RF EXPOSURE EVALUATION

SPECIFIC ABSORPTION RATE

SAR TEST REPORT

FOR

MOTION COMPUTING INC.

T006 TABLET PC

WITH

NOVATEL ES720 DUAL-BAND CDMA/EV-DO

AND

USI UB2-2111-S BLUETOOTH

IDENTIFIER(S)	FCC ID: Q3QHWNVWEX720	IC: 4587A-NVWEX720
Test Standard(s) and Procedure(s)	FCC OET Bulletin 65, Supplement C (01-01)	
	FCC OET SAR Measurement Procedures for 3G Devices	
	Industry Canada RSS-102 Issue 2	

Test Report Serial No.

010307Q3Q-T803-S24C

Test Report Revision No.

Revision 1.1 (Model Listing)
Revision 1.0 (Initial Release)

Test Lab and Location

Celltech Compliance Testing & Engineering Lab
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Certificate No. 2470.01

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DECLARATION OF COMPLIANCE
SAR RF EXPOSURE EVALUATION

Test Lab and Location

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Company Information

MOTION COMPUTING INCORPORATED
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FCC IDENTIFIER:	Q3QHWNVWEX720		**IC IDENTIFIER:**	4587A-NVWEX720
Rule Part(s) Applied:	FCC	47 CFR §2.1093	IC	Health Canada Safety Code 6
Test Procedure(s) Applied:	FCC	OET Bulletin 65, Supplement C (01-01)	OET SAR Measurement Procedures for 3G Devices	
	IC	RSS-102 Issue 2		
Device Classification(s):	FCC	PCS Licensed Transmitter (PCB)	47 CFR Part 24 Subpart E	
	IC	2 GHz Personal Communication Services	RSS-133 Issue 3	
		800 MHz Cellular Telephones Employing New Technologies	RSS-132 Issue 2	
Device Model & Description:	T006 Tablet PC			
Internal Transmitter Type:	Novatel ES720 Dual-Band CDMA/EV-DO (PCI-Express)		CDMA 1xRTT	1xEv-Do Rev. 0 / 1xEv-DO Rev. A
Co-located Transmitter(s):	USI UB2-2111-S Bluetooth (Simultaneous Transmission)			
LCD User Orientation(s):	0 Degrees Landscape		-90 Degrees Portrait	
Transmit Frequency Range(s):	1851.25 - 1908.75 MHz	PCS CDMA/EV-DO	824.70 - 848.31 MHz	Cellular CDMA/EV-DO
	2402 - 2480 MHz	Bluetooth	-	-

Max. RF Output Power Tested:						
	PCS	24.8 dBm	0.302 Watts	Average Conducted	EV-DO Rev. 0/A	L/M/H Channels
	Cellular	24.6 dBm	0.288 Watts	Average Conducted	CDMA 1xRTT	Mid Channel
	Bluetooth	-0.97 dBm	0.8 mW	Conducted	Specification	Mid Channel

Antenna Type(s) Tested:	CDMA/EV-DO	External Swivel	100° - Open Position	0° - Closed Position
	Bluetooth	Internal	-	-
Battery Type(s) Tested:	Lithium-ion 14.8 V (P/N: BATEDX20L4) - Standard		Lithium-ion 14.8 V (P/N: BATEDX20L8) - Extended	

Max. SAR Level(s) Evaluated:	**1.32 W/kg**	**1g average**	**EV-DO Rev. 0 & Bluetooth**	**PCS Band**
	0.651 W/kg	**1g average**	**CDMA 1xRTT / EV-DO Rev. A**	**Cellular Band**

Celltech Labs Inc. declares under its sole responsibility that this wireless device was compliant with the Specific Absorption Rate (SAR) RF exposure requirements specified in FCC 47 CFR §2.1093 and Health Canada's Safety Code 6. The device was tested in accordance with the measurement procedures specified in FCC OET Bulletin 65, Supplement C (Edition 01-01), FCC OET SAR Measurement Procedures for 3G Devices and Industry Canada RSS-102 Issue 2 for the General Population / Uncontrolled Exposure environment. 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.

Test Report Approved By:
Sean Johnston
SAR Lab Manager
Celltech Labs Inc.

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1.0 INTRODUCTION

This measurement report demonstrates that MOTION COMPUTING INCORPORATED Model: T006 Tablet PC FCC ID: Q3QHWNVWEX720, incorporating the Novatel ES720 Dual-Band CDMA/EV-DO PCI-Express Card and co-located USI UB2-2111-S Bluetooth, complies with the SAR (Specific Absorption Rate) RF exposure requirements specified in 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 3G Devices (see reference [4]) and IC RSS-102 Issue 2 (see reference [5]) 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.

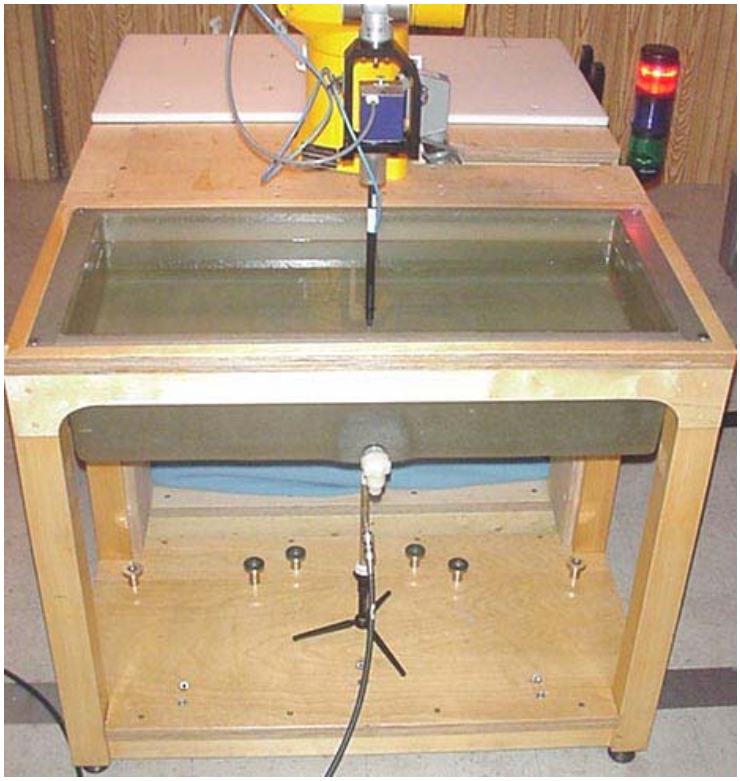
2.0 DESCRIPTION of DEVICE UNDER TEST (DUT)

FCC Rule Part(s) Applied	47 CFR §2.1093			**IC Rule Part(s) Applied**	Health Canada Safety Code 6			
Test Procedure(s) Applied	FCC OET Bulletin 65, Supplement C (01-01)							
	FCC OET SAR Measurement Procedures for 3G Devices							
	Industry Canada RSS-102 Issue 2							
RF Exposure Category	General Population / Uncontrolled Environment							
FCC Device Classification	PCS Licensed Transmitter (PCB)				47 CFR Part 24 Subpart E			
IC Device Classification	2 GHz Personal Communication Services				RSS 133 Issue 3			
	800MHz Cellular Telephones Employing New Technologies				RSS-132 Issue 2			
Device Description	Tablet PC			**Device Model(s)**	T006			
Internal Transmitter Type(s)	Novatel ES720 Dual-Band CDMA/EV-DO PCI-Express Card							
Transmitter Technology Type(s)	CDMA 1xRTT		1xEV-DO Rev. 0		1xEV-DO Rev. A			
Co-located Transmitter(s)	USI UB2-2111-S Bluetooth (Simultaneous Transmission)							
LCD User Orientation(s)	0 Degrees Landscape			-90 Degrees Portrait				
FCC IDENTIFIER	Q3QHWNVWEX720			**IC IDENTIFIER**	4587A-NVWEX720			
Test Sample Serial No.(s)	P2DVT2 IDX80010009 013			Identical Prototype				
Transmitter Frequency Range(s)	824.70 - 848.31 MHz			Cellular CDMA/EV-DO				
	1851.25 - 1908.75 MHz			PCS CDMA/EV-DO				
	2402 - 2480 MHz			Bluetooth				
Max. Average RF Conducted Output Power Level(s) Tested	**Band**	**Frequency**	**EV-DO Rev. A**		**EV-DO Rev. 0**		**CDMA 1xRTT**	
		MHz	**dBm**	**Watts**	**dBm**	**Watts**	**dBm**	**Watts**
	Cellular	**836.52**	24.5	0.282	24.4	0.275	24.6	0.288
	PCS	**1851.25**	-	-	24.8	0.302	-	-
		1880.00	24.8	0.302	24.8	0.302	-	-
		1908.75	-	-	24.8	0.302	-	-
Antenna Type(s) Tested	CDMA/EV-DO		External Swivel		100° - Open Position		0° - Closed Position	
	Bluetooth		Internal		-		-	
Battery Type(s) Tested	Lithium-ion		Standard		14.8 V		P/N: BATEDX20L4	
	Lithium-ion		Extended		14.8 V		P/N: BATEDX20L8	

3.0 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 SAR Measurement System with planar phantom and validation dipole

4.0 OUTPUT POWER MEASUREMENTS

1xEv-Do Rev. 0

Power Measurement Procedures

This procedure assumes the Agilent 8960 Series 10 E5515C Wireless Communications Test Set contains the following applications installed and with valid license.

Application	Rev. License
1xEv-Do Terminal Test	A.07.13, L

FTAP

- Call Setup → Shift & Preset
- Protocol Rev → 0 (1xEv-Do)
- Application Config → Enhanced Test Application Protocol → FTAP
- FTAP Rate → 307.2 kbps (2 Slot, QPSK)
- Access Network Info → Cell Parameters → Sector ID → 00840AC0 → Subnet Mask → 0
- Generator Info → Termination Parameters → Max Forward Packet Duration → 16 Slots
- Rvs Power Ctrl → All Bits Up (to get the maximum power)

RTAP

- Call Setup → Shift & Preset
- Protocol Rev → 0 (1xEv-Do)
- Application Config → Enhanced Test Application Protocol → RTAP
- RTAP Rate → 153.6 kbps
- Access Network Info → Cell Parameters → Sector ID → 00840AC0 → Subnet Mask → 0
- Generator Info → Termination Parameters → Max Forward Packet Duration → 16 Slots
- Rvs Power Ctrl → All Bits Up (to get the maximum power)

Average Conducted Power Measurements

1xEv-Do Rev. 0

Band	Freq. (MHz)	Channel	FTAP			RTAP		
			Rate (kbps)	dBm	Watts	Rate (kbps)	dBm	Watts
PCS	1851.25	25	307.2 (2 slot)	24.6	0.288	153.6	24.8	0.302
	1880.00	600		24.6	0.288		24.8	0.302
	1908.75	1175		24.1	0.257		24.2	0.263
Cellular	824.70	1013	307.2 (2 slot)	24.3	0.269	153.6	24.4	0.275
	836.52	384		24.3	0.269		24.4	0.275
	848.31	777		24.3	0.269		23.4	0.219

OUTPUT POWER MEASUREMENTS (Cont.)

1xEv-Do Rev. A

Power Measurement Procedures

This procedure assumes the Agilent 8960 Series 10 E5515C Wireless Communications Test Set contains the following applications installed and with valid license.

Application	Rev. License
1xEv-Do Terminal Test	A.07.13, L

FETAP

- Call Setup → Shift & Preset
- Protocol Rev → A (1xEv-Do-A)
- Application Config → Enhanced Test Application Protocol → FETAP
- FTAP Rate → 307.2 kbps (2 Slot, QPSK)
- Protocol Subtype Config → Release A Physical Layer Subtype → Subtype 0
- Access Network Info → Cell Parameters → Sector ID → 00840AC0 → Subnet Mask → 0
- Generator Info → Termination Parameters > Max Forward Packet Duration → 16 Slots
- Rvs Power Ctrl → All Bits Up (to get the maximum power)

RETAP

- Call Setup → Shift & Preset
- Protocol Rev → A (1xEv-Do-A)
- Application Config → Enhanced Test Application Protocol → RETAP
- F-Traffic Format → 4 (1024, 2,128) Canonical (307.2k, QPSK)
- R-Data Pkt Size → 4096
- Protocol Subtype Config → Release A Physical Layer Subtype → Subtype 2
  → PL Subtype 2 Access Channel MAC Subtype → Default (Subtype 0)
- Access Network Info → Cell Parameters → Sector ID → 00840AC0 → Subnet Mask → 0
- Generator Info → Termination Parameters → Max Forward Packet Duration > 16 Slots
  → ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl → All Bits Up (to get the maximum power)

Average Conducted Power Measurements

1x Ev-Do Rev. A

Band	Freq. (MHz)	Channel	FETAP			RETAP		
			Rate (kbps)	dBm	Watts	Rate (bps)	dBm	Watts
PCS	1851.25	25	307.2 (2 slot)	24.6	0.288	4096 (16 Slots)	24.8	0.302
	1880.00	600		24.6	0.288		24.8	0.302
	1908.75	1175		24.2	0.263		24.2	0.263
Cellular	824.70	1013	307.2 (2 slot)	23.9	0.245	4096 (16 Slots)	24.2	0.263
	836.52	384		24.1	0.257		24.5	0.282
	848.31	777		24.1	0.257		24.5	0.282

OUTPUT POWER MEASUREMENTS (Cont.)

1xRTT

Power Measurement Procedures

This procedure assumes the Agilent 8960 Series 10 E5515C Wireless Communications Test Set contains the following applications installed and with valid license.

Application	Rev. License
CDMA2000 Mobile Test	B.12.12, L

1xRTT

- Call Setup → Shift & Preset
- Protocol Rev → 6 (IS-2000-0)
- Radio Config (RC) → RC3 (Fwd3, Rvs3)
- FCH Service Option (SO) Setup → SO55
- Traffic Data Rate → Full
- Cell info → Cell Parameters → System ID (SID) → 2238 (for Cellular) and 4145 (for PCS)
  → Network ID (NID) → 65535
- Rvs Power Ctrl → All Bits Up (to get the maximum power)

Average Conducted Power Measurements

1xRTT

Band	Freq. (MHz)	Channel	Rate (Kbps)	Radio Config. (RC)	Service Option (SO)	dBm	Watts
PCS	1851.25	25	9600	RC3	SO55	24.4	0.275
	1880.00	600				24.8	0.302
	1908.75	1175				24.3	0.269
Cellular	824.70	1013	9600	RC3	SO55	24.5	0.282
	836.52	384				24.6	0.288
	848.31	777				24.5	0.282
PCS	1851.25	25	9600	RC3	SO32 (FCH+SCH)	24.7	0.295
	1880.00	600				24.4	0.275
	1908.75	1175				24.3	0.269
Cellular	824.70	1013	9600	RC3	SO32 (FCH+SCH)	24.7	0.295
	836.52	384				24.7	0.295
	848.31	777				24.6	0.288
PCS	1851.25	25	9600	RC1	SO55	24.6	0.288
	1880.00	600				24.8	0.302
	1908.75	1175				24.3	0.269
Cellular	824.70	1013	9600	RC1	SO55	24.5	0.282
	836.52	384				24.6	0.288
	848.31	777				24.6	0.288

5.0 MEASUREMENT SUMMARY

BODY SAR EVALUATION RESULTS

Cellular CDMA/EV-DO

Test Date	Test Mode		Freq.	Channel	Antenna Position	Battery Type	DUT Position to Planar Phantom	DUT Spacing to Planar Phantom	Cond. Power Before Test	SAR Drift During Test	Measured SAR 1g
			MHz					cm	dBm	dB	W/kg
Feb. 5	Ev-Do Rev. 0	RTAP	836.52	384	Open	Standard	Bottom Side	0.0 (Touch)	24.4	0.0322	0.592
Feb. 5	**CDMA 1xRTT**	RC3, SO55	836.52	384	Open	Standard	Bottom Side	0.0 (Touch)	24.6	-0.0589	**0.651**
Feb. 6	CDMA 1xRTT	RC3, SO55	836.52	384	Closed	Standard	Bottom Side	0.0 (Touch)	24.6	0.0226	0.0613
Feb. 6	**Ev-Do Rev. A**	RETAP	836.52	384	Open	Standard	Bottom Side	0.0 (Touch)	24.5	0.0364	**0.651**
Feb. 6	CDMA 1xRTT	RC3, SO55	836.52	384	Open	Standard	Bottom Side	0.0 (Touch)	24.6	0.0475	0.618
	Bluetooth co-transmit	Modulated Fixed Freq.	2441	39					-0.97		

ANSI / IEEE C95.1 2005 - SAFETY LIMIT | **BODY: 1.6 W/kg (averaged over 1 gram)** | **Spatial Peak - Uncontrolled Exposure / General Population**

Test Date(s)			February 05, 2007		February 06, 2007		Test Date(s)	Feb 5	Feb 6	Unit
Dielectric Constant ε_r	Fluid Type		835 MHz Body		835 MHz Body		Relative Humidity	33	33	%
	IEEE Target		Measured	Deviation	Measured	Deviation	Atmospheric Pressure	103.4	103.4	kPa
	55.2	± 5%	56.8	+2.9%	57.4	+4.0%	Ambient Temperature	24.8	23.3	°C
Conductivity σ (mho/m)	Fluid Type		835 MHz Body		835 MHz Body		Fluid Temperature	22.2	22.4	°C
	IEEE Target		Measured	Deviation	Measured	Deviation	Fluid Depth	≥ 15	≥ 15	cm
	0.97	± 5%	0.99	+2.1%	0.99	+2.1%	ρ (Kg/m^3)	1000		

Note(s)		
	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.	The device modes tested and reported in the above test data table were selected based on the procedures described in FCC OET SAR Measurement Procedures for 3G Devices were implemented (see reference [4]).
	3.	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]).
	4.	A co-located simultaneous transmit SAR evaluation with Bluetooth was performed in the maximum SAR configuration.
	5.	The DUT was evaluated for SAR at maximum power via air-link using the Agilent 8960 Series 10 E5515C Wireless Communications Test Set.
	6.	The power drift of the DUT measured by the DASY4 system during the SAR evaluations was <5% from the start power.
	7.	The DUT battery was fully charged prior to the SAR evaluations.
	8.	The fluid temperature was measured prior to and after the SAR evaluations to ensure the temperature remained within +/-2°C of the fluid temperature reported during the dielectric parameter measurements.
	9.	The dielectric parameters of the simulated tissue mixture were measured prior to the SAR evaluations using an ALS-PR-DIEL Dielectric Probe Kit and an HP 8753ET Network Analyzer (see Appendix C).
	10.	The SAR evaluations were performed within 24 hours of the system performance check.

MEASUREMENT SUMMARY (Cont.)

BODY SAR EVALUATION RESULTS

PCS CDMA/EV-DO

Test Mode		Freq.	Channel	Antenna Position	Battery Type	DUT Position to Planar Phantom	DUT Spacing to Planar Phantom	Cond. Power Before Test	SAR Drift During Test	Measured SAR 1g
		MHz					cm	dBm	dB	W/kg
Ev-Do Rev. 0	RTAP	1880.00	600	Open	Standard	Bottom Side	0.0 (Touch)	24.8	0.0475	1.30
Ev-Do Rev. 0	RTAP	1851.25	25	Open	Standard	Bottom Side	0.0 (Touch)	24.8	0.0549	1.11
Ev-Do Rev. 0	RTAP	1908.75	1175	Open	Standard	Bottom Side	0.0 (Touch)	24.8	0.106	1.10
Ev-Do Rev. 0	RTAP	1880.00	600	Closed	Standard	Bottom Side	0.0 (Touch)	24.8	-0.0400	0.965
Ev-Do Rev. A	RETAP	1880.00	600	Open	Standard	Bottom Side	0.0 (Touch)	24.8	0.00116	1.24
Ev-Do Rev. 0	RTAP	1880.00	600	Open	Extended	Bottom Side	0.0 (Touch)	24.8	0.0590	0.475
Ev-Do Rev. 0	RTAP	1880.00	600	Open	Standard	Bottom Side	0.0 (Touch)	24.8	-0.0750	**1.32**
Bluetooth co-transmit	Modulated Fixed Freq.	2441	39					-0.97		

ANSI / IEEE C95.1 2005 - SAFETY LIMIT	BODY: 1.6 W/kg (averaged over 1 gram)	Spatial Peak Uncontrolled Exposure / General Population

Test Date(s)	February 02, 2007				Relative Humidity	36	%
Measured Fluid Type	1880 MHz Body				Atmospheric Pressure	102.2	kPa
Dielectric Constant ε_r	IEEE Target		Measured	Deviation	Ambient Temperature	23.4	°C
	53.3	± 5%	51.6	-3.2%	Fluid Temperature	22.5	°C
Conductivity σ (mho/m)	IEEE Target		Measured	Deviation	Fluid Depth	≥ 15	Cm
	1.52	± 5%	1.50	-1.3%	ρ (Kg/m^3)	1000	

Note(s)		
	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.	The device modes tested and reported in the above test data table were selected based on the procedures described in FCC OET SAR Measurement Procedures for 3G Devices were implemented (see reference [4]).
	3.	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]).
	4.	A co-located simultaneous transmit SAR evaluation with Bluetooth was performed in the maximum SAR configuration.
	5.	A SAR evaluation was performed with the extended battery in the maximum SAR configuration from the standard battery to report a comparison between the two battery types.
	6.	The DUT was evaluated for SAR at maximum power via air-link using the Agilent 8960 Series 10 E5515C Wireless Communications Test Set.
	7.	The power drifts measured by the DASY4 system for the duration of the SAR evaluations were <5% from the start power.
	8.	The DUT battery was fully charged prior to the SAR evaluations.
	9.	The fluid temperature was measured prior to and after the SAR evaluations to ensure the temperature remained within +/-2°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 an ALS-PR-DIEL Dielectric Probe Kit and an HP 8753ET Network Analyzer (see Appendix C).
	11.	The SAR evaluations were performed within 24 hours of the system performance check.

6.0 DETAILS OF SAR EVALUATION

The MOTION COMPUTING INCORPORATED Model: T006 Tablet PC FCC ID: Q3QHWNVWEX720, incorporating the Novatel ES720 Dual-Band CDMA/EV-DO PCI-Express Card and co-located USI UB2-2111-S Bluetooth, was compliant for localized Specific Absorption Rate (Uncontrolled Exposure) based on the test provisions and conditions described below. The detailed test setup photographs are shown in Appendix D.

Test Configurations

1. The DUT was tested for body SAR (lap-held) 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 SAR with the swivel antenna in both the Open (100°) and Closed (0°) positions.

Power Settings & Test Modes

3. The conducted power levels of the DUT were measured prior to the SAR evaluations using the Agilent 8960 Series 10 E5515C Wireless Communications Test Set according to the procedures described in FCC SAR Measurement Procedures for 3G Devices (see reference [4]).
4. The DUT was tested in continuous transmit operation with a modulated CDMA signal via air-link with the Agilent 8960 Series 10 E5515C Wireless Communications Test Set at maximum power in “all bits up” power control mode.
5. For the co-located simultaneous transmit SAR evaluations the Bluetooth was tested in continuous transmit mode at maximum power on a fixed frequency with the frequency hopping disabled and a modulated signal.
6. The power drift of the DUT during the SAR evaluations was measured by the DASY4 system.

Test Conditions

7. The fluid temperature was measured prior to and after the SAR evaluations to ensure the temperature remained within +/-2°C of the fluid temperature reported during the dielectric parameter measurements.
8. The dielectric parameters of the simulated tissue mixtures were measured prior to the SAR evaluations using an ALS-PR-DIEL Dielectric Probe Kit and an HP 8753ET Network Analyzer (see Appendix C).

7.0 EVALUATION PROCEDURES

a. (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.

b. 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:

c. 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.

d. 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:

e. Extrapolation is used to find the points between the dipole center of the probe and the surface of the phantom. This data cannot be measured, since the center of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.4 mm (see probe calibration document in Appendix F). The extrapolation was based on trivariate quadratics computed from the previously calculated 3D interpolated points nearest the phantom surface.

f. 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).

g. A zoom scan volume of 32 mm x 32 mm x 30 mm (5 x 5 x 7 points) centered at the peak SAR location determined from the area scan is used for all zoom scans for devices with a transmit frequency < 800 MHz. Zoom scans for frequencies ≥ 800 MHz are determined with a scan volume of 30 mm x 30 mm x 30 mm (7 x 7 x 7) to ensure complete capture of the peak spatial-average SAR.

8.0 SYSTEM PERFORMANCE CHECK

Prior to the SAR evaluations, system checks were performed using a planar phantom with 835MHz and 1900MHz dipoles (see Appendix E for system validation procedures). The dielectric parameters of the simulated tissue mixtures were measured prior to the system performance checks using an ALS-PR-DIEL Dielectric Probe Kit and an HP 8753ET 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 ±10% (see Appendix B for system performance check test plots). See Table 1 below for the SAR system manufacturer's reference body SAR values from the DASY4 Manual (see reference [8]).

SYSTEM PERFORMANCE CHECK EVALUATIONS

Test Date	Equiv. Tissue	SAR 1g (W/kg)			Dielectric Constant ε_r			Conductivity σ (mho/m)			ρ (Kg/m^3)	Amb. Temp. (°C)	Fluid Temp. (°C)	Fluid Depth (cm)	Humid. (%)	Barom. Press. (kPa)
	Body (MHz)	SPEAG Target	Meas.	Dev.	IEEE Target	Meas.	Dev.	IEEE Target	Meas.	Dev.						
Feb. 2	1900	9.95 ±10%	10.4	+4.5%	53.3 ±5%	51.6	-3.2%	1.52 ±5%	1.53	+0.7%	1000	23.4	22.5	≥ 15	36	102.2
Feb. 5	835	2.43 ±10%	2.43	0.0%	55.2 ±5%	56.8	+2.9%	0.97 ±5%	0.99	+2.1%	1000	24.8	22.2	≥ 15	33	103.4

Note(s)		
	1.	The fluid temperature was measured prior to and after the SAR evaluations to ensure the temperature remained within +/-2°C of the fluid temperature reported during the dielectric parameter measurements.
	2.	The SAR evaluations were performed within 24 hours of the system performance check.

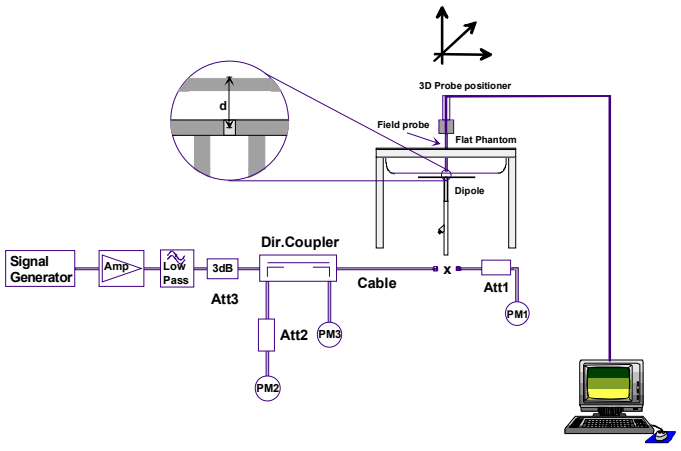


Figure 1. System Performance Check Measurement Setup

835 MHz Dipole Setup

Dipole Type	Distance [mm]	Frequency [MHz]	SAR (1g) [W/kg]	SAR (10g) [W/kg]	SAR (peak) [W/kg]
D300V2	15	300	3.02	2.06	4.36
D450V2	15	450	5.01	3.36	7.22
D835V2	15	835	9.71	6.38	14.1
D900V2	15	900	11.1	7.17	16.3
D1450V2	10	1450	29.6	16.6	49.8
D1500V2	10	1500	30.8	17.1	52.1
D1640V2	10	1640	34.4	18.7	59.4
D1800V2	10	1800	38.5	20.3	67.5
D1900V2	10	1900	39.8	20.8	69.6
D2000V2	10	2000	40.9	21.2	71.5
D2450V2	10	2450	51.2	23.7	97.6
D3000V2	10	3000	61.9	24.8	136.7

Table 32.1: Numerical reference SAR values for SPEAG dipoles and flat phantom filled with body-tissue simulating liquid. Note: All SAR values normalized to 1 W forward power.

Table 1. SAR System Manufacturer's Reference Body SAR Values

1900 MHz Dipole Setup

9.0 SIMULATED EQUIVALENT TISSUES

The 1880/1900MHz simulated equivalent tissue mixture consisted of Glycol-monobutyl, water, and salt. The 835MHz simulated equivalent tissue mixture consisted of a viscous gel using saline solution. Preservation with a bactericide was added and visual inspection was made to ensure air bubbles were not trapped during the mixing process. The fluids were prepared according to standardized procedures and measured for dielectric parameters (permittivity and conductivity).

1880/1900MHz TISSUE MIXTURE		
INGREDIENT	1900 MHz Body System Performance Check	1880 MHz Body DUT Evaluation
Water	69.85 %	69.85 %
Glycol Monobutyl	29.89 %	29.89 %
Salt	0.26 %	0.26 %

835MHz TISSUE MIXTURE		
INGREDIENT	835 MHz Body System Performance Check	835 MHz Body DUT Evaluation
Water	53.79 %	53.79 %
Sugar	45.13 %	45.13 %
Salt	0.98 %	0.98 %
Bactericide	0.10 %	0.10 %

10.0 SAR SAFETY LIMITS

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 1 g of tissue)	1.60	8.0
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0
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.		

11.0 ROBOT SYSTEM SPECIFICATIONS

Specifications	
Positioner	Stäubli Unimation Corp. Robot Model: RX60L
Repeatability	0.02 mm
No. of axis	6
Data Acquisition Electronic (DAE) System	
Cell Controller	
Processor	AMD Athlon XP 2400+
Clock Speed	2.0 GHz
Operating System	Windows XP Professional
Data Converter	
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
DASY4 Measurement Server	
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
E-Field Probe	
Probe (Cell Band)	
Model	ET3DV6
Serial No.	1387
Construction	Triangular core fiber optic detection system
Frequency	10 MHz to 6 GHz
Linearity	±0.2 dB (30 MHz to 3 GHz)
Probe (PCS Band)	
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)
Phantom(s)	
Type	Planar Phantom
Shell Material	Fiberglass
Thickness	2.0 ±0.1 mm
Volume	Approx. 70 liters

12.0 PROBE SPECIFICATIONS

ET3DV6E-Field Probe

Construction:	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, glycol)
Calibration:	In air from 10 MHz to 2.5 GHz In brain simulating tissue at frequencies of 900 MHz and 1.8 GHz (accuracy ± 8%)
Frequency:	10 MHz to > 6 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)
Directivity:	± 0.2 dB in brain tissue (rotation around probe axis) ± 0.4 dB in brain tissue (rotation normal to probe axis)
Dynamic Range:	5 μW/g to > 100 mW/g; Linearity: ± 0.2 dB
Surface Detect:	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces
Dimensions:	Overall length: 330 mm Tip length: 16 mm Body diameter: 12 mm Tip diameter: 6.8 mm Distance from probe tip to dipole centers: 2.7 mm
Application:	General dosimetry up to 3 GHz Compliance tests of mobile phone

ET3DV6 E-Field Probe

EX3DV4 E-Field Probe

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

EX3DV4 E-Field Probe

13.0 PLANAR PHANTOM

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 G for dimensions and specifications of the planar phantom).

Planar Phantom

14.0 DEVICE HOLDER

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 such as Laptop and Tablet PCs, a Plexiglas platform is attached to the device holder.

Device Holder

15.0 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
x	-Robot	00046	599396-01	N/A		N/A
x	-DAE4	00019	353	21Jun06		21Jun07
x	-ET3DV6 E-Field Probe	00016	1387	16Mar06		16Mar07
x	-EX3DV4 E-Field Probe	00213	3600	24Jan07		24Jan08
	-300MHz Validation Dipole	00023	135	23Oct06		23Oct07
	-450MHz Validation Dipole	00024	136	07Dec06		07Dec07
	-835MHz Validation Dipole	00022	411	**Brain**	28Mar06	28Mar07
x				**Body**	18Jan07	18Jan08
	-900MHz Validation Dipole	00020	054	**Brain**	06Jun06	06Jun07
				Body	06Jun06	06Jun07
	-1640MHz Validation Dipole	00212	0175	**Brain**	14Aug06	14Aug07
	-1800MHz Validation Dipole	00021	247	**Brain**	08Jun06	08Jun07
				Body	09Jun06	09Jun07
	-1900MHz Validation Dipole	00032	151	**Brain**	09Jun06	09Jun07
x				**Body**	02Feb07	02Feb08
	-2450MHz Validation Dipole	00025	150	**Body**	24Apr06	24Apr07
	5GHz Validation Dipole -5200MHz	00126	1031	**Body**	18Jul06	18Jul07
	5GHz Validation Dipole -5500 MHz			**Body**	14Nov06	14Nov07
	5GHz Validation Dipole -5800MHz			**Brain**	15Mar06	15Mar07
				Body	18Jul06	18Jul07
x	-SAM Phantom V4.0C	00154	1033	N/A		N/A
x	-Barski Planar Phantom	00155	03-01	N/A		N/A
	-Plexiglas Side Planar Phantom	00156	161	N/A		N/A
	-Plexiglas Validation Planar Phantom	00157	137	N/A		N/A
x	ALS-PR-DIEL Dielectric Probe Kit	00160	260-00953	N/A		N/A
x	Gigatronics 8652A Power Meter	00110	1835801	12Apr06		12Apr07
	Gigatronics 8652A Power Meter	00008	1835267	22Jan07		22Jan08
x	Gigatronics 80701A Power Sensor	00012	1834350	22Jan07		22Jan08
x	Gigatronics 80701A Power Sensor	00014	1833699	22Jan07		22Jan08
x	HP 8753ET Network Analyzer	00134	US39170292	18Apr06		18Apr07
	HP 8648D Signal Generator	00005	3847A00611	N/A		N/A
	Rohde & Schwarz SMR40 Signal Generator	00006	100104	06Apr06		06Apr07
x	Amplifier Research 5S1G4 Power Amplifier	00106	26235	N/A		N/A
	Anritsu Radio Communication Analyzer	00208	6200241241	06Jun06		06Jun07
x	Agilent 8960 Wireless Communication Test Set	80012	GB42361078	13Dec06		12Jan09

16.0 MEASUREMENT UNCERTAINTIES

UNCERTAINTY BUDGET FOR DEVICE EVALUATION						
Error Description	**Uncertainty Value ±%**	**Probability Distribution**	**Divisor**	**ci 1g**	**Uncertainty Value ±% (1g)**	**V_i or V_{eff}**
Measurement System						
Probe calibration	5.5	Normal	1	1	5.5	∞
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	1	Rectangular	1.732050808	1	0.6	∞
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)	5	Normal	1	0.64	3.2	∞
Liquid permittivity (target)	5	Rectangular	1.732050808	0.6	1.7	∞
Liquid permittivity (measured)	5	Normal	1	0.6	3.0	∞
Combined Standard Uncertainty					**11.24**	
Expanded Uncertainty (k=2)					**22.48**	

Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 (see reference [6])

MEASUREMENT UNCERTAINTIES (Cont.)

UNCERTAINTY BUDGET FOR SYSTEM VALIDATION						
Error Description	**Uncertainty Value ±%**	**Probability Distribution**	**Divisor**	**ci 1g**	**Uncertainty Value ±% (1g)**	**V_i or V_{eff}**
Measurement System						
Probe calibration	5.5	Normal	1	1	5.5	∞
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	1	Rectangular	1.732050808	1	0.6	∞
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)	5	Normal	1	0.64	3.2	∞
Liquid permittivity (target)	5	Rectangular	1.732050808	0.6	1.7	∞
Liquid permittivity (measured)	5	Normal	1	0.6	3.0	∞
Combined Standard Uncertainty					**9.57**	
Expanded Uncertainty (k=2)					**19.14**	

Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 (see reference [6])

17.0 REFERENCES

[1] Federal Communications Commission - “Radiofrequency radiation exposure evaluation: portable devices”, Rule Part 47 CFR §2.1093: 1999.

[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] Federal Communications Commission - “SAR Measurement Procedures for 3G Devices”: FCC OET, June 2006 (Rev. 1).

[5] Industry Canada - “Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)”, Radio Standards Specification RSS-102 Issue 2: November 2005.

[6] 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.

[7] ANSI/IEEE C95.1-2005 - “American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3 kHz to 300 GHz”, New York: IEEE, April 2006.

[8] Schmid & Partner Engineering AG - “DASY4 Manual”, V4.5 March 2005.

APPENDIX A - SAR MEASUREMENT DATA

Date Tested: 02/05/2007

Body SAR - Cellular Band - 1xEV-DO Rev. 0 - 836.52 MHz - Ch. 384 - Antenna Open (100°)

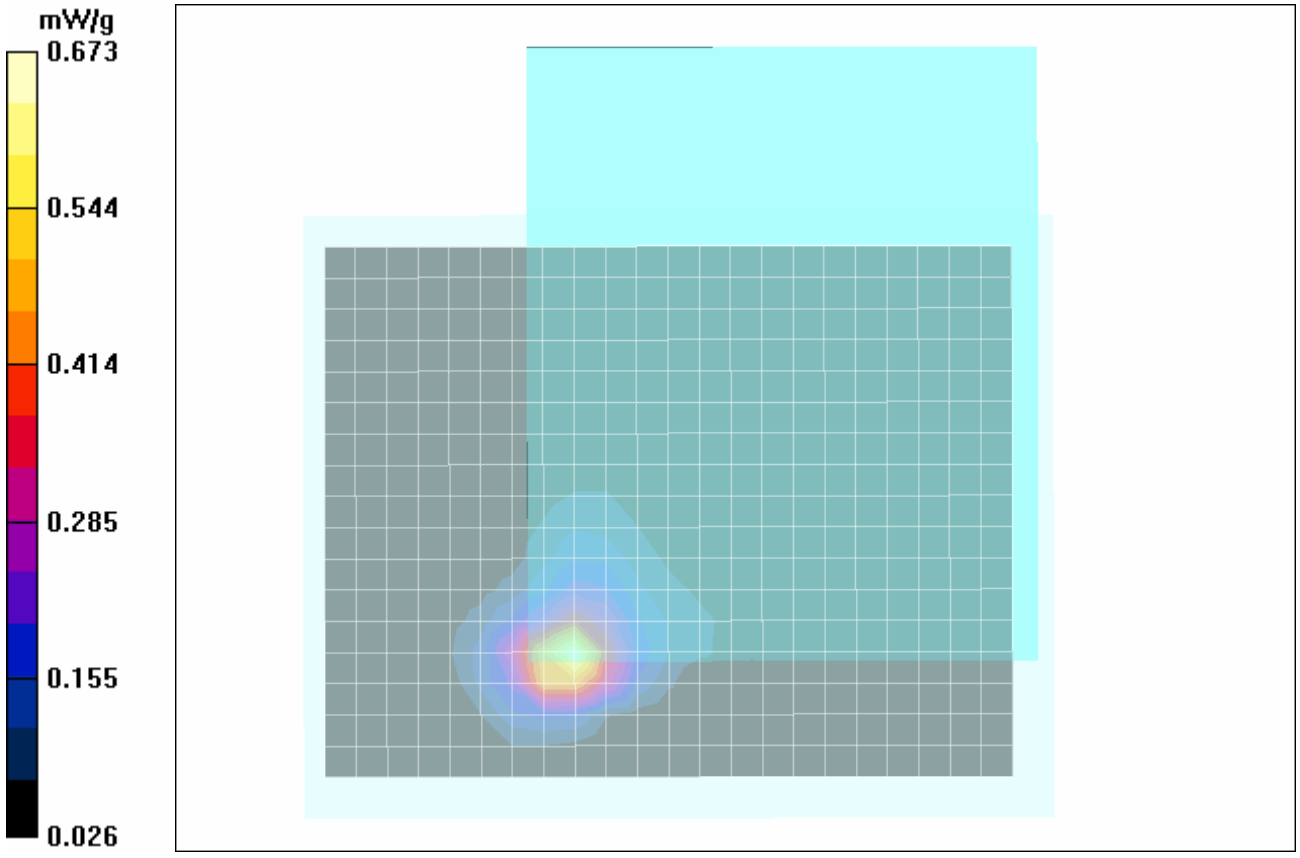
DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 24.8ºC; Fluid Temp: 22.2ºC; Barometric Pressure: 103.4 kPa; Humidity: 33%

Communication System: Cellular CDMA
Frequency: 836.52 MHz; Duty Cycle: 1:1
RF Output Power: 24.4 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
Medium: M835 Medium parameters used: f = 836.52 MHz; σ = 0.99 mho/m; ε_r = 56.8; ρ = 1000 kg/m^3
- Probe: ET3DV6 - SN1387; ConvF(6.04, 6.04, 6.04); Calibrated: 16/03/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 384 - 836.52 MHz - Antenna Open
Area Scan (19x24x1): Measurement grid: dx=15mm, dy=15mm

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 384 - 836.52 MHz - Antenna Open
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.9 V/m; Power Drift = 0.0322 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.592 mW/g; SAR(10 g) = 0.364 mW/g
Maximum value of SAR (measured) = 0.673 mW/g



Date Tested: 02/05/2007

Body SAR - Cellular Band - CDMA1xRTT - 836.52 MHz - Ch. 384 - Antenna Open (100°)

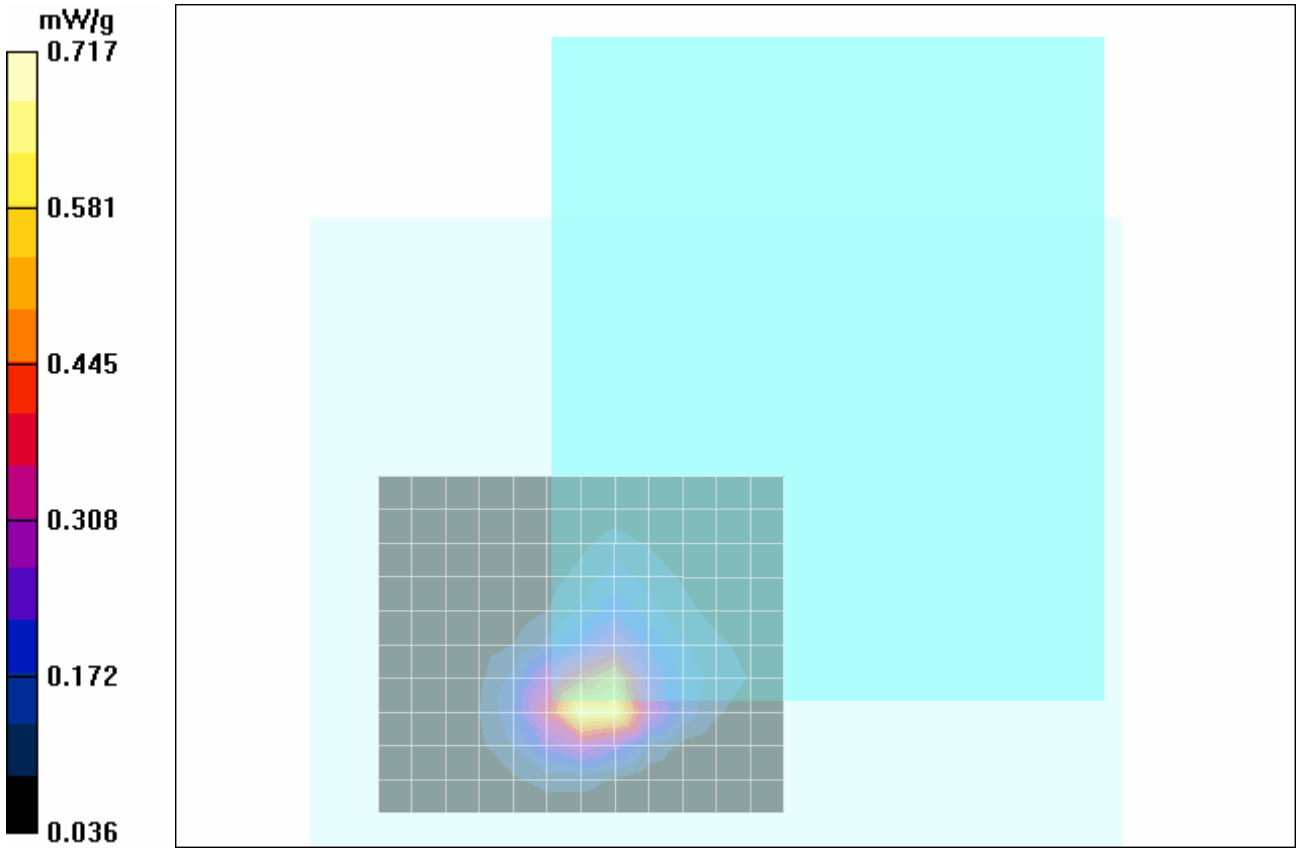
DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 24.8ºC; Fluid Temp: 22.2ºC; Barometric Pressure: 103.4 kPa; Humidity: 33%

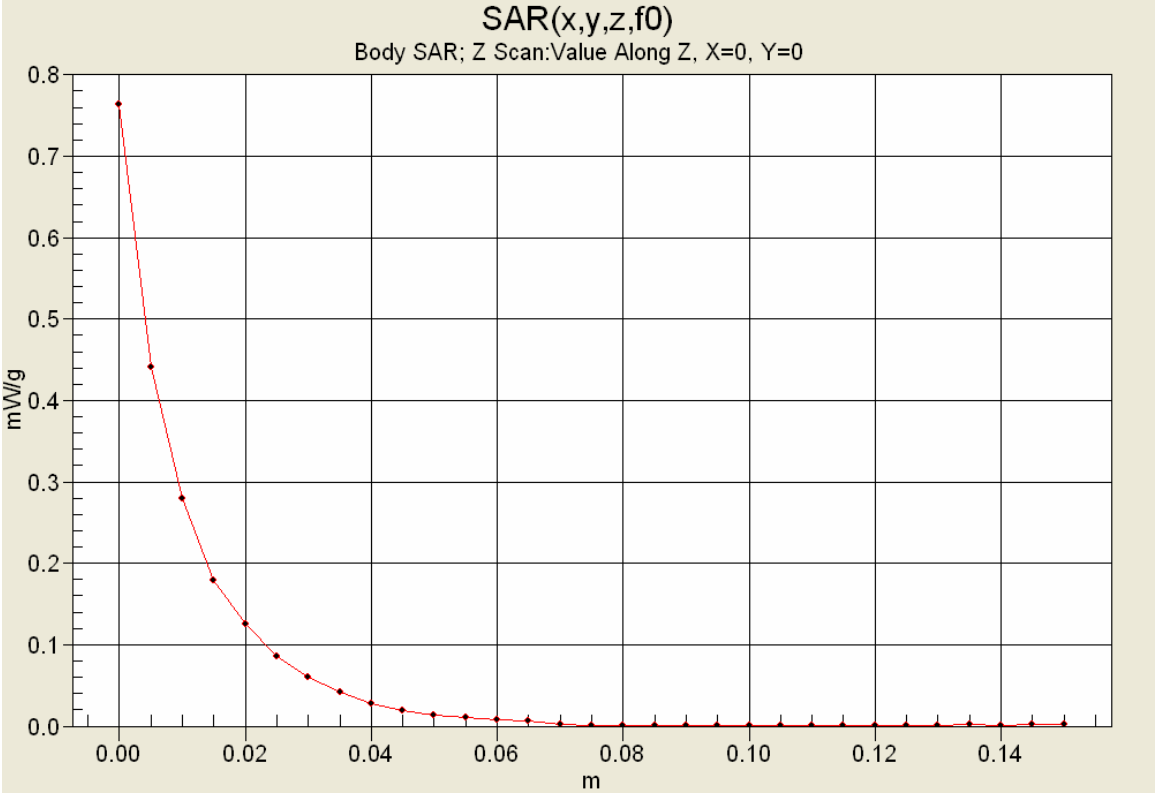
Communication System: Cellular CDMA
Frequency: 836.52 MHz; Duty Cycle: 1:1
RF Output Power: 24.6 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
Medium: M835 Medium parameters used: f = 836.52 MHz; σ = 0.99 mho/m; ε_r = 56.8; ρ = 1000 kg/m^3
- Probe: ET3DV6 - SN1387; ConvF(6.04, 6.04, 6.04); Calibrated: 16/03/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 384 - 836.52 MHz - Antenna Open
Area Scan (11x13x1): Measurement grid: dx=15mm, dy=15mm

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 384 - 836.52 MHz - Antenna Open
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.5 V/m; Power Drift = -0.0589 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.651 mW/g; SAR(10 g) = 0.389 mW/g
Maximum value of SAR (measured) = 0.717 mW/g



Z-Axis Scan


SAR(x,y,z,f0)
Body SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
m

Date Tested: 02/06/2007

Body SAR - Cellular Band - CDMA1xRTT - 836.52 MHz - Ch. 384 - Antenna Closed (0°)

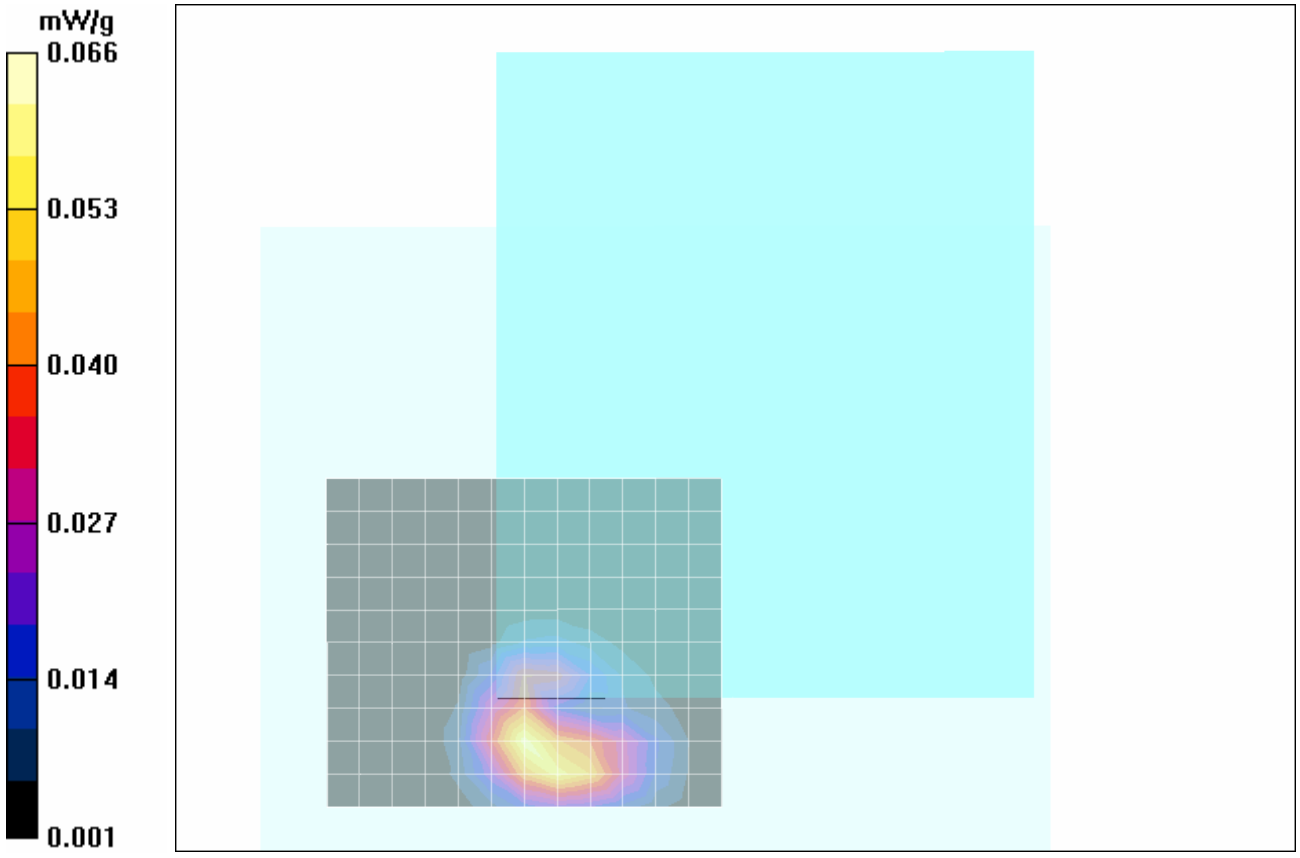
DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 23.3ºC; Fluid Temp: 22.4ºC; Barometric Pressure: 103.4 kPa; Humidity: 33%

Communication System: Cellular CDMA
Frequency: 836.52 MHz; Duty Cycle: 1:1
RF Output Power: 24.6 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
Medium: M835 Medium parameters used: f = 836.52 MHz; σ = 0.99 mho/m; ε_r = 57.4; ρ = 1000 kg/m^3
- Probe: ET3DV6 - SN1387; ConvF(6.04, 6.04, 6.04); Calibrated: 16/03/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 384 - 836.52 MHz - Antenna Closed
Area Scan (11x13x1): Measurement grid: dx=15mm, dy=15mm

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 384 - 836.52 MHz - Antenna Closed
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.10 V/m; Power Drift = 0.0226 dB
Peak SAR (extrapolated) = 0.096 W/kg
SAR(1 g) = 0.0613 mW/g; SAR(10 g) = 0.038 mW/g
Maximum value of SAR (measured) = 0.066 mW/g



Date Tested: 02/06/2007

Body SAR - Cellular Band - EV-DO Rev. A - 836.52 MHz - Ch. 384 - Antenna Open (100°)

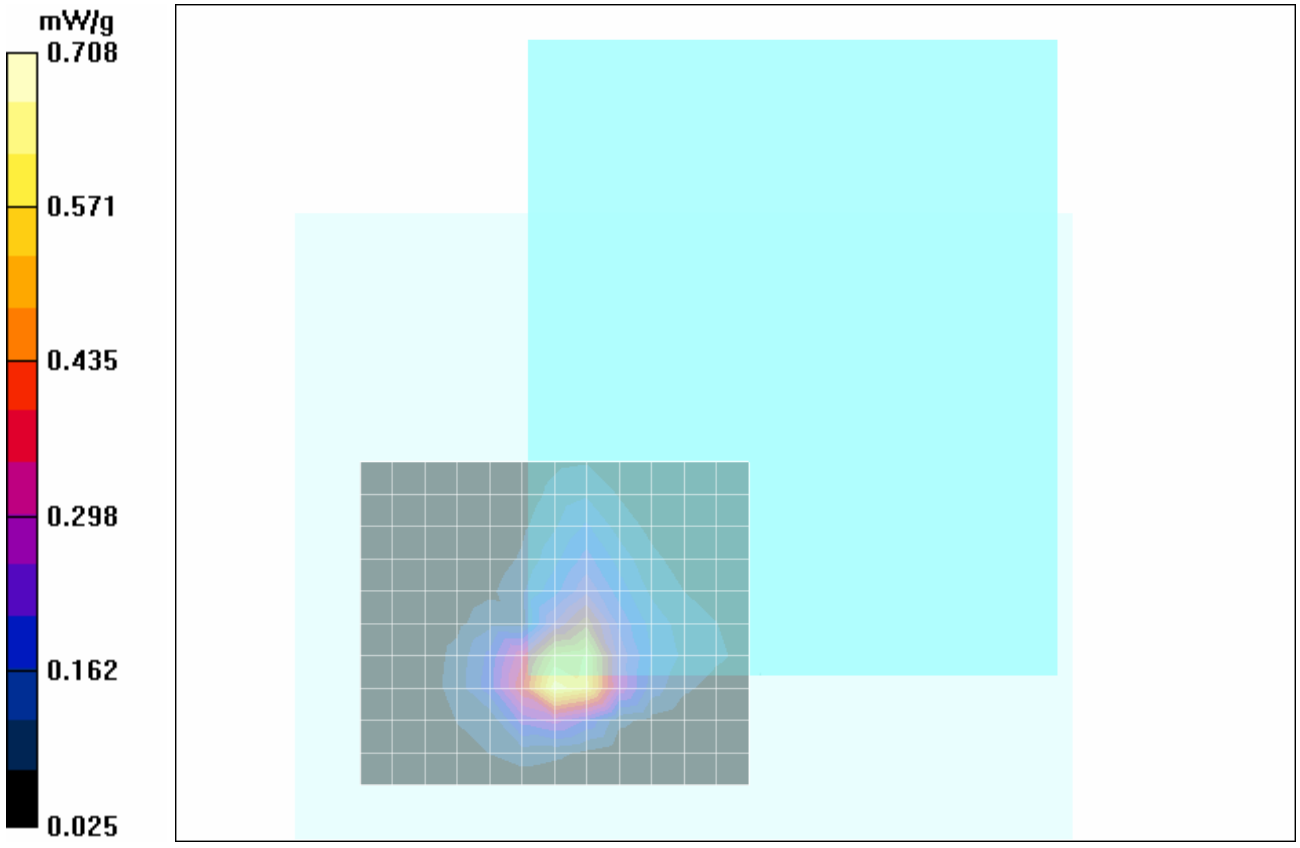
DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 23.3ºC; Fluid Temp: 22.4ºC; Barometric Pressure: 103.4 kPa; Humidity: 33%

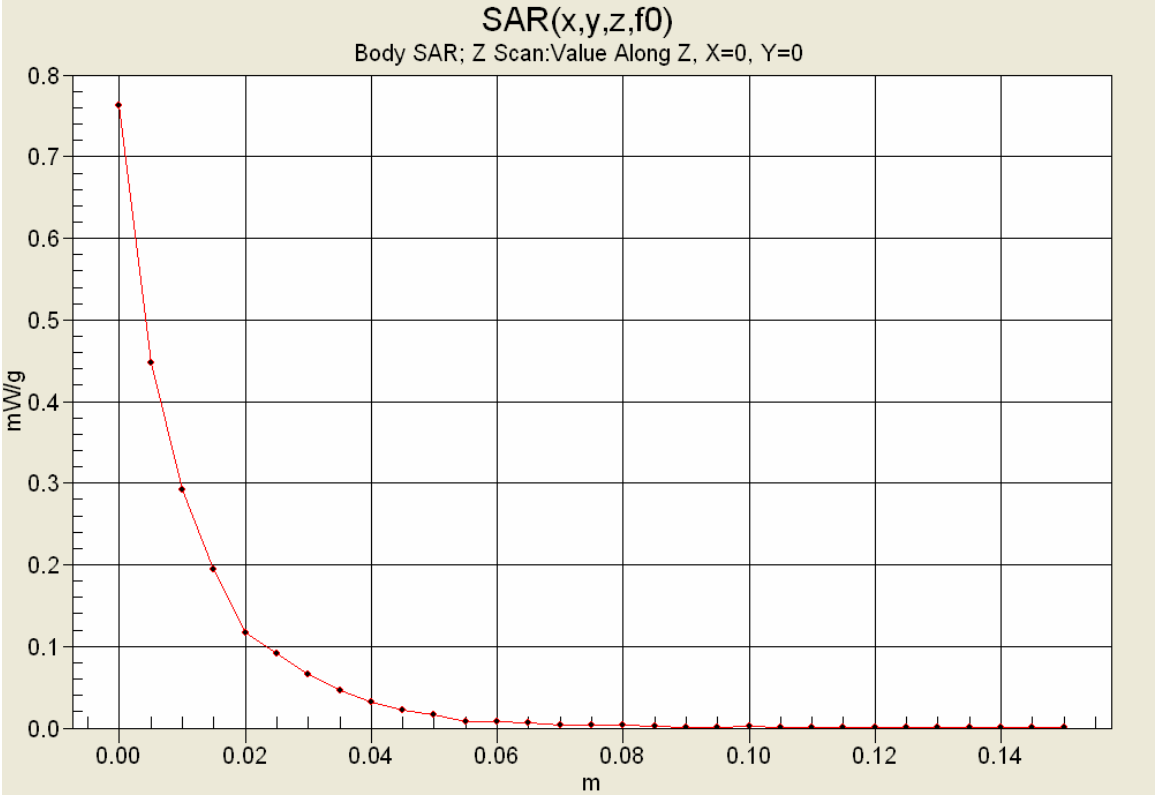
Communication System: Cellular CDMA
Frequency: 836.52 MHz; Duty Cycle: 1:1
RF Output Power: 24.5 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
Medium: M835 Medium parameters used: f = 836.52 MHz; σ = 0.99 mho/m; ε_r = 57.4; ρ = 1000 kg/m^3
- Probe: ET3DV6 - SN1387; ConvF(6.04, 6.04, 6.04); Calibrated: 16/03/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 384 - 836.52 MHz - Antenna Open
Area Scan (11x13x1): Measurement grid: dx=15mm, dy=15mm

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 384 - 836.52 MHz - Antenna Open
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.0 V/m; Power Drift = 0.0364 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.651 mW/g; SAR(10 g) = 0.384 mW/g
Maximum value of SAR (measured) = 0.708 mW/g



Z-Axis Scan



Date Tested: 02/06/2007

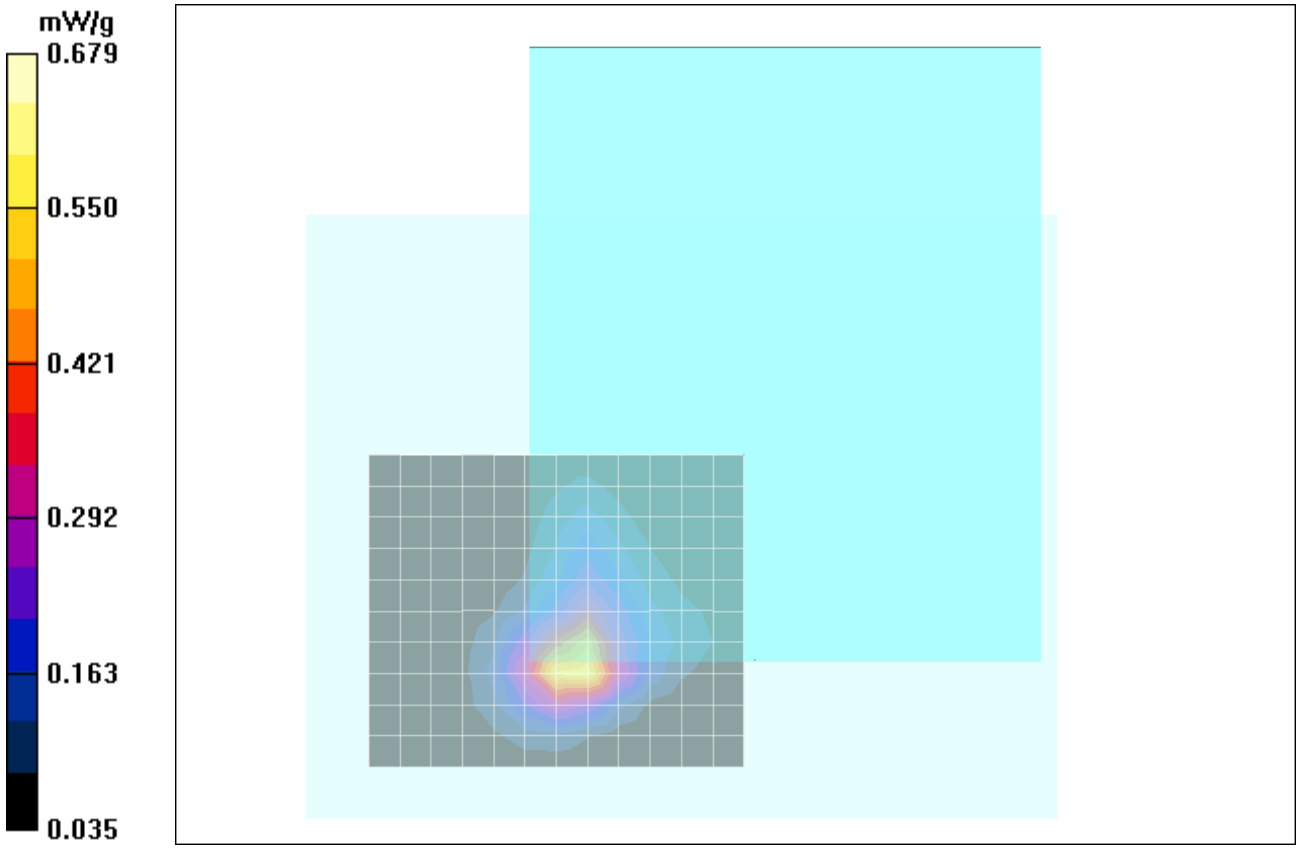
Body SAR - Cellular Band - CDMA1xRTT - 836.52 MHz - Ch. 384 - Antenna Open (100°) Simultaneous Transmit with Co-located Bluetooth

DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 23.3ºC; Fluid Temp: 22.4ºC; Barometric Pressure: 103.4 kPa; Humidity: 33%

Communication System: Cellular CDMA
Frequency: 836.52 MHz; Duty Cycle: 1:1
RF Output Power: 24.6 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
RF Output Power: -0.97 dBm (Conducted) Bluetooth
Communication System: Modulated Fixed Frequency (Bluetooth)
Frequency: 2441 MHz; Duty Cycle: 1:1 (Bluetooth)
Medium: M835 Medium parameters used: f = 836.52 MHz; σ = 0.99 mho/m; ε_r = 57.4; ρ = 1000 kg/m^3
- Probe: ET3DV6 - SN1387; ConvF(6.04, 6.04, 6.04); Calibrated: 16/03/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 384 - 836.52 MHz - Antenna Open
Area Scan (11x13x1): Measurement grid: dx=15mm, dy=15mm
Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 384 - 836.52 MHz - Antenna Open
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.4 V/m; Power Drift = 0.0475 dB
Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.618 mW/g; SAR(10 g) = 0.376 mW/g
Maximum value of SAR (measured) = 0.679 mW/g



Date Tested: 02/02/2007

Body SAR - PCS Band - EV-DO Rev. 0 - 1880.00 MHz - Ch. 600 - Antenna Open (100°)

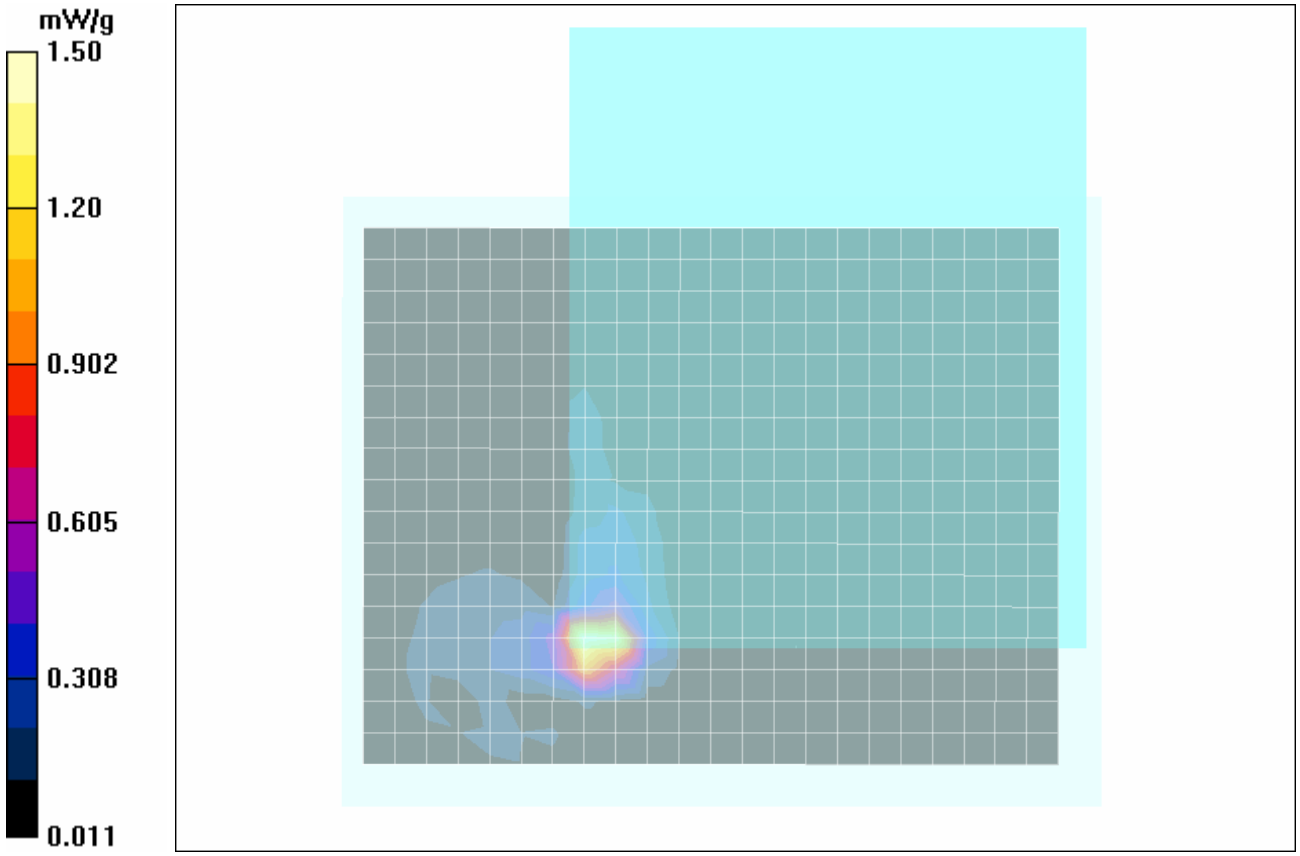
DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 23.4ºC; Fluid Temp: 22.5ºC; Barometric Pressure: 102.2 kPa; Humidity: 36%

Communication System: PCS CDMA
Frequency: 1880.00 MHz; Duty Cycle: 1:1
RF Output Power: 24.8 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
Medium: M1880 Medium parameters used: f = 1880 MHz; σ = 1.50 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
- Probe: EX3DV4 - SN3600; ConvF(6.85, 6.85, 6.85); Calibrated: 24/01/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 600 - 1880.00 MHz - Antenna Open
Area Scan (19x24x1): Measurement grid: dx=15mm, dy=15mm

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 600 - 1880.00 MHz - Antenna Open
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.83 V/m; Power Drift = 0.0475 dB
Peak SAR (extrapolated) = 3.11 W/kg
SAR(1 g) = 1.30 mW/g; SAR(10 g) = 0.525 mW/g
Maximum value of SAR (measured) = 1.50 mW/g



Date Tested: 02/02/2007

Body SAR - PCS Band - EV-DO Rev. 0 - 1851.25 MHz - Ch. 25 - Antenna Open (100°)

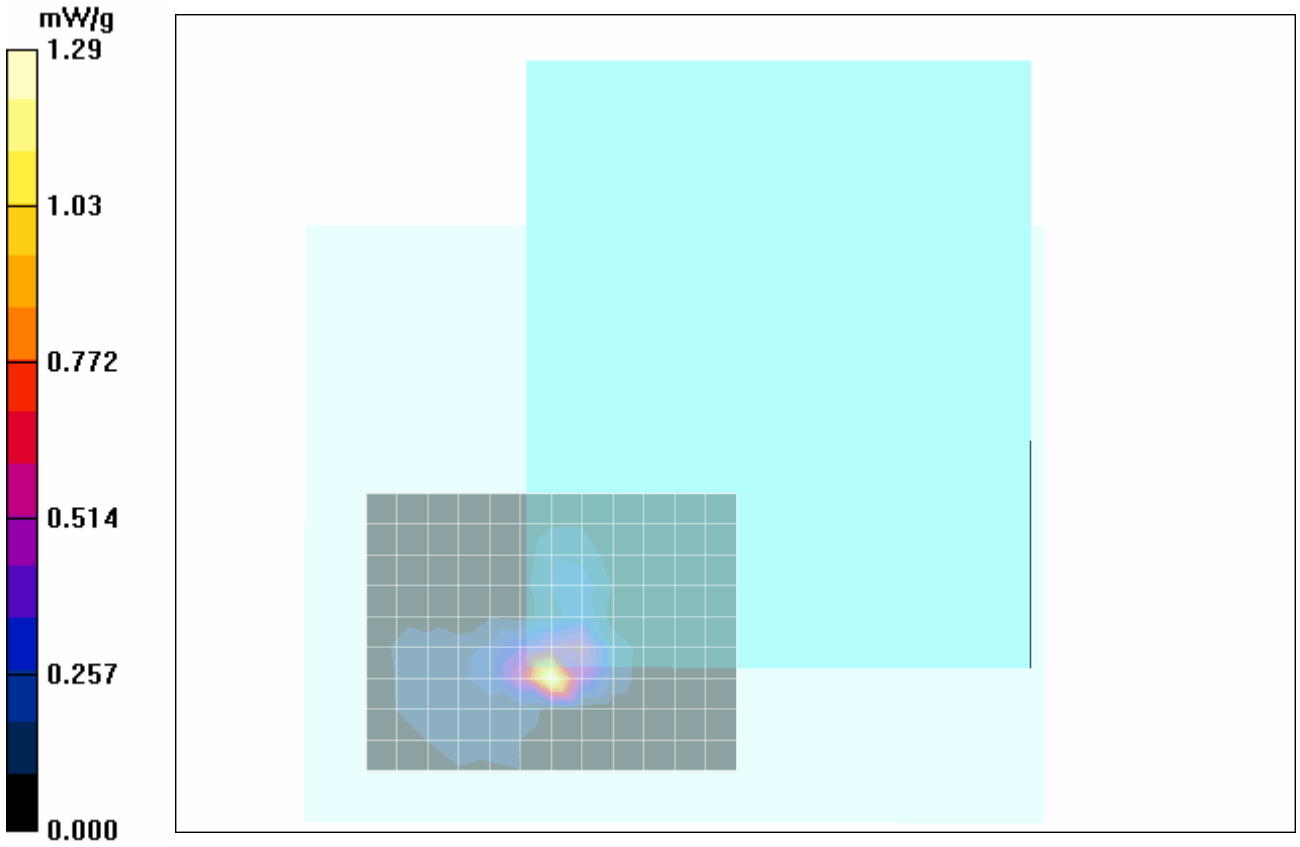
DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 23.4ºC; Fluid Temp: 22.5ºC; Barometric Pressure: 102.2 kPa; Humidity: 36%

Communication System: PCS CDMA
Frequency: 1851.25 MHz; Duty Cycle: 1:1
RF Output Power: 24.8 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
Medium: M1880 Medium parameters used: f = 1851.25 MHz; σ = 1.50 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
- Probe: EX3DV4 - SN3600; ConvF(6.85, 6.85, 6.85); Calibrated: 24/01/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 25 - 1851.25 MHz - Antenna Open
Area Scan (10x13x1): Measurement grid: dx=15mm, dy=15mm

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 25 - 1851.25 MHz - Antenna Open
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.9 V/m; Power Drift = 0.0549 dB
Peak SAR (extrapolated) = 2.73 W/kg
SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.455 mW/g
Maximum value of SAR (measured) = 1.29 mW/g



Date Tested: 02/02/2007

Body SAR - PCS Band - EV-DO Rev. 0 - 1908.75 MHz - Ch. 1175 - Antenna Open (100°)

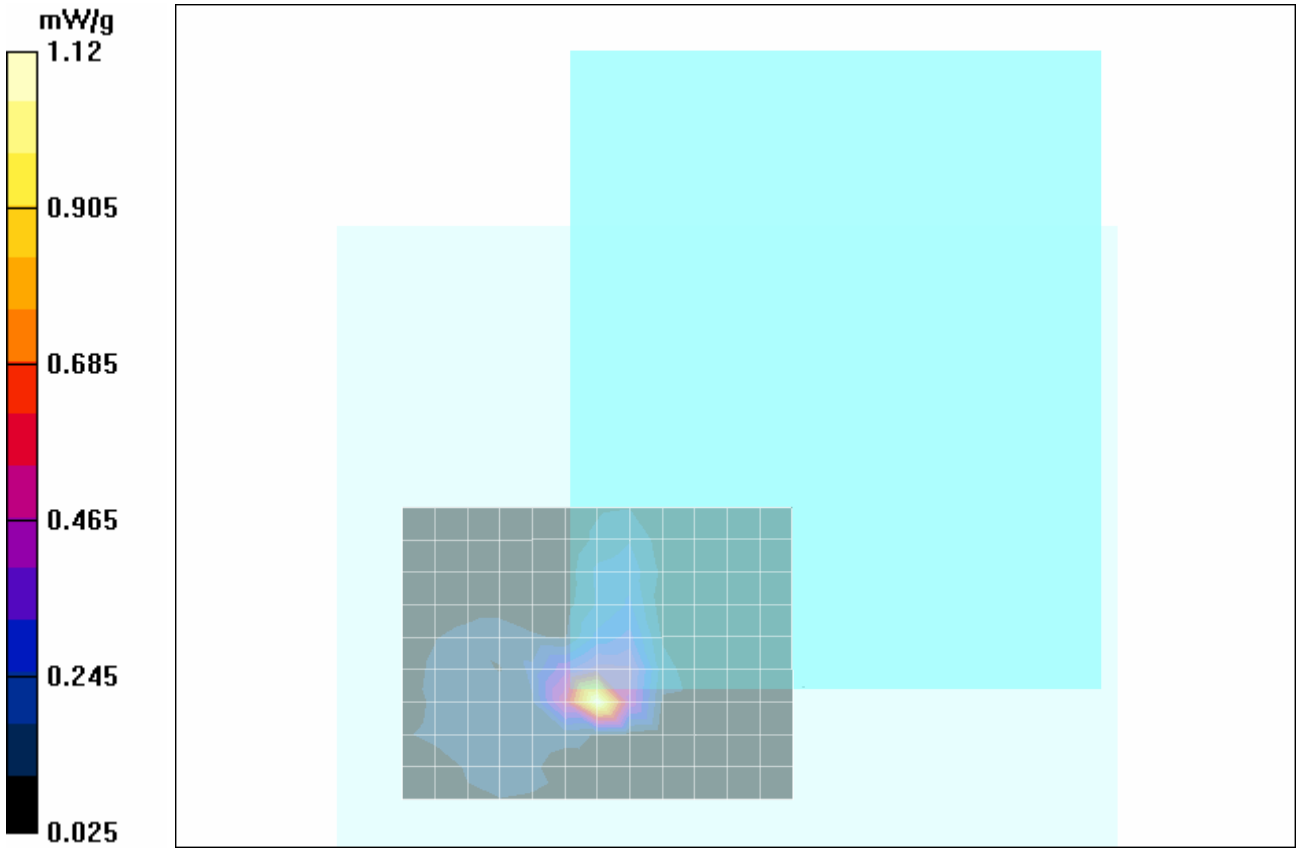
DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 23.4ºC; Fluid Temp: 22.5ºC; Barometric Pressure: 102.2 kPa; Humidity: 36%

Communication System: PCS CDMA
Frequency: 1908.75 MHz; Duty Cycle: 1:1
RF Output Power: 24.8 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
Medium: M1880 Medium parameters used: f = 1908.75 MHz; σ = 1.50 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
- Probe: EX3DV4 - SN3600; ConvF(6.85, 6.85, 6.85); Calibrated: 24/01/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 1175 - 1908.75 MHz - Antenna Open
Area Scan (10x13x1): Measurement grid: dx=15mm, dy=15mm

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 1175 - 1908.75 MHz - Antenna Open
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.6 V/m; Power Drift = 0.106 dB
Peak SAR (extrapolated) = 5.13 W/kg
SAR(1 g) = 1.10 mW/g; SAR(10 g) = 0.407 mW/g
Maximum value of SAR (measured) = 1.12 mW/g



Date Tested: 02/02/2007

Body SAR - PCS Band - EV-DO Rev. 0 - 1880.00 MHz - Ch. 600 - Antenna Closed (0°)

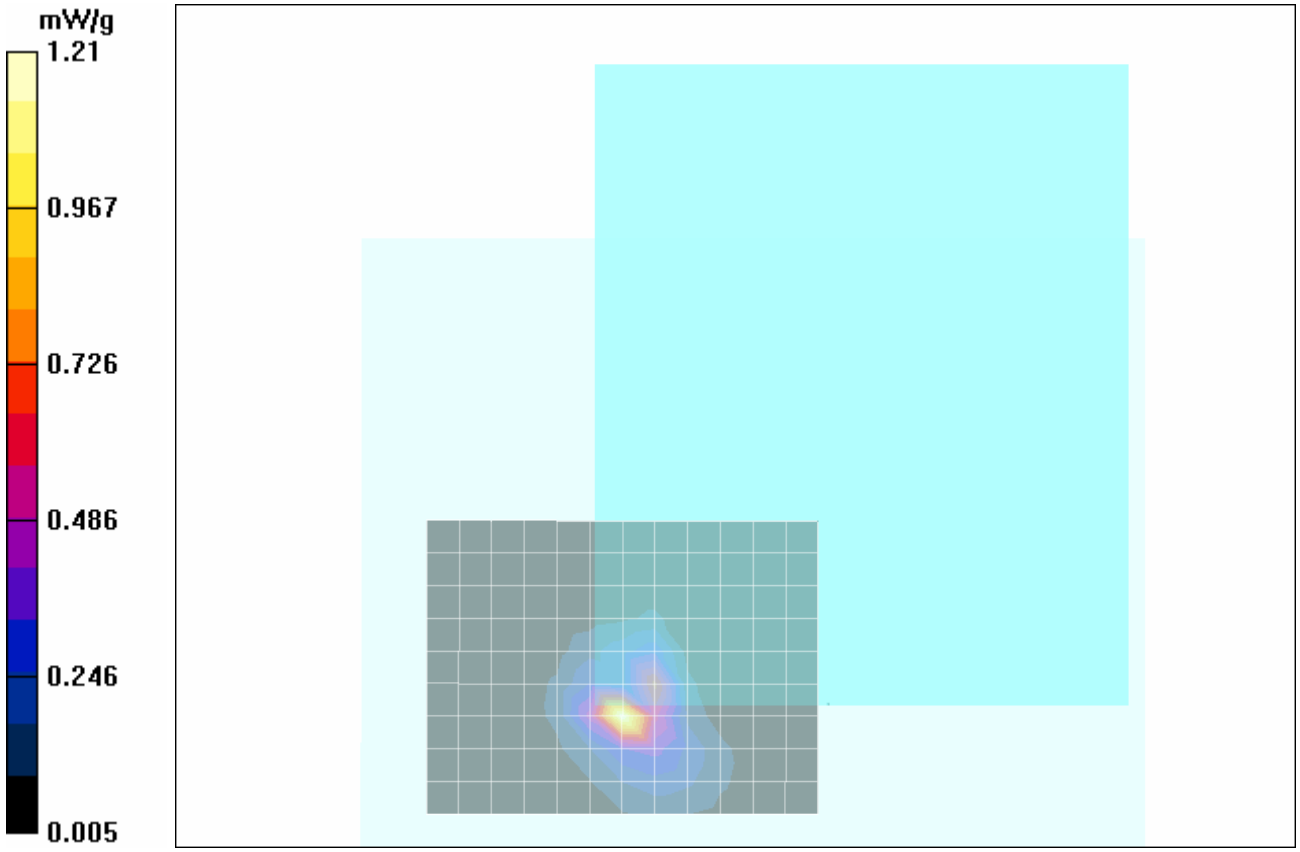
DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 23.4ºC; Fluid Temp: 22.5ºC; Barometric Pressure: 102.2 kPa; Humidity: 36%

Communication System: PCS CDMA
Frequency: 1880.00 MHz; Duty Cycle: 1:1
RF Output Power: 24.8 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
Medium: M1880 Medium parameters used: f = 1880 MHz; σ = 1.50 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
- Probe: EX3DV4 - SN3600; ConvF(6.85, 6.85, 6.85); Calibrated: 24/01/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 600 - 1880.00 MHz - Antenna Closed
Area Scan (10x13x1): Measurement grid: dx=15mm, dy=15mm

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 600 - 1880.00 MHz - Antenna Closed
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.8 V/m; Power Drift = -0.0400 dB
Peak SAR (extrapolated) = 2.21 W/kg
SAR(1 g) = 0.965 mW/g; SAR(10 g) = 0.389 mW/g
Maximum value of SAR (measured) = 1.21 mW/g



Date Tested: 02/02/2007

Body SAR - PCS Band - EV-DO Rev. A - 1880.00 MHz - Ch. 600 - Antenna Open (100°)

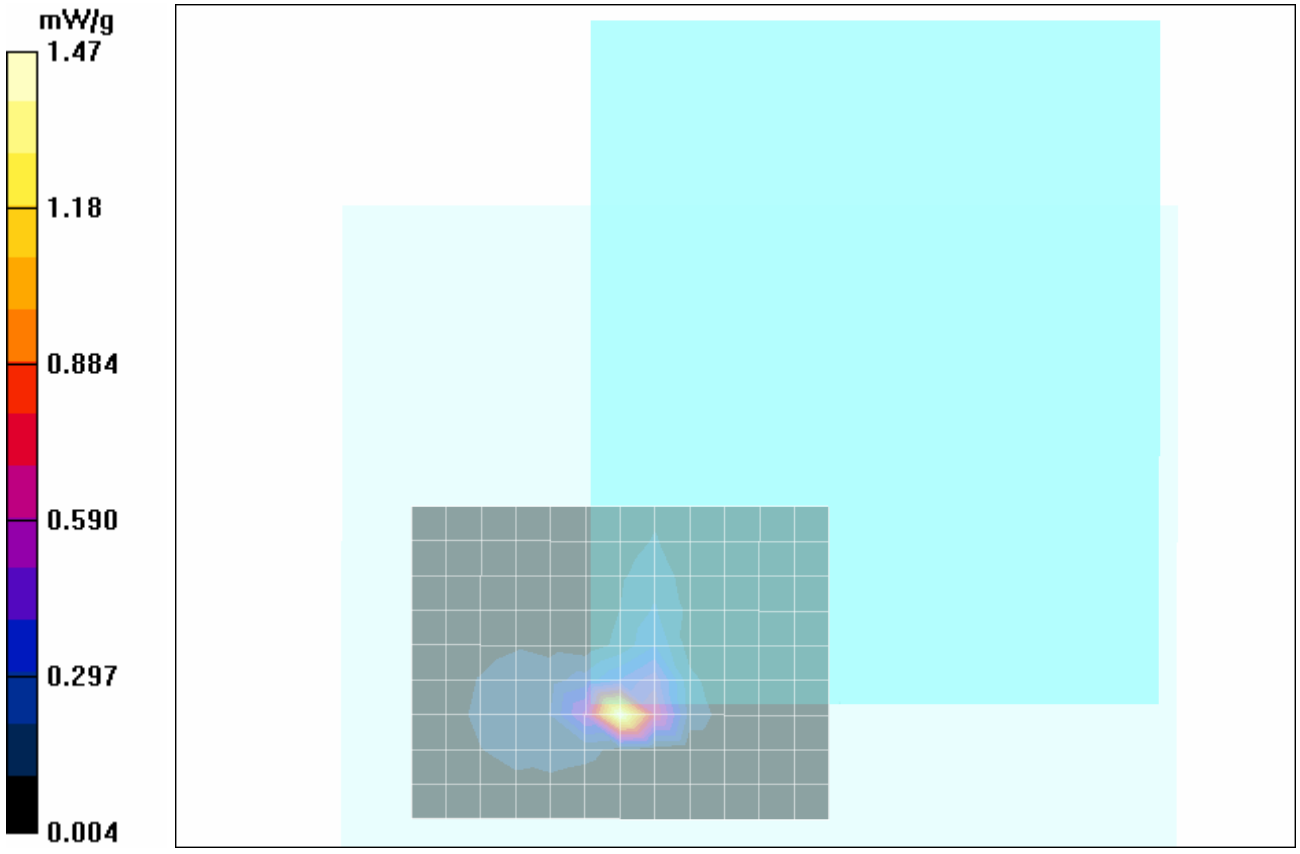
DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 23.4ºC; Fluid Temp: 22.5ºC; Barometric Pressure: 102.2 kPa; Humidity: 36%

Communication System: PCS CDMA
Frequency: 1880.00 MHz; Duty Cycle: 1:1
RF Output Power: 24.8 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
Medium: M1880 Medium parameters used: f = 1880 MHz; σ = 1.50 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
- Probe: EX3DV4 - SN3600; ConvF(6.85, 6.85, 6.85); Calibrated: 24/01/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 600 - 1880.00 MHz - Antenna Open
Area Scan (10x13x1): Measurement grid: dx=15mm, dy=15mm

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 600 - 1880.00 MHz - Antenna Open
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.6 V/m; Power Drift = 0.00116 dB
Peak SAR (extrapolated) = 4.12 W/kg
SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.499 mW/g
Maximum value of SAR (measured) = 1.47 mW/g



Date Tested: 02/02/2007

Body SAR - PCS Band - EV-DO Rev. 0 - 1880.00 MHz - Ch. 600 - Antenna Open (100°)

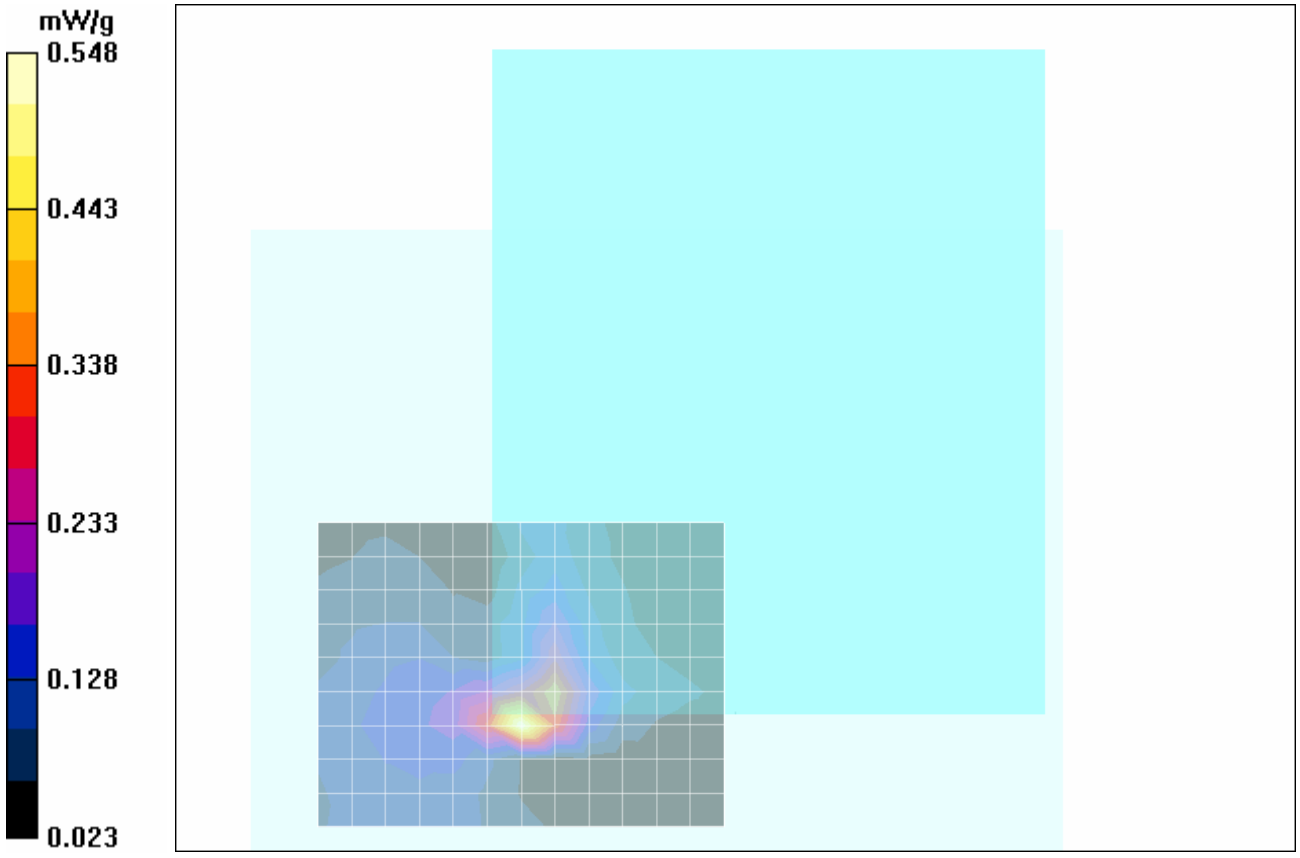
DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

Ambient Temp: 23.4ºC; Fluid Temp: 22.5ºC; Barometric Pressure: 102.2 kPa; Humidity: 36%

Communication System: PCS CDMA
Frequency: 1880.00 MHz; Duty Cycle: 1:1
RF Output Power: 24.8 dBm (Conducted)
14.8 V Extended Li-ion Battery (Model: BATEDX20L8)
Medium: M1880 Medium parameters used: f = 1880 MHz; σ = 1.50 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
- Probe: EX3DV4 - SN3600; ConvF(6.85, 6.85, 6.85); Calibrated: 24/01/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 600 - 1880.00 MHz - Antenna Open
Area Scan (10x13x1): Measurement grid: dx=15mm, dy=15mm

Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 600 - 1880.00 MHz - Antenna Open
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.6 V/m; Power Drift = 0.0590 dB
Peak SAR (extrapolated) = 0.986 W/kg
SAR(1 g) = 0.475 mW/g; SAR(10 g) = 0.225 mW/g
Maximum value of SAR (measured) = 0.548 mW/g



Date Tested: 02/02/2007

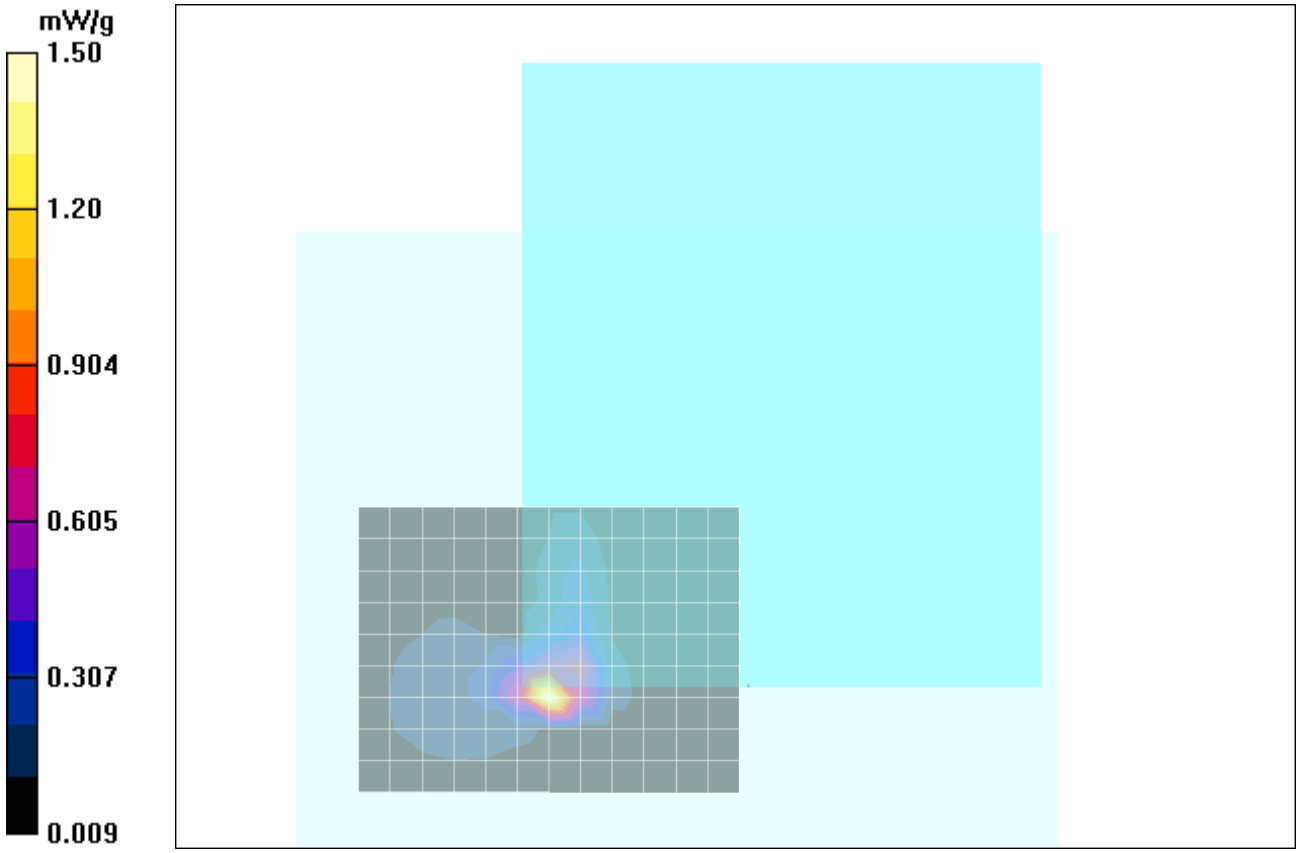
Body SAR - PCS Band - EV-DO Rev. 0 - 1880.00 MHz - Ch. 600 - Antenna Open (100°) Simultaneous Transmit with Co-located Bluetooth

DUT: Motion; Model: T006; Type: Tablet PC with Dual-Band CDMA/EV-DO; Serial: P2DVT2 IDX80010009 013

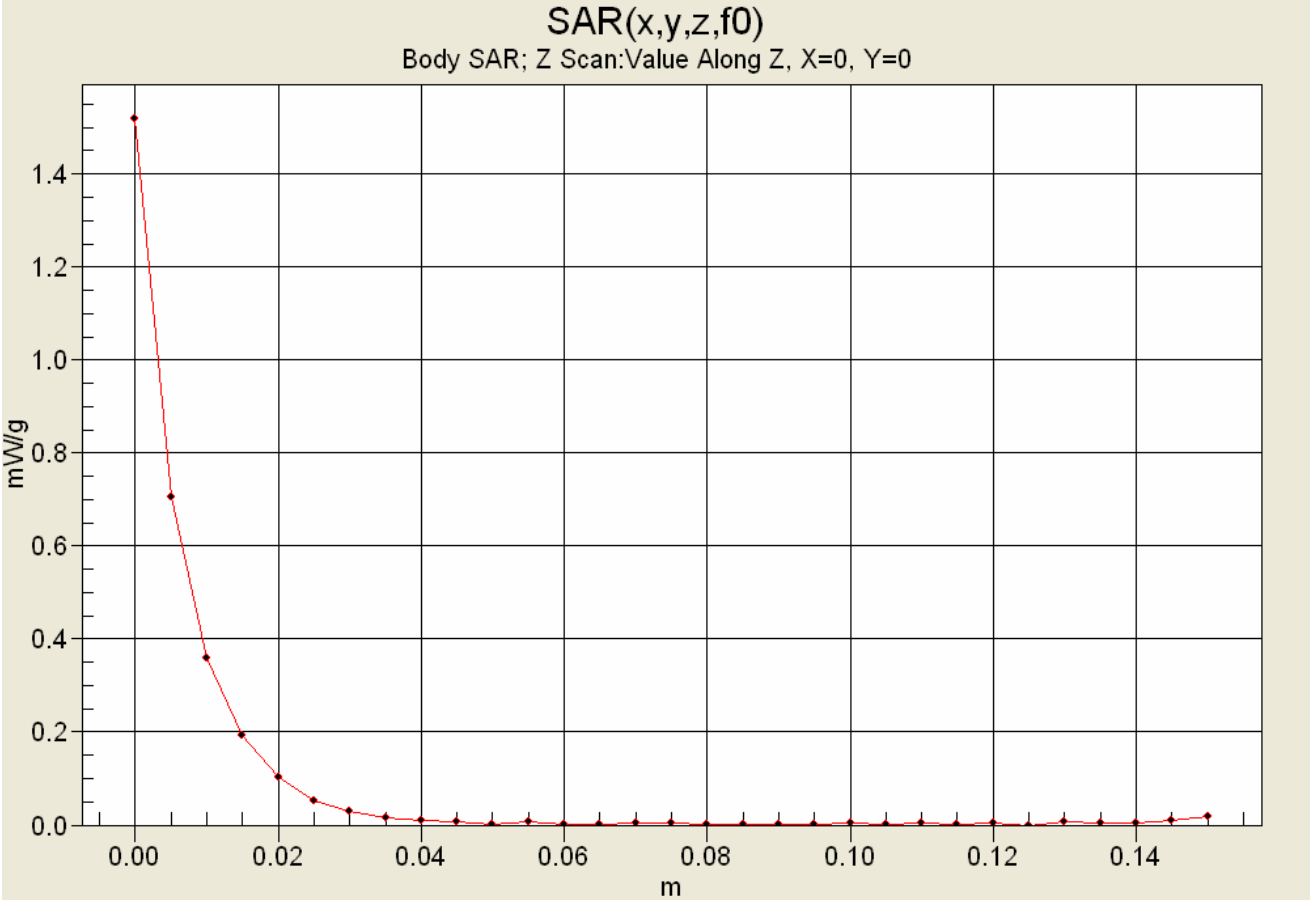
Ambient Temp: 23.4ºC; Fluid Temp: 22.5ºC; Barometric Pressure: 102.2 kPa; Humidity: 36%

Communication System: PCS CDMA
Frequency: 1880.00 MHz; Duty Cycle: 1:1
RF Output Power: 24.8 dBm (Conducted)
14.8 V Li-ion Standard Battery (Model: BATEDX20L4)
RF Output Power: -0.97 dBm (Conducted) Bluetooth
Communication System: Modulated Fixed Frequency (Bluetooth)
Frequency: 2441 MHz; Duty Cycle: 1:1 (Bluetooth)
Medium: M1880 Medium parameters used: f = 1880 MHz; σ = 1.50 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3
- Probe: EX3DV4 - SN3600; ConvF(6.85, 6.85, 6.85); Calibrated: 24/01/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas 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 - Channel 600 - 1880.00 MHz - Antenna Open
Area Scan (10x13x1): Measurement grid: dx=15mm, dy=15mm
Body SAR - Bottom Side of Tablet PC Touching Planar Phantom - Channel 600 - 1880.00 MHz - Antenna Open
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.3 V/m; Power Drift = -0.0750 dB
Peak SAR (extrapolated) = 3.01 W/kg
SAR(1 g) = 1.32 mW/g; SAR(10 g) = 0.558 mW/g
Maximum value of SAR (measured) = 1.50 mW/g



Z-Axis Scan



APPENDIX B - SYSTEM PERFORMANCE CHECK DATA

Date Tested: 02/02/2007

System Performance Check - 1900 MHz Dipole

DUT: Dipole 1900 MHz; Asset: 00032; Serial: 151; Validation: 02/02/2007

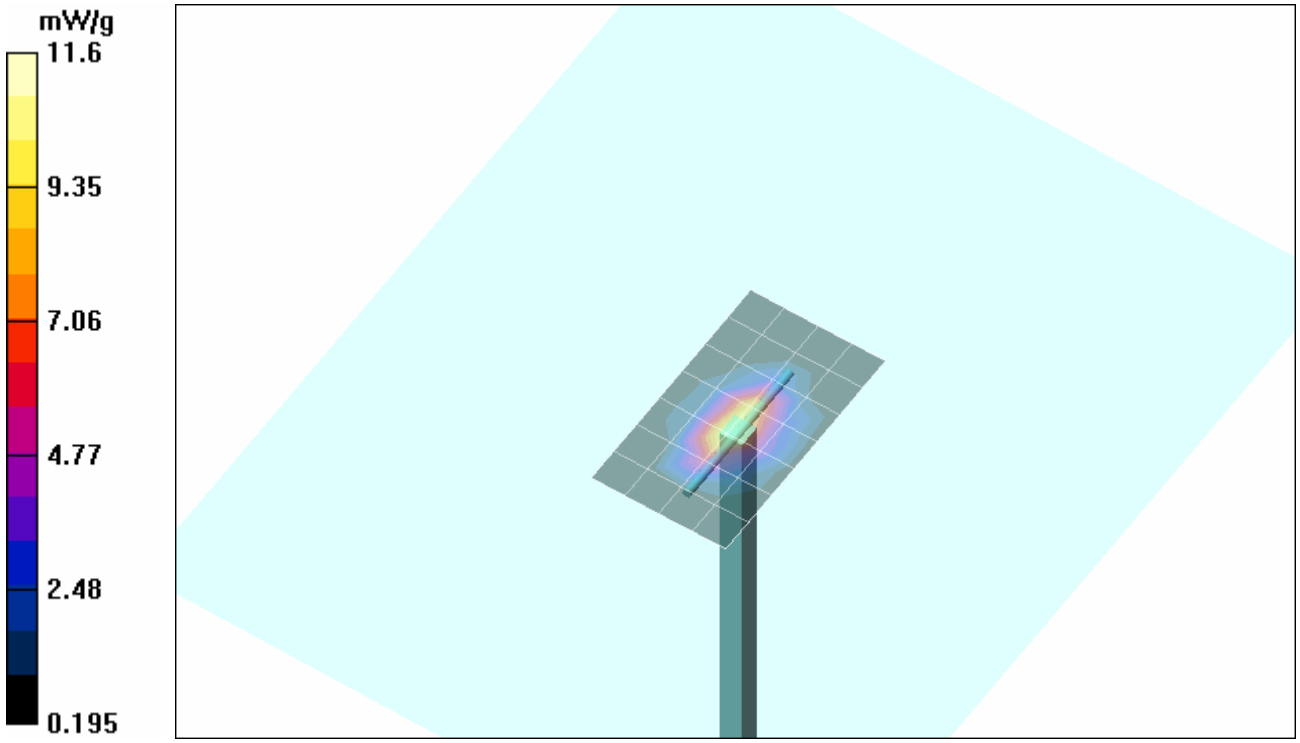
Ambient Temp: 23.4ºC; Fluid Temp: 22.5ºC; Barometric Pressure: 102.2 kPa; Humidity: 36%

Communication System: CW
Forward Conducted Power: 250 mW
Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1900 MHz; σ = 1.53 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3

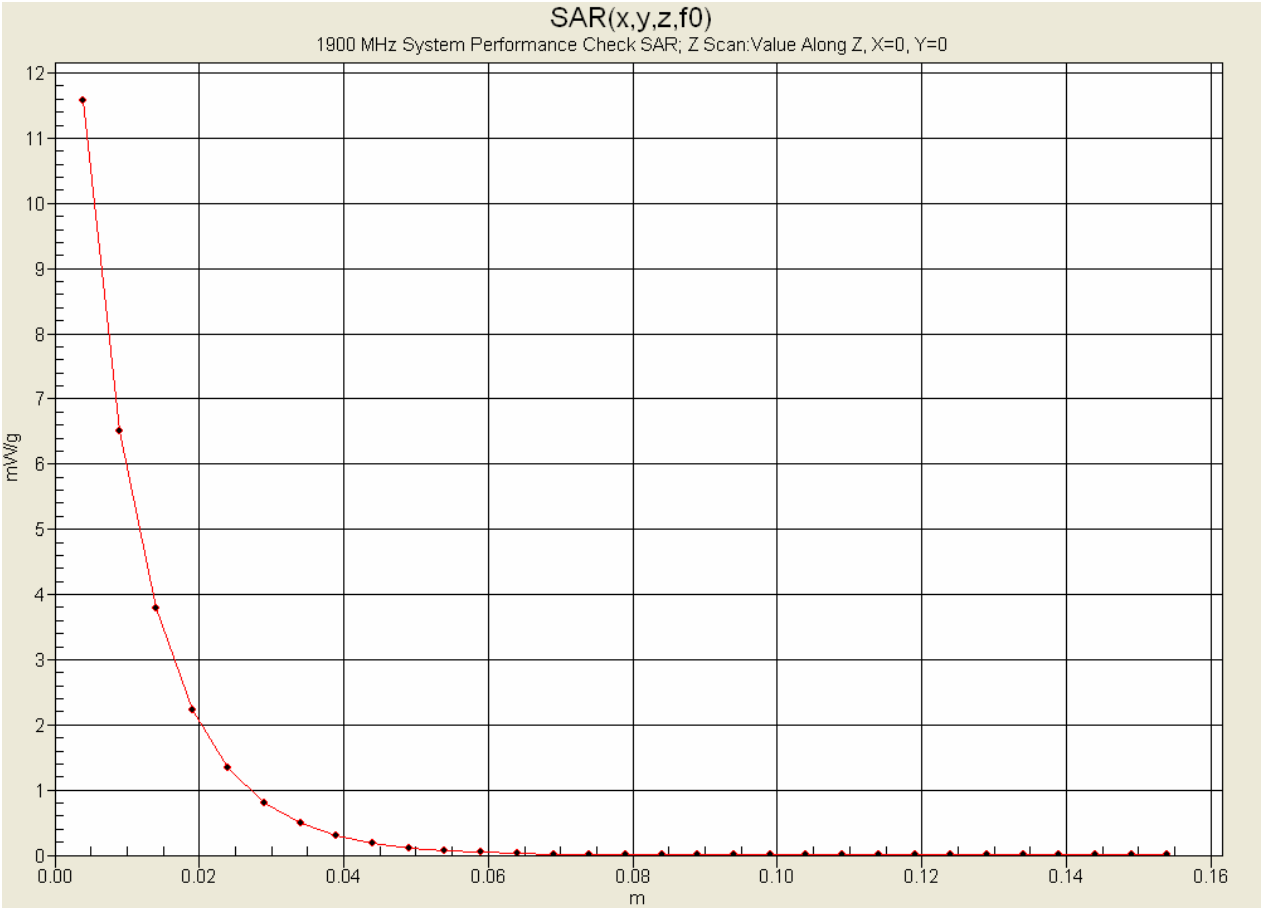
- Probe: EX3DV4 - SN3600; ConvF(6.85, 6.85, 6.85); Calibrated: 24/01/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

1900 MHz Dipole - System Performance Check
Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

1900 MHz Dipole - System Performance Check
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 87.8 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 19.3 W/kg
SAR(1 g) = 10.4 mW/g; SAR(10 g) = 5.32 mW/g
Maximum value of SAR (measured) = 11.6 mW/g



Z-Axis Scan



Date Tested: 02/05/2007

System Performance Check - 835 MHz Dipole

DUT: Dipole 835 MHz; Asset: 00022; Serial: 411; Validation: 01/18/2007

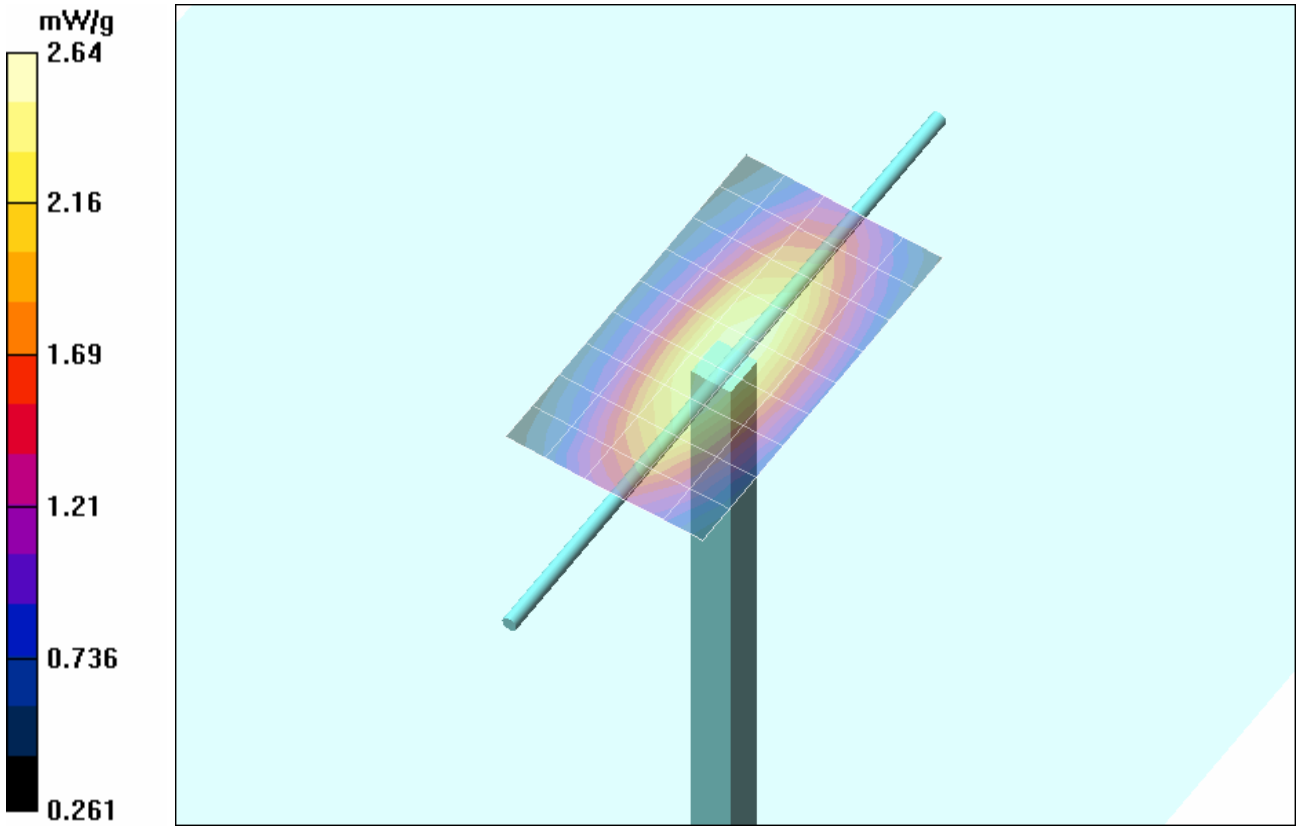
Ambient Temp: 24.8ºC; Fluid Temp: 22.2ºC; Barometric Pressure: 103.4 kPa; Humidity: 33%

Communication System: CW
Forward Conducted Power: 250 mW
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: M835 Medium parameters used: f = 835 MHz; σ = 0.99 mho/m; ε_r = 56.8; ρ = 1000 kg/m^3

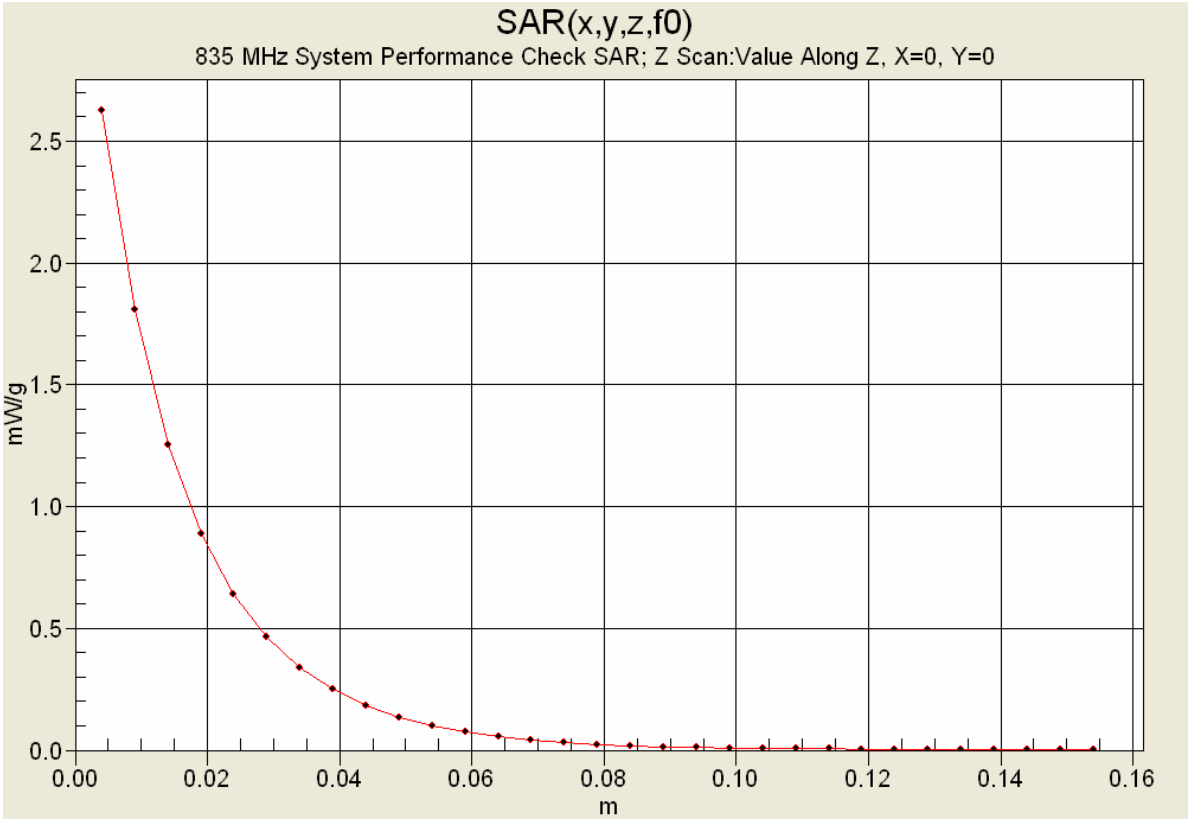
- Probe: ET3DV6 - SN1387; ConvF(6.04, 6.04, 6.04); Calibrated: 16/03/2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 21/06/2006
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

835 MHz Dipole - System Performance Check
Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

835 MHz Dipole - System Performance Check
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.0 V/m; Power Drift = -0.131 dB
Peak SAR (extrapolated) = 3.54 W/kg
SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.6 mW/g
Maximum value of SAR (measured) = 2.64 mW/g



Z-Axis Scan


SAR(x,y,z,f0)
835 MHz System Performance Check SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
2.5
2.0
1.5
1.0
0.5
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

APPENDIX C - MEASURED FLUID DIELECTRIC PARAMETERS

1900 MHz System Performance Check & 1880 MHz DUT Evaluation (Body)

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Celltech Labs Inc.
Test Result for UIM Dielectric Parameter
Fri 02/Feb/2007
Frequency (GHz)
FCC_eH FCC Bulletin 65 Supplement C (June 2001) Limits for Head Epsilon
FCC_sH FCC 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
1.8000	53.30	1.52	51.97	1.43
1.8100	53.30	1.52	51.94	1.44
1.8200	53.30	1.52	51.94	1.45
1.8300	53.30	1.52	51.85	1.46
1.8400	53.30	1.52	51.88	1.48
1.8500	53.30	1.52	51.81	1.49
1.8600	53.30	1.52	51.75	1.49
1.8700	53.30	1.52	51.72	1.50
1.8800	53.30	1.52	51.61	1.50
1.8900	53.30	1.52	51.58	1.52
1.9000	53.30	1.52	51.55	1.53
1.9100	53.30	1.52	51.54	1.55
1.9200	53.30	1.52	51.47	1.56
1.9300	53.30	1.52	51.38	1.56
1.9400	53.30	1.52	51.41	1.58
1.9500	53.30	1.52	51.32	1.59
1.9600	53.30	1.52	51.26	1.59
1.9700	53.30	1.52	51.33	1.60
1.9800	53.30	1.52	51.35	1.63
1.9900	53.30	1.52	51.31	1.63
2.0000	53.30	1.52	51.17	1.64

835 MHz System Performance Check & DUT Evaluation (Body)

****

Celltech Labs Inc.
Test Result for UIM Dielectric Parameter
Mon 05/Feb/2007
Frequency (GHz)
FCC_eH FCC Bulletin 65 Supplement C (June 2001) Limits for Head Epsilon
FCC_sH FCC 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
0.7350	55.59	0.96	57.49	0.90
0.7450	55.55	0.96	57.59	0.90
0.7550	55.51	0.96	57.36	0.91
0.7650	55.47	0.96	57.47	0.92
0.7750	55.43	0.97	57.47	0.93
0.7850	55.39	0.97	57.23	0.94
0.7950	55.36	0.97	57.17	0.95
0.8050	55.32	0.97	57.08	0.96
0.8150	55.28	0.97	56.99	0.96
0.8250	55.24	0.97	56.95	0.97
0.8350	55.20	0.97	56.82	0.99
0.8450	55.17	0.98	56.82	0.99
0.8550	55.14	0.99	56.81	1.00
0.8650	55.11	1.01	56.65	1.01
0.8750	55.08	1.02	56.57	1.02
0.8850	55.05	1.03	56.48	1.03
0.8950	55.02	1.04	56.44	1.03
0.9050	55.00	1.05	56.49	1.04
0.9150	55.00	1.06	56.32	1.06
0.9250	54.98	1.06	56.19	1.07
0.9350	54.96	1.07	56.17	1.08

835 MHz DUT Evaluation (Body)

****

Celltech Labs Inc.
Test Result for UIM Dielectric Parameter
Tue 06/Feb/2007
Frequency (GHz)
FCC_eH FCC Bulletin 65 Supplement C (June 2001) Limits for Head Epsilon
FCC_sH FCC 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

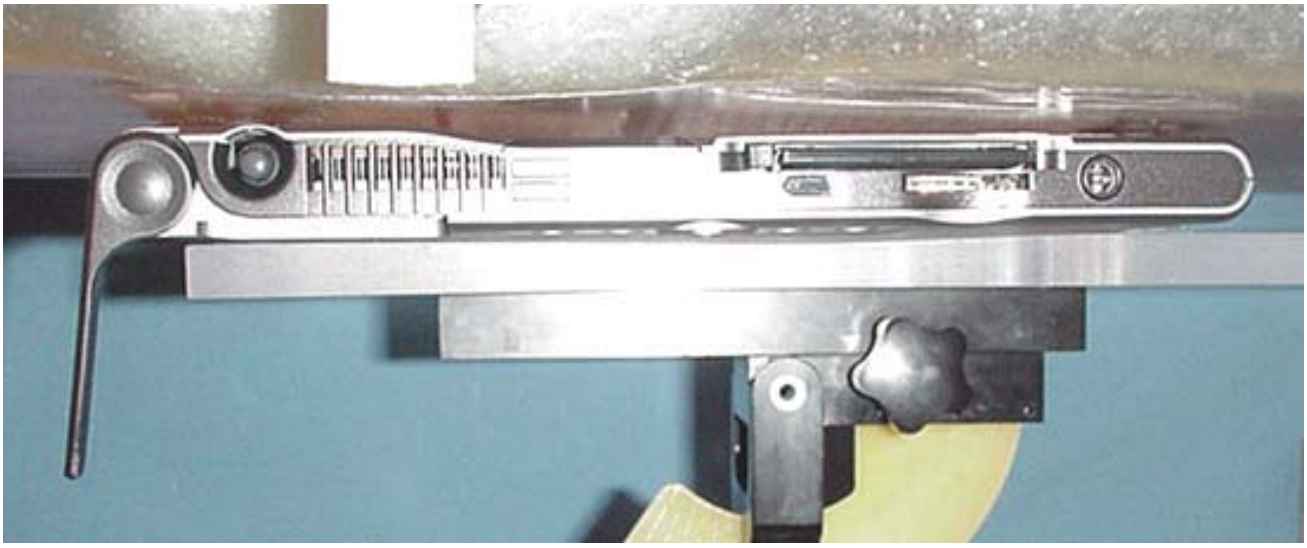
****

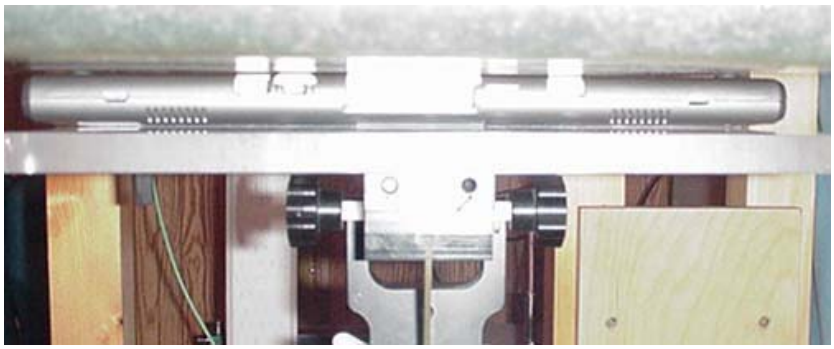
Freq	FCC_eB	FCC_sB	Test_e	Test_s
0.7350	55.59	0.96	58.29	0.89
0.7450	55.55	0.96	58.01	0.89
0.7550	55.51	0.96	58.03	0.91
0.7650	55.47	0.96	57.76	0.91
0.7750	55.43	0.97	57.79	0.92
0.7850	55.39	0.97	57.62	0.93
0.7950	55.36	0.97	57.71	0.94
0.8050	55.32	0.97	57.55	0.95
0.8150	55.28	0.97	57.47	0.97
0.8250	55.24	0.97	57.34	0.97
0.8350	55.20	0.97	57.42	0.99
0.8450	55.17	0.98	57.20	0.99
0.8550	55.14	0.99	57.17	1.00
0.8650	55.11	1.01	57.09	1.01
0.8750	55.08	1.02	57.04	1.02
0.8850	55.05	1.03	57.00	1.02
0.8950	55.02	1.04	56.85	1.04
0.9050	55.00	1.05	56.81	1.05
0.9150	55.00	1.06	56.68	1.05
0.9250	54.98	1.06	56.68	1.06
0.9350	54.96	1.07	56.54	1.07

APPENDIX D - SAR TEST SETUP PHOTOGRAPHS

BODY SAR TEST SETUP PHOTOGRAPHS

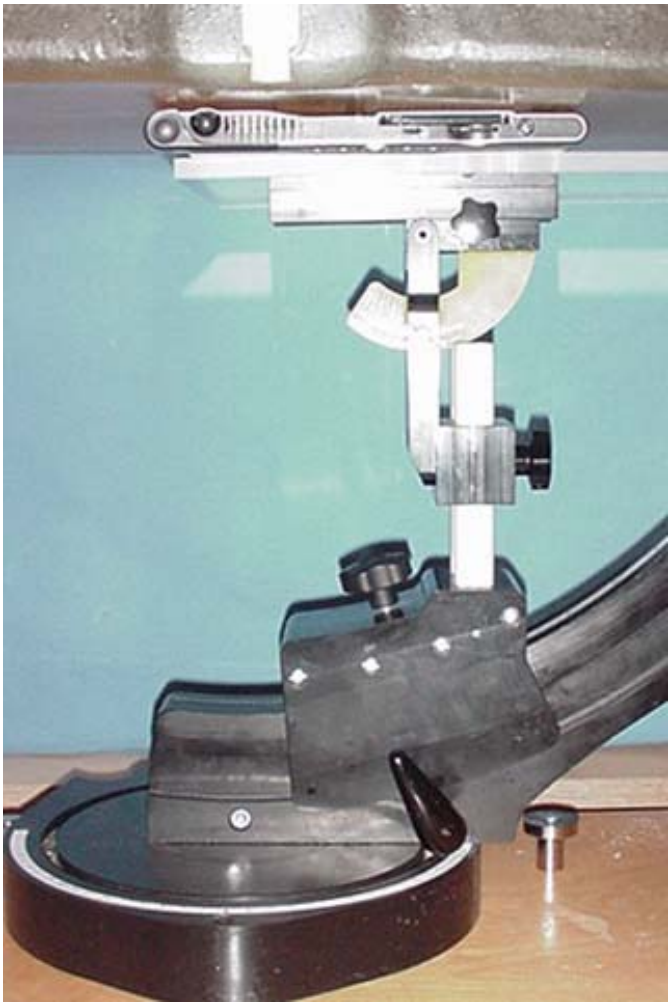
Bottom Side of DUT Touching Planar Phantom
Antenna Open (100°) - Standard Battery

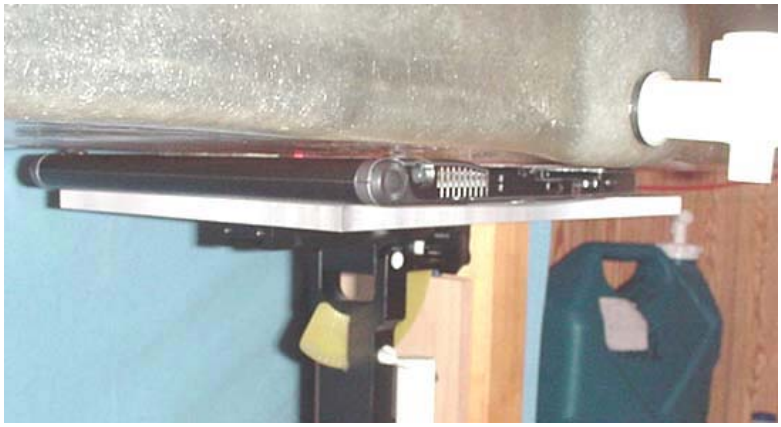


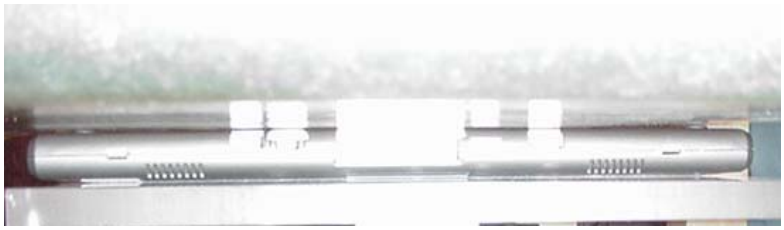


BODY SAR TEST SETUP PHOTOGRAPHS

Bottom Side of DUT Touching Planar Phantom
Antenna Closed (0°) - Standard Battery

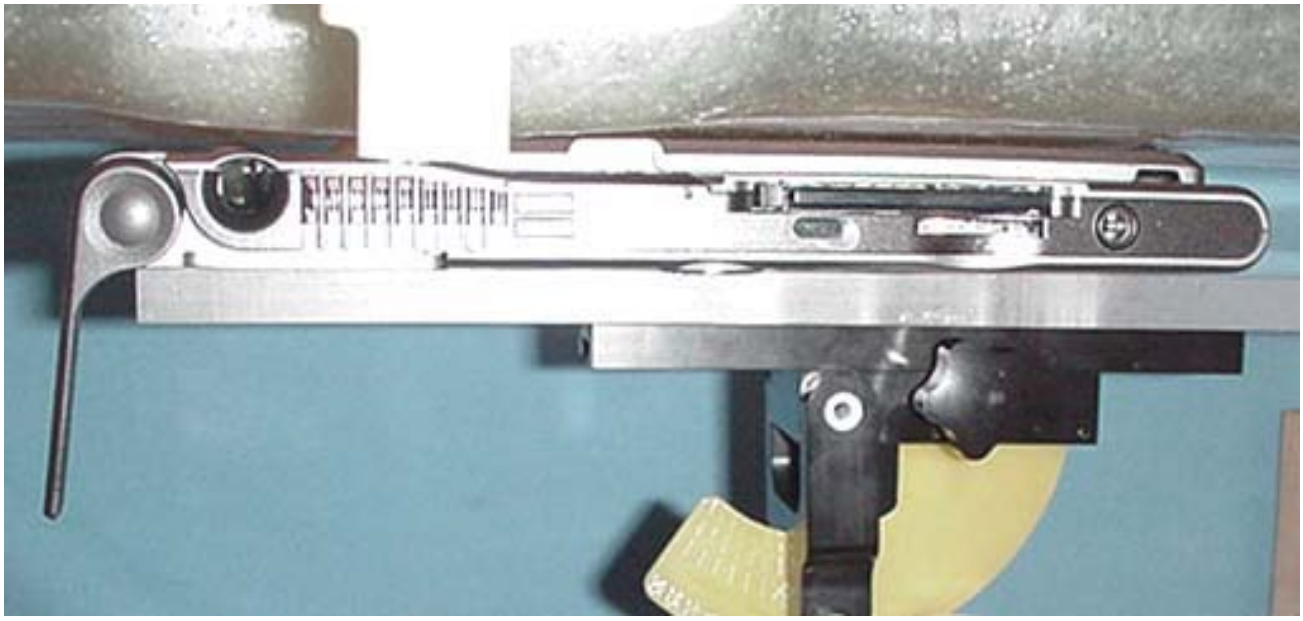






BODY SAR TEST SETUP PHOTOGRAPHS

Bottom Side of DUT Touching Planar Phantom
Antenna Open (100°) - Extended Battery



DUT PHOTOGRAPHS

Top Side View of DUT (0° Landscape LCD Orientation)

Bottom Side View of DUT

DUT PHOTOGRAPHS

Left Side View of DUT (-90° Portrait LCD Orientation)

Right Side View of DUT

DUT PHOTOGRAPHS

Top Side Edge View of DUT (standard battery location)

Bottom Side Edge View of DUT

DUT Standard Battery Compartment

Standard Lithium-ion Battery (P/N: BATEDX20L4)

DUT PHOTOGRAPHS

DUT with Extended Lithium-ion Battery

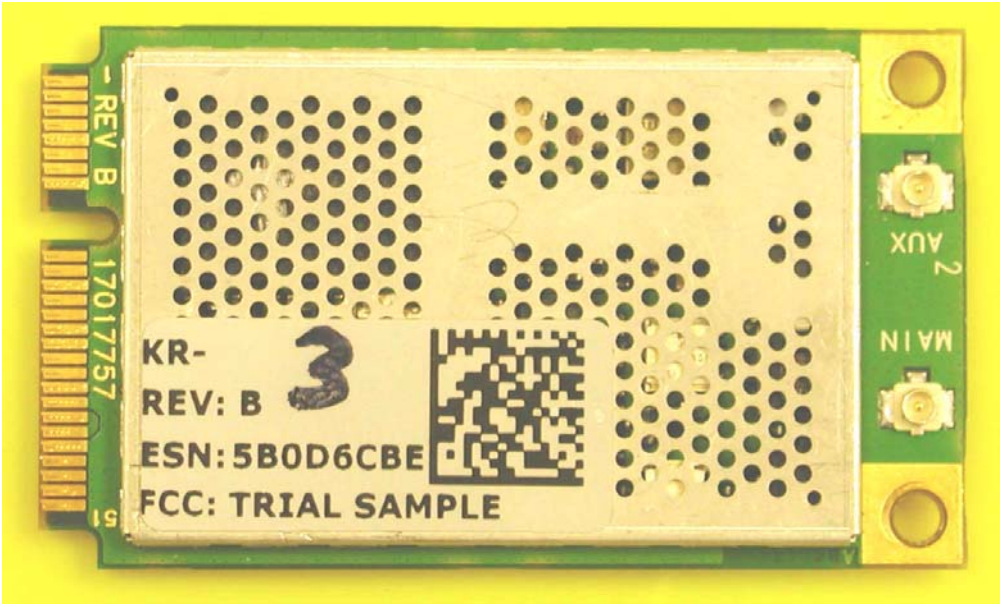
Extended Lithium-ion Battery (P/N: BATEDX20L8)

DUT PHOTOGRAPHS

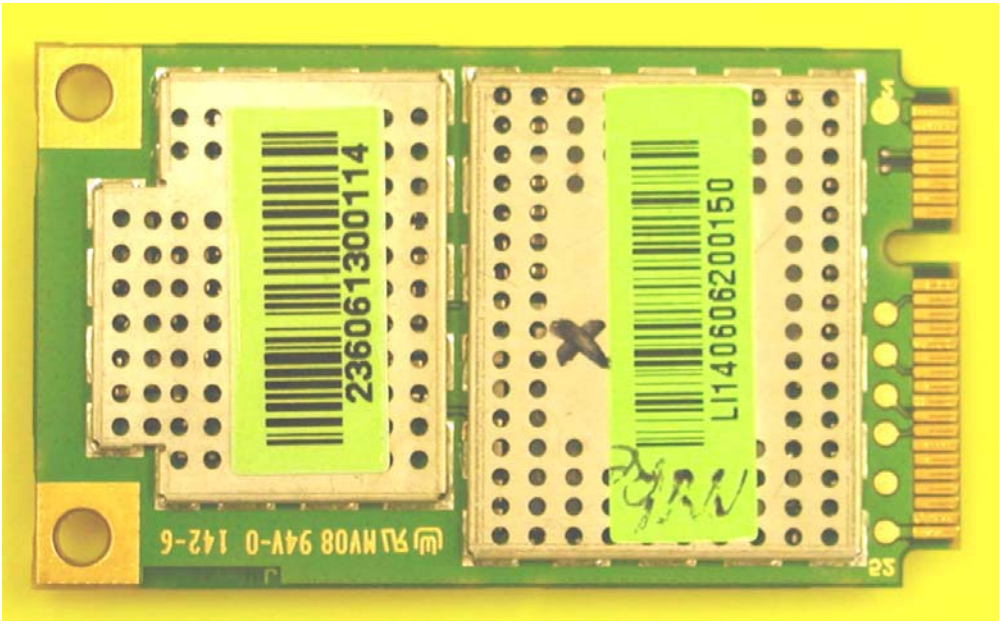
Antenna Open (100°)

Antenna Closed (0°)

DUT PHOTOGRAPHS
Novatel ES720 PCI-Express Card



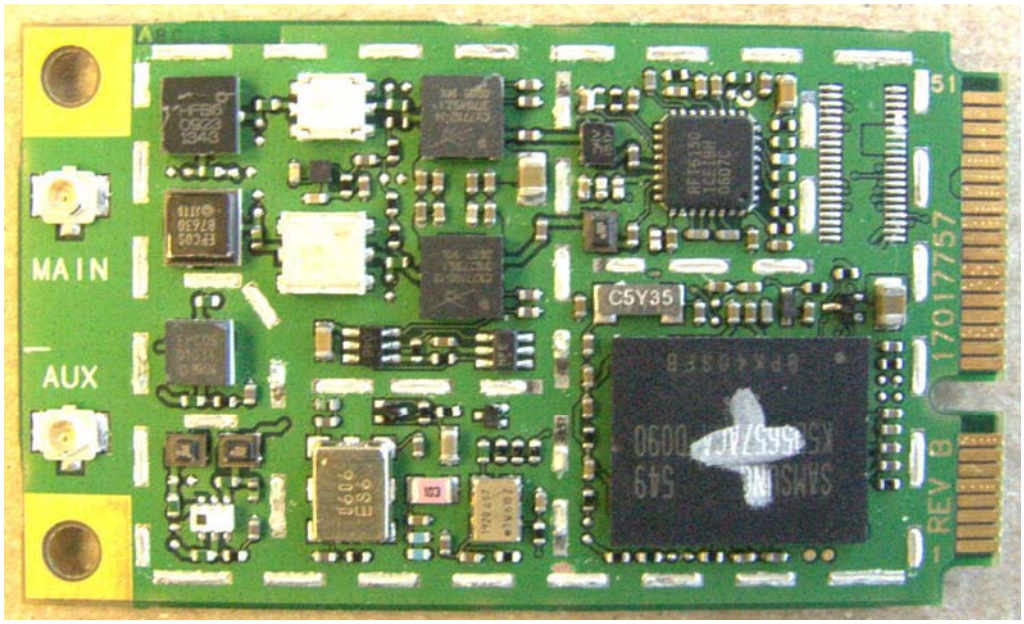
Top View of Card (with shielding)



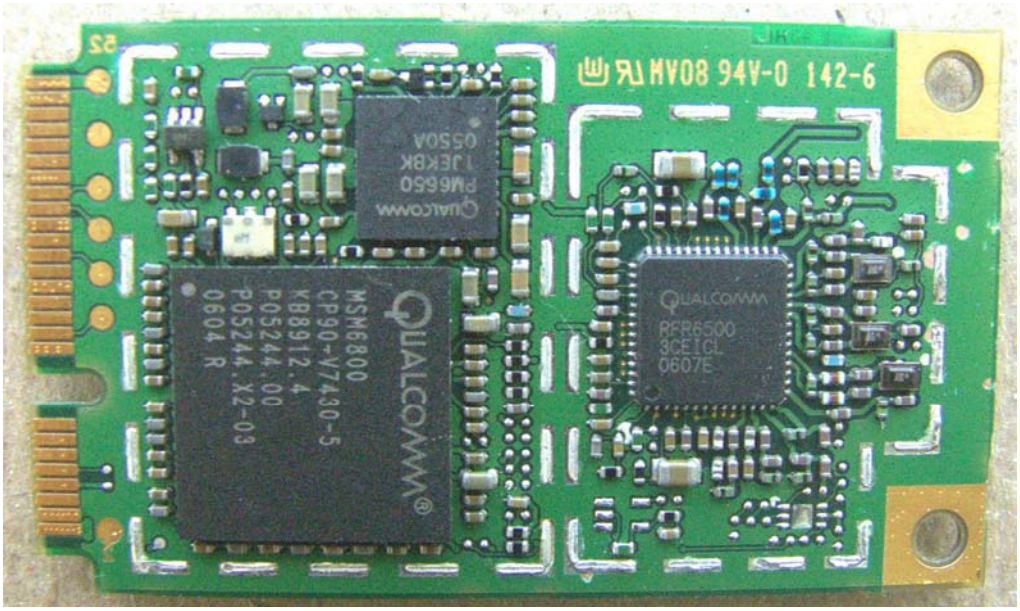
Bottom View of Card (with shielding)

DUT PHOTOGRAPHS

Novatel ES720 PCI-Express Card



Top View of Card (shielding removed)



Bottom View of Card (shielding removed)

APPENDIX G - PLANAR PHANTOM CERTIFICATE OF CONFORMITY

2378 Westlake Road
Kelowna, B.C. Canada
V1Z-2V2

BARSKI INDUSTRIES (1985) LTD.

Ph. # 250-769-6848
Fax # 250-769-6334
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: _____

Daniel Chailler

Fiberglass Planar Phantom - Top View

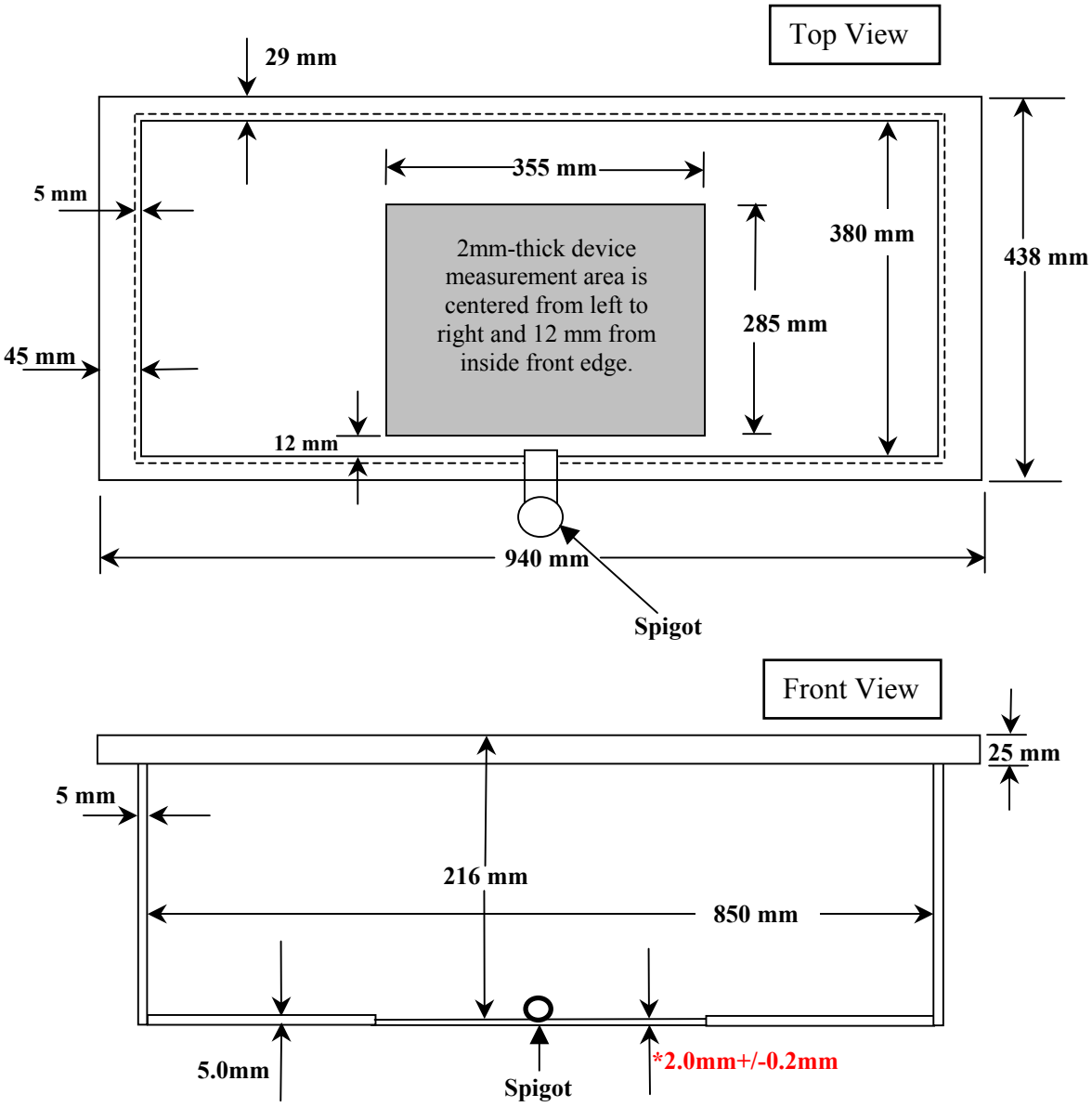
Fiberglass Planar Phantom - Front View

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.