



	<u>Date(s) of Evaluation</u> Nov. 28, '07 - Jan. 16, '08	<u>Test Report Serial No.</u> 111507UGL-T876-S15WB	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

SAR TEST REPORT (FCC/IC)

RF EXPOSURE EVALUATION		SPECIFIC ABSORPTION RATE	
APPLICANT	DRS TACTICAL SYSTEMS, INC.		
DEVICE UNDER TEST (DUT)	802.11abg WLAN (Intel PRO/Wireless 3945ABG Mini-PCI Express Card)		
CO-LOCATED TRANSMITTER(S)	Class II Bluetooth (Micro-Star International Co., Ltd. Model: MS-6837D)		
HOST PC	Tablet PC with Fixed Nylon Case		
MANUFACTURER	DRS Tactical Systems, Inc.		
MODEL(S)	Armor X10		
DEVICE IDENTIFIER(S)	DRS Tactical	FCC ID: UGL980026000WF	802.11abg WLAN
	DRS Tactical	FCC ID: UGL980026000BT	Class II Bluetooth
STANDARD(S) APPLIED	FCC 47 CFR §2.1093		
	Health Canada Safety Code 6		
PROCEDURE(S) APPLIED	FCC OET Bulletin 65, Supplement C (01-01)		
	FCC OET SAR Measurement Procedures for 802.11a/b/g		
	FCC OET SAR Measurement Requirements for 3 - 6 GHz		
	Industry Canada RSS-102 Issue 2		
FCC DEVICE CLASSIFICATION(S)	Digital Transmission System (DTS) - §15C		
	Unlicensed National Information Infrastructure TX (NII) - §15E		
IC DEVICE CLASSIFICATION(S)	Low Power License-Exempt Radiocommunication Device (RSS-210)		
RF EXPOSURE CATEGORY	General Population / Uncontrolled		
RF EXPOSURE EVALUATION(S)	Body and Lap-held		
DATE(S) OF EVALUATION(S)	November 28, 2007 - January 16, 2008		
TEST REPORT SERIAL NO.	111507UGL-T876-S15WB		
TEST REPORT REVISION NO.	Revision 1.0	Initial Release	March 11, 2008
TEST REPORT SIGNATORIES	Testing Performed By		Test Report Prepared By
	Sean Johnston Celltech Labs Inc.		Jonathan Hughes Celltech Labs Inc.
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	info@celltechlabs.com		www.celltechlabs.com
TEST LAB ACCREDITATION(S)	<div> Certificate No. 2470.01</div>		

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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DECLARATION OF COMPLIANCE SAR RF EXPOSURE EVALUATION

Test Lab Information	Name	CELLTECH LABS INC.				
	Address	21-364 Lougheed Road, Kelowna, B.C. V1X 7R8 Canada				
Company Information	Name	DRS TACTICAL SYSTEMS, INC.				
	Address	1110 West Hibiscus Blvd., Melbourne, FL 32901 United States				
Standard(s) Applied	FCC	47 CFR §2.1093				
	IC	Health Canada Safety Code 6				
Procedure(s) Applied	FCC	OET Bulletin 65, Supplement C (01-01)				
	FCC	OET SAR Measurement Procedures for 802.11a/b/g (Rev. 1.2)				
	FCC	OET SAR Measurement Requirements for 3 - 6 GHz (Rev. 1.1)				
	IC	RSS-102 Issue 2				
Device Classification(s)	FCC	Digital Transmission System (DTS) - §15C				
	FCC	Unlicensed National Information Infrastructure TX (NII) - §15E				
	IC	Low Power License-Exempt Radiocommunication Device (RSS-210)				
Device Identifier(s)	FCC ID:	UGL980026000WF (WLAN)	UGL980026000BT (Bluetooth)	Serial No.	0008-DSTC1S08U0E (Tablet PC)	
Device Under Test (DUT)	WLAN	Intel PRO/Wireless 3945ABG Mini-PCI Express Card		Model	WM3945ABG	
Co-located Transmitter(s)	Bluetooth	Micro-Star International Co., Ltd. Bluetooth Class II 2.0+EDR		Model	MS-6837D	
Device Test Configuration	Portable	DRS Tactical Systems, Inc. Tablet PC with Fixed Nylon Case		Model	Armor X10	
LCD Display Orientation(s)	Tablet PC	0 Degrees Landscape	90 Degrees Portrait	180 Degrees Landscape	-90 Degrees Portrait	
Mode(s) of Operation	802.11b	Direct Sequence Spread Spectrum (DSSS)		802.11a/g	Orthogonal Frequency Division Multiplexing (OFDM)	
	Bluetooth	Frequency Hopping Spread Spectrum (FHSS)		BT Mode(s)	GFSK (1 Mbps), DQPSK (2 Mbps), 8DPSK (3 Mbps)	
WLAN Modulation Type(s)	802.11a/g	BPSK, QPSK, 16QAM, 64QAM		802.11b	CCK, DQPSK, DBPSK	
WLAN Data Rates	802.11a/g	6, 9, 12, 24, 36, 48, 54 Mbps		802.11b	1, 2, 5.5, 11 Mbps	
Transmit Frequency Range(s)	802.11a	5180-5240 MHz (UNII-1)	5260-5320 MHz (UNII-2)	5745-5825 MHz (UNII-3)	802.11b/g	2412-2462 MHz (ISM)
	Bluetooth	2402 - 2480 MHz	Test Frequency	2441 MHz	RF Power Spec.	+4 dBm (2.5 mW) Conducted
Max. RF Output Power Tested	Transmit Mode	Frequency	Channel	Data Rate	Average Conducted	
	802.11b (ISM)	2442 MHz	7	1 Mbps	18.0 dBm	63.1 mW
	802.11a (UNII-1)	5180 MHz	36	6 Mbps	16.0 dBm	39.8 mW
	802.11a (UNII-2)	5260 MHz	52	6 Mbps	17.0 dBm	50.1 mW
	802.11a (UNII-3)	5785 MHz	157	6 Mbps	17.0 dBm	50.1 mW
Antenna Type(s) Tested	WLAN Tx Diversity	MAIN	Internal - Top Left Radome		AUX	Internal - Right Side Radome
	Bluetooth Module	Internal - Top Left Radome		Distance to MAIN Ant.	26 mm	Distance to AUX Ant. 165 mm
Power Source(s) Tested	Lithium-ion Rechargeable Battery		10.8 VDC	Model:	0300-15663-0001	Part No.: 020110-06
Max. SAR Level(s) Evaluated (With 75% Duty Factor Scaling)	Body	802.11a	1.31 W/kg	1g average	75% Scaling	FCC/IC Spatial Peak SAR Limit 1.6 W/kg 1g average
		802.11b	0.521 W/kg	1g average	75% Scaling	Uncontrolled Exposure

Celltech Labs Inc. declares under its sole responsibility that this wireless portable device is compliant with the Specific Absorption Rate (SAR) RF exposure requirements specified in FCC 47 CFR §2.1093 and Health Canada's Safety Code 6 for the General Population / Uncontrolled Exposure environment. The device was tested in accordance with the measurement standards and procedures specified in FCC OET Bulletin 65, Supplement C (Edition 01-01) and Industry Canada RSS-102 Issue 2. All measurements were performed in accordance with the SAR system manufacturer recommendations.


I attest to the accuracy of data. All measurements were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

The results and statements contained in this report pertain only to the device(s) evaluated.

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Test Report Approved By  Sean Johnston Celltech Labs Inc.



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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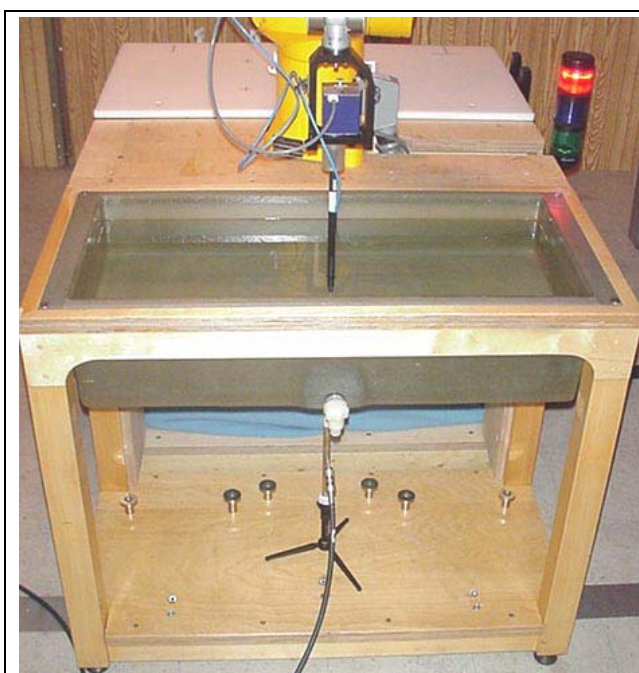
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1.0 INTRODUCTION

This measurement report demonstrates compliance of the DRS Tactical Systems, Inc. Model: Armor X10 Tablet PC (incorporating the Intel PRO/Wireless 3945ABG WLAN Mini-PCI Express Card and co-located MSI Co., Ltd. MS-6837D Class II Bluetooth) with the SAR (Specific Absorption Rate) RF exposure requirements of FCC 47 CFR §2.1093 (see reference [1]) and Health Canada's Safety Code 6 (see reference [2]) for the General Population / Uncontrolled Exposure environment. The test procedures described in FCC OET Bulletin 65, Supplement C, Edition 01-01 (see reference [3]), FCC OET SAR Measurement Procedures for 802.11a/b/g Transmitters (see reference [6]), FCC OET SAR Measurement Requirements for 3 - 6 GHz (see reference [7]) and IC RSS-102 Issue 2 (see reference [4]) were employed. A description of the product and operating configuration, detailed summary of the test results, methodology and procedures used in the evaluation, equipment used, and the various provisions of the rules are included within this test report.

2.0 SAR MEASUREMENT SYSTEM


Celltech Labs Inc. SAR measurement facility utilizes the Dosimetric Assessment System (DASY™) manufactured by Schmid & Partner Engineering AG (SPEAG™) of Zurich, Switzerland. The DASY4 measurement system is comprised of the measurement server, robot controller, computer, near-field probe, probe alignment sensor, specific anthropomorphic mannequin (SAM) phantom, and various planar phantoms for brain and/or body SAR evaluations. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF). A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The Staubli robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the DASY4 measurement server. The DAE4 utilizes a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16-bit AD-converter and a command decoder and control logic unit. Transmission to the DASY4 measurement server is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe-mounting device includes two different sensor systems for frontal and sidewise probe contacts. The sensor systems are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.





DASY4 SAR Measurement System with Planar Phantom



DASY4 Measurement Server

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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Certificate No. 2470.01

3.0 MEASUREMENT SUMMARY

BODY SAR MEASUREMENT RESULTS (2.4 GHz: ISM Band)

Test Date	Tx Mode	Test Mode	Freq. MHz	Ch.	Data Rate Mbps	Battery Type	Bluetooth Transmit	WLAN Antenna	Tablet PC Position to Planar Phantom	Antenna Distance to Planar Phantom cm	Cond. Power Before Test dBm	SAR Drift During Test dB	Meas. SAR 1g W/kg 100% d/f	Scaled SAR 1g W/kg 75% d/f ⁸
Nov-28	802.11b	DSSS	2442	7	1	Li-ion	Off	MAIN	Bottom Touch	3.0	18.0	-- ⁶	0.0211	0.0158
Nov-28	802.11b	DSSS	2442	7	1	Li-ion	Off	AUX	Bottom Touch	2.5	18.0	-- ⁶	0.0124	0.0093
Nov-28	802.11b	DSSS	2442	7	1	Li-ion	Off	MAIN	MAIN Antenna Side Edge-on	2.0	18.0	0.196 ⁵	0.602	0.452
Nov-28	802.11b	DSSS	2442	7	1	Li-ion	Off	AUX	AUX Antenna Side Edge-on	1.5	18.0	-0.060 ⁵	0.694	0.521
Nov-28	802.11b	DSSS	2442	7	1	Li-ion	Off	MAIN	MAIN Adjacent Side Edge-on	2.5	18.0	-- ⁶	0.011	0.0083
Nov-28	802.11b	DSSS	2442	7	1	Li-ion	Off	AUX	AUX Adjacent Side Edge-on	5.0	18.0	-- ⁶	0.010 ⁴	--
Jan-16	802.11b	DSSS	2442	7	1	Li-ion	On ⁷	MAIN	MAIN Antenna Side Edge-on	2.0	18.0	-0.074 ⁵	0.604	0.453

SAR LIMIT(S)

BODY

SPATIAL PEAK

RF EXPOSURE CATEGORY

FCC 47 CFR 2.1093

Health Canada Safety Code 6

1.6 W/kg


averaged over 1 gram


General Population / Uncontrolled



Test Date(s)	November 28, 2007				January 16, 2008				Test Date	Nov-28	Jan-16
Measured Fluid Type	2450 MHz Body				2450 MHz Body				Ambient Temperature	24.6 °C	24.0 °C
	IEEE Target	Meas.	Dev.		IEEE Target	Meas.	Dev.		Fluid Temperature	23.3 °C	23.0 °C
Dielectric Constant ϵ_r	52.7	±5%	50.6	-4.0%	52.7	±5%	50.2	-4.7%	Fluid Depth	≥ 15 cm	≥ 15 cm
Conductivity σ (mho/m)	1.95	±5%	2.01	+3.1%	1.95	±5%	1.97	+1.0%	Relative Humidity	35%	36%
ρ (Kg/m ³)	1000				1000				Atmospheric Pressure	101.1 kPa	101.1 kPa

Notes

1.	The measurement results were obtained with the DUT tested in the conditions described in this report. Detailed measurement data and plots showing the maximum SAR location of the DUT are reported in Appendix A.
2.	If the SAR levels measured at the mid channel were ≥ 3 dB below the SAR limit, SAR evaluation for the low and high channels was optional (per FCC OET Bulletin 65, Supplement C, Edition 01-01 - see reference [3]).
3.	Higher data rates and 802.11g mode were not evaluated based on the average output power levels were not 0.25 dB > the output power level measured at the lowest data rate in 802.11b mode (per FCC OET "SAR Measurement Procedures for 802.11a/b/g Transmitters" - see reference [6]).
4.	The SAR level measured and reported is the Peak SAR level measured from the area scan. The 1g-averaged SAR is not measured when the peak SAR value from the area scan evaluation is less than 1% of the 1g average limit. The mathematical formula used to extrapolate the SAR value at the surface from the zoom scan SAR values measured at 5 mm steps leading away from the surface assumes a curving slope (i.e. the SAR values gradually decrease as the probe moves away from the surface). When the peak SAR of a device is so low that the RF noise level is competing with the SAR level, the zoom scan measurements leading away from the surface are no longer a curving slope and the extrapolation formula cannot accurately estimate the 1g average SAR. Therefore the peak value from the area scan is reported in place of the 1g averaged SAR value whenever the peak values are less than 1% of the average limit. This avoids gross uncertainties in the 1g average SAR calculation while maintaining a conservative estimation of the SAR level.
5.	The power drift of the DUT measured by the DASY4 system during the SAR evaluations was <5% from the start power.
6.	The power drift of the DUT during the SAR evaluations was measured at the reference point of the phantom with low SAR. The resulting drift values were inaccurate due to the SAR value at the reference point was close to the measurement noise floor and are therefore not reported.
7.	The max. SAR evaluated in 802.11b single-transmit mode was re-evaluated with the Bluetooth transmitting to report any changes in SAR due to co-transmission.
8.	The measured SAR levels were scaled to a duty factor of 75% per FCC OET procedures for 802.11a/b/g switched transmit diversity antennas (see reference [6]).
9.	The fluid temperature was measured prior to and after the SAR evaluations to ensure the temperature remained within $\pm 2^\circ\text{C}$ of the fluid temperature reported during the dielectric parameter measurements.
10.	The dielectric parameters of the simulated tissue mixture were measured prior to the SAR evaluations using a Dielectric Probe Kit and a Network Analyzer (see Appendix C).

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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4.0 DETAILS OF SAR EVALUATION



The DRS Tactical Systems, Inc. ARMOR X10 Tablet PC incorporating the Intel PRO/Wireless 3945ABG WLAN Mini-PCI Express Card and co-located MSI MS-6837D Class II Bluetooth was compliant for localized Specific Absorption Rate (General Population) based on the test provisions and conditions described below. The detailed test setup photographs are shown in Appendix E.

1. The DUT was evaluated for body SAR (lap-held configuration) with the bottom side of the Tablet PC placed parallel to, and touching, the outer surface of the planar phantom.
2. The DUT was evaluated for body SAR (edge-on configuration) with the MAIN diversity antenna edge of the Tablet PC placed parallel to, and touching, the outer surface of the planar phantom.
3. The DUT was evaluated for body SAR (edge-on configuration) with the AUX diversity antenna edge of the Tablet PC placed parallel to, and touching, the outer surface of the planar phantom.
4. The DUT was evaluated for body SAR (edge-on configuration) with the MAIN diversity antenna adjacent edge of the Tablet PC placed parallel to, and touching, the outer surface of the planar phantom.
5. The DUT was evaluated for body SAR (edge-on configuration) with the AUX diversity antenna adjacent edge of the Tablet PC placed parallel to, and touching, the outer surface of the planar phantom.
6. The MAIN and AUX switched diversity antennas were evaluated individually (one at a time with the other disabled).
7. Co-transmit SAR evaluations were performed with the WLAN and Class II Bluetooth transmitting simultaneously.
8. The WLAN was tested using proprietary CRTU test software provided by Intel to continuously transmit on a specific test channel/frequency and antenna and to manually set the appropriate power levels and associated duty cycle prescribed by Intel.
9. The WLAN was tested with a modulated DSSS signal in 802.11b mode and a modulated OFDM signal in 802.11a mode.
10. The co-transmit SAR evaluations were performed with the Class II Bluetooth placed in continuous transmit operation at maximum power on a fixed frequency (frequency hopping disabled) and modulated GFSK signal. The Class II Bluetooth was placed in the appropriate test mode using the proprietary Bluecore BlueSuite test software provided by the applicant.
11. The SAR evaluations were performed within 24 hours of the system performance check.
12. The DUT battery was fully charged prior to the SAR evaluations.

5.0 EVALUATION PROCEDURES

- (i) The evaluation was performed in the applicable area of the phantom depending on the type of device being tested. For devices held to the ear during normal operation, both the left and right ear positions were evaluated using the SAM phantom.
- (ii) For body-worn and face-held devices a planar phantom was used.
- The SAR was determined by a pre-defined procedure within the DASY4 software. Upon completion of a reference and optical surface check, the exposed region of the phantom was scanned near the inner surface with a grid spacing of 15mm x 15mm.
An area scan was determined as follows:
- Based on the defined area scan grid, a more detailed grid is created to increase the points by a factor of 10. The interpolation function then evaluates all field values between corresponding measurement points.
- A linear search is applied to find all the candidate maxima. Subsequently, all maxima are removed that are >2 dB from the global maximum. The remaining maxima are then used to position the cube scans.
A 1g and 10g spatial peak SAR was determined as follows:
- Extrapolation is used to determine the values between the dipole center of the probe and the surface of the phantom. This data cannot be measured because the center of the dipole sensors is 1.0 mm away from the probe tip and the distance between the probe and the boundary must be larger than 25% of the probe diameter. The probe diameter is 2.4 mm. In the DASY4 software, the distance between the sensor center and phantom surface is set to 2.0 mm. This provides a distance of 1.0 mm between the probe tip and the surface. The extrapolation of the values between the dipole center and the surface of the phantom was based on trivariate quadratics computed from the previously calculated 3D interpolated points nearest the phantom surface.
- Interpolated data is used to calculate the average SAR over 1g and 10g cubes by spatially discretizing the entire measured cube. The volume used to determine the averaged SAR is a 1mm grid (42875 interpolated points).
- For frequencies < 3 GHz a zoom scan volume of 24 mm x 24 mm x 24 mm (7x7x7 points) centered at the peak SAR location determined from the area scan was used and a zoom scan resolution of 5 mm x 5 mm x 5 mm was used.
- For frequencies > 3 GHz a zoom scan volume of 24 mm x 24 mm x 20 mm (7x7x9 points) centered at the peak SAR location determined from the area scan was used and a zoom scan resolution of 4 mm x 4 mm x 2.5 mm was used.

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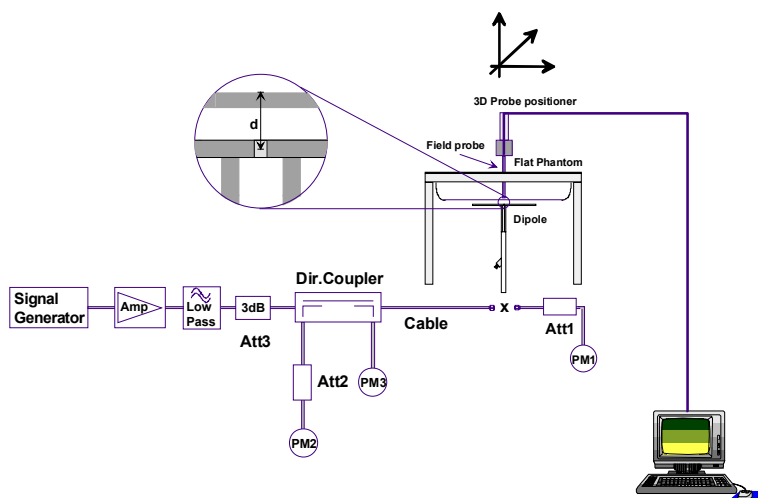
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6.0 SYSTEM PERFORMANCE CHECK

Prior to the SAR evaluations, system checks were performed using a planar phantom with 2450 MHz and 5000 MHz validation dipoles (see Appendix B for system performance check test plots). The dielectric parameters of the simulated tissue mixtures were measured prior to the system performance checks using a Dielectric Probe Kit and a Network Analyzer (see Appendix C). A forward power of 250 mW was applied to the dipole and the system was verified to a tolerance of $\pm 10\%$ from the system validation target SAR values (see Appendix F for system validation measurement procedures).

SYSTEM PERFORMANCE CHECK EVALUATION RESULTS

Test Date	Freq. (MHz)	SAR 10g (W/kg)			PEAK SAR (W/kg)			Dielectric Constant ϵ_r			Conductivity σ (mho/m)			Amb. Temp. (°C)	Fluid Temp. (°C)	Humid. (%)	Barom. Press. (kPa)
	Body	Sys. Val. Target	Meas.	Dev.	Sys. Val. Target	Meas.	Dev.	Sys. Val. Target	Meas.	Dev.	Sys. Val. Target	Meas.	Dev.				
Nov. 28	2450	13.4 ±10%	14.0	+4.5%	-	-	-	50.1 ±5%	50.6	+1.0%	1.99 ±5%	2.01	+1.0%	24.8	23.5	35	101.1
Jan. 16	2450	13.4 ±10%	14.2	+6.0%	-	-	-	50.1 ±5%	50.2	+0.2%	1.99 ±5%	1.97	-1.0%	24.0	23.1	36	101.1
Nov. 30	5200	18.2 ±10%	17.8	-2.2%	72.7 ±15%	74.2	+2.1%	44.6 ±10%	45.1	+1.2%	5.52 ±5%	5.28	-4.3%	23.3	22.0	33	101.0
Dec. 04	5800	19.1 ±10%	19.3	+1.1%	87.3 ±15%	87.0	-0.3%	44.7 ±10%	45.5	+1.8%	6.22 ±5%	6.20	-0.3%	23.0	22.5	32	101.8
Jan. 15	5800	19.1 ±10%	18.5	-3.1%	87.3 ±15%	84.9	-2.7%	44.7 ±10%	44.7	0.0%	6.22 ±5%	6.12	-1.6%	23.9	22.2	31	101.0
Fluid Depth		≥ 15 cm	Notes	1. The target SAR values are referenced from the System Validation procedures performed by Celltech Labs Inc. (see Appendix F).													
				2. The target dielectric parameters are referenced from the System Validation procedures performed by Celltech Labs Inc. (see Appendix F).													
ρ (Kg/m³)		1000		3. The fluid temperature was measured prior to and after the system performance checks to ensure the temperature remained within +/-2°C of the fluid temperature reported during the dielectric parameter measurements.													
				4. The SAR evaluations were performed within 24 hours of the system performance check.													




System Performance Check Measurement Setup Diagram





2 GHz Validation Dipole Setup



5 GHz Validation Dipole Setup

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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7.0 SIMULATED EQUIVALENT TISSUES


The 2450 MHz simulated tissue mixture consisted of Glycol-monobutyl, water and salt. The 5 GHz simulated tissue mixture was provided by SPEAG and is listed below. The dielectric parameters of the tissue mixtures (permittivity and conductivity) were measured prior to the SAR evaluations. See Appendix D for the system manufacturer's 5GHz fluid data sheet.



SIMULATED TISSUE MIXTURE (2 GHz)		
INGREDIENT	2450 MHz Body	2450 MHz Body
	System Performance Check	DUT Evaluation
Water	69.98 %	69.98 %
Glycol Monobutyl	30.00 %	30.00 %
Salt	0.02 %	0.02 %

SIMULATED TISSUE MIXTURE (5 GHz)		
INGREDIENT	5 GHz Body	5 GHz Body
	System Performance Check	DUT Evaluation
Water	64-78%	64-78%
Mineral Oil	11-18%	11-18%
Emulsifiers	9-15%	9-15%
Additives and Salt	2-3%	2-3%

8.0 SAR LIMITS


SAR RF EXPOSURE LIMITS			
FCC 47 CFR 2.1093	Health Canada Safety Code 6	(General Population / Uncontrolled Exposure)	(Occupational / Controlled Exposure)
Spatial Average (averaged over the whole body)		0.08 W/kg	0.4 W/kg
Spatial Peak (averaged over any 1 g of tissue)		1.6 W/kg	8.0 W/kg
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)		4.0 W/kg	20.0 W/kg
The Spatial Average value of the SAR averaged over the whole body.			
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.			
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.			
Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.			
Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.			




Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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9.0 ROBOT SYSTEM SPECIFICATIONS

<u>Specifications</u>	
Positioner	Stäubli Unimation Corp. Robot Model: RX60L
Repeatability	0.02 mm
No. of axis	6
<u>Data Acquisition Electronic (DAE) System</u>	
<u>Cell Controller</u>	
Processor	AMD Athlon XP 2400+
Clock Speed	2.0 GHz
Operating System	Windows XP Professional
<u>Data Converter</u>	
Features	Signal Amplifier, multiplexer, A/D converter, and control logic
Software	Measurement Software: DASY4, V4.7 Build 44
	Postprocessing Software: SEMCAD, V1.8 Build 171
Connecting Lines	Optical downlink for data and status info.; Optical uplink for commands and clock
<u>DASY4 Measurement Server</u>	
Function	Real-time data evaluation for field measurements and surface detection
Hardware	PC/104 166MHz Pentium CPU; 32 MB chipdisk; 64 MB RAM
Connections	COM1, COM2, DAE, Robot, Ethernet, Service Interface
<u>E-Field Probe</u>	
Model	EX3DV4
Serial No.	3600
Construction	Symmetrical design with triangular core
Frequency	10 MHz to 6 GHz
Linearity	±0.2 dB (30 MHz to 3 GHz)
<u>Phantom(s)</u>	
Type	Planar Phantom
Shell Material	Fiberglass
Thickness	2.0 ±0.1 mm
Volume	Approx. 70 liters


Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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				Certificate No. 2470.01


10.0 PROBE SPECIFICATION (EX3DV4)


<p>Construction: Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g. DGBE)</p> <p>Calibration: Basic Broadband Calibration in air: 10-3000 MHz Conversion Factors (CF) for HSL 900 and HSL 1750</p> <p>Frequency: 10 MHz to >6 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)</p> <p>Directivity: ± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)</p> <p>Dynamic Range: 10 μW/g to >100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 μW/g)</p> <p>Dimensions: Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1.0 mm</p> <p>Application: High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better than 30%.</p>	
EX3DV4 E-Field Probe	



11.0 PLANAR PHANTOM

<p>The planar phantom is a fiberglass shell phantom with a 2.0 mm (+/-0.2mm) thick device measurement area at the center of the phantom for SAR evaluations of devices with a larger surface area than the planar section of the SAM phantom. The planar phantom is integrated in a wooden table (see Appendix H for dimensions and specifications of the planar phantom). The planar phantom was also used for the system performance check evaluations.</p>	
Planar Phantom	

12.0 DEVICE HOLDER


<p>The DASY4 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65°. The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. For evaluations of larger devices a Plexiglas platform is attached to the device holder.</p>	
Device Holder	



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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13.0 TEST EQUIPMENT LIST


TEST EQUIPMENT		ASSET NO.	SERIAL NO.	DATE CALIBRATED		CALIBRATION DUE DATE
USED	DESCRIPTION					
x	Schmid & Partner DASY4 System	-	-	-	-	-
x	-DASY4 Measurement Server	00158	1078	N/A	N/A	N/A
x	-Robot	00046	599396-01	N/A	N/A	N/A
x	-DAE4	00019	353	10Jul07	10Jul08	10Jul08
	-DAE3	00018	370	13Mar07	13Mar08	13Mar08
	-ET3DV6 E-Field Probe	00016	1387	16Mar07	16Mar08	16Mar08
x	-EX3DV4 E-Field Probe	00213	3600	24Jan07	24Jan08	24Jan08
	-300 MHz Validation Dipole	00023	135	08Jun07	08Jun08	08Jun08
	-450 MHz Validation Dipole	00024	136	30Jul07	30Jul08	30Jul08
	-835 MHz Validation Dipole	00022	411	Brain	07Jun07	07Jun08
				Body	07Jun07	07Jun08
	-900 MHz Validation Dipole	00020	054	Brain	07Jun07	07Jun08
				Body	07Jun07	07Jun08
	-1800 MHz Validation Dipole	00021	247	Brain	06Jun07	06Jun08
				Body	06Jun07	06Jun08
	-1900 MHz Validation Dipole	00032	151	Brain	06Jun07	06Jun08
				Body	06Jun07	06Jun08
	-2450 MHz Validation Dipole	00025	150	Brain	16Jul07	16Jul08
x				Body	08Jun07	08Jun08
x	5GHz Validation Dipole	00126	1031	Body	18May07	18May08
				Body	22May07	22May08
				Brain	09May07	09May08
x				Body	10May07	10May08
	-SAM Phantom V4.0C	00154	1033	N/A	N/A	N/A
x	-Barski Planar Phantom	00155	03-01	N/A	N/A	N/A
	-Plexiglas Side Planar Phantom	00156	161	N/A	N/A	N/A
	-Plexiglas Validation Planar Phantom	00157	137	N/A	N/A	N/A
	ALS-PR-DIEL Dielectric Probe Kit	00160	260-00953	N/A	N/A	N/A
x	HP 85070C Dielectric Probe Kit	00033	US39240170	N/A	N/A	N/A
x	Gigatronics 8652A Power Meter	00007	1835272	26Mar07	26Mar08	26Mar08
x	Gigatronics 80701A Power Sensor	00012	1834350	22Jan07	22Jan08	22Jan08
x	Gigatronics 80701A Power Sensor	00014	1833699	22Jan07	22Jan08	22Jan08
	Gigatronics 80701A Power Sensor	00109	1834366	26Mar07	26Mar08	26Mar08
x	HP 8753ET Network Analyzer	00134	US39170292	20Apr07	20Apr08	20Apr08
x	HP 8648D Signal Generator	00005	3847A00611	NCR	NCR	NCR
x	Rohde & Schwarz SMR20 Signal Generator	00006	100104	NCR	NCR	NCR
x	Amplifier Research 5S1G4 Power Amplifier	00106	26235	NCR	NCR	NCR
	Amplifier Research 10W1000C Power Amplifier	00041	27887	NCR	NCR	NCR
x	Nextec NB00383 Microwave Amplifier	00151	0535	NCR	NCR	NCR
x	HP E4408B Spectrum Analyzer	00015	US39240170	05Feb07	05Feb08	05Feb08



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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14.0 MEASUREMENT UNCERTAINTIES


UNCERTAINTY BUDGET FOR DEVICE EVALUATION (2 GHz)						
Error Description	Uncertainty Value ±%	Probability Distribution	Divisor	ci 1g	Uncertainty Value ±% (1g)	V _i or V _{eff}
Measurement System						
Probe calibration (2450 MHz)	5.9	Normal	1	1	5.9	∞
Axial isotropy of the probe	4.7	Rectangular	1.732050808	0.7	1.9	∞
Spherical isotropy of the probe	9.6	Rectangular	1.732050808	0.7	3.9	∞
Spatial resolution	0	Rectangular	1.732050808	1	0.0	∞
Boundary effects	0.2	Rectangular	1.732050808	1	0.1	∞
Probe linearity	4.7	Rectangular	1.732050808	1	2.7	∞
Detection limit	1	Rectangular	1.732050808	1	0.6	∞
Readout electronics	0.3	Normal	1	1	0.3	∞
Response time	0.8	Rectangular	1.732050808	1	0.5	∞
Integration time	2.6	Rectangular	1.732050808	1	1.5	∞
RF ambient conditions	3	Rectangular	1.732050808	1	1.7	∞
Mech. constraints of robot	0.4	Rectangular	1.732050808	1	0.2	∞
Probe positioning	2.9	Rectangular	1.732050808	1	1.7	∞
Extrapolation & integration	1	Rectangular	1.732050808	1	0.6	∞
Test Sample Related						
Device positioning	2.9	Normal	1	1	2.9	12
Device holder uncertainty	3.6	Normal	1	1	3.6	8
Power drift	5	Rectangular	1.732050808	1	2.9	∞
Phantom and Setup						
Phantom uncertainty	4	Rectangular	1.732050808	1	2.3	∞
Liquid conductivity (target)	5	Rectangular	1.732050808	0.64	1.8	∞
Liquid conductivity (measured)	3.1	Normal	1	0.64	2.0	∞
Liquid permittivity (target)	5	Rectangular	1.732050808	0.6	1.7	∞
Liquid permittivity (measured)	4.7	Normal	1	0.6	2.8	∞
Combined Standard Uncertainty					11.10	
Expanded Uncertainty (k=2)					22.21	
Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 (see reference [5])						



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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MEASUREMENT UNCERTAINTIES (Cont.)


UNCERTAINTY BUDGET FOR SYSTEM VALIDATION (2 GHz)						
Error Description	Uncertainty Value $\pm\%$	Probability Distribution	Divisor	ci 1g	Uncertainty Value $\pm\%$ (1g)	V_i or V_{eff}
Measurement System						
Probe calibration (2450 MHz)	5.9	Normal	1	1	5.9	∞
Axial isotropy of the probe	4.7	Rectangular	1.732050808	1	2.7	∞
Spherical isotropy of the probe	0	Rectangular	1.732050808	1	0.0	∞
Spatial resolution	0	Rectangular	1.732050808	1	0.0	∞
Boundary effects	0.2	Rectangular	1.732050808	1	0.1	∞
Probe linearity	4.7	Rectangular	1.732050808	1	2.7	∞
Detection limit	1	Rectangular	1.732050808	1	0.6	∞
Readout electronics	0.3	Normal	1	1	0.3	∞
Response time	0	Rectangular	1.732050808	1	0.0	∞
Integration time	0	Rectangular	1.732050808	1	0.0	∞
RF ambient conditions	3	Rectangular	1.732050808	1	1.7	∞
Mech. constraints of robot	0.4	Rectangular	1.732050808	1	0.2	∞
Probe positioning	2.9	Rectangular	1.732050808	1	1.7	∞
Extrapolation & integration	1	Rectangular	1.732050808	1	0.6	∞
Dipole						
Dipole Positioning	2	Normal	1.732050808	1	1.2	∞
Power & Power Drift	4.7	Normal	1.732050808	1	2.7	∞
Phantom and Setup						
Phantom uncertainty	4	Rectangular	1.732050808	1	2.3	∞
Liquid conductivity (target)	5	Rectangular	1.732050808	0.64	1.8	∞
Liquid conductivity (measured)	1	Normal	1	0.64	0.6	∞
Liquid permittivity (target)	5	Rectangular	1.732050808	0.6	1.7	∞
Liquid permittivity (measured)	1	Normal	1	0.6	0.6	∞
Combined Standard Uncertainty					8.80	
Expanded Uncertainty (k=2)					17.59	
Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 (see reference [5])						



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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MEASUREMENT UNCERTAINTIES (Cont.)

UNCERTAINTY BUDGET FOR DEVICE EVALUATION (5 GHz)						
Error Description	Uncertainty Value ±%	Probability Distribution	Divisor	ci 1g	Uncertainty Value ±% (1g)	V _i or V _{eff}
Measurement System						
Probe calibration (5 GHz)	6.55	Normal	1	1	6.55	∞
Axial isotropy of the probe	4.7	Rectangular	1.732050808	0.7	1.9	∞
Spherical isotropy of the probe	9.6	Rectangular	1.732050808	0.7	3.9	∞
Spatial resolution	0	Rectangular	1.732050808	1	0.0	∞
Boundary effects	0.1	Rectangular	1.732050808	1	0.1	∞
Probe linearity	4.7	Rectangular	1.732050808	1	2.7	∞
Detection limit	1	Rectangular	1.732050808	1	0.6	∞
Readout electronics	0.3	Normal	1	1	0.3	∞
Response time	0.8	Rectangular	1.732050808	1	0.5	∞
Integration time	2.6	Rectangular	1.732050808	1	1.5	∞
RF ambient conditions	3	Rectangular	1.732050808	1	1.7	∞
Mech. constraints of robot	0.8	Rectangular	1.732050808	1	0.5	∞
Probe positioning	5.7	Rectangular	1.732050808	1	3.3	∞
Extrapolation & integration	4	Rectangular	1.732050808	1	2.3	∞
Test Sample Related						
Device positioning	2.9	Normal	1	1	2.9	12
Device holder uncertainty	3.6	Normal	1	1	3.6	8
Power drift	5	Rectangular	1.732050808	1	2.9	∞
Phantom and Setup						
Phantom uncertainty	4	Rectangular	1.732050808	1	2.3	∞
Liquid conductivity (target)	5	Rectangular	1.732050808	0.64	1.8	∞
Liquid conductivity (measured)	3.3	Normal	1	0.64	2.1	∞
Liquid permittivity (target)	10	Rectangular	1.732050808	0.6	3.5	∞
Liquid permittivity (measured)	8.3	Normal	1	0.6	5.0	∞
Combined Standard Uncertainty					13.07	
Expanded Uncertainty (k=2)					26.15	
Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 (see reference [5])						


Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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MEASUREMENT UNCERTAINTIES (Cont.)


UNCERTAINTY BUDGET FOR SYSTEM VALIDATION (5 GHz)						
Error Description	Uncertainty Value ±%	Probability Distribution	Divisor	ci 1g	Uncertainty Value ±% (1g)	V _i or V _{eff}
Measurement System						
Probe calibration (5 GHz)	6.55	Normal	1	1	6.55	∞
Axial isotropy of the probe	4.7	Rectangular	1.732050808	1	2.7	∞
Spherical isotropy of the probe	9.6	Rectangular	1.732050808	1	5.5	∞
Spatial resolution	0	Rectangular	1.732050808	1	0.0	∞
Boundary effects	0.1	Rectangular	1.732050808	1	0.1	∞
Probe linearity	4.7	Rectangular	1.732050808	1	2.7	∞
Detection limit	1	Rectangular	1.732050808	1	0.6	∞
Readout electronics	0.3	Normal	1	1	0.3	∞
Response time	0	Rectangular	1.732050808	1	0.0	∞
Integration time	0	Rectangular	1.732050808	1	0.0	∞
RF ambient conditions	3	Rectangular	1.732050808	1	1.7	∞
Mech. constraints of robot	0.8	Rectangular	1.732050808	1	0.5	∞
Probe positioning	5.7	Rectangular	1.732050808	1	3.3	∞
Extrapolation & integration	4	Rectangular	1.732050808	1	2.3	∞
Dipole						
Dipole positioning	2	Rectangular	1.732050808	1	1.2	∞
Power & Power Drift	4.7	Rectangular	1.732050808	1	2.7	∞
Phantom and Setup						
Phantom uncertainty	4	Rectangular	1.732050808	1	2.3	∞
Liquid conductivity (target)	5	Rectangular	1.732050808	0.64	1.8	∞
Liquid conductivity (measured)	4.3	Normal	1	0.64	2.8	∞
Liquid permittivity (target)	10	Rectangular	1.732050808	0.6	3.5	∞
Liquid permittivity (measured)	1.8	Normal	1	0.6	1.1	∞
Combined Standard Uncertainty					12.10	
Expanded Uncertainty (k=2)					24.19	
Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 (see reference [5])						



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	


15.0 REFERENCES



- [1] Federal Communications Commission - "Radiofrequency radiation exposure evaluation: portable devices", Rule Part 47 CFR §2.1093.
- [2] Health Canada - "Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz", Safety Code 6: 1999.
- [3] Federal Communications Commission - "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields", OET Bulletin 65, Supplement C (Edition 01-01), FCC, Washington, D.C.: June 2001.
- [4] Industry Canada - "Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)", Radio Standards Specification RSS-102 Issue 2: November 2005.
- [5] IEEE Standard 1528-2003 - "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques": December 2003.
- [6] Federal Communications Commission - "SAR Measurement Procedures for 802.11a/b/g Transmitters": May 2007 (Rev. 1.2).
- [7] Federal Communications Commission - "SAR Measurement Requirements for 3 - 6 GHz": October 2006 (Rev. 1.1).

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX A - SAR MEASUREMENT DATA

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/28/2007

Body SAR - 802.11b - 1 Mbps - 2442 MHz - Channel 7 - Bottom Side of Tablet PC - MAIN Antenna

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 24.6°C; Fluid Temp: 23.3°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: DSSS WLAN

Frequency: 2442 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 18.0 dBm (Conducted)

Medium: M2450 Medium parameters used: $f = 2442 \text{ MHz}$; $\sigma = 2.01 \text{ mho/m}$; $\epsilon_r = 50.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(6.31, 6.31, 6.31); Calibrated: 24/01/2007

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

- Electronics: DAE4 Sn353; Calibrated: 10/07/2007

- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01

- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 2442 MHz

Area Scan (11x23x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 2442 MHz

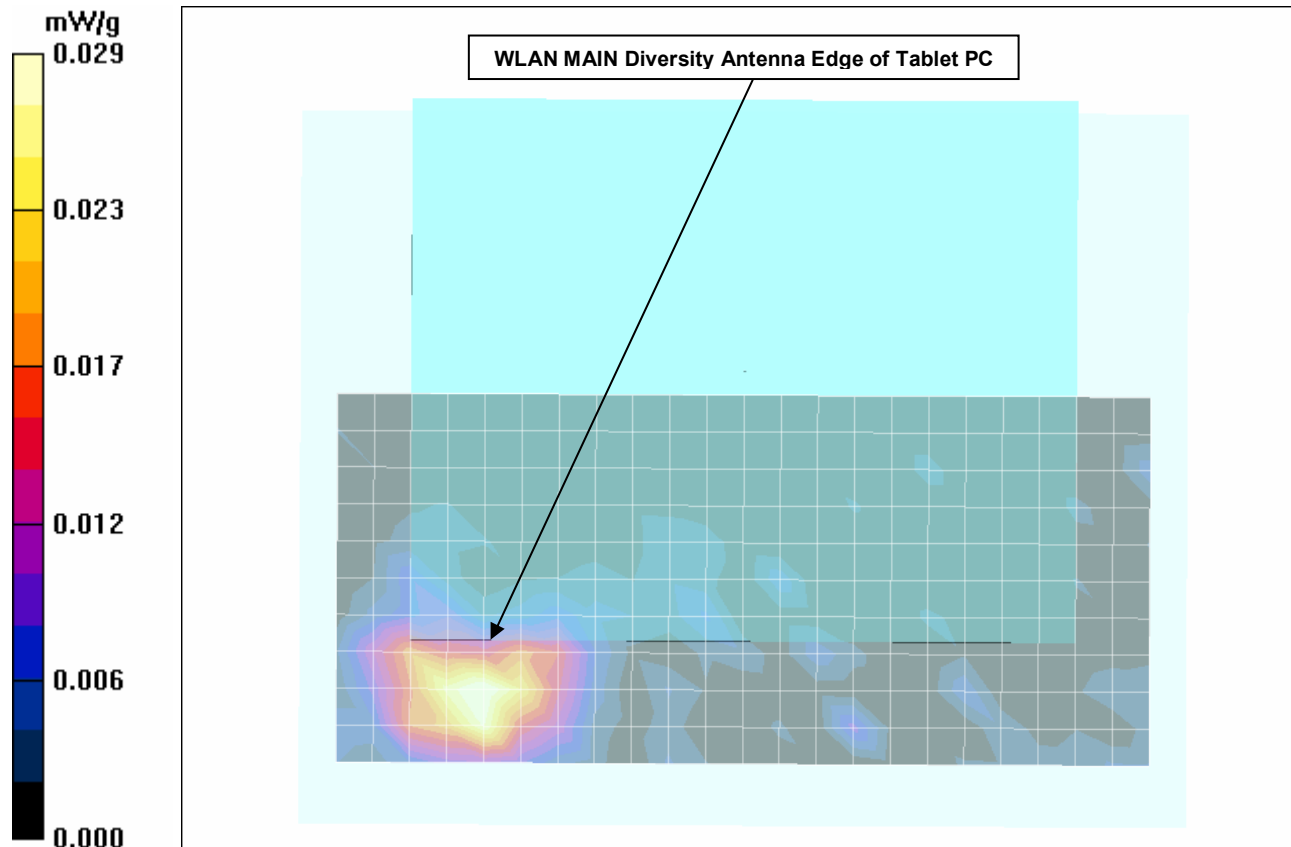
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$


Reference Value = 3.23 V/m



Peak SAR (extrapolated) = 0.036 W/kg

SAR(1 g) = 0.0211 mW/g; SAR(10 g) = 0.0123 mW/g

Maximum value of SAR (measured) = 0.029 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/28/2007

Body SAR - 802.11b - 1 Mbps - 2442 MHz - Channel 7 - Bottom Side of Tablet PC - AUX Antenna

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 24.6°C; Fluid Temp: 23.3°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: DSSS WLAN

Frequency: 2442 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 18.0 dBm (Conducted)

Medium: M2450 Medium parameters used: $f = 2442 \text{ MHz}$; $\sigma = 2.01 \text{ mho/m}$; $\epsilon_r = 50.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(6.31, 6.31, 6.31); Calibrated: 24/01/2007

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

- Electronics: DAE4 Sn353; Calibrated: 10/07/2007

- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01

- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 2442 MHz

Area Scan (11x23x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.021 mW/g

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 2442 MHz

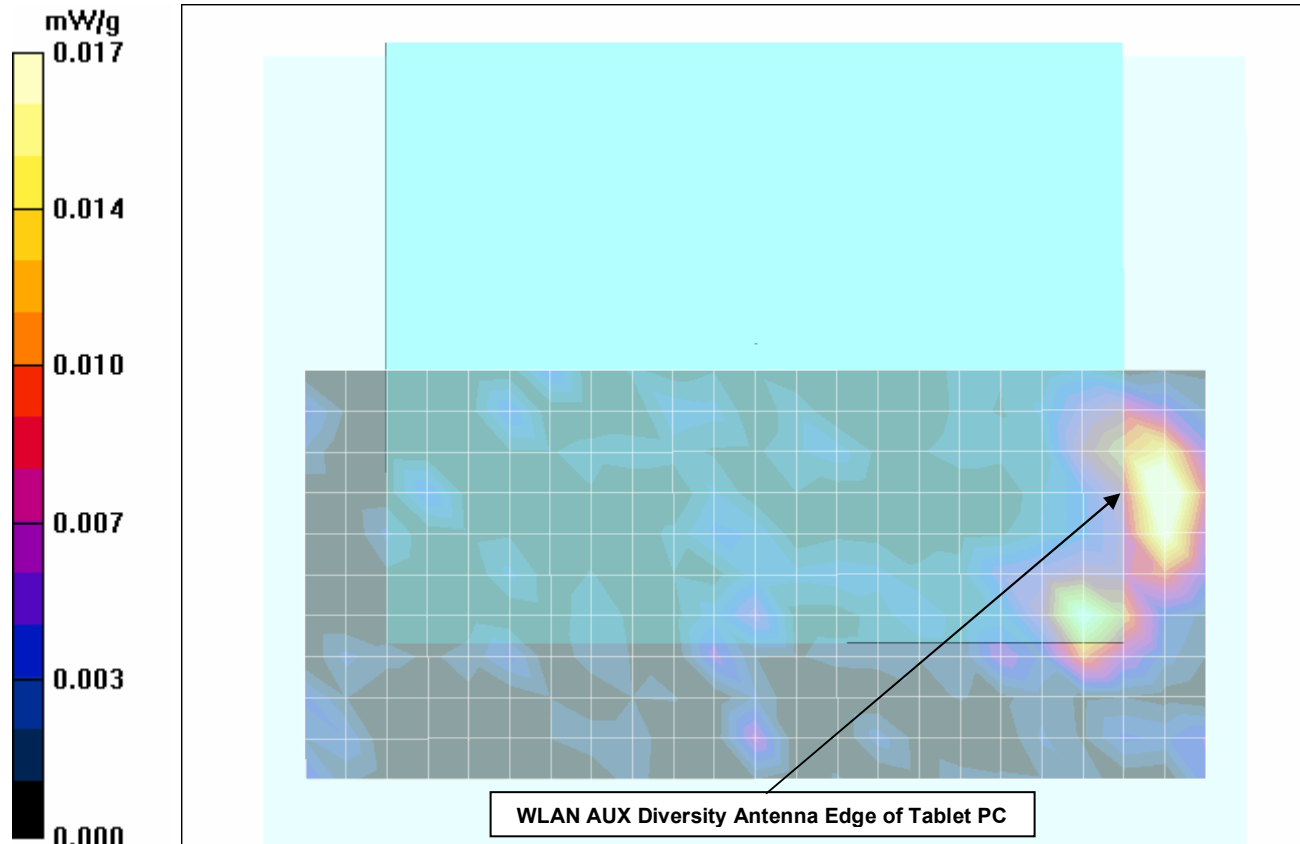
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$


Reference Value = 2.88 V/m



Peak SAR (extrapolated) = 0.030 W/kg

SAR(1 g) = 0.0124 mW/g; SAR(10 g) = 0.0057 mW/g

Maximum value of SAR (measured) = 0.017 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/28/2007

Body SAR - 802.11b - 1 Mbps - 2442 MHz - Channel 7 - MAIN Antenna Side Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 24.6°C; Fluid Temp: 23.3°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: DSSS WLAN

Frequency: 2442 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 18.0 dBm (Conducted)

Medium: M2450 Medium parameters used: $f = 2442 \text{ MHz}$; $\sigma = 2.01 \text{ mho/m}$; $\epsilon_r = 50.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(6.31, 6.31, 6.31); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 2442 MHz

Area Scan (7x23x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.689 mW/g

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 2442 MHz

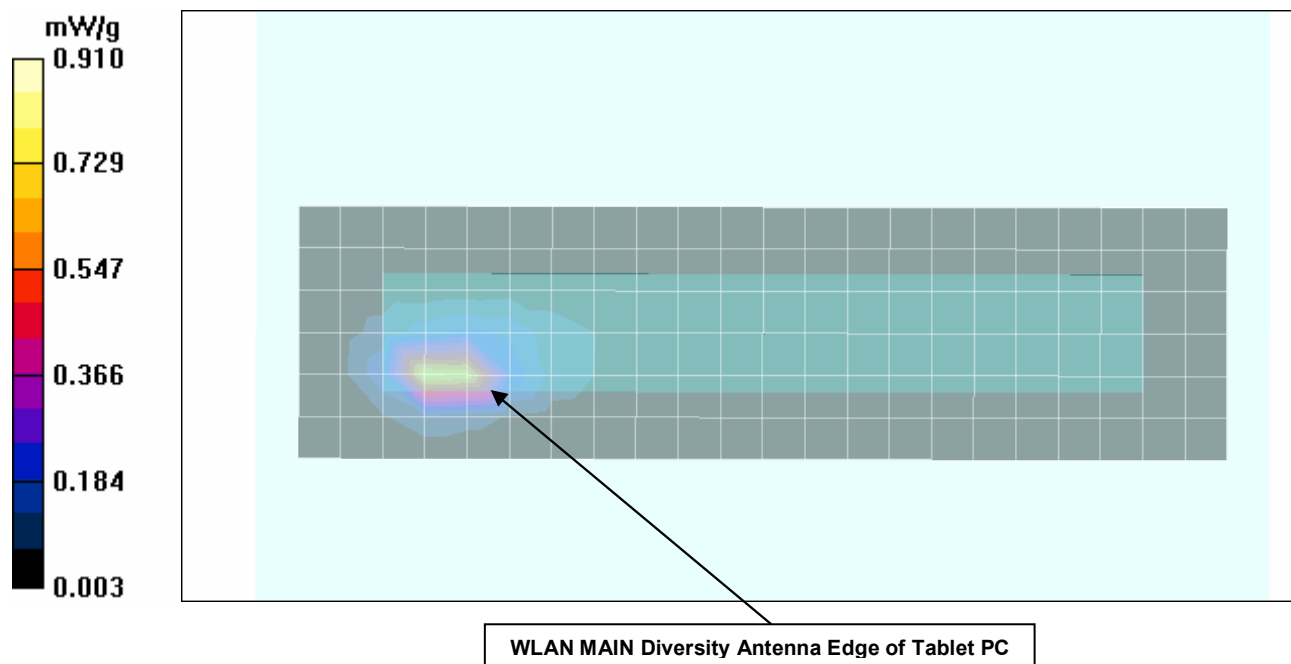
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$


Reference Value = 18.1 V/m; Power Drift = 0.196 dB



Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.602 mW/g; SAR(10 g) = 0.266 mW/g

Maximum value of SAR (measured) = 0.910 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/28/2007

Body SAR - 802.11b - 1 Mbps - 2442 MHz - Channel 7 - AUX Antenna Side Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 24.6°C; Fluid Temp: 23.3°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: DSSS WLAN

Frequency: 2442 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 18.0 dBm (Conducted)

Medium: M2450 Medium parameters used: $f = 2442 \text{ MHz}$; $\sigma = 2.01 \text{ mho/m}$; $\epsilon_r = 50.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(6.31, 6.31, 6.31); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - AUX Antenna Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 2442 MHz

Area Scan (7x23x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.816 mW/g

Body SAR - AUX Antenna Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 2442 MHz

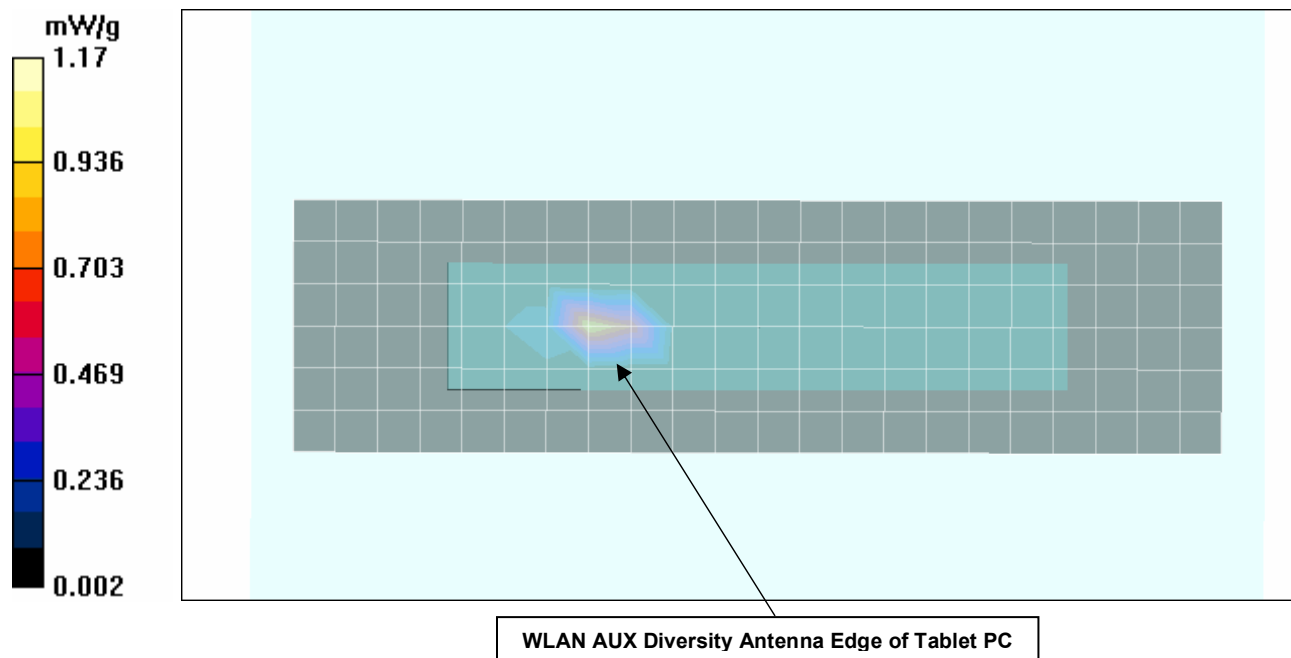
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$


Reference Value = 20.9 V/m; Power Drift = -0.060 dB



Peak SAR (extrapolated) = 1.78 W/kg

SAR(1 g) = 0.694 mW/g; SAR(10 g) = 0.227 mW/g

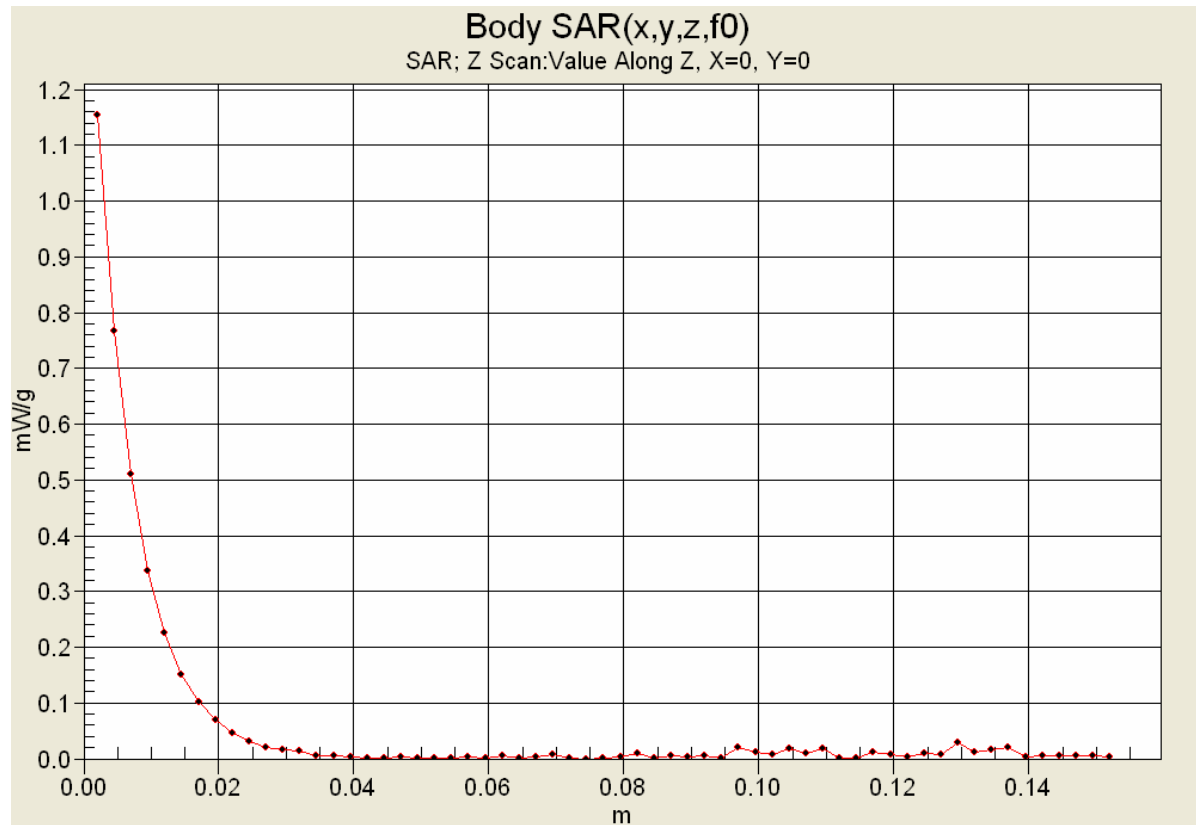
Maximum value of SAR (measured) = 1.17 mW/g






Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Z-Axis Scan



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/28/2007

Body SAR - 802.11b - 1 Mbps - 2442 MHz - Ch. 7 - MAIN Antenna Adjacent Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 24.6°C; Fluid Temp: 23.3°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: DSSS WLAN

Frequency: 2442 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 18.0 dBm (Conducted)

Medium: M2450 Medium parameters used: $f = 2442 \text{ MHz}$; $\sigma = 2.01 \text{ mho/m}$; $\epsilon_r = 50.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(6.31, 6.31, 6.31); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - MAIN Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 2442 MHz

Area Scan (7x23x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.015 mW/g

Body SAR - MAIN Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 2442 MHz

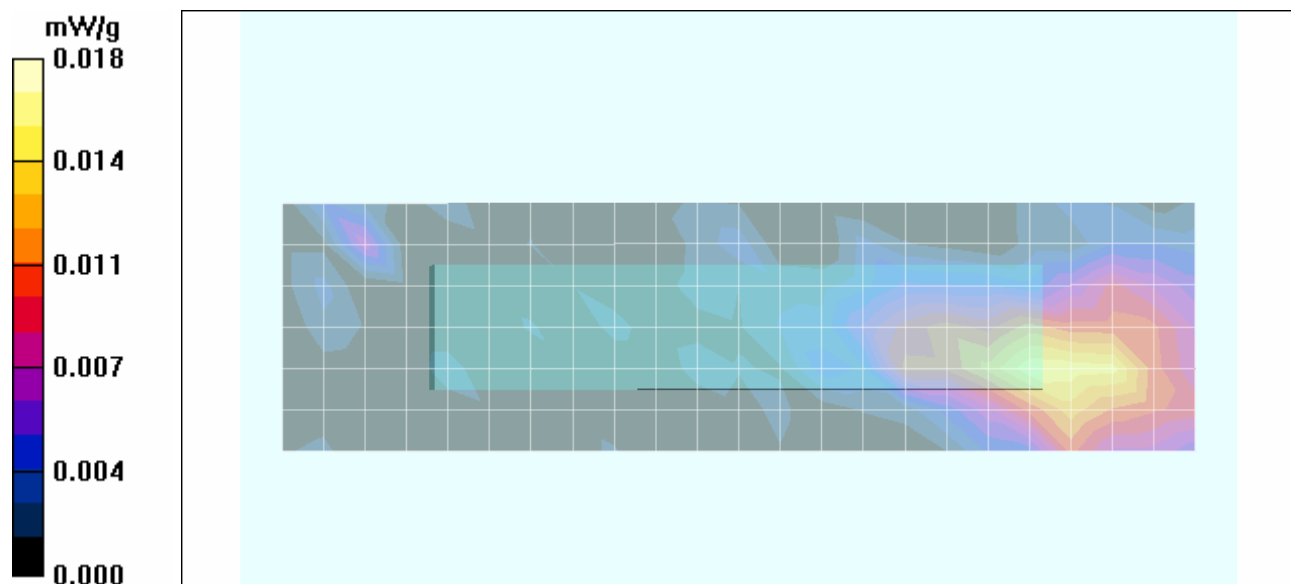
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$


Reference Value = 2.27 V/m



Peak SAR (extrapolated) = 0.023 W/kg

SAR(1 g) = 0.011 mW/g; SAR(10 g) = 0.00655 mW/g

Maximum value of SAR (measured) = 0.018 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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Date Tested: 11/28/2007

Body SAR - 802.11b - 1 Mbps - 2442 MHz - Ch. 7 - AUX Antenna Adjacent Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 24.6°C; Fluid Temp: 23.3°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: DSSS WLAN

Frequency: 2442 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 18.0 dBm (Conducted)

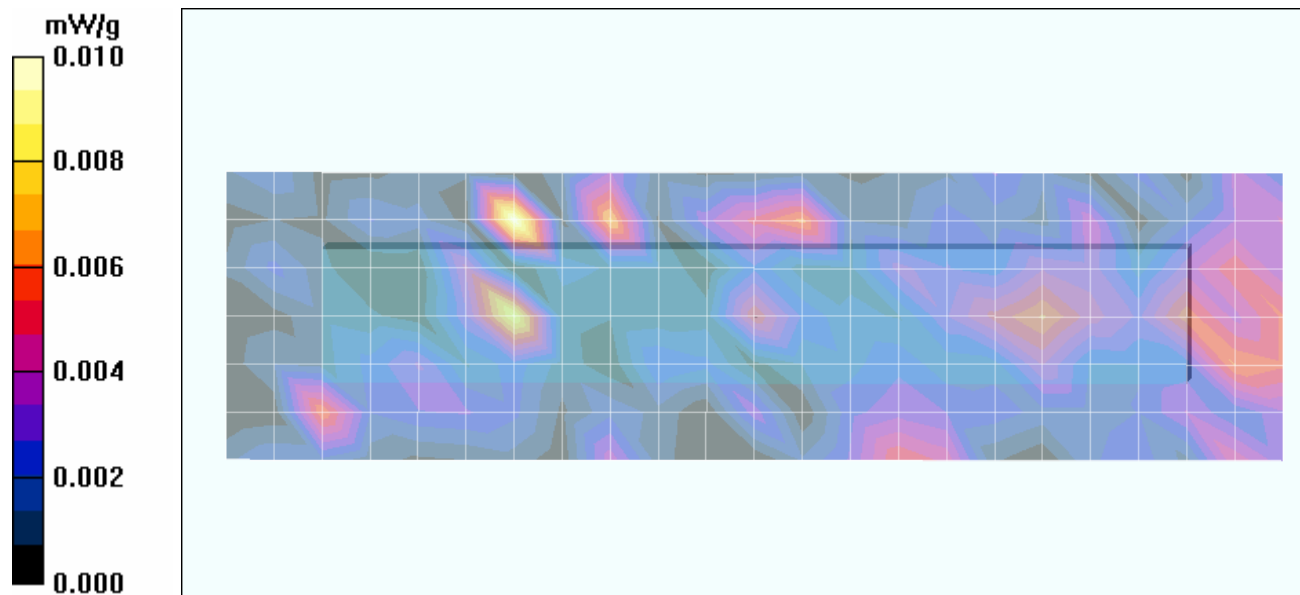
Medium: M2450 Medium parameters used: $f = 2442 \text{ MHz}$; $\sigma = 2.01 \text{ mho/m}$; $\epsilon_r = 50.6$; $\rho = 1000 \text{ kg/m}^3$


- Probe: EX3DV4 - SN3600; ConvF(6.31, 6.31, 6.31); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171



Body SAR - AUX Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 2442 MHz

Area Scan (7x23x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.010 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 01/16/2008

Body SAR - 802.11b - 1 Mbps - 2442 MHz - Channel 7 - MAIN Antenna Side Edge-on of Tablet PC With Co-transmitting Bluetooth

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 24.0°C; Fluid Temp: 23.0°C; Barometric Pressure: 101.1 kPa; Humidity: 36%

Communication System: DSSS WLAN

Frequency: 2442 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 18.0 dBm (Conducted)

Medium: M2450 Medium parameters used: $f = 2442 \text{ MHz}$; $\sigma = 1.97 \text{ mho/m}$; $\epsilon_r = 50.2$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(6.31, 6.31, 6.31); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 2442 MHz & Co-transmitting Bluetooth

Area Scan (7x23x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.646 mW/g

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 2442 MHz & Co-transmitting Bluetooth

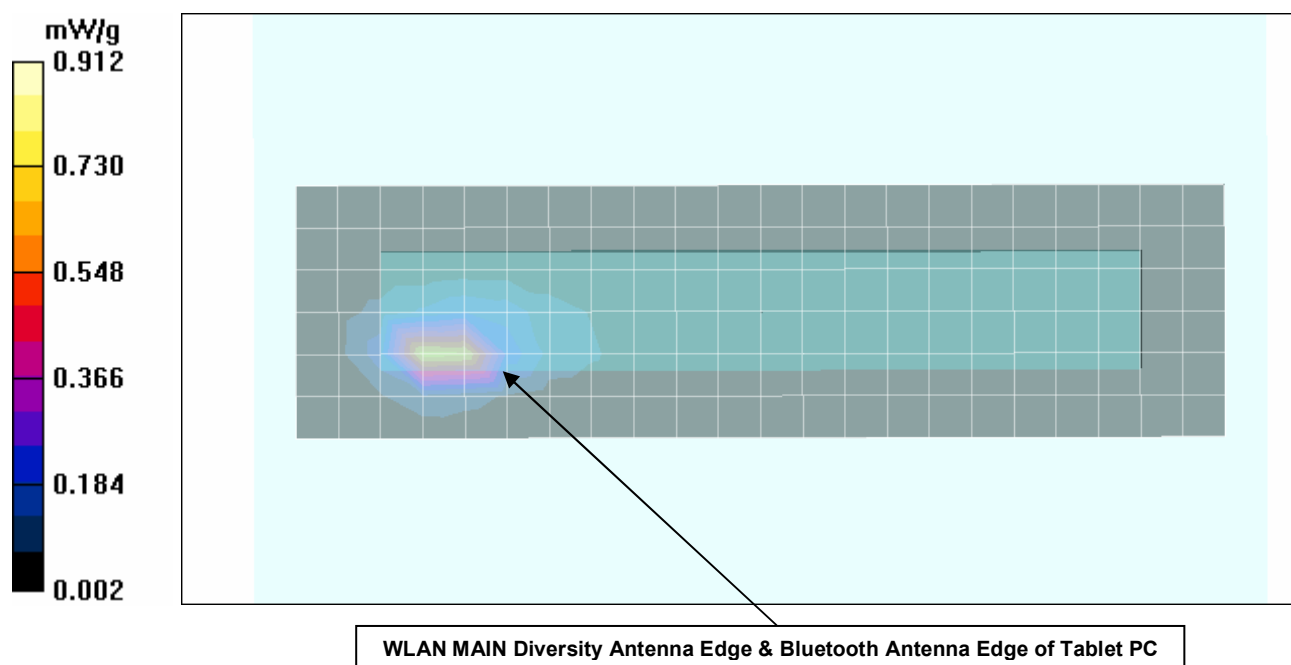
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$


Reference Value = 18.7 V/m; Power Drift = -0.074 dB



Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.604 mW/g; SAR(10 g) = 0.266 mW/g

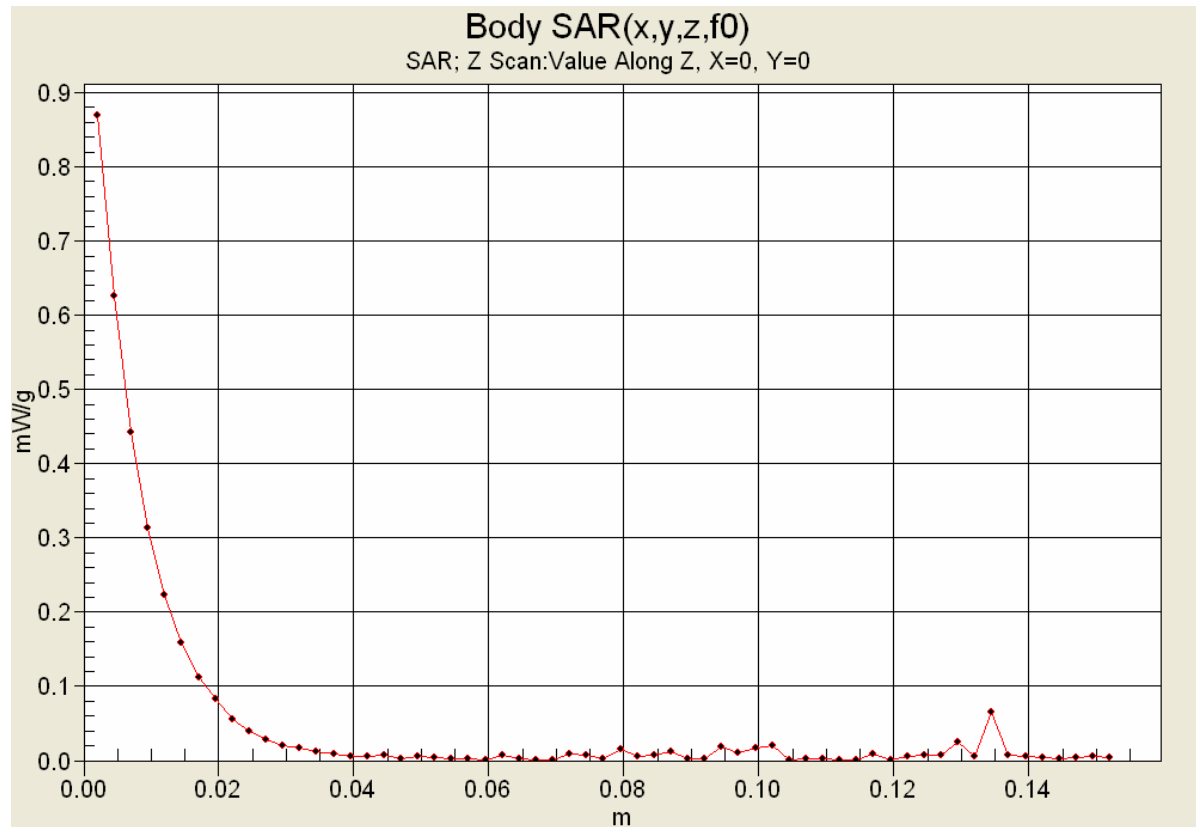
Maximum value of SAR (measured) = 0.912 mW/g






Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Z-Axis Scan



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

Body SAR - 802.11a - 6 Mbps - 5180 MHz - Channel 36 - MAIN Antenna Side Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: OFDM WLAN

Frequency: 5180 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 16.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.25 \text{ mho/m}$; $\epsilon_r = 45.0$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5180 MHz

Area Scan (9x31x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.07 mW/g

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5180 MHz

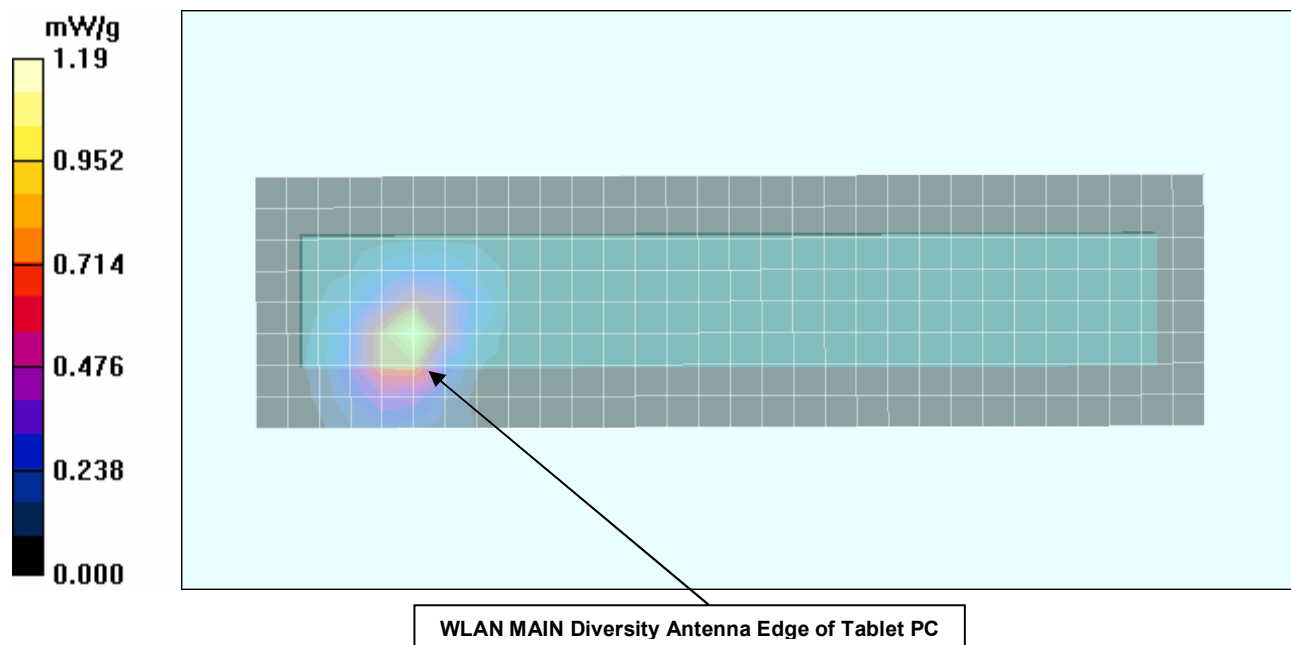
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 15.2 V/m; Power Drift = 0.008 dB



Peak SAR (extrapolated) = 2.13 W/kg

SAR(1 g) = 0.645 mW/g; SAR(10 g) = 0.244 mW/g

Maximum value of SAR (measured) = 1.19 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

Body SAR - 802.11a - 6 Mbps - 5180 MHz - Channel 36 - AUX Antenna Side Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: OFDM WLAN

Frequency: 5180 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 16.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.25 \text{ mho/m}$; $\epsilon_r = 45.0$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - AUX Antenna Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5180 MHz

Area Scan (9x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.715 mW/g

Body SAR - AUX Antenna Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5180 MHz

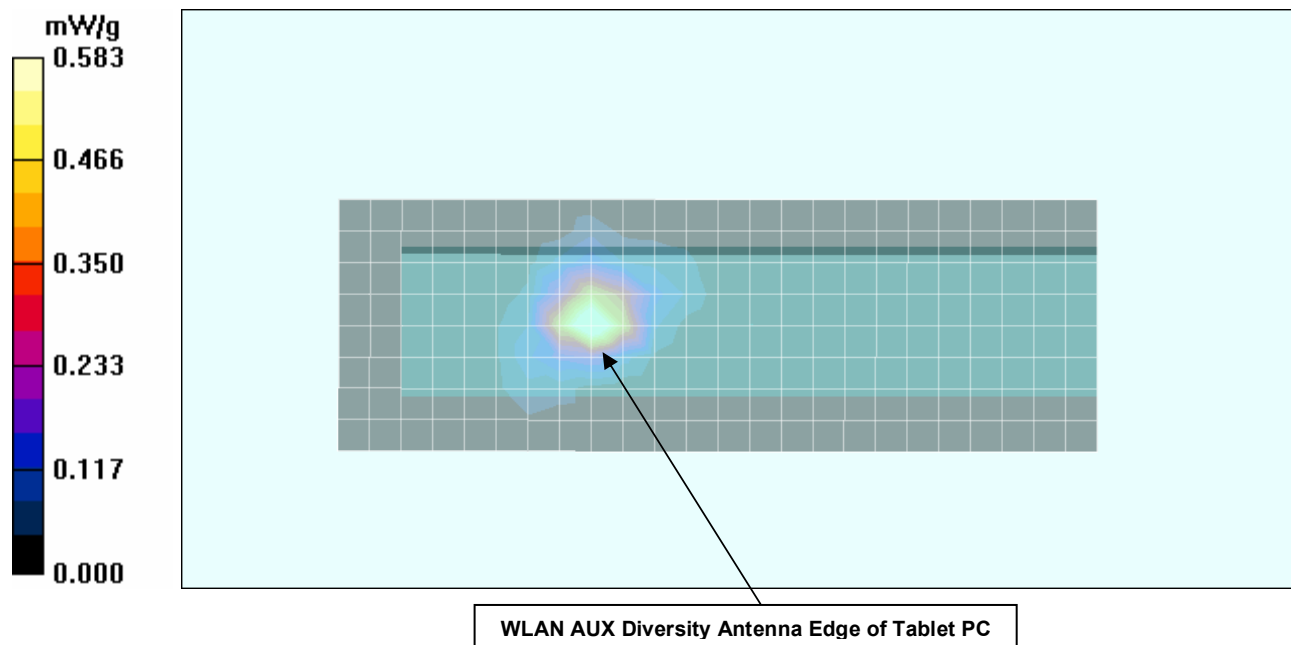
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 10.2 V/m; Power Drift = 0.091 dB



Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.305 mW/g; SAR(10 g) = 0.112 mW/g

Maximum value of SAR (measured) = 0.583 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

Body SAR - 802.11a - 6 Mbps - 5180 MHz - Ch. 36 - MAIN Antenna Adjacent Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: OFDM WLAN

Frequency: 5180 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 16.0 dBm (Conducted)

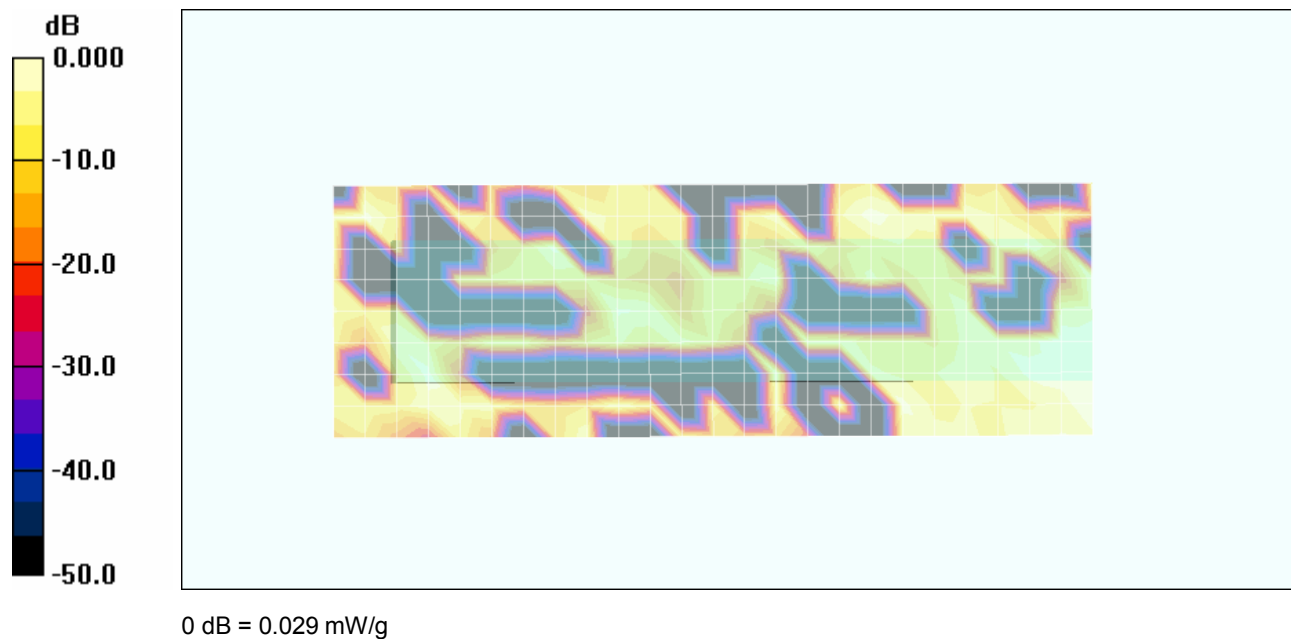
Medium: M5200-5800 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.25 \text{ mho/m}$; $\epsilon_r = 45.0$; $\rho = 1000 \text{ kg/m}^3$


- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171



Body SAR - MAIN Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5180 MHz

Area Scan (9x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.029 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

Body SAR - 802.11a - 6 Mbps - 5180 MHz - Ch. 36 - AUX Antenna Adjacent Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: OFDM WLAN

Frequency: 5180 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 16.0 dBm (Conducted)

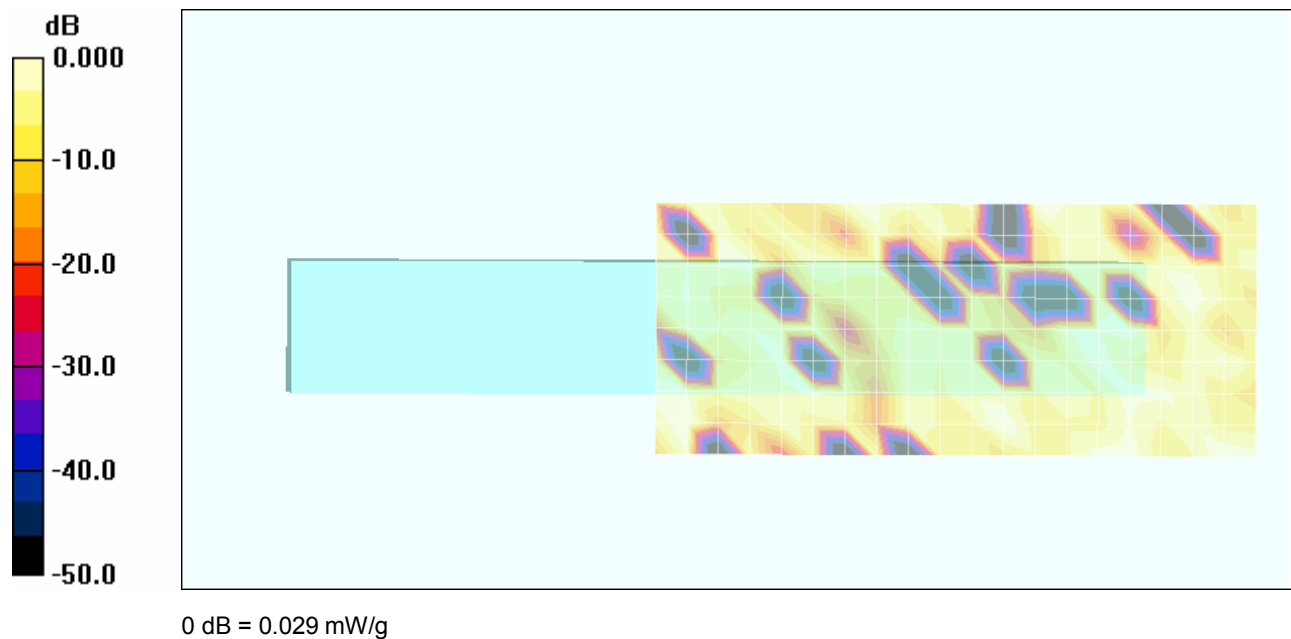
Medium: M5200-5800 Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.25 \text{ mho/m}$; $\epsilon_r = 45.0$; $\rho = 1000 \text{ kg/m}^3$


- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171



Body SAR - AUX Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5180 MHz

Area Scan (9x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.029 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

Body SAR - 802.11a - 6 Mbps - 5260 MHz - Channel 52 - MAIN Antenna Side Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: OFDM WLAN

Frequency: 5260 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.39 \text{ mho/m}$; $\epsilon_r = 44.9$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5260 MHz

Area Scan (9x16x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.04 mW/g

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5260 MHz

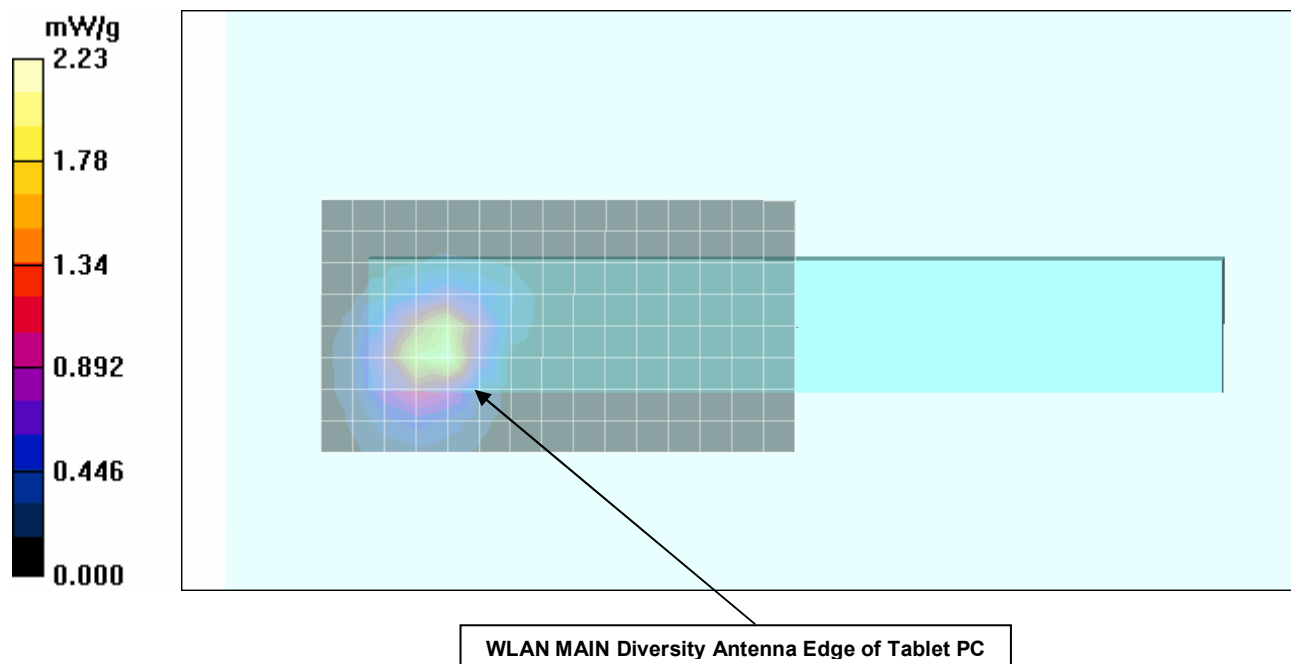
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 20.9 V/m; Power Drift = 0.0601 dB



Peak SAR (extrapolated) = 4.12 W/kg

SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.476 mW/g

Maximum value of SAR (measured) = 2.23 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

Body SAR - 802.11a - 6 Mbps - 5260 MHz - Channel 52 - AUX Antenna Side Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: OFDM WLAN

Frequency: 5260 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.39 \text{ mho/m}$; $\epsilon_r = 44.9$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - AUX Antenna Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5260 MHz

Area Scan (9x31x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.83 mW/g

Body SAR - AUX Antenna Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5260 MHz

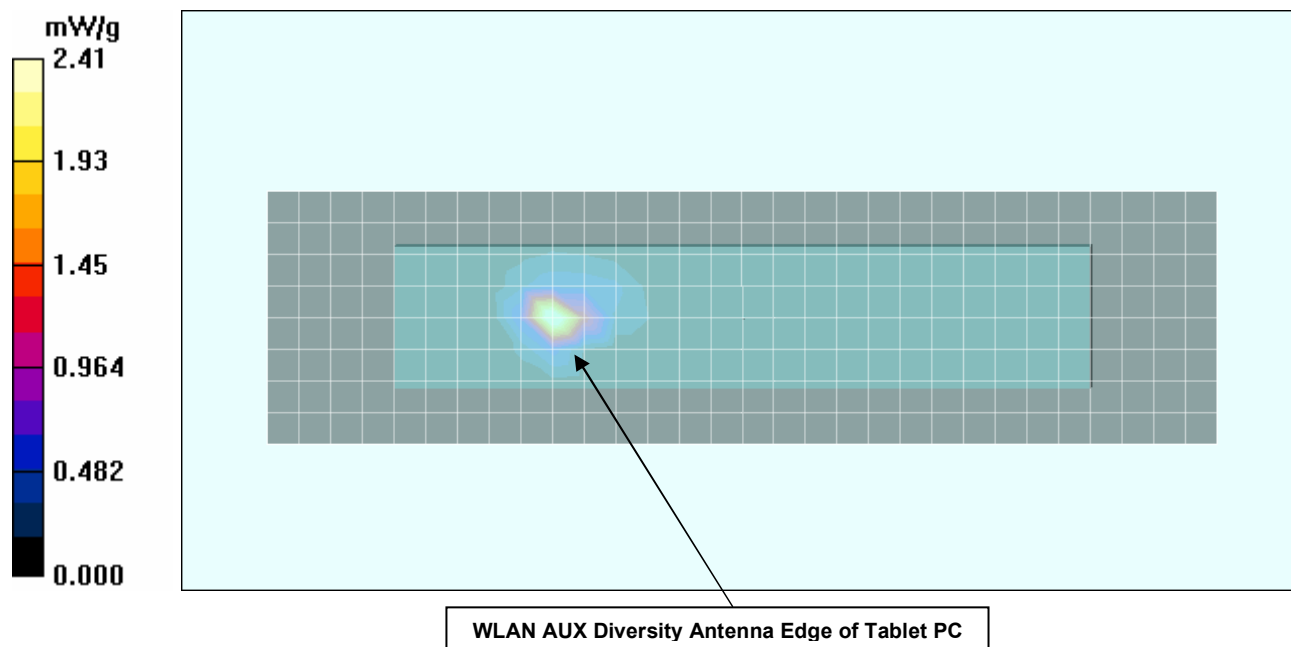
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 22.2 V/m; Power Drift = -0.097 dB



Peak SAR (extrapolated) = 5.35 W/kg

SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.271 mW/g

Maximum value of SAR (measured) = 2.41 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

Body SAR - 802.11a - 6 Mbps - 5260 MHz - Ch. 52 - MAIN Antenna Adjacent Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: OFDM WLAN

Frequency: 5260 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.39 \text{ mho/m}$; $\epsilon_r = 44.9$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - MAIN Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5260 MHz

Area Scan (9x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.080 mW/g

Body SAR - MAIN Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5260 MHz

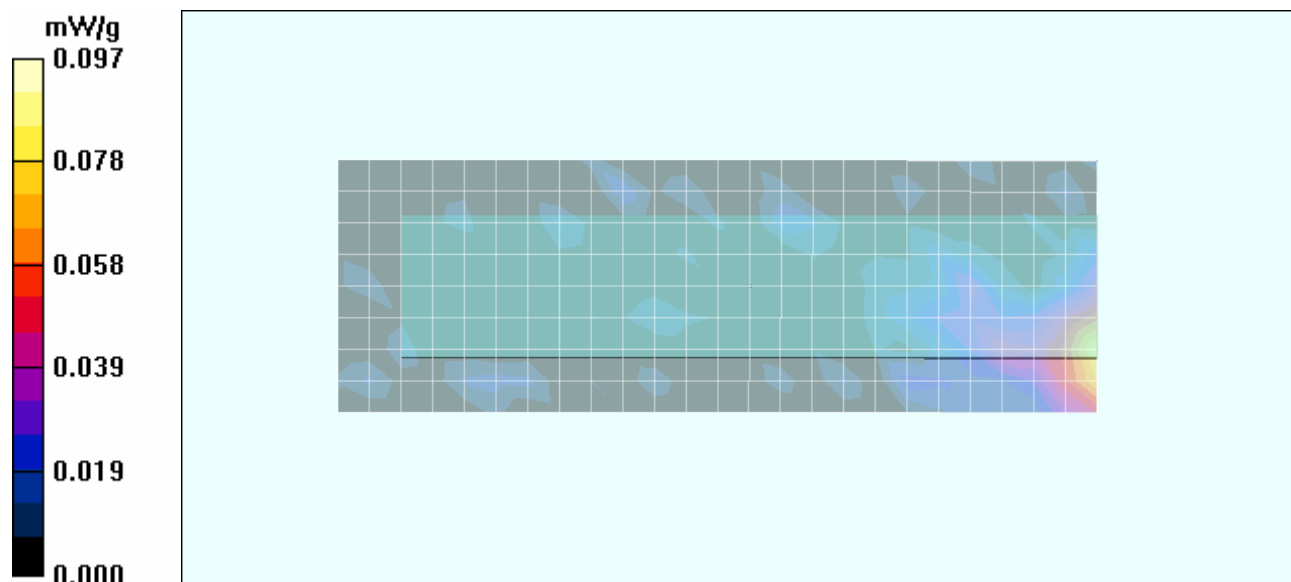
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 0.000 V/m




Peak SAR (extrapolated) = 0.135 W/kg

SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.028 mW/g

Maximum value of SAR (measured) = 0.097 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

Body SAR - 802.11a - 6 Mbps - 5260 MHz - Ch. 52 - AUX Antenna Adjacent Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: OFDM WLAN

Frequency: 5260 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

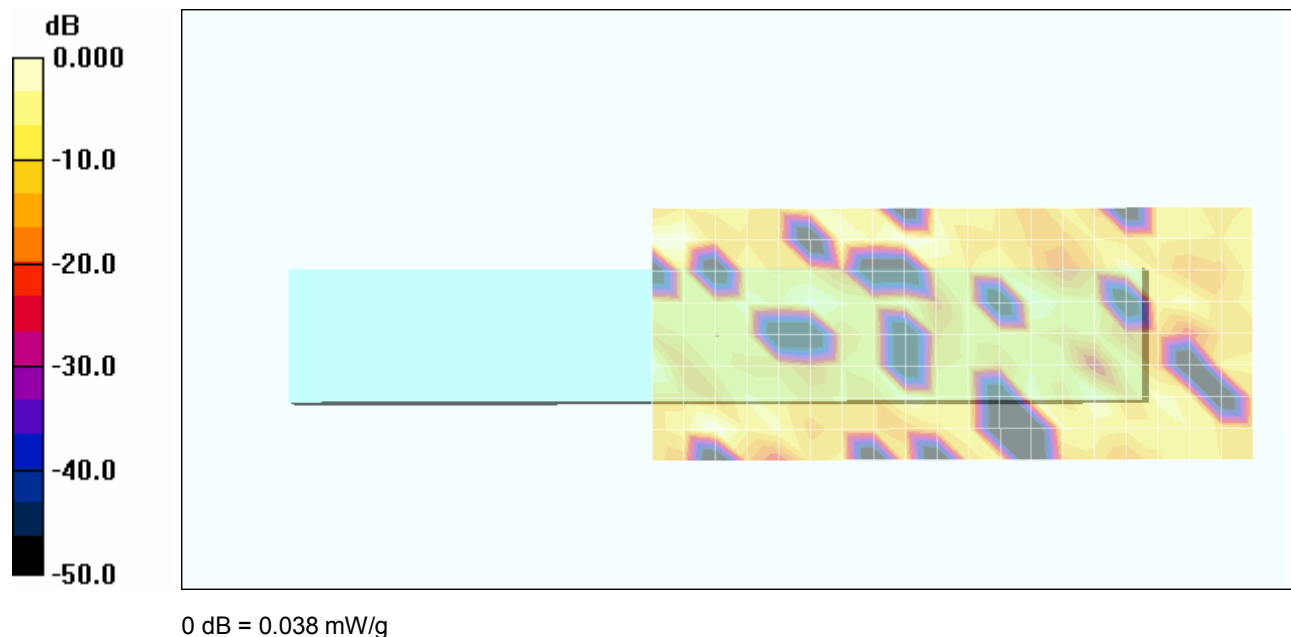
Medium: M5200-5800 Medium parameters used: $f = 5260 \text{ MHz}$; $\sigma = 5.39 \text{ mho/m}$; $\epsilon_r = 44.9$; $\rho = 1000 \text{ kg/m}^3$


- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171



Body SAR - AUX Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5260 MHz

Area Scan (9x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.038 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

Body SAR - 802.11a - 6 Mbps - 5300 MHz - Channel 60 - MAIN Antenna Side Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: OFDM WLAN

Frequency: 5300 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 5.44 \text{ mho/m}$; $\epsilon_r = 44.8$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5300 MHz

Area Scan (9x16x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.70 mW/g

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5300 MHz

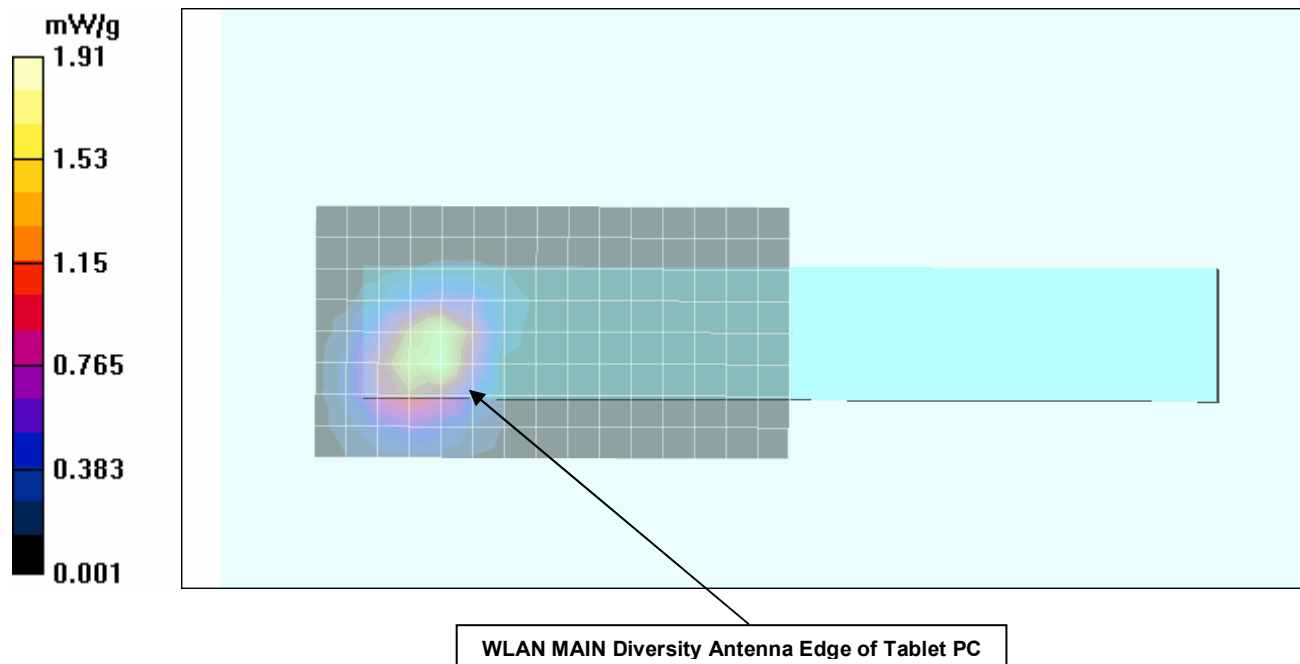
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 20.2 V/m; Power Drift = -0.050 dB



Peak SAR (extrapolated) = 3.54 W/kg

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.412 mW/g

Maximum value of SAR (measured) = 1.91 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

Body SAR - 802.11a - 6 Mbps - 5300 MHz - Channel 60 - AUX Antenna Side Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: OFDM WLAN

Frequency: 5300 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 5.44 \text{ mho/m}$; $\epsilon_r = 44.8$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - AUX Antenna Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5300 MHz

Area Scan (9x31x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 3.56 mW/g

Body SAR - AUX Antenna Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5300 MHz

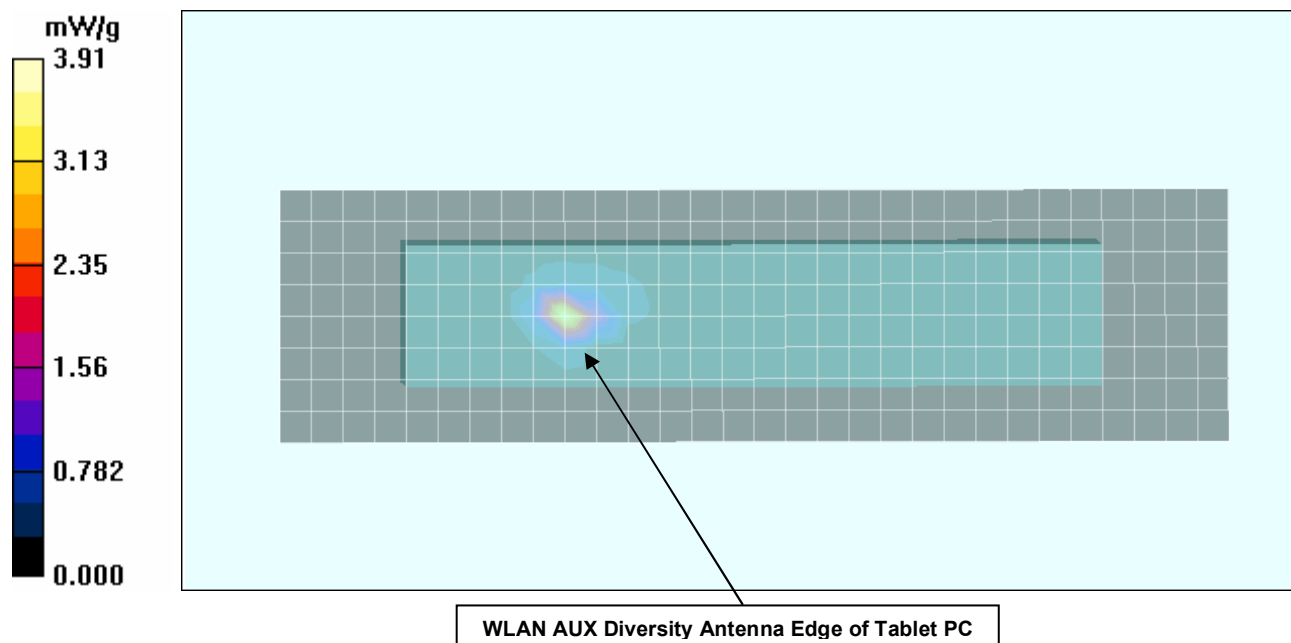
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 27.6 V/m; Power Drift = -0.0506 dB



Peak SAR (extrapolated) = 8.15 W/kg

SAR(1 g) = 1.74 mW/g; SAR(10 g) = 0.428 mW/g

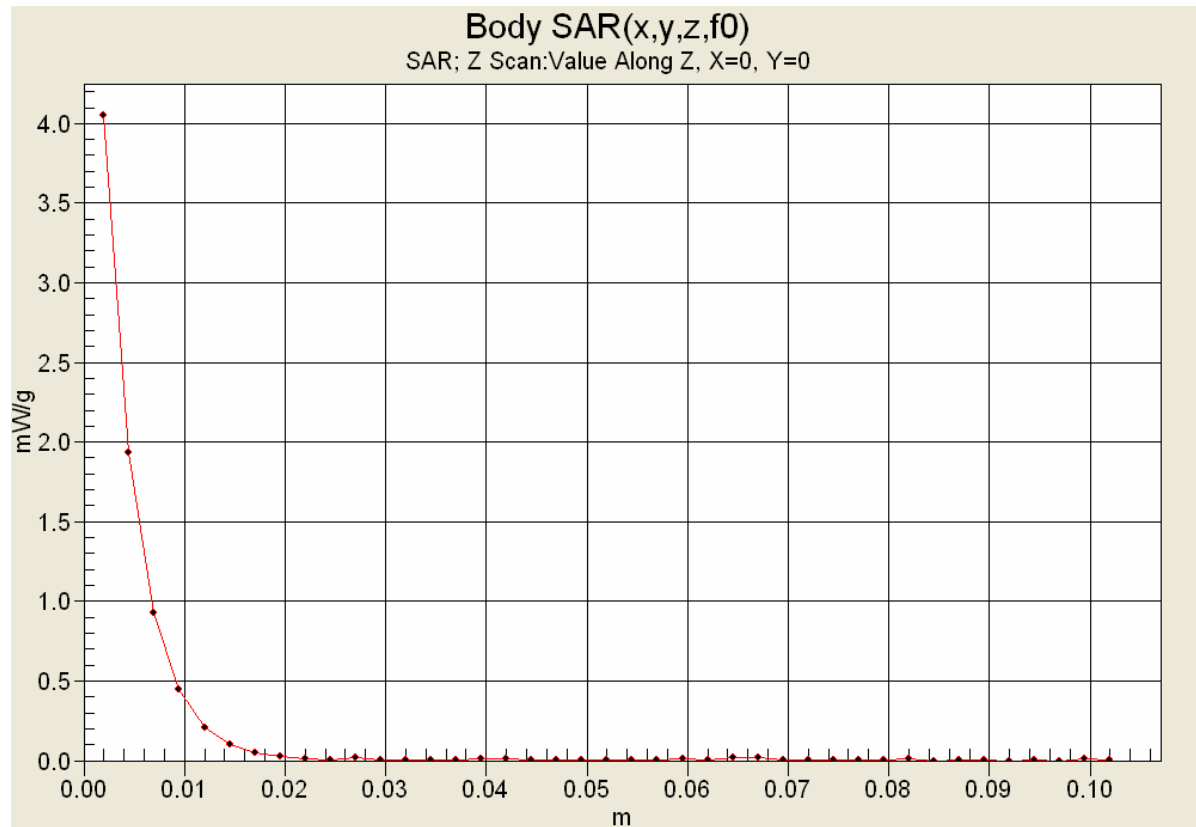
Maximum value of SAR (measured) = 3.91 mW/g






Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Z-Axis Scan



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/04/2007

Body SAR - 802.11a - 6 Mbps - 5785 MHz - Channel 157 - Bottom Side of Tablet PC - MAIN Antenna

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.0°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: OFDM WLAN

Frequency: 5785 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.2 \text{ mho/m}$; $\epsilon_r = 45.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.14, 4.14, 4.14); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5785 MHz

Area Scan (13x32x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.172 mW/g

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5785 MHz

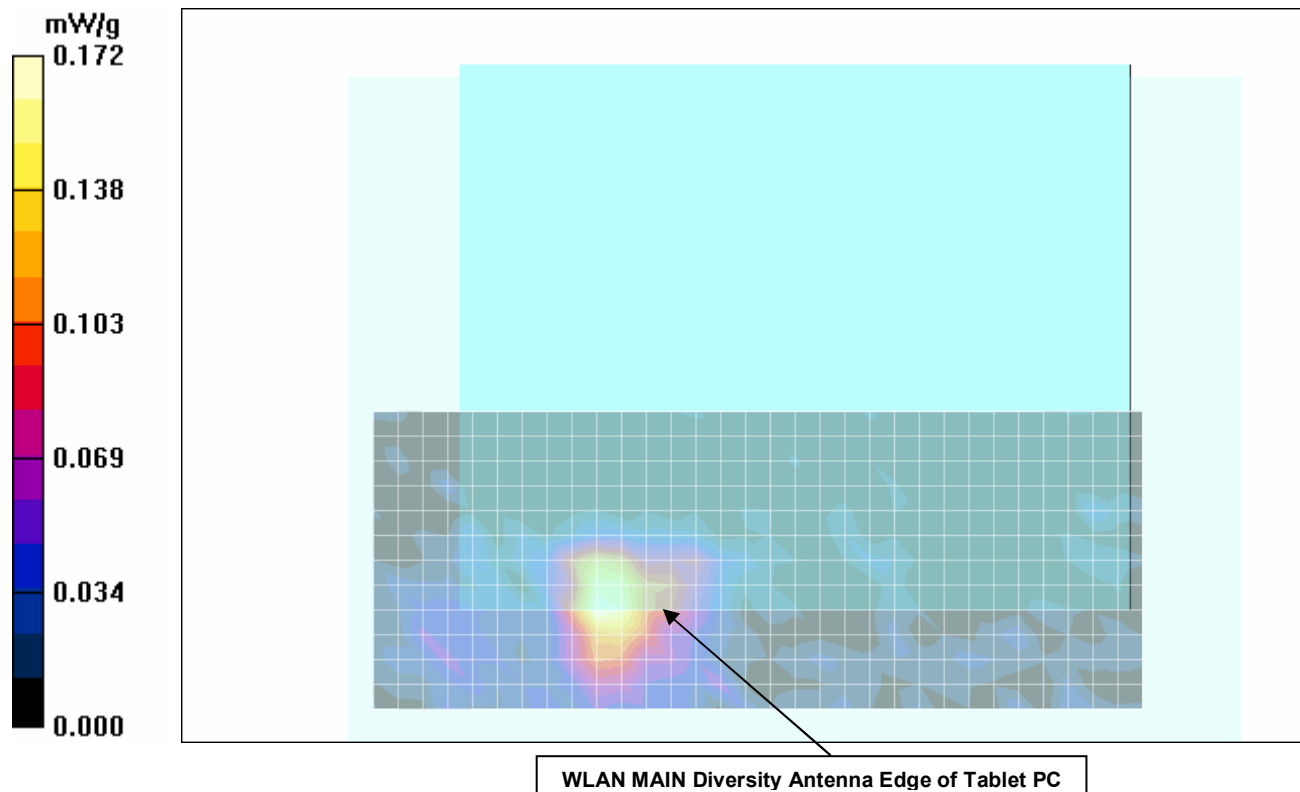
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 5.04 V/m; Power Drift = -0.231 dB



Peak SAR (extrapolated) = 0.286 W/kg

SAR(1 g) = 0.089 mW/g; SAR(10 g) = 0.039 mW/g

Maximum value of SAR (measured) = 0.172 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/04/2007

Body SAR - 802.11a - 6 Mbps - 5785 MHz - Channel 157 - Bottom Side of Tablet PC - AUX Antenna

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.0°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: OFDM WLAN

Frequency: 5785 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.2 \text{ mho/m}$; $\epsilon_r = 45.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.14, 4.14, 4.14); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5785 MHz

Area Scan (14x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5785 MHz

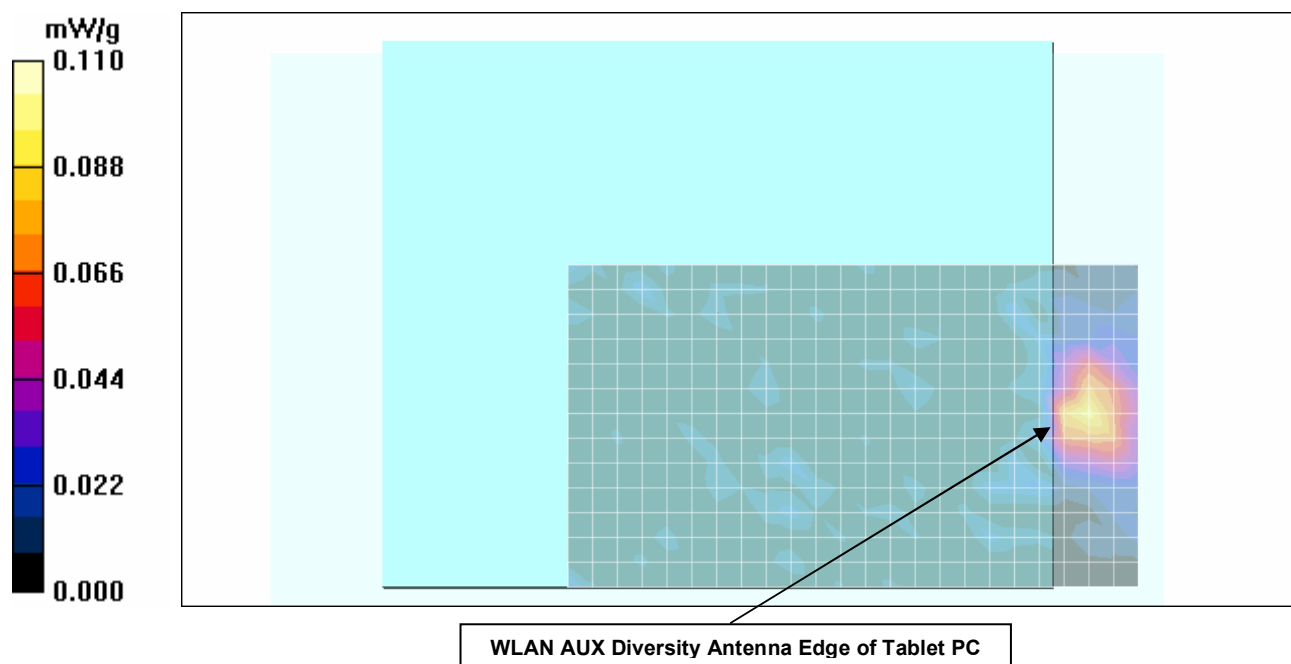
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 3.75 V/m; Power Drift = -0.173 dB



Peak SAR (extrapolated) = 0.464 W/kg

SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.018 mW/g

Maximum value of SAR (measured) = 0.110 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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Date Tested: 12/04/2007

Body SAR - 802.11a - 6 Mbps - 5785 MHz - Channel 157 - MAIN Antenna Side Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.0°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: OFDM WLAN

Frequency: 5785 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.2 \text{ mho/m}$; $\epsilon_r = 45.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.14, 4.14, 4.14); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5785 MHz

Area Scan (9x31x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.60 mW/g

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5785 MHz

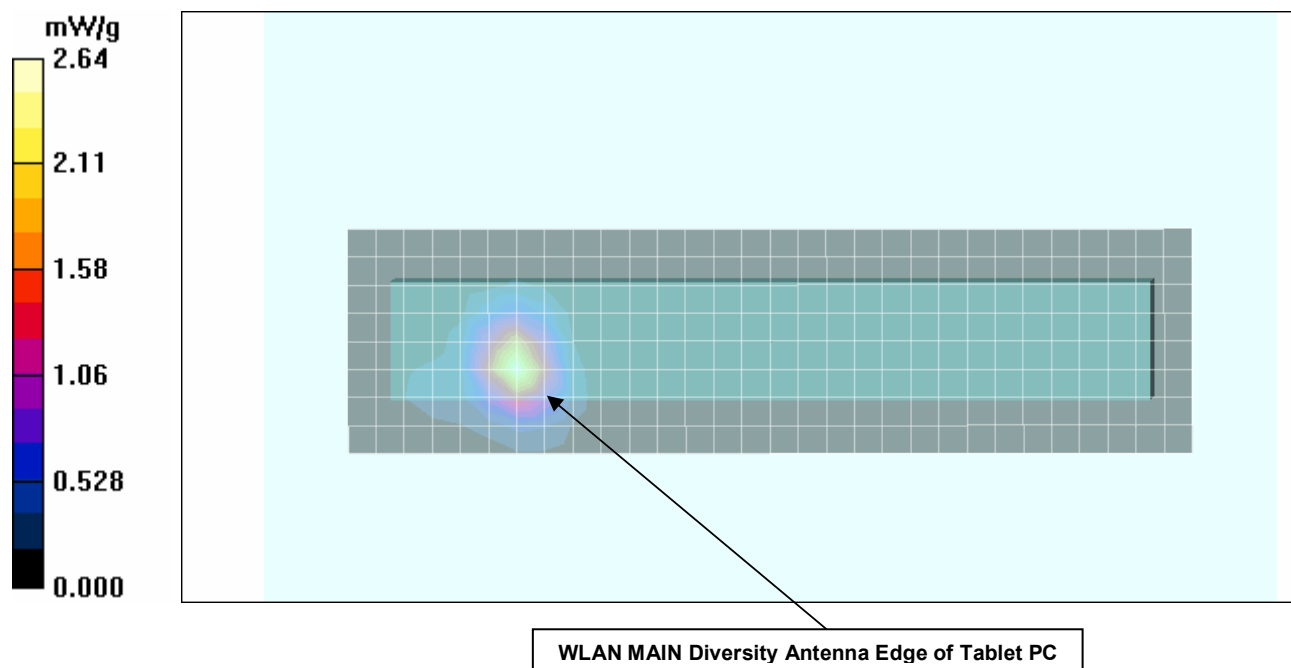
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 22.3 V/m; Power Drift = -0.108 dB



Peak SAR (extrapolated) = 5.28 W/kg

SAR(1 g) = 1.38 mW/g; SAR(10 g) = 0.498 mW/g

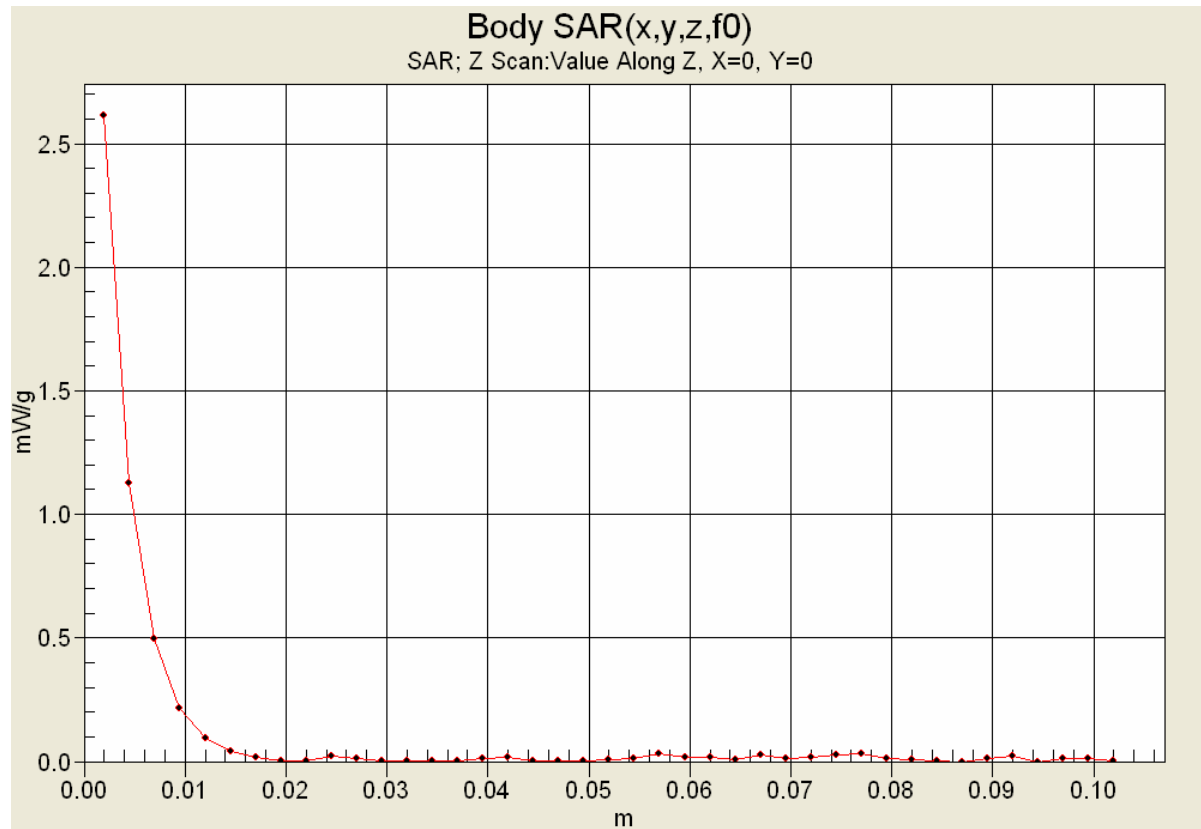
Maximum value of SAR (measured) = 2.64 mW/g






Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Z-Axis Scan



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/04/2007

Body SAR - 802.11a - 6 Mbps - 5785 MHz - Channel 157 - AUX Antenna Side Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.0°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: OFDM WLAN

Frequency: 5785 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.2 \text{ mho/m}$; $\epsilon_r = 45.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.14, 4.14, 4.14); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - AUX Antenna Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5785 MHz

Area Scan (9x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.43 mW/g

Body SAR - AUX Antenna Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5785 MHz

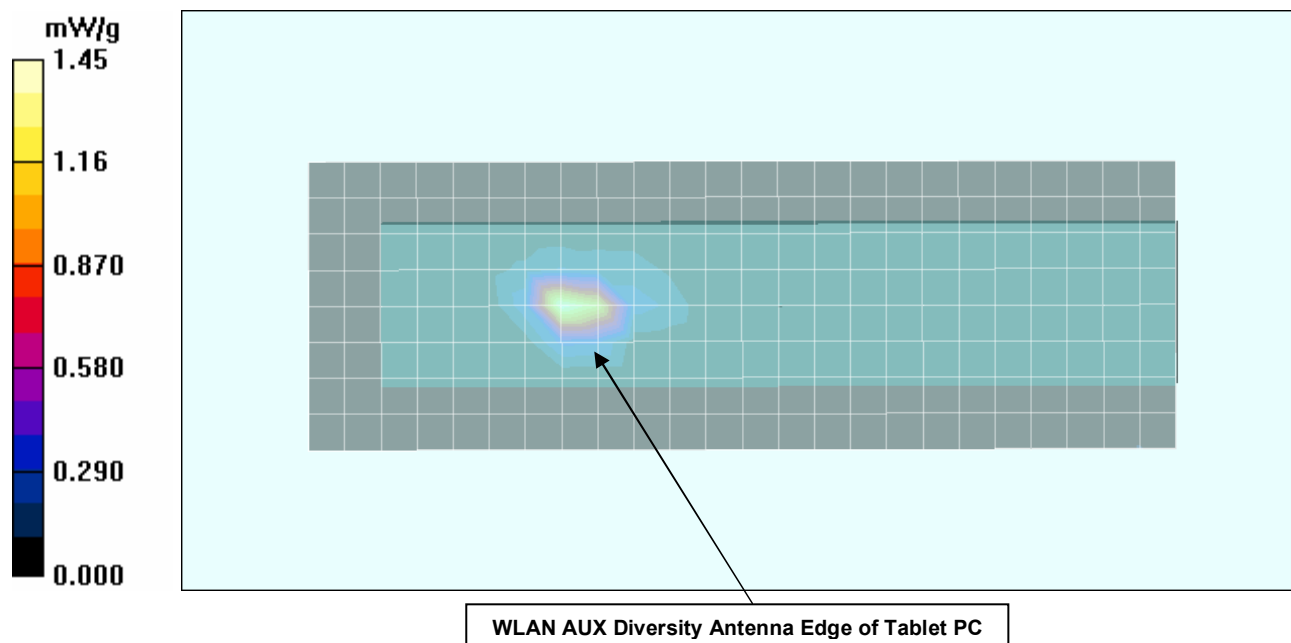
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 15.7 V/m; Power Drift = 0.037 dB



Peak SAR (extrapolated) = 3.30 W/kg

SAR(1 g) = 0.637 mW/g; SAR(10 g) = 0.156 mW/g

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



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/04/2007

Body SAR - 802.11a - 6 Mbps - 5785 MHz - Ch. 157 - MAIN Antenna Adjacent Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.0°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: OFDM WLAN

Frequency: 5785 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.2 \text{ mho/m}$; $\epsilon_r = 45.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.14, 4.14, 4.14); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - MAIN Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5785 MHz

Area Scan (9x31x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

Body SAR - MAIN Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5785 MHz

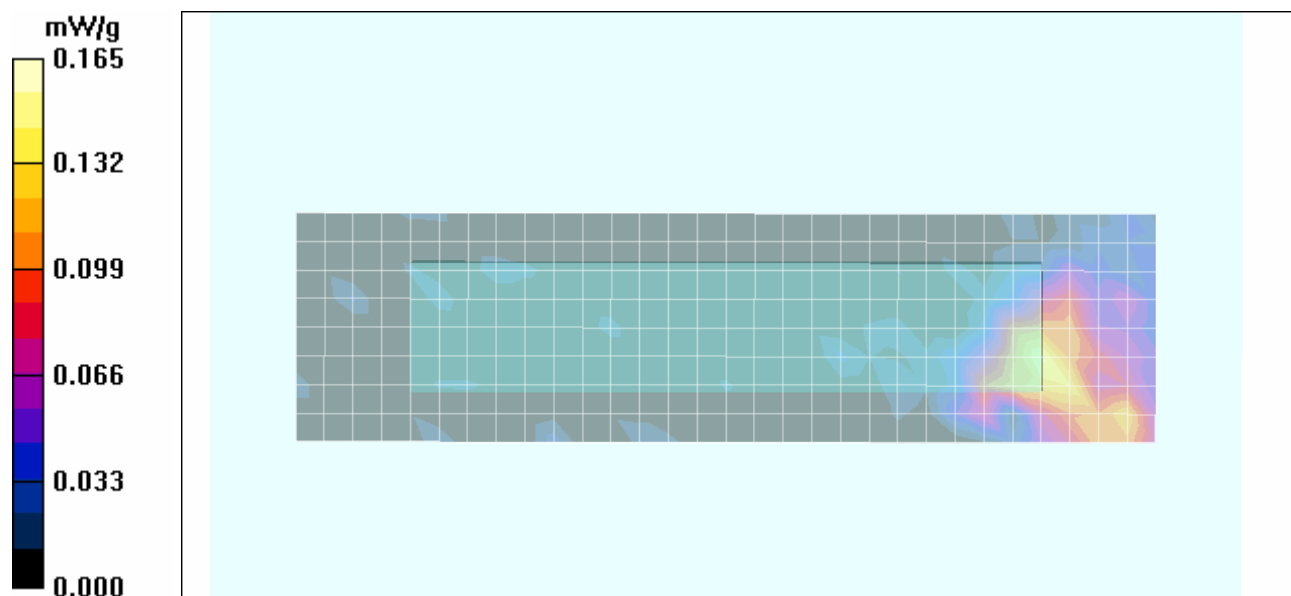
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 5.30 V/m; Power Drift = -0.224 dB




Peak SAR (extrapolated) = 0.444 W/kg

SAR(1 g) = 0.084 mW/g; SAR(10 g) = 0.041 mW/g

Maximum value of SAR (measured) = 0.165 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/04/2007

Body SAR - 802.11a - 6 Mbps - 5785 MHz - Ch. 157 - AUX Antenna Adjacent Edge-on of Tablet PC

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.0°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: OFDM WLAN

Frequency: 5785 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

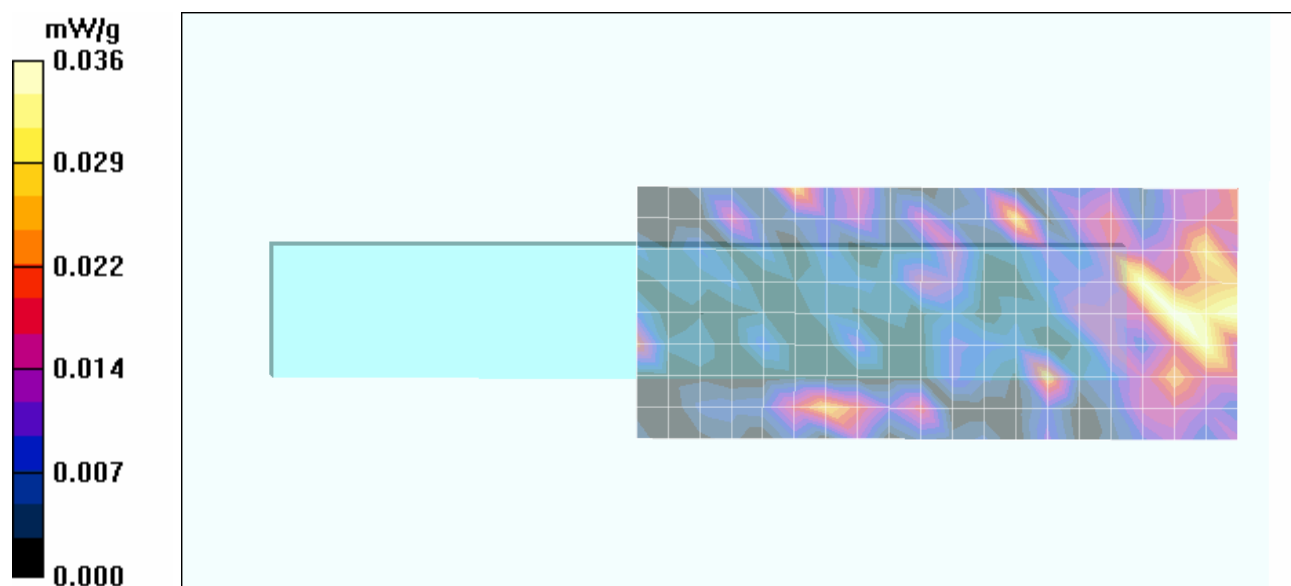
Medium: M5200-5800 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.2 \text{ mho/m}$; $\epsilon_r = 45.5$; $\rho = 1000 \text{ kg/m}^3$


- Probe: EX3DV4 - SN3600; ConvF(4.14, 4.14, 4.14); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171



Body SAR - AUX Ant. Adjacent Edge of Tablet PC Touching Planar Phantom - AUX Diversity Antenna - 5785 MHz

Area Scan (9x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.036 mW/g



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 01/15/2008

Body SAR - 802.11a - 6 Mbps - 5785 MHz - Channel 157 - MAIN Antenna Side Edge-on of Tablet PC With Co-transmitting Bluetooth

DUT: DRS Tactical Systems; Type: Armor X10 Tablet PC with 802.11abg & Bluetooth; Serial: 0008-DSTC1S08U0E

Ambient Temp: 23.9°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.0 kPa; Humidity: 31%

Communication System: OFDM WLAN

Frequency: 5785 MHz; Duty Cycle: 1:1

Power Supply: 10.8V Lithium-ion Battery

RF Output Power: 17.0 dBm (Conducted)

Medium: M5200-5800 Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 6.12 \text{ mho/m}$; $\epsilon_r = 44.7$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.14, 4.14, 4.14); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5785 MHz & Co-transmitting Bluetooth

Area Scan (9x31x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.68 mW/g

Body SAR - MAIN Antenna Edge of Tablet PC Touching Planar Phantom - MAIN Diversity Antenna - 5785 MHz & Co-transmitting Bluetooth

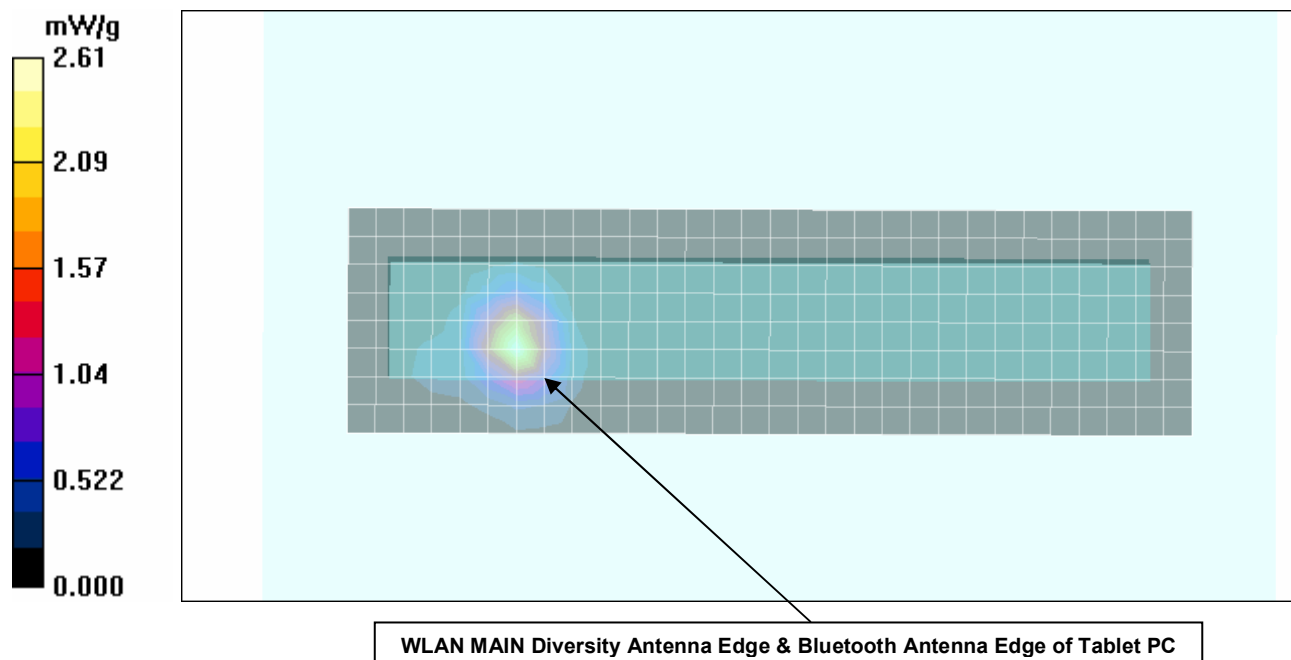
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 21.1 V/m; Power Drift = 0.211 dB



Peak SAR (extrapolated) = 6.07 W/kg

SAR(1 g) = 1.33 mW/g; SAR(10 g) = 0.475 mW/g

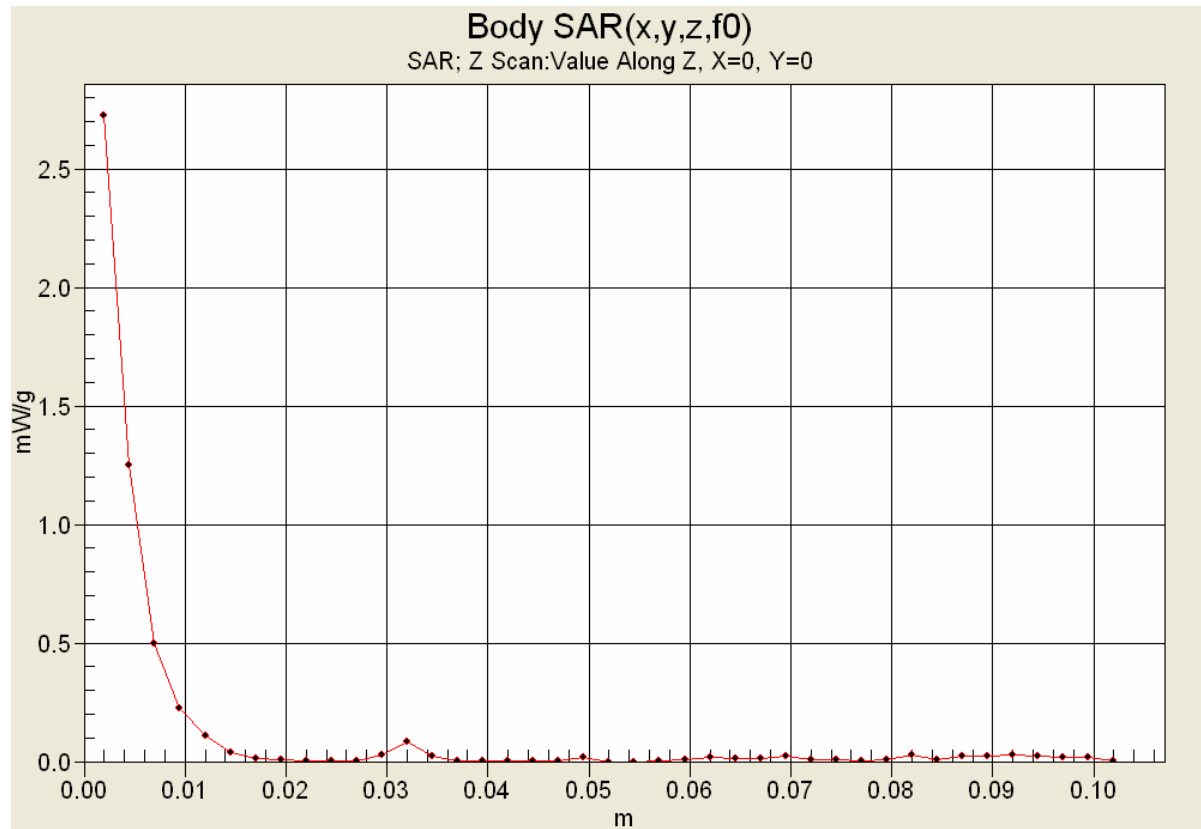
Maximum value of SAR (measured) = 2.61 mW/g






Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	


Z-Axis Scan





Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX B - SYSTEM PERFORMANCE CHECK DATA

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/28/2007

System Performance Check - 2450 MHz Dipole - MSL

DUT: Dipole 2450 MHz; Asset: 00025; Serial: 150; Validation: 06/08/2007

Ambient Temp: 24.8°C; Fluid Temp: 23.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 2.01 \text{ mho/m}$; $\epsilon_r = 50.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(6.31, 6.31, 6.31); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

2450 MHz Dipole - System Performance Check/Area Scan (6x10x1):

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

Maximum value of SAR (measured) = 21.3 mW/g

2450 MHz Dipole - System Performance Check/Zoom Scan (7x7x7)/Cube 0:

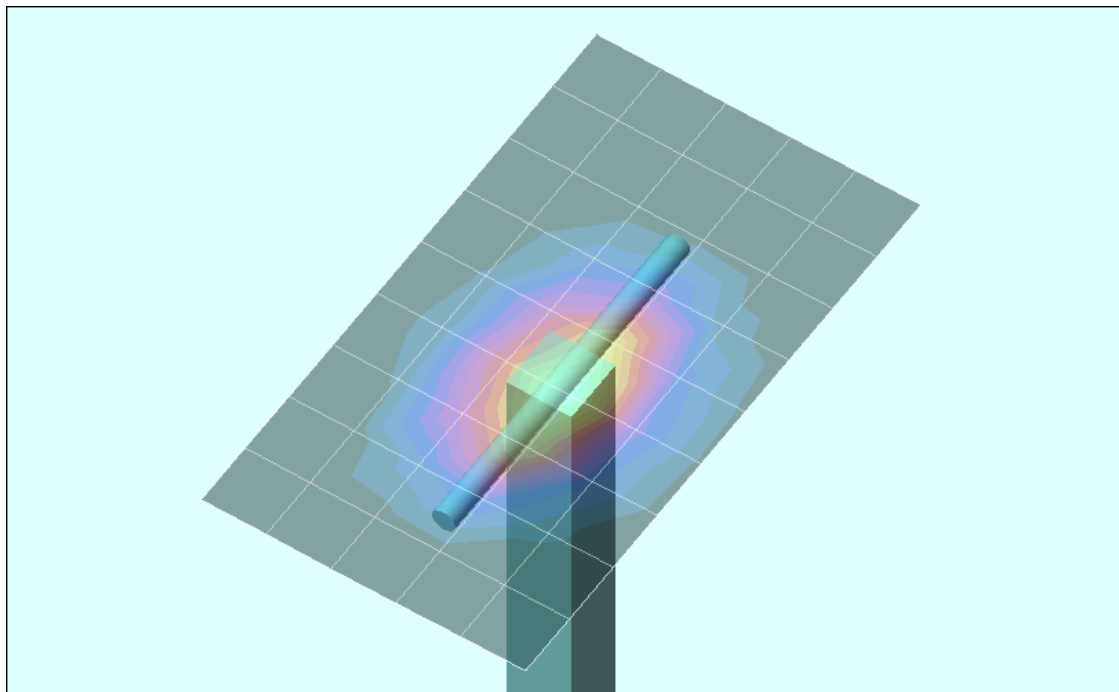
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$


Reference Value = 100.0 V/m; Power Drift = -0.134 dB



Peak SAR (extrapolated) = 29.5 W/kg

SAR(1 g) = 14.0 mW/g; SAR(10 g) = 6.24 mW/g

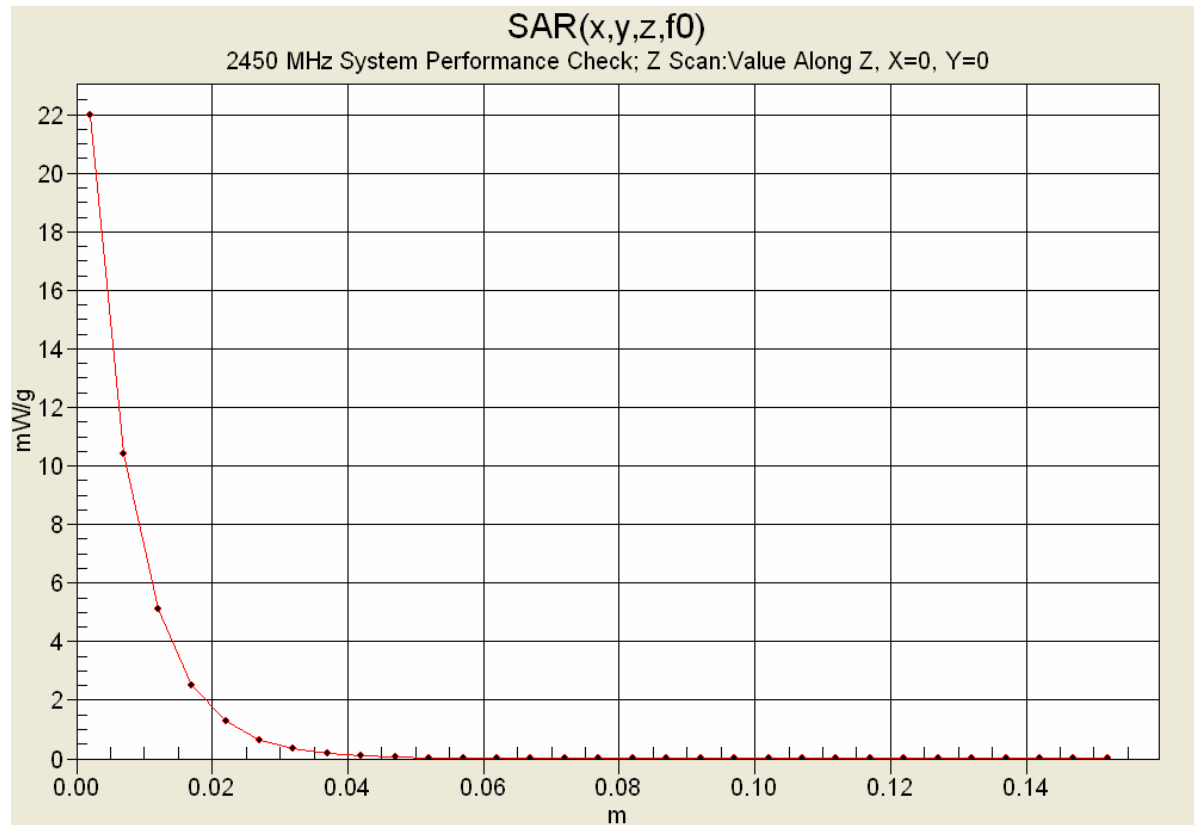
Maximum value of SAR (measured) = 21.7 mW/g






Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Z-Axis Scan



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 01/16/2008

System Performance Check - 2450 MHz Dipole - MSL

DUT: Dipole 2450 MHz; Asset: 00025; Serial: 150; Validation: 06/08/2007

Ambient Temp: 24.0°C; Fluid Temp: 23.1°C; Barometric Pressure: 101.1 kPa; Humidity: 36%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.97 \text{ mho/m}$; $\epsilon_r = 50.2$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(6.31, 6.31, 6.31); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

2450 MHz System Performance Check/Area Scan (6x10x1):

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

Maximum value of SAR (measured) = 21.5 mW/g

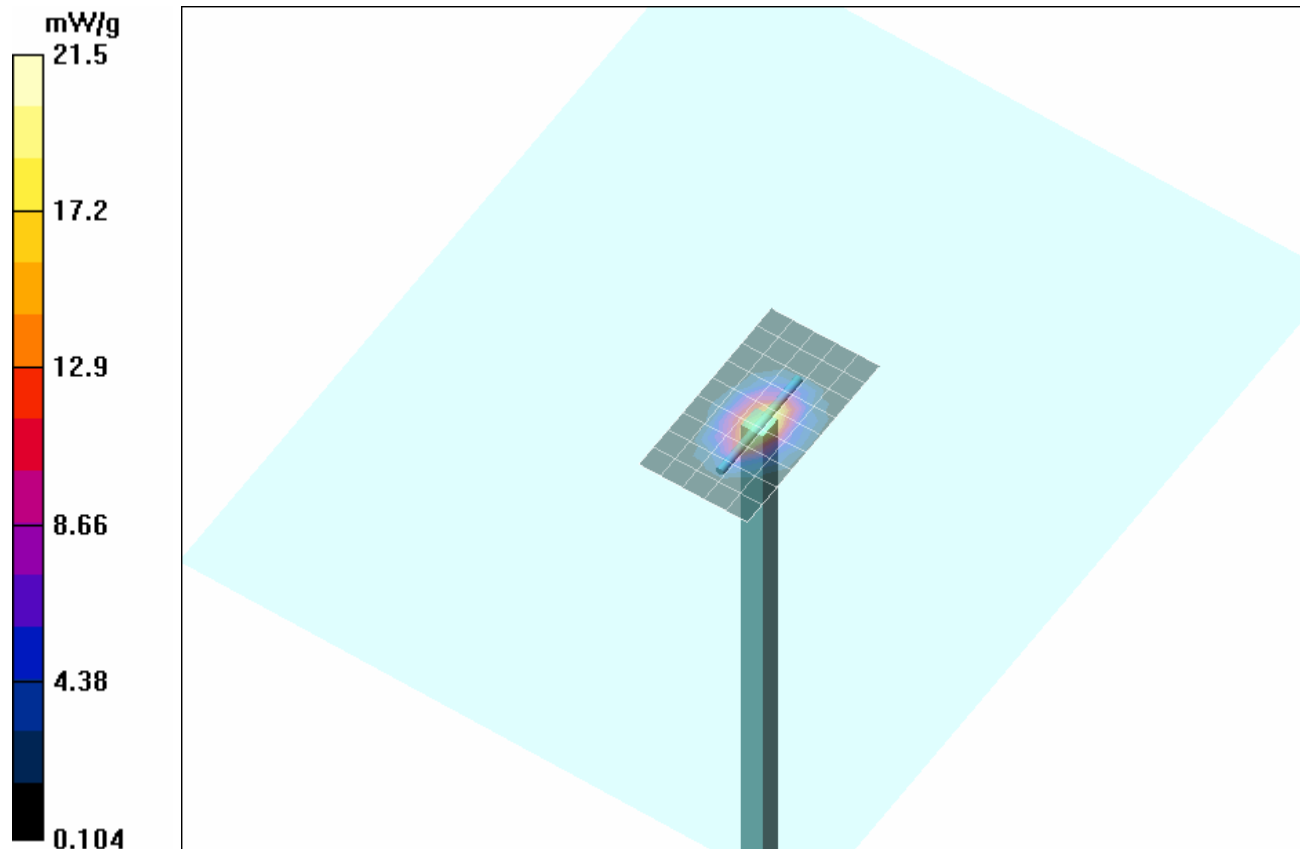
2450 MHz System Performance Check/Zoom Scan (7x7x7)/Cube 0:


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



Reference Value = 101.9 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 30.2 W/kg

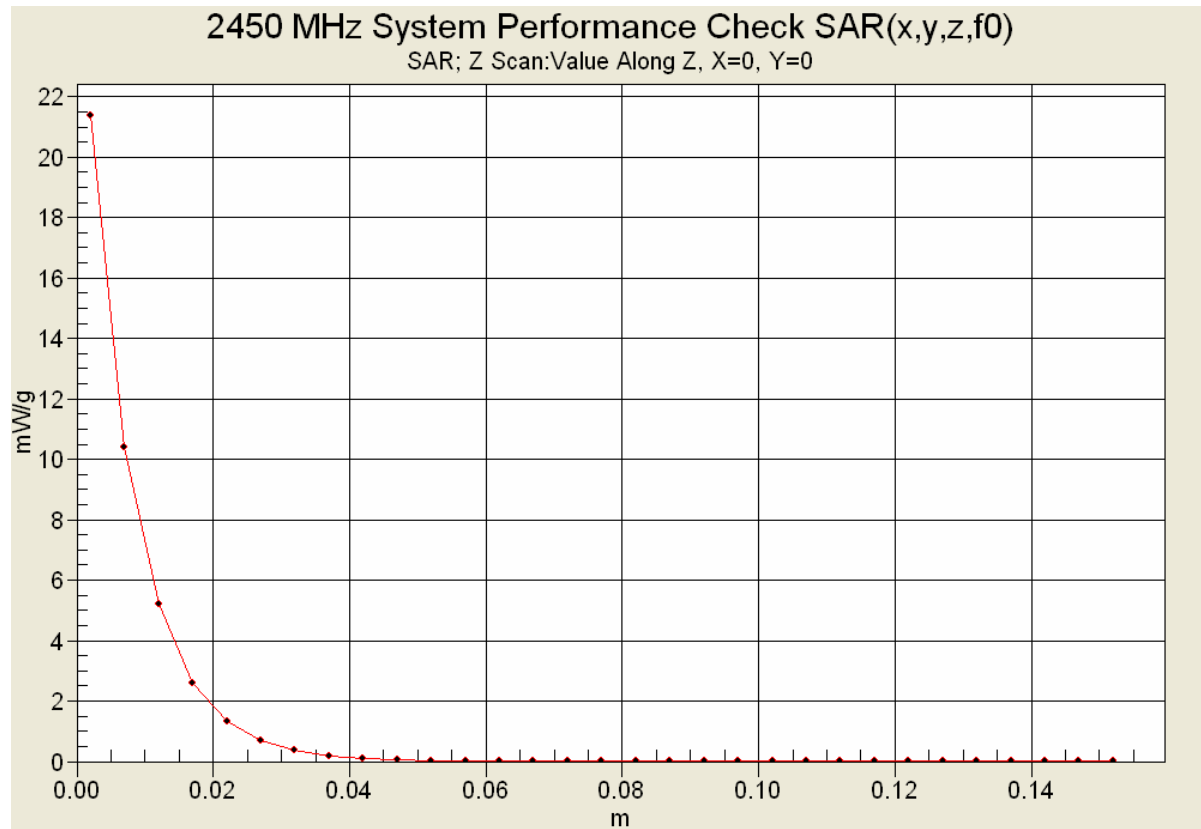
SAR(1 g) = 14.2 mW/g; SAR(10 g) = 6.39 mW/g






Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Z-Axis Scan



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 11/30/2007

System Performance Check - 5200 MHz Dipole - MSL

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: 1031; Validation: 05/18/2007

Ambient Temp: 23.3°C; Fluid Temp: 22.0°C; Barometric Pressure: 101.0 kPa; Humidity: 33%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: M5200-5800 Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.28 \text{ mho/m}$; $\epsilon_r = 45.1$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.1, 4.1, 4.1); Calibrated: 24/01/2007
- Sensor-Surface: 2 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 10/07/2007
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

5200 MHz System Performance Check/Area Scan (9x13x1):

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

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

5200 MHz System Performance Check/Zoom Scan (7x7x9)/Cube 0:

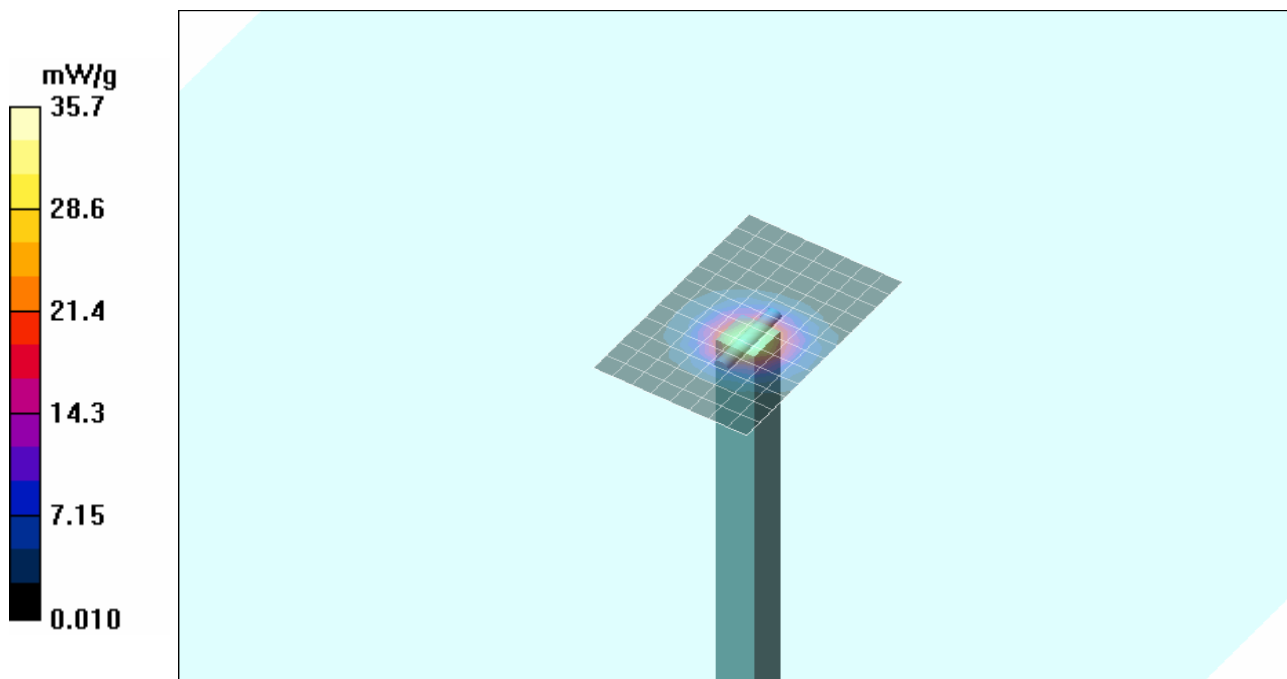
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 51.8 V/m; Power Drift = -0.015 dB



Peak SAR (extrapolated) = 74.2 W/kg

SAR(1 g) = 17.8 mW/g; SAR(10 g) = 5.02 mW/g

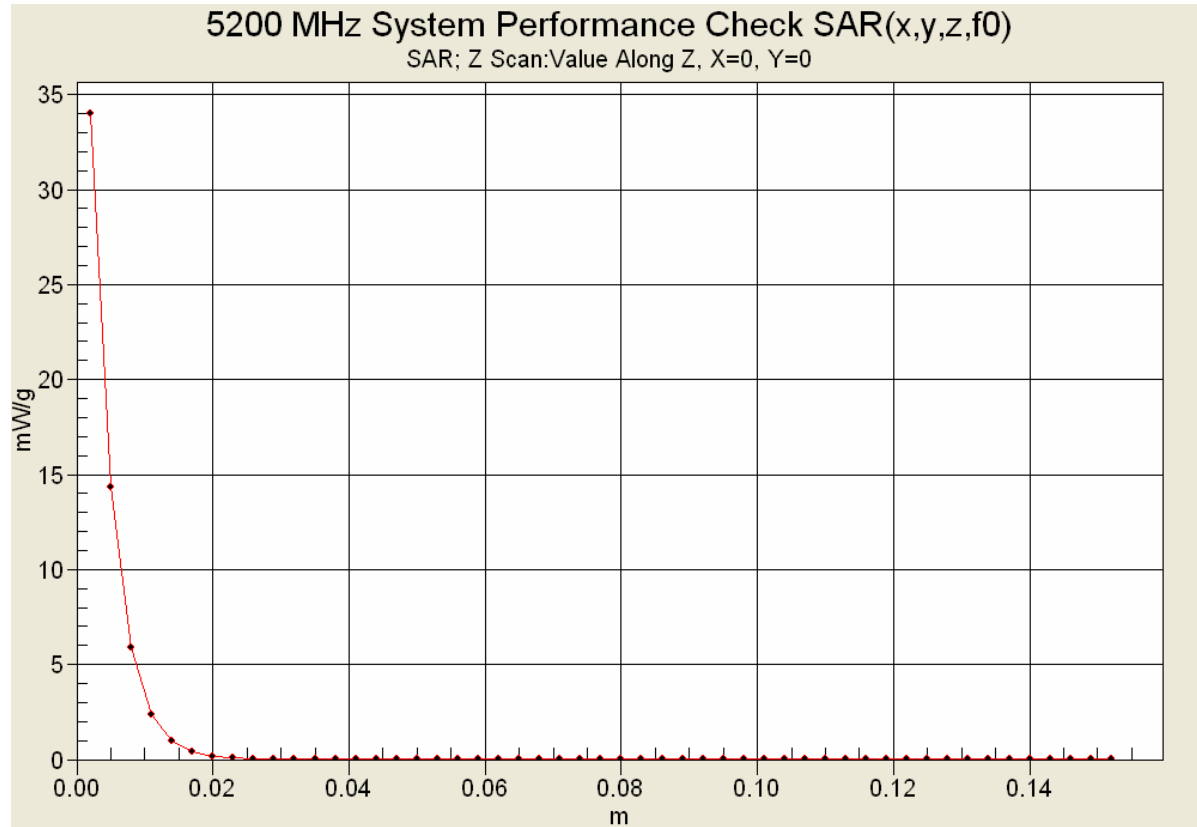
Maximum value of SAR (measured) = 35.7 mW/g






Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Z-Axis Scan



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/04/2007

System Performance Check - 5800 MHz Dipole - MSL

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: 1031; Validation: 05/10/2007

Ambient Temp: 23.0°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 32%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: M5200-5800 Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.2 \text{ mho/m}$; $\epsilon_r = 45.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.14, 4.14, 4.14); Calibrated: 24/01/2007

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

- Electronics: DAE4 Sn353; Calibrated: 10/07/2007

- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01

- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

5800 MHz System Performance Check/Area Scan (9x13x1):

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

Maximum value of SAR (measured) = 39.9 mW/g

5800 MHz System Performance Check/Zoom Scan (7x7x9)/Cube 0:

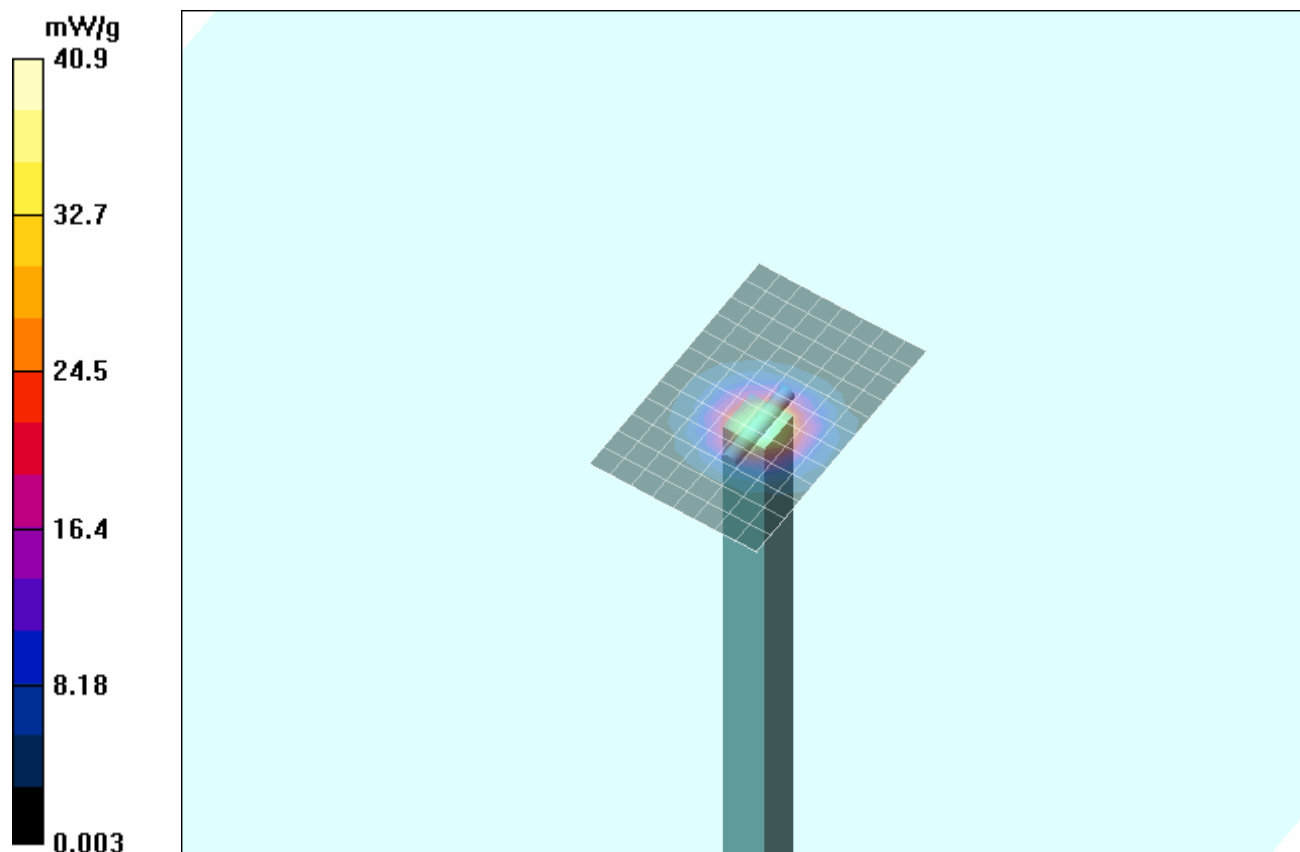
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 72.1 V/m; Power Drift = 0.083 dB



Peak SAR (extrapolated) = 87.0 W/kg

SAR(1 g) = 19.3 mW/g; SAR(10 g) = 5.35 mW/g

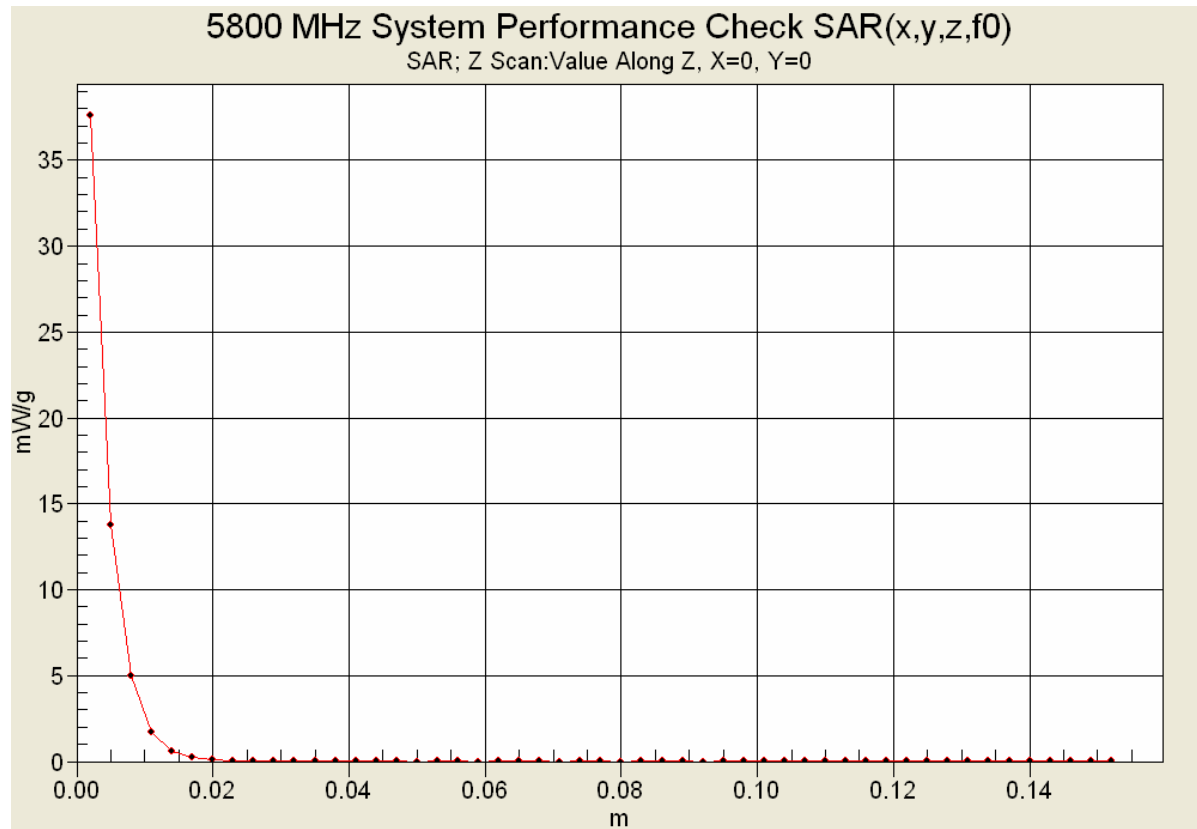
Maximum value of SAR (measured) = 40.9 mW/g






Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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Z-Axis Scan



Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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Date Tested: 01/15/2008

System Performance Check - 5800 MHz Dipole - MSL

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: 1031; Validation: 05/10/2007

Ambient Temp: 23.9°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.0 kPa; Humidity: 31%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: M5200-5800 Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.12 \text{ mho/m}$; $\epsilon_r = 44.7$; $\rho = 1000 \text{ kg/m}^3$

- Probe: EX3DV4 - SN3600; ConvF(4.14, 4.14, 4.14); Calibrated: 24/01/2007

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

- Electronics: DAE4 Sn353; Calibrated: 10/07/2007

- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01

- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

5800 MHz System Performance Check/Area Scan (9x13x1):

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

Maximum value of SAR (measured) = 39.9 mW/g

5800 MHz System Performance Check/Zoom Scan (7x7x9)/Cube 0:

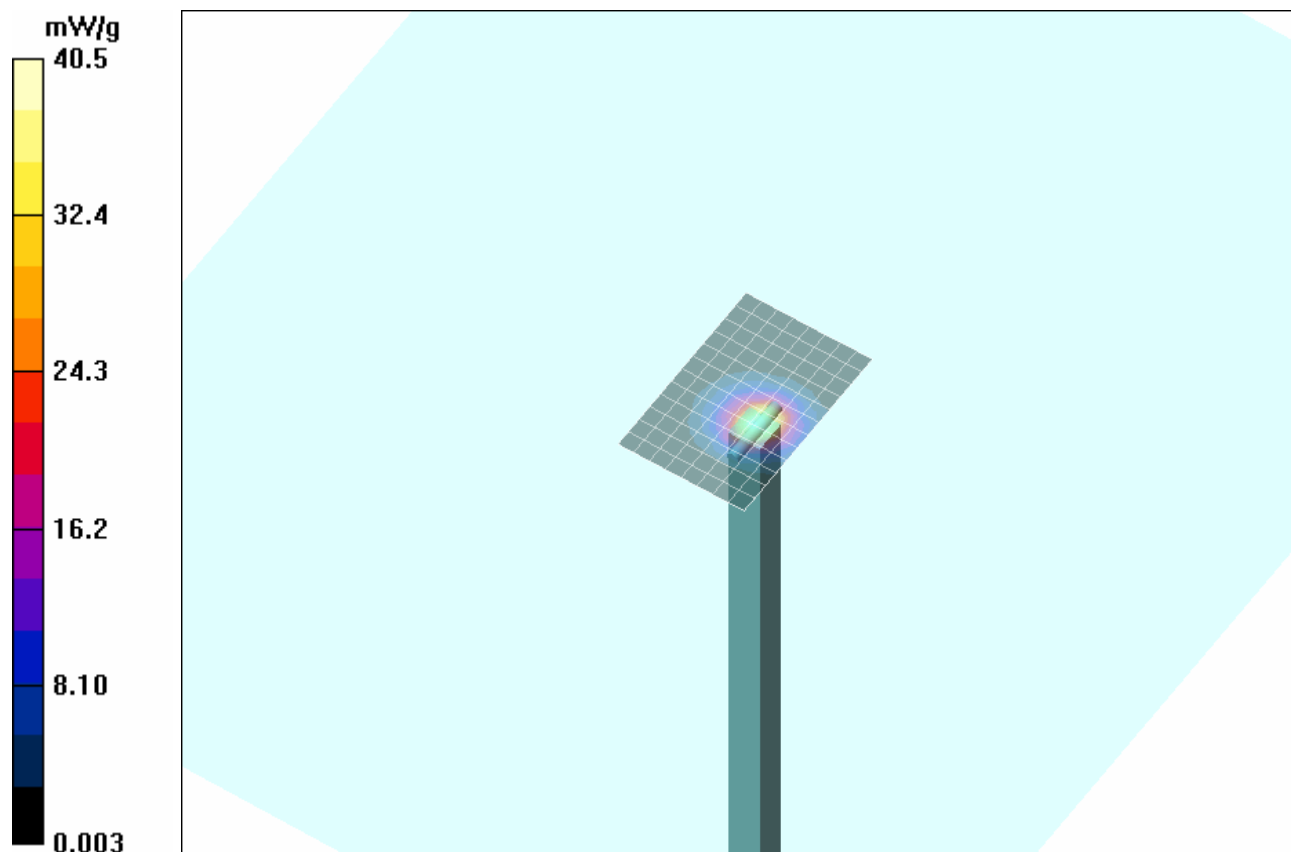
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 56.5 V/m; Power Drift = 0.045 dB



Peak SAR (extrapolated) = 84.9 W/kg

SAR(1 g) = 18.5 mW/g; SAR(10 g) = 5.18 mW/g

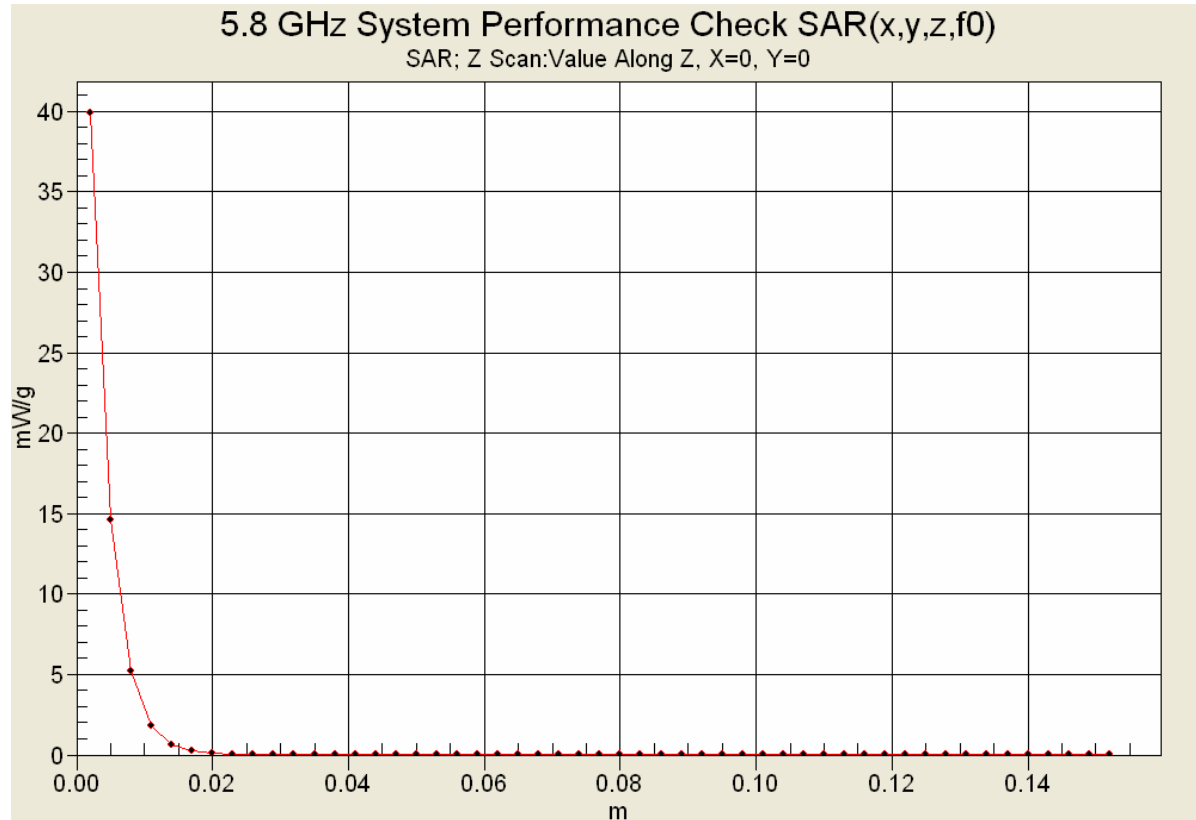
Maximum value of SAR (measured) = 40.5 mW/g






Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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Z-Axis Scan





Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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APPENDIX C - MEASURED FLUID DIELECTRIC PARAMETERS

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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2450 MHz System Performance Check & DUT Evaluation (Body)

Celltech Labs Inc.

Test Result for UIM Dielectric Parameter

Wed 28/Nov/2007

Frequency (GHz)

FCC_eHFCC Bulletin 65 Supplement C (June 2001) Limits for Head Epsilon

FCC_sHFCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma


FCC_eBFCC Limits for Body Epsilon



FCC_sBFCC Limits for Body Sigma

Test_e Epsilon of UIM

Test_s Sigma of UIM

Freq	FCC_eBFCC	sBFCC	Test_e	Test_s
2.3500	52.83	1.85	50.84	1.88
2.3600	52.82	1.86	50.85	1.89
2.3700	52.81	1.87	50.83	1.91
2.3800	52.79	1.88	50.78	1.92
2.3900	52.78	1.89	50.74	1.92
2.4000	52.77	1.90	50.79	1.94
2.4100	52.75	1.91	50.78	1.96
2.4200	52.74	1.92	50.66	1.97
2.4300	52.73	1.93	50.69	1.98
2.4400	52.71	1.94	50.61	2.00
2.4500	52.70	1.95	50.61	2.01
2.4600	52.69	1.96	50.57	2.02
2.4700	52.67	1.98	50.59	2.04
2.4800	52.66	1.99	50.53	2.05
2.4900	52.65	2.01	50.52	2.06
2.5000	52.64	2.02	50.44	2.07
2.5100	52.62	2.04	50.35	2.09
2.5200	52.61	2.05	50.39	2.10
2.5300	52.60	2.06	50.30	2.11
2.5400	52.59	2.08	50.27	2.13
2.5500	52.57	2.09	50.31	2.14

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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2450 MHz System Performance Check & DUT Evaluation (Body)

Celltech Labs Inc.

Test Result for UIM Dielectric Parameter

Wed 16/Jan/2008

Frequency (GHz)

FCC_eHFCC Bulletin 65 Supplement C (June 2001) Limits for Head Epsilon

FCC_sHFCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma


FCC_eB FCC Limits for Body Epsilon



FCC_sB FCC Limits for Body Sigma

Test_e Epsilon of UIM

Test_s Sigma of UIM

Freq	FCC_eB	FCC_sB	Test_e	Test_s
2.3500	52.83	1.85	50.19	1.85
2.3600	52.82	1.86	50.12	1.86
2.3700	52.81	1.87	50.28	1.87
2.3800	52.79	1.88	50.20	1.88
2.3900	52.78	1.89	50.29	1.90
2.4000	52.77	1.90	50.25	1.91
2.4100	52.75	1.91	50.27	1.92
2.4200	52.74	1.92	50.28	1.93
2.4300	52.73	1.93	50.31	1.94
2.4400	52.71	1.94	50.20	1.96
2.4500	52.70	1.95	50.16	1.97
2.4600	52.69	1.96	50.07	1.99
2.4700	52.67	1.98	50.05	2.00
2.4800	52.66	1.99	50.04	2.01
2.4900	52.65	2.01	50.09	2.03
2.5000	52.64	2.02	50.05	2.04
2.5100	52.62	2.04	50.05	2.04
2.5200	52.61	2.05	50.05	2.06
2.5300	52.60	2.06	49.98	2.07
2.5400	52.59	2.08	49.97	2.08
2.5500	52.57	2.09	49.90	2.10

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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5200 MHz System Performance Check & 5260 MHz DUT Evaluation (Body)

Celltech Labs Inc.

Test Result for UIM Dielectric Parameter

Fri 30/Nov/2007

Frequency (GHz)

FCC_eHFCC Bulletin 65 Supplement C (June 2001) Limits for Head Epsilon

FCC_sHFCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma


FCC_eB FCC Limits for Body Epsilon



FCC_sB FCC Limits for Body Sigma

Test_e Epsilon of UIM

Test_s Sigma of UIM

Freq	FCC_eB	FCC_sB	Test_e	Test_s
5.1000	49.15	5.18	45.28	5.13
5.1100	49.14	5.19	45.31	5.16
5.1200	49.12	5.21	45.20	5.15
5.1300	49.11	5.22	45.27	5.18
5.1400	49.10	5.23	45.12	5.17
5.1500	49.08	5.24	45.12	5.19
5.1600	49.07	5.25	44.99	5.23
5.1700	49.06	5.26	45.06	5.21
5.1800	49.04	5.28	45.02	5.25
5.1900	49.03	5.29	45.12	5.30
5.2000	49.01	5.30	45.11	5.28
5.2100	49.00	5.31	45.00	5.27
5.2200	48.99	5.32	45.03	5.30
5.2300	48.97	5.33	44.98	5.32
5.2400	48.96	5.35	44.99	5.34
5.2500	48.95	5.36	44.86	5.37
5.2600	48.93	5.37	44.90	5.39
5.2700	48.92	5.38	44.94	5.40
5.2800	48.91	5.39	44.81	5.40
5.2900	48.89	5.40	44.87	5.40
5.3000	48.88	5.42	44.75	5.44

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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 Testing and Engineering Services Ltd	<u>Date(s) of Evaluation</u> Nov. 28, '07 - Jan. 16, '08	<u>Test Report Serial No.</u> 111507UGL-T876-S15WB	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

5800 MHz System Performance Check & DUT Evaluation (Body)

Celltech Labs Inc.

Test Result for UIM Dielectric Parameter

Tue 04/Dec/2007

Frequency (GHz)

FCC_eHFCC Bulletin 65 Supplement C (June 2001) Limits for Head Epsilon

FCC_sHFCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma


FCC_eBFCC Limits for Body Epsilon



FCC_sBFCC Limits for Body Sigma

Test_e Epsilon of UIM

Test_s Sigma of UIM

Freq	FCC_eBFCC	sBFCC	Test_e	Test_s
5.7000	48.34	5.88	45.60	6.07
5.7100	48.32	5.89	45.48	6.08
5.7200	48.31	5.91	45.49	6.10
5.7300	48.30	5.92	45.54	6.08
5.7400	48.28	5.93	45.49	6.12
5.7500	48.27	5.94	45.45	6.16
5.7600	48.25	5.95	45.46	6.17
5.7700	48.24	5.96	45.46	6.19
5.7800	48.23	5.98	45.62	6.22
5.7900	48.21	5.99	45.47	6.19
5.8000	48.20	6.00	45.45	6.20
5.8100	48.19	6.01	45.52	6.27
5.8200	48.17	6.02	45.50	6.24
5.8300	48.16	6.04	45.38	6.31
5.8400	48.15	6.05	45.33	6.31
5.8500	48.13	6.06	45.37	6.29
5.8600	48.12	6.07	45.48	6.30
5.8700	48.10	6.08	45.31	6.35
5.8800	48.09	6.09	45.35	6.36
5.8900	48.08	6.11	45.39	6.37
5.9000	48.06	6.12	45.28	6.38

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Date(s) of Evaluation</u> Nov. 28, '07 - Jan. 16, '08	<u>Test Report Serial No.</u> 111507UGL-T876-S15WB	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 Certificate No. 2470.01
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5800 MHz System Performance Check & DUT Evaluation (Body)

Celltech Labs Inc.

Test Result for UIM Dielectric Parameter

Tue 15/Jan/2008

Frequency (GHz)

FCC_eHFCC Bulletin 65 Supplement C (June 2001) Limits for Head Epsilon

FCC_sHFCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma


FCC_eBFCC Limits for Body Epsilon



FCC_sBFCC Limits for Body Sigma

Test_e Epsilon of UIM


Test_s Sigma of UIM



Freq	FCC_eBFCC	sBFCC	Test_e	Test_s
5.7000	48.34	5.88	45.11	5.98
5.7100	48.32	5.89	44.97	5.92
5.7200	48.31	5.91	44.90	5.94
5.7300	48.30	5.92	44.86	5.95
5.7400	48.28	5.93	44.74	5.97
5.7500	48.27	5.94	44.74	6.01
5.7600	48.25	5.95	44.71	6.01
5.7700	48.24	5.96	44.66	6.05
5.7800	48.23	5.98	44.63	6.09
5.7900	48.21	5.99	44.62	6.07
5.8000	48.20	6.00	44.69	6.12
5.8100	48.19	6.01	44.79	6.11
5.8200	48.17	6.02	44.77	6.12
5.8300	48.16	6.04	44.68	6.13
5.8400	48.15	6.05	44.59	6.13
5.8500	48.13	6.06	44.54	6.15
5.8600	48.12	6.07	44.64	6.16
5.8700	48.10	6.08	44.45	6.14
5.8800	48.09	6.09	44.44	6.21
5.8900	48.08	6.11	44.61	6.26
5.9000	48.06	6.12	44.49	6.26

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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APPENDIX D - MANUFACTURER'S TISSUE SIMULANT DATA SHEET (5 GHz)

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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	<u>Test Report Issue Date</u> March 11, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Schmid & Partner Engineering AG

s p e a g

Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 1 245 9700, Fax +41 1 245 9779
info@speag.com, http://www.speag.com

Material Safety Data Sheet

1 Identification of the substance and of the manufacturer / origin

Item	Head Tissue Simulation Liquid HSL5800 Muscle Tissue Simulation Liquid MSL 5800
Type No	SL AAH 580, SL AAM 580
Series No	N/A
Manufacturer / Origin	Schmid & Partner Engineering AG Zeughausstrasse 43 8004 Zürich Switzerland Phone +41 1 245 9700, Fax +41 1 245 9779, support@speag.com

Use of the substance:

Liquid simulating physical parameters of Head or Muscle Tissue in the RF range to 6GHz.

2 Composition / Information on ingredients

The Item is composed of the following ingredients:

Water	64 - 78%
Mineral Oil	11 - 18%
Emulsifiers	9 - 15%
Additives and Salt	2 - 3%

Safety relevant ingredients according to EU directives:

CAS-No 107-41-5	< 4%	2-Methyl-2,4-pentandiol (Hexylene Glycol): Xi irritant, R36/38 irritant for eyes and skin
CAS-No 770-35-4	< 2%	1-Phenoxy-2-propanol (Propylene Glycol Phenyl Ether): Xi irritant, R36 irritant for eyes
CAS-No 93-83-4	< 2%	N,N-bis(2-Hydroxyethyl)oleamide: Xi irritant, R36/38 irritant for eyes and skin
CAS-No 9004-95-9	< 0.5%	Polyethylene glycol cetyl ether: Xi irritant, R22 harmful if swallowed, R36/38 irritant for eyes and skin R50 Very toxic to aquatic organisms

According to EU guidelines and Swiss rules, the product is not a dangerous mixture and therefore not required to be marked by symbols.

3 Hazards identification

Identification not required.


4 First aid measures



The product reacts slightly alkaline.

After skin contact:	Wash with fresh water and mild sope
After eye contact:	Rinse out with plenty of water for several minutes with the eyelid held open. Consult an ophthalmologist if necessary.
After ingestion:	Do not induce vomiting. Get medical attention.

5 Fire-fighting measures

Firefighting media	CO2, foam, dry chemical
Combustion products	Carbon oxides, nitrogen and traces of oxides of chlorine and sulfur, HCl
Due to the high water content, the liquid is self-extinguishing.	

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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6 Accidental release measures

Person-related precaution measures: wash with water and mild soap.
 Environmental-protection measures: do not allow to enter sewerage system.
 Procedures for cleaning / absorption: Use oil-binding agents., forward for disposal. Spills may cause slippery conditions.

7 Handling and storage

Handling: Keep in open container only for minimum required time in order to avoid water evaporation.
 Storage: tightly closed, between >0 to 40°C. Avoid direct solar irradiation of the storage containers.

8 Exposure controls / personal protection

Protection measures are not generally required. For eye protection, industrial safety glasses are recommended.
 Personal hygiene and clean working practices are sufficient.

9 Physical and chemical properties

Form: liquid
 Colour: medium to dark brown, transparent to opaque
 Odour: almost odourless / slightly oily
 pH-Value: slightly alcalic
 Boiling point: 100°C
 Density: 1g/cm³

10 Stability and reactivity

Conditions to be avoided: heating above 40°C
 The product contains water and is not compatible with strong oxidizers or magnesium.

11 Toxicological information

LD50 > 40 g/kg
 Further data: the product should be handled with the care usual when dealing with chemicals

12 Ecological information

Contains mineral oil. Do not allow to enter waters, waste water, or soil!

13 Disposal considerations

Disposal is possible by splitting the mineral oil from the emulsion with absorbing agents, with salt or ultra-filtration. Dispose as other mineral oil containing products according to local regulations.
 Product packing must be disposed of in compliance with respect national regulations.

14 Transport information


Not subject to transport regulations.



15 Regulatory information

No special labelling required.


16 Other information

Release date: 6.1.2005
 Responsible: FB

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL98002600WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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APPENDIX H - PLANAR PHANTOM CERTIFICATE OF CONFORMITY

Applicant:	DRS Tactical Systems, Inc.	FCC ID:	UGL980026000WF	Model(s):	Armor X10	
DUT Type:	Tablet PC with Intel PRO/Wireless 3945ABG WLAN & Co-located MSI MS-6837D Bluetooth					
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Kelowna, B.C. Canada
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E-mail: barskiind@shaw.ca
Web: www.bcfiberglass.com

FIBERGLASS FABRICATORS

Certificate of Conformity

Item : Flat Planar Phantom Unit # 03-01
Date: June 16, 2003
Manufacturer: Barski Industries (1985 Ltd)

Test	Requirement	Details
Shape	Compliance to geometry according to drawing	Supplied CAD drawing
Material Thickness	Compliant with the requirements	2mm +/- 0.2mm in measurement area
Material Parameters	Dielectric parameters for required frequencies Based on Dow Chemical technical data	100 MHz-5 GHz Relative permittivity<5 Loss Tangent<0.05

Conformity

Based on the above information, we certify this product to be compliant to the requirements specified.

Signature: _____

A handwritten signature in black ink, appearing to read 'Daniel Chailier', is written over a horizontal line.

Daniel Chailier



Fiberglass Planar Phantom - Top View



Fiberglass Planar Phantom - Front View



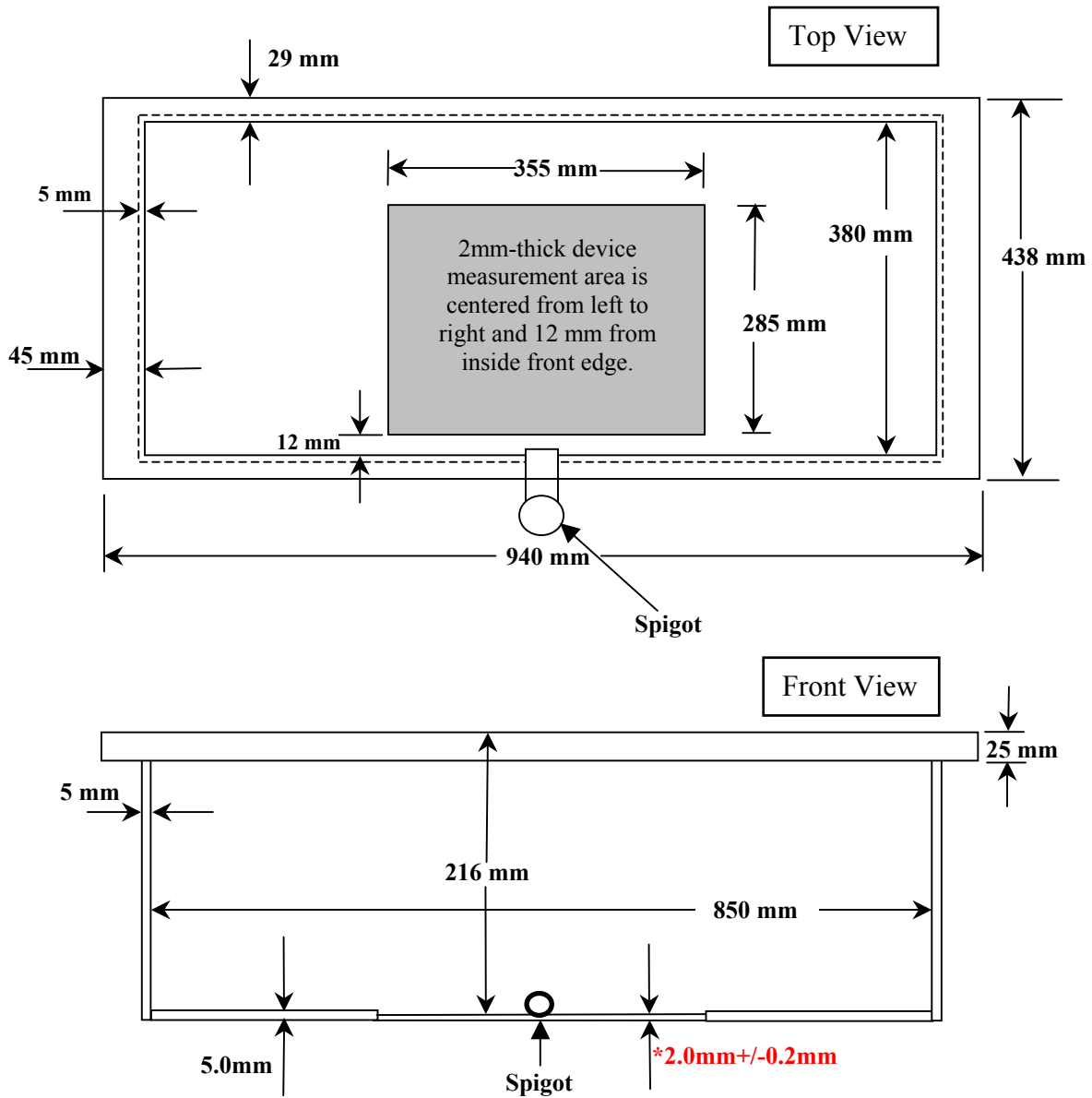
Fiberglass Planar Phantom - Back View



Fiberglass Planar Phantom - Bottom View

Dimensions of Fiberglass Planar Phantom

(Manufactured by Barski Industries Ltd. - Unit# 03-01)



**Note: Measurements that aren't repeated for the opposite sides are the same as the side measured.
This drawing is not to scale.**