


	Date(s) of Evaluation December 21, 2007	Test Report Serial No. 102407KBC-T865-S15B	Report Revision No. Rev. 1.1 (2nd Release)	
	Test Report Issue Date March 20, 2008	Description of Test(s) Specific Absorption Rate	RF Exposure Category General Population	

SAR TEST REPORT (FCC/IC)

RF EXPOSURE EVALUATION		SPECIFIC ABSORPTION RATE	
APPLICANT		GENERAL DYNAMICS ITRONIX CORPORATION	
DEVICE UNDER TEST (DUT)		Class 1 Bluetooth Transmitter (v2.0)	
DEVICE MODEL(S)		IX-GUBTC41MTH	
DEVICE IDENTIFIER(S)	FCC ID:	KBCIX-GUBTC41MTH	
	IC:	1943A-GUBTC41MTH	
HOST PC TYPE		Ruggedized Tablet PC (General Dynamics Itronix Corp. Model: IX350)	
CO-LOCATED TRANSMITTER(S)		IX-4965AGN 802.11abgn WLAN Mini-PCI Card (Intel Corp. Model: 4965AGN)	
APPLICATION TYPE		Certification	
STANDARD(S) APPLIED		FCC 47 CFR §2.1093	
		Health Canada Safety Code 6 (1999)	
PROCEDURE(S) APPLIED		FCC OET Bulletin 65, Supplement C (01-01)	
		Industry Canada RSS-102 Issue 2	
FCC DEVICE CLASSIFICATION		Digital Transmission System (DTS) - §15C	
IC DEVICE CLASSIFICATION		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)		December 21, 2007	
TEST REPORT SERIAL NO.		102407KBC-T865-S15B	
TEST REPORT REVISION NO.		Revision 1.1	Add LCD User Orientation - Page 2 Correction to WLAN Power - Page 6
		Revision 1.0	Initial Release
		March 20, 2008	February 14, 2008
TEST REPORT SIGNATORIES		Testing Performed By	Test Report Prepared By
		Sean Johnston Celltech Labs Inc.	Jonathan Hughes Celltech Labs Inc.
TEST LAB AND LOCATION		Celltech Compliance Testing and Engineering Lab	
		21-364 Loughheed Road, Kelowna, B.C. V1X 7R8 Canada	
TEST LAB CONTACT INFO.		Tel.: 250-765-7650	Fax: 250-765-7645
		info@celltechlabs.com	www.celltechlabs.com
TEST LAB ACCREDITATION(S)		 Certificate No. 2470.01	

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 1 of 45



<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)
<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population



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								
Applicant Information	Name	GENERAL DYNAMICS ITRONIX CORPORATION								
	Address	12825 E. Mirabeau Parkway, Spokane Valley, WA 92216 United States								
Standard(s) Applied	FCC	47 CFR §2.1093								
	IC	Health Canada Safety Code 6 (1999)								
Procedure(s) Applied	FCC	OET Bulletin 65, Supplement C (01-01)								
	IC	RSS-102 Issue 2								
Application Type(s)	FCC/IC	Certification								
Device Classification(s)	FCC	Digital Transmission System (DTS) - §15C								
	IC	Low Power License-Exempt Radiocommunication Device (RSS-210)								
Device RF Exposure Category	FCC/IC	General Population / Uncontrolled								
Device Identifier(s)	FCC ID:	KBCIX-GUBTC41MTH				IC:	1943A-GUBTC41MTH			
Device Under Test (DUT)	Module	Class 1 Bluetooth Transmitter (v2.0)				Model	IX-GUBTC41MTH			
Device Configuration	Host PC	Ruggedized Tablet PC				Model	IX350			
	Co-Tx	802.11ABGN WLAN Mini-PCI Express Card				Model	IX-4965AGN			
	FCC ID:	KBCIX-4965AGN (Grant Date: May 22, 2007)				IC:	1943A-4965AGN (Approval Date: Dec. 24, 2007)			
Device Manufacturer(s)	Bluetooth	Billionton Systems, Inc.				Serial No.	07052200019 (Production Sample)			
	Host PC	General Dynamics Itronix Corporation				Serial No.	SY7200000659 (Identical Prototype)			
	WLAN	Intel Corporation				Serial No.	MAC: 0013E847EDE3 (Production Sample)			
LCD Display Orientation(s)	Host PC	0 Degrees Landscape		-90 Degrees Portrait		90 Degrees Portrait				
Device Position(s) Tested	Host PC	Bluetooth Antenna Side (Edge-on) - Body			Bottom Side (Touch) - Lap-held					
Mode(s) of Operation	Bluetooth	Frequency Hopping Spread Spectrum (FHSS)								
Modulation(s) & Data Rate(s)	Bluetooth	GFSK (1 Mbps), π/4-DQPSK (2 Mbps), 8DPSK (3 Mbps)								
Transmit Frequency Range(s)	Bluetooth	2402 - 2480 MHz								
Max. RF Output Power Tested	Bluetooth	Conducted - Average	Conducted - Peak		Freq.	Chan.	Modulation	Data Rate	Packet	
		13.0 dBm	20.0 mW	13.1 dBm	20.4 mW	2402 MHz	0	GFSK	1 Mbps	DH5
		12.9 dBm	19.5 mW	13.2 dBm	20.9 mW	2441 MHz	39	GFSK	1 Mbps	DH5
		12.9 dBm	19.5 mW	13.0 dBm	20.0 mW	2480 MHz	78	GFSK	1 Mbps	DH5
Max. Duty Cycle(s) Tested	Bluetooth	50%		Crest Factor	1:2		Test Mode	Modulated (Frequency Hopping disabled)		
Antenna Type(s) & Location(s)	Bluetooth	Internal - Left Side Edge of PC			WLAN Co-Tx	Internal (Tx Diversity / MIMO) - Top Left & Right Edges of PC				
Power Source(s) Tested	Host PC	Internal Lithium-Ion Battery			11.1V		3900 mAh		Model: T8M-E	
Max. SAR Level(s) Evaluated	Host PC	Body	0.410 W/kg		1g average	LCD -90 Degrees Portrait - Bluetooth Antenna side edge-on				
Spatial Peak SAR Safety Limit	FCC/IC	Body	1.6 W/kg		1g average	General Population / Uncontrolled Exposure Environment				

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

This test report is not to be reproduced, in whole or in part, without the prior written permission of Celltech Labs Inc.

Test Report Approved By  **Sean Johnston** **Celltech Labs Inc.**



Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 2 of 45





	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

TABLE OF CONTENTS

1.0 INTRODUCTION.....	4
2.0 SAR MEASUREMENT SYSTEM	4
3.0 MEASUREMENT SUMMARY.....	5
MEASUREMENT SUMMARY (Cont.)	6
MEASUREMENT SUMMARY (Cont.)	7
4.0 DETAILS OF SAR EVALUATION	8
5.0 EVALUATION PROCEDURES.....	8
6.0 SYSTEM PERFORMANCE CHECK	9
7.0 SIMULATED EQUIVALENT TISSUES.....	10
8.0 SAR LIMITS.....	10
9.0 ROBOT SYSTEM SPECIFICATIONS.....	11
10.0 PROBE SPECIFICATION (EX3DV4)	12
11.0 SAM TWIN PHANTOM V4.0C	12
12.0 DEVICE HOLDER.....	12
13.0 TEST EQUIPMENT LIST.....	13
14.0 MEASUREMENT UNCERTAINTIES.....	14
MEASUREMENT UNCERTAINTIES (Cont.)	15
15.0 REFERENCES.....	16
APPENDIX A - SAR MEASUREMENT DATA	17
APPENDIX B - SYSTEM PERFORMANCE CHECK DATA.....	25
APPENDIX C - MEASURED FLUID DIELECTRIC PARAMETERS	28
APPENDIX D - SAR TEST SETUP & DUT PHOTOGRAPHS.....	30
APPENDIX E - SYSTEM VALIDATION	43
APPENDIX F - PROBE CALIBRATION.....	44
APPENDIX G - SAM PHANTOM CERTIFICATE OF CONFORMITY.....	45

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 3 of 45

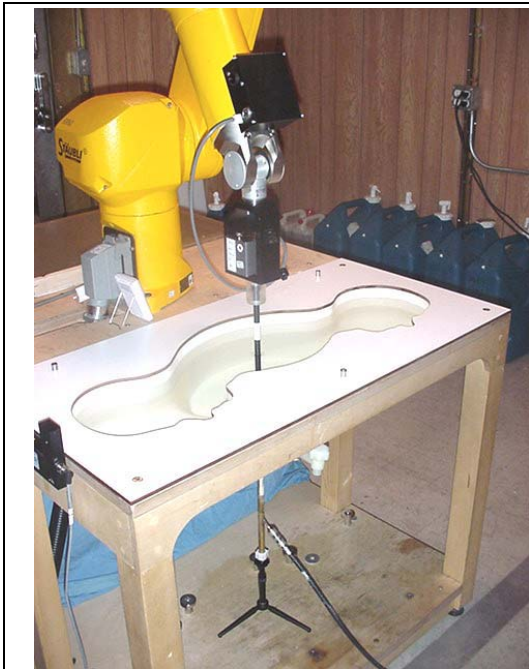
 Celltech <small>Testing and Engineering Services Ltd.</small>	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

1.0 INTRODUCTION

This measurement report demonstrates compliance of the General Dynamics Itronix Corporation Model: IX350 Ruggedized Tablet PC, incorporating the IX-GUBTC41MTH Bluetooth and co-located IX-4965AGN WLAN Mini-PCI Express Card, 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 measurement procedures described in FCC OET Bulletin 65, Supplement C, Edition 01-01 (see reference [3]) 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 & SAM Phantom




DASY4 Measurement Server

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC	GENERAL DYNAMICS <small>Itronix</small>	
2008 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.			Page 4 of 45

 Testing and Engineering Services Ltd.	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

3.0 MEASUREMENT SUMMARY

BODY SAR MEASUREMENT SUMMARY												
Test Mode	Freq.	Ch.	Data Rate		WLAN Co-Tx	Host PC LCD Display Orientation	Host PC Position to Planar Phantom	Antenna Distance to Planar Phantom	Output Power Before Test	SAR Drift During Test	Measured SAR	
			Mbps	Packet							cm	dBm
Modulated GFSK Fixed Frequency	2402	0	1	DH5	Off	-90° Portrait	Bluetooth Antenna Edge-on	0.5	13.0	0.061 ³	0.143	1g
Modulated GFSK Fixed Frequency	2441	39	1	DH5	Off	-90° Portrait	Bluetooth Antenna Edge-on	0.5	12.9	-0.022 ³	0.192	1g
Modulated GFSK Fixed Frequency	2480	78	1	DH5	Off	-90° Portrait	Bluetooth Antenna Edge-on	0.5	12.9	-0.026 ³	0.410	1g
Modulated GFSK Fixed Frequency	2402	0	1	DH5	Off	n/a	Bottom Side Touch	4.2	13.0	-- ⁴	0.053	Pk ²
Modulated GFSK Fixed Frequency	2441	39	1	DH5	Off	n/a	Bottom Side Touch	4.2	12.9	-- ⁴	0.004	Pk ²
Modulated GFSK Fixed Frequency	2480	78	1	DH5	Off	n/a	Bottom Side Touch	4.2	12.9	-- ⁴	0.039	Pk ²
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)		December 21, 2007				Ambient Temperature			23.1	°C		
Measured Tissue Type		2450 MHz Body				Fluid Temperature			22.4	°C		
Tissue Dielectric Parameters		IEEE Target		Measured	Deviation	Fluid Depth			≥ 15	cm		
Dielectric Constant ε _r		52.7	±5%	50.1	-4.9%	Relative Humidity			35	%		
Conductivity σ (mho/m)		1.95	±5%	1.98	+1.6%	Atmospheric Pressure			101.1	kPa		
Measured RF Output Power		Average Conducted				ρ (Kg/m ³)			1000			
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.	The SAR levels measured and reported are the Peak SAR levels 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.											
3.	The power drift of the DUT during the SAR evaluations was measured by the DASY4 system. The power drift was within 5% of the measured start power.											
4.	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.											
5.	The DUT battery was fully charged prior to the SAR evaluations.											
6.	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.											
7.	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).											
8.	The SAR evaluations were performed within 24 hours of the system performance check.											

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH	
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC			
2008 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 5 of 45

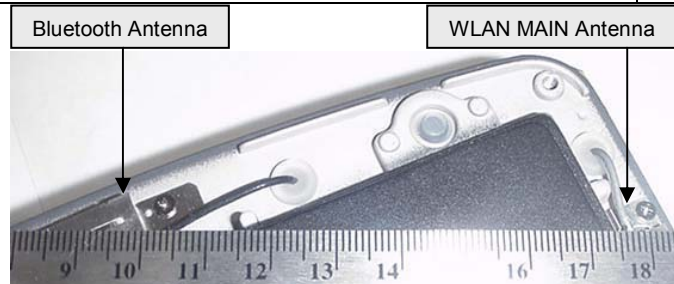
MEASUREMENT SUMMARY (Cont.)

MEASURED SAR LEVELS AND DISTANCES OF CO-TRANSMITTING ANTENNAS

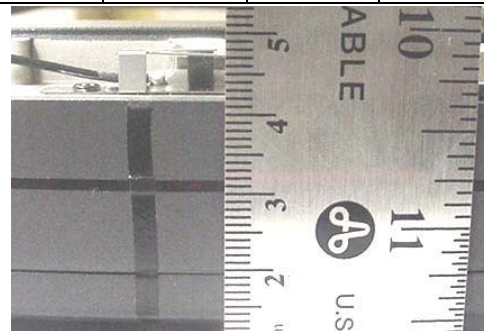
DUT TEST POSITION	BLUETOOTH & WLAN MAIN ANTENNA SPACING cm	DISTANCE FROM ANTENNA TO PLANAR PHANTOM cm		BLUETOOTH TRANSMITTER		WLAN TRANSMITTER MAIN ANT. (CHAIN B)	
		BLUETOOTH cm	WLAN MAIN cm	Frequency	SAR	Frequency	SAR
				MHz	W/kg	MHz	W/kg
Bottom Side of Tablet PC	7.5	4.2	4.2	2402	0.053 Peak	2442	0.047 Peak
Bottom Side of Tablet PC	7.5	4.2	4.2	2402	0.053 Peak	5260	0.047 Peak
Bluetooth Antenna Side - Tablet PC Edge-on (WLAN MAIN Adjacent)	7.5	0.5	4.0	2480	0.410 1 gram	2442	0.024 1 gram
Bluetooth Antenna Side - Tablet PC Edge-on (WLAN MAIN Adjacent)	7.5	0.5	4.0	2480	0.410 1 gram	5180	0.048 Peak
Maximum SAR Summation of Co-transmitting Antennas:				0.434 W/kg (averaged over 1 gram)			

MEASURED RF CONDUCTED OUTPUT POWER LEVELS OF CO-TRANSMITTING ANTENNAS

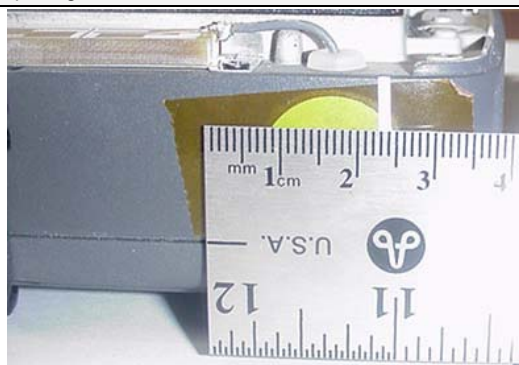
BLUETOOTH (Average Power)					WLAN (Average Power)			
Frequency (MHz)	Mode		Level	Frequency (MHz)	Mode		Level	
2402	GFSK	1 Mbps	DH5	13.0 dBm	2442	802.11b	1 Mbps	16.1 dBm
2480	GFSK	1 Mbps	DH5	12.9 dBm	5180	802.11a	6 Mbps	16.1 dBm
Note: The WLAN AUX (Chain A) Antenna is 17 cm distance from the Bluetooth Antenna and is not considered in this co-tx analysis					5260	802.11a	6 Mbps	17.5 dBm



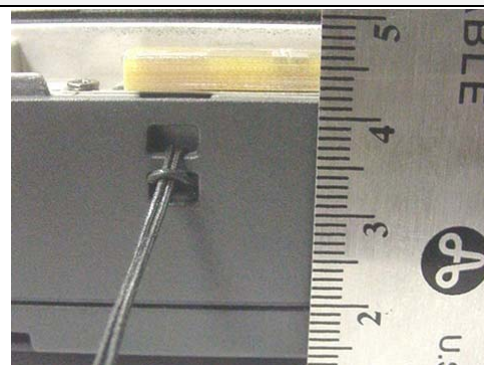
7.5 cm Spacing between Bluetooth Antenna and WLAN MAIN Antenna



4.2 cm Distance from Bluetooth Antenna to Bottom of PC



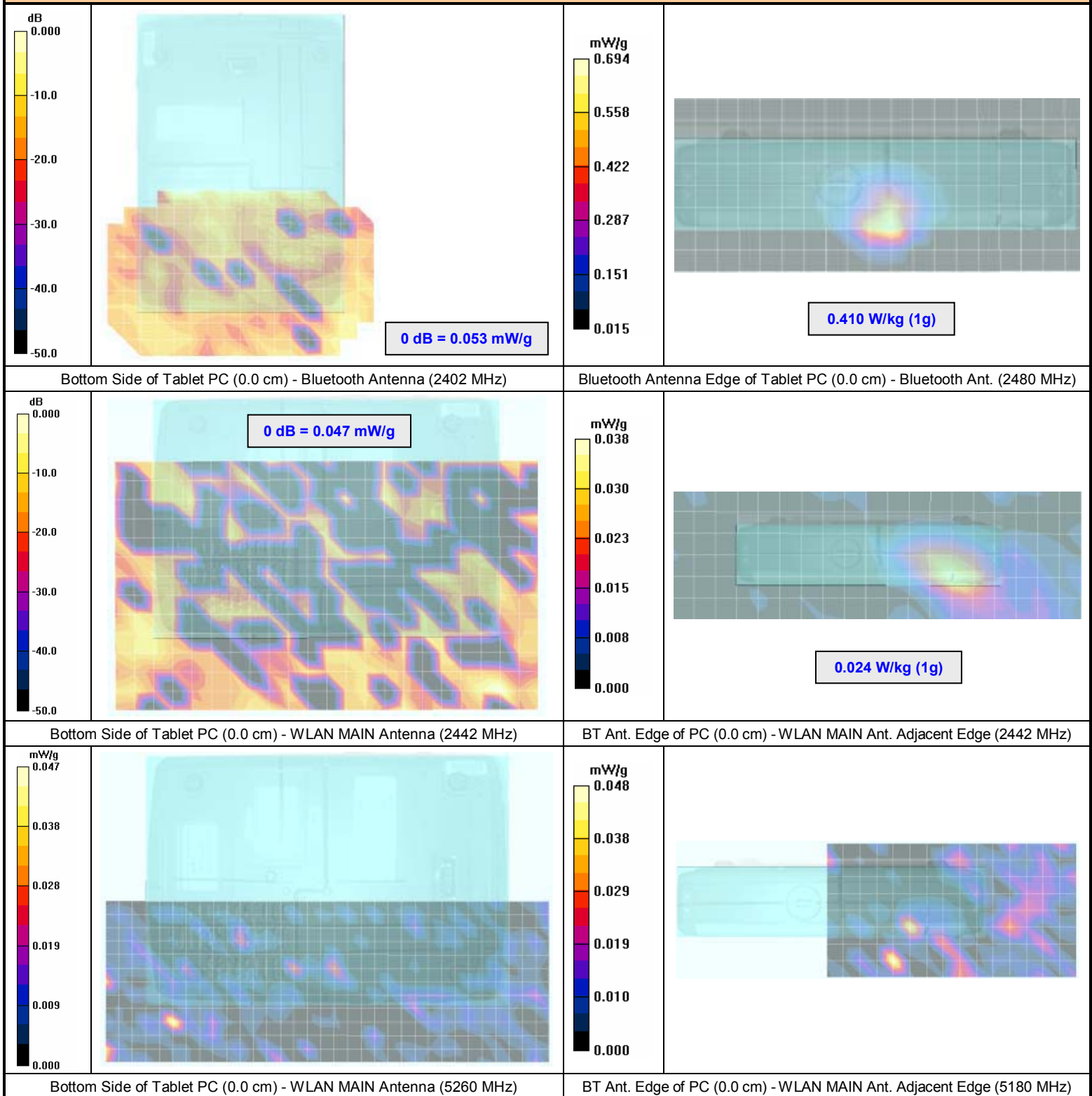
4 cm Distance from WLAN MAIN Ant. to Adjacent Edge (BT Ant. Edge)




4.2 cm Distance from WLAN MAIN Antenna to Bottom of PC

MEASUREMENT SUMMARY (Cont.)

MEASURED SAR DISTRIBUTION OF CO-TRANSMITTING ANTENNAS



	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

4.0 DETAILS OF SAR EVALUATION

The General Dynamics Itronix Corporation Model: IX350 Tablet PC incorporating the IX-GUBTC41MTH Bluetooth and co-located IX-4965AGN WLAN Mini-PCI Express Card was compliant for localized Specific Absorption Rate (General Population exposure) based on the test provisions and conditions described below. The detailed test setup photographs are shown in Appendix D.

Test Configuration(s)


- The DUT was evaluated for body SAR (lap-held) with the bottom side of the Tablet PC touching the outer surface of the SAM phantom (planar section). Test data is reported herein to show the Bluetooth SAR measurement result and also the measurement result of the WLAN MAIN antenna (Chain B) which is the closest co-transmitting antenna (7.5 cm spacing) to the Bluetooth antenna. Both the Bluetooth and WLAN (2.4/5.2 GHz) SAR levels (bottom side of PC) were near the noise floor of the measurement system (see SAR data summary of co-transmitting antennas on pages 6-7).
- The DUT was evaluated for body SAR with the Bluetooth antenna edge-on side of the Tablet PC (-90° Portrait user LCD display orientation) touching the outer surface of the SAM phantom (planar section). The Bluetooth antenna edge-on side of the Tablet PC is also the adjacent edge of the WLAN MAIN antenna (Chain B). The WLAN MAIN antenna was also evaluated in this configuration (2.4/5.2 GHz) based on the WLAN MAIN antenna is < 10 cm from the adjacent edge (4.0 cm distance). The SAR data is reported herein to show the SAR distribution as a co-transmitting antenna in conjunction with the Bluetooth antenna edge-on SAR distribution (see SAR data summary of co-transmitting antennas on pages 6-7). Note: The WLAN antenna (MAIN/AUX) edge/side of the Tablet PC is not enabled as an LCD orientation.

Test Mode(s) & Power Level(s)

- The Bluetooth was placed in test mode using the proprietary Blue Suite test software and CSR Blue test application provided by the applicant. The test software enabled the Bluetooth in modulated continuous transmit operation on a fixed frequency (frequency hopping disabled). The maximum power level settings were prescribed by the manufacturer.
- The conducted output power levels of the Bluetooth transmitter were measured prior to the SAR evaluations. Average measurements were made using a universal power meter. Peak measurements were made using a spectrum analyzer (KDB 558074 Power Output Option 1). Each modulation and data rate were evaluated and the worst-case reported.

5.0 EVALUATION PROCEDURES

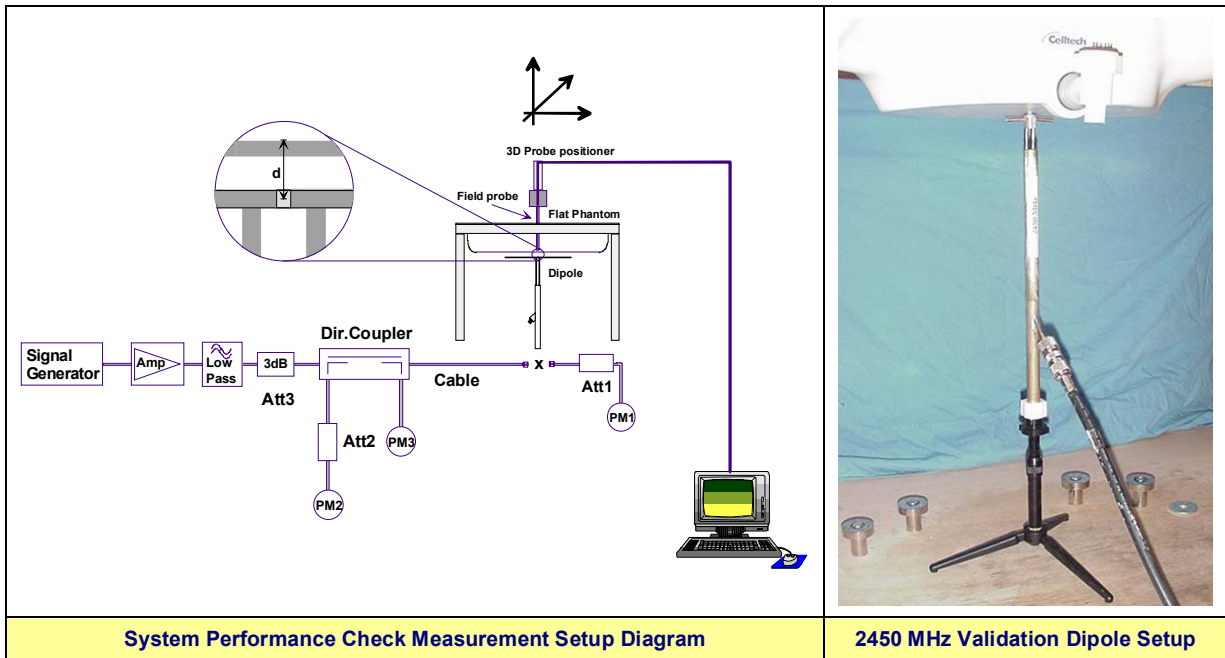
- (i) The evaluation was performed in the applicable area of the phantom depending on the type of device being tested. For devices held to the ear during normal operation, both the left and right ear positions were evaluated using the SAM phantom.
(ii) For body-worn and face-held devices a planar phantom 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.



Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 8 of 45

6.0 SYSTEM PERFORMANCE CHECK

Prior to the SAR evaluations a system check was performed using the SAM twin phantom (planar section) with 2450 MHz validation dipole (see Appendix B for system performance check test plot). The dielectric parameters of the simulated tissue mixture were measured prior to the system performance check 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 E for system validation measurement procedures).

SYSTEM PERFORMANCE CHECK EVALUATION SUMMARY																
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)
		Freq. (MHz)	Sys. Val. Target	Meas.	Dev.	Sys. Val. Target	Meas.	Dev.	Sys. Val. Target	Meas.						
Dec 21	Body	13.4 $\pm 10\%$	13.9	+3.8%	50.1 $\pm 5\%$	50.1	0.0%	1.99 $\pm 5\%$	1.98	-0.5%	1000	23.1	22.4	≥ 15	35	101.1
	2450															
Note(s)		1. The target SAR values are referenced from the System Validation procedures performed by Celltech Labs Inc. (see Appendix E). 2. The target dielectric parameters are referenced from the System Validation procedures performed by Celltech Labs Inc. (see Appendix E). 3. The fluid temperature was measured prior to and after the system performance check. The fluid temperature remained within $\pm 2^\circ\text{C}$ of the fluid temperature from the dielectric parameter measurements. 4. The SAR evaluations were performed within 24 hours of the system performance check.														



	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	


7.0 SIMULATED EQUIVALENT TISSUES



The 2450 MHz simulated tissue mixture consisted of Glycol-monobutyl, water and salt. The tissue mixtures were prepared according to standardized procedures and the dielectric parameters (permittivity and conductivity) were measured prior to the SAR evaluations.

SIMULATED TISSUE MIXTURE		
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 %

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:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 10 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	


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	SAM V4.0C
Shell Material	Fiberglass
Thickness	2.0 ±0.1 mm
Volume	Approx. 25 liters

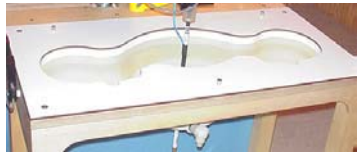
Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 11 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	


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 SAM TWIN PHANTOM V4.0C

<p>The SAM twin phantom V4.0C is a fiberglass shell phantom with a 2.0 mm (+/-0.2 mm) shell thickness for left and right head and flat planar area integrated in a wooden table. The shape of the fiberglass shell corresponds to the phantom defined by SCC34-SC2. The device holder positions are adjusted to the standard measurement positions in the three sections (see Appendix G for specifications of the SAM phantom V4.0C).</p>	
	SAM Twin Phantom V4.0C

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:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 12 of 45

 Celltech Testing and Engineering Services LLC	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

13.0 TEST EQUIPMENT LIST


TEST EQUIPMENT		ASSET NO.	SERIAL NO.	DATE CALIBRATED		CALIBRATION DUE DATE	
USED	DESCRIPTION			Brain	Body		
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	
	5GHz Validation Dipole	00126	1031	Body	18May07	18May08	
				-5200 MHz	Body	22May07	22May08
				-5500 MHz	Brain	09May07	09May08
				-5800 MHz	Body	10May07	10May08
x	-SAM Phantom V4.0C	00154	1033	N/A	N/A	N/A	
	-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	00109	1834366	26Mar07	26Mar08	26Mar08	
x	HP 8753ET Network Analyzer	00134	US39170292	20Apr07	20Apr08	20Apr08	
	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	
	Nextec NB00383 Microwave Amplifier	00151	0535	NCR	NCR	NCR	



Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 13 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

14.0 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 (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)	1.6	Normal	1	0.64	1.0	∞
Liquid permittivity (target)	5	Rectangular	1.732050808	0.6	1.7	∞
Liquid permittivity (measured)	4.9	Normal	1	0.6	2.9	∞
Combined Standard Uncertainty					11.00	
Expanded Uncertainty (k=2)					22.01	
Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 (see reference [5])						



Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 14 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

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 (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)	0.5	Normal	1	0.64	0.3	∞
Liquid permittivity (target)	5	Rectangular	1.732050808	0.6	1.7	∞
Liquid permittivity (measured)	0	Normal	1	0.6	0.0	∞
Combined Standard Uncertainty					8.76	
Expanded Uncertainty (k=2)					17.52	
Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 (see reference [5])						

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 15 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 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.

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 16 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX A - SAR MEASUREMENT DATA

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 17 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/21/2007

Body SAR - Class 1 Bluetooth - 2402 MHz - Channel 0 - Bluetooth Antenna Edge-on of Tablet PC

DUT: General Dynamics Itronix Corp.; Type: IX-GUBTC41MTH Bluetooth in IX350 Tablet PC; Serial: 07052200019

Ambient Temp: 23.1°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

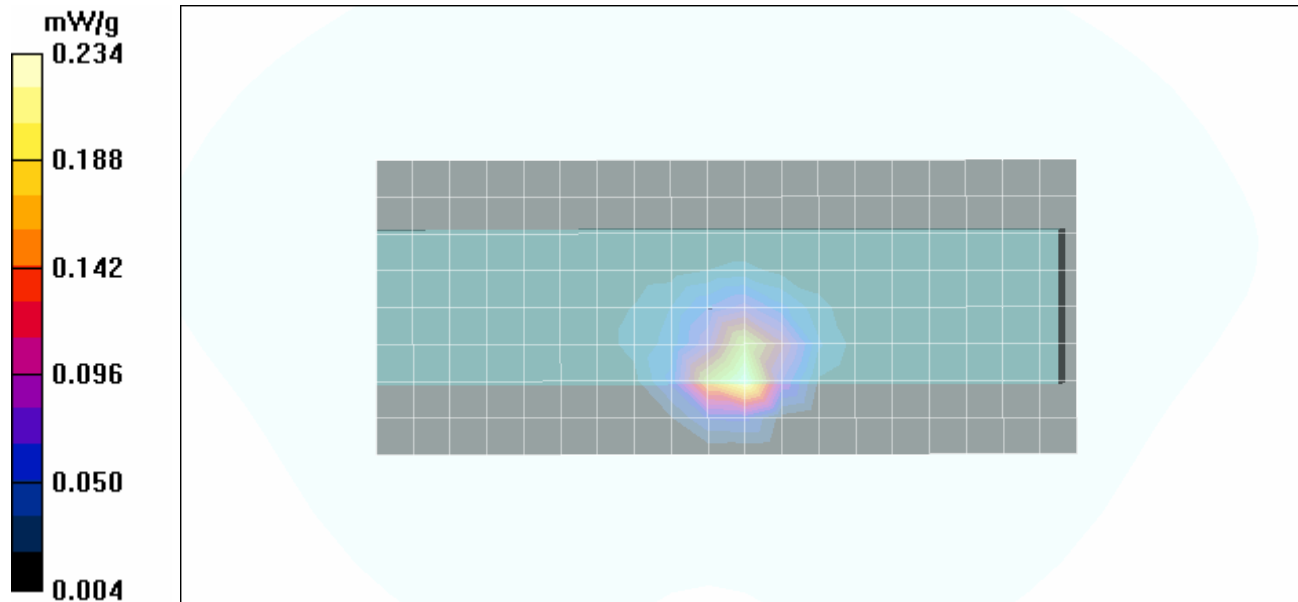
Frequency: 2402 MHz; Duty Cycle: 1:2
Communication System: GFSK 1Mbps
Power: 11.1V, 3900mAh Li-ion Battery
RF Output Power: 13.0 dBm (Conducted)
Medium: M2450 Medium parameters used: $f = 2402 \text{ MHz}$; $\sigma = 1.98 \text{ mho/m}$; $\epsilon_r = 50.1$; $\rho = 1000 \text{ kg/m}^3$
- Probe: EX3DV4 - 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: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171


Body SAR - Bluetooth Antenna Side Edge-on (Touch) Position - Channel 0 - 2402 MHz

Area Scan (9x20x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.232 mW/g

Body SAR - Bluetooth Antenna Side Edge-on (Touch) Position - Channel 0 - 2402 MHz

Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 9.19 V/m; Power Drift = 0.061 dB
Peak SAR (extrapolated) = 0.360 W/kg
SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.064 mW/g
Maximum value of SAR (measured) = 0.234 mW/g



Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 18 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/21/2007

Body SAR - Class 1 Bluetooth - 2441 MHz - Channel 39 - Bluetooth Antenna Edge-on of Tablet PC

DUT: General Dynamics Itronix Corp.; Type: IX-GUBTC41MTH Bluetooth in IX350 Tablet PC; Serial: 07052200019

Ambient Temp: 23.1°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

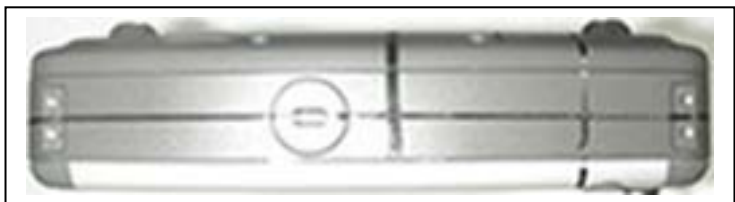
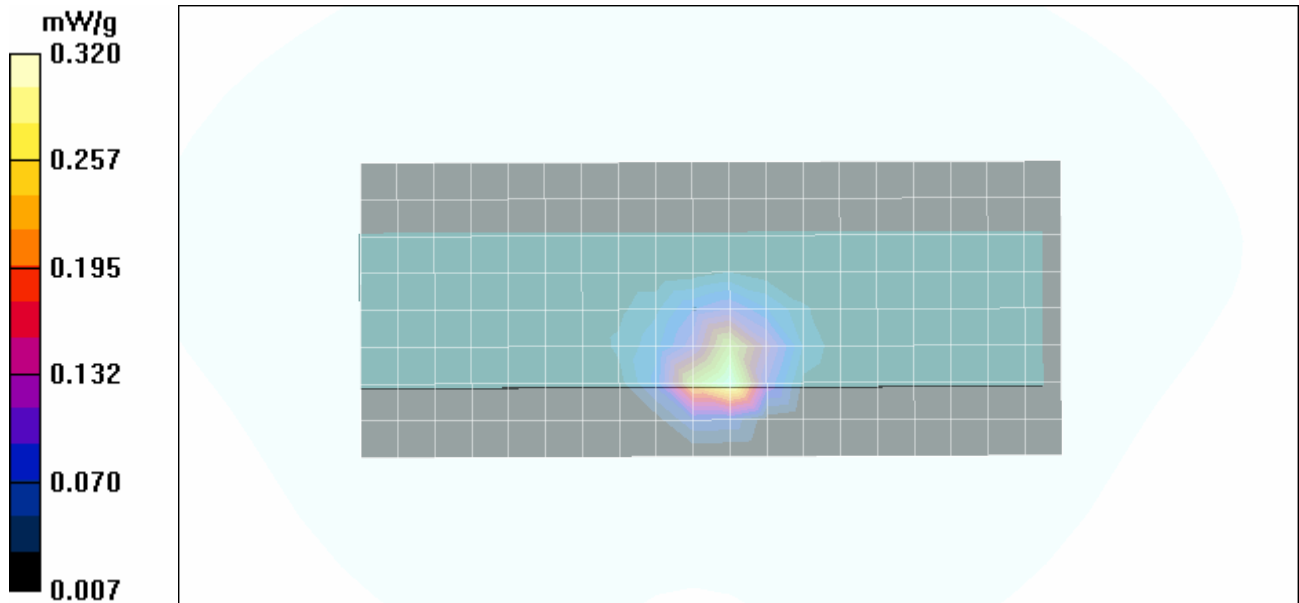
Frequency: 2441 MHz; Duty Cycle: 1:2
 Communication System: GFSK 1Mbps
 Power: 11.1V, 3900mAh Li-ion Battery
 RF Output Power: 12.9 dBm (Conducted)
 Medium: M2450 Medium parameters used: $f = 2441 \text{ MHz}$; $\sigma = 1.98 \text{ mho/m}$; $\epsilon_r = 50.1$; $\rho = 1000 \text{ kg/m}^3$
 - Probe: 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: SAM 4.0; Type: Fiberglass; Serial: 1033
 - Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171


Body SAR - Bluetooth Antenna Side Edge-on (Touch) Position - Channel 39 - 2441 MHz

Area Scan (9x20x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
 Maximum value of SAR (measured) = 0.315 mW/g

Body SAR - Bluetooth Antenna Side Edge-on (Touch) Position - Channel 39 - 2441 MHz

Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$
 Reference Value = 10.6 V/m; Power Drift = -0.022 dB
 Peak SAR (extrapolated) = 0.491 W/kg
SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.085 mW/g
 Maximum value of SAR (measured) = 0.320 mW/g



Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.			Page 19 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/21/2007

Body SAR - Class 1 Bluetooth - 2480 MHz - Channel 78 - Bluetooth Antenna Edge-on of Tablet PC

DUT: General Dynamics Itronix Corp.; Type: IX-GUBTC41MTH Bluetooth in IX350 Tablet PC; Serial: 07052200019

Ambient Temp: 23.1°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Frequency: 2480 MHz; Duty Cycle: 1:2

Communication System: GFSK 1Mbps

Power: 11.1V, 3900mAh Li-ion Battery

RF Output Power: 12.9 dBm (Conducted)

Medium: M2450 Medium parameters used: $f = 2480 \text{ MHz}$; $\sigma = 1.98 \text{ mho/m}$; $\epsilon_r = 50.1$; $\rho = 1000 \text{ kg/m}^3$

- 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: SAM 4.0; Type: Fiberglas; Serial: 1033

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

Body SAR - Bluetooth Antenna Side Edge-on (Touch) Position - Channel 78 - 2480 MHz

Area Scan (9x20x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.667 mW/g

Body SAR - Bluetooth Antenna Side Edge-on (Touch) Position - Channel 78 - 2480 MHz

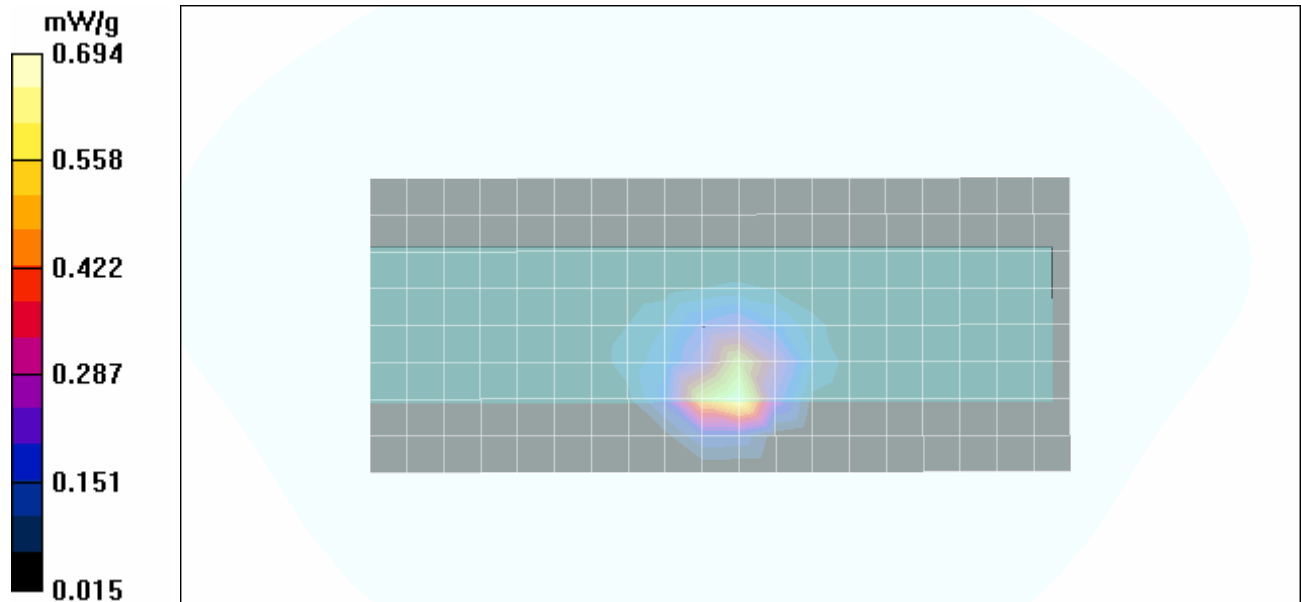
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$


Reference Value = 15.1 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 1.03 W/kg

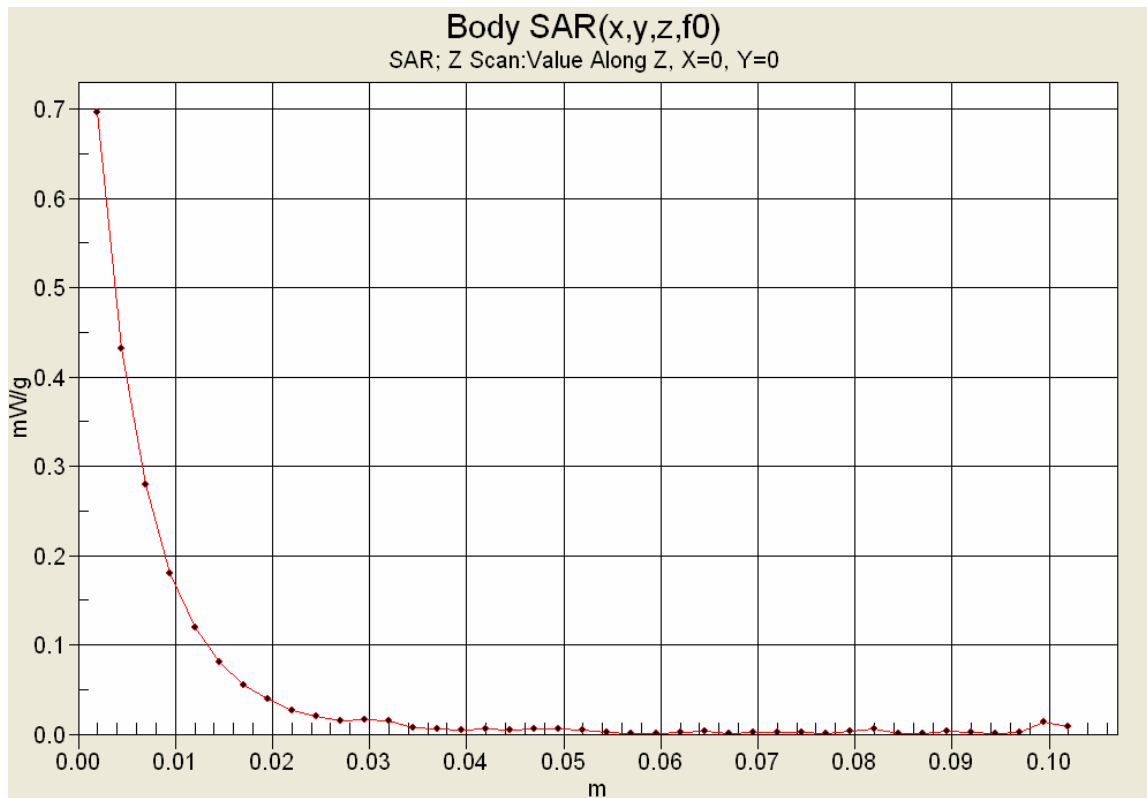
SAR(1 g) = 0.410 mW/g; SAR(10 g) = 0.181 mW/g


Maximum value of SAR (measured) = 0.694 mW/g



Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 20 of 45

Z-Axis Scan



	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/21/2007

Body SAR - Class 1 Bluetooth - 2402 MHz - Channel 0 - Bottom Side of Tablet PC

DUT: General Dynamics Itronix Corp.; Type: IX-GUBTC41MTH Bluetooth in IX350 Tablet PC; Serial: 07052200019

Ambient Temp: 23.1°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

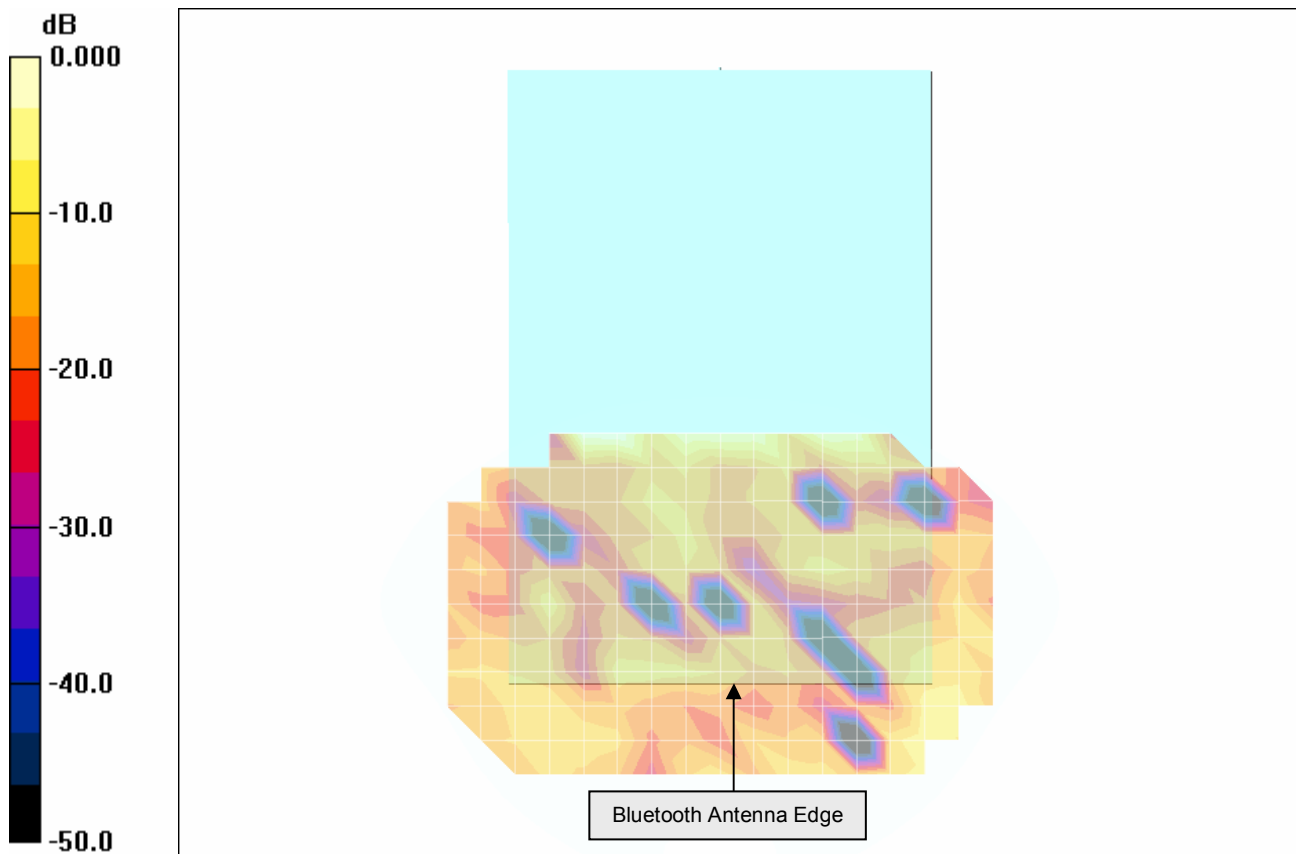
Frequency: 2402 MHz; Duty Cycle: 1:2
 Communication System: GFSK 1Mbps
 Power: 11.1V, 3900mAh Li-ion Battery
 RF Output Power: 13.0 dBm (Conducted)
 Medium: M2450 Medium parameters used: $f = 2402 \text{ MHz}$; $\sigma = 1.98 \text{ mho/m}$; $\epsilon_r = 50.1$; $\rho = 1000 \text{ kg/m}^3$

- 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: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171


Body SAR - Bottom Side Touch Position of Tablet PC - Channel 0 - 2402 MHz

Area Scan (11x17x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.053 mW/g



0 dB = 0.053 mW/g

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 22 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/21/2007

Body SAR - Class 1 Bluetooth - 2441 MHz - Channel 39 - Bottom Side of Tablet PC

DUT: General Dynamics Itronix Corp.; Type: IX-GUBTC41MTH Bluetooth in IX350 Tablet PC; Serial: 07052200019

Ambient Temp: 23.1°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Frequency: 2441 MHz; Duty Cycle: 1:2

Communication System: GFSK 1Mbps

Power: 11.1V, 3900mAh Li-ion Battery

RF Output Power: 12.9 dBm (Conducted)

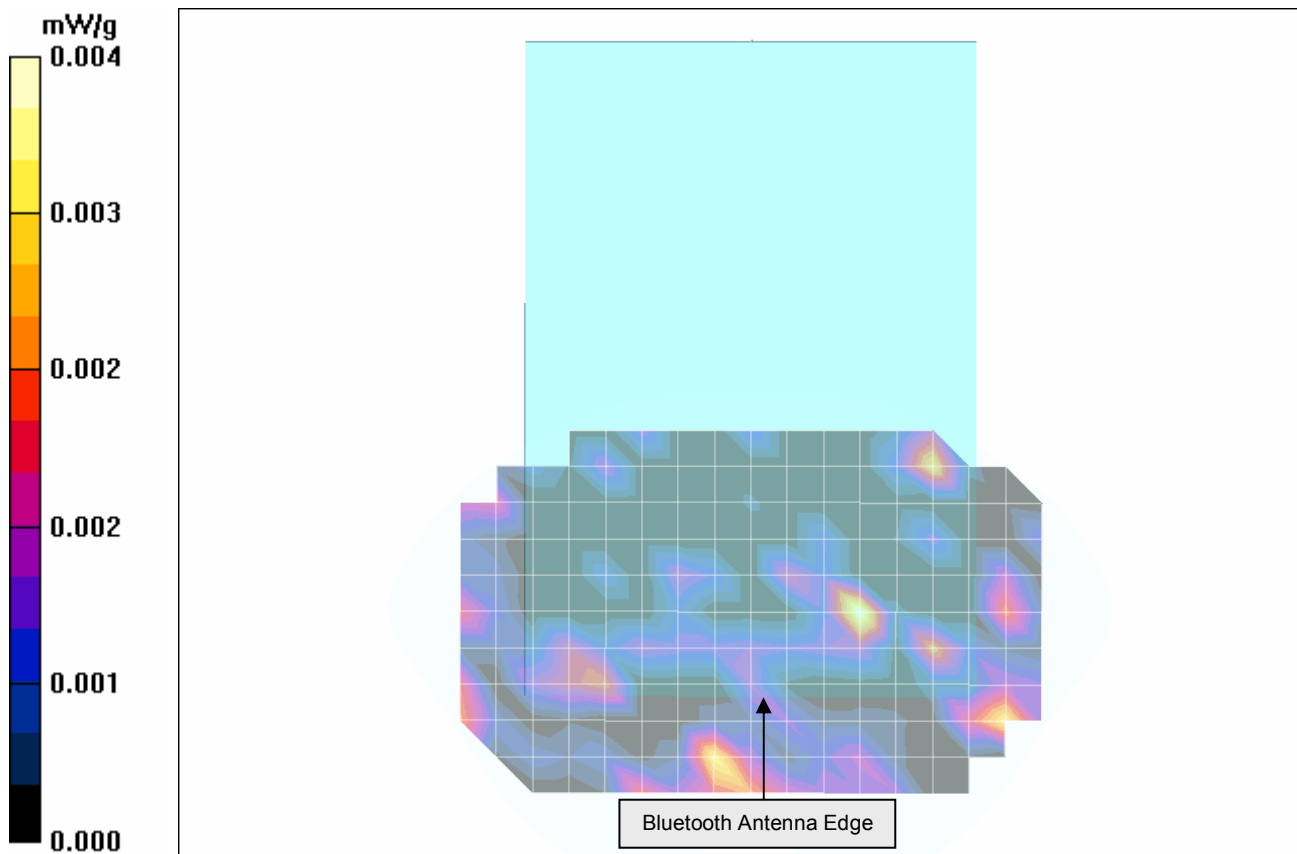
Medium: M2450 Medium parameters used: $f = 2441 \text{ MHz}$; $\sigma = 1.98 \text{ mho/m}$; $\epsilon_r = 50.1$; $\rho = 1000 \text{ kg/m}^3$


- 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: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Bottom Side Touch Position of Tablet PC - Channel 39 - 2441 MHz

Area Scan (11x17x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.004 mW/g



Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 23 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/21/2007

Body SAR - Class 1 Bluetooth - 2480 MHz - Channel 78 - Bottom Side of Tablet PC

DUT: General Dynamics Itronix Corp.; Type: IX-GUBTC41MTH Bluetooth in IX350 Tablet PC; Serial: 07052200019

Ambient Temp: 23.1°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Frequency: 2480 MHz; Duty Cycle: 1:2

Communication System: GFSK 1Mbps

Power: 11.1V, 3900mAh Li-ion Battery

RF Output Power: 12.9 dBm (Conducted)

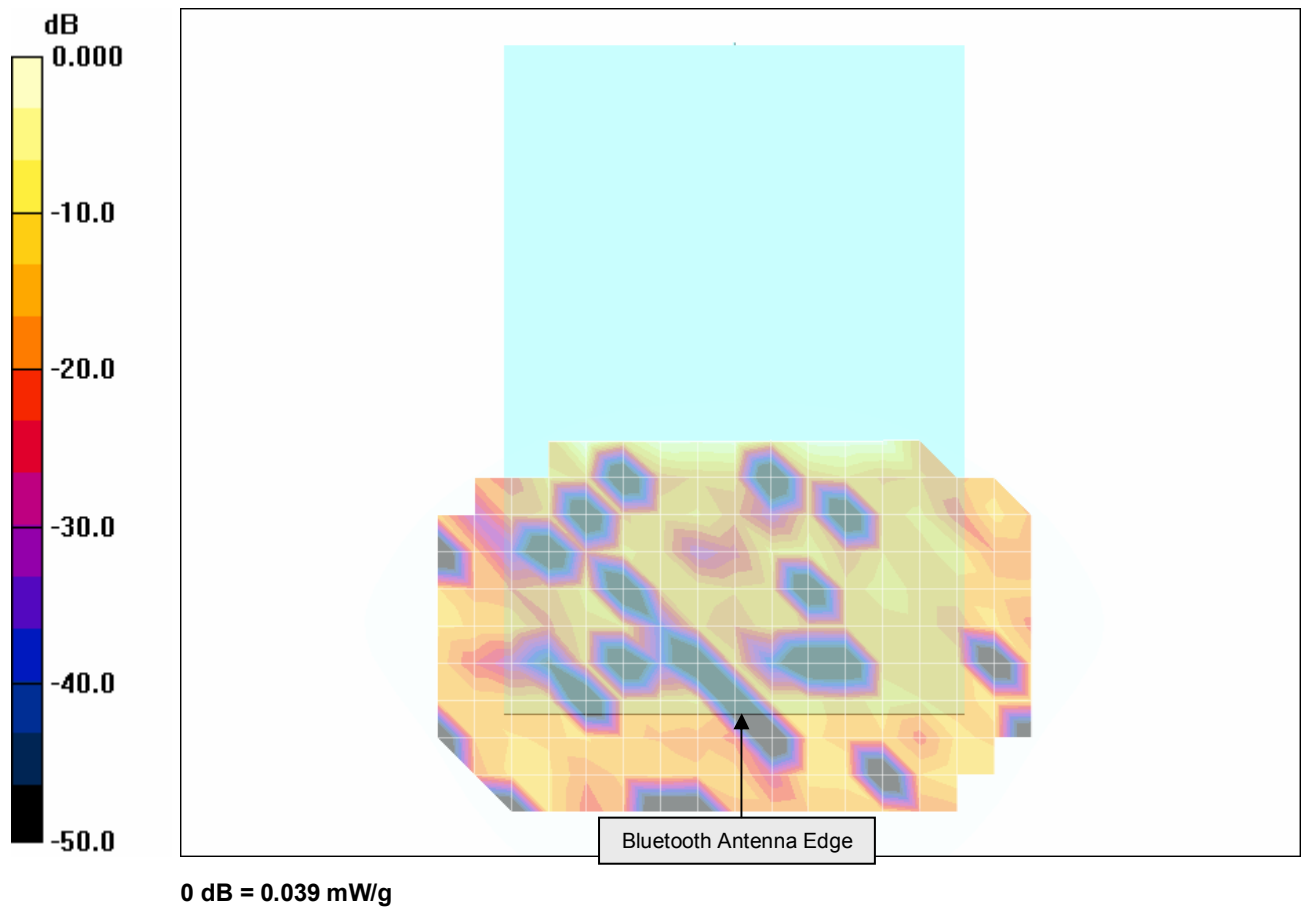
Medium: M2450 Medium parameters used: $f = 2480 \text{ MHz}$; $\sigma = 1.98 \text{ mho/m}$; $\epsilon_r = 50.1$; $\rho = 1000 \text{ kg/m}^3$


- 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: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Bottom Side Touch Position of Tablet PC - Channel 78 - 2480 MHz

Area Scan (11x17x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$


Maximum value of SAR (measured) = 0.039 mW/g





Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 24 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX B - SYSTEM PERFORMANCE CHECK DATA

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 25 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 12/21/2007

System Performance Check - 2450 MHz Dipole - MSL

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

Ambient Temp: 23.1°C; Fluid Temp: 22.4°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: $f = 2450 \text{ MHz}$; $\sigma = 1.98 \text{ mho/m}$; $\epsilon_r = 50.1$; $\rho = 1000 \text{ kg/m}^3$

- 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: SAM 4.0; Type: Fiberglass; Serial: 1033
- 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) = 18.3 mW/g

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

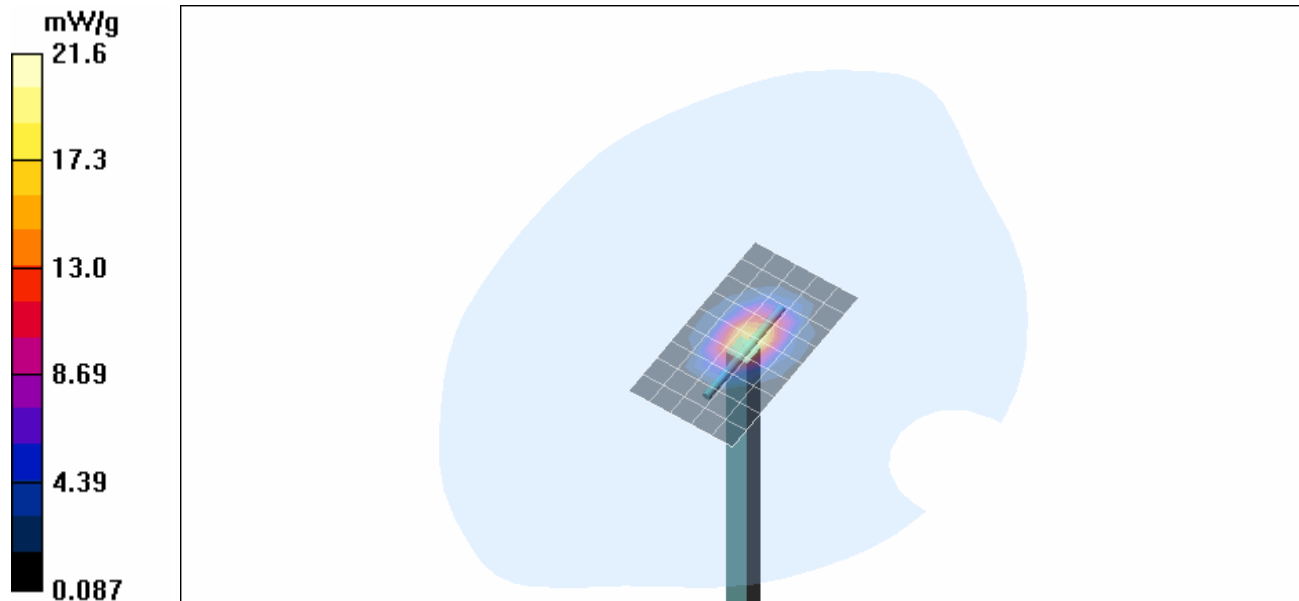
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$


Reference Value = 106.6 V/m; Power Drift = -0.079 dB

Peak SAR (extrapolated) = 29.6 W/kg

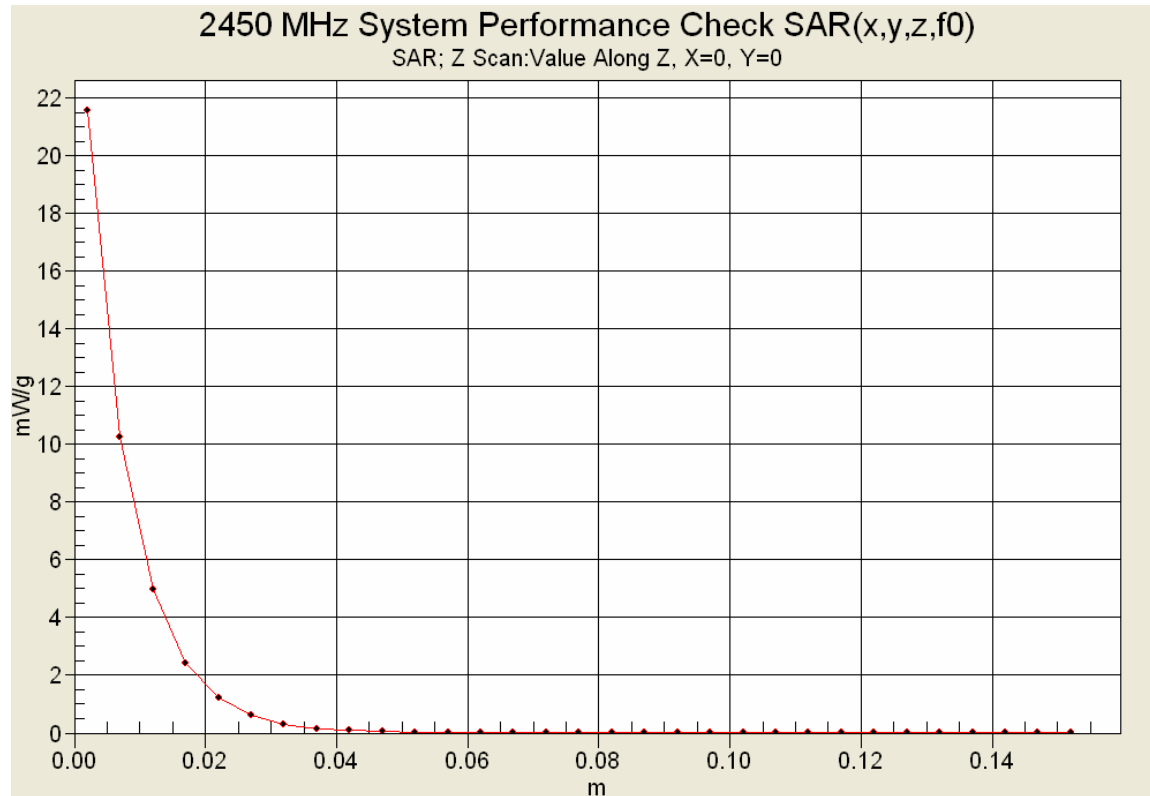
SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.19 mW/g

Maximum value of SAR (measured) = 21.6 mW/g




Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 26 of 45

Z-Axis Scan



	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX C - MEASURED FLUID DIELECTRIC PARAMETERS


Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 28 of 45



	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

2450 MHz System Performance Check & DUT Evaluation (Body)


Celltech Labs Inc.
 Test Result for UIM Dielectric Parameter
 21/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_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	50.53	1.86
2.3600	52.82	1.86	50.63	1.88
2.3700	52.81	1.87	50.57	1.88
2.3800	52.79	1.88	50.46	1.91
2.3900	52.78	1.89	50.44	1.91
2.4000	52.77	1.90	50.35	1.92
2.4100	52.75	1.91	50.27	1.94
2.4200	52.74	1.92	50.23	1.94
2.4300	52.73	1.93	50.22	1.96
2.4400	52.71	1.94	50.27	1.97
2.4500	52.70	1.95	50.13	1.98
2.4600	52.69	1.96	50.15	1.99
2.4700	52.67	1.98	50.06	2.00
2.4800	52.66	1.99	50.16	2.02
2.4900	52.65	2.01	50.03	2.04
2.5000	52.64	2.02	49.96	2.06
2.5100	52.62	2.04	49.99	2.06
2.5200	52.61	2.05	49.89	2.07
2.5300	52.60	2.06	49.87	2.09
2.5400	52.59	2.08	49.91	2.11
2.5500	52.57	2.09	49.94	2.11

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 29 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	


APPENDIX D - SAR TEST SETUP & DUT PHOTOGRAPHS

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 30 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

BODY SAR TEST SETUP PHOTOGRAPHS
Bluetooth Antenna Edge of Tablet PC Touching Planar Phantom
(-90° Portrait LCD Display Orientation)




Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 31 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

BODY SAR TEST SETUP PHOTOGRAPHS
Bottom Side of Tablet PC Touching Planar Phantom




Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 32 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

DUT PHOTOGRAPHS

General Dynamics Itronix Corporation Ruggedized Tablet PC Model: IX350 - "0 Degrees Landscape" LCD Display Orientation

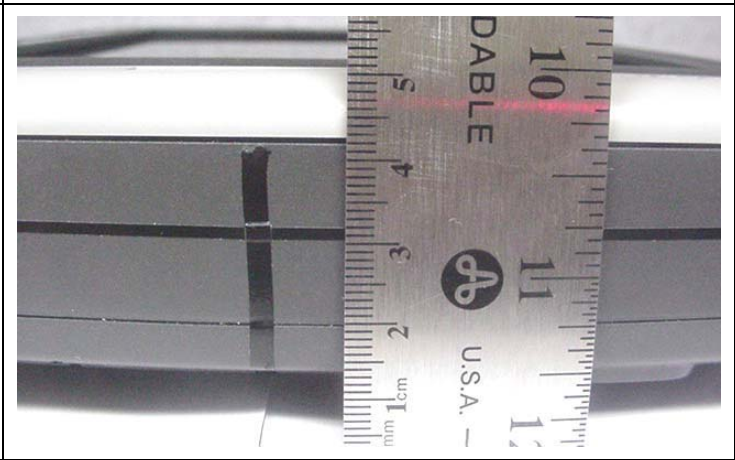


Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 33 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	


DUT PHOTOGRAPHS

General Dynamics Itronix Corporation Ruggedized Tablet PC Model: IX350 - “-90 Degrees Portrait” LCD Display Orientation



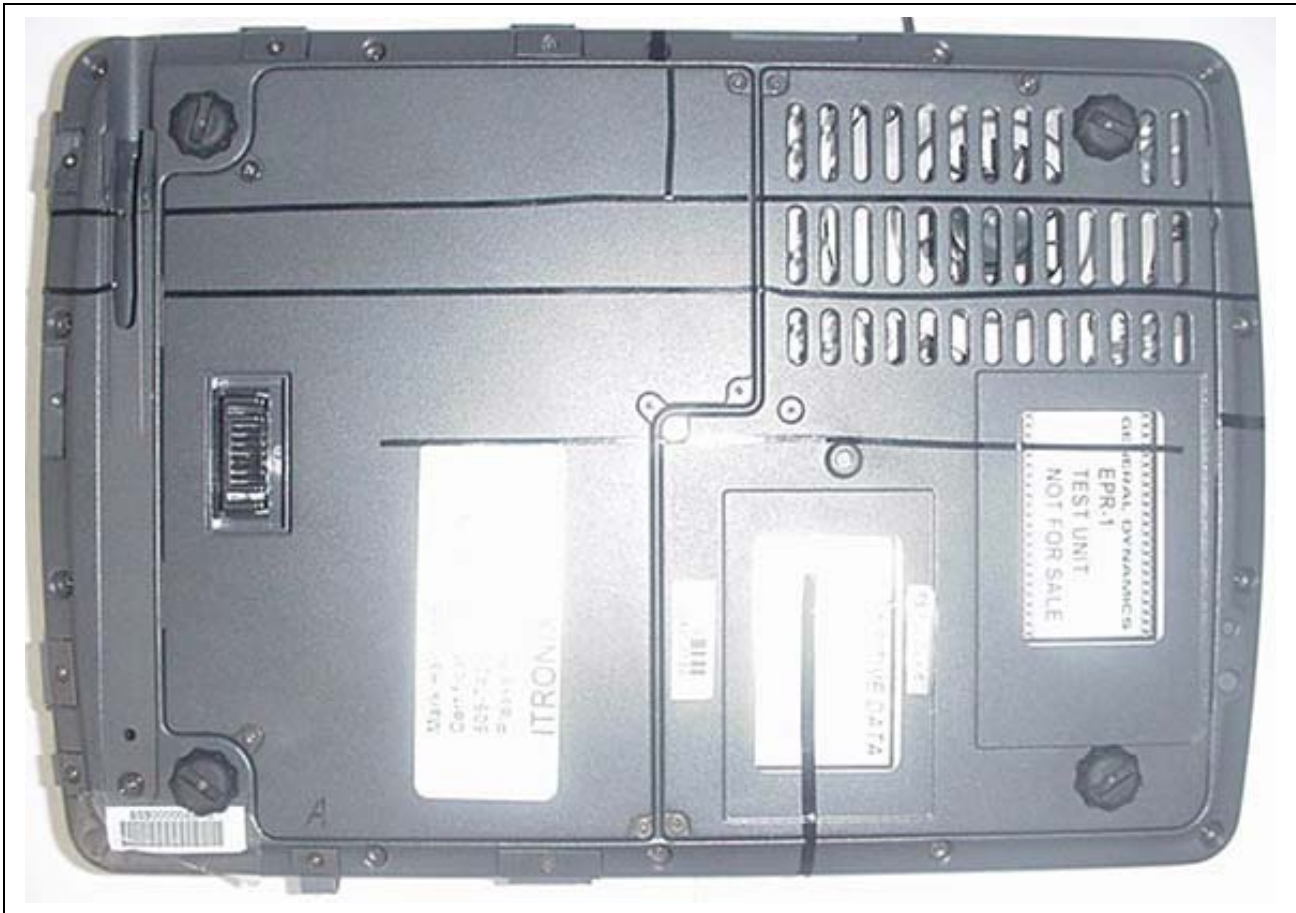
Bluetooth Antenna Edge of Tablet PC

Distance from Bottom Side of Tablet PC to Top Side of Tablet PC

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 34 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	


DUT PHOTOGRAPHS




Bottom Side of Tablet PC



Edge of Tablet PC - "0 Degrees Landscape" LCD Display Orientation

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 35 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

DUT PHOTOGRAPHS




Bottom Side of Tablet PC with Battery Cover Removed



Front Side of Lithium-ion Battery



Back Side of Lithium-ion Battery

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 36 of 45

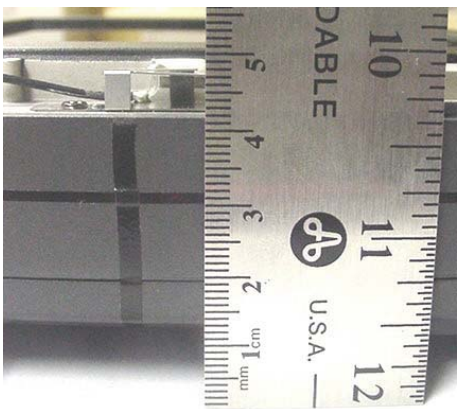
	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

DUT PHOTOGRAPHS

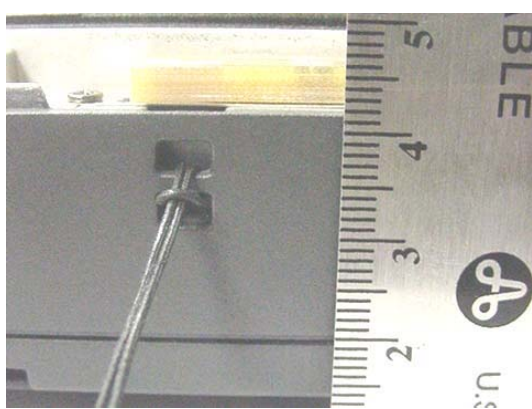
**WLAN MAIN
Antenna
(Chain B)**

**Bluetooth
Antenna
Location**

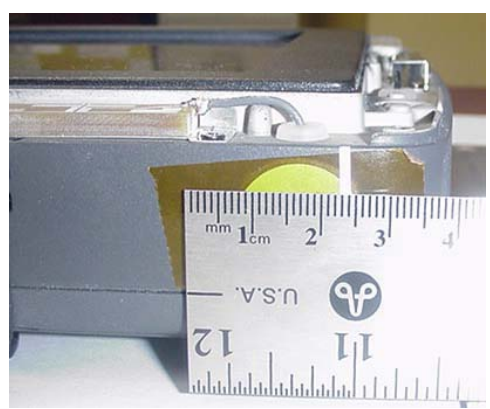
**WLAN AUX
Antenna
(Chain A)**




Bluetooth Antenna Distance to Bottom of PC



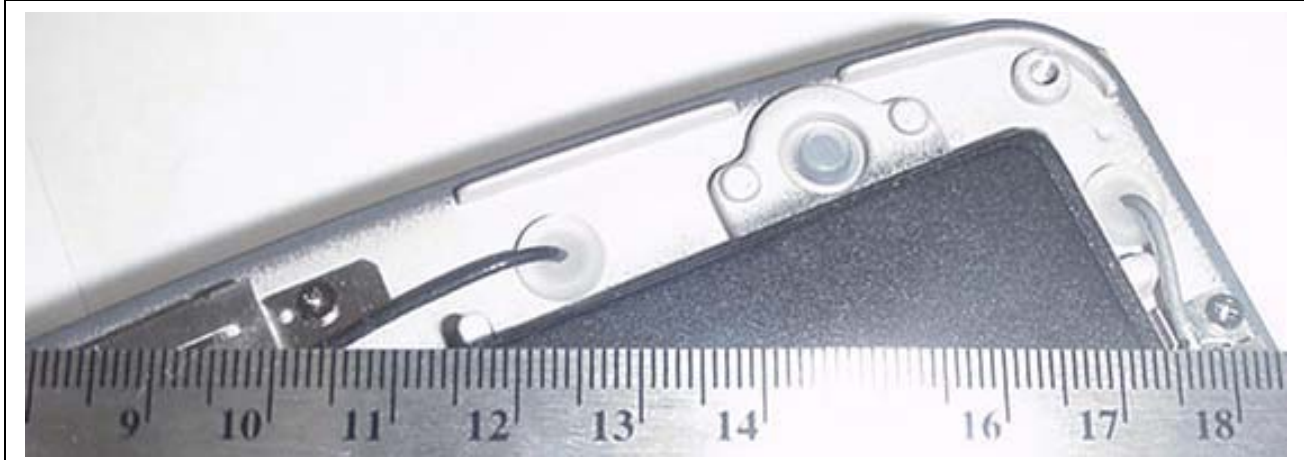
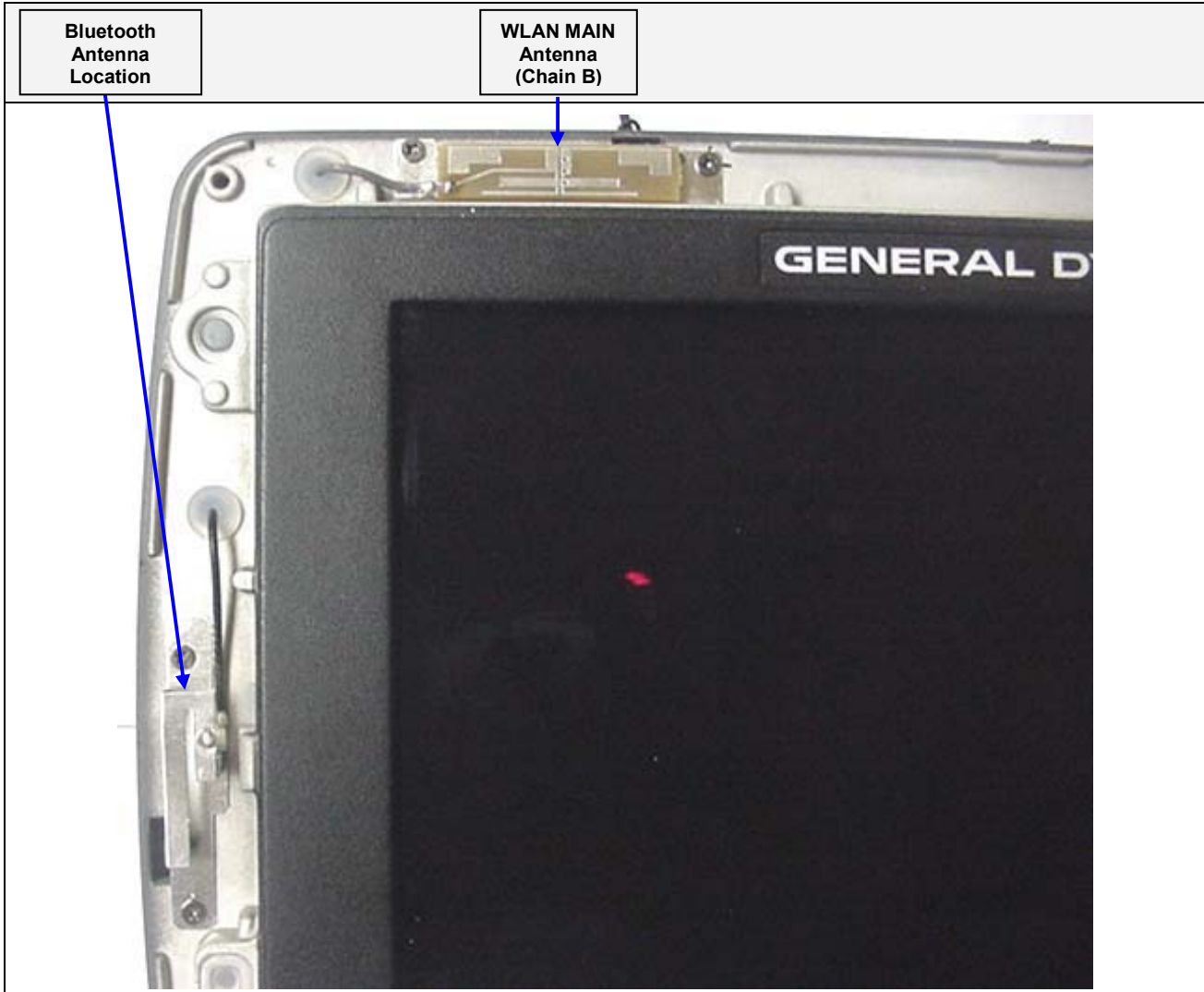
WLAN MAIN Antenna Distance to Bottom of PC



WLAN MAIN Antenna Distance to Adjacent Edge

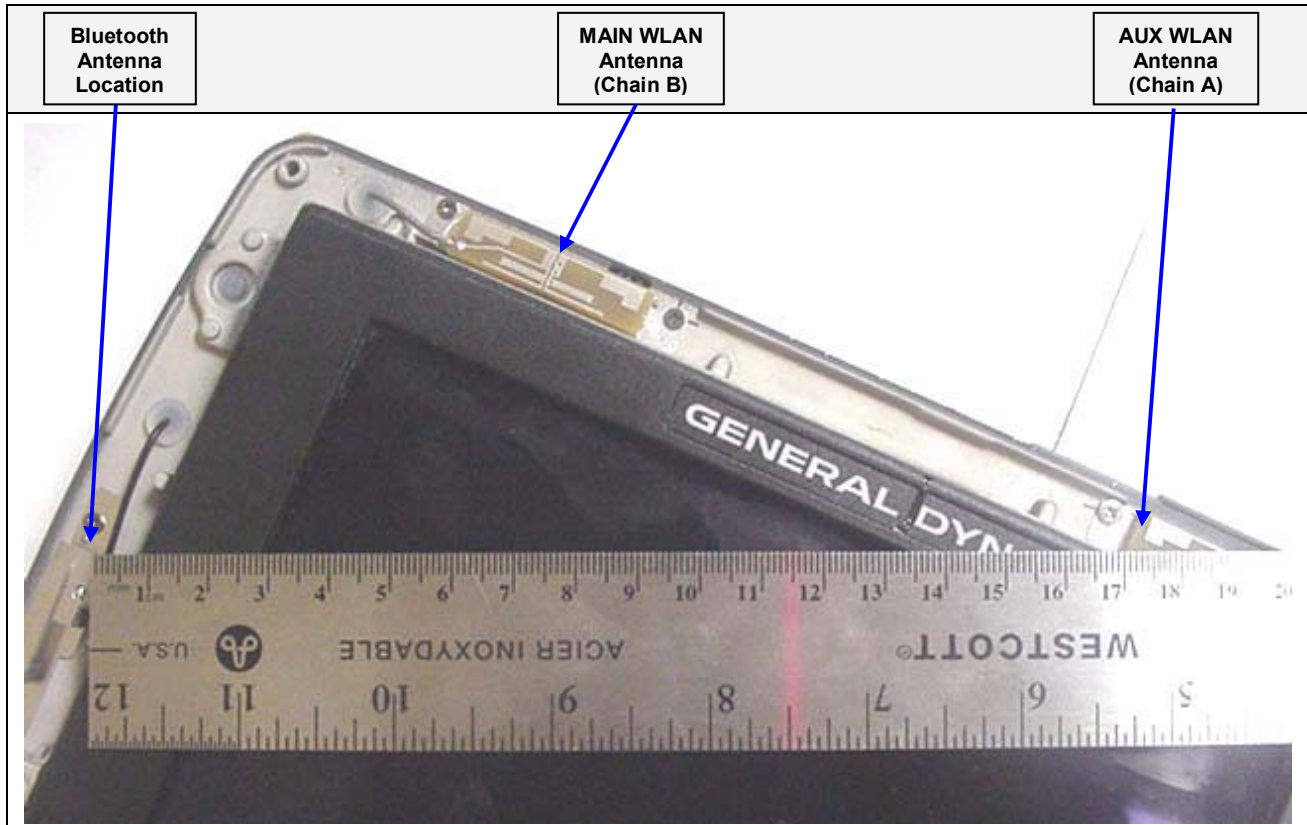
Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.			Page 37 of 45	

DUT PHOTOGRAPHS



Bluetooth Antenna Distance to WLAN MAIN Antenna (7.5 cm)

DUT PHOTOGRAPHS



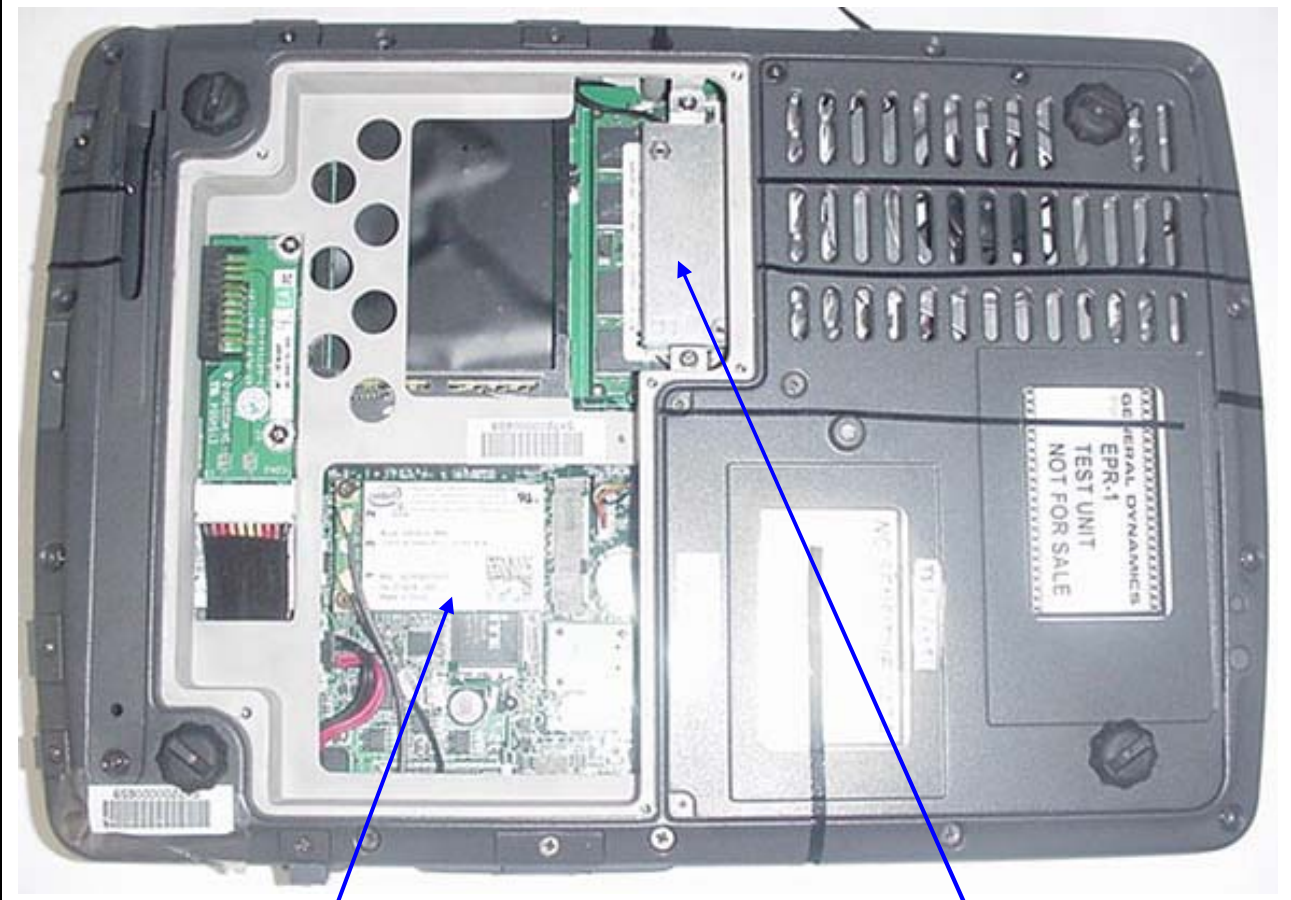
Bluetooth Antenna Distance to WLAN AUX Antenna (17 cm)



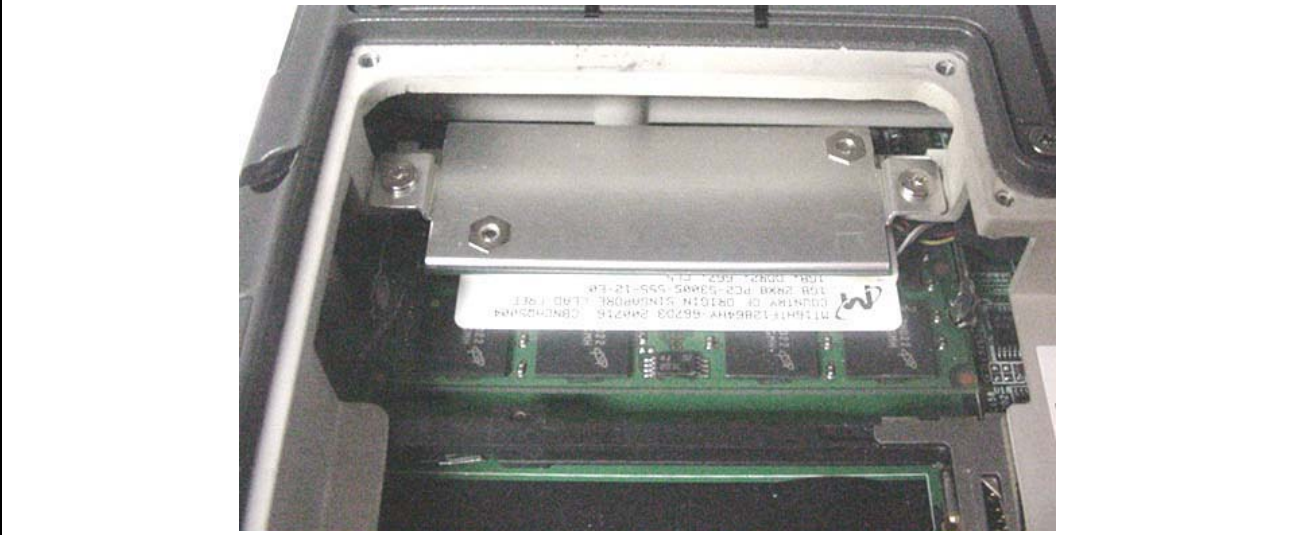
WLAN MAIN Antenna Distance to WLAN AUX Antenna (8.5 cm)

DUT PHOTOGRAPHS

Bottom Side of Tablet PC (Battery Removed)



IX-4965AGN WLAN Mini-PCI Express Card	IX-GUBTC41MTH Bluetooth Transmitter
--	--



IX-GUBTC41MTH Bluetooth Transmitter Location (with cover plate)

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	


DUT PHOTOGRAPHS



Bottom Side of Tablet PC (Battery Removed) with Bluetooth Cover Removed



Front and Back Sides of IX-GUBTC41MTH Bluetooth Transmitter

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 41 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

DUT PHOTOGRAPHS





IX-4965AGN WLAN Mini-PCI Express Card installed in IX350 Tablet PC





IX-4965AGN WLAN Mini-PCI Express Card

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC	GENERAL DYNAMICS <small>Itronix</small>	
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 42 of 45

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX E - SYSTEM VALIDATION

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 43 of 45

	Date of Evaluation:	June 08, 2007	Document Serial No.:	SV2450M-060807-R1.4	
	Evaluation Type:	System Validation	Validation Dipole:	2450 MHz	Fluid Type:

2450 MHz SYSTEM VALIDATION

Type:

2450 MHz Validation Dipole

Asset Number:

00025

Serial Number:

150

Place of Validation:

Celltech Labs Inc.

Date of Validation:

June 08, 2007

Celltech Labs Inc. certifies that the 2450 MHz System Validation was performed on the date indicated above.

Performed by:

Cheri Frangiadakis

Approved by:

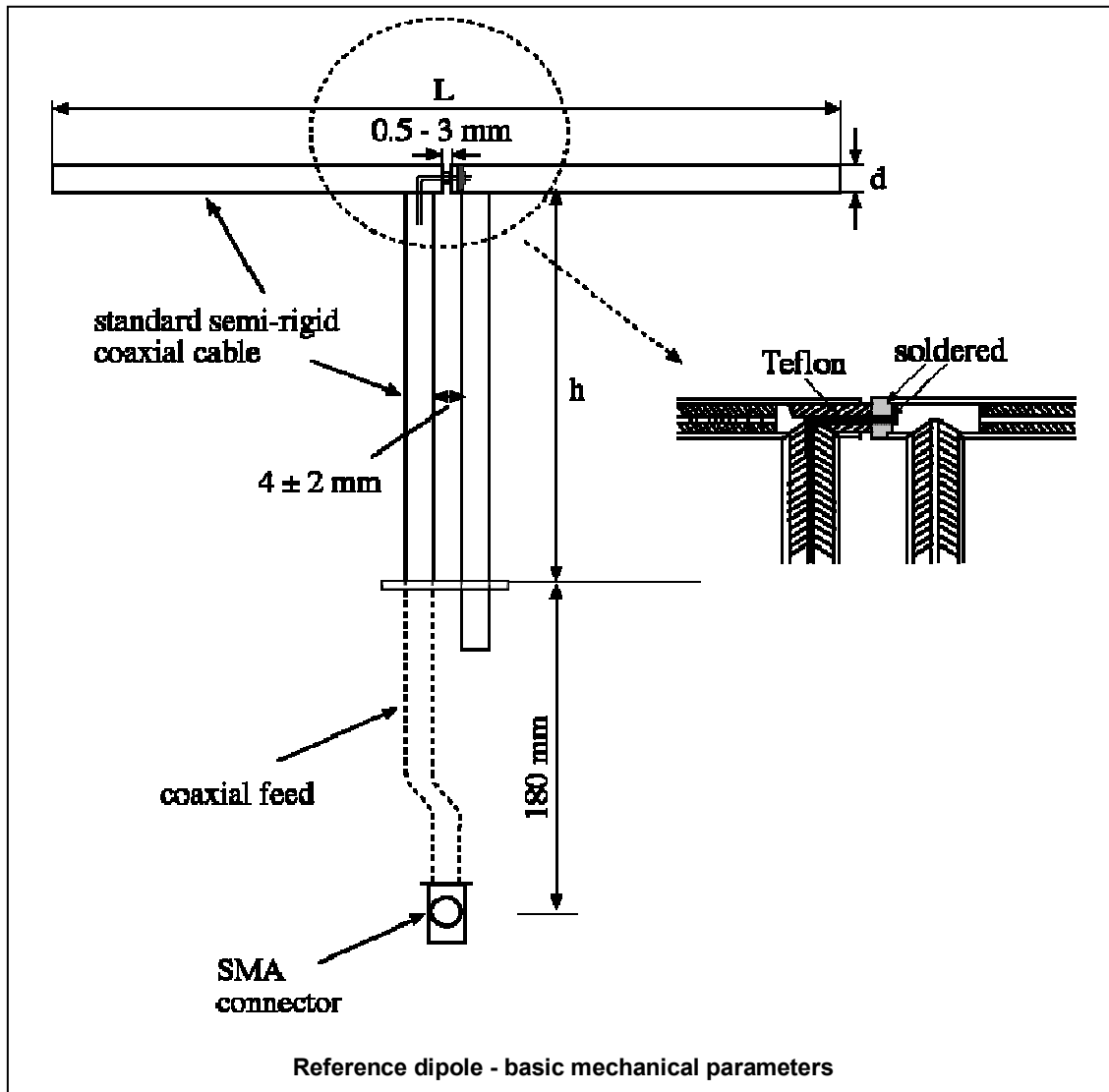
Sean Johnston

1. Dipole Construction & Electrical Characteristics

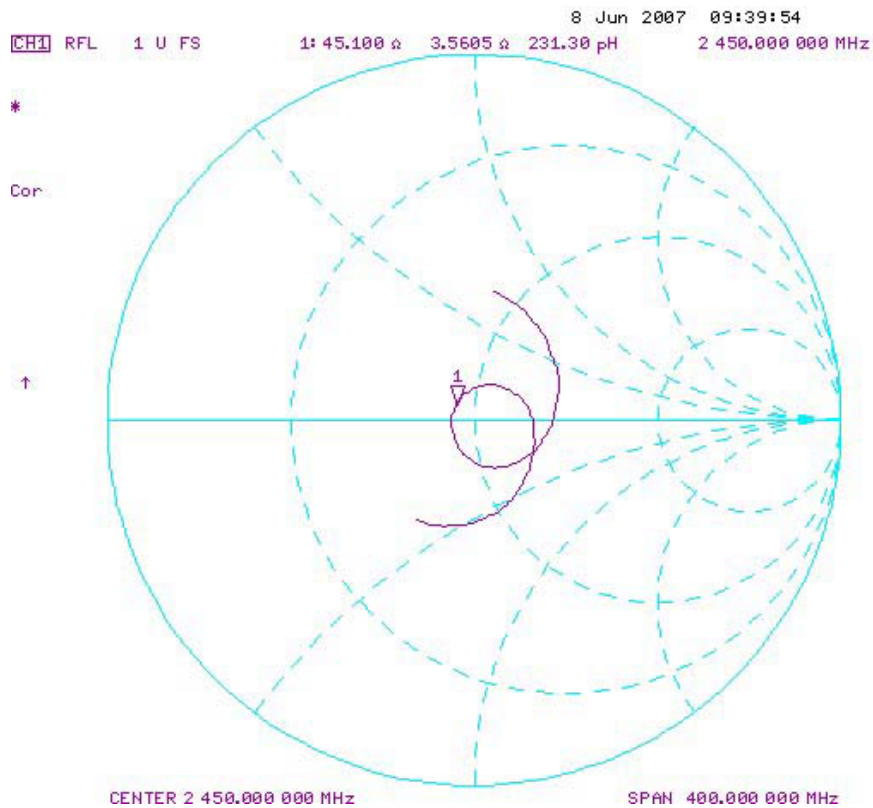
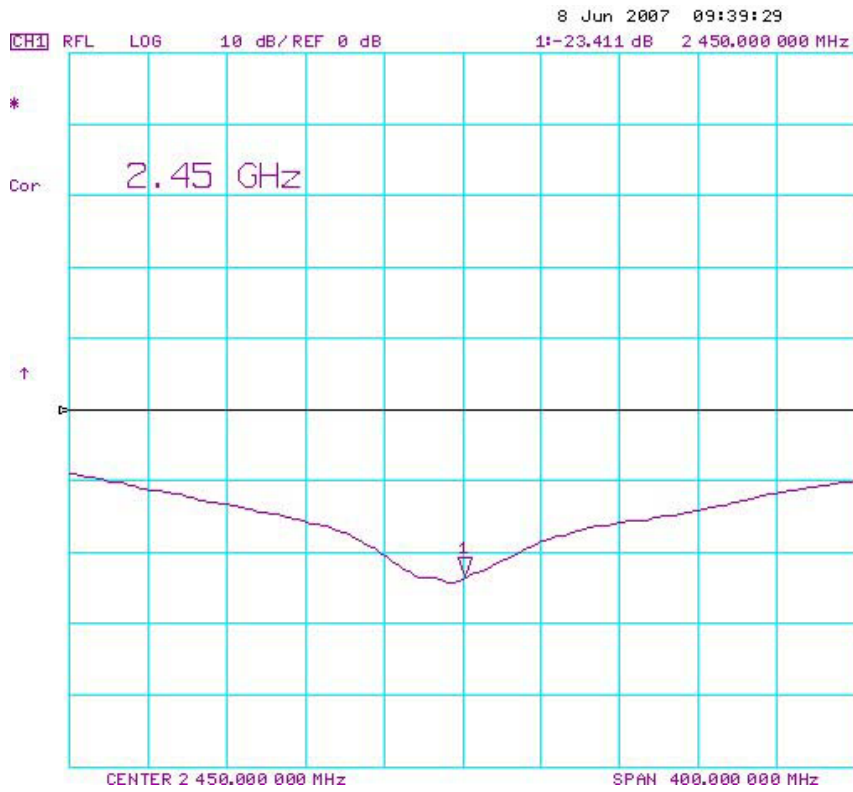
The validation dipole was constructed in accordance with the requirements specified in IEEE Standard 1528-2003 and International Standard IEC 62209-1:2005. The electrical properties were measured using an HP 8753ET Network Analyzer. The network analyzer was calibrated to the validation dipole N-type connector feed point using an HP85032E Type N calibration kit. The dipole was placed parallel to a planar phantom at a separation distance of 10.0mm from the simulating fluid using a loss-less dielectric spacer. The measured input impedance is:

Feed point impedance at 2450 MHz $\text{Re}\{Z\} = 45.100\Omega$
 $\text{Im}\{Z\} = 3.5605\Omega$

Return Loss at 2450 MHz -23.411dB



2. Validation Dipole VSWR Data



3. Validation Dipole Dimensions

Frequency (MHz)	L (mm)	H (mm)	D (mm)
300	396.0	250.0	6.0
450	270.0	167.0	6.0
835	161.0	89.8	3.6
900	149.0	83.3	3.6
1450	89.1	51.7	3.6
1800	72.0	41.7	3.6
1900	68.0	39.5	3.6
2000	64.5	37.5	3.6
2450	51.5	30.4	3.6
3000	41.5	25.0	3.6

4. Validation Phantom

The validation phantom is the SAM (Specific Anthropomorphic Mannequin) phantom manufactured by Schmid & Partner Engineering AG. The SAM phantom is a Fiberglass shell integrated in a wooden table. The shape of the shell corresponds to the phantom defined by SCC34-SC2. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot.


- Shell Thickness:** 2.0 ± 0.1 mm
- Filling Volume:** Approx. 25 liters
- Dimensions:** 50 cm (W) x 100 cm (L)



SAM Phantom




Fluid Depth (≥ 15.0 cm)

	Date of Evaluation:	June 08, 2007	Document Serial No.:	SV2450M-060807-R1.4	
	Evaluation Type:	System Validation	Validation Dipole:	2450 MHz	Fluid Type:

5. 2450 MHz System Validation Setup



	Date of Evaluation:	June 08, 2007	Document Serial No.:	SV2450M-060807-R1.4	
	Evaluation Type:	System Validation	Validation Dipole:	2450 MHz	Fluid Type:

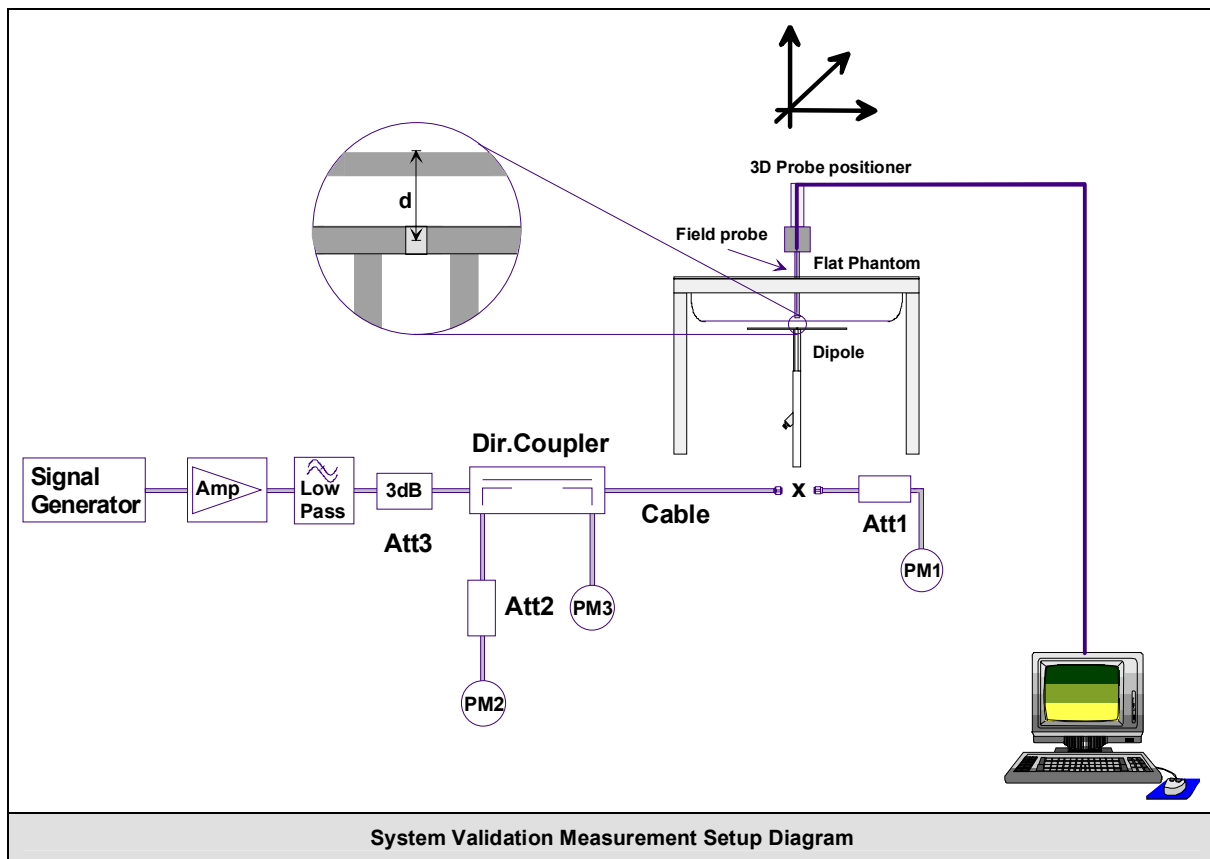
6. 2450 MHz Validation Dipole Setup



7. SAR Measurement

Measurements were made at the planar section of the SAM phantom using a dosimetric E-field probe EX3DV4 (S/N: 3600, conversion factor 6.31). The SAR measurement was performed with the E-field probe in mechanical detection mode only. The setup and determination of the forward power into the dipole was performed using the procedures described below.

First the power meter PM1 (including attenuator Att1) is connected to the cable to measure the forward power at the location of the dipole connector (X). The signal generator is adjusted for the desired forward power at the dipole connector (taking into account the attenuation of Att1) as read by power meter PM2. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter PM2. If the signal generator does not allow adjustment in 0.01dB steps, the remaining difference at PM2 must be taken into consideration. PM3 records the reflected power from the dipole to ensure that the value is not changed from the previous value. The reflected power should be 20dB below the forward power.



8. Measurement Conditions

The SAM phantom was filled with 2450 MHz Body tissue simulant.

Relative Permittivity: 50.1 (-4.9% deviation from target)
 Conductivity: 1.99 mho/m (+2.1% deviation from target)
 Fluid Temperature: 21.5 °C (Start of Test) / 21.2 °C (End of Test)
 Fluid Depth: ≥ 15.0 cm

Environmental Conditions:

Ambient Temperature: 22.7 °C
 Barometric Pressure: 101.1 kPa
 Humidity: 31 %

The 2450 MHz Body tissue simulant consisted of the following ingredients:


Ingredient	Percentage by weight	
Water	69.98%	
Glycol Monobutyl	30.00%	
Salt	0.02%	
IEEE Target Dielectric Parameters:	$\epsilon_r = 52.7 (+/-5\%)$	$\sigma = 1.95 \text{ S/m } (+/-5\%)$

9. System Validation SAR Results

SAR @ 0.25W Input averaged over 1g (W/kg)				SAR @ 1W Input averaged over 1g (W/kg)			
SPEAG Target		Measured	Deviation	SPEAG Target		Measured	Deviation
12.8	+/- 10%	13.4	+4.7%	51.2	+/- 10%	53.6	+4.7%
SAR @ 0.25W Input averaged over 10g (W/kg)				SAR @ 1W Input averaged over 10g (W/kg)			
SPEAG Target		Measured	Deviation	SPEAG Target		Measured	Deviation
5.93	+/- 10%	6.03	+1.7%	23.7	+/- 10%	24.1	+1.7%

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.

	Date of Evaluation:	June 08, 2007	Document Serial No.:	SV2450M-060807-R1.4
	Evaluation Type:	System Validation	Validation Dipole:	2450 MHz
			Fluid Type:	Body

System Validation - 2450 MHz Dipole - June 8, 2007

DUT: Dipole 2450 MHz; Asset: 00025; Serial: 150

Ambient Temp: 22.7°C; Fluid Temp: 21.5°C; Barometric Pressure: 101.1 kPa; Humidity: 31%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.99 \text{ mho/m}$; $\epsilon_r = 50.1$; $\rho = 1000 \text{ kg/m}^3$

- 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: 21/06/2006
- Phantom: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

2450 MHz System Validation/Area Scan (6x10x1):

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

Maximum value of SAR (measured) = 13.1 mW/g

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

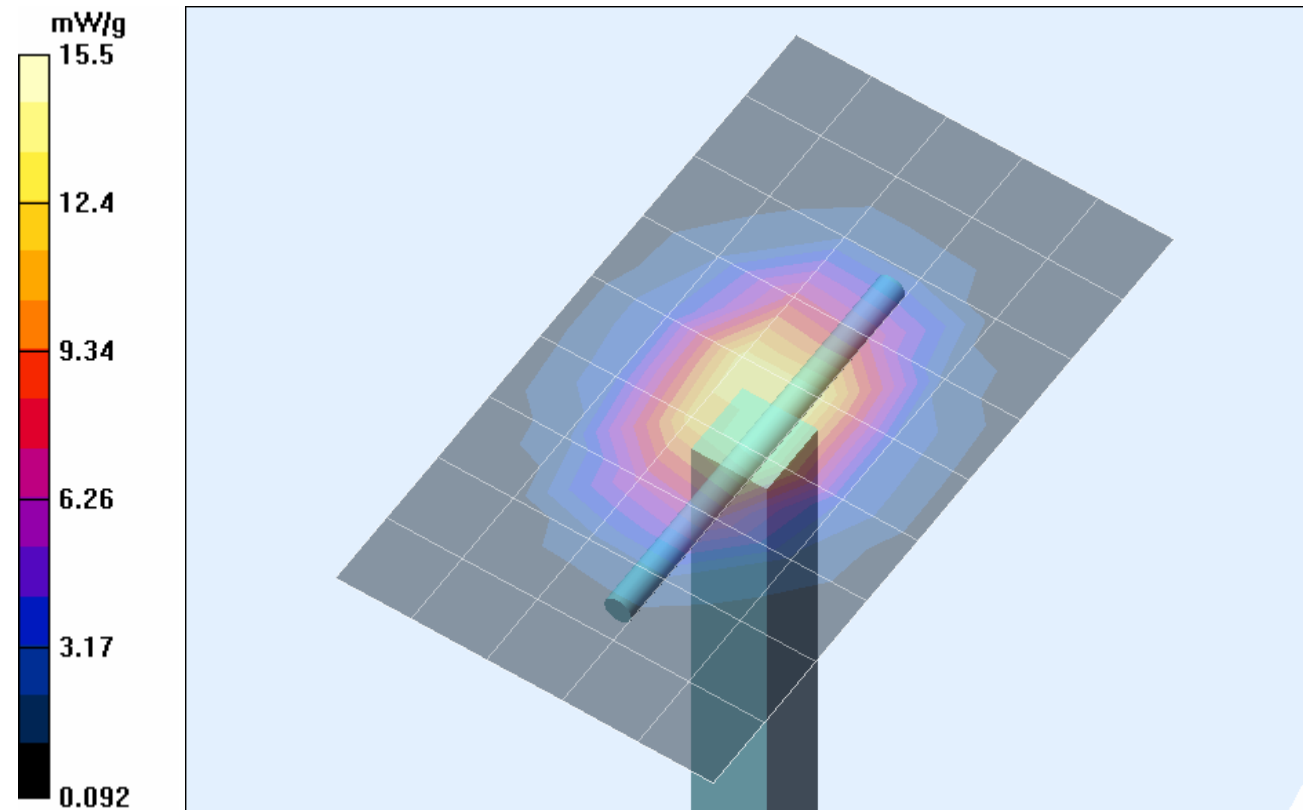
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

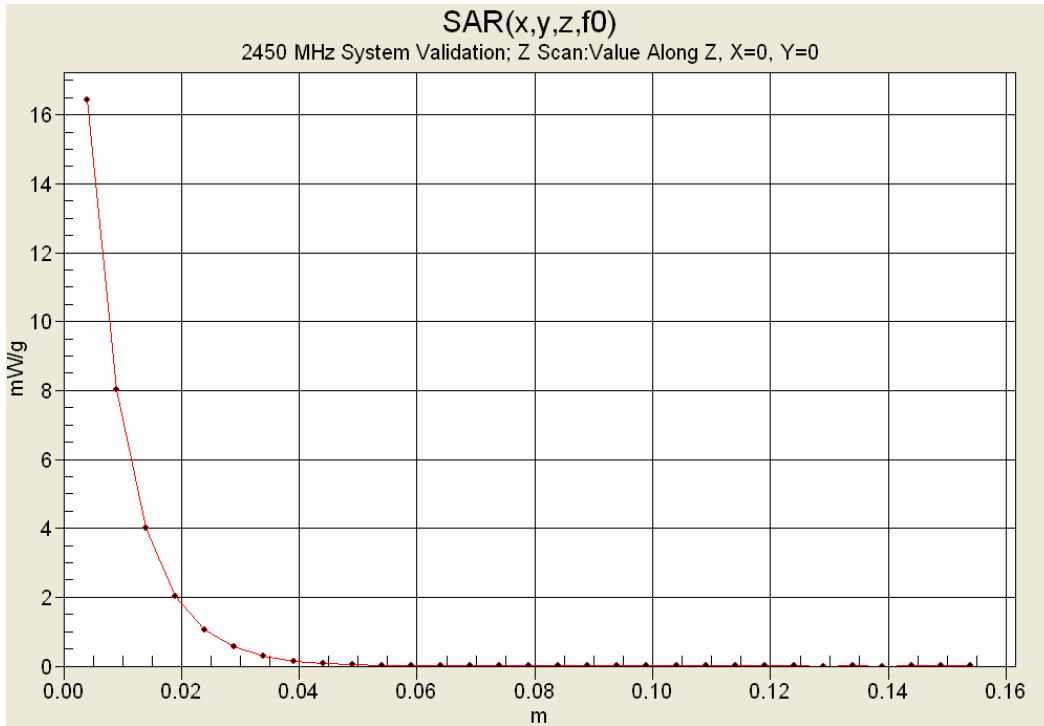
Reference Value = 91.9 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 28.6 W/kg

SAR(1 g) = 13.4 mW/g; SAR(10 g) = 6.03 mW/g

Maximum value of SAR (measured) = 15.5 mW/g





10. Measured Fluid Dielectric Parameters

System Validation - 2450 MHz (Body)

Celltech Labs Inc.

Test Result for UIM Dielectric Parameter

Fri 08/Jun/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
2.3500	52.83	1.85	50.39	1.89
2.3600	52.82	1.86	50.32	1.90
2.3700	52.81	1.87	50.28	1.91
2.3800	52.79	1.88	50.28	1.93
2.3900	52.78	1.89	50.31	1.94
2.4000	52.77	1.90	50.26	1.95
2.4100	52.75	1.91	50.24	1.96
2.4200	52.74	1.92	50.21	1.96
2.4300	52.73	1.93	50.21	1.98
2.4400	52.71	1.94	50.13	1.99
2.4500	52.70	1.95	50.09	1.99
2.4600	52.69	1.96	50.01	2.03
2.4700	52.67	1.98	50.10	2.03
2.4800	52.66	1.99	50.12	2.05
2.4900	52.65	2.01	50.09	2.07
2.5000	52.64	2.02	50.08	2.07
2.5100	52.62	2.04	50.03	2.08
2.5200	52.61	2.05	50.02	2.09
2.5300	52.60	2.06	49.93	2.10
2.5400	52.59	2.08	49.87	2.11
2.5500	52.57	2.09	49.78	2.13

11. Measurement Uncertainties


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 (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)	2.1	Normal	1	0.64	1.3	∞
Liquid permittivity (target)	5	Rectangular	1.732050808	0.6	1.7	∞
Liquid permittivity (measured)	4.9	Normal	1	0.6	2.9	∞
Combined Standard Uncertainty					9.33	
Expanded Uncertainty (k=2)					18.66	
Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 and IEC Standard 62209-1:2005						

12. Test Equipment List

TEST EQUIPMENT	ASSET NO.	SERIAL NO.	DATE OF CAL.	CAL. DUE DATE
SPEAG DASY4 Measurement Server	00158	1078	N/A	N/A
SPEAG Robot	00046	599396-01	N/A	N/A
SPEAG DAE4	00019	353	21Jun06	21Jun07
SPEAG EX3DV4 E-Field Probe	00213	3600	24Jan07	24Jan08
2450 MHz Validation Dipole	00025	150	08Jun07	08Jun08
SPEAG SAM Phantom V4.0C	00154	1033	N/A	N/A
ALS-PR-DIEL Dielectric Probe Kit	00160	260-00953	N/A	N/A
Gigatronics 8652A Power Meter	00007	1835272	26Mar07	26Mar08
Gigatronics 80701A Power Sensor	00014	1833699	22Jan07	22Jan08
Gigatronics 80701A Power Sensor	00109	1834366	26Mar07	26Mar08
HP 8753ET Network Analyzer	00134	US39170292	20Apr07	20Apr08
HP 8648D Signal Generator	00005	3847A00611	NCR	NCR
Amplifier Research 5S1G4 Power Amplifier	00106	26235	NCR	NCR

	<u>Date(s) of Evaluation</u> December 21, 2007	<u>Test Report Serial No.</u> 102407KBC-T865-S15B	<u>Report Revision No.</u> Rev. 1.1 (2nd Release)	 Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 20, 2008	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX G - SAM PHANTOM CERTIFICATE OF CONFORMITY

Applicant:	General Dynamics Itronix Corporation	FCC ID:	KBCIX-GUBTC41MTH	IC:	1943A-GUBTC41MTH
DUT Type:	IX-GUBTC41MTH Bluetooth Transmitter	Host PC:	IX350 Ruggedized Tablet PC		
2008 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 45 of 45

Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Certificate of conformity / First Article Inspection

Item	SAM Twin Phantom V4.0
Type No	QD 000 P40 BA
Series No	TP-1002 and higher
Manufacturer / Origin	Untersee Composites Hauptstr. 69 CH-8559 Fruthwilen Switzerland

Tests

The series production process used allows the limitation to test of first articles. Complete tests were made on the pre-series Type No. QD 000 P40 AA, Serial No. TP-1001 and on the series first article Type No. QD 000 P40 BA, Serial No. TP-1006. Certain parameters have been retested using further series units (called samples).

Test	Requirement	Details	Units tested
Shape	Compliance with the geometry according to the CAD model.	IT'IS CAD File (*)	First article, Samples
Material thickness	Compliant with the requirements according to the standards	2mm +/- 0.2mm in specific areas	First article, Samples
Material parameters	Dielectric parameters for required frequencies	200 MHz – 3 GHz Relative permittivity < 5 Loss tangent < 0.05.	Material sample TP 104-5
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards	Liquid type HSL 1800 and others according to the standard.	Pre-series, First article

Standards

- [1] CENELEC EN 50361
- [2] IEEE P1528-200x draft 6.5
- [3] IEC PT 62209 draft 0.9

(*) The IT'IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of [1] and [3].

Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standard [1] and draft standards [2] and [3].

Date 18.11.2001

Signature / Stamp

**Schmid & Partner
Engineering AG**

Zeughausstrasse 43, CH-8004 Zurich
Tel. +41 1 245 97 00, Fax +41 1 245 97 79