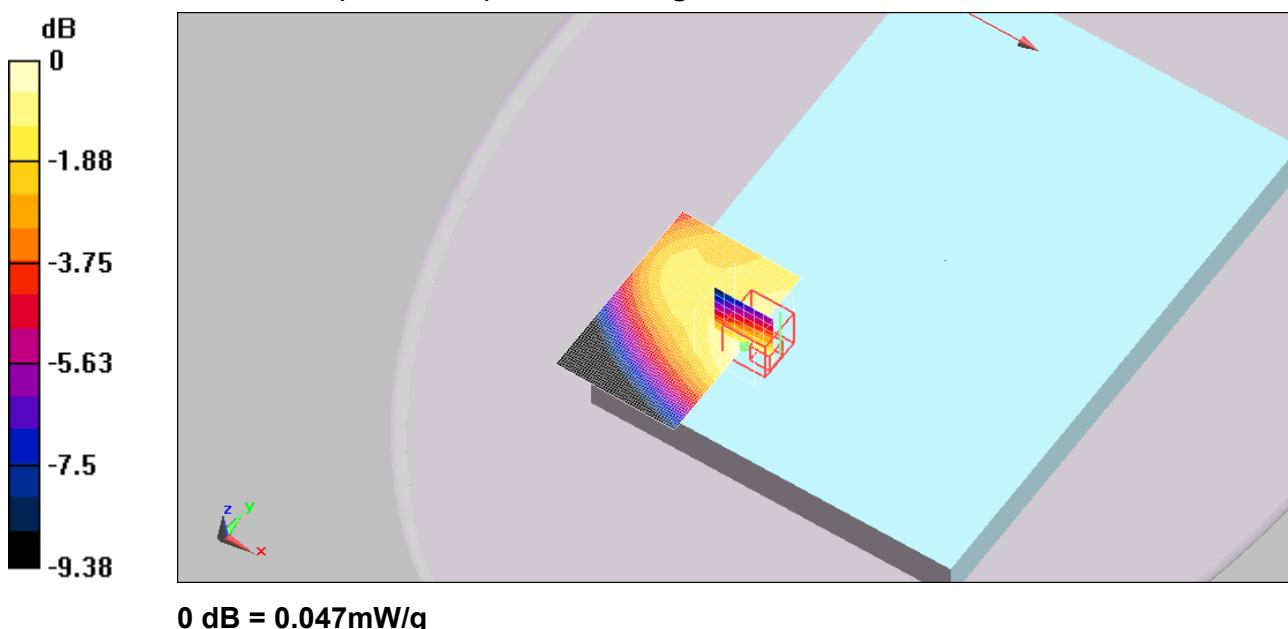
< WCDMA Band V CH4183 836.6 MHz Back Body Repeated / Date : Mar 30, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: W-CDMA 850(Band 5); Frequency: 836.6 MHz; Duty Cycle: 1:1****Medium parameters used : $f = 836.6 \text{ MHz}$; $\sigma = 0.959 \text{ mho/m}$; $\epsilon_r = 54.7$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch4183_836.6 MHz_Back_Repeated/Area Scan (51x81x1): Measurement grid:**dx=12mm, dy=12mm****Maximum value of SAR = 0.900 mW/g****WCDMA_ch4183_836.6 MHz_Back_Repeated/Zoom Scan (7x7x7)/Cube 0: Measurement grid:****dx=5mm, dy=5mm, dz=5mm****Reference Value = 31.5 V/m; Power Drift = -0.167 dB****Peak SAR (extrapolated) = 1.3 W/kg****SAR(1 g) = 0.696 mW/g; SAR(10 g) = 0.412 mW/g****Maximum value of SAR (measured) = 0.890 mW/g**

< WCDMA Band V CH4183 836.6 MHz Back Body with Bar Code-IC / Date : Mar 30, 2015 >**DUT: ET100; Type: Sample; Serial: Not Specified****Communication System: W-CDMA 850(Band 5); Frequency: 836.6 MHz; Duty Cycle: 1:1****Medium parameters used : $f = 836.6 \text{ MHz}$; $\sigma = 0.959 \text{ mho/m}$; $\epsilon_r = 54.7$; $\rho = 1000 \text{ kg/m}^3$** **Phantom section: Flat Section****DASY5 Configuration:**

- Probe: ES3DV3 - SN3171; ConvF(6.08, 6.08, 6.08); Calibrated: 2014-07-18
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

WCDMA_ch4183_836.6 MHz_Back_Bar Code-IC/Area Scan (51x81x1): Measurement grid: dx=12mm, dy=12mm**Maximum value of SAR = 0.044 mW/g****WCDMA_ch4183_836.6 MHz_Back_Bar Code-IC/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm****Reference Value = 7.45 V/m; Power Drift = 0.041 dB****Peak SAR (extrapolated) = 0.055 W/kg****SAR(1 g) = 0.041 mW/g; SAR(10 g) = 0.030 mW/g****Maximum value of SAR (measured) = 0.047 mW/g**

< 802.11b CH1 2 412 MHz 1 Mbps Front Body / Date : Mar 27, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 2412 \text{ MHz}$; $\sigma = 1.9 \text{ mho/m}$; $\epsilon_r = 53.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(7.13, 7.13, 7.13); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11b_ch1_2 412MHz_1 Mbps_Front/Area Scan (91x61x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.611 mW/g

802.11b_ch1_2 412MHz_1 Mbps_Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

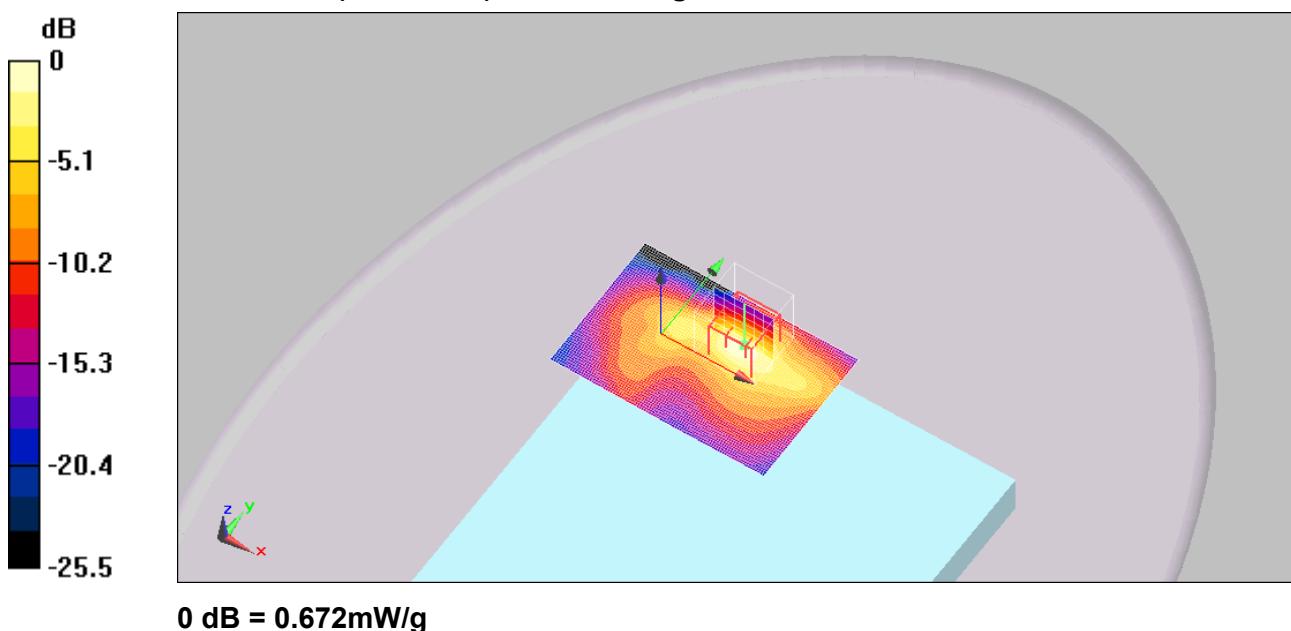
dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.7 V/m; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 0.964 W/kg

SAR(1 g) = 0.429 mW/g; SAR(10 g) = 0.188 mW/g

Maximum value of SAR (measured) = 0.672 mW/g



< 802.11b CH6 2 437 MHz 1 Mbps Front Body / Date : Mar 27, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 2437 \text{ MHz}$; $\sigma = 1.93 \text{ mho/m}$; $\epsilon_r = 53.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(7.13, 7.13, 7.13); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11b_ch6_2 437MHz_1 Mbps_Front/Area Scan (111x71x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.564 mW/g

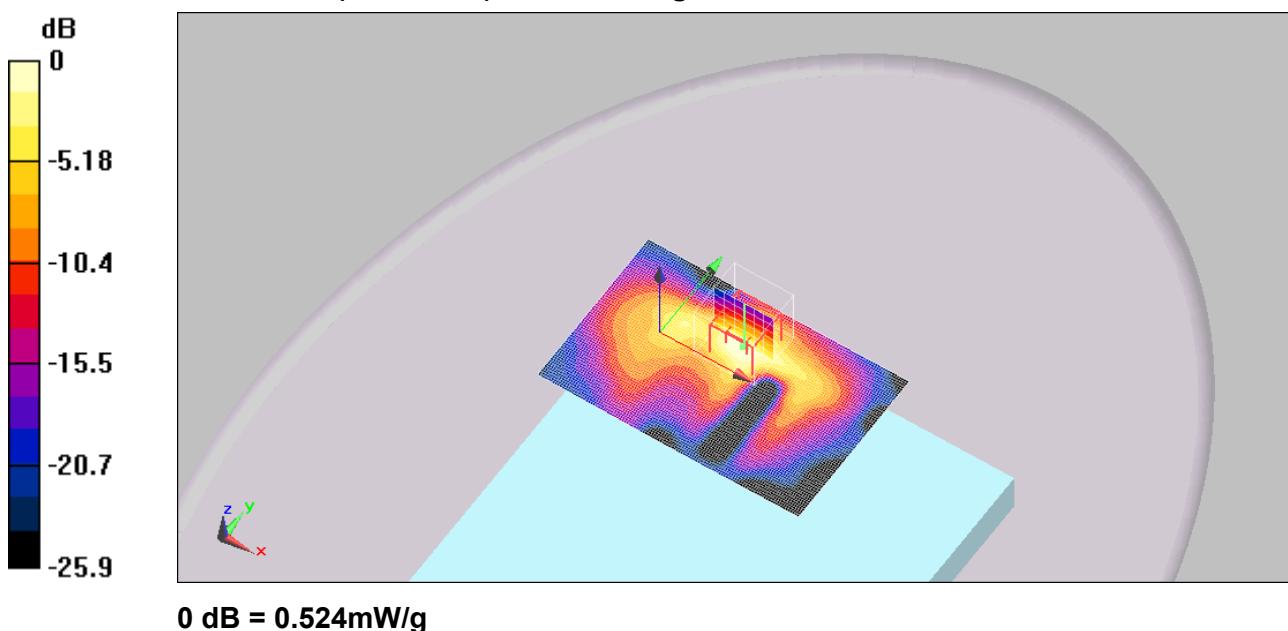
802.11b_ch6_2 437MHz_1 Mbps_Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11 V/m; Power Drift = -0.136 dB

Peak SAR (extrapolated) = 0.786 W/kg

SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.148 mW/g

Maximum value of SAR (measured) = 0.524 mW/g



< 802.11b CH11 2 462 MHz 1 Mbps Front Body / Date : Mar 27, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 2462 \text{ MHz}$; $\sigma = 1.96 \text{ mho/m}$; $\epsilon_r = 53.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(7.13, 7.13, 7.13); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11b_ch11_2 462MHz_1 Mbps_Front/Area Scan (91x61x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 0.498 mW/g

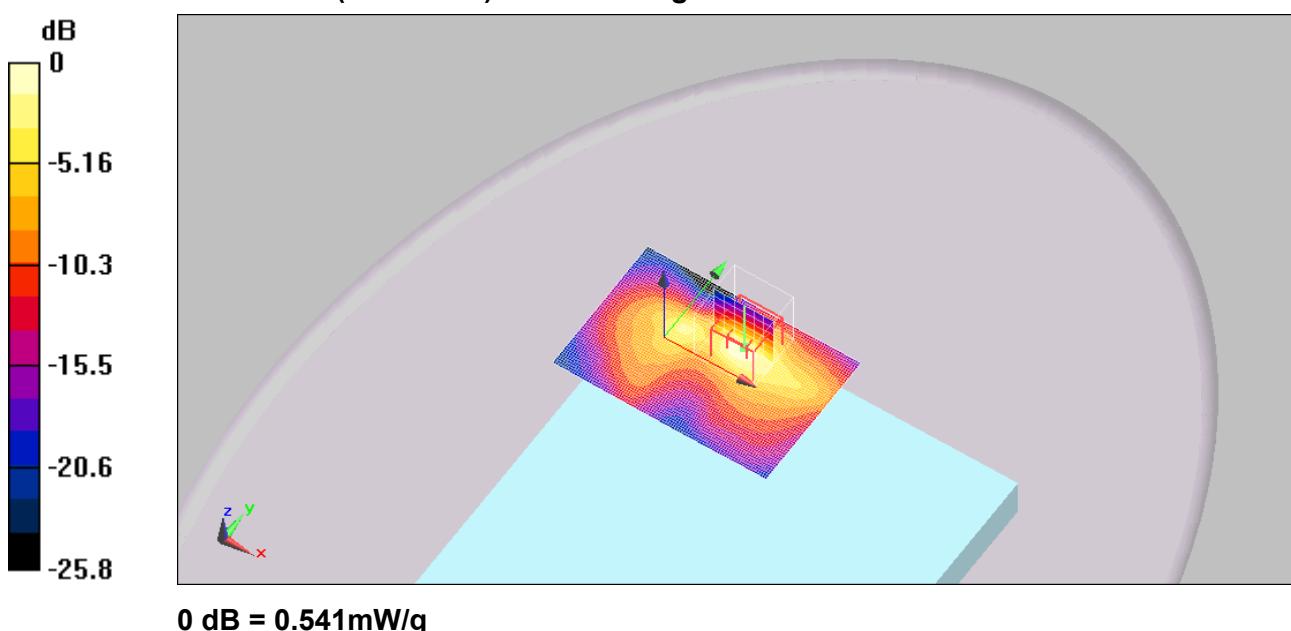
802.11b_ch11_2 462MHz_1 Mbps_Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.9 V/m; Power Drift = -0.160 dB

Peak SAR (extrapolated) = 0.776 W/kg

SAR(1 g) = 0.339 mW/g; SAR(10 g) = 0.143 mW/g

Maximum value of SAR (measured) = 0.541 mW/g



< 802.11b CH6 2 437 MHz 1 Mbps Back Body / Date : Mar 27, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 2437 \text{ MHz}$; $\sigma = 1.93 \text{ mho/m}$; $\epsilon_r = 53.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(7.13, 7.13, 7.13); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11b_ch6_2 437MHz_1 Mbps_Back/Area Scan (91x61x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.503 mW/g

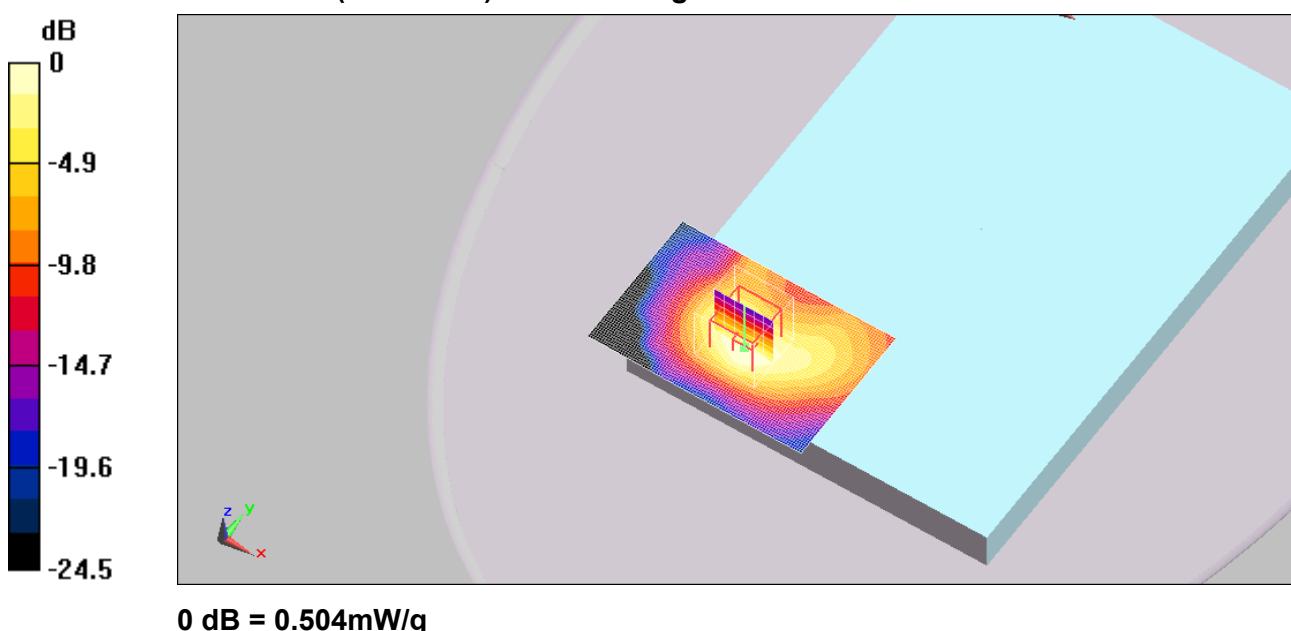
802.11b_ch6_2 437MHz_1 Mbps_Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.9 V/m; Power Drift = -0.150 dB

Peak SAR (extrapolated) = 0.700 W/kg

SAR(1 g) = 0.336 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.504 mW/g



< 802.11b CH6 2 437 MHz 1 Mbps Right Body / Date : Mar 27, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(7.13, 7.13, 7.13); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11b_ch6_2 437MHz_1 Mbps_Right/Area Scan (41x91x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.175 mW/g

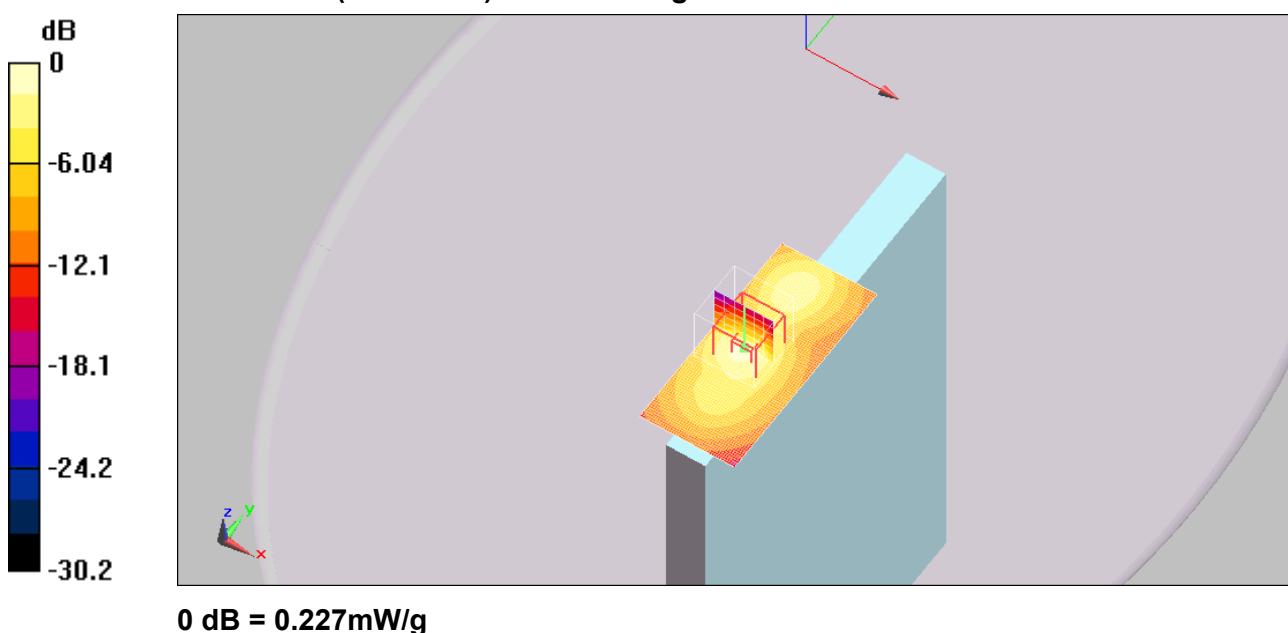
802.11b_ch6_2 437MHz_1 Mbps_Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.26 V/m; Power Drift = 0.122 dB

Peak SAR (extrapolated) = 0.310 W/kg

SAR(1 g) = 0.153 mW/g; SAR(10 g) = 0.071 mW/g

Maximum value of SAR (measured) = 0.227 mW/g



< 802.11b CH1 2 412 MHz 1 Mbps Front Body with Bar Code-IC / Date : Mar 27, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 2412 \text{ MHz}$; $\sigma = 1.9 \text{ mho/m}$; $\epsilon_r = 53.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(7.13, 7.13, 7.13); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11b_ch1_2 412MHz_1 Mbps_Front_Bar Code-IC /Area Scan (191x241x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.524 mW/g

802.11b_ch1_2 412MHz_1 Mbps_Front_Bar Code-IC /Zoom Scan (7x7x7)/Cube 0:

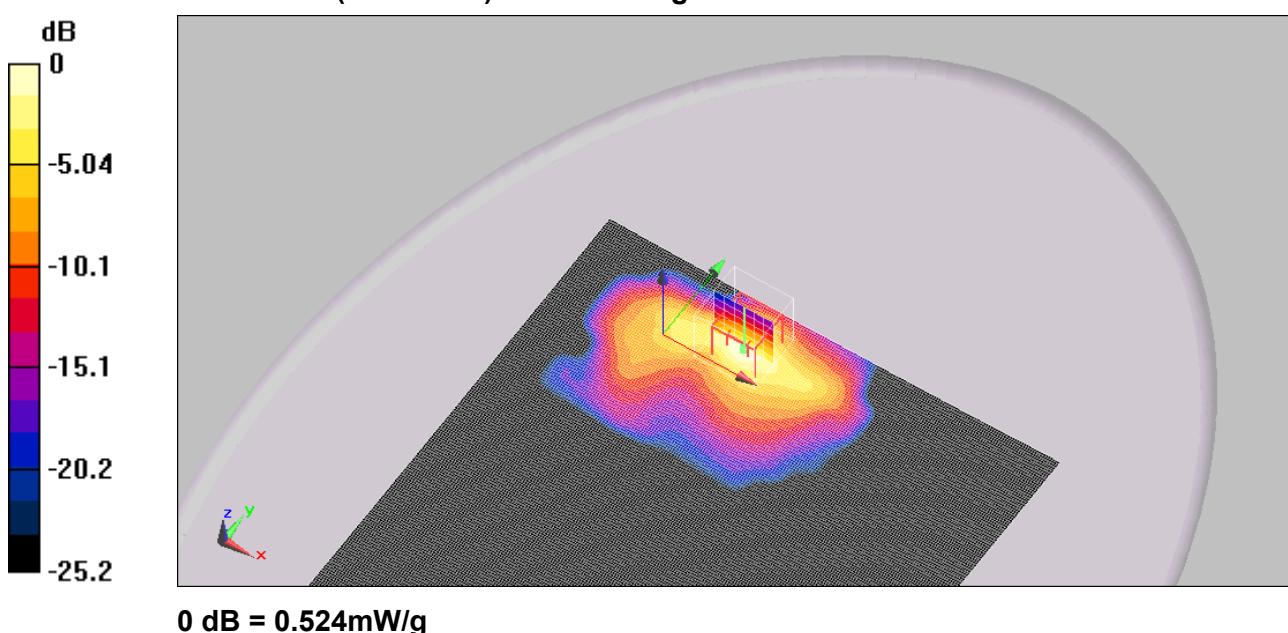
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.5 V/m; Power Drift = 0.072 dB

Peak SAR (extrapolated) = 0.793 W/kg

SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.155 mW/g

Maximum value of SAR (measured) = 0.524 mW/g



< 802.11n HT20 CH1 2 412 MHz MCS0 Front Body MIMO / Date : Mar 27, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 2412 \text{ MHz}$; $\sigma = 1.9 \text{ mho/m}$; $\epsilon_r = 53.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(7.13, 7.13, 7.13); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11n HT20_ch1_2 412MHz_MCS0_Front_MIMO/Area Scan (91x121x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR = 0.264 mW/g

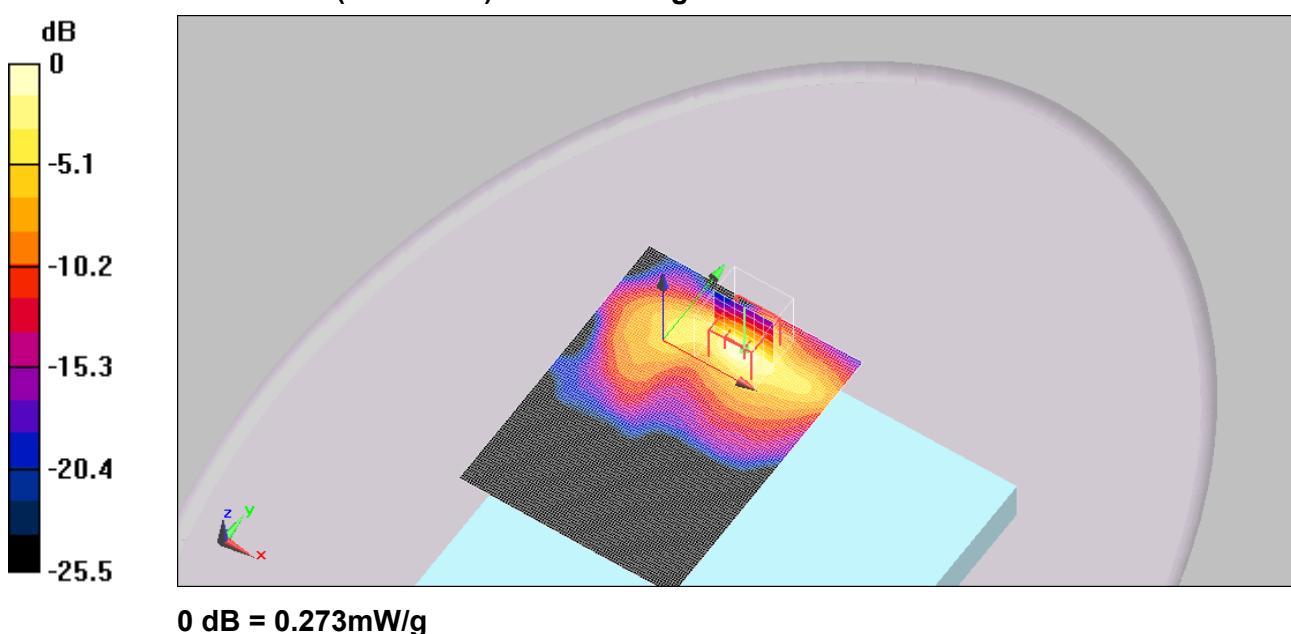
802.11n HT20_ch1_2 412MHz_MCS0_Front_MIMO/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.04 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 0.396 W/kg

SAR(1 g) = 0.179 mW/g; SAR(10 g) = 0.078 mW/g

Maximum value of SAR (measured) = 0.273 mW/g



< 802.11a CH36 5 180 MHz 6 Mbps Back Body / Date : Mar 28, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.43 \text{ mho/m}$; $\epsilon_r = 48.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.41, 4.41, 4.41); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch36_5 180 MHz_6 Mbps_Back_Body/Area Scan (101x81x1): Measurement grid:
 $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.906 mW/g

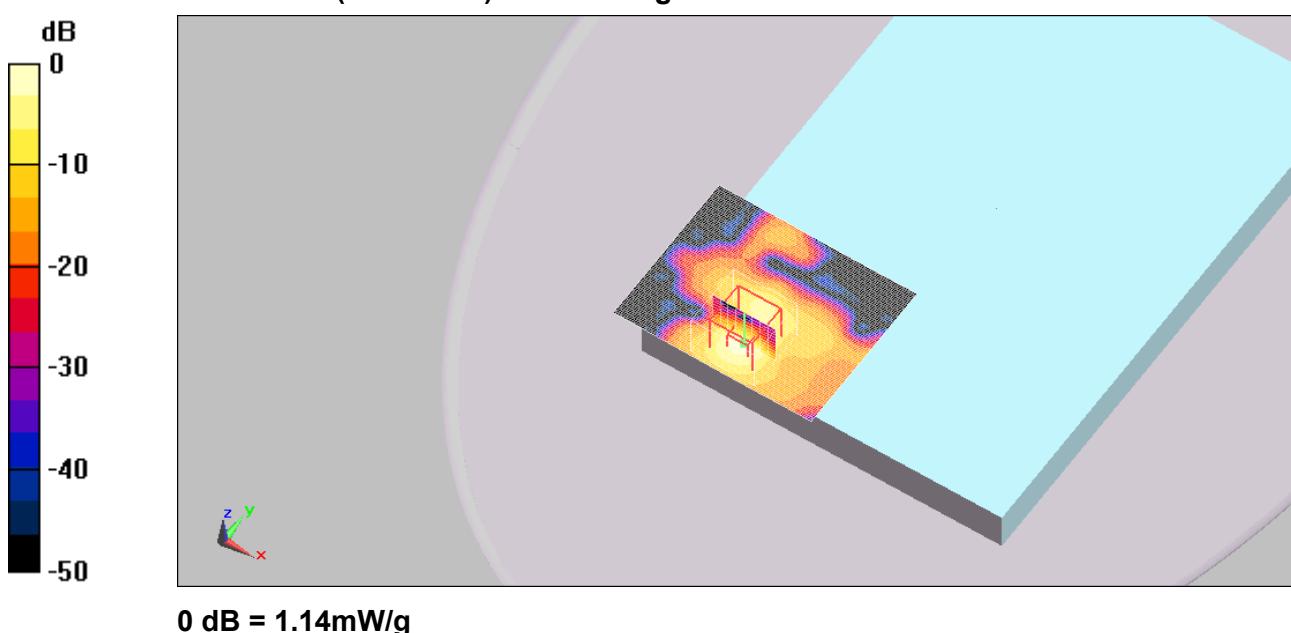
802.11a_ch36_5 180 MHz_6 Mbps_Back_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 9.71 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 2.42 W/kg

SAR(1 g) = 0.522 mW/g; SAR(10 g) = 0.137 mW/g

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



< 802.11a CH48 5 240 MHz 6 Mbps Back Body / Date : Mar 28, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 5.51 \text{ mho/m}$; $\epsilon_r = 48.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.41, 4.41, 4.41); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch48_5 240 MHz_6 Mbps_Back_Body/Area Scan (101x81x1): Measurement grid:
 $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.901 mW/g

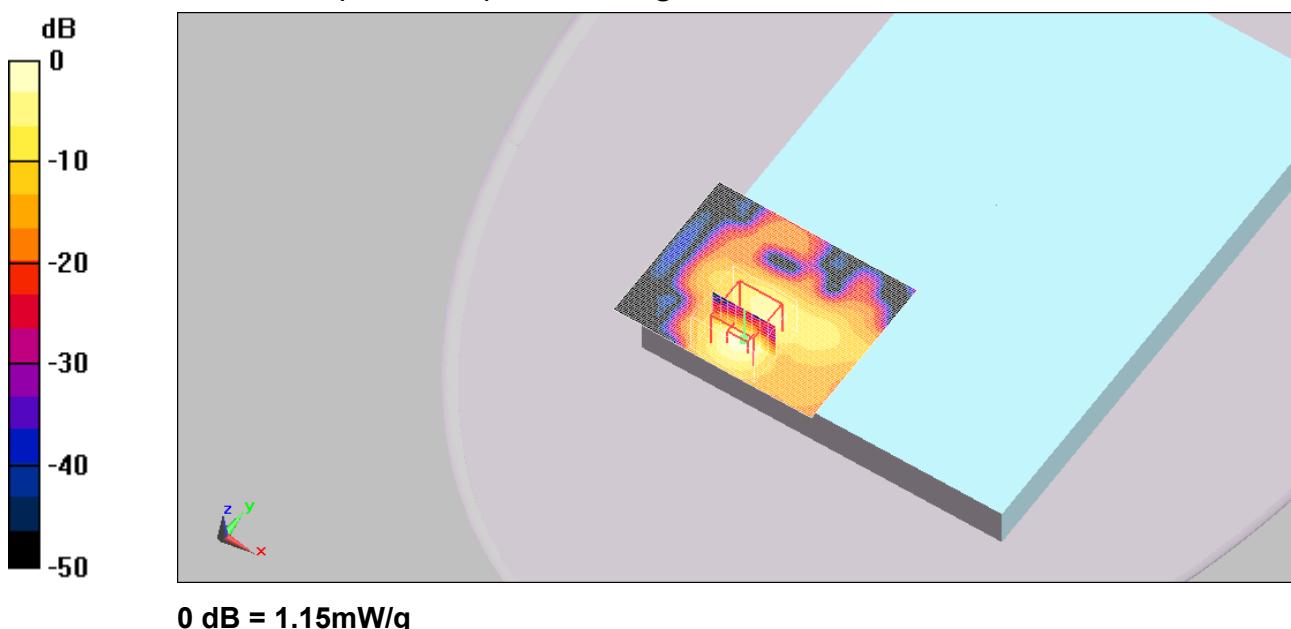
802.11a_ch48_5 240 MHz_6 Mbps_Back_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 9.57 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 2.53 W/kg

SAR(1 g) = 0.521 mW/g; SAR(10 g) = 0.135 mW/g

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



< 802.11a CH48 5 240 MHz 6 Mbps Front Body / Date : Mar 28, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 5.51 \text{ mho/m}$; $\epsilon_r = 48.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.41, 4.41, 4.41); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch48_5 240MHz_6Mbps_Front_Body/Area Scan (111x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.881 mW/g

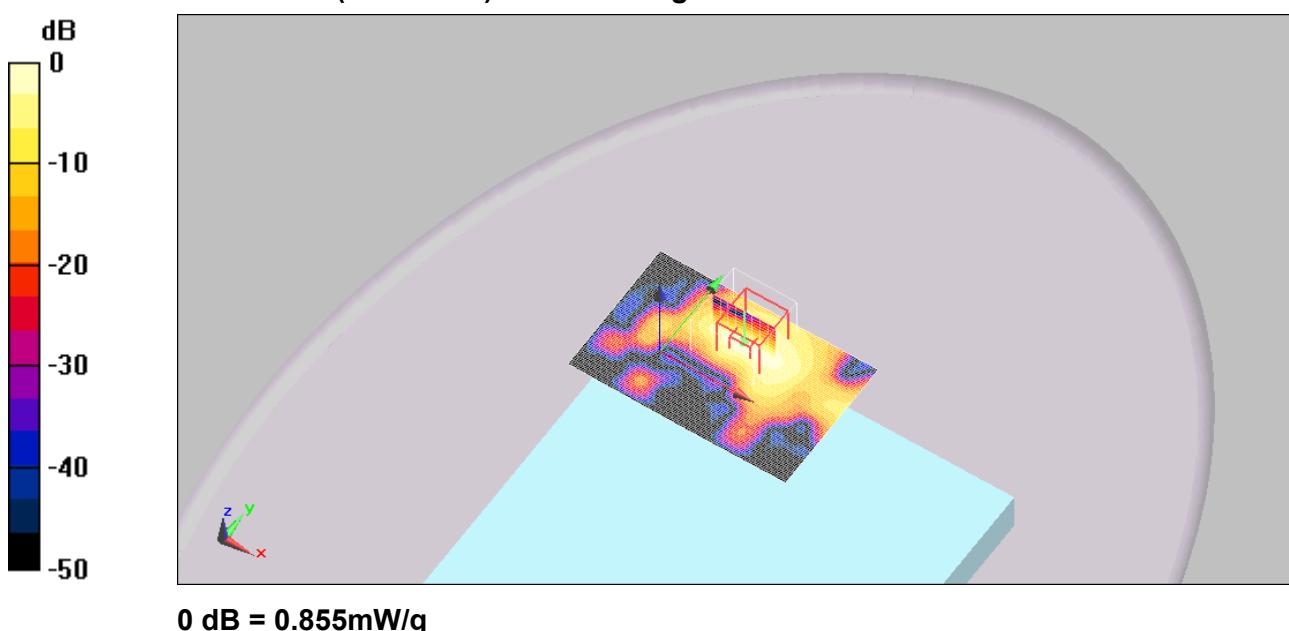
802.11a_ch48_5 240MHz_6Mbps_Front_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 12.2 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 1.73 W/kg

SAR(1 g) = 0.440 mW/g; SAR(10 g) = 0.133 mW/g

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



< 802.11a CH48 5 240 MHz 6 Mbps Right Body / Date : Mar 28, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used: $f = 5240 \text{ MHz}$; $\sigma = 5.51 \text{ mho/m}$; $\epsilon_r = 48.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.41, 4.41, 4.41); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch48_5 240 MHz_6 Mbps_Right_Body/Area Scan (41x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.839 mW/g

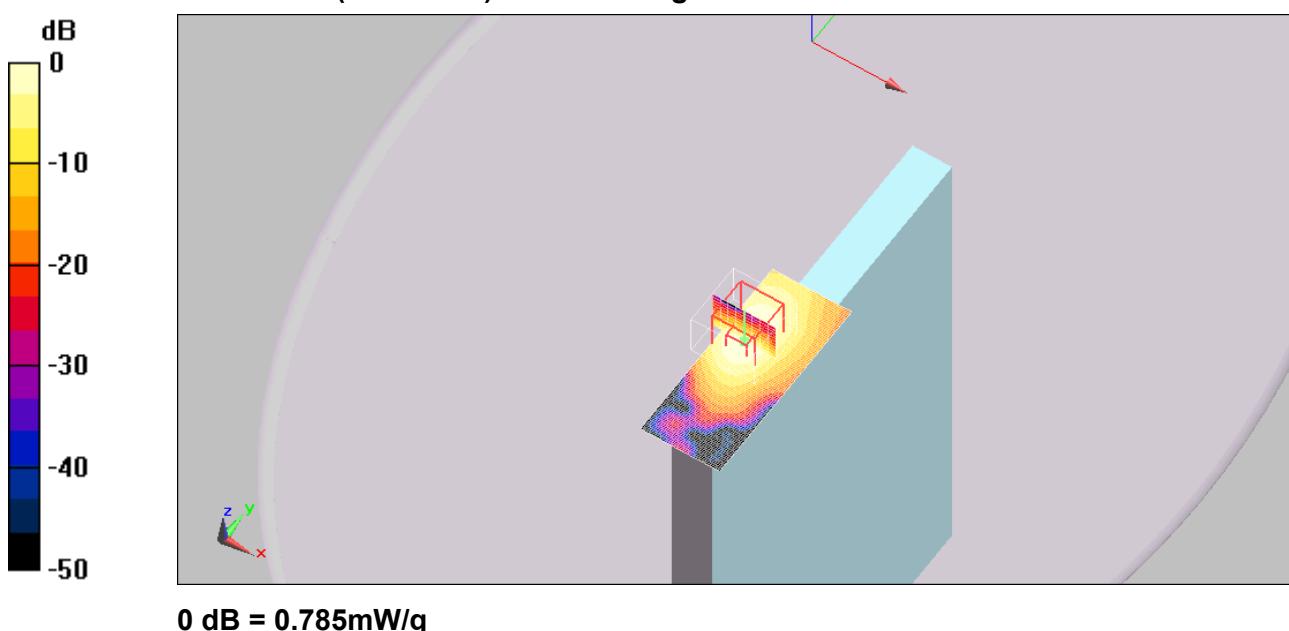
802.11a_ch48_5 240 MHz_6 Mbps_Right_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 8.91 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.416 mW/g; SAR(10 g) = 0.146 mW/g

Maximum value of SAR (measured) = 0.785 mW/g



< 802.11a CH36 5 180 MHz 6 Mbps Back Body Repeated / Date : Mar 28, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.43 \text{ mho/m}$; $\epsilon_r = 48.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.41, 4.41, 4.41); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch36_5 180 MHz_6 Mbps_Back_Body_Repeated/Area Scan (101x81x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.901 mW/g

802.11a_ch36_5 180 MHz_6 Mbps_Back_Body_Repeated/Zoom Scan (9x9x12)/Cube 0:

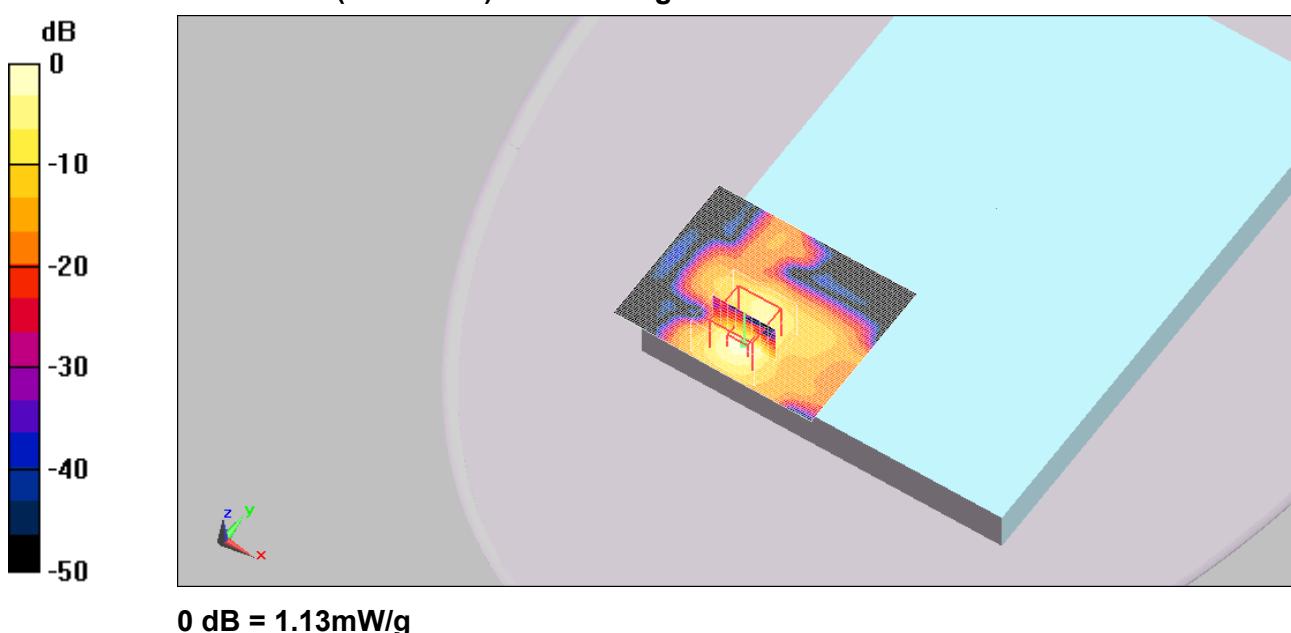
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 9.5 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 2.47 W/kg

SAR(1 g) = 0.522 mW/g; SAR(10 g) = 0.138 mW/g

Maximum value of SAR (measured) = 1.13 mW/g



< 802.11a CH36 5 180 MHz 6 Mbps Back Body with Bar Code-IC / Date : Mar 28, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.43 \text{ mho/m}$; $\epsilon_r = 48.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.41, 4.41, 4.41); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch36_5 180 MHz_6 Mbps_Back_Body_Bar Code-IC/Area Scan (221x281x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.139 mW/g

802.11a_ch36_5 180 MHz_6 Mbps_Back_Body_Bar Code-IC/Zoom Scan (9x9x12)/Cube 0:

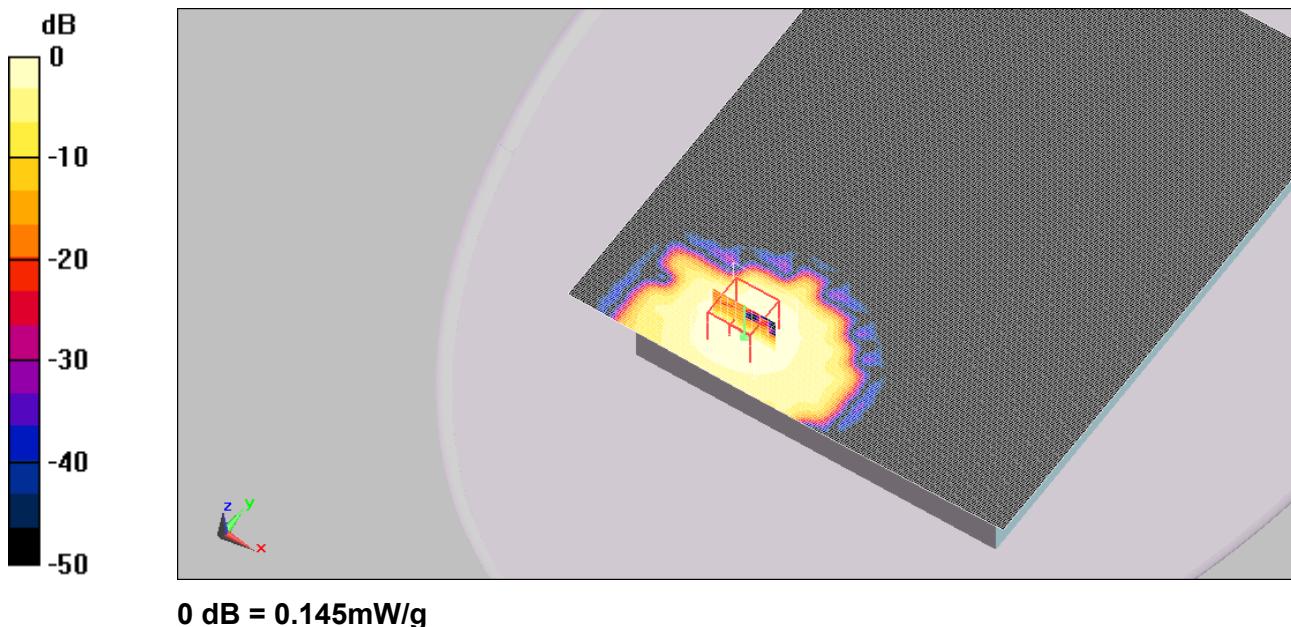
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 5.85 V/m; Power Drift = -0.127 dB

Peak SAR (extrapolated) = 0.325 W/kg

SAR(1 g) = 0.085 mW/g; SAR(10 g) = 0.036 mW/g

Maximum value of SAR (measured) = 0.145 mW/g



< 802.11a HT20 CH36 5 180 MHz MCS0 Back Body MIMO / Date : Mar 28, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.43 \text{ mho/m}$; $\epsilon_r = 48.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.41, 4.41, 4.41); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a HT20_ch36_5 180 MHz_MCS0_Back_Body_MIMO/Area Scan (101x131x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.395 mW/g

802.11a HT20_ch36_5 180 MHz_MCS0_Back_Body_MIMO/Zoom Scan (9x9x12)/Cube 0:

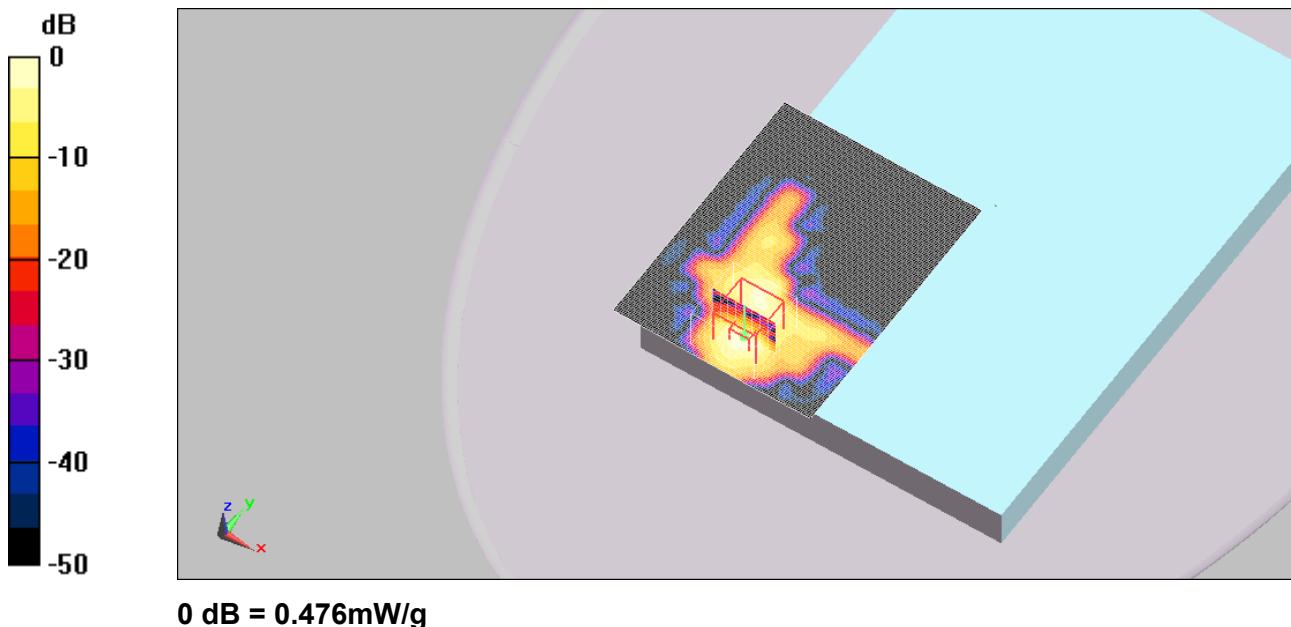
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 5.86 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.058 mW/g

Maximum value of SAR (measured) = 0.476 mW/g



< 802.11a CH52 5 260 MHz 6 Mbps Right Body / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.52 \text{ mho/m}$; $\epsilon_r = 48.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.22, 4.22, 4.22); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch52_5 260 MHz_6 Mbps_Right_Body/Area Scan (41x101x1): Measurement grid:
 $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 1.55 mW/g

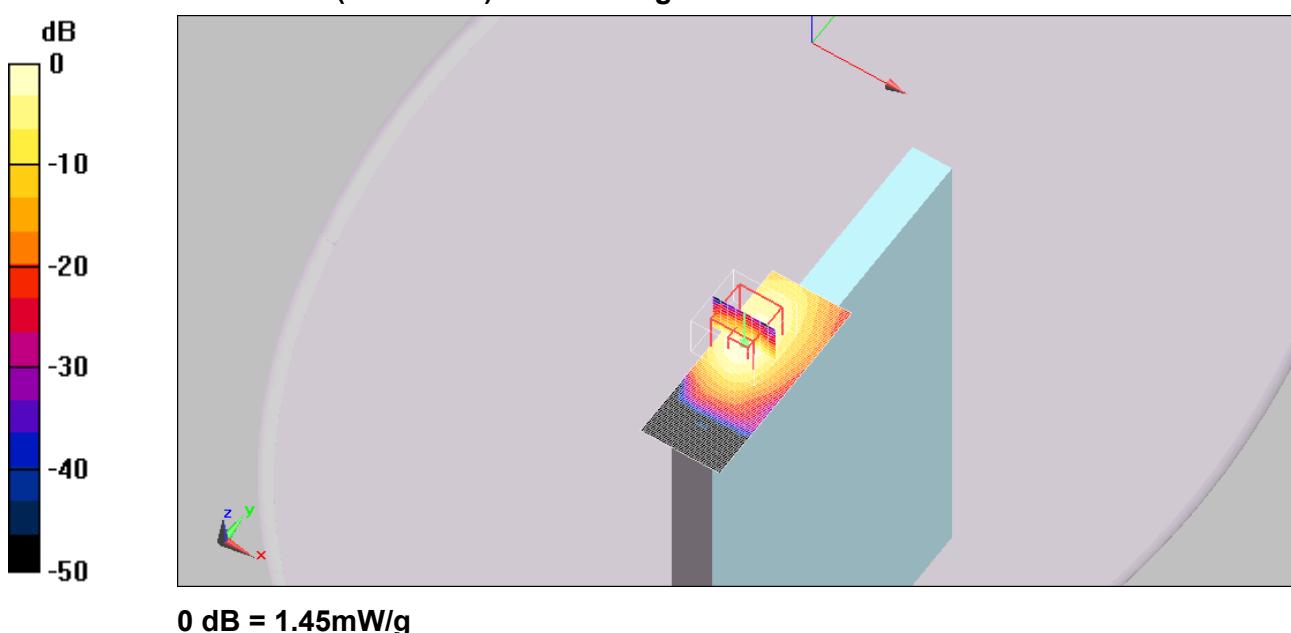
802.11a_ch52_5 260 MHz_6 Mbps_Right_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 10.8 V/m; Power Drift = -0.145 dB

Peak SAR (extrapolated) = 3.02 W/kg

SAR(1 g) = 0.751 mW/g; SAR(10 g) = 0.245 mW/g

Maximum value of SAR (measured) = 1.45 mW/g



< 802.11a CH64 5 320 MHz 6 Mbps Right Body / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5320 \text{ MHz}$; $\sigma = 5.6 \text{ mho/m}$; $\epsilon_r = 48$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.22, 4.22, 4.22); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch64_5 320 MHz_6 Mbps_Right_Body/Area Scan (41x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.720 mW/g

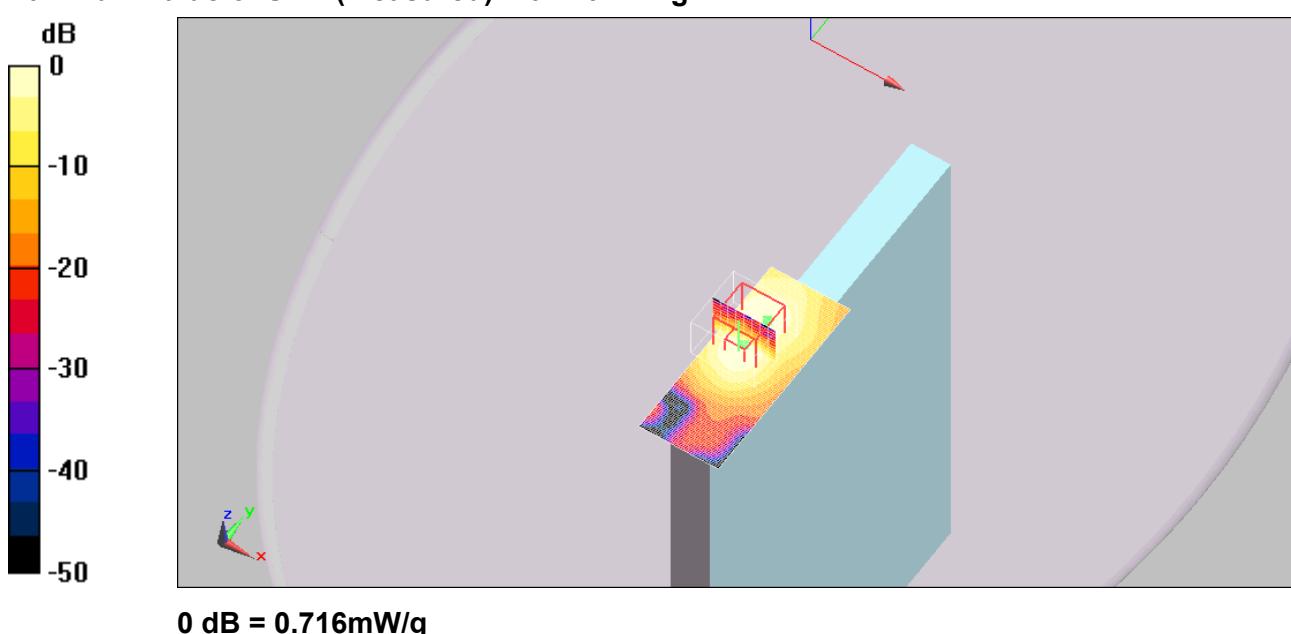
802.11a_ch64_5 320 MHz_6 Mbps_Right_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 9.86 V/m; Power Drift = 0.030 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.379 mW/g; SAR(10 g) = 0.139 mW/g

Maximum value of SAR (measured) = 0.716 mW/g



< 802.11a CH52 5 260 MHz 6 Mbps Front Body / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.52 \text{ mho/m}$; $\epsilon_r = 48.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.22, 4.22, 4.22); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch52_5 260MHz_6Mbps_Front_Body/Area Scan (111x71x1): Measurement grid:
 $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.950 mW/g

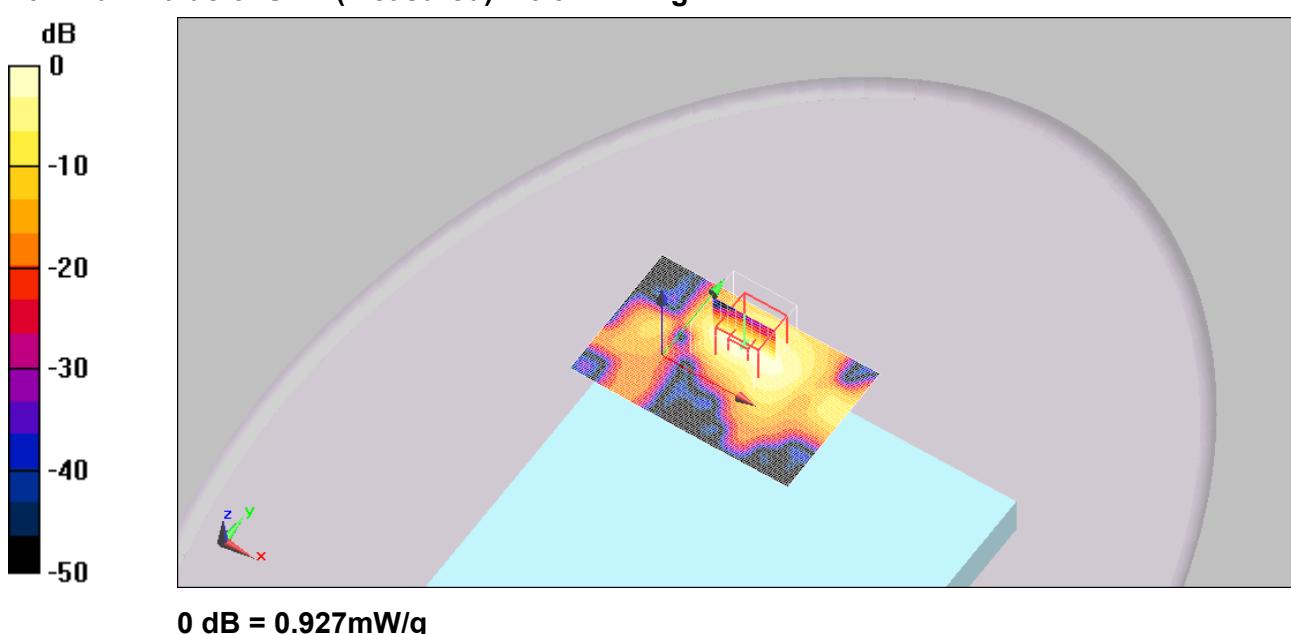
802.11a_ch52_5 260MHz_6Mbps_Front_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 13.7 V/m; Power Drift = -0.187 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 0.486 mW/g; SAR(10 g) = 0.150 mW/g

Maximum value of SAR (measured) = 0.927 mW/g



< 802.11a CH52 5 260 MHz 6 Mbps Back Body / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.52 \text{ mho/m}$; $\epsilon_r = 48.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.22, 4.22, 4.22); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch52_5 260 MHz_6 Mbps_Back_Body/Area Scan (101x81x1): Measurement grid:
 $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 1.35 mW/g

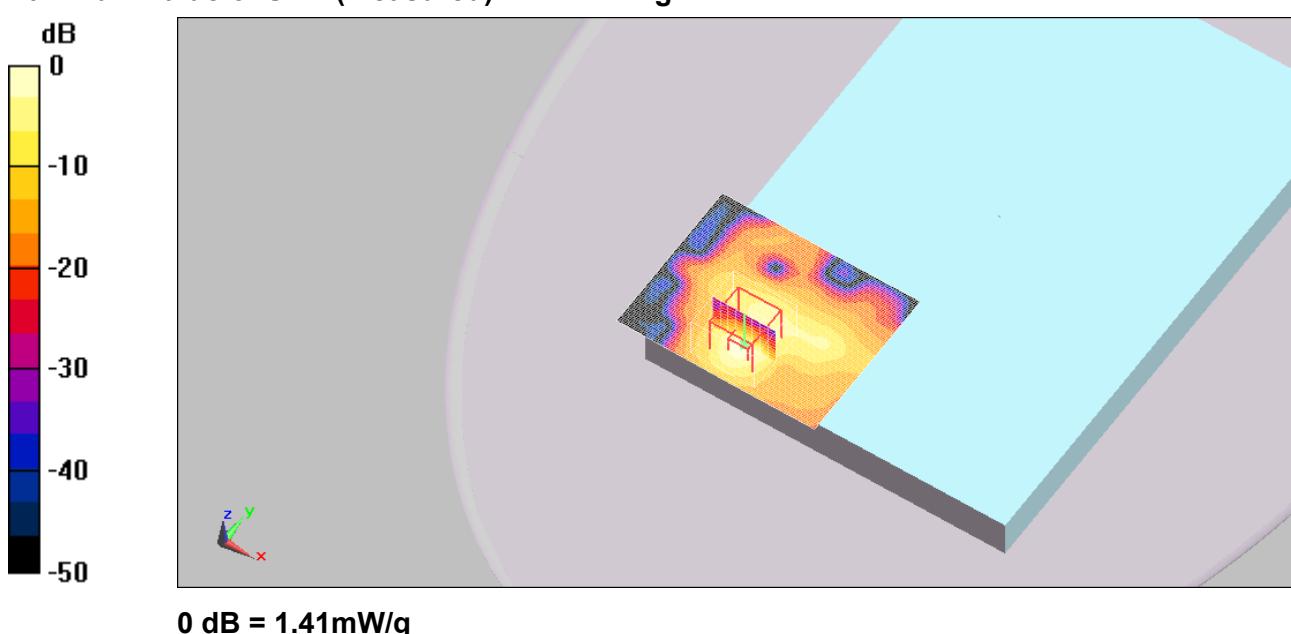
802.11a_ch52_5 260 MHz_6 Mbps_Back_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 10.1 V/m; Power Drift = -0.077 dB

Peak SAR (extrapolated) = 3.21 W/kg

SAR(1 g) = 0.679 mW/g; SAR(10 g) = 0.180 mW/g

Maximum value of SAR (measured) = 1.41 mW/g



< 802.11a CH52 5 260 MHz 6 Mbps Right Body Repeated / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.52 \text{ mho/m}$; $\epsilon_r = 48.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.22, 4.22, 4.22); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch52_5 260 MHz_6 Mbps_Right_Body_Repeated/Area Scan (41x101x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 1.57 mW/g

802.11a_ch52_5 260 MHz_6 Mbps_Right_Body_Repeated/Zoom Scan (9x9x12)/Cube 0:

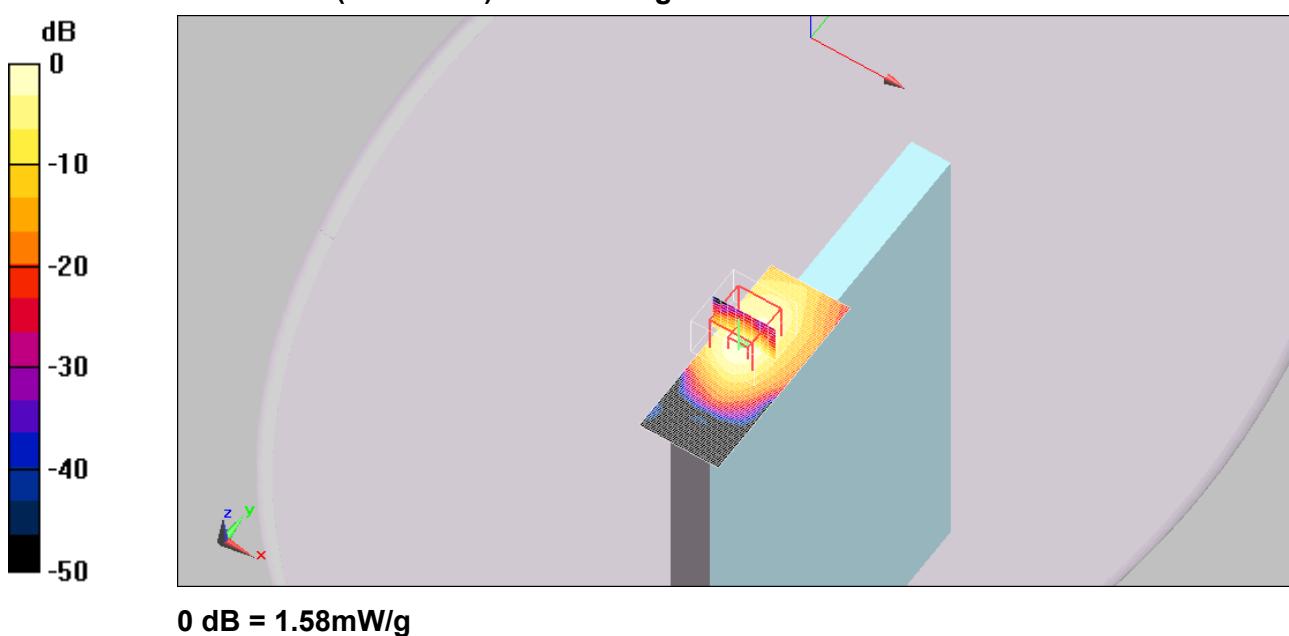
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 12.1 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 3.21 W/kg

SAR(1 g) = 0.826 mW/g; SAR(10 g) = 0.268 mW/g

Maximum value of SAR (measured) = 1.58 mW/g



< 802.11a CH52 5 260 MHz 6 Mbps Right Body with Bar Code-IC / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.52 \text{ mho/m}$; $\epsilon_r = 48.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.22, 4.22, 4.22); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch52_5 260 MHz_6 Mbps_Right_Body_Bar Code-IC/Area Scan (41x201x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 1.65 mW/g

802.11a_ch52_5 260 MHz_6 Mbps_Right_Body_Bar Code-IC/Zoom Scan (9x9x12)/Cube 0:

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

Reference Value = 12.1 V/m; Power Drift = 0.00966 dB

Peak SAR (extrapolated) = 3.33 W/kg

SAR(1 g) = 0.846 mW/g; SAR(10 g) = 0.271 mW/g

Maximum value of SAR (measured) = 1.67 mW/g



< 802.11a HT20 CH52 5 260 MHz MCS0 Right Body MIMO / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.52 \text{ mho/m}$; $\epsilon_r = 48.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.22, 4.22, 4.22); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a HT20_ch52_5 260 MHz_MCS0_Right_Body_MIMO/Area Scan (41x101x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.628 mW/g

802.11a HT20_ch52_5 260 MHz_MCS0_Right_Body_MIMO/Zoom Scan (9x9x12)/Cube 0:

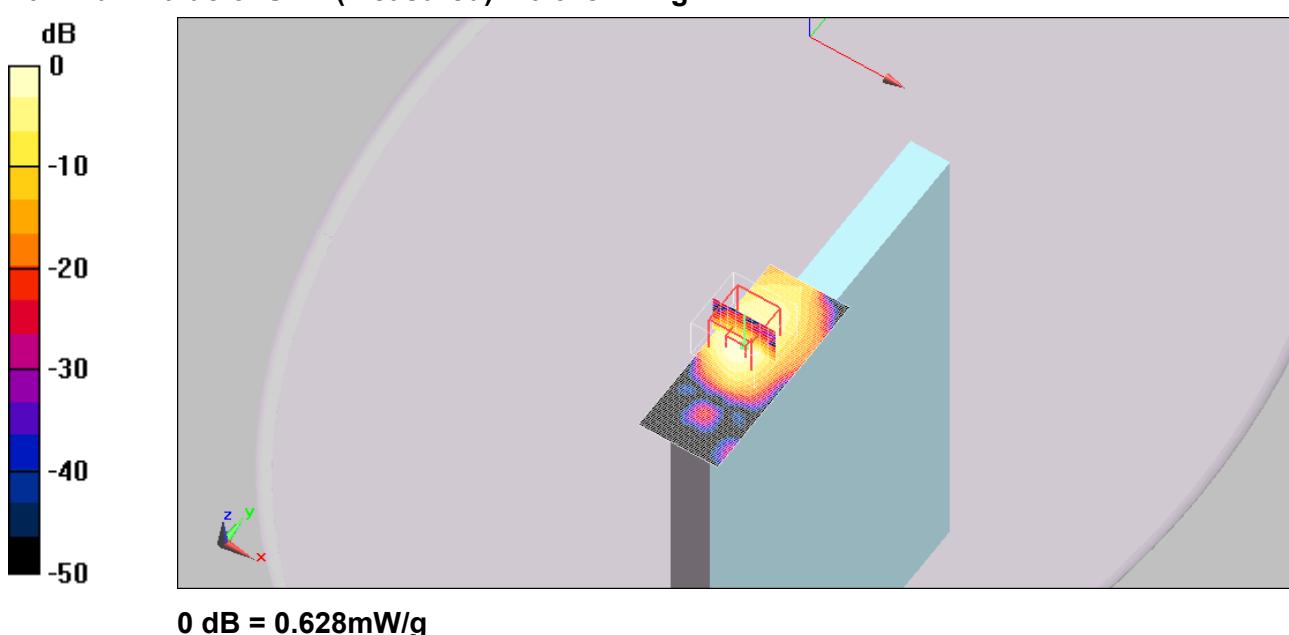
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 7.41 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.316 mW/g; SAR(10 g) = 0.097 mW/g

Maximum value of SAR (measured) = 0.628 mW/g



< 802.11a CH104 5 520 MHz 6 Mbps Front Body / Date : Mar 03, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5520 \text{ MHz}$; $\sigma = 5.87 \text{ mho/m}$; $\epsilon_r = 46.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(3.89, 3.89, 3.89); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch104_5 520 MHz_6 Mbps_Front_Body/Area Scan (111x71x1): Measurement grid:
 $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.327 mW/g

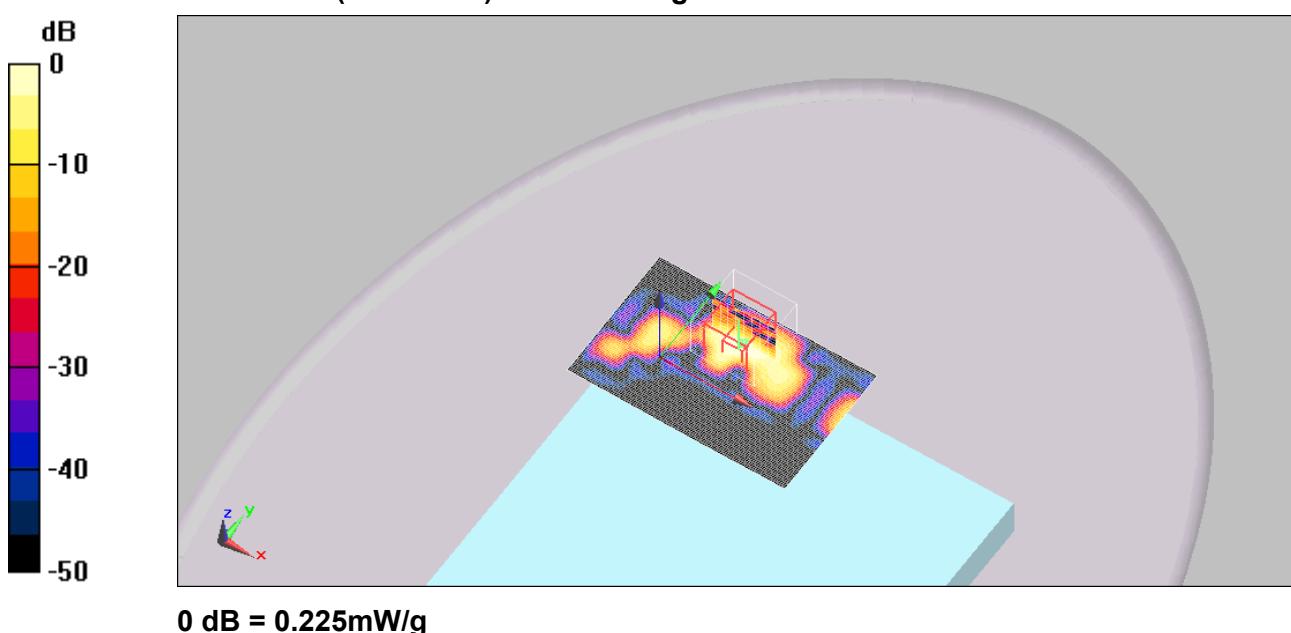
802.11a_ch104_5 520 MHz_6 Mbps_Front_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 6.65 V/m; Power Drift = -0.275 dB

Peak SAR (extrapolated) = 0.408 W/kg

SAR(1 g) = 0.099 mW/g; SAR(10 g) = 0.025 mW/g

Maximum value of SAR (measured) = 0.225 mW/g



< 802.11a CH116 5 580 MHz 6 Mbps Front Body / Date : Mar 03, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580 \text{ MHz}$; $\sigma = 5.94 \text{ mho/m}$; $\epsilon_r = 46.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(3.85, 3.85, 3.85); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch116_5 580 MHz_6 Mbps_Front_Body/Area Scan (111x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.388 mW/g

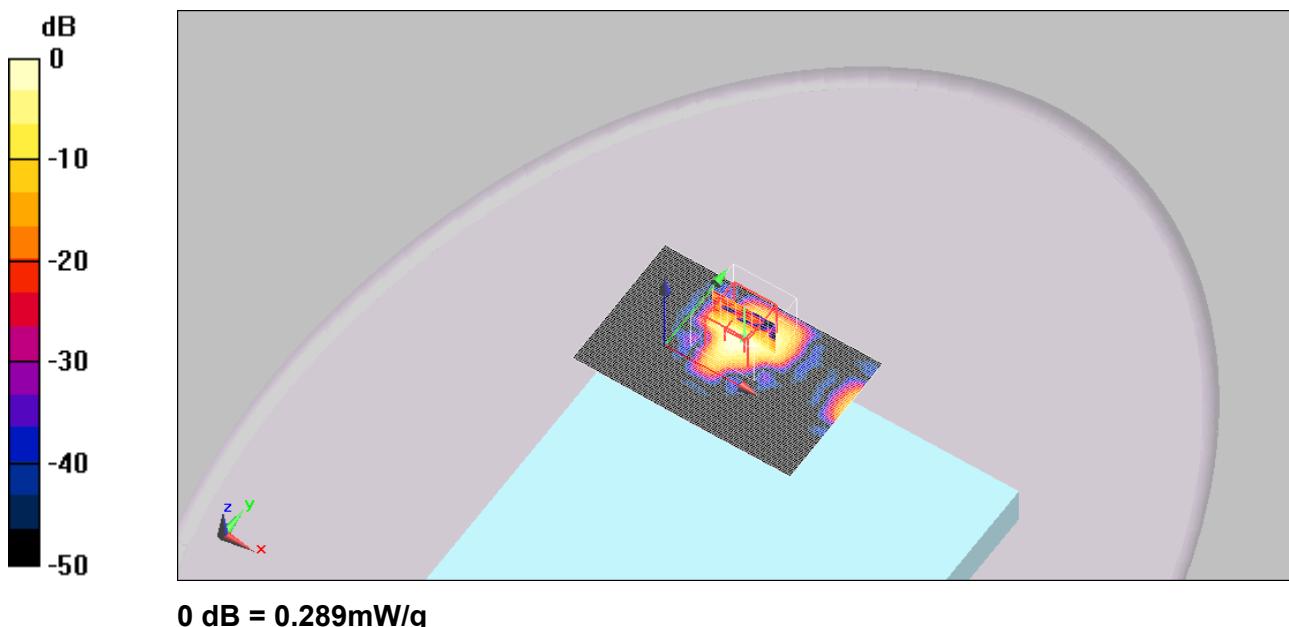
802.11a_ch116_5 580 MHz_6 Mbps_Front_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 7.37 V/m; Power Drift = -0.289 dB

Peak SAR (extrapolated) = 0.538 W/kg

SAR(1 g) = 0.136 mW/g; SAR(10 g) = 0.036 mW/g

Maximum value of SAR (measured) = 0.289 mW/g



< 802.11a CH124 5 620 MHz 6 Mbps Front Body / Date : Mar 03, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5620 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5620 \text{ MHz}$; $\sigma = 6 \text{ mho/m}$; $\epsilon_r = 46.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(3.85, 3.85, 3.85); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch124_5 620 MHz_6 Mbps_Front_Body/Area Scan (111x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.327 mW/g

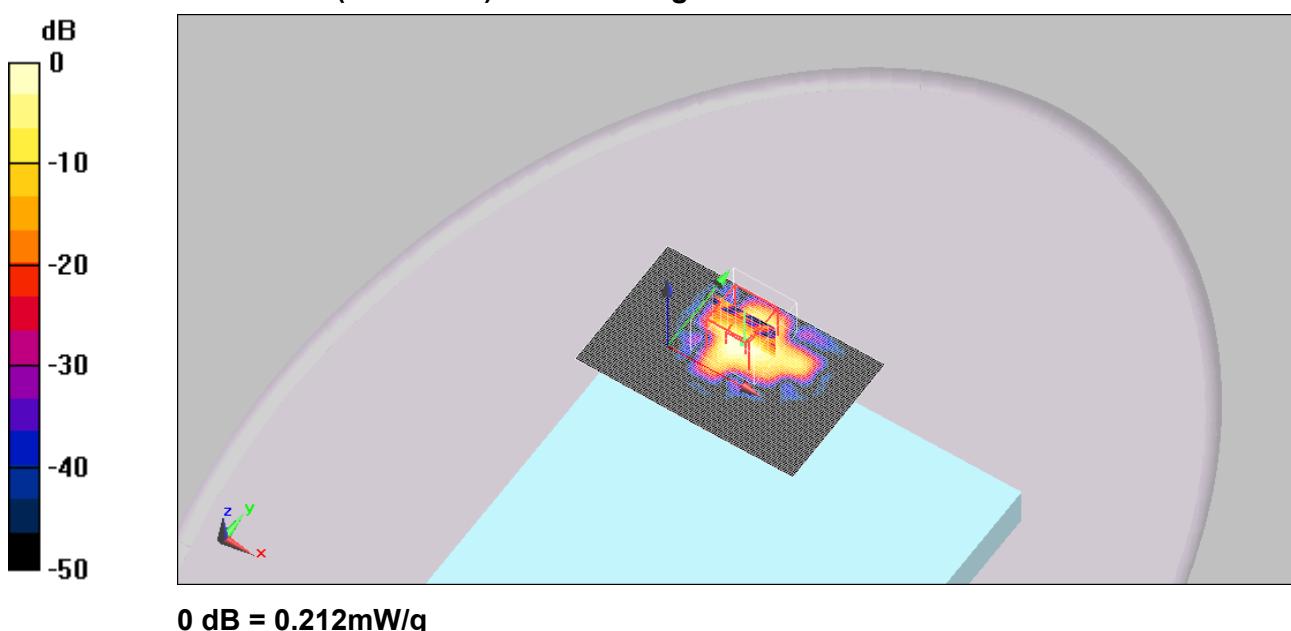
802.11a_ch124_5 620 MHz_6 Mbps_Front_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 6.2 V/m; Power Drift = -0.541 dB

Peak SAR (extrapolated) = 0.388 W/kg

SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.025 mW/g

Maximum value of SAR (measured) = 0.212 mW/g



< 802.11a CH136 5 680 MHz 6 Mbps Front Body / Date : Mar 03, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5680 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5680 \text{ MHz}$; $\sigma = 6.08 \text{ mho/m}$; $\epsilon_r = 46.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(3.85, 3.85, 3.85); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch136_5 680 MHz_6 Mbps_Front_Body/Area Scan (111x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.191 mW/g

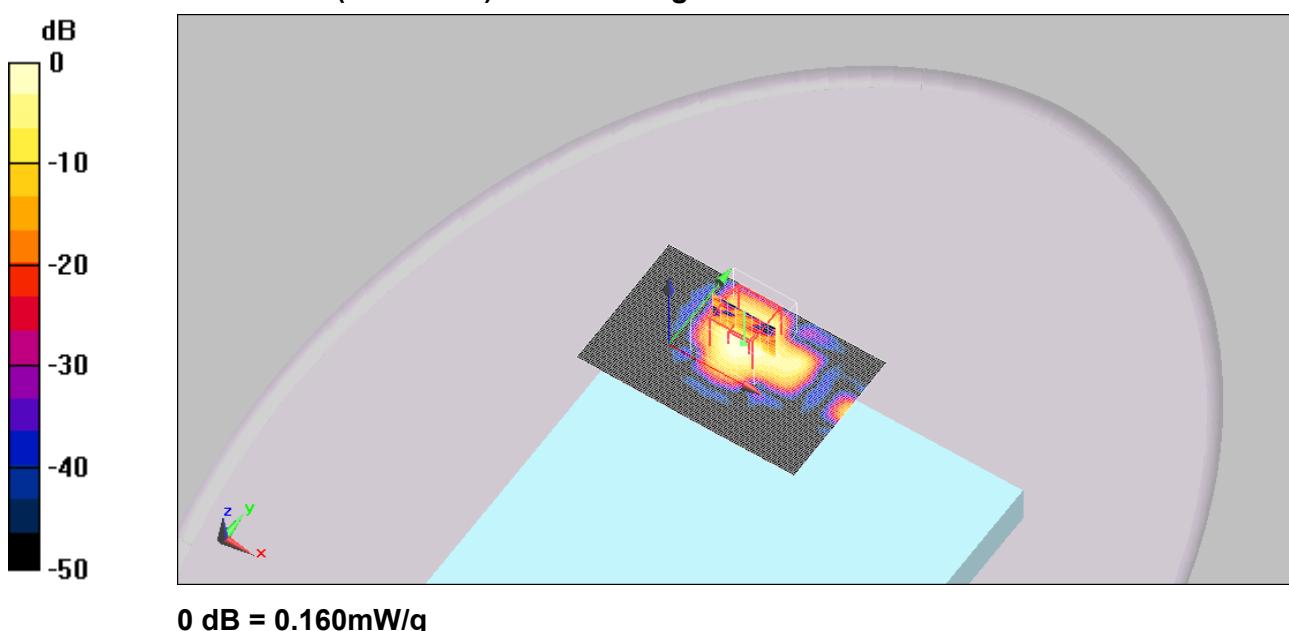
802.11a_ch136_5 680 MHz_6 Mbps_Front_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.17 V/m; Power Drift = -0.278 dB

Peak SAR (extrapolated) = 0.305 W/kg

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.020 mW/g

Maximum value of SAR (measured) = 0.160 mW/g



< 802.11a CH116 5 580 MHz 6 Mbps Back Body / Date : Mar 03, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580 \text{ MHz}$; $\sigma = 5.94 \text{ mho/m}$; $\epsilon_r = 46.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(3.85, 3.85, 3.85); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch116_5 580 MHz_6 Mbps_Back_Body/Area Scan (101x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.429 mW/g

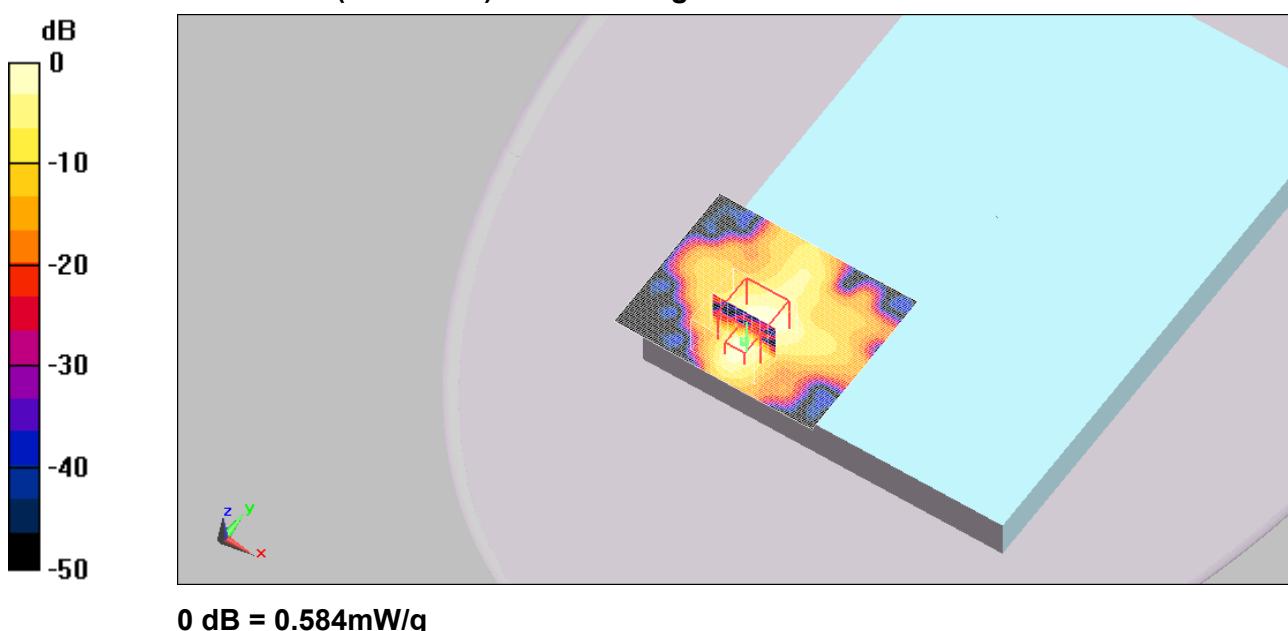
802.11a_ch116_5 580 MHz_6 Mbps_Back_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 8.31 V/m; Power Drift = -0.110 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.255 mW/g; SAR(10 g) = 0.073 mW/g

Maximum value of SAR (measured) = 0.584 mW/g



< 802.11a CH116 5 580 MHz 6 Mbps Right Body / Date : Mar 03, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580 \text{ MHz}$; $\sigma = 5.94 \text{ mho/m}$; $\epsilon_r = 46.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(3.85, 3.85, 3.85); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch116_5 580 MHz_6 Mbps_Right_Body/Area Scan (41x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.576 mW/g

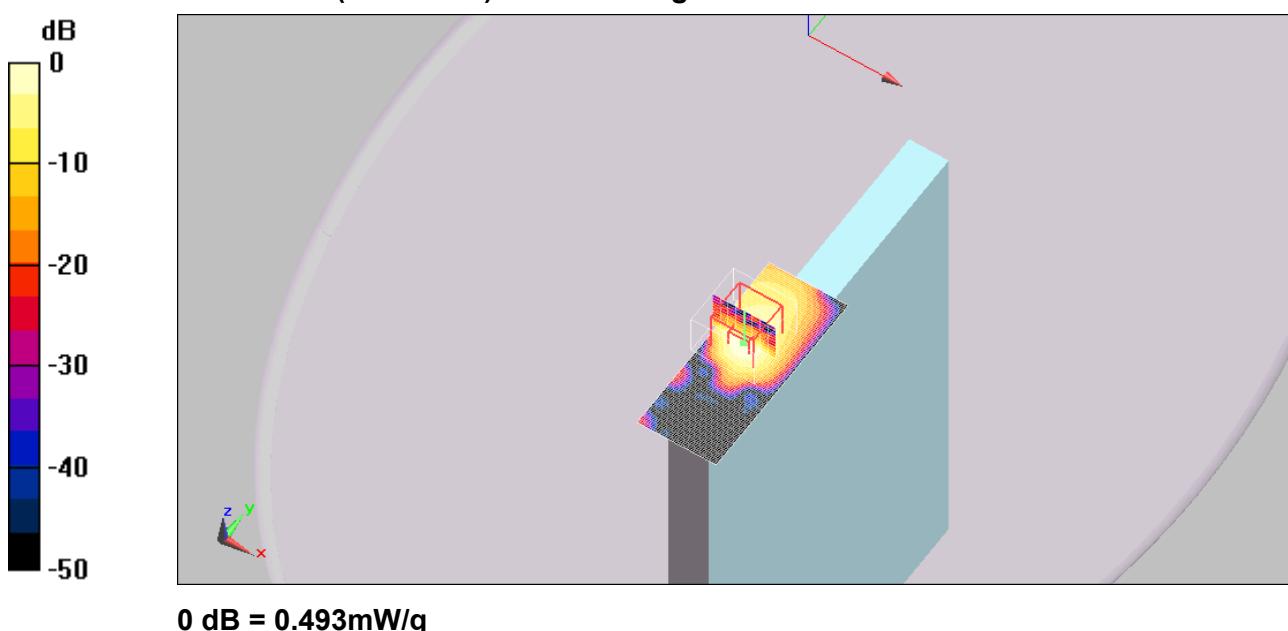
802.11a_ch116_5 580 MHz_6 Mbps_Right_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 6.2 V/m; Power Drift = -0.065 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.238 mW/g; SAR(10 g) = 0.068 mW/g

Maximum value of SAR (measured) = 0.493 mW/g



< 802.11a CH116 5 580 MHz 6 Mbps Back Body with Bar Code-IC / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580 \text{ MHz}$; $\sigma = 5.94 \text{ mho/m}$; $\epsilon_r = 47.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(3.85, 3.85, 3.85); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch118_5 580 MHz_6 Mbps_Back_Body_Bar Code-IC/Area Scan (101x81x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.141 mW/g

802.11a_ch118_5 580 MHz_6 Mbps_Back_Body_Bar Code-IC/Zoom Scan (9x9x12)/Cube 0:

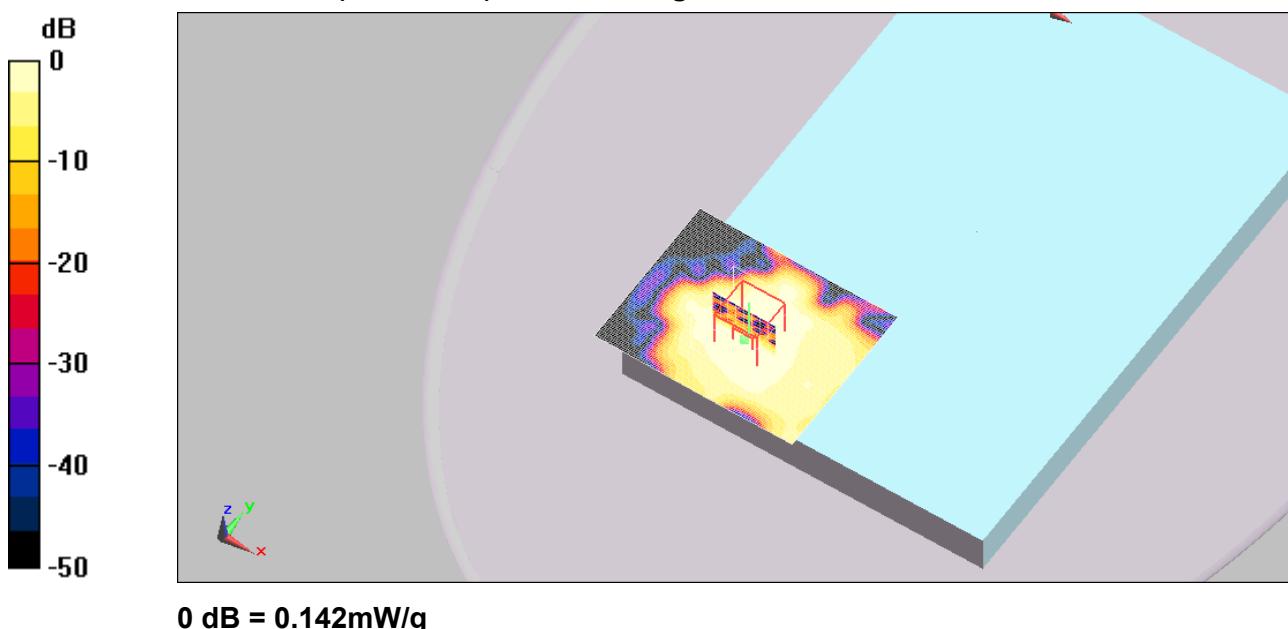
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 5.26 V/m; Power Drift = 0.105 dB

Peak SAR (extrapolated) = 0.340 W/kg

SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.031 mW/g

Maximum value of SAR (measured) = 0.142 mW/g



< 802.11a HT20 CH116 5 580 MHz MCS0 Back Body MIMO / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

Communication System: 802.11a; Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580 \text{ MHz}$; $\sigma = 5.94 \text{ mho/m}$; $\epsilon_r = 47.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(3.85, 3.85, 3.85); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a HT20_ch116_5 580 MHz_MCS0_Back_Body_MIMO/Area Scan (101x131x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.179 mW/g

802.11a HT20_ch116_5 580 MHz_MCS0_Back_Body_MIMO/Zoom Scan (9x9x12)/Cube 0:

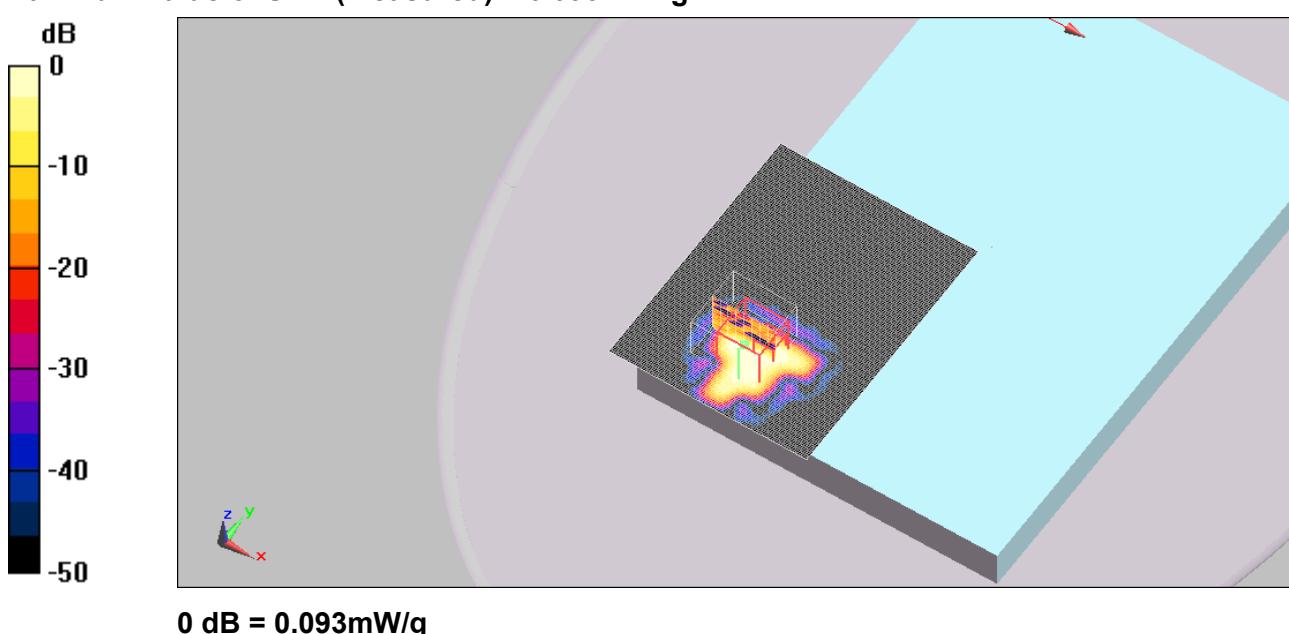
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 3.6 V/m; Power Drift = 0.205 dB

Peak SAR (extrapolated) = 0.167 W/kg

SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.010 mW/g

Maximum value of SAR (measured) = 0.093 mW/g



< 802.11a CH149 5 745 MHz 6 Mbps Back Body / Date : Mar 06, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 5745 \text{ MHz}$; $\sigma = 5.95 \text{ mho/m}$; $\epsilon_r = 48.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.03, 4.03, 4.03); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch149_5 745 MHz_6 Mbps_Back_Body/Area Scan (101x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.243 mW/g

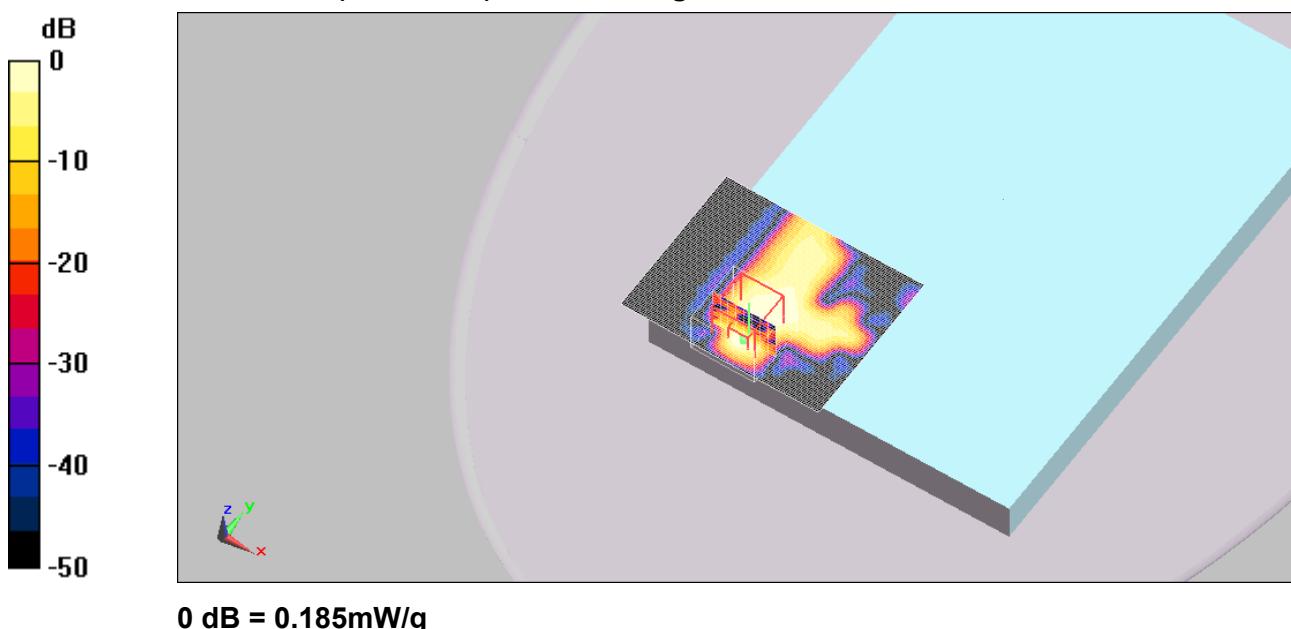
802.11a_ch149_5 745 MHz_6 Mbps_Back_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.23 V/m; Power Drift = -0.189 dB

Peak SAR (extrapolated) = 0.353 W/kg

SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.022 mW/g

Maximum value of SAR (measured) = 0.185 mW/g



< 802.11a CH161 5 805 MHz 6 Mbps Back Body / Date : Mar 06, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 5805 \text{ MHz}$; $\sigma = 6.04 \text{ mho/m}$; $\epsilon_r = 48.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.03, 4.03, 4.03); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch161_5 805 MHz_6 Mbps_Back_Body/Area Scan (101x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.170 mW/g

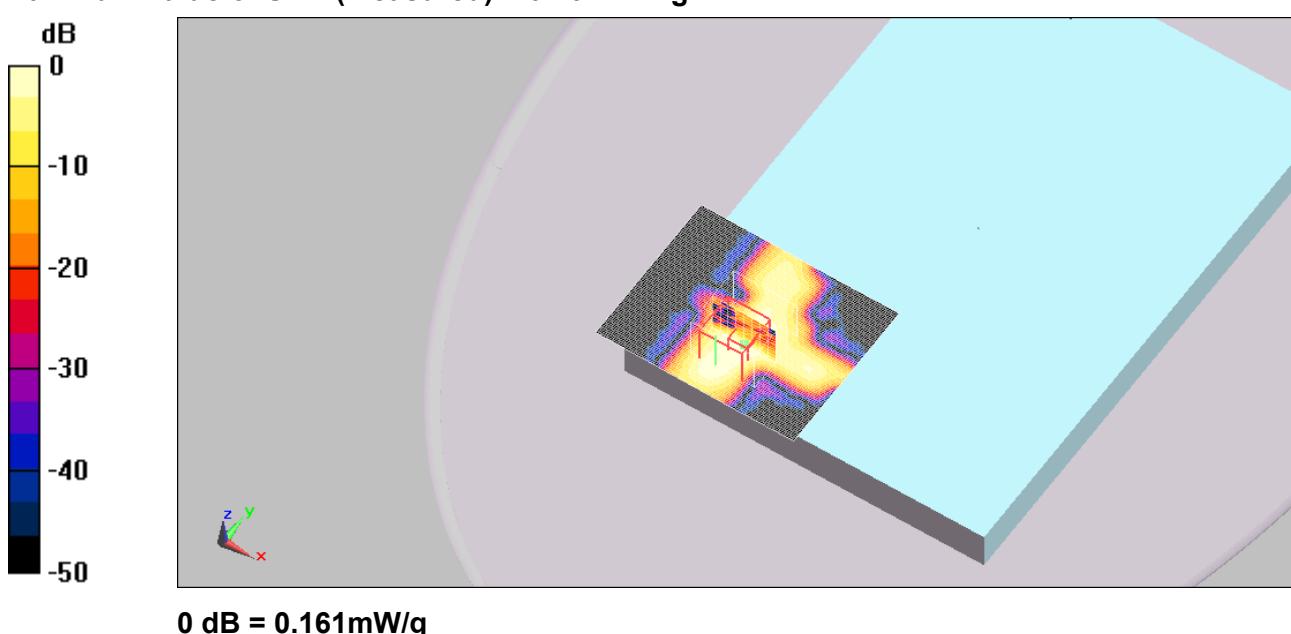
802.11a_ch161_5 805 MHz_6 Mbps_Back_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.15 V/m; Power Drift = -0.705 dB

Peak SAR (extrapolated) = 0.282 W/kg

SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.021 mW/g

Maximum value of SAR (measured) = 0.161 mW/g



< 802.11a CH149 5 745 MHz 6 Mbps Front Body / Date : Mar 06, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 5745 \text{ MHz}$; $\sigma = 5.95 \text{ mho/m}$; $\epsilon_r = 48.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.03, 4.03, 4.03); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch149_5 745 MHz_6 Mbps_Front_Body/Area Scan (111x71x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.195 mW/g

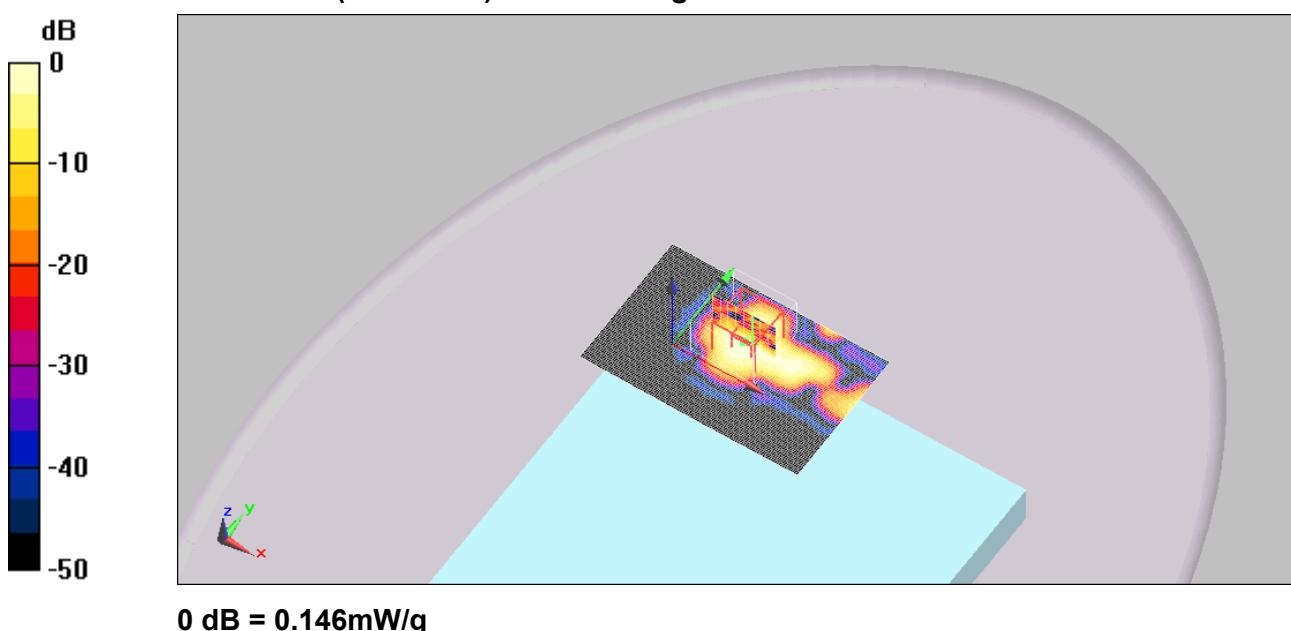
802.11a_ch149_5 745 MHz_6 Mbps_Front_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.64 V/m; Power Drift = -0.249 dB

Peak SAR (extrapolated) = 0.281 W/kg

SAR(1 g) = 0.067 mW/g; SAR(10 g) = 0.019 mW/g

Maximum value of SAR (measured) = 0.146 mW/g



< 802.11a CH149 5 745 MHz 6 Mbps Right Body / Date : Mar 06, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 5745 \text{ MHz}$; $\sigma = 5.95 \text{ mho/m}$; $\epsilon_r = 48.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.03, 4.03, 4.03); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch149_5 745 MHz_6 Mbps_Right_Body/Area Scan (41x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR = 0.243 mW/g

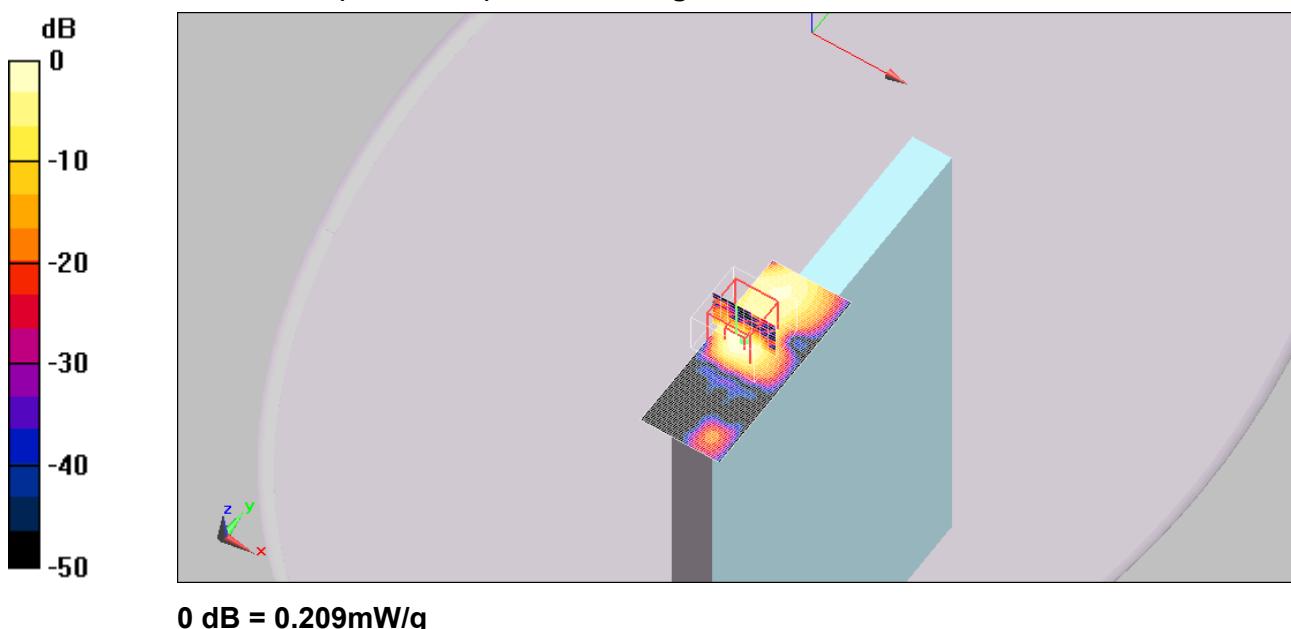
802.11a_ch149_5 745 MHz_6 Mbps_Right_Body/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.56 V/m; Power Drift = -0.260 dB

Peak SAR (extrapolated) = 0.396 W/kg

SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.025 mW/g

Maximum value of SAR (measured) = 0.209 mW/g



< 802.11a CH149 5 745 MHz 6 Mbps Right Body with Bar Code-IC / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 5745 \text{ MHz}$; $\sigma = 6.15 \text{ mho/m}$; $\epsilon_r = 47.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.03, 4.03, 4.03); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a_ch149_5 745 MHz_6 Mbps_Right_Body_Bar Code-IC/Area Scan (41x101x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.288 mW/g

802.11a_ch149_5 745 MHz_6 Mbps_Right_Body_Bar Code-IC/Zoom Scan (9x9x12)/Cube 0:

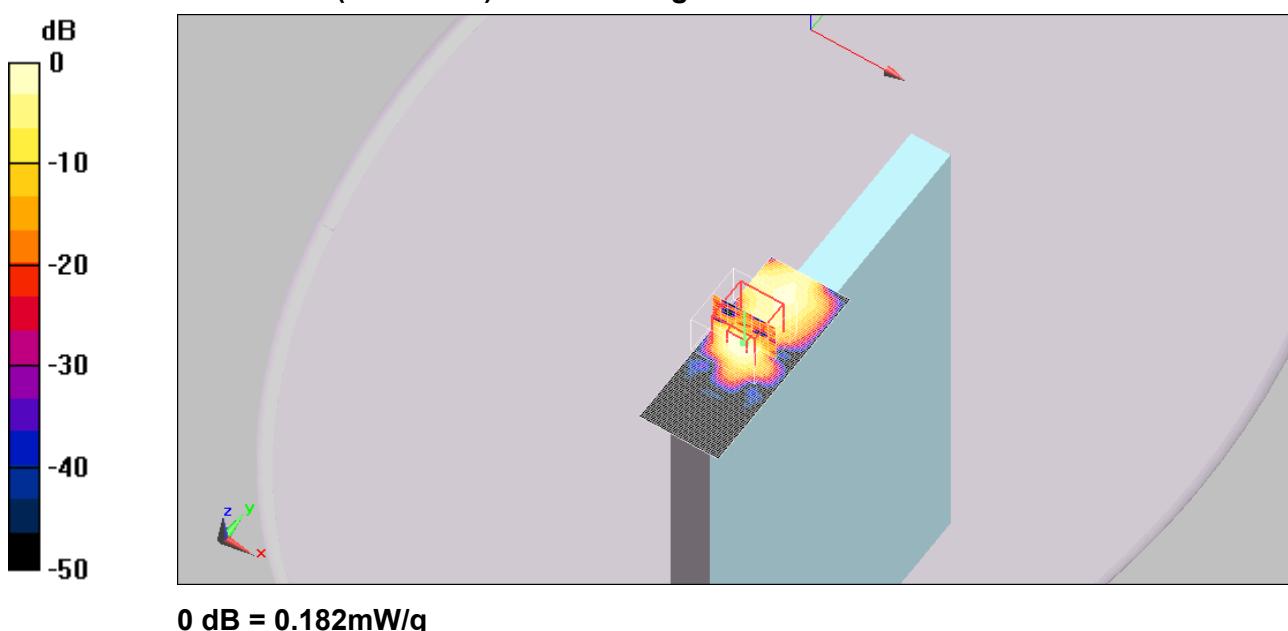
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 4.19 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 0.343 W/kg

SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.021 mW/g

Maximum value of SAR (measured) = 0.182 mW/g



< 802.11a HT20 CH149 5 745 MHz MCS0 Right Body MIMO / Date : Mar 29, 2015 >

DUT: ET100; Type: Sample; Serial: Not Specified

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

Medium parameters used : $f = 5745 \text{ MHz}$; $\sigma = 6.15 \text{ mho/m}$; $\epsilon_r = 47.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.03, 4.03, 4.03); Calibrated: 2014-11-18
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn444; Calibrated: 2014-11-12
- Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1030
- Measurement SW: DASY5, V5.0 Build 125; SEMCAD X Version 13.4 Build 125

802.11a HT20_ch149_5 745 MHz_MCS0_Right_Body_MIMO/Area Scan (41x101x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR = 0.030 mW/g

802.11a HT20_ch149_5 745 MHz_MCS0_Right_Body_MIMO/Zoom Scan (9x9x12)/Cube 0:

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

Reference Value = 1.97 V/m; Power Drift = 0.091 dB

Peak SAR (extrapolated) = 0.114 W/kg

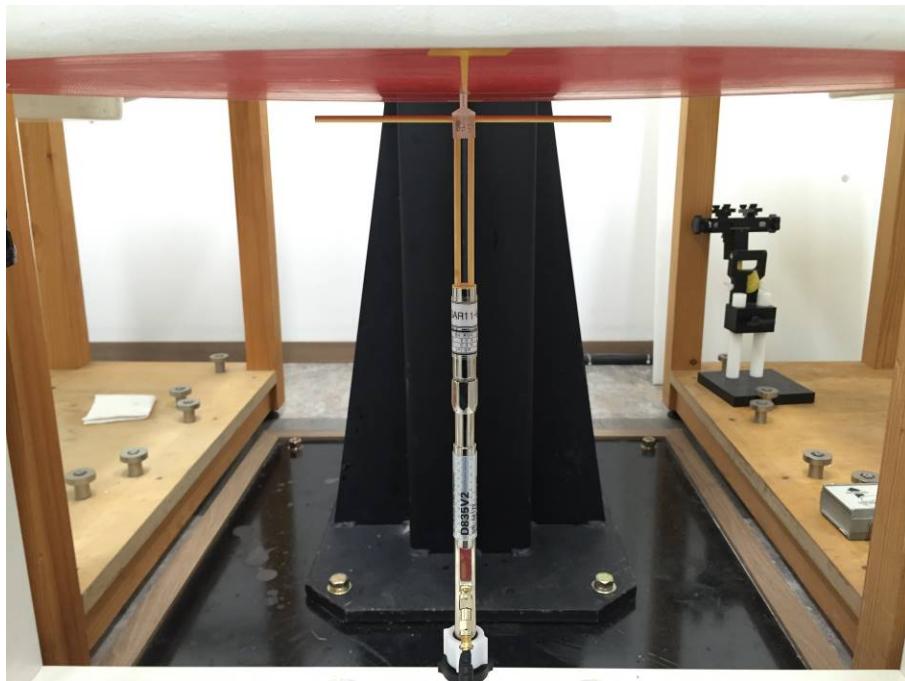
SAR(1 g) = 0.012 mW/g; SAR(10 g) = 0.00265 mW/g

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

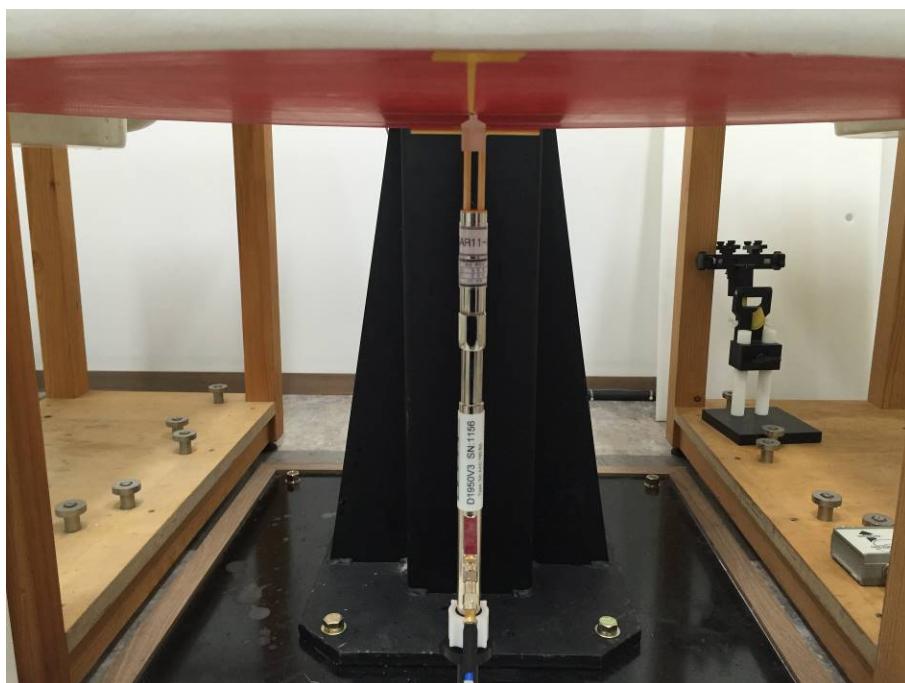


ANNEX C. PHOTOGRAPHS

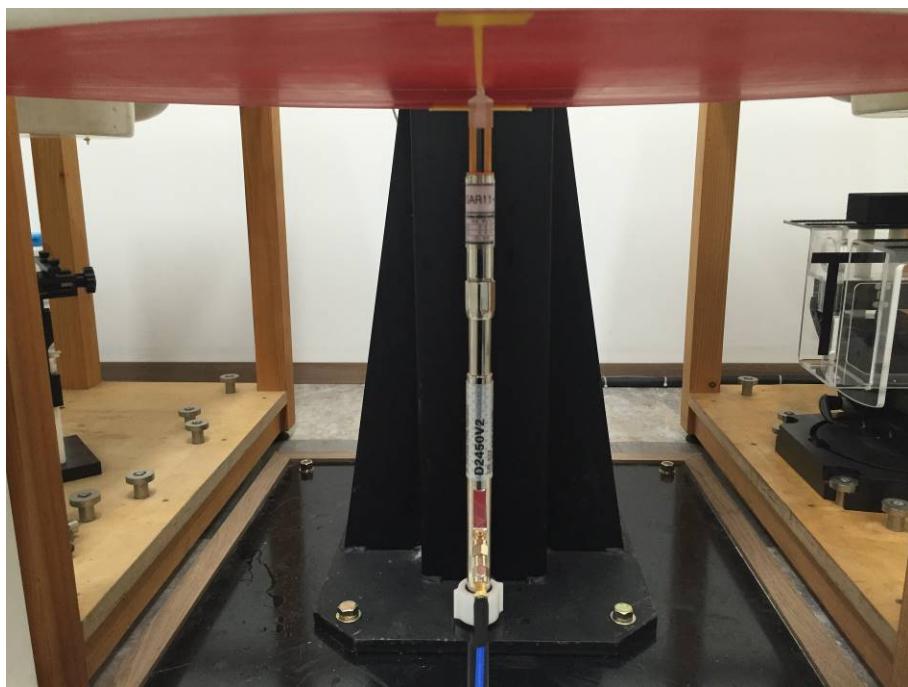
< System Verification >



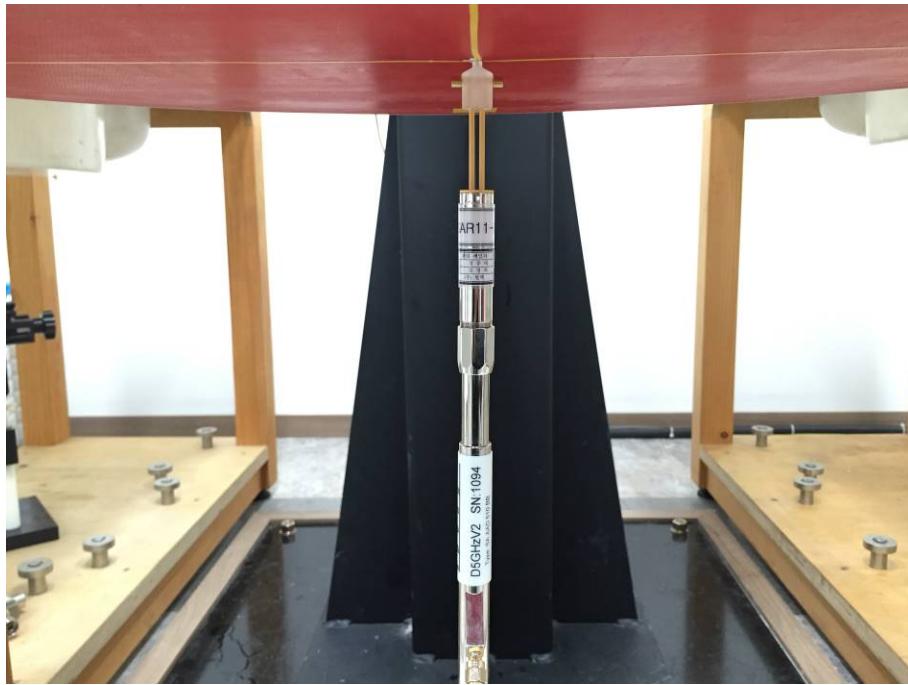
< 835 MHz >



< 1 950 MHz >

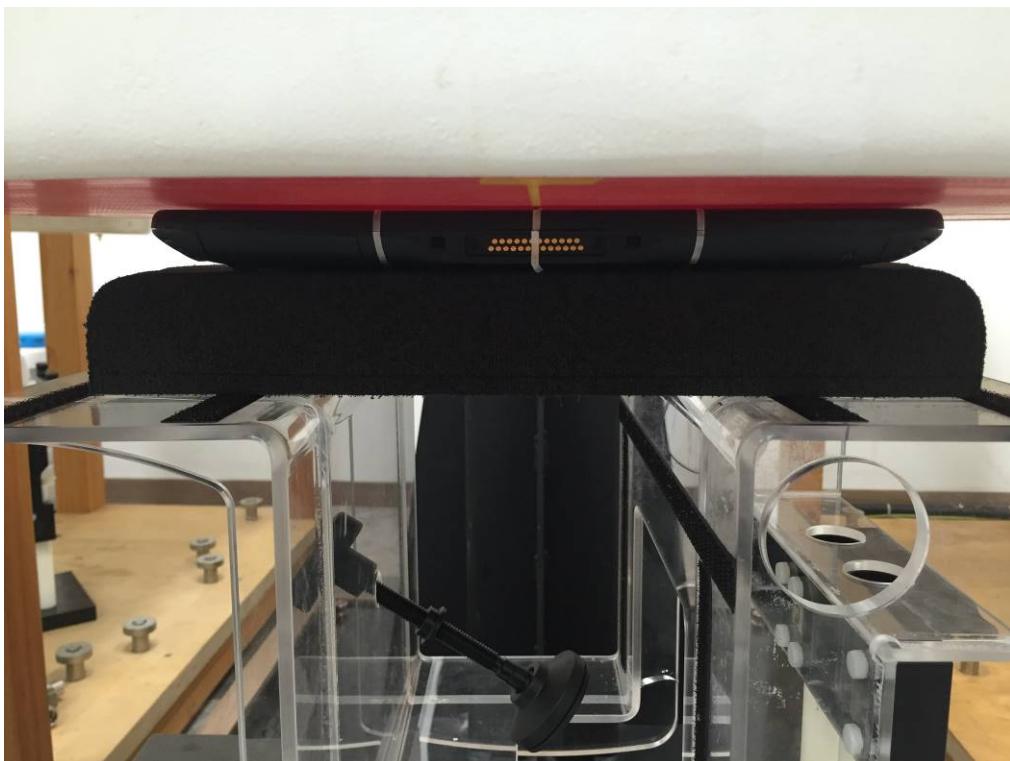


< 2 450 MHz >

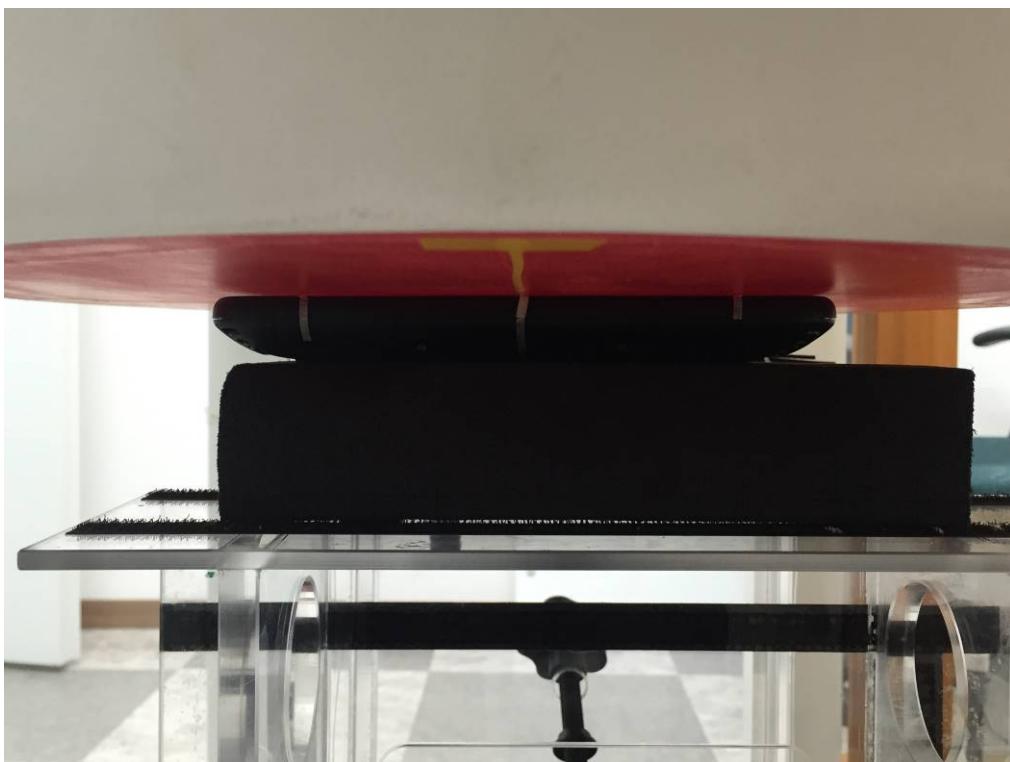


< 5 GHz >

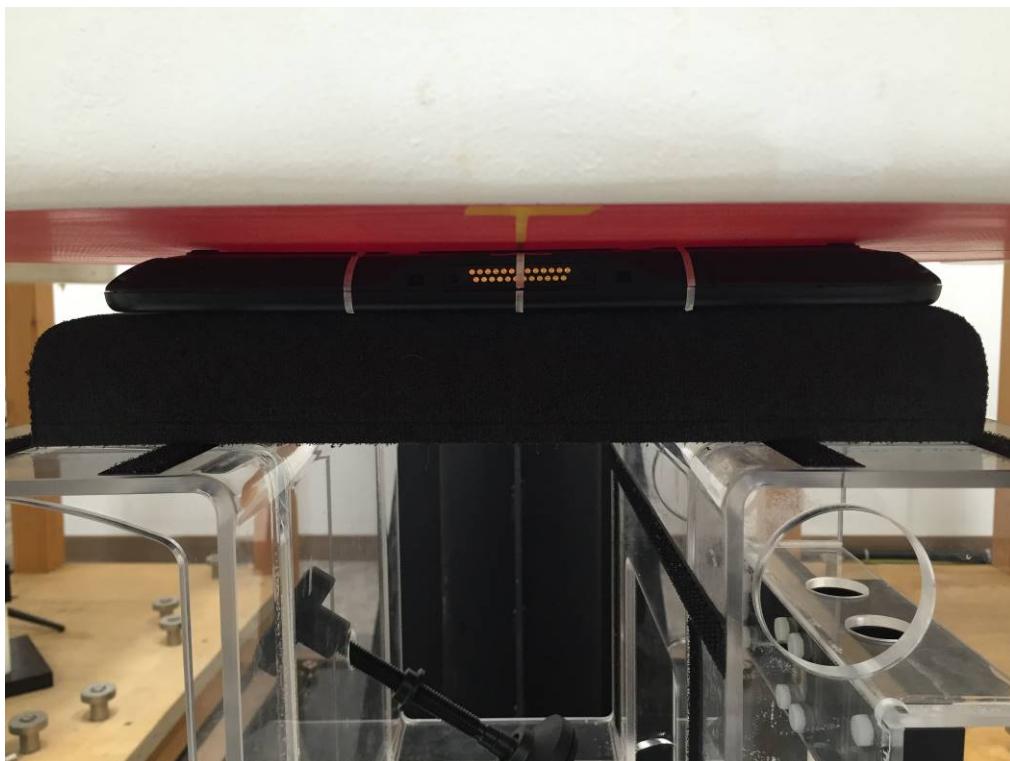
< Test position >



Front view (Front of DUT)



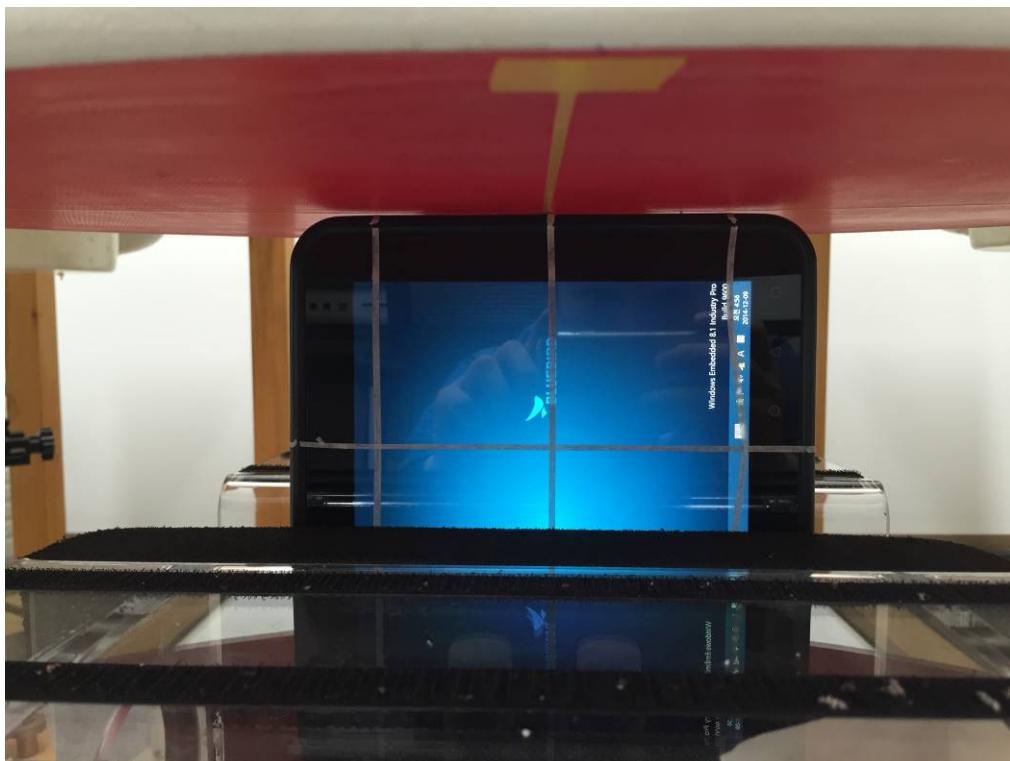
Side view (Front of DUT)



Front view (Back of DUT)



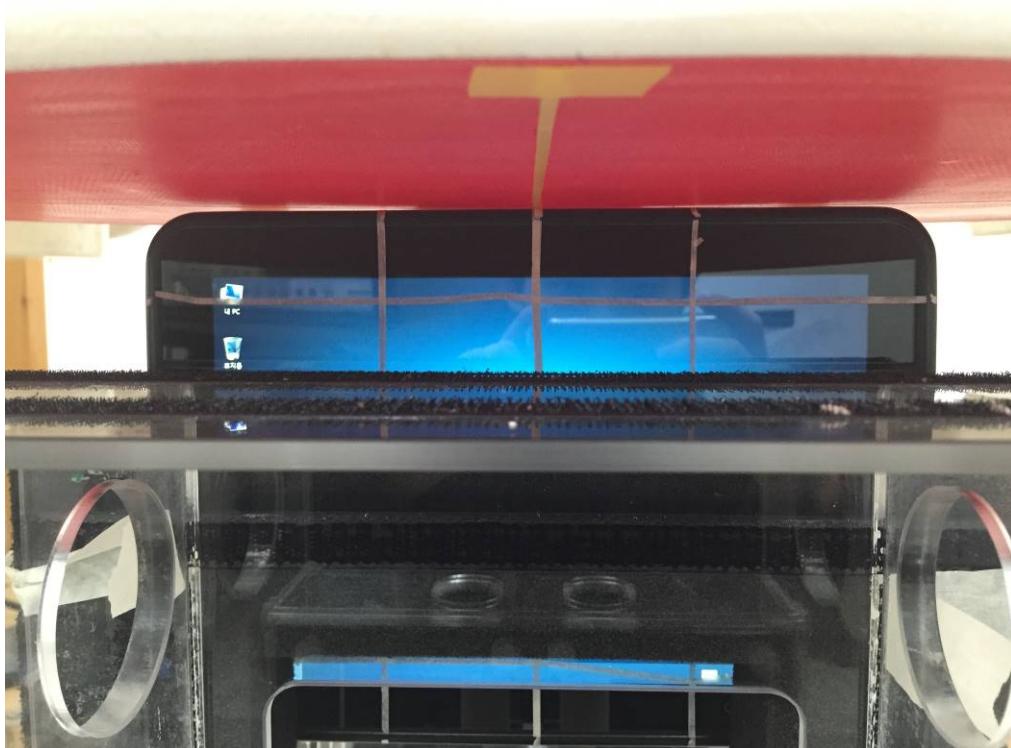
Side view (Back of DUT)



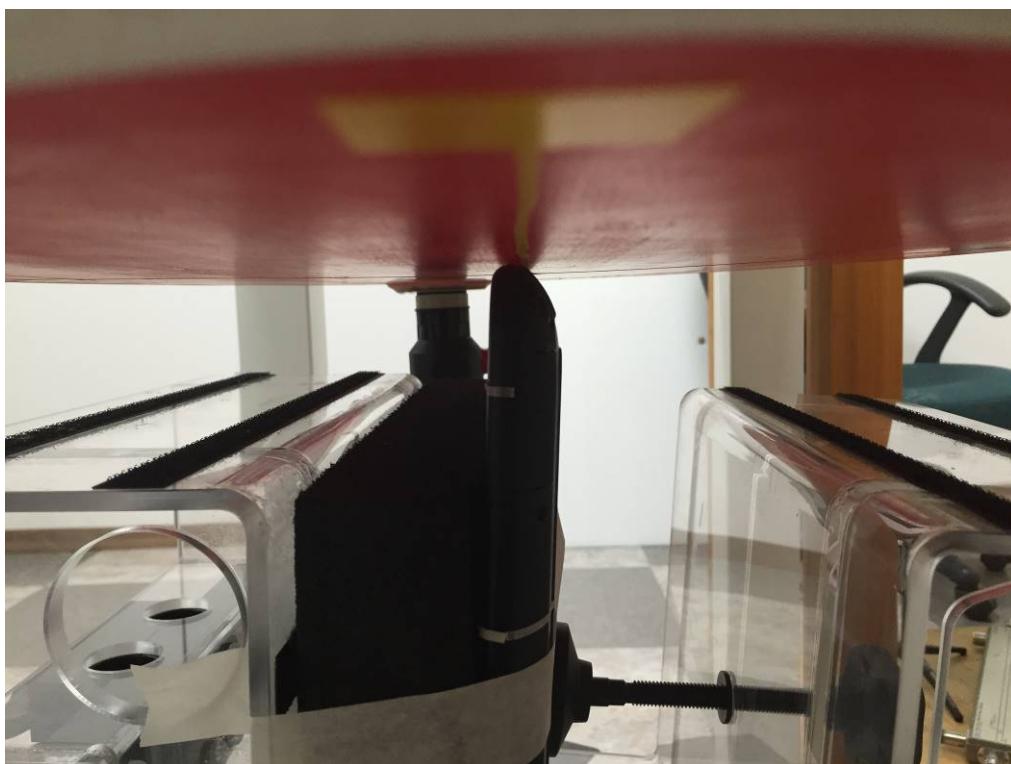
Front view (Right of DUT)



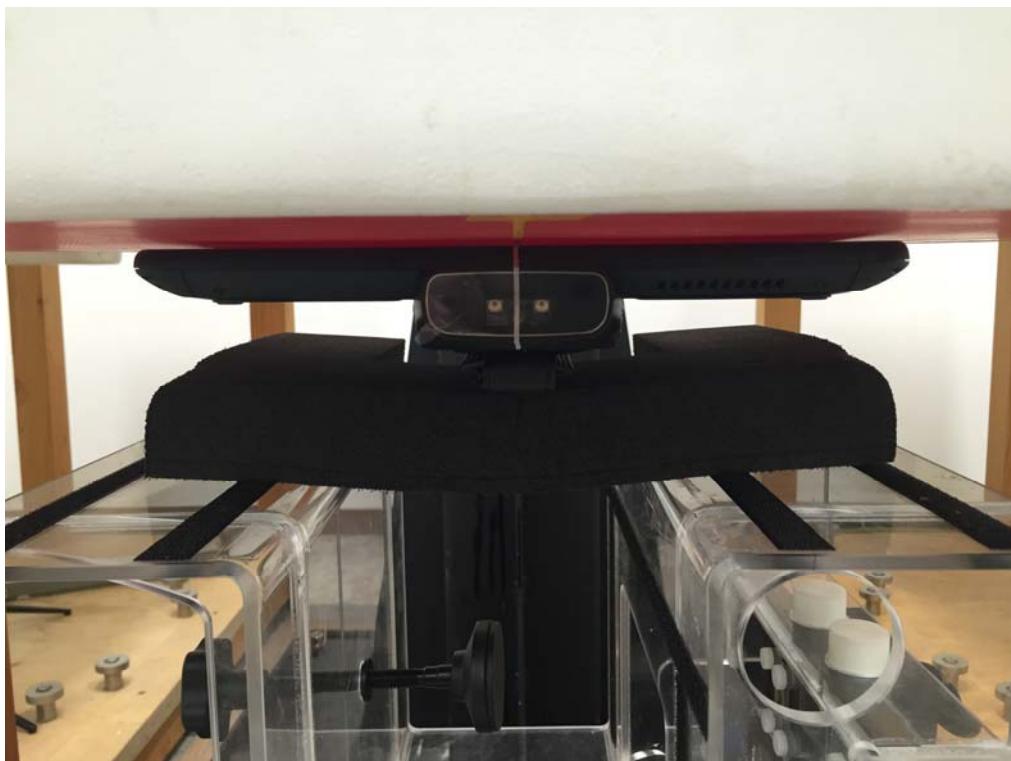
Side view (Right of DUT)



Front view (Top of DUT)



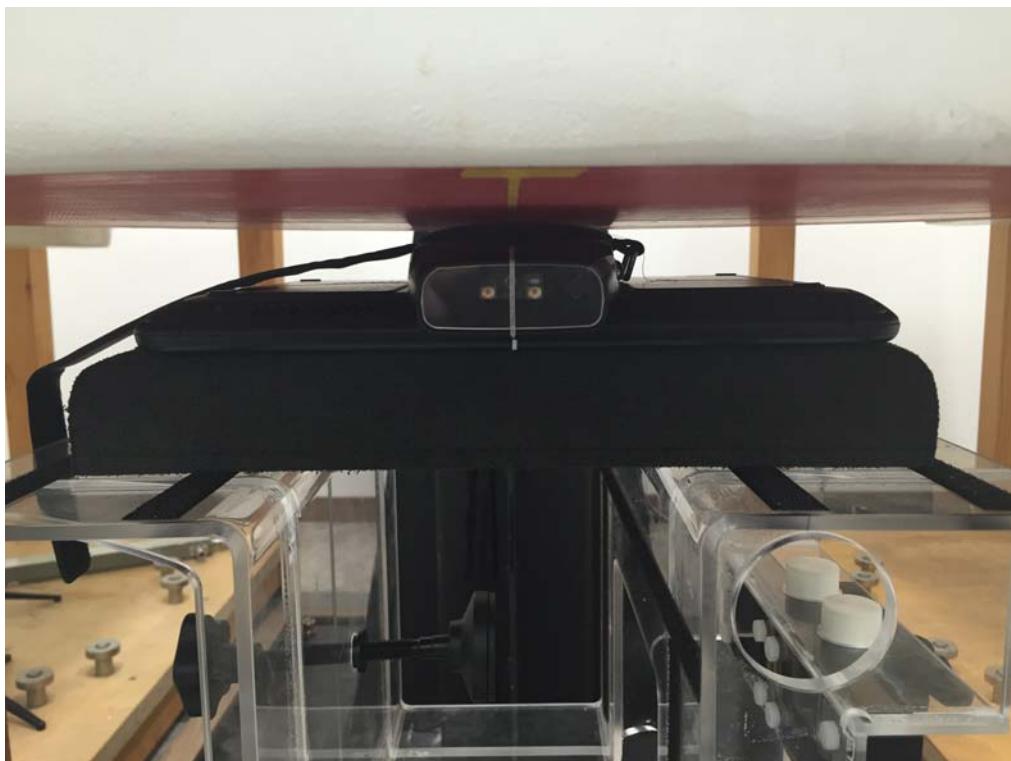
Side view (Top of DUT)



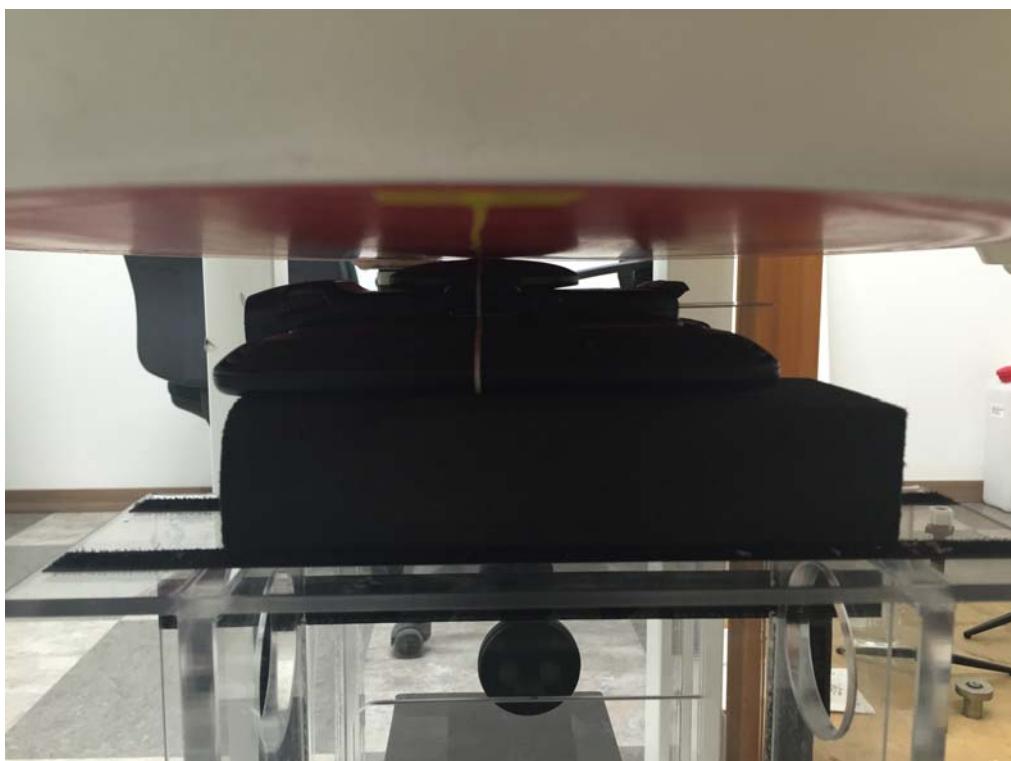
accessory Front view (Front of DUT)



accessory Side view (Front of DUT)



accessory Front view (Back of DUT)



accessory Side view (Back of DUT)



accessory Front view (Right of DUT)



accessory Side view (Right of DUT)



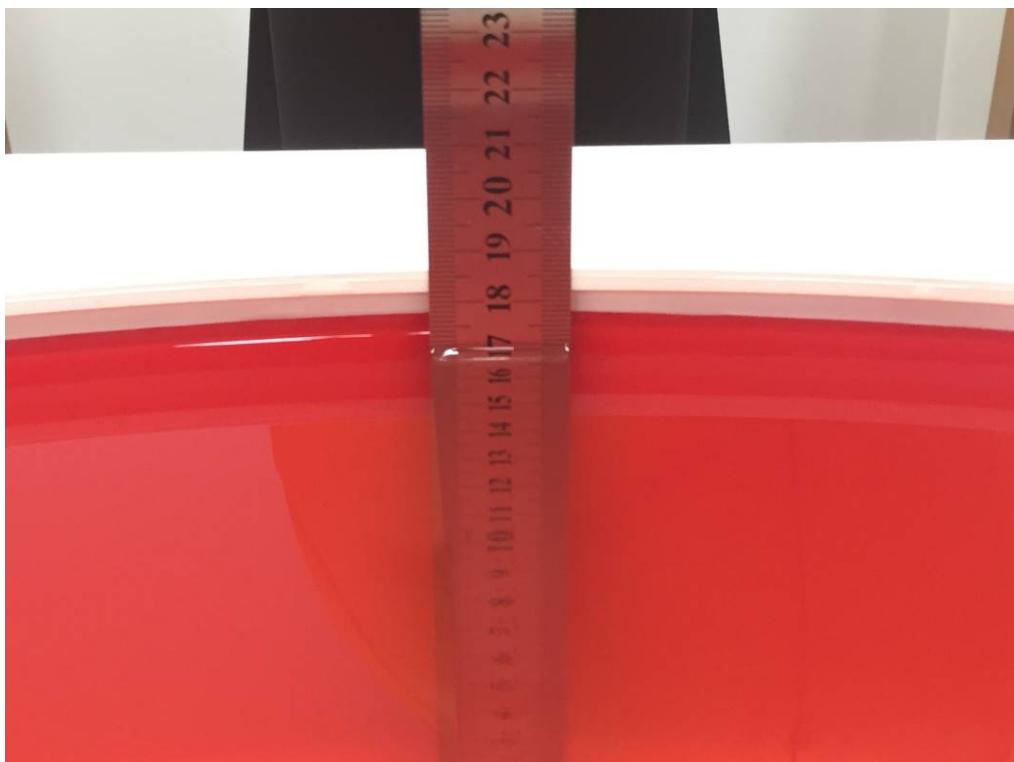
accessory Front view (Top of DUT)



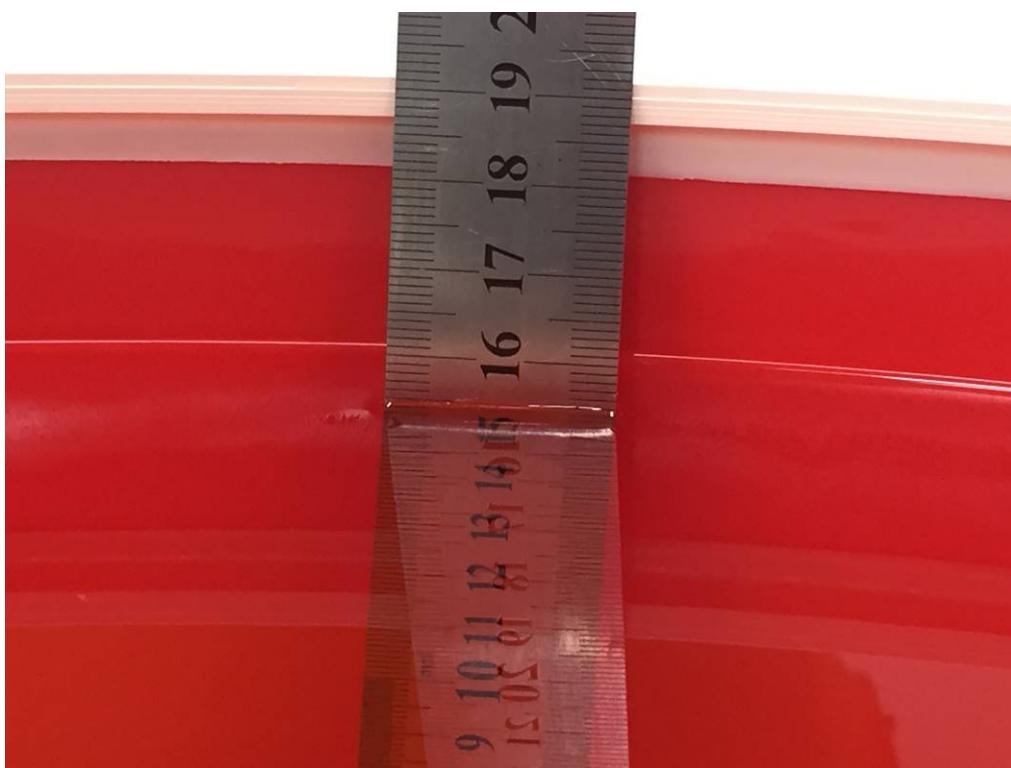
accessory Side view (Top of DUT)

< Liquid Depth >

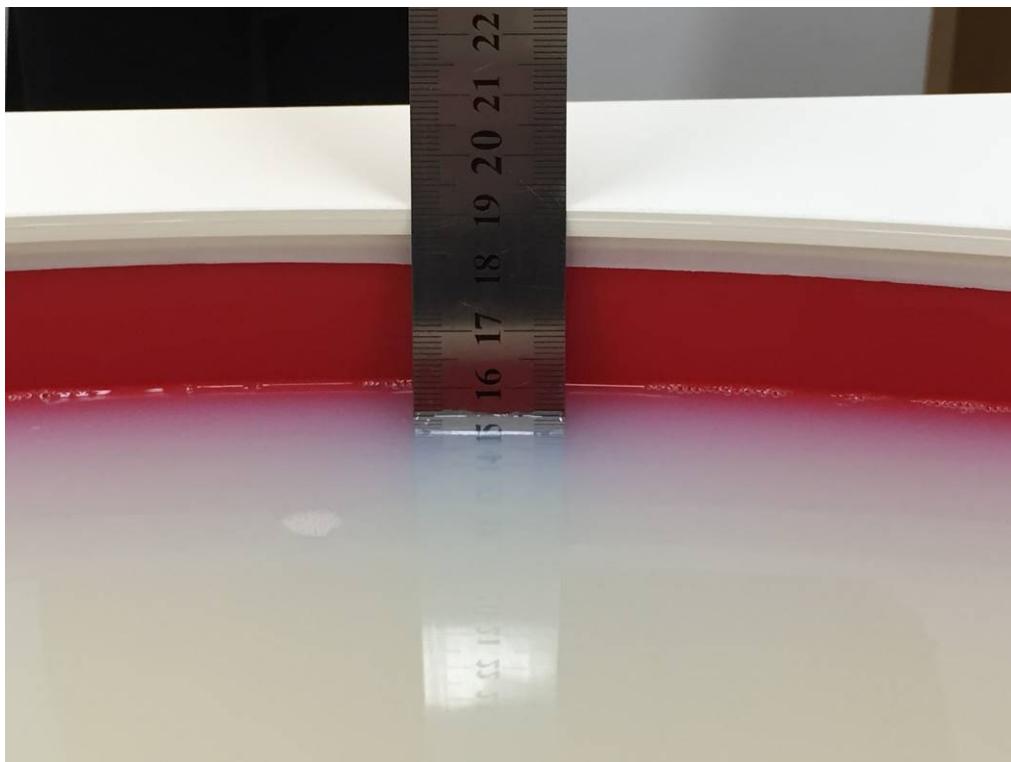
< 835 MHz >



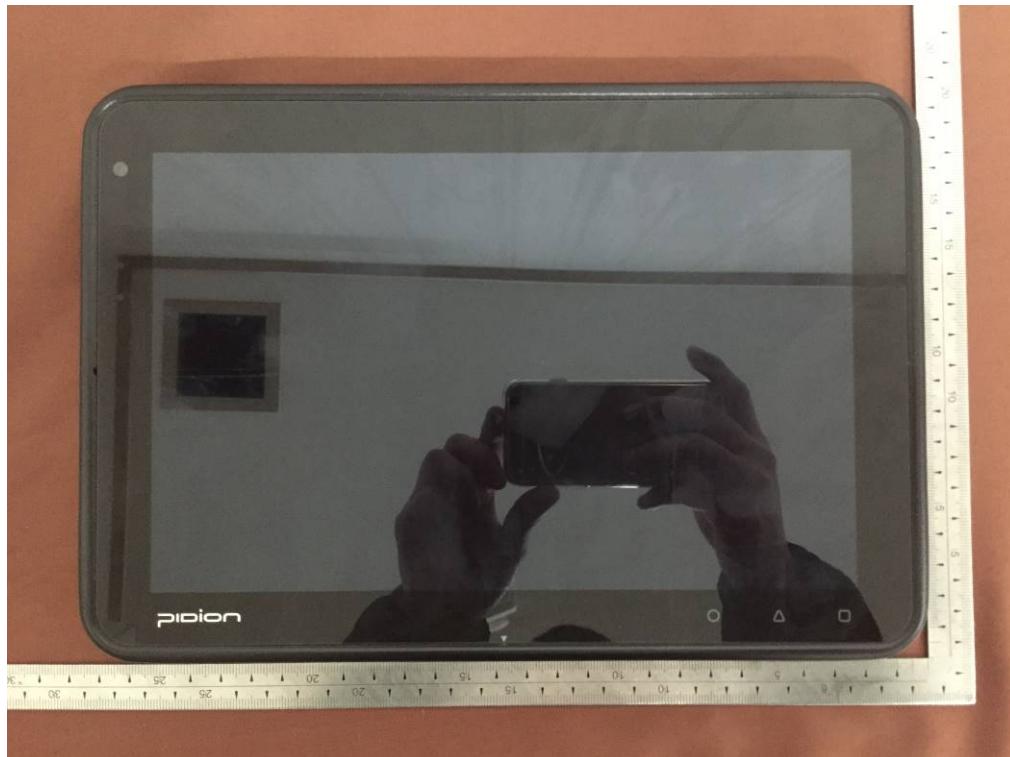
< 1950 MHz >



< 2.450 MHz >



< 5 GHz >

< DUT Photograph >**< Front >****< Back >**



< Top >



< Bottom >



< Left >



< Right >