



	Date(s) of Evaluation Nov. 17,20,23-25, 2009	Test Report Serial No. 102809AQZ-T991-S90P	Test Report Revision No. Rev. 1.2 (3rd Release)	
	Test Report Issue Date December 23, 2009	Description of Test(s) Specific Absorption Rate	RF Exposure Category Occupational (Controlled)	


## FCC/IC SAR TEST REPORT - 700/800 MHz Band


RF EXPOSURE EVALUATION	SPECIFIC ABSORPTION RATE				
APPLICANT / MANUFACTURER	HARRIS CORPORATION - RF COMMUNICATIONS DIVISION				
DEVICE UNDER TEST (DUT)	PORTABLE PTT MULTI-BAND RADIO TRANSCEIVER				
DEVICE MODEL(S)	UNITY XG-100P				
TRANSMIT FREQUENCY BAND(S)	700/800	FREQUENCY RANGES		FCC/IC	763 - 775 MHz
					793 - 805 MHz
					806 - 824 MHz
					851 - 869 MHz
MANUF. RATED OUTPUT POWER	34.2 dBm	2.63 Watts	+0.5/-0.2 dB	Conducted	763-775 MHz
	34.2 dBm	2.63 Watts	+0.5/-0.2 dB	Conducted	793-805 MHz
	35.0 dBm	3.16 Watts	+0.5/-0.2 dB	Conducted	806-824 MHz
	35.0 dBm	3.16 Watts	+0.5/-0.2 dB	Conducted	851-869 MHz
DEVICE MODES OF OPERATION	ANALOG - FM		P25 Phase 1 - FDMA		
DEVICE IDENTIFIER(S)	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
APPLICATION TYPE	FCC/IC Certification				
APPLICABLE RULE PART(S)	FCC Part 90		IC RSS-119 Issue 9		
STANDARD(S) APPLIED	FCC 47 CFR §2.1093				
	Health Canada Safety Code 6				
PROCEDURE(S) APPLIED	FCC OET Bulletin 65, Supplement C (01-01)				
	FCC KDB 447498 D01v04		FCC KDB Inquiry No. 794297		
	Industry Canada RSS-102 Issue 3				
	IEEE 1528-2003	IEC 62209-1:2005	IEC 62209-2 (Draft)		
FCC DEVICE CLASSIFICATION	Licensed Non-Broadcast Transmitter Held to Face (TNF)				
IC DEVICE CLASSIFICATION	Land Mobile Radio Transmitter/Receiver (27.41-960 MHz)				
RF EXPOSURE CATEGORY	Occupational / Controlled				
RF EXPOSURE EVALUATION(S)	Face-held & Body-worn				
DATE(S) OF EVALUATION	November 17, 20, 23-25, 2009				
TEST REPORT SERIAL NO.	102809AQZ-T991-S90P				
TEST REPORT REVISION NO.	Revision 1.2	See Revision List (Pg. 4)		December 23, 2009	
	Revision 1.1	See Revision List (Pg. 4)		December 22, 2009	
	Revision 1.0	Initial Release		December 03, 2009	
TEST REPORT SIGNATORIES	Testing Performed By		Test Report Prepared By		
	Sean Johnston - Celltech		Jonathan Hughes - Celltech		
TEST LAB AND LOCATION	Celltech Compliance Testing and Engineering Lab				
	21-364 Lougheed 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)	ISO/IEC 17025:2005 (A2LA Test Lab Certificate No. 2470.01)				

Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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	Test Report Issue Date December 23, 2009	Description of Test(s) Specific Absorption Rate	RF Exposure Category Occupational (Controlled)	

## DECLARATION OF COMPLIANCE SAR RF EXPOSURE EVALUATION


<b>Test Lab Information</b>		<b>Name</b>	CELLTECH LABS INC.								
		<b>Address</b>	21-364 Lougheed Road, Kelowna, B.C. V1X 7R8 Canada								
<b>Applicant Information</b>		<b>Name</b>	HARRIS CORPORATION - RF COMMUNICATIONS DIVISION								
		<b>Address</b>	1680 University Avenue, Rochester, NY 14610 United States								
<b>Standard(s) Applied</b>		<b>FCC</b>	47 CFR §2.1093	<b>IC</b>	Health Canada Safety Code 6						
		<b>FCC</b>	OET Bulletin 65, Supplement C	<b>IC</b>	RSS-102 Issue 3						
<b>Procedure(s) Applied</b>		<b>FCC</b>	KDB 447498 D01v04	KDB Inquiry Tracking No. 794297							
		<b>IEEE</b>	1528-2003	<b>IEC</b>	62209-1:2005	<b>IEC</b>	62209-2 (Draft)				
<b>Device Identifier(s)</b>		<b>FCC ID:</b>	AQZ-XG-100P00		<b>IC:</b>	122D-XG100P00					
<b>Device Model(s)</b>		UNITY XG-100P		<b>Test Sample Serial No.</b>	EM067 (Identical Prototype)						
<b>Device Description</b>		<b>700/800 PTT</b>	Portable Push-To-Talk (PTT) Multi-Band Radio Transceiver (Analog FM / Digital P25 FDMA)								
		<b>Bluetooth</b>	Class 1 Bluetooth - Pwr = > 60/f <sub>(GHz)</sub> mW - Manuf. max. cond. pwr spec. = 20 dBm (Average) Supports simultaneous transmission - PTT antenna to Bluetooth antenna distance = ~ 130 mm								
<b>DUT Hardware / Software Revisions</b>		Version SW Platform 12082-8900_0.1.8			Version SW Build Nov 9 2009 - 11:58:03						
		Version HW FPGA LMR_091509_1358			Version HW FPGA_PN 12082-4030-01						
<b>Frequency Ranges Tested (700/800)</b>		763 - 775 MHz		793 - 805 MHz		806 - 824 MHz		851 - 869 MHz			
<b>Manufacturer's Rated Output Power</b>		34.2 dBm	2.63 Watts	+0.5 / -0.2 dB		Conducted		763-775 / 793-805 MHz			
		35.0 dBm	3.16 Watts	+0.5 / -0.2 dB		Conducted		806-824 / 851-869 MHz			
<b>Test Channels &amp; RF Output Power</b>		No. of Ch.s	MHz	dBm	Watts	Ch	MHz	dBm	Watts	Method	
		N <sub>c</sub> = 3	1	763.0	34.4	2.75	1	806.0	35.1	3.24	Conducted
			2	769.0	34.4	2.75	2	815.0	35.1	3.24	Conducted
			3	775.0	34.4	2.75	3	824.0	35.1	3.24	Conducted
			1	793.0	34.4	2.75	1	851.0	35.2	3.31	Conducted
			2	799.0	34.4	2.75	2	860.0	35.3	3.39	Conducted
			3	805.0	34.4	2.75	3	869.0	35.1	3.24	Conducted
<b>Antenna Type(s) Tested</b>		Ext. Detachable Full-Spectrum Multi-Band			P/N: 12082-0250-01		Length: 240 mm				
<b>Battery Type(s) Tested</b>		Lithium-ion		7.4 V		3650 mAh		P/N: 12082-0308-01			
		Alkaline Case		1.5 V (x6 AA)		Energizer Industrial		P/N: 12082-0309-01			
<b>Body-worn Accessories Tested</b>		Metal Belt-Clip		1.2 cm Spacing		Contains Metal		P/N: 12082-1291-01			
		Nylon Case (Window) Nylon Shoulder Strap		1.5 cm Spacing		Contains Metal		P/N: 12082-0512-01			
		Leather Case (D-Rings) Full with Shoulder Strap		1.5 cm Spacing		Contains Metal		P/N: 12082-0500-01			
		Leather Case (D-Clip) Full with Swivel Belt-Loop (3")		4.5 cm Spacing		Contains Metal		P/N: 12082-0505-01			
<b>Audio Accessories Tested</b>		Speaker-Microphone						P/N: 12082-0600-01			
<b>Max. SAR Level(s) Evaluated</b>		Face-held	0.647 W/kg	1g	50% PTT duty cycle	Occupational / Controlled Exp.					
		Body-worn	3.27 W/kg	1g	50% PTT duty cycle	Occupational / Controlled Exp.					
<b>FCC/IC Spatial Peak SAR Limit</b>		Head/Body	8.0 W/kg	1g	50% PTT duty cycle	Occupational / Controlled Exp.					
Celltech Labs Inc. declares under its sole responsibility that this wireless portable device has demonstrated compliance with the Specific Absorption Rate (SAR) RF exposure measurement standards and procedures as listed above. All measurements were performed in accordance with the SAR system manufacturer recommendations.											
I attest to the accuracy of data. All measurements were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.											
The results and statements contained in this report pertain only to the device(s) evaluated.											
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<b>Test Report Approved By</b>					<b>Sean Johnston</b>			<b>Celltech Labs Inc.</b>			



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	


<b>REVISION HISTORY</b>		
<b>REVISION NO.</b>	<b>DESCRIPTION</b>	<b>RELEASE DATE</b>
1.0	Initial Release	December 03, 2009
1.1	1. Added Revision History (page 4) 2. Changed FCC ID and IC ID (per Harris Corporation) all pages 3. Changed nominal rated power specification (per Harris Corporation) pgs 1-2 4. Revised conducted output power measurement table (Section 4, page 6) 5. Corrected Bluetooth maximum average conducted output power (page 2) 6. Revised items 10-11 to item 10 only - simultaneous transmission (page 12) 7. Changed Belt-Clip part no. to 12082-1291-01 (per Harris Corporation) 8. Corrected part no. of Leather Case (Full) and Swivel Belt-Loop accessory evaluated for SAR to part no. 12082-0502-02 (3" loop) and corrected item 3e to 3" loop (Section 9, page 14) 9. Revised description of difference between 2.5" and 3" Swivel Belt-Loop (pages 5 and 9) and corresponding accessory listing note no. reference (pg 5) 10. Corrected separation distance provided by the Leather Case (Full) and 3" Swivel Belt-Loop accessory (back of radio to phantom & antenna to phantom) 11. Added photos of Leather Case (D-Rings) Half - p/n 12082-0501-01 (page 126) 12. Added photos of 2.5" Belt-Loop (page 131) 13. Revised PTT antenna to Bluetooth antenna distance (page 2) 14. Corrected test sample serial number on SAR test plots (Appendix A)	December 22, 2009
1.2	Corrected IC ID (all pages)	December 23, 2009



<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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## 1.0 DUT ACCESSORY LISTING

Part Number	Accessory Type	Inc. in SAR Eval.
12082-0250-01	ANTENNA, UNITY, 136-870 MHz, HELICAL	Yes
12082-0308-01	BATTERY, LITHIUM-ION	Yes
12082-0600-01	STANDARD SPEAKER MICROPHONE	Yes
12082-0310-01	CHARGER, 1-BAY, TRI-CHEMISTRY	n/a
12082-0314-01	CHARGER, 6-BAY, TRI-CHEMISTRY	n/a
12082-0309-01	BATTERY, AA CLAMSHELL	Yes
12082-1291-01	BELT CLIP, METAL	Yes
12082-0504-01	STRAP, NYLON	Yes
12082-0505-01	STRAP, LEATHER	Yes
12082-0512-01	CASE, NYLON, WINDOW, T-STRAP	Yes
12082-0510-01	CASE, NYLON, FULL, T-STRAP	No <sup>1</sup>
12082-0507-02	CASE, LEATHER, HALF, 3" LOOP	No <sup>3</sup>
12082-0507-01	CASE, LEATHER, HALF, 2.5" LOOP	No <sup>2</sup>
12082-0502-02	CASE, LEATHER, FULL, 3" LOOP	Yes
12082-0502-01	CASE, LEATHER, FULL, 2.5" LOOP	No <sup>2</sup>
12082-0501-01	CASE, LEATHER, HALF, T-STRAP	No <sup>4</sup>
12082-0500-01	CASE, LEATHER, FULL, T-STRAP	Yes
12082-0410-A1	CABLE, USB Programming	n/a
12082-0400-A1	CABLE, KVL Key Loading	n/a
<b>Notes</b>		
<p>1. Accessory not evaluated due to identical SAR characteristics as the Nylon Case (Window) accessory evaluated for SAR - the only difference is the Nylon Case (Full) accessory has full nylon material on the front side (radio keypad side) of the accessory whereas the Nylon Case (Window) accessory has clear plastic material on the front side (radio keypad side) of the accessory.</p>		
<p>2. Accessories not evaluated due to identical SAR characteristics as the Leather Case with 3" Swivel Belt-Loop evaluated for SAR. The only difference is the increased length (0.5") of the inside gap on the 3" Belt-Loop to accommodate a wider belt and the 2.5" Belt-Loop is otherwise identical to the 3" Belt-Loop evaluated for SAR. Both the 2.5" and 3" belt-loops provide the same separation distance from the back of the radio to planar phantom.</p>		
<p>3. Accessory not evaluated due to identical SAR characteristics as the Leather Case (Full) with Swivel Belt-Loop accessory evaluated for SAR - the only difference is the amount of leather material (Half versus Full) on the front side (radio keypad side) of the accessory.</p>		
<p>4. Accessory not evaluated due to identical SAR characteristics as the Leather Case (Full) with Shoulder Strap accessory evaluated for SAR - the only difference is the amount of leather material (Half versus Full) on the front side (radio keypad side) of the accessory.</p>		

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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## 2.0 INTRODUCTION


This measurement report demonstrates that the Harris Corporation Model: XG-100P Portable Analog/Digital PTT Multi-Band Radio Transceiver (700/800 Band) 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 Occupational / Controlled Exposure environment. The measurement procedures described in FCC OET Bulletin 65, Supplement C 01-01 (see reference [3]), IC RSS-102 Issue 3 (see reference [4]), IEEE Standard 1528-2003 (see reference [5]), IEC Standard 62209-1:2005 (see reference [6]) and Draft Standard IEC 62209-2 (see reference [7]) were employed. A description of the device, 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.

## 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 head 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 a controller with a built in VME-bus computer.

## 4.0 RF CONDUCTED OUTPUT POWER MEASUREMENTS

MEASURED RF CONDUCTED OUTPUT POWER LEVELS						
$N_c = 3^1$	Freq. (MHz)	Mode	Watts	dBm	Manufacturer's Nominal Rated Output Power	
					dBm	Tolerance Spec.
1	763.0	CW	2.75	34.4	34.2	+0.5 / -0.2 dB
2	769.0	CW	2.75	34.4		
3	775.0	CW	2.75	34.4		
1	793.0	CW	2.75	34.4		
2	799.0	CW	2.75	34.4		
3	805.0	CW	2.75	34.4		
1	806.0	CW	3.24	35.1	35.0	
2	815.0	CW	3.24	35.1		
3	824.0	CW	3.24	35.1		
1	851.0	CW	3.31	35.2		
2	860.0	CW	3.39	35.3		
3	869.0	CW	3.24	35.1		
<b>Notes</b>						
1. The test channels were selected in accordance with the procedural guidelines of FCC KDB Inquiry No. 794297.						
2. The RF conducted output power levels of the DUT were measured by Celltech prior to the SAR evaluations using a Gigatronics 8652A Universal Power Meter at the external antenna connector.						
3. The DUT was preset by the manufacturer to the nominal rated conducted output power level. The SAR levels measured and reported are well below the SAR limit with sufficient margin for compliance at the upper tolerance spec.						

<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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## 5.0 SAR PROBE CALIBRATION & MEASUREMENT FREQUENCIES

The following procedures are recommended for measurements at 150 MHz - 3 GHz to minimize probe calibration and tissue dielectric parameter discrepancies. In general, SAR measurements below 300 MHz should be within  $\pm 50$  MHz of the probe calibration frequency. At 300 MHz to 3 GHz, measurements should be within  $\pm 100$  MHz of the probe calibration frequency. Measurements exceeding 50% of these intervals,  $\pm 25$  MHz  $< 300$  MHz and  $\pm 50$  MHz  $\geq 300$  MHz, require additional steps (per FCC KDB 450824 D01 v01r01, SAR Probe Calibration and System Verification Considerations for Measurements at 150 MHz - 3 GHz - see reference [9]).

Probe Calibration Freq.	Device Measurement Freq.	Frequency Interval	$\pm 50$ MHz $\geq 300$ MHz
<b>835 MHz</b>	763 MHz	72 MHz	$> 50$ MHz <sup>2</sup>
	769 MHz	66 MHz	$> 50$ MHz <sup>2</sup>
	775 MHz	60 MHz	$> 50$ MHz <sup>2</sup>
	793 MHz	42 MHz	$< 50$ MHz <sup>1</sup>
	799 MHz	36 MHz	$< 50$ MHz <sup>1</sup>
	805 MHz	30 MHz	$< 50$ MHz <sup>1</sup>
	806 MHz	29 MHz	$< 50$ MHz <sup>1</sup>
	815 MHz	20 MHz	$< 50$ MHz <sup>1</sup>
	824 MHz	11 MHz	$< 50$ MHz <sup>1</sup>
	851 MHz	16 MHz	$< 50$ MHz <sup>1</sup>
	860 MHz	25 MHz	$< 50$ MHz <sup>1</sup>
869 MHz	34 MHz	$< 50$ MHz <sup>1</sup>	



1. The probe calibration and measurement frequency interval is  $< 50$  MHz; therefore the additional steps were not required.

2. The probe calibration and measurement frequency interval is  $> 50$  MHz; therefore the following additional steps were implemented (per FCC KDB 450824 D01 v01r01): *The measured 1-g SAR may be compensated with respect to +5% tolerances in  $\epsilon_r$  and -5% tolerances in  $\sigma$ , computed according to valid SAR sensitivity data, to reduce SAR underestimation and maintain conservativeness.* SAR sensitivity data is per SPEAG DASY4 Manual (see reference [10]).

Probe Calibration Frequency = 835 MHz				Target Parameters:		Head 41.5 $\epsilon_r$ / 0.9 $\sigma$		Body 55.2 $\epsilon_r$ / 0.97 $\sigma$	
Test Freq.	Tissue	$\sigma$	Sensitivity	$\epsilon_r$	Sensitivity	% Change	Compensated Max. SAR Level		
763 MHz	Head	-4.4%	n/a	+2.4%	n/a	n/a	n/a	1g	50% ptt d/c
769 MHz	Head	-4.4%	n/a	+2.4%	n/a	n/a	n/a	1g	50% ptt d/c
775 MHz	Head	-3.4%	n/a	+1.7%	n/a	n/a	n/a	1g	50% ptt d/c
763 MHz	Body	-5.0%	n/a	+0.9%	n/a	n/a	n/a	1g	50% ptt d/c
769 MHz	Body	-5.0%	n/a	+0.9%	n/a	n/a	n/a	1g	50% ptt d/c
775 MHz	Body	-5.0%	n/a	+0.4%	n/a	n/a	n/a	1g	50% ptt d/c

Parameter	$\epsilon$	$\sigma$	$\rho$
f=800MHz, d=15 mm ( $\epsilon_r=41.5$ , $\sigma=0.90$ S/m)			
SAR Peak	- 0.70	+ 0.86	-
SAR 1 g	- 0.57	+ 0.59	0.10
SAR 10 g	- 0.45	+ 0.35	0.18

Note: Per SPEAG, the above sensitivity data (Head) from the DASY4 manual (see reference [10]) can be applied to Body tissue parameters provided the approximation is for  $< 5\%$  deviation of liquid parameters.

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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

## 6.0 FCC SAR TEST REDUCTION PROCEDURES (KDB 794297)

The following procedures were applied to determine the number of test frequencies and channels to be evaluated for SAR based on the number-of-test-frequencies formula for test frequency reduction provision prescribed by the FCC in KDB Inquiry Tracking No. 794297 (interim ptt device test redux adjusted2).

### FCC KDB Inquiry Tracking No. 794297 (interim ptt device test redux adjusted2)

1) Antennas are the primary radiating structures for wireless transmitters, and therefore are generally not considered for test reductions in similar manners as other accessories. When multiple antennas are available, each antenna should be tested at the required frequency channels according to the transmission band covered by the specific antenna used for the device (e.g. some antennas may not cover all transmission bands), and according to the required accessory combinations determined under an acceptable test reduction plan, as described in the following items. For antennas that are substantially equivalent as confirmed by SAR data, e.g. at the highest SAR channel with equivalent (practically identical) SAR distributions, testing at other channels for other similar antennas may be optional, provided that the SAR results do not show unexpected or significant changes among the other channels tested.

There is only one antenna option for the Unity XG-100P.

2) Each antenna (among the one or more available antennas) should be tested at its mid-band channel, for all accessories in each accessory category, to determine the highest SAR configuration for each accessory category (i.e. battery, body-worn and audio accessories etc.). Because a battery is the minimum accessory necessary for the device to function, the testing procedures for each antenna [at the mid-band channel, or for the two or three channels specified per item 7)] should start by determining the highest SAR for each battery category (e.g. long and short physical dimensions, etc.), and without any body-worn and audio accessories, for body and head configurations. The highest SAR configuration in each battery category should be tested with each applicable body-worn accessory combination for each antenna at the mid-band channel to determine the body-worn accessory with highest SAR. It is assumed that the audio accessories are only used in conjunction with specific body-worn accessories; therefore, the process may continue by testing each antenna at the mid-band channel using the highest SAR battery in each battery category and the highest SAR body-worn accessory to determine the highest SAR audio accessory. The combination of highest SAR battery per category, and body-worn and audio accessories, should be used to perform testing for the other channels per item 1).

For body-worn configuration, "baseline" highest SAR search procedure evaluations were performed in order to determine the highest SAR for each battery category (Lithium-ion and Alkaline) without any body-worn or audio accessories connected. The highest SAR configuration in each battery category was tested with each applicable body-worn accessory combination at the 2<sup>nd</sup> (Mid) channel in each band split in order to determine the body-worn accessory with the highest SAR. The specified speaker-microphone is the only audio accessory option for the Unity XG-100P (excluding the wireless Speaker-Microphone with Bluetooth audio accessory). The remaining 1<sup>st</sup> and 3<sup>rd</sup> test channels in each band split were subsequently evaluated with the highest SAR battery and body-worn accessory configuration. For face-held configuration, the "baseline" highest SAR search procedure evaluations were addressed by the required face-held SAR measurements evaluated at 2.5 cm spacing from the planar phantom.

3) It is anticipated that the different batteries, and body-worn and audio accessories, may not operate together in all combinations. It may be necessary to sub-categorize the body-worn and audio accessories, similar to the long and short battery categories, to facilitate searching for the highest SAR configuration for the other channel testing of item 1).


Both the Lithium-ion and Alkaline battery types can be utilized with all specified body-worn accessories and the specified speaker-microphone audio accessory.

4) In each step of the highest SAR configuration search for each accessory category [i.e. item 2)], besides determining the highest SAR configurations, all configurations in each accessory category with SAR larger than 70% of the limit should also be included in the highest SAR search using subsequent accessories (body-worn, audio etc.) and in the other channel testing of item 1).



All measured SAR levels were less than 70% of the limit (50% PTT duty factor).

5) Accessories that can be demonstrated to have identical SAR characteristics and/or noticeably lower SAR may be excluded in the search procedure of item 2) with acceptable justification clearly documented.

Test exclusion from the SAR search procedures was applied to the Nylon Case (Full) accessory. The Nylon Case (Full) accessory was determined to have identical SAR characteristics as the Nylon Case (Window) accessory evaluated for SAR, based on the only difference is the Nylon Case (Full) accessory has full nylon material on the front side (radio keypad side) of the accessory whereas the Nylon Case (Window) accessory has clear plastic material on the front side (radio keypad side) of the accessory.

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

## FCC SAR TEST REDUCTION PROCEDURES (CONT.)

Test exclusion from the SAR search procedures was applied to the Nylon Case (Full) accessory. The Nylon Case (Full) accessory was determined to have identical SAR characteristics as the Nylon Case (Window) accessory evaluated for SAR, based on the only difference is the Nylon Case (Full) accessory has full nylon material on the front side (radio keypad side) of the accessory whereas the Nylon Case (Window) accessory has clear plastic material on the front side (radio keypad side) of the accessory.

Test exclusion from the SAR search procedures was applied to the Leather Case (Half) with Shoulder Strap accessory. The Leather Case (Half) accessory was determined to have identical SAR characteristics as the Leather Case (Full) accessory evaluated for SAR, based on the only difference is the Leather Case (Half) accessory only has leather material on half of the front side (radio keypad side) of the accessory (the remainder is open-faced) whereas the Leather Case (Full) accessory contains leather material on all of the front side (radio keypad side) of the accessory.

Test reduction was applied to the Leather Case (Full) accessory with Swivel Belt-Loop (3") attachment. The Swivel Belt-Loop attachment contains a metal plate which hooks on to the metal swivel on the Leather Case accessory. The Leather Case with Swivel Belt-Loop accessory provides a 4.5 cm spacing from the back side of the DUT to the planar phantom versus the 1.5 cm spacing the Leather Case with Metal D-Rings and Shoulder Strap accessory provides. The Leather Case (Full) with Swivel Belt-Loop (3") accessory was included in the highest SAR search procedures based on the significant amount of metal contained in the accessory components; however based on the increased spacing from the back of the DUT to the planar phantom the Leather Case (Full) with Swivel Belt-Loop (3") was only evaluated with the Lithium-ion battery.

Test exclusion from the SAR search procedures was applied to the Leather Case (Half) with Swivel Belt-Loop accessory. The Leather Case (Half) with Swivel Belt-Loop accessory was determined to have identical SAR characteristics as the Leather Case (Full) with Swivel Belt-Loop accessory evaluated for SAR; based on the only difference is the amount of leather material (Half versus Full) on the front side (radio keypad side) of the accessory.

Test exclusion from the SAR search procedures was applied to the Leather Case with Swivel Belt-Loop (2.5") accessory. The Leather Case with Swivel Belt-Loop (2.5") accessory was determined to have identical SAR characteristics as the Leather Case with Swivel Belt-Loop (3") evaluated for SAR. The only difference is the increased length (0.5") of the inside gap on the 3" Belt-Loop to accommodate a wider belt and the 2.5" Belt-Loop is otherwise identical to the 3" Belt-Loop evaluated for SAR. Both the 2.5" and 3" belt-loops provide the same separation distance from the back of the radio to the planar phantom.

6) The highest SAR search procedures of item 2) should be applied separately to each exposure condition; for example, held-to-face and body etc. configurations, and must be tested with the required separation distance from the relevant surface of the device (e.g. back or front). Transmitters designed to operate in push-to-talk configurations in front of a person's face should be tested with the device positioned at 2.5 cm from a flat phantom. Initial testing for body configurations under item 2) should position the device at the smallest distance that would be provided by any intended accessories used in the subsequent highest SAR search procedures.

For the body-worn "baseline" highest SAR search procedure evaluations an air-gap spacing of 1.2 cm was utilized between the back of the DUT and the planar phantom based on the smallest distance provided by the belt-clip accessory. For the face-held configuration the "baseline" highest SAR search procedure evaluations were addressed by the required face-held SAR measurements evaluated at 2.5 cm spacing from the planar phantom.

7) When the operating bandwidth of an antenna is larger than 10% of the mid-band channel frequency, more than 3 channels (high, middle, and low) will need to be tested under item 1). When 5 channels are required for testing, the 2nd and 4th channel in the sequence should be used in the search procedures in item 2) instead of the mid-band channel. When 7 channels are required, in addition to the mid-band channel the 2nd and the 6th should also be tested in the search procedures of item 2).


The following formula prescribed by the FCC in KDB Inquiry Tracking No. 794297 was applied in order to determine the required number of test frequencies:



$$N_c = \text{Round} \{ [ 100 \times ( f_h - f_l ) / f_c ]^{0.5} \times ( f_c / 100 )^{0.2} \}$$

fh	fl	fh-fl	fc	% BW	Nc
763	775	12	769	2	2
793	805	12	799	2	2
806	824	18	815	2	2
851	869	18	860	2	2

Notes:

- Per FCC KDB 794297: concerning att. herein entitled {interim ptt device test redux adjusted2} - for Nc = 4 and Nc = 2, use fc for the baseline and the other testing under step 2) of that att., then final test configuration will have the fc results plus the Nc = 4 and Nc = 2 equi-spaced channels (final test total 5 ch and 3 ch. resp.)


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<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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## 7.0 SAR MEASUREMENT SUMMARY

### FACE-HELD SAR EVALUATION MEASUREMENT RESULTS

Test Date	Freq. Band	Test Freq.	Test Chan.	Battery Type	Device Distance to Planar Phantom		Cond. Power Before Test	Measured SAR 1g (W/kg)		SAR Drift During Test	Scaled SAR with droop 1g (W/kg)	
					DUT	Antenna		PTT Duty Cycle			PTT Duty Cycle	
								100%	50%		100%	50%
MHz	MHz	$N_c = 3$			Watts	100%	50%	dB	100%	50%		
Nov 17	763-775	769.0	2	Li-ion	2.5 cm	5.0 cm	2.75	0.576	0.288	-1.12	0.746	0.373
Nov 17				Alkaline				2.75	0.479		0.240	-1.22
Nov 17		775.0	3	Li-ion	2.5 cm	5.0 cm	2.75	0.466	0.233	-0.572	0.532	0.266
Nov 17								2.75	0.624		0.312	-0.509
Nov 17	793-805	799.0	2	Li-ion	2.5 cm	5.0 cm	2.75	0.738	0.369	-0.327	0.796	0.398
Nov 17				Alkaline				2.75	0.538		0.269	-0.231
Nov 17		805.0	3	Li-ion	2.5 cm	5.0 cm	2.75	0.769	0.385	-0.526	0.868	0.434
Nov 17								2.75	0.745		0.373	-0.539
Nov 17	806-824	815.0	2	Li-ion	2.5 cm	5.0 cm	3.24	0.543	0.272	-1.04	0.690	0.345
Nov 17				Alkaline				3.24	0.508		0.254	-1.15
Nov 17		824.0	3	Li-ion	2.5 cm	5.0 cm	3.24	0.892	0.446	-0.743	1.06	0.530
Nov 17								3.24	0.584		0.292	-1.45
Nov 17	851-869	860.0	2	Li-ion	2.5 cm	5.0 cm	3.39	0.637	0.319	-1.21	0.842	0.421
Nov 17				Alkaline				3.39	0.918		0.459	-1.49
Nov 17		869.0	3	Alkaline	2.5 cm	5.0 cm	3.31	0.671	0.336	-1.65	0.981	0.491
Nov 17								3.24	0.705		0.353	-1.46

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<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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## SAR MEASUREMENT SUMMARY (CONT.)

BODY-WORN SAR EVALUATION MEASUREMENT RESULTS - 700 MHz Band														
Test Date	Freq. Band	Test Freq.	Test Chan.	Battery Type	Accessory Type(s)		Device Distance to Planar Phantom		Cond. Power Before Test	Measured SAR 1g (W/kg)		SAR Drift During Test	Scaled SAR with droop 1g (W/kg)	
										PTT Duty Cycle			dB	PTT Duty Cycle
		MHz	N <sub>c</sub> = 3		Body-worn	Audio	DUT	Antenna	Watts	100%	50%	100%		50%
Nov 20	763-775	769.0	2	Li-ion	None (Baseline)	None (Baseline)	1.2 cm	2.0 cm	2.75	P 1.76	0.880	-1.01	P 2.22	1.11
Nov 20				S 1.47						0.735	S 1.85		0.927	
Nov 20		769.0	2	Alkaline	Metal Belt-Clip	Spkr-Mic	1.2 cm	2.0 cm	2.75	P 1.22	0.610	-0.902	P 1.50	0.751
Nov 20				S 1.47						0.735	S 1.81		0.905	
Nov 20		769.0	2	Li-ion	Nylon Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	2.75	P 2.28	1.14	-1.10	P 2.94	1.47
Nov 20				S 1.83						0.915	S 2.36		1.18	
Nov 20		769.0	2	Alkaline	Leather Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	2.75	P 2.16	1.08	-1.29	P 2.91	1.46
Nov 20				S 1.46						0.730	S 1.97		0.985	
Nov 20		769.0	2	Li-ion	Leather Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	2.75	P 2.12	1.06	-0.823	P 2.56	1.28
Nov 20				S 1.56						0.780	S 1.86		0.930	
Nov 20		769.0	2	Alkaline	Leather Case & 3" Belt-Loop	Spkr-Mic	4.5 cm	5.5 cm	2.75	P 1.46	0.730	-1.26	P 1.95	0.976
Nov 20				S 1.10						0.550	S 1.47		0.735	
Nov 20		769.0	2	Li-ion	Leather Case & 3" Belt-Loop	Spkr-Mic	4.5 cm	5.5 cm	2.75	0.567	0.284	-0.908	0.699	0.350
Nov 20		763.0	1	Alkaline	Metal Belt-Clip	Spkr-Mic	1.2 cm	2.0 cm	2.75	2.97	1.49	-1.01	3.75	1.88
Nov 20	775.0	3	Alkaline	Metal Belt-Clip	Spkr-Mic	1.2 cm	2.0 cm	2.75	3.25	1.63	-0.955	4.05	2.03	
Nov 23	793-805	799.0	2	Li-ion	None (Baseline)	Spkr-Mic	1.2 cm	2.0 cm	2.75	P 2.05	1.03	-1.12	P 2.65	1.33
Nov 23				S 1.60						0.800	S 2.07		1.04	
Nov 23		799.0	2	Alkaline	Metal Belt-Clip	Spkr-Mic	1.2 cm	2.0 cm	2.75	P 1.17	0.585	-0.814	P 1.41	0.706
Nov 23				S 0.736						0.368	S 0.888		0.444	
Nov 23		799.0	2	Li-ion	Nylon Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	2.75	5.14	2.57	-0.455	5.71	2.86
Nov 23				2.86						1.43	-0.752		3.40	1.70
Nov 23		799.0	2	Alkaline	Leather Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	2.75	1.87	0.935	-0.917	2.31	1.16
Nov 23				P 3.35						1.68	-1.27		P 4.49	2.25
Nov 23		799.0	2	Li-ion	Leather Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	2.75	S 1.15	0.575	-0.737	S 1.54	0.770
Nov 23				3.45						1.73	-0.731		4.09	2.05
Nov 23		799.0	2	Alkaline	Leather Case & 3" Belt-Loop	Spkr-Mic	4.5 cm	5.5 cm	2.75	2.62	1.31	-0.731	3.10	1.55
Nov 23				0.549						0.275	-0.598		0.630	0.315
Nov 23		793.0	1	Li-ion	Metal Belt-Clip	Spkr-Mic	1.2 cm	2.0 cm	2.75	2.07	1.04	-0.631	2.39	1.20
Nov 23		805.0	3	Li-ion	Metal Belt-Clip	Spkr-Mic	1.2 cm	2.0 cm	2.75	5.49	2.75	-0.751	6.53	3.27

**SAR MEASUREMENT SUMMARY (CONT.)**



BODY-WORN SAR EVALUATION MEASUREMENT RESULTS - 800 MHz Band															
Test Date	Freq. Band	Test Freq.	Test Chan.	Battery Type	Accessory Type(s)		Device Distance to Planar Phantom		Cond. Power Before Test	Measured SAR 1g (W/kg)		SAR Drift During Test	Scaled SAR with droop 1g (W/kg)		
										PTT Duty Cycle			dB	PTT Duty Cycle	
		MHz	N <sub>c</sub> = 3		Body-worn	Audio	DUT	Antenna	Watts	100%	50%	100%		50%	
Nov 24	806-824	815.0	2	Li-ion	None (Baseline)	Spkr-Mic	1.2 cm	2.0 cm	3.24	2.40	1.20	-0.894	2.95	1.48	
Nov 24				Alkaline					3.24	P 1.19	0.595	-1.50	P 1.68	0.840	
										S 0.926	0.463		S 1.31	0.655	
Nov 24		815.0	2	Li-ion	Metal Belt-Clip	Spkr-Mic	1.2 cm	2.0 cm	3.24	3.60	1.80	-1.34	4.90	2.45	
Nov 24				Alkaline					3.24	P 2.56	1.28	-1.63	P 3.73	1.87	
										S 2.79	1.40		S 4.06	2.03	
Nov 24		815.0	2	Li-ion	Nylon Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	3.24	2.3	1.15	-1.01	2.90	1.45	
Nov 24				Alkaline					3.24	2.51	1.26	-1.44	3.50	1.75	
Nov 24		815.0	2	Li-ion	Leather Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	3.24	P 2.90	1.45	-1.48	P 4.08	2.04	
Nov 24				Alkaline					3.24	S 1.10	0.550	-1.18	S 1.55	0.775	
										1.75	0.875		2.30	1.15	
Nov 24		806.0	815.0	2	Li-ion	Leather Case & 3" Belt-Loop	Spkr-Mic	4.5 cm	5.5 cm	3.24	0.338	0.169	-0.790	0.405	0.203
Nov 24					Li-ion					3.24	4.07	2.04	-0.568	4.64	2.23
Nov 24			824.0	3	Li-ion	Metal Belt-Clip	Spkr-Mic	1.2 cm	2.0 cm	3.24	1.84	0.920	-0.599	2.11	1.06
Nov 24	3.24									1.84	0.920	-0.599	2.11	1.06	
Nov 25	851-869	860.0	2	Li-ion	None (Baseline)	Spkr-Mic	1.2 cm	2.0 cm	3.39	2.25	1.13	-1.23	2.99	1.50	
Nov 25				Alkaline					3.39	P 1.68	0.840	-1.46	P 2.35	1.18	
										S 1.27	0.635		S 1.78	0.890	
Nov 25		860.0	2	Li-ion	Metal Belt-Clip	Spkr-Mic	1.2 cm	2.0 cm	3.39	2.95	1.48	-1.29	3.97	1.99	
Nov 25				Alkaline					3.39	P 2.76	1.38	-1.59	P 3.98	1.99	
										S 2.09	1.05		S 3.02	1.51	
Nov 25		860.0	2	Li-ion	Nylon Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	3.39	3.07	1.54	-1.36	4.20	2.10	
Nov 25				Alkaline					3.39	3.09	1.55	-1.62	4.49	2.25	
Nov 25		860.0	2	Li-ion	Leather Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	3.39	2.16	1.08	-1.15	2.82	1.41	
Nov 25				Alkaline					3.39	2.70	1.35	-1.72	4.01	2.01	
Nov 25		860.0	2	Li-ion	Leather Case & 3" Belt-Loop	Spkr-Mic	4.5 cm	5.5 cm	3.39	0.585	0.293	-1.05	0.745	0.373	
Nov 25				Li-ion					3.31	3.54	1.77	-1.33	4.81	2.41	
Nov 25		869.0	3	Li-ion	Nylon Case & Shoulder Strap	Spkr-Mic	1.5 cm	2.2 cm	3.24	1.48	0.740	-1.69	2.18	1.09	
Nov 25									3.24	1.48	0.740	-1.69	2.18	1.09	

## 8.0 MEASURED FLUID DIELECTRIC PARAMETERS

### HEAD & BODY MEASURED FLUID DIELECTRIC PARAMETERS

765 MHz Body - Nov 20															775 MHz Body - Nov 20						795 MHz Body - Nov 23						805 MHz Body - Nov 23						805 MHz Body - Nov 24					
Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$														
835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.												
55.2	± 5%	55.7	+0.9%	55.2	± 5%	55.4	+0.4%	55.2	± 5%	55.3	+0.2%	55.2	± 5%	55.4	+0.4%	55.2	± 5%	54.7	-0.9%																			
Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)																	
835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.												
0.97	± 5%	0.92	-5.0%	0.97	± 5%	0.92	-5.0%	0.97	± 5%	0.93	-4.2%	0.97	± 5%	0.95	-2.1%	0.97	± 5%	0.94	-3.0%																			
815 MHz Body - Nov 24				825 MHz Body - Nov 24				855 MHz Body - Nov 25				865 MHz Body - Nov 25				765 MHz Head - Nov 17																						
Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$																							
835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.																					
55.2	± 5%	54.4	-1.4%	55.2	± 5%	54.3	-1.6%	55.2	± 5%	53.9	-2.3%	55.2	± 5%	53.9	-2.3%	41.5	± 5%	42.5	+2.4%																			
Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)																							
835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.																					
0.97	± 5%	0.95	-2.1%	0.97	± 5%	0.97	0.0%	0.97	± 5%	0.97	0.0%	0.97	± 5%	0.99	+2.0%	0.90	± 5%	0.86	-4.4%																			
775 MHz Head - Nov 17				795 MHz Head - Nov 17				805 MHz Head - Nov 17				815 MHz Head - Nov 17				825 MHz Head - Nov 17																						
Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$																							
835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.																					
41.5	± 5%	42.2	+1.7%	41.5	± 5%	42.1	+1.5%	41.5	± 5%	42.0	+1.2%	41.5	± 5%	42.0	+1.2%	41.5	± 5%	41.4	-0.2%																			
Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)																							
835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.	835 Target	Meas.	Dev.																					
0.90	± 5%	0.87	-3.4%	0.90	± 5%	0.88	-2.2%	0.90	± 5%	0.89	-1.0%	0.90	± 5%	0.90	0.0%	0.90	± 5%	0.91	+1.1%																			
855 MHz Head - Nov 17				865 MHz Head - Nov 17																																		
Dielectric Constant $\epsilon_r$			Dielectric Constant $\epsilon_r$																																			
835 Target	Meas.	Dev.	835 Target	Meas.	Dev.																																	
41.5	± 5%	41.3	-0.5%	41.5	± 5%	40.9	-1.4%																															
Conductivity $\sigma$ (mho/m)			Conductivity $\sigma$ (mho/m)																																			
835 Target	Meas.	Dev.	835 Target	Meas.	Dev.																																	
0.90	± 5%	0.93	+3.4%	0.90	± 5%	0.95	+5.0%																															

Test Date	Fluid Type	Ambient Temp.	Fluid Temp.	Fluid Depth	Atmospheric Pressure	Relative Humidity	$\rho$ (Kg/m <sup>3</sup> )
Nov 17	835 Head	24.0°C	22.9°C	≥ 15 cm	101.1 kPa	35%	1000
Nov 20	835 Body	24.1°C	22.9°C	≥ 15 cm	101.1 kPa	35%	1000
Nov 23	835 Body	23.8°C	22.5°C	≥ 15 cm	101.1 kPa	35%	1000
Nov 24	835 Body	22.5°C	22.1°C	≥ 15 cm	101.1 kPa	35%	1000
Nov 25	835 Body	22.8°C	22.2°C	≥ 15 cm	101.1 kPa	35%	1000


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## 9.0 DETAILS OF SAR EVALUATION

- The number of test frequencies and actual channels evaluated for SAR were selected in accordance with the number-of-test-frequencies formula for test frequency reduction prescribed by the FCC in KDB Inquiry Tracking No. 794297.
- The DUT was evaluated in a face-held configuration with the front of the radio placed parallel to the outer surface of the planar phantom. A 2.5 cm spacing was maintained between the front side of the DUT and the outer surface of the planar phantom.
- The DUT was evaluated in a body-worn configuration with the back of the radio facing the outer surface of the planar phantom as follows:
  - “Baseline” evaluations were firstly evaluated to determine the highest SAR for each battery category without any body-worn or audio accessories connected, with an air-gap spacing of 1.2 cm between the back of the DUT and the planar phantom (smallest distance provided by any intended body-worn accessories used in the subsequent highest SAR search procedures) in accordance with the test reduction procedures prescribed by the FCC in KDB Inquiry Tracking No. 794297.
  - The DUT was evaluated with the Metal Belt-Clip accessory attached the radio and the Metal Belt-Clip touching the planar phantom. The Metal Belt-Clip accessory provided a 1.2 cm spacing from the back of the DUT to the planar phantom. The Speaker-Microphone audio accessory was connected to the radio and keyed continuously for the duration of the SAR evaluations.
  - The DUT was evaluated with the radio placed inside the Nylon Case (Window) accessory with the Nylon Shoulder Strap accessory attached. The DUT with Nylon Case (Window) and Shoulder Strap accessory was positioned with the back side touching the planar phantom. The Nylon Case (Window) accessory provided a 1.5 cm spacing from the back of the DUT to the planar phantom. The speaker-microphone audio accessory was connected to the radio and keyed continuously for the duration of the SAR evaluations.
  - The DUT was evaluated with the radio placed inside the Leather Case (Full with D-Rings) accessory with the Leather Shoulder Strap accessory attached. The DUT with Leather Case (Full with D-Rings) and Shoulder Strap accessory was positioned with the back side touching the planar phantom. The Leather Case (Full with D-Rings) accessory provided a 1.5 cm spacing from the back of the DUT to the planar phantom. The speaker-microphone audio accessory was connected to the radio and keyed continuously for the duration of the SAR evaluations.
  - The DUT was evaluated with the radio placed inside the Leather Case (Full) accessory with the Leather Swivel Belt-Loop accessory (3”) attached. The DUT with Leather Case (Full) and Swivel Belt-Loop (3”) accessory was positioned with the back side touching the planar phantom. The Leather Case (Full) and Swivel Belt-Loop accessory (3”) provided a 4.5 cm spacing from the back of the DUT to the planar phantom. The speaker-microphone audio accessory was connected to the radio and keyed continuously for the duration of the SAR evaluations.
- The conducted output power levels of the DUT referenced in this report were measured by Celltech Labs Inc. prior to the SAR evaluations at the antenna connector of the DUT using a Gigatronics 8652A Universal Power Meter in accordance with FCC 47 CFR §2.1046 and IC RSS-Gen.
- The DUT was tested at the maximum output power level preset by the manufacturer in unmodulated continuous transmit operation (Continuous Wave mode at 100% duty cycle) with the transmit key constantly depressed. For a push-to-talk device the 50% duty cycle compensation reported assumes a transmit/receive cycle of equal time base.
- The area scan evaluation was performed with a fully charged battery pack. After the area scan was completed the radio was cooled down and the battery pack was replaced with a fully charged battery pack prior to the zoom scan evaluation.
- SAR-versus-Time power droop evaluations were performed for the test configuration with the maximum scaled SAR level (50% PTT duty cycle) and the test configuration with the maximum measured SAR droop. See Appendix A (SAR Test Plots) for SAR-versus-Time power droop evaluation plots.
- The fluid temperature was measured prior to and after the SAR evaluations and the temperature remained within +/- 2°C of the fluid temperature reported during the dielectric parameter measurements.
- The dielectric parameters of the simulated tissue mixtures were measured prior to the SAR evaluations using a Dielectric Probe Kit and a Network Analyzer (see Appendix C).
- SAR evaluation for simultaneous transmission of the 700/800 band PTT and Bluetooth was not required in accordance with the test exclusion provision of FCC KDB 648474 Section 4 - the sum of the 1-g SAR measured for all simultaneous transmitting antennas is less than the SAR limit. The antenna-to-antenna separation distance is ~ 130 mm.

	MAX. SAR - 700/800 BAND	MAX. SAR - BLUETOOTH	SUM OF 1-g SAR LEVELS	SAR LIMIT (Occupational)
Face	0.647 W/kg (1g)	0.114 W/kg (1g)	0.761 W/kg (1g)	8.0 W/kg (1g)
Body	3.27 W/kg (1g)	0	3.27 W/kg (1g)	8.0 W/kg (1g)

- Secondary peak SAR levels measured within 2 dB of the primary (P = Primary, S = Secondary) are reported (pg. 11-12).

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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## 10.0 SAR 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 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.
  - 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).
  - 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.

## 11.0 SYSTEM PERFORMANCE CHECK

Prior to the SAR evaluations, daily system checks were performed at the planar section of the SAM phantom with an 835MHz SPEAG dipole (see Appendix B for system performance check test plots) in accordance with the procedures described in IEEE Standard 1528-2003 (see reference [5]). A forward power of 250 mW was applied to the dipole and the system was verified to a tolerance of ±10% from the system manufacturer's dipole calibration target SAR value (see Appendix E for system manufacturer's dipole calibration procedures).

### SYSTEM PERFORMANCE CHECK EVALUATIONS

Test Date	Equiv. Tissue	SAR 1g (W/kg)			Dielectric Constant $\epsilon_r$			Conductivity $\sigma$ (mho/m)			$\rho$ (Kg/m <sup>3</sup> )	Amb. Temp. (°C)	Fluid Temp. (°C)	Fluid Depth (cm)	Humid. (%)	Barom. Press. (kPa)
		835 MHz	SPEAG Target	Meas.	Dev.	SPEAG Target	Meas.	Dev.	SPEAG Target	Meas.						
Nov 17	Head	2.35±10%	2.32	-1.3%	41.1±5%	41.8	+1.7%	0.89±5%	0.92	+3.4%	1000	24.0	22.9	≥ 15	35	101.1
Nov 20	Body	2.49±10%	2.52	+1.2%	53.9±5%	54.9	+1.8%	1.01±5%	0.99	-2.0%	1000	24.1	22.9	≥ 15	35	101.1
Nov 23			2.49	0.0%		54.7	+1.5%		0.99	-2.0%						
Nov 24			2.49	0.0%		54.2	+0.6%		0.97	-4.0%						
Nov 25			2.49	0.0%		54.3	+0.8%		0.96	-5.0%						
Notes	1.	The target SAR values are the measured values from the dipole calibration performed by SPEAG (see Appendix E).														
	2.	The target dielectric parameters are the measured values from the dipole calibration performed by SPEAG (see Appendix E).														
	3.	The fluid temperature was measured prior to and after the system performance check to ensure the temperature remained within +/-2°C of the fluid temperature reported during the dielectric parameter measurements.														
	4.	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).														

Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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## 12.0 SIMULATED EQUIVALENT TISSUES



The simulated equivalent tissue recipes in the table below are derived from the SAR system manufacturer's suggested recipes in the DASY4 manual (see references [11] and [12]) in accordance with the procedures and requirements specified in IEEE Standard 1528-2003 (see reference [5]) and IEC Standard 62209-1:2005 (see reference [6]). The ingredient percentage may have been adjusted minimally in order to achieve the appropriate target dielectric parameters within the specified tolerance.

SIMULATED TISSUE MIXTURES					
INGREDIENT	Water	835 MHz Head Tissue Mixture	40.71 %	835 MHz Body Tissue Mixture	53.79 %
	Sugar		56.63 %		45.13 %
	Salt		1.48 %		0.98 %
	HEC		0.99 %		--
	Bactericide		0.19 %		0.10 %

## 13.0 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	<b>8.0 W/kg</b>
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.			





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## 14.0 ROBOT SYSTEM SPECIFICATIONS

<u>Specifications</u>	
<b>Positioner</b>	Stäubli Unimation Corp. Robot Model: RX60L
<b>Repeatability</b>	0.02 mm
<b>No. of axis</b>	6
<u>Data Acquisition Electronic (DAE) System</u>	
<u>Cell Controller</u>	
<b>Processor</b>	AMD Athlon XP 2400+
<b>Clock Speed</b>	2.0 GHz
<b>Operating System</b>	Windows XP Professional
<u>Data Converter</u>	
<b>Features</b>	Signal Amplifier, multiplexer, A/D converter, and control logic
<b>Software</b>	Measurement Software: DASY4, V4.7 Build 44
	Postprocessing Software: SEMCAD, V1.8 Build 171
<b>Connecting Lines</b>	Optical downlink for data and status info., Optical uplink for commands and clock
<u>DASY4 Measurement Server</u>	
<b>Function</b>	Real-time data evaluation for field measurements and surface detection
<b>Hardware</b>	PC/104 166MHz Pentium CPU; 32 MB chipdisk; 64 MB RAM
<b>Connections</b>	COM1, COM2, DAE, Robot, Ethernet, Service Interface
<u>E-Field Probe</u>	
<b>Model</b>	ET3DV6
<b>Serial No.</b>	1590
<b>Construction</b>	Triangular core fiber optic detection system
<b>Frequency</b>	10 MHz to 6 GHz
<b>Linearity</b>	±0.2 dB (30 MHz to 3 GHz)
<u>Evaluation Phantom</u>	
<b>Type</b>	Side Planar Phantom
<b>Shell Material</b>	Plexiglas
<b>Bottom Thickness</b>	2.0 mm ± 0.1 mm
<b>Inner Dimensions</b>	72.6 cm (L) x 20.3 cm (W) x 20.3 cm (H)
<u>Validation Phantom</u>	
<b>Type</b>	SAM V4.0C
<b>Shell Material</b>	Fiberglass
<b>Thickness</b>	2.0 ±0.1 mm
<b>Volume</b>	Approx. 25 liters

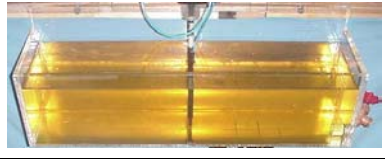
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## 15.0 PROBE SPECIFICATION (ET3DV6)

<p><b>Construction:</b> Symmetrical design with triangular core; Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, glycol)</p> <p><b>Calibration:</b> In air from 10 MHz to 2.5 GHz In head simulating tissue at frequencies of 900 MHz and 1.8 GHz (accuracy <math>\pm 8\%</math>)</p> <p><b>Frequency:</b> 10 MHz to &gt; 6 GHz; Linearity: <math>\pm 0.2</math> dB (30 MHz to 3 GHz)</p> <p><b>Directivity:</b> <math>\pm 0.2</math> dB in head tissue (rotation around probe axis) <math>\pm 0.4</math> dB in head tissue (rotation normal to probe axis)</p> <p><b>Dynamic Range:</b> 5 <math>\mu</math>W/g to &gt; 100 mW/g; Linearity: <math>\pm 0.2</math> dB</p> <p><b>Surface Detect:</b> <math>\pm 0.2</math> mm repeatability in air and clear liquids over diffuse reflecting surfaces</p> <p><b>Dimensions:</b> 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</p> <p><b>Application:</b> General dosimetry up to 3 GHz; Compliance tests of mobile phone</p>	
<b>ET3DV6 E-Field Probe</b>	

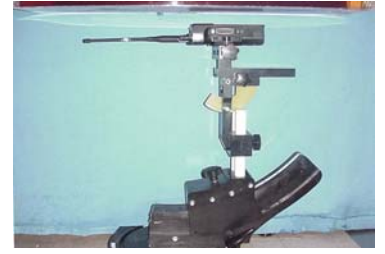
## 16.0 SIDE PLANAR PHANTOM


<p>The side planar phantom is constructed of Plexiglas material with a 2.0 mm shell thickness for face-held and body-worn SAR evaluations of portable radio transceivers. The side planar phantom is mounted on the side of the DASY4 compact system table.</p>	
<b>Plexiglas Side Planar Phantom</b>	



## 17.0 VALIDATION PHANTOM

<p>The SAM 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.</p>	
<b>Plexiglas Validation Planar Phantom</b>	

## 18.0 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.</p>	
<b>Device Holder</b>	



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## 19.0 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	CNR	CNR
x	-Robot	00046	599396-01	CNR	CNR
x	-DAE4	00019	353	28Apr09	28Apr10
x	-ET3DV6 E-Field Probe	00017	1590	16Jul09	16Jul10
x	-D835V2 Validation Dipole	00217	4d075	20Apr09	20Apr10
x	-Plexiglas Side Planar Phantom	00156	161	CNR	CNR
x	-SAM Phantom V4.0C	00154	1033	CNR	CNR
x	HP 85070C Dielectric Probe Kit	00033	US39240170	CNR	CNR
x	HP E4408B Spectrum Analyzer	00015	US39240170	23Apr08	28Apr10
x	Gigatronics 8652A Power Meter	00007	1835272	23Apr08	28Apr10
x	Gigatronics 80701A Power Sensor	00014	1833699	23Apr08	28Apr10
x	HP 8753ET Network Analyzer	00134	US39170292	28Apr08	28Apr10
x	Rohde & Schwarz SMR20 Signal Generator	00006	100104	CNR	CNR
x	Amplifier Research 5S1G4 Power Amplifier	00106	26235	CNR	CNR
Abbr.	CNR = Calibration Not Required				



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## 20.0 MEASUREMENT UNCERTAINTIES


UNCERTAINTY BUDGET FOR DEVICE EVALUATION									
Uncertainty Component	IEEE 1528 Section	Uncertainty Value ±%	Probability Distribution	Divisor	ci 1g	ci 10g	Uncertainty Value ±% (1g)	Uncertainty Value ±% (10g)	V <sub>i</sub> or V <sub>eff</sub>
<b>Measurement System</b>									
Probe Calibration (835 MHz)	E.2.1	5.5	Normal	1	1	1	5.5	5.5	∞
Axial Isotropy	E.2.2	4.7	Rectangular	1.732050808	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	E.2.2	9.6	Rectangular	1.732050808	0.7	0.7	3.9	3.9	∞
Boundary Effect	E.2.3	1	Rectangular	1.732050808	1	1	0.6	0.6	∞
Linearity	E.2.4	4.7	Rectangular	1.732050808	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1	Rectangular	1.732050808	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	E.2.7	0.8	Rectangular	1.732050808	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	Rectangular	1.732050808	1	1	1.5	1.5	∞
RF Ambient Conditions	E.6.1	3	Rectangular	1.732050808	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.4	Rectangular	1.732050808	1	1	0.2	0.2	∞
Probe Positioning wrt Phantom Shell	E.6.3	2.9	Rectangular	1.732050808	1	1	1.7	1.7	∞
Extrapolation, interpolation & integration algorithms for max. SAR evaluation	E.5	1	Rectangular	1.732050808	1	1	0.6	0.6	∞
<b>Test Sample Related</b>									
Test Sample Positioning	E.4.2	2.9	Normal	1	1	1	2.9	2.9	12
Device Holder Uncertainty	E.4.1	3.6	Normal	1	1	1	3.6	3.6	8
SAR Drift Measurement	6.6.2	5	Rectangular	1.732050808	1	1	2.9	2.9	∞
<b>Phantom and Tissue Parameters</b>									
Phantom Uncertainty	E.3.1	4	Rectangular	1.732050808	1	1	2.3	2.3	∞
Liquid Conductivity (target)	E.3.2	5	Rectangular	1.732050808	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (measured)	E.3.3	5	Normal	1	0.64	0.43	3.2	2.2	∞
Liquid Permittivity (target)	E.3.2	5	Rectangular	1.732050808	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (measured)	E.3.3	2.4	Normal	1	0.6	0.49	1.4	1.2	∞
<b>Combined Standard Uncertainty</b>			<b>RSS</b>				<b>10.93</b>	<b>10.50</b>	
<b>Expanded Uncertainty (95% Confidence Interval)</b>			<b>k=2</b>				<b>21.86</b>	<b>21.00</b>	
Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003									



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00		
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz			
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	


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- [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.
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- [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.
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- [10] Schmid & Partner Engineering AG - DASY4 Manual V4.6, Chapter 21 Application Note, SAR Sensitivities: Sept. 2005.
- [11] Schmid & Partner Engineering AG - DASY4 Manual V4.6, Chapter 16 Application Note, Head Tissue Recipe: Sept. 2005.
- [12] Schmid & Partner Engineering AG - DASY4 Manual V4.6, Chapter 17 Application Note, Body Tissue Recipe: Sept. 2005.

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
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**APPENDIX A - SAR MEASUREMENT DATA**

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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Date Tested: 11/17/2009

## Face-held SAR - Lithium-ion Battery Pack - 769.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 769 \text{ MHz}$ ;  $\sigma = 0.86 \text{ mho/m}$ ;  $\epsilon_r = 42.5$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DAS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.627 mW/g

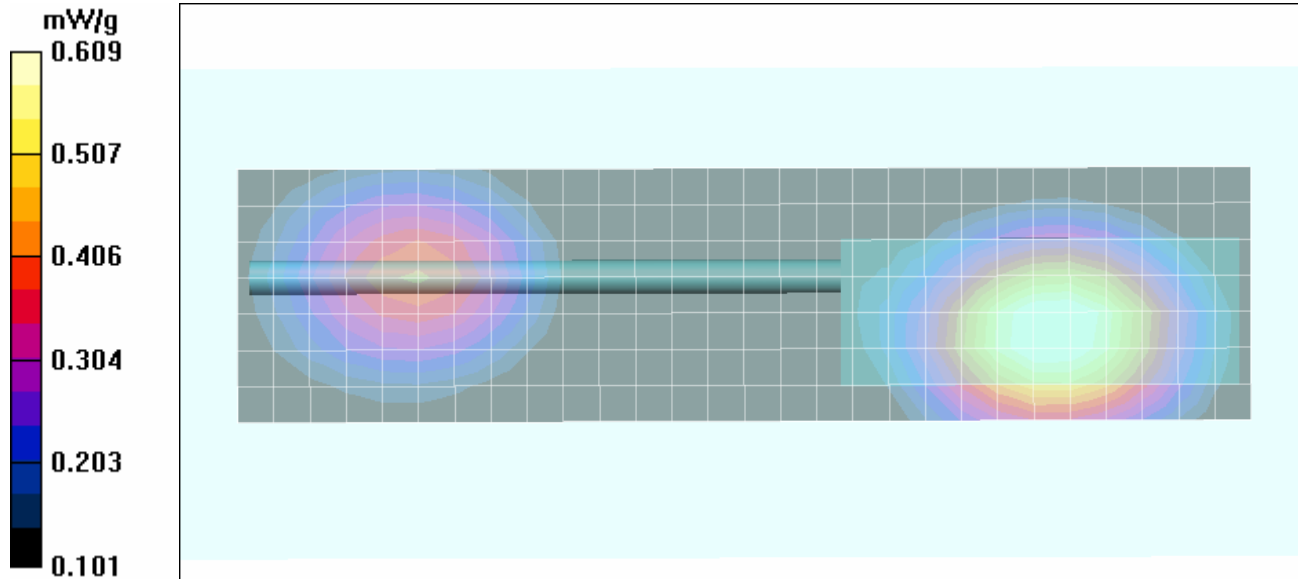
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 13.3 V/m; Power Drift = -1.12 dB



Peak SAR (extrapolated) = 0.728 W/kg

**SAR(1 g) = 0.576 mW/g; SAR(10 g) = 0.439 mW/g**

Maximum value of SAR (measured) = 0.609 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P0	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/17/2009

## Face-held SAR - Alkaline Battery Case - 769.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 769 \text{ MHz}$ ;  $\sigma = 0.86 \text{ mho/m}$ ;  $\epsilon_r = 42.5$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.363 mW/g

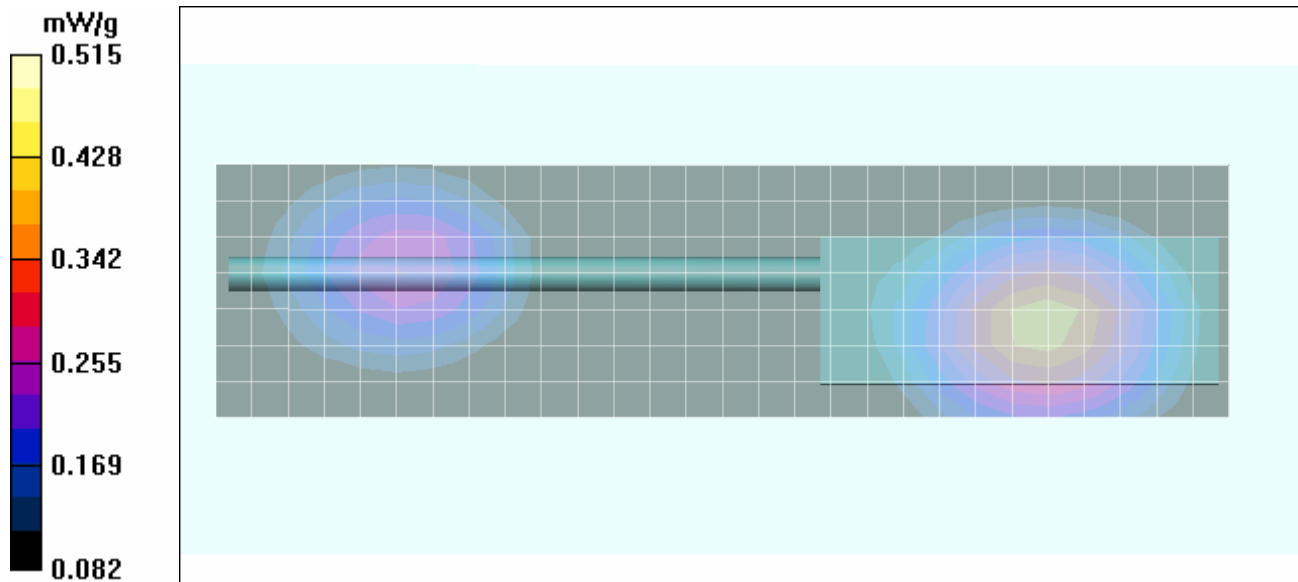
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 13.2 V/m; Power Drift = -1.22 dB

Peak SAR (extrapolated) = 0.605 W/kg



**SAR(1 g) = 0.479 mW/g; SAR(10 g) = 0.366 mW/g**

Maximum value of SAR (measured) = 0.515 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/17/2009

## Face-held SAR - Lithium-ion Battery Pack - 763.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 763 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 763 \text{ MHz}$ ;  $\sigma = 0.86 \text{ mho/m}$ ;  $\epsilon_r = 42.5$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.482 mW/g

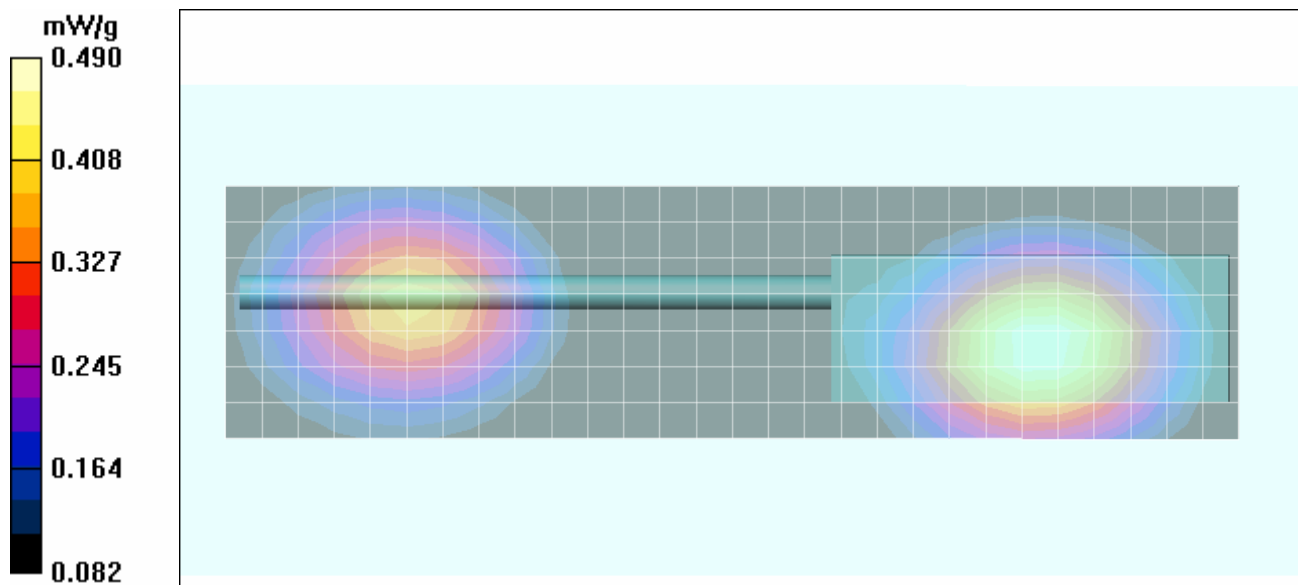
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 11.6 V/m; Power Drift = -0.572 dB



Peak SAR (extrapolated) = 0.586 W/kg

**SAR(1 g) = 0.466 mW/g; SAR(10 g) = 0.352 mW/g**

Maximum value of SAR (measured) = 0.490 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/17/2009

## Face-held SAR - Lithium-ion Battery Pack - 775.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 775 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 775 \text{ MHz}$ ;  $\sigma = 0.87 \text{ mho/m}$ ;  $\epsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.544 mW/g

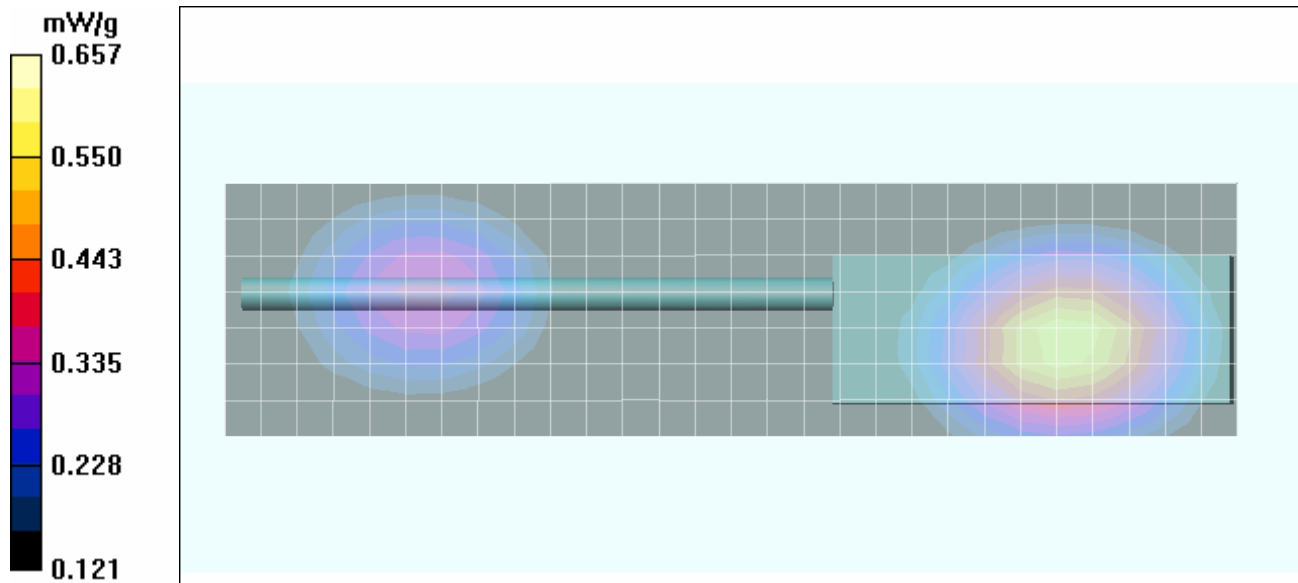
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm


Reference Value = 13.4 V/m; Power Drift = -0.509 dB



Peak SAR (extrapolated) = 0.784 W/kg

**SAR(1 g) = 0.624 mW/g; SAR(10 g) = 0.472 mW/g**

Maximum value of SAR (measured) = 0.657 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P0	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/17/2009

## Face-held SAR - Lithium-ion Battery Pack - 799.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 799 \text{ MHz}$ ;  $\sigma = 0.88 \text{ mho/m}$ ;  $\epsilon_r = 42.1$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.434 mW/g

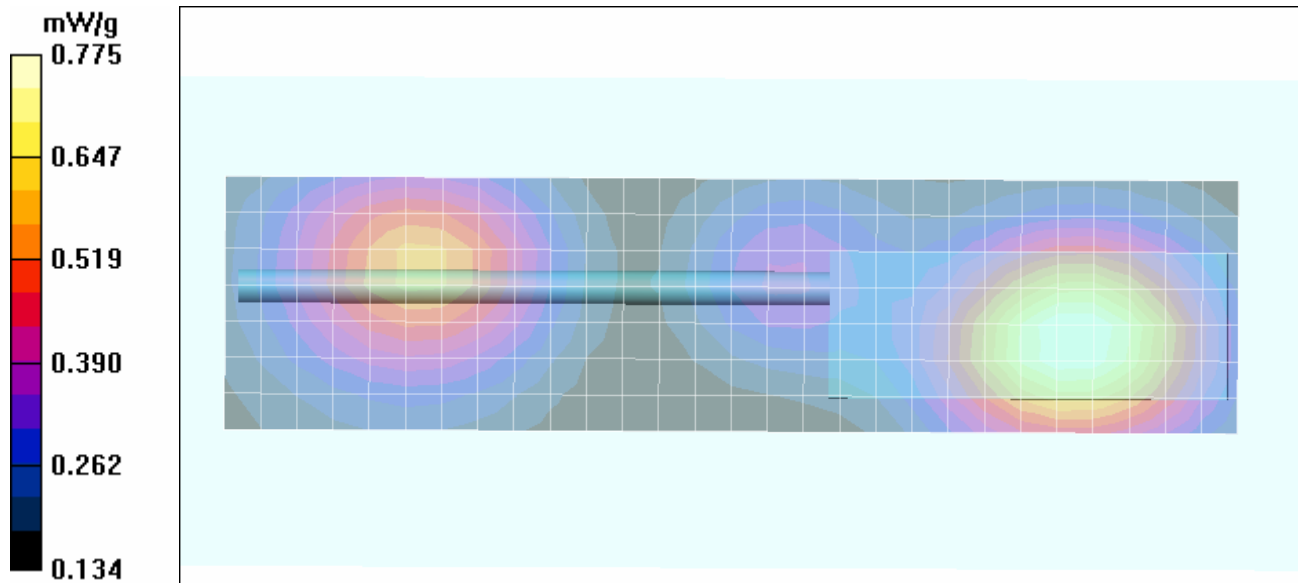
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 16.7 V/m; Power Drift = -0.327 dB



Peak SAR (extrapolated) = 0.926 W/kg

**SAR(1 g) = 0.738 mW/g; SAR(10 g) = 0.556 mW/g**

Maximum value of SAR (measured) = 0.775 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P0	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/17/2009

## Face-held SAR - Alkaline Battery Case - 799.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 799 \text{ MHz}$ ;  $\sigma = 0.88 \text{ mho/m}$ ;  $\epsilon_r = 42.1$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.647 mW/g

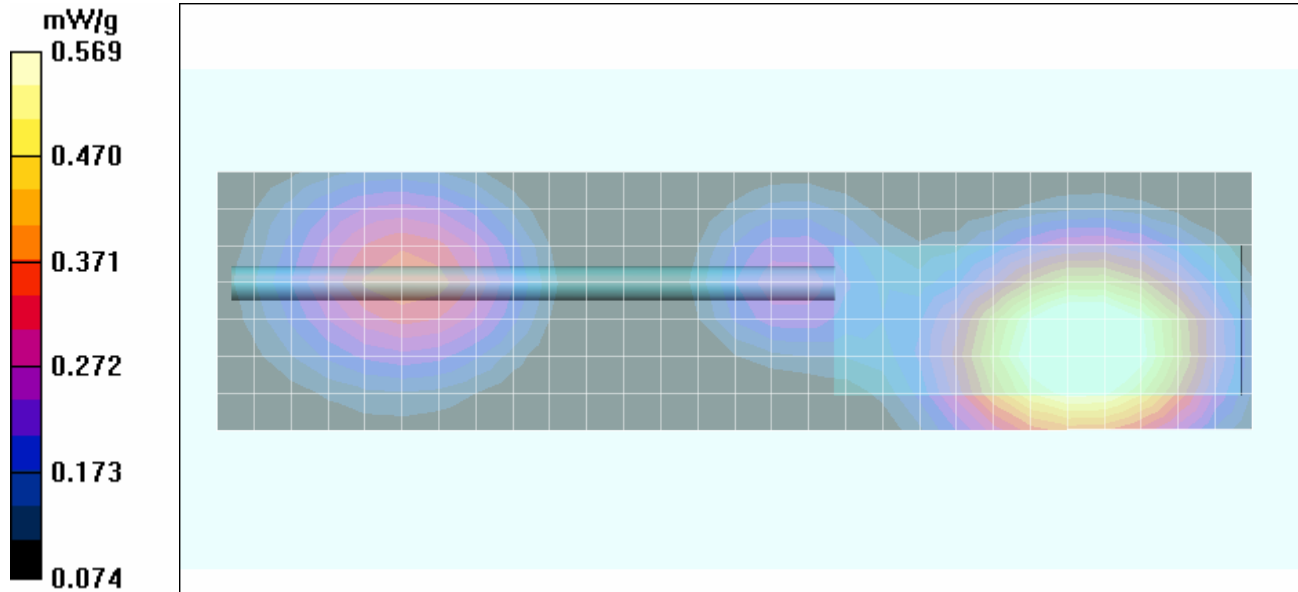
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 13.8 V/m; Power Drift = -0.231 dB



Peak SAR (extrapolated) = 0.701 W/kg

**SAR(1 g) = 0.538 mW/g; SAR(10 g) = 0.390 mW/g**

Maximum value of SAR (measured) = 0.569 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/17/2009

## Face-held SAR - Lithium-ion Battery Pack - 793.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 793 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 793 \text{ MHz}$ ;  $\sigma = 0.88 \text{ mho/m}$ ;  $\epsilon_r = 42.1$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.439 mW/g

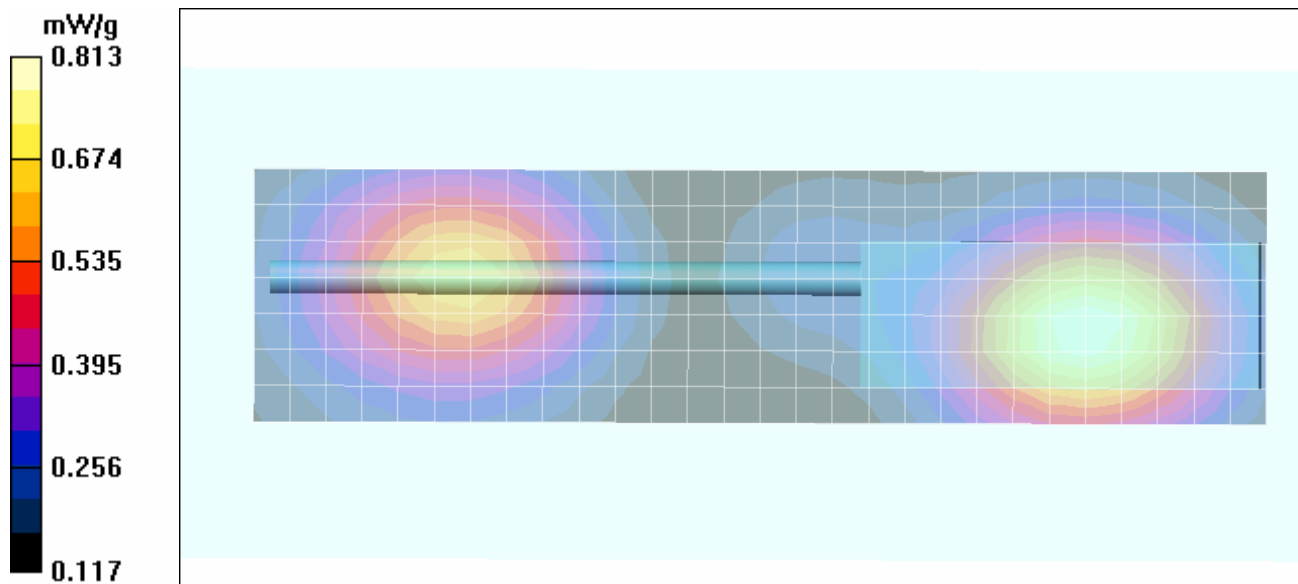
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 16.7 V/m; Power Drift = -0.526 dB



Peak SAR (extrapolated) = 0.971 W/kg

**SAR(1 g) = 0.769 mW/g; SAR(10 g) = 0.570 mW/g**

Maximum value of SAR (measured) = 0.813 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/17/2009

## Face-held SAR - Lithium-ion Battery Pack - 805.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 805 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 805 \text{ MHz}$ ;  $\sigma = 0.89 \text{ mho/m}$ ;  $\epsilon_r = 42$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DAS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.826 mW/g

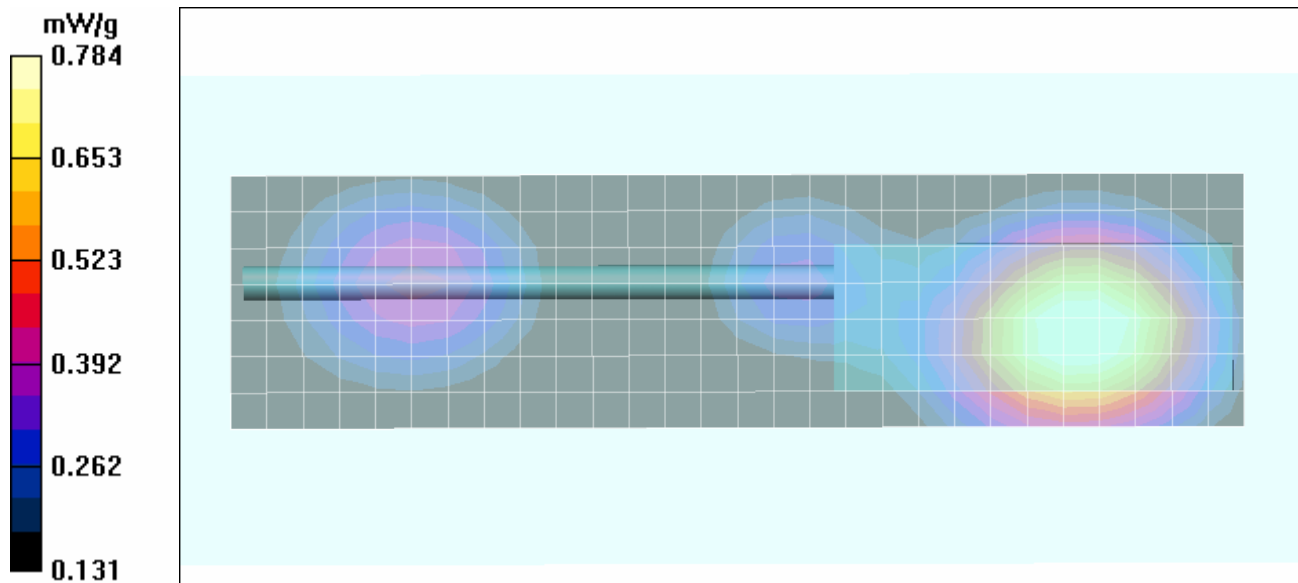
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 18.3 V/m; Power Drift = -0.539 dB



Peak SAR (extrapolated) = 0.944 W/kg

**SAR(1 g) = 0.745 mW/g; SAR(10 g) = 0.559 mW/g**

Maximum value of SAR (measured) = 0.784 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P0	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/17/2009

**Face-held SAR - Lithium-ion Battery Pack - 815.0 MHz**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 815 \text{ MHz}$ ;  $\sigma = 0.9 \text{ mho/m}$ ;  $\epsilon_r = 42$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DAS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.565 mW/g

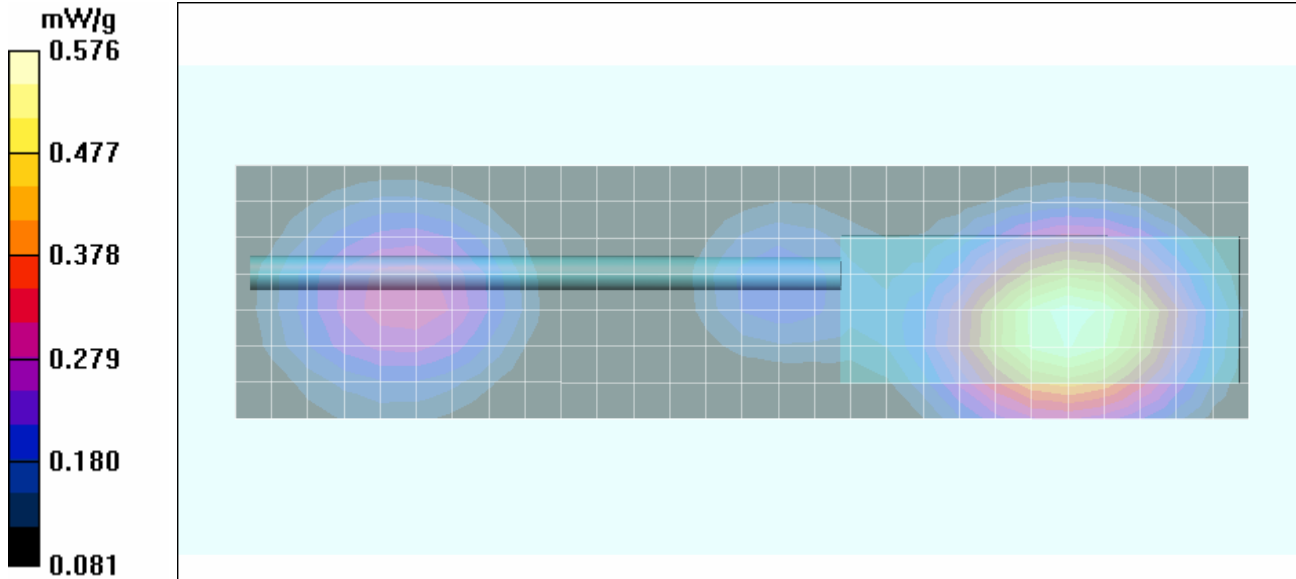
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm


Reference Value = 16.5 V/m; Power Drift = -1.04 dB



Peak SAR (extrapolated) = 0.694 W/kg

**SAR(1 g) = 0.543 mW/g; SAR(10 g) = 0.402 mW/g**

Maximum value of SAR (measured) = 0.576 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P0	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/17/2009

## Face-held SAR - Alkaline Battery Case - 815.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 815 \text{ MHz}$ ;  $\sigma = 0.9 \text{ mho/m}$ ;  $\epsilon_r = 42$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DAS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.530 mW/g

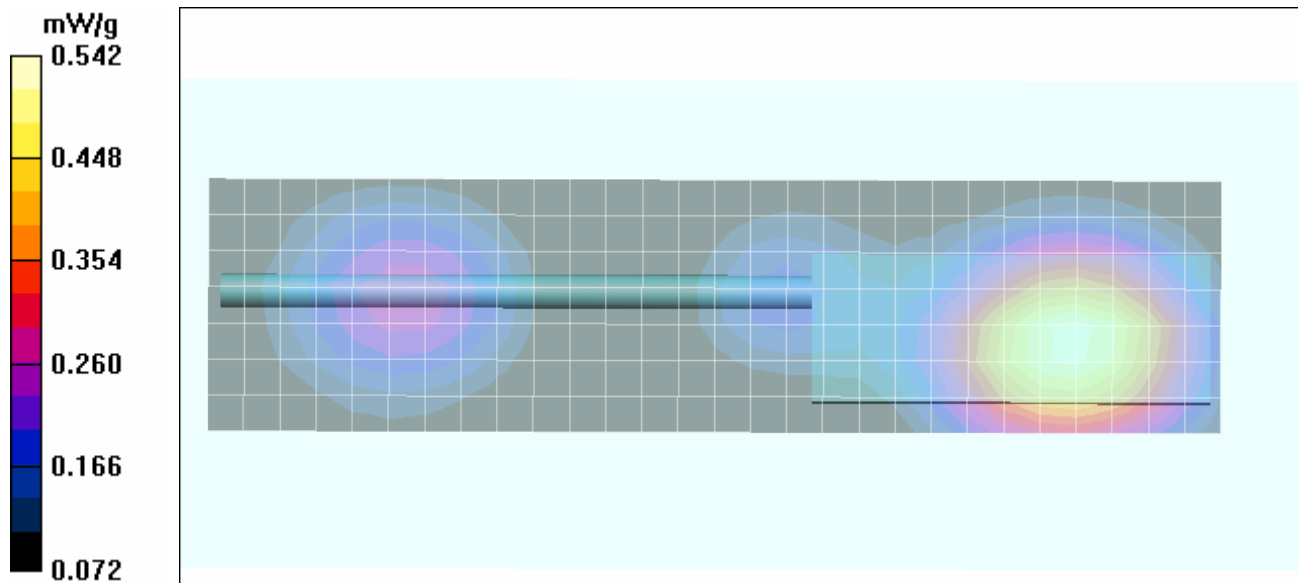
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 15.3 V/m; Power Drift = -1.15 dB

Peak SAR (extrapolated) = 0.652 W/kg



**SAR(1 g) = 0.508 mW/g; SAR(10 g) = 0.375 mW/g**

Maximum value of SAR (measured) = 0.542 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P0	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/17/2009

## Face-held SAR - Lithium-ion Battery Pack - 806.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 806 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 806 \text{ MHz}$ ;  $\sigma = 0.89 \text{ mho/m}$ ;  $\epsilon_r = 42$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DAS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.892 mW/g

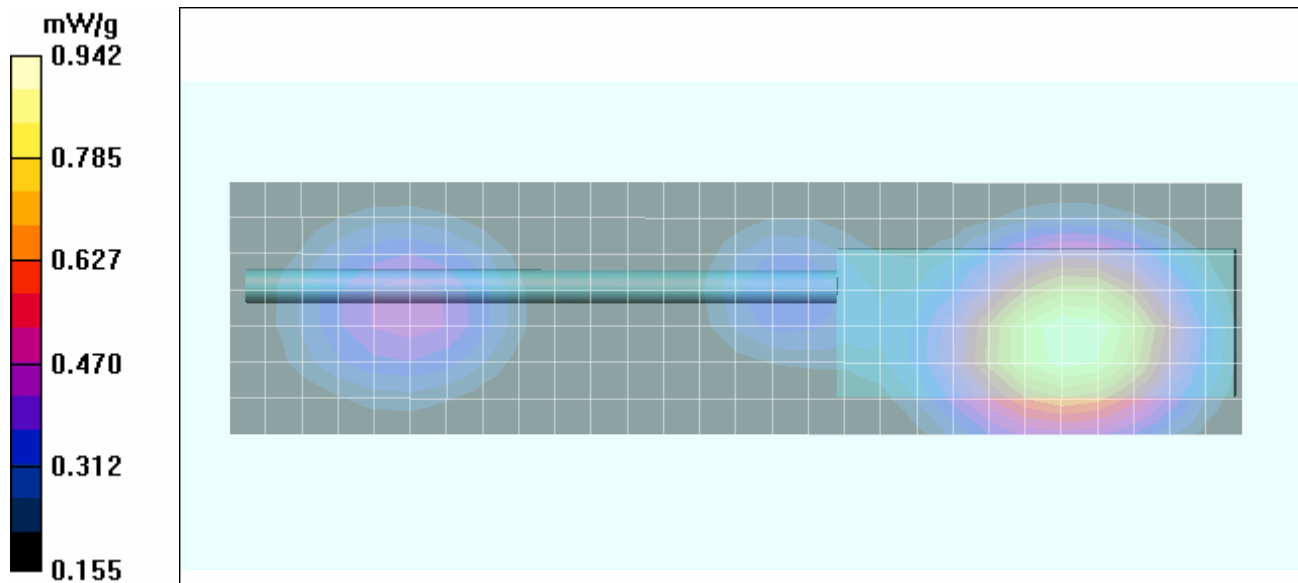
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 20.6 V/m; Power Drift = -0.743 dB



Peak SAR (extrapolated) = 1.13 W/kg

**SAR(1 g) = 0.892 mW/g; SAR(10 g) = 0.669 mW/g**

Maximum value of SAR (measured) = 0.942 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/17/2009

## Face-held SAR - Lithium-ion Battery Pack - 824.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 824 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 824 \text{ MHz}$ ;  $\sigma = 0.91 \text{ mho/m}$ ;  $\epsilon_r = 41.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DAS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.458 mW/g

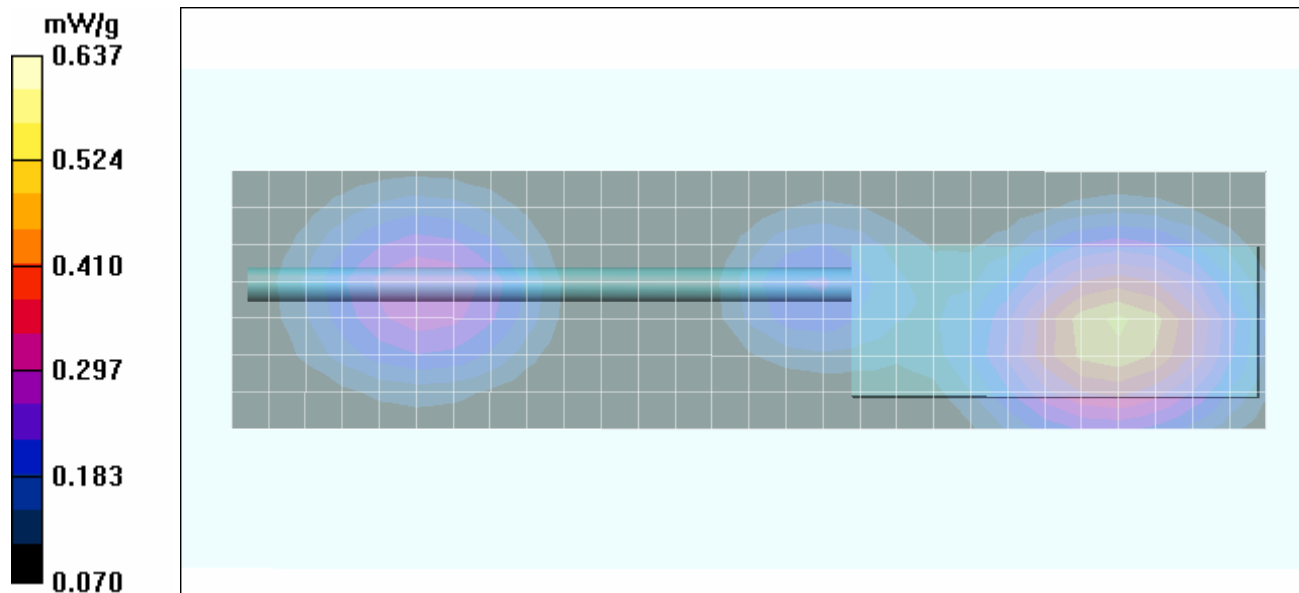
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 15.8 V/m; Power Drift = -1.45 dB



Peak SAR (extrapolated) = 0.778 W/kg

**SAR(1 g) = 0.584 mW/g; SAR(10 g) = 0.414 mW/g**

Maximum value of SAR (measured) = 0.637 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/17/2009

## Face-held SAR - Lithium-ion Battery Pack - 860.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 860 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 41.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DAS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.882 mW/g

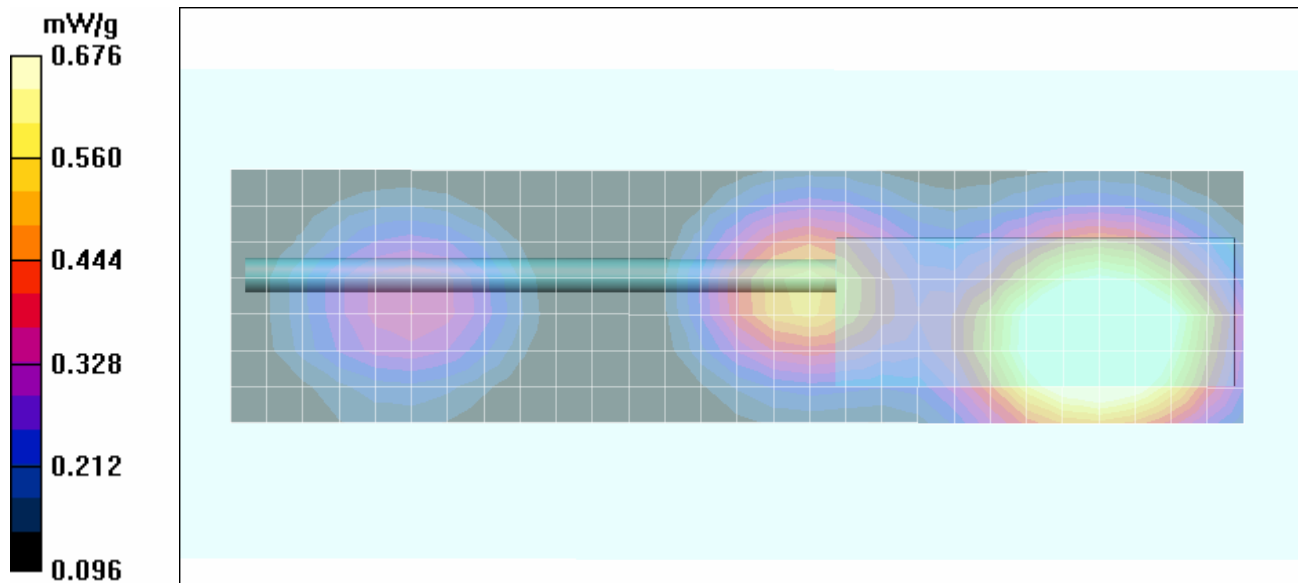
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 23.7 V/m; Power Drift = -1.21 dB



Peak SAR (extrapolated) = 0.820 W/kg

**SAR(1 g) = 0.637 mW/g; SAR(10 g) = 0.474 mW/g**

Maximum value of SAR (measured) = 0.676 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/17/2009

## Face-held SAR - Alkaline Battery Case - 860.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 860 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 41.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASYS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.774 mW/g

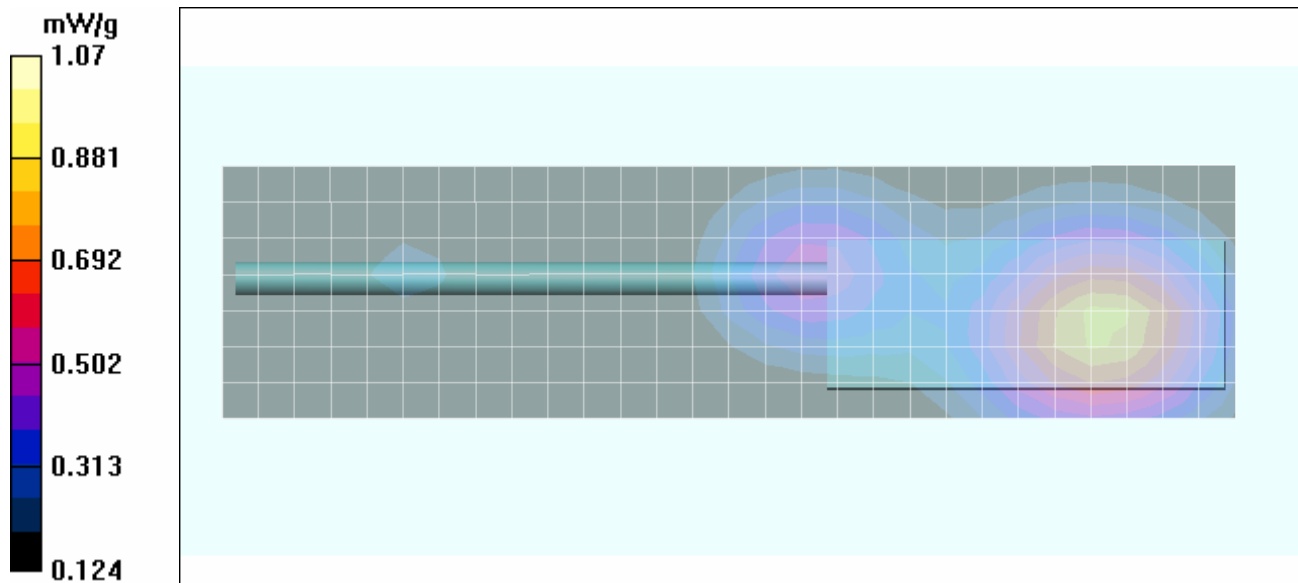
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 30.8 V/m; Power Drift = -1.49 dB

Peak SAR (extrapolated) = 1.29 W/kg

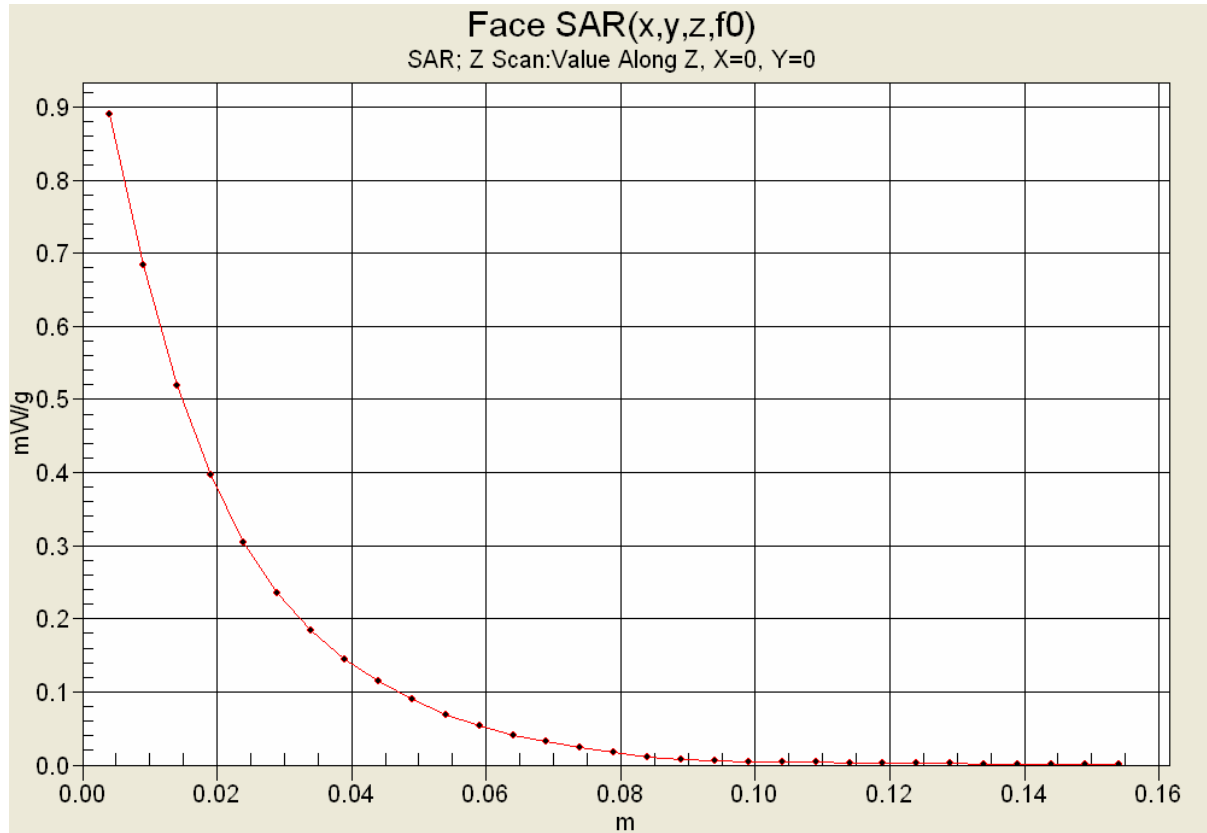
**SAR(1 g) = 0.918 mW/g; SAR(10 g) = 0.664 mW/g**



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



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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## Z-Axis Scan



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Date Tested: 11/17/2009

### Face-held SAR - Alkaline Battery Case - 851.0 MHz

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 851 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 851 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 41.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DAS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.772 mW/g

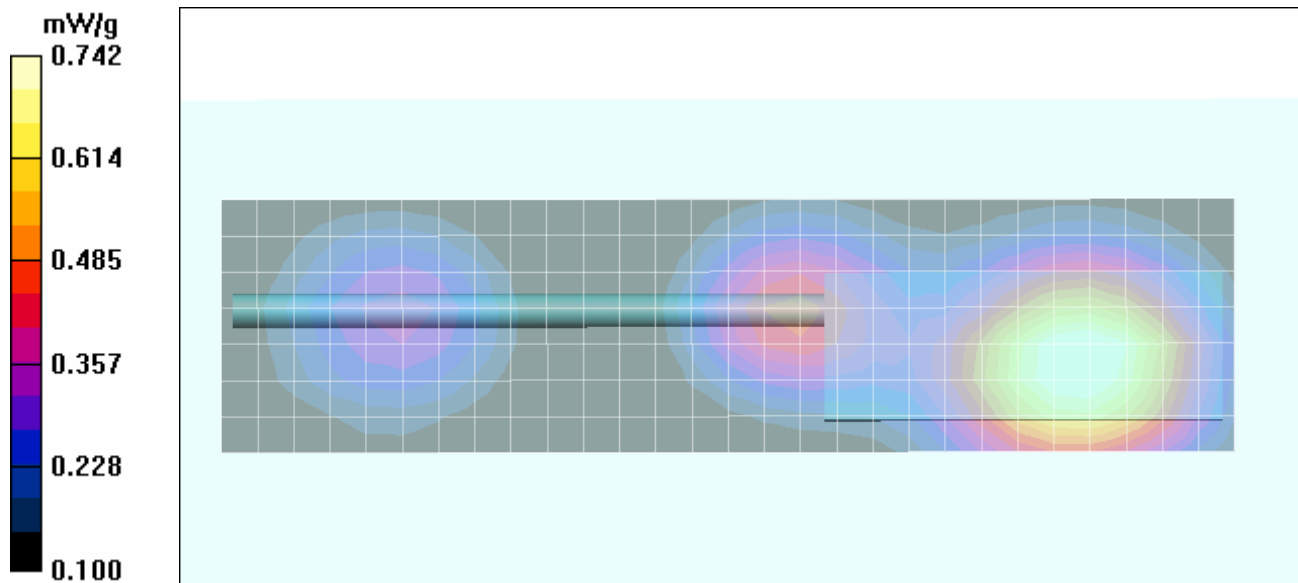
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 24.0 V/m; Power Drift = -1.65 dB



Peak SAR (extrapolated) = 0.895 W/kg

**SAR(1 g) = 0.671 mW/g; SAR(10 g) = 0.489 mW/g**

Maximum value of SAR (measured) = 0.742 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/17/2009

**Face-held SAR - Alkaline Battery Case - 869.0 MHz**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 869 MHz; Duty Cycle: 1:1

Medium: HSL769-860 Medium parameters used:  $f = 869 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 40.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DAS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.696 mW/g

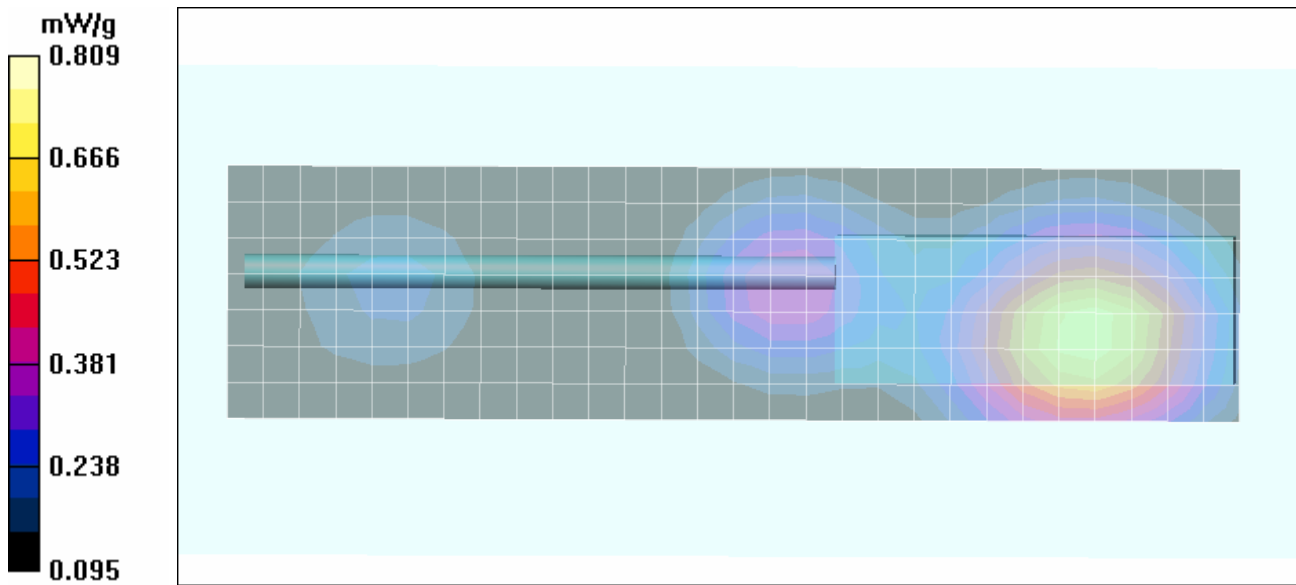
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 26.2 V/m; Power Drift = -1.46 dB



Peak SAR (extrapolated) = 0.984 W/kg

**SAR(1 g) = 0.705 mW/g; SAR(10 g) = 0.507 mW/g**

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



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P0	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

## Body-worn SAR - Lithium-ion Battery Pack - 769.0 MHz - Battery "Baseline" Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 769 \text{ MHz}$ ;  $\sigma = 0.92 \text{ mho/m}$ ;  $\epsilon_r = 55.7$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Air-Gap Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.65 mW/g

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

Reference Value = 37.6 V/m; Power Drift = -1.01 dB

Peak SAR (extrapolated) = 2.25 W/kg

**SAR(1 g) = 1.76 mW/g; SAR(10 g) = 1.27 mW/g**

Maximum value of SAR (measured) = 1.88 mW/g

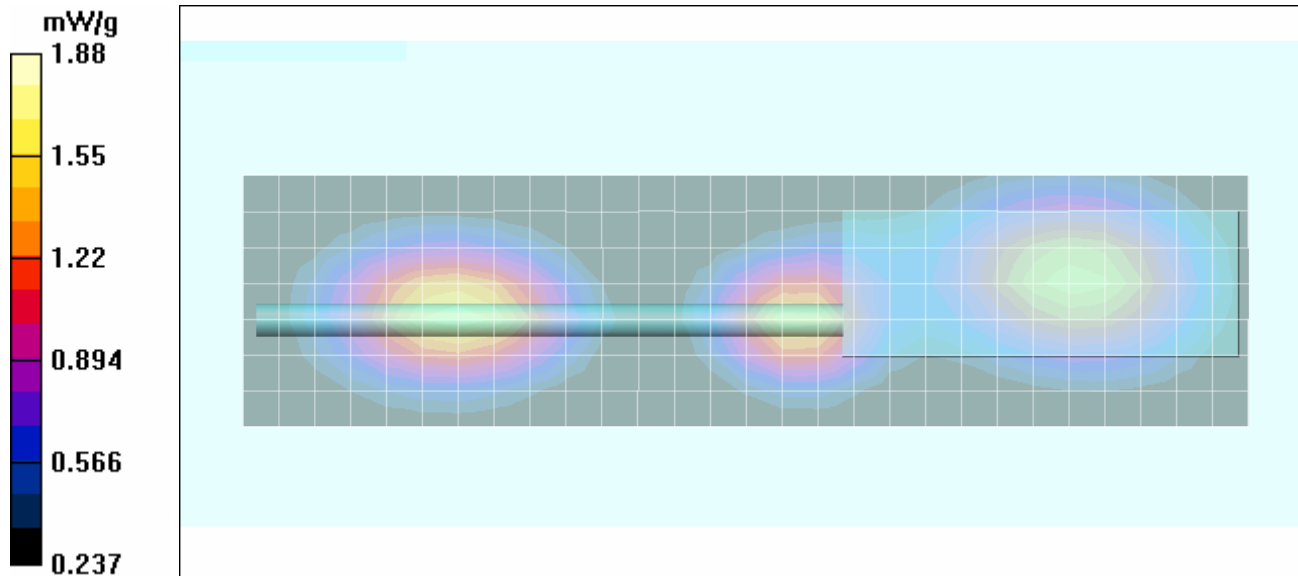
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 37.6 V/m; Power Drift = -1.01 dB

Peak SAR (extrapolated) = 1.92 W/kg



**SAR(1 g) = 1.47 mW/g; SAR(10 g) = 1.04 mW/g**

Maximum value of SAR (measured) = 1.56 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

## Body-worn SAR - Alkaline Battery Case - 769.0 MHz - Battery “Baseline” Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 769 \text{ MHz}$ ;  $\sigma = 0.92 \text{ mho/m}$ ;  $\epsilon_r = 55.7$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Air-Gap Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.99 mW/g

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

Reference Value = 40.8 V/m; Power Drift = -0.902 dB

Peak SAR (extrapolated) = 1.53 W/kg

**SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.917 mW/g**

Maximum value of SAR (measured) = 1.29 mW/g

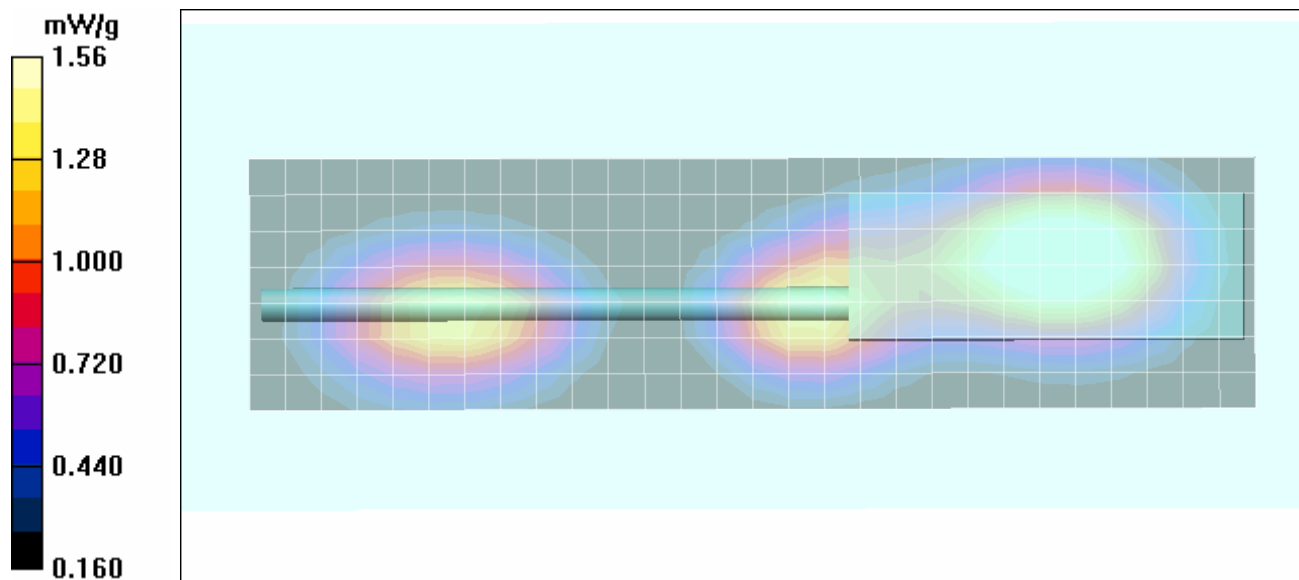
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 40.8 V/m; Power Drift = -0.902 dB



Peak SAR (extrapolated) = 1.93 W/kg

**SAR(1 g) = 1.47 mW/g; SAR(10 g) = 1.05 mW/g**

Maximum value of SAR (measured) = 1.56 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

## Body-worn SAR - Lithium-ion Battery Pack - 769.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 769 \text{ MHz}$ ;  $\sigma = 0.92 \text{ mho/m}$ ;  $\epsilon_r = 55.7$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 5.08 mW/g

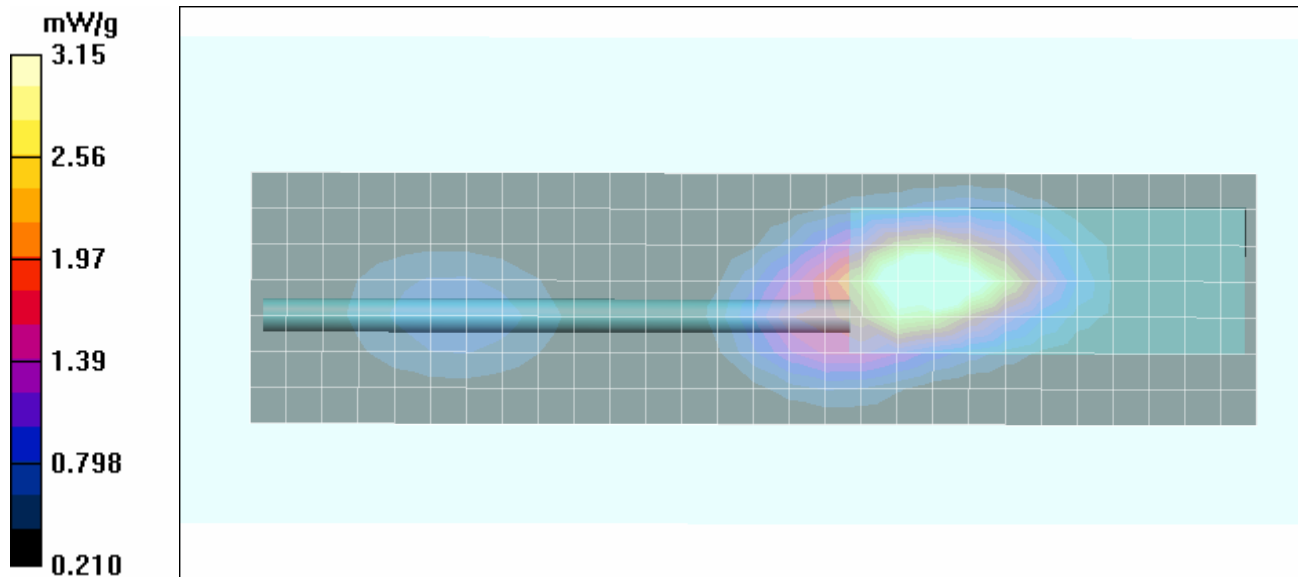
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 40.3 V/m; Power Drift = -0.819 dB



Peak SAR (extrapolated) = 4.91 W/kg

**SAR(1 g) = 2.86 mW/g; SAR(10 g) = 1.75 mW/g**

Maximum value of SAR (measured) = 3.15 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

## Body-worn SAR - Alkaline Battery Case - 769.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 769 \text{ MHz}$ ;  $\sigma = 0.92 \text{ mho/m}$ ;  $\epsilon_r = 55.7$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 6.07 mW/g

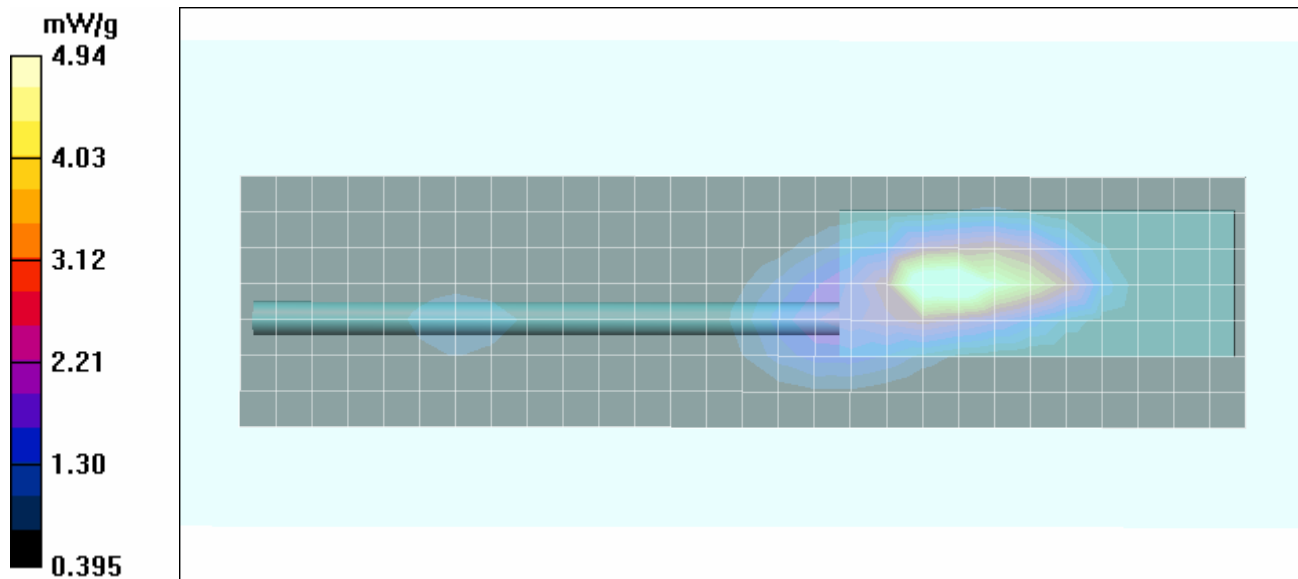
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 48.1 V/m; Power Drift = -0.353 dB

Peak SAR (extrapolated) = 7.44 W/kg

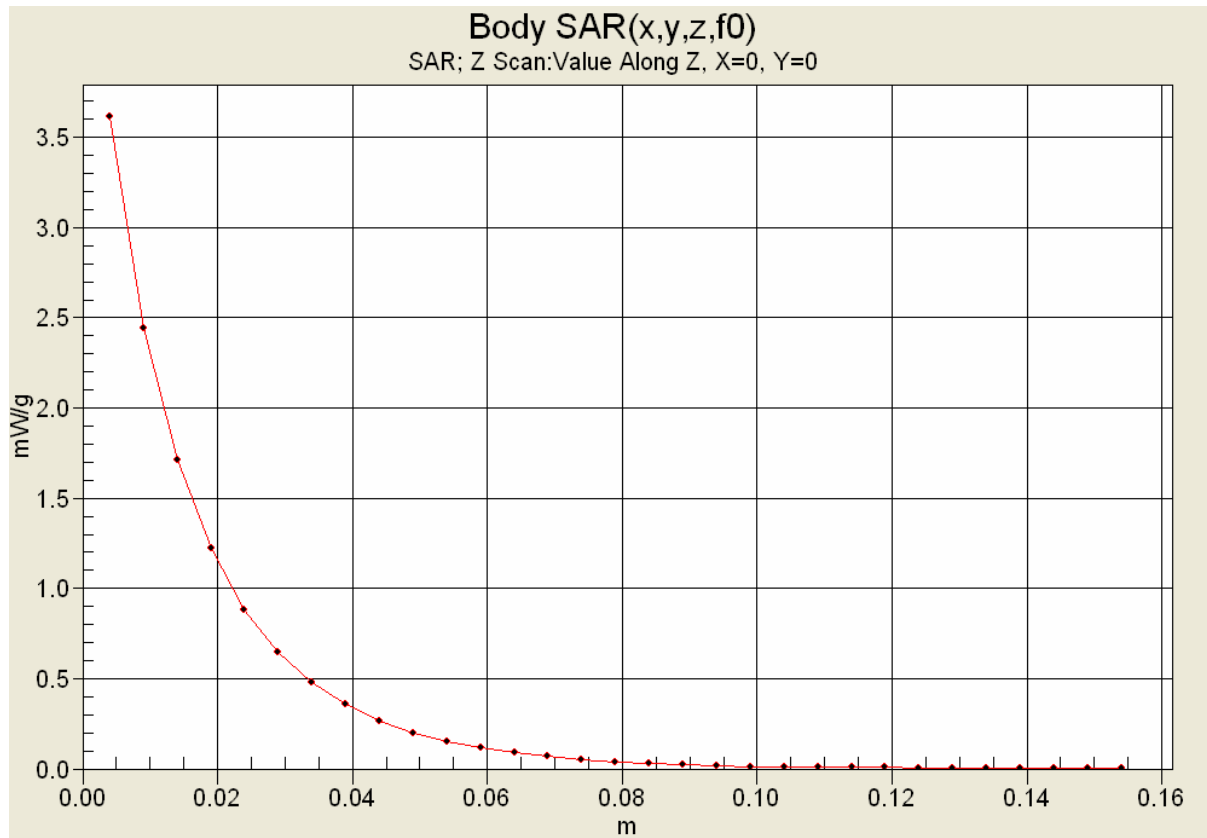
**SAR(1 g) = 4.51 mW/g; SAR(10 g) = 2.85 mW/g**



Maximum value of SAR (measured) = 4.94 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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## Z-Axis Scan



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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

**Body-worn SAR - Lithium-ion Battery Pack - 769.0 MHz - B-w Accessory Highest SAR Search**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Nylon Case (Window) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used: f = 769 MHz;  $\sigma = 0.92$  mho/m;  $\epsilon_r = 55.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Body-worn SAR - 1.5 cm Nylon Case Spacing from Back of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.59 mW/g

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

Reference Value = 47.8 V/m; Power Drift = -1.10 dB

Peak SAR (extrapolated) = 3.12 W/kg

**SAR(1 g) = 2.28 mW/g; SAR(10 g) = 1.59 mW/g**

Maximum value of SAR (measured) = 2.46 mW/g

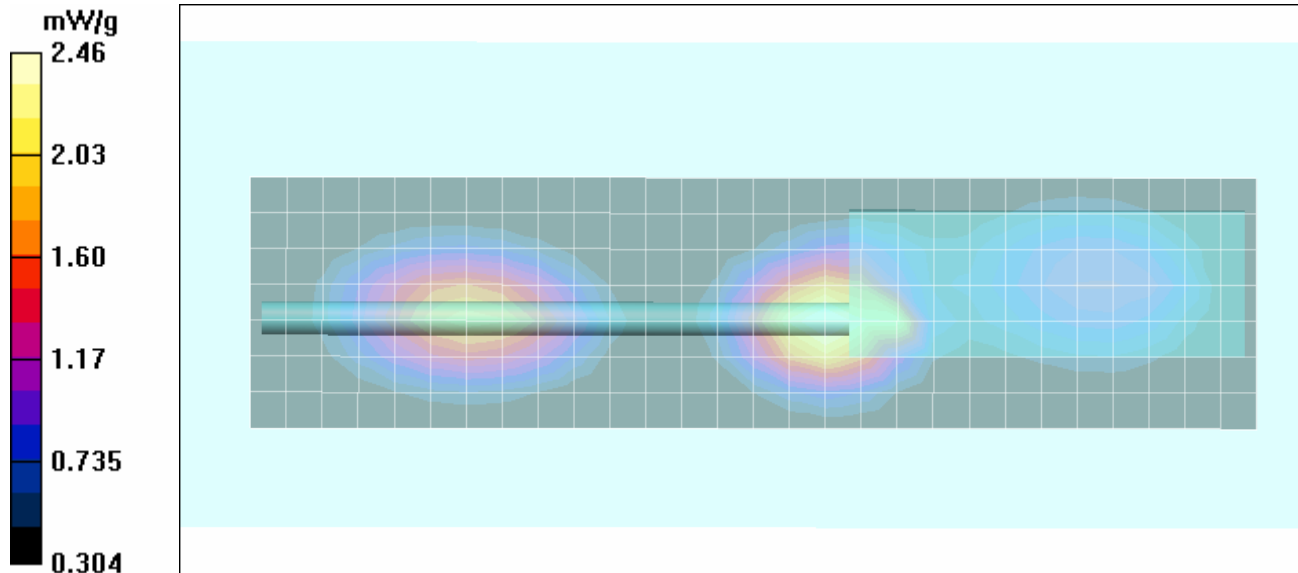
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm


Reference Value = 47.8 V/m; Power Drift = -1.10 dB



Peak SAR (extrapolated) = 4.63 W/kg

**SAR(1 g) = 1.83 mW/g; SAR(10 g) = 1.2 mW/g**

Maximum value of SAR (measured) = 2.13 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

**Body-worn SAR - Alkaline Battery Case - 769.0 MHz - B-w Accessory Highest SAR Search**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Nylon Case (Window) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used: f = 769 MHz;  $\sigma = 0.92$  mho/m;  $\epsilon_r = 55.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Body-worn SAR - 1.5 cm Nylon Case Spacing from Back of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.47 mW/g

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

Reference Value = 41.8 V/m; Power Drift = -1.29 dB

Peak SAR (extrapolated) = 2.82 W/kg

**SAR(1 g) = 2.16 mW/g; SAR(10 g) = 1.55 mW/g**

Maximum value of SAR (measured) = 2.30 mW/g

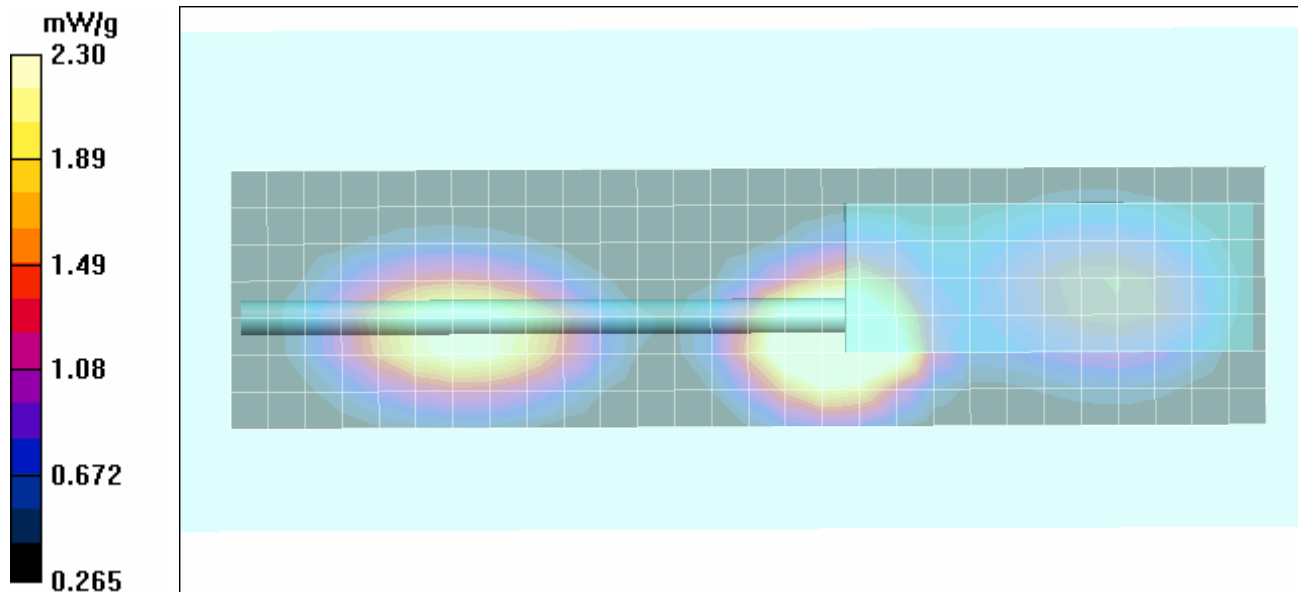
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm


Reference Value = 41.8 V/m; Power Drift = -1.29 dB



Peak SAR (extrapolated) = 1.89 W/kg

**SAR(1 g) = 1.46 mW/g; SAR(10 g) = 1.07 mW/g**

Maximum value of SAR (measured) = 1.55 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

**Body-worn SAR - Lithium-ion Battery Pack - 769.0 MHz - B-w Accessory Highest SAR Search**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used: f = 769 MHz;  $\sigma = 0.92$  mho/m;  $\epsilon_r = 55.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Body-worn SAR - 1.5 cm Leather Case Spacing from Back of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.07 mW/g

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

Reference Value = 38.8 V/m; Power Drift = -0.823 dB

Peak SAR (extrapolated) = 2.76 W/kg

**SAR(1 g) = 2.12 mW/g; SAR(10 g) = 1.53 mW/g**

Maximum value of SAR (measured) = 2.24 mW/g

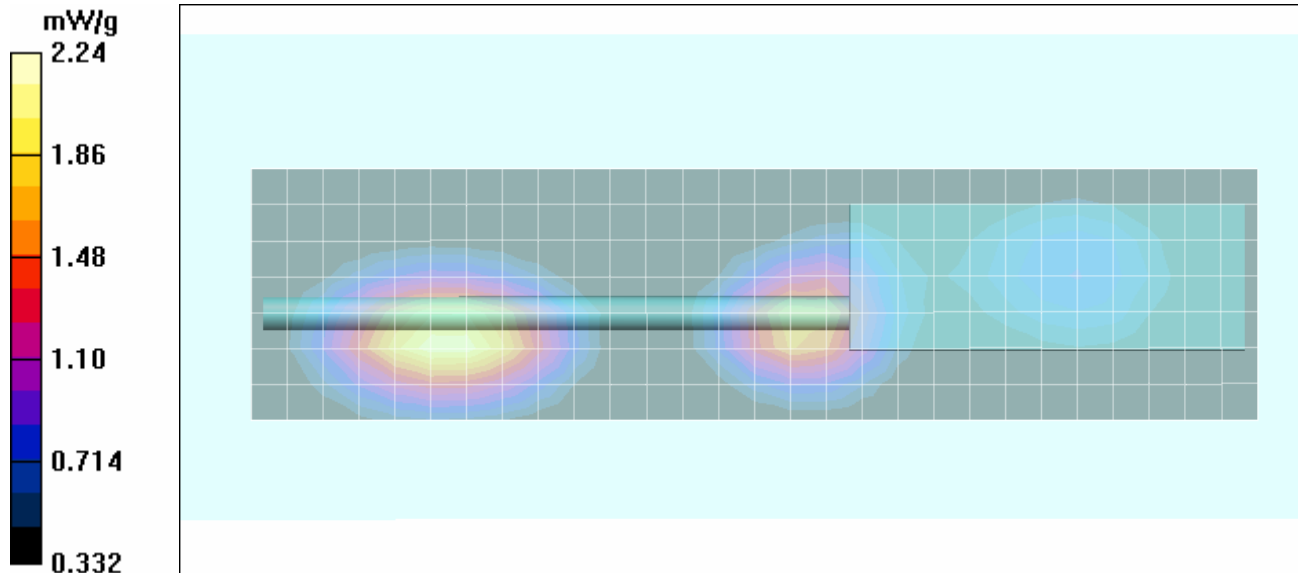
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm


Reference Value = 38.8 V/m; Power Drift = -0.823 dB



Peak SAR (extrapolated) = 2.04 W/kg

**SAR(1 g) = 1.56 mW/g; SAR(10 g) = 1.12 mW/g**

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



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

## Body-worn SAR - Alkaline Battery Case - 769.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 769 \text{ MHz}$ ;  $\sigma = 0.92 \text{ mho/m}$ ;  $\epsilon_r = 55.7$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Leather Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.79 mW/g

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

Reference Value = 31.8 V/m; Power Drift = -1.26 dB

Peak SAR (extrapolated) = 1.85 W/kg

**SAR(1 g) = 1.46 mW/g; SAR(10 g) = 1.07 mW/g**

Maximum value of SAR (measured) = 1.53 mW/g

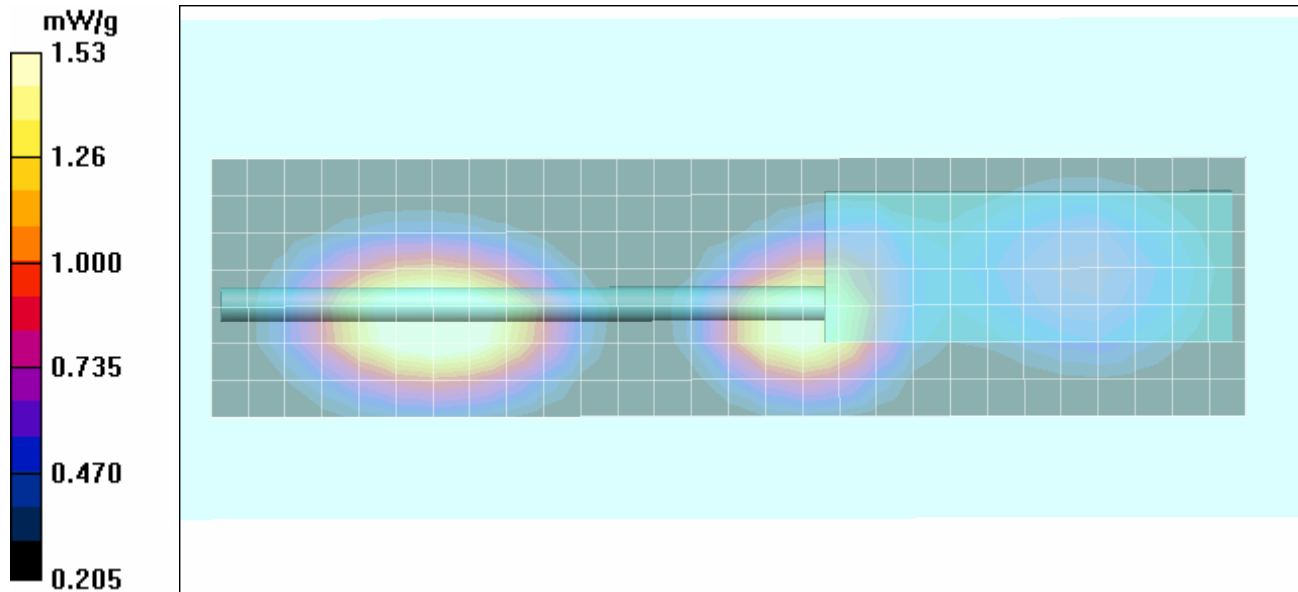
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 31.8 V/m; Power Drift = -1.26 dB

Peak SAR (extrapolated) = 1.42 W/kg



**SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.786 mW/g**

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



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

## Body-worn SAR - Lithium-ion Battery Pack - 769.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Swivel Belt-Loop (3"); Audio Accessory: Speaker-Microphone**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 769 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 769 \text{ MHz}$ ;  $\sigma = 0.92 \text{ mho/m}$ ;  $\epsilon_r = 55.7$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 4.5 cm Leather Case & Swivel Belt-Loop Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.507 mW/g

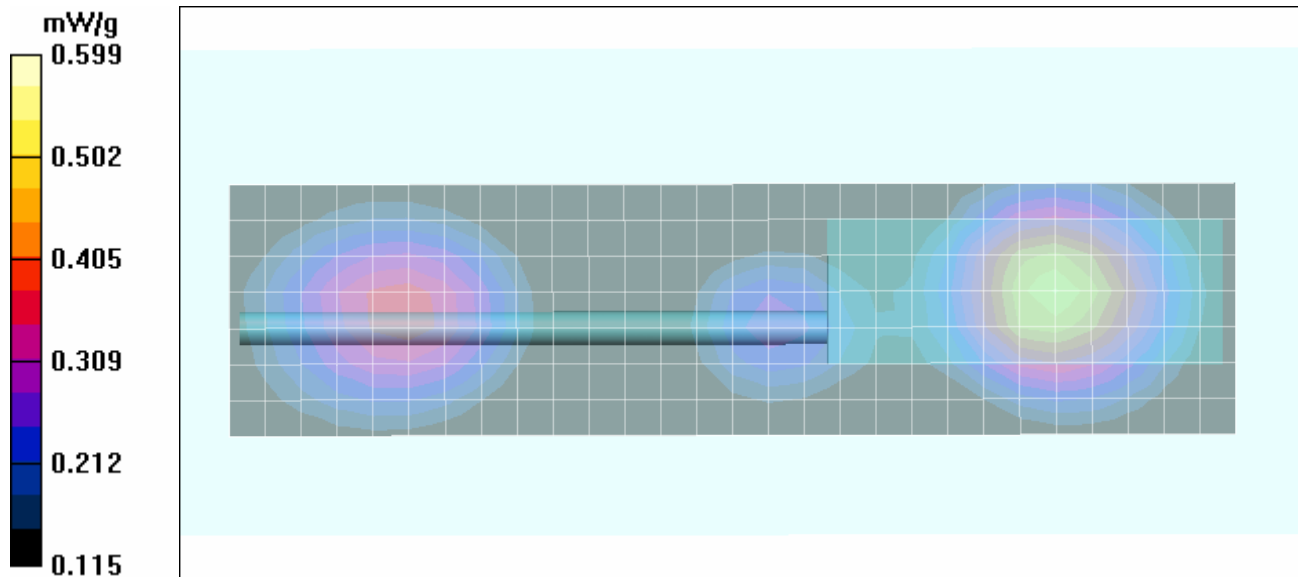
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 16.2 V/m; Power Drift = -0.908 dB



Peak SAR (extrapolated) = 0.692 W/kg

**SAR(1 g) = 0.567 mW/g; SAR(10 g) = 0.434 mW/g**

Maximum value of SAR (measured) = 0.599 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

**Body-worn SAR - Alkaline Battery Case - 763.0 MHz - B-w Accessory Highest SAR Search**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 763 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used: f = 763 MHz;  $\sigma = 0.92$  mho/m;  $\epsilon_r = 55.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 4.01 mW/g

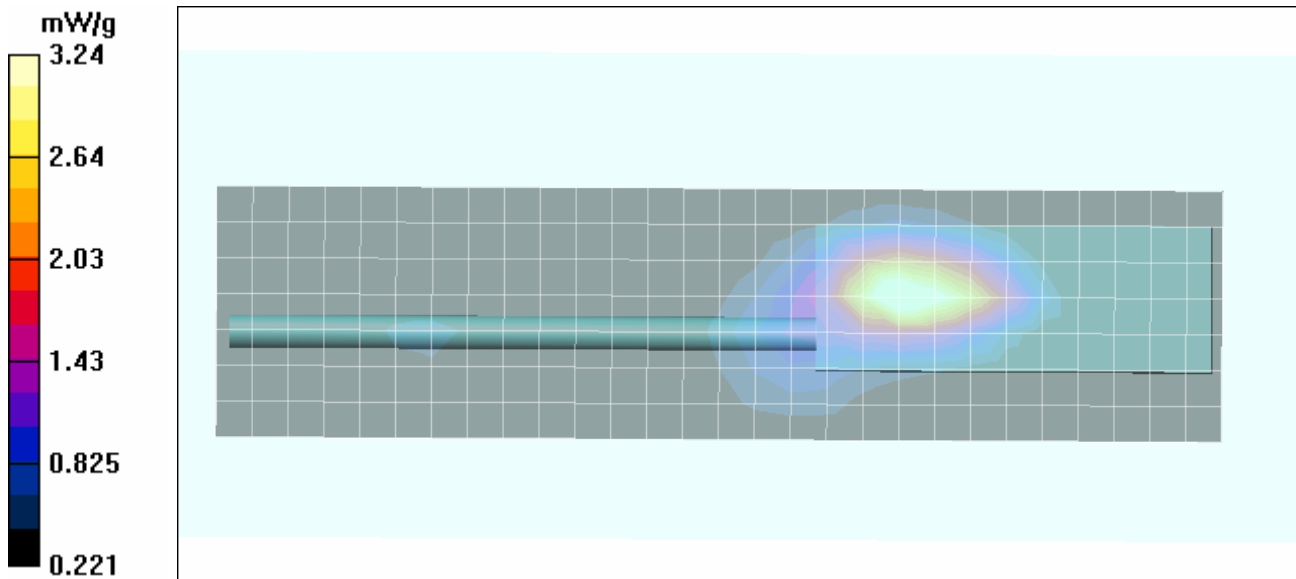
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm


Reference Value = 40.1 V/m; Power Drift = -1.01 dB



Peak SAR (extrapolated) = 4.81 W/kg

**SAR(1 g) = 2.97 mW/g; SAR(10 g) = 1.89 mW/g**

Maximum value of SAR (measured) = 3.24 mW/g



<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/20/2009

## Body-worn SAR - Alkaline Battery Case - 775.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 775 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 775 \text{ MHz}$ ;  $\sigma = 0.92 \text{ mho/m}$ ;  $\epsilon_r = 55.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 4.19 mW/g

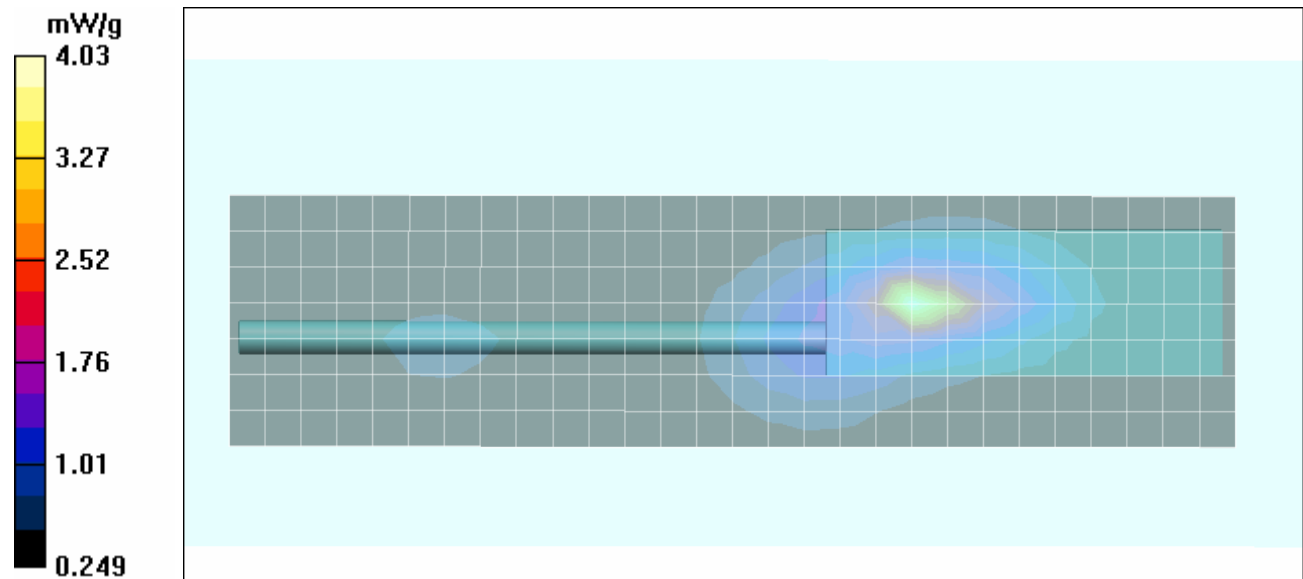
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 40.5 V/m; Power Drift = -0.955 dB



Peak SAR (extrapolated) = 5.69 W/kg

**SAR(1 g) = 3.25 mW/g; SAR(10 g) = 1.98 mW/g**

Maximum value of SAR (measured) = 4.03 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/23/2009

## Body-worn SAR - Lithium-ion Battery Pack - 799.0 MHz - Battery "Baseline" Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 799 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Air-Gap Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.27 mW/g

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

Reference Value = 41.9 V/m; Power Drift = -1.12 dB

Peak SAR (extrapolated) = 2.72 W/kg

**SAR(1 g) = 2.05 mW/g; SAR(10 g) = 1.44 mW/g**

Maximum value of SAR (measured) = 2.17 mW/g

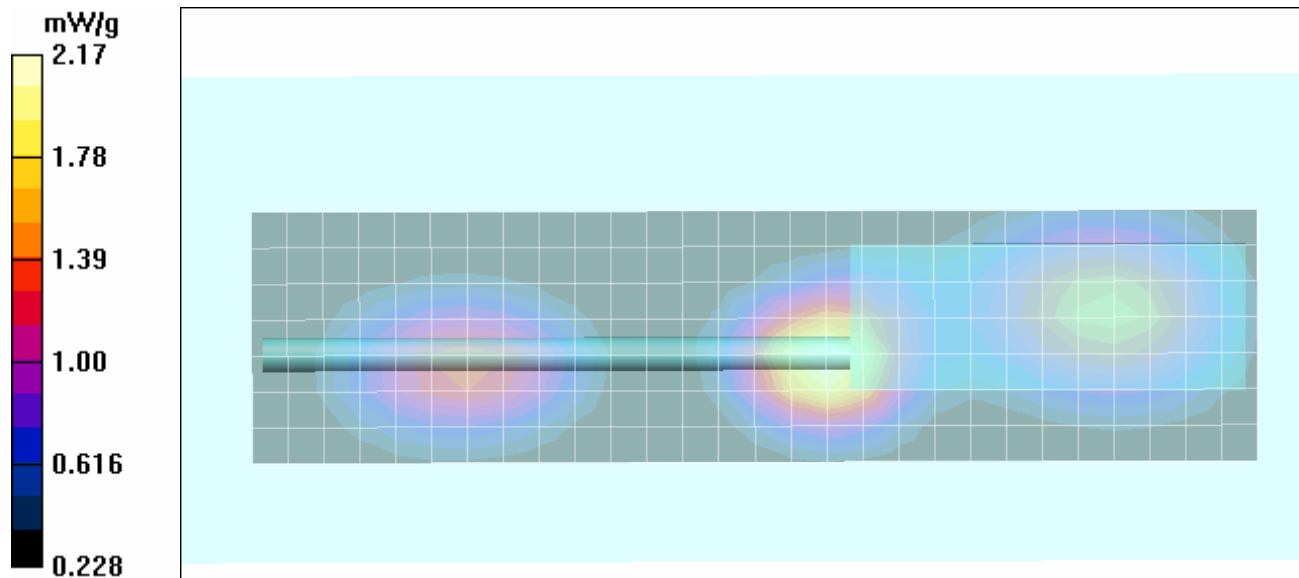
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 41.9 V/m; Power Drift = -1.12 dB



Peak SAR (extrapolated) = 1.99 W/kg

**SAR(1 g) = 1.6 mW/g; SAR(10 g) = 1.21 mW/g**

Maximum value of SAR (measured) = 1.69 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/23/2009

## Body-worn SAR - Alkaline Battery Case - 799.0 MHz - Battery “Baseline” Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 799 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Air-Gap Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.33 mW/g

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

Reference Value = 25.3 V/m; Power Drift = -0.814 dB

Peak SAR (extrapolated) = 1.48 W/kg

**SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.859 mW/g**

Maximum value of SAR (measured) = 1.24 mW/g

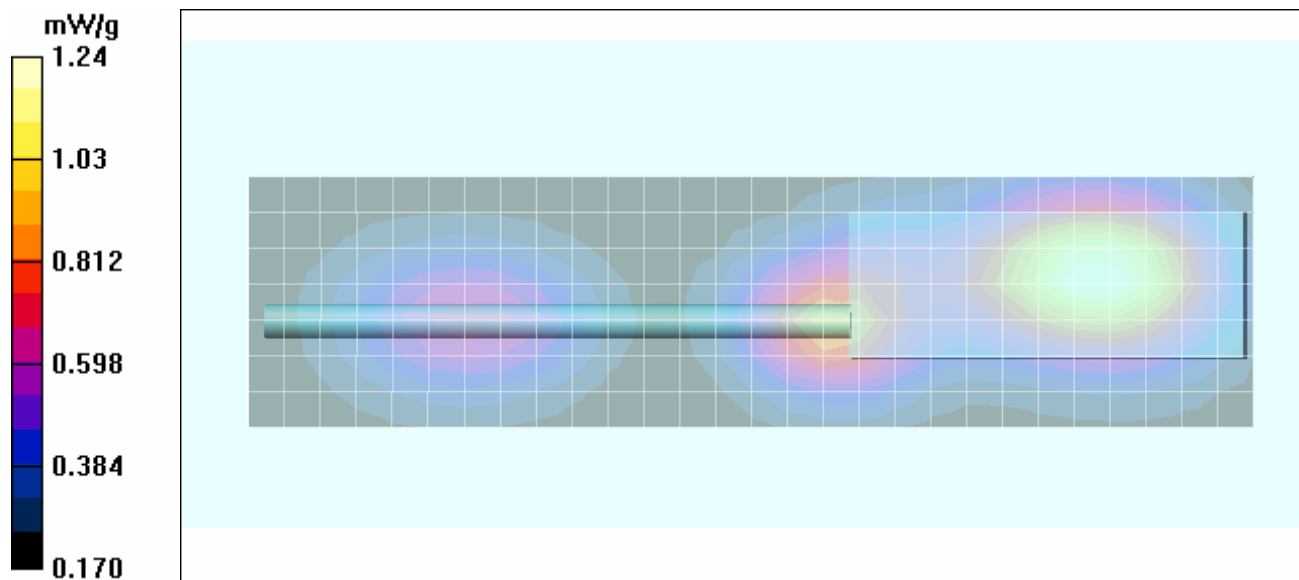
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 25.3 V/m; Power Drift = -0.814 dB



Peak SAR (extrapolated) = 1.02 W/kg

**SAR(1 g) = 0.736 mW/g; SAR(10 g) = 0.482 mW/g**

Maximum value of SAR (measured) = 0.803 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/23/2009

## Body-worn SAR - Lithium-ion Battery Pack - 799.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 799 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 5.12 mW/g

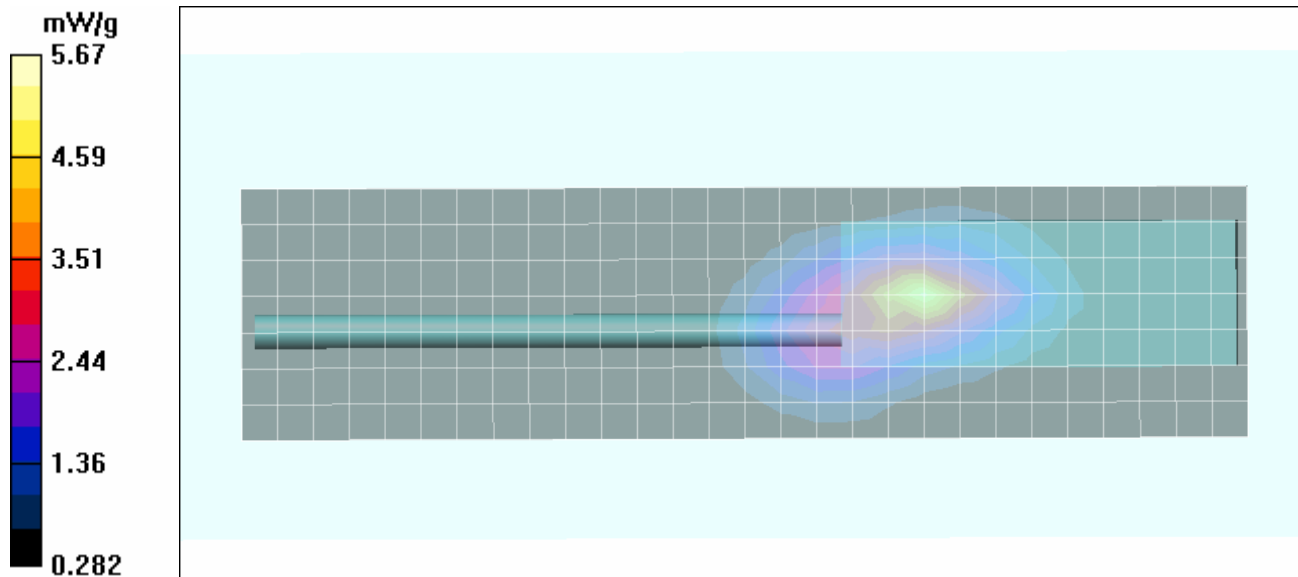
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 61.2 V/m; Power Drift = -0.455 dB

Peak SAR (extrapolated) = 8.37 W/kg

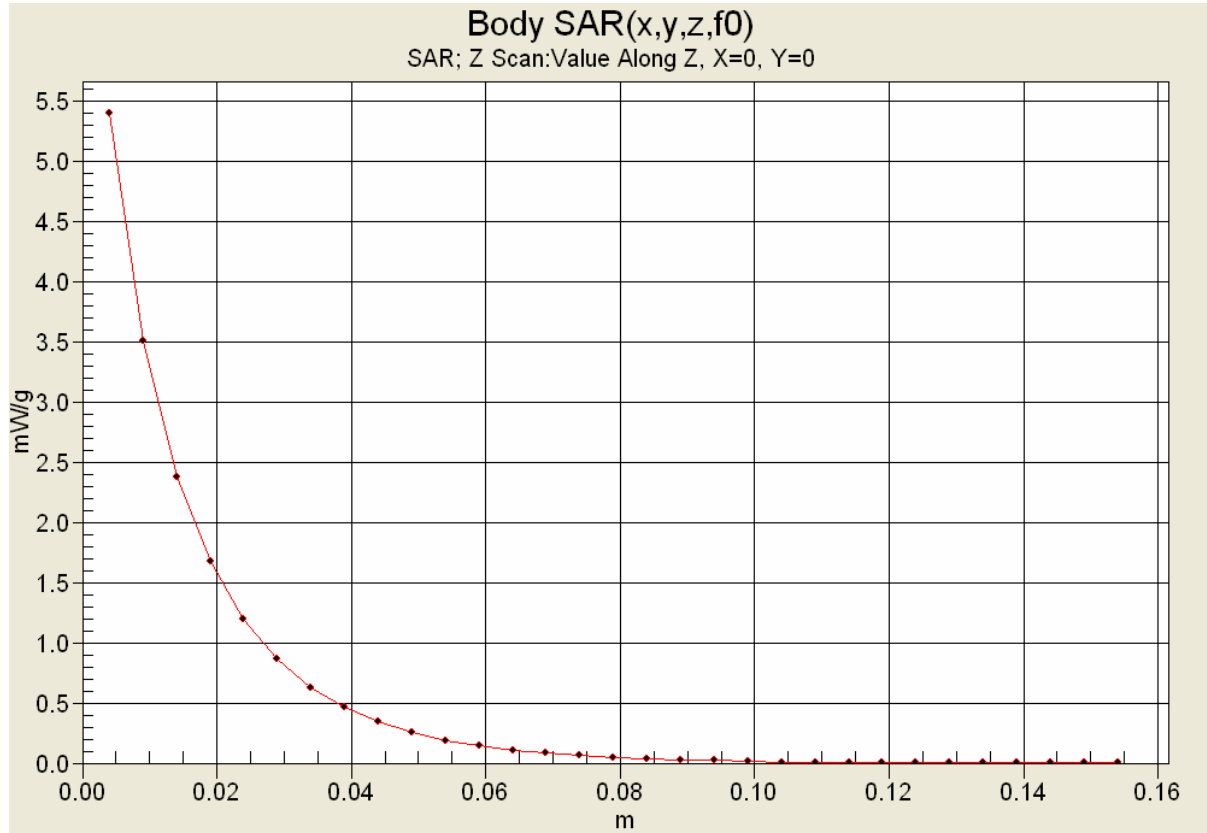
**SAR(1 g) = 5.14 mW/g; SAR(10 g) = 3.23 mW/g**



Maximum value of SAR (measured) = 5.67 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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## Z-Axis Scan



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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/23/2009

## Body-worn SAR - Alkaline Battery Case - 799.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 799 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.91 mW/g

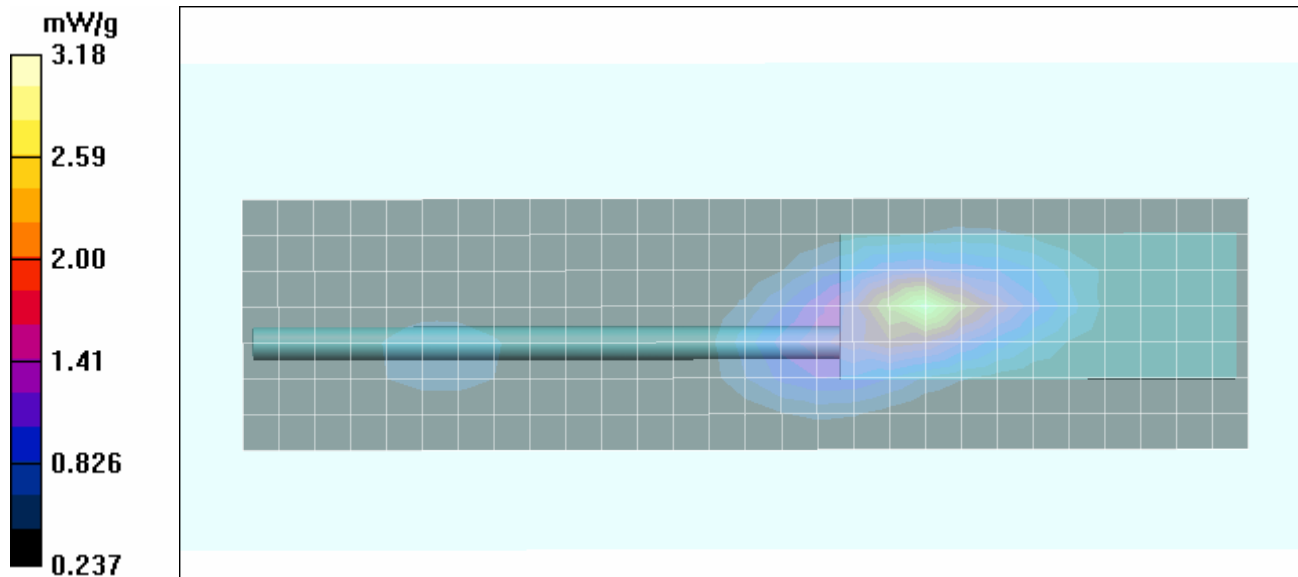
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 42.3 V/m; Power Drift = -0.752 dB

Peak SAR (extrapolated) = 5.07 W/kg



**SAR(1 g) = 2.86 mW/g; SAR(10 g) = 1.72 mW/g**

Maximum value of SAR (measured) = 3.18 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/23/2009

**Body-worn SAR - Lithium-ion Battery Pack - 799.0 MHz - B-w Accessory Highest SAR Search**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Nylon Case (Window) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used: f = 799 MHz;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Body-worn SAR - 1.5 cm Nylon Case Spacing from Back of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.08 mW/g

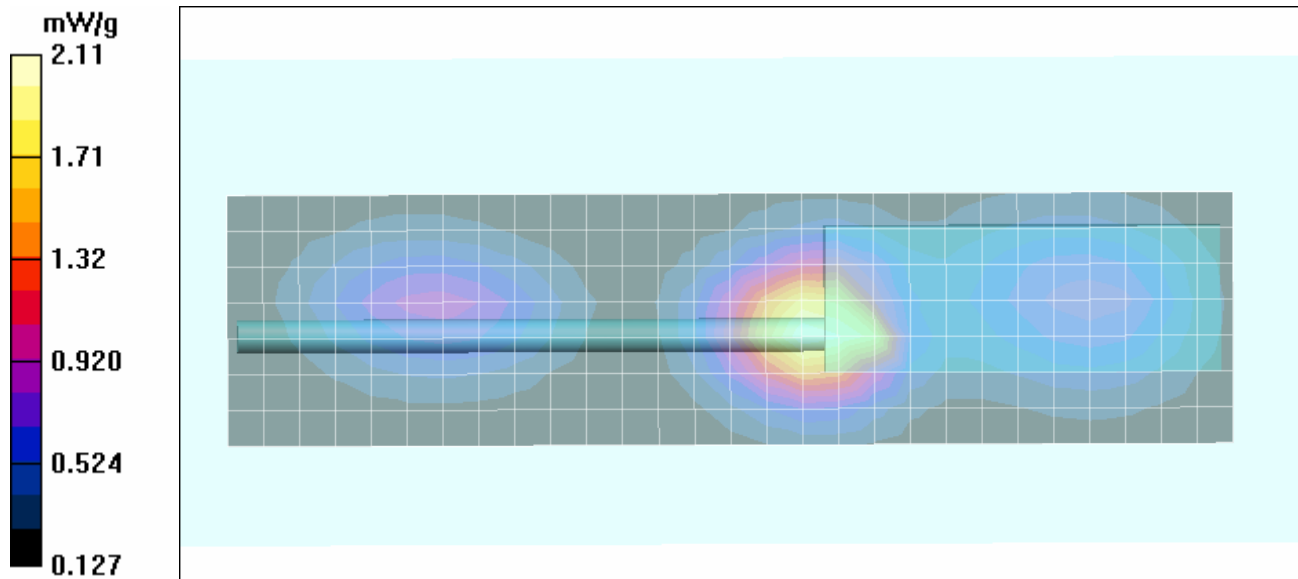
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm


Reference Value = 36.6 V/m; Power Drift = -0.917 dB



Peak SAR (extrapolated) = 3.34 W/kg+

**SAR(1 g) = 1.87 mW/g; SAR(10 g) = 1.27 mW/g**

Maximum value of SAR (measured) = 2.11 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/23/2009

## Body-worn SAR - Alkaline Battery Case - 799.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Nylon Case (Window) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 799 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Nylon Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.00 mW/g

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

Reference Value = 56.8 V/m; Power Drift = -1.27 dB

Peak SAR (extrapolated) = 4.55 W/kg

**SAR(1 g) = 3.35 mW/g; SAR(10 g) = 2.34 mW/g**

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

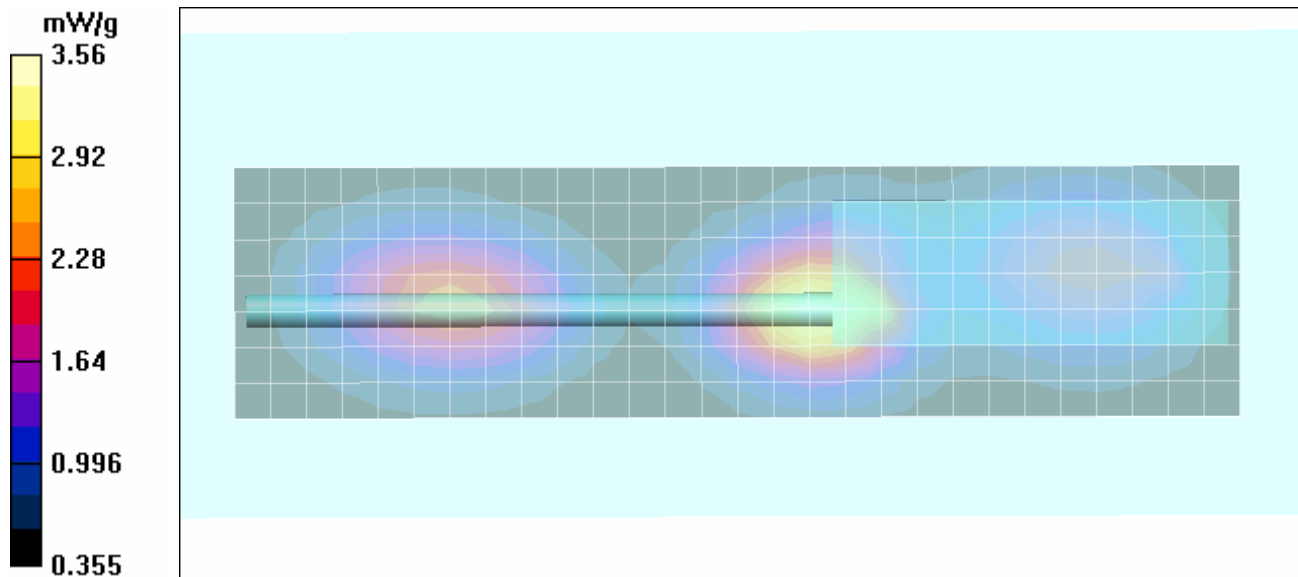
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 56.8 V/m; Power Drift = -1.27 dB



Peak SAR (extrapolated) = 1.49 W/kg

**SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.815 mW/g**

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



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/23/2009

## Body-worn SAR - Lithium-ion Battery Pack - 799.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 799 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Leather Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 3.36 mW/g

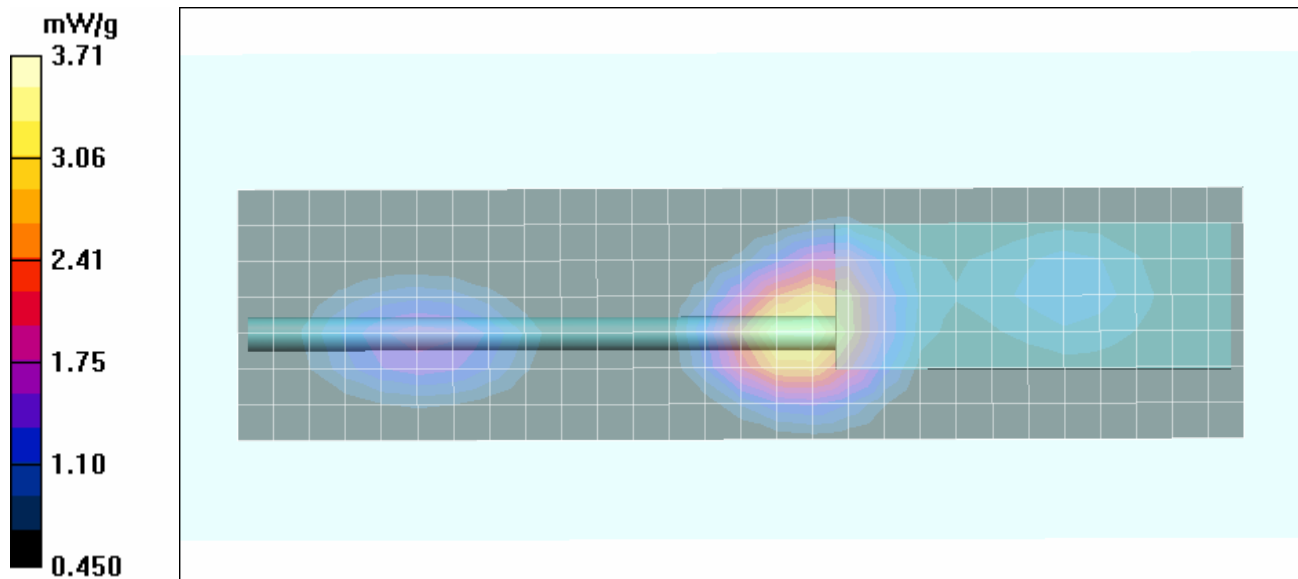
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 54.7 V/m; Power Drift = -0.737 dB



Peak SAR (extrapolated) = 4.58 W/kg

**SAR(1 g) = 3.45 mW/g; SAR(10 g) = 2.44 mW/g**

Maximum value of SAR (measured) = 3.71 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/23/2009

## Body-worn SAR - Alkaline Battery Case - 799.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 799 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Leather Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.89 mW/g

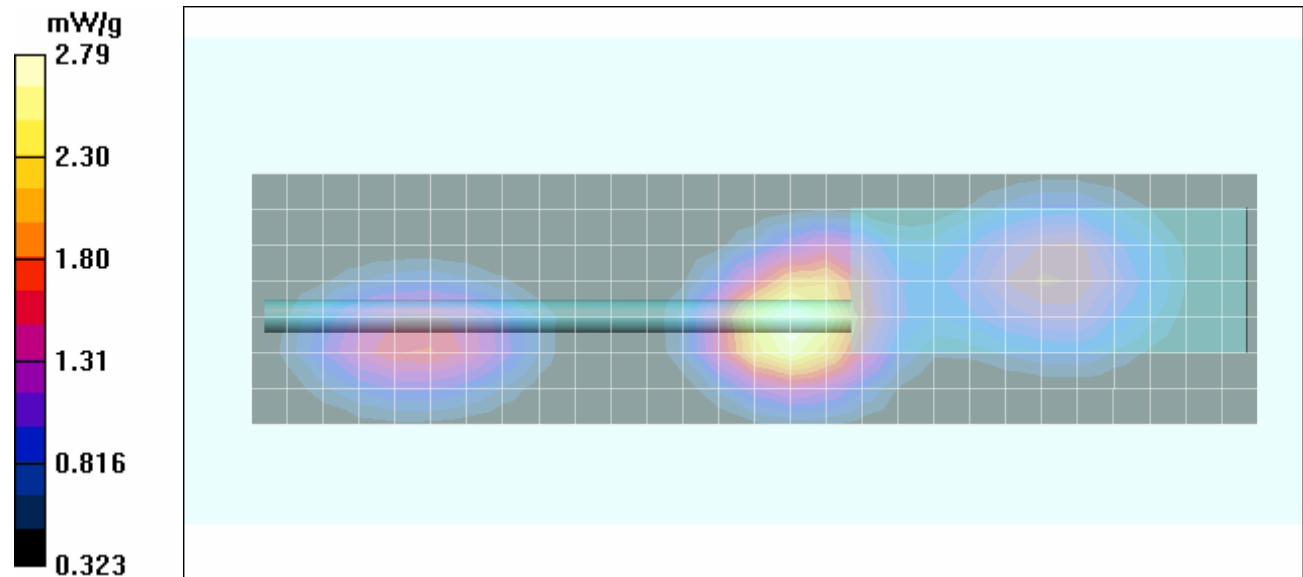
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 51.0 V/m; Power Drift = -0.731 dB



Peak SAR (extrapolated) = 3.44 W/kg

**SAR(1 g) = 2.62 mW/g; SAR(10 g) = 1.87 mW/g**

Maximum value of SAR (measured) = 2.79 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/23/2009

**Body-worn SAR - Lithium-ion Battery Pack - 799.0 MHz - B-w Accessory Highest SAR Search**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Swivel Belt-Loop (3"); Audio Accessory: Speaker-Microphone**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 799 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used: f = 799 MHz;  $\sigma = 0.93$  mho/m;  $\epsilon_r = 55.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Body-worn SAR - 4.5 cm Leather Case & Swivel Belt-Loop Spacing from Back of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.650 mW/g

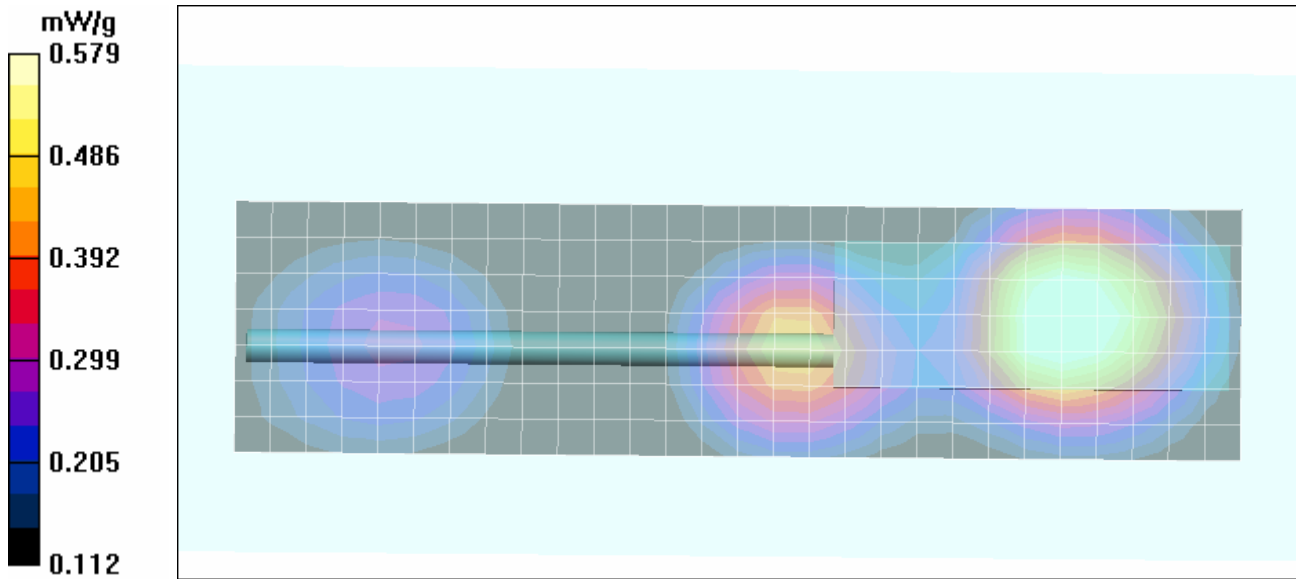
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm


Reference Value = 21.2 V/m; Power Drift = -0.598 dB



Peak SAR (extrapolated) = 0.668 W/kg

**SAR(1 g) = 0.549 mW/g; SAR(10 g) = 0.422 mW/g**

Maximum value of SAR (measured) = 0.579 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/23/2009

## Body-worn SAR - Lithium-ion Battery Pack - 793.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 793 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 793 \text{ MHz}$ ;  $\sigma = 0.93 \text{ mho/m}$ ;  $\epsilon_r = 55.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.68 mW/g

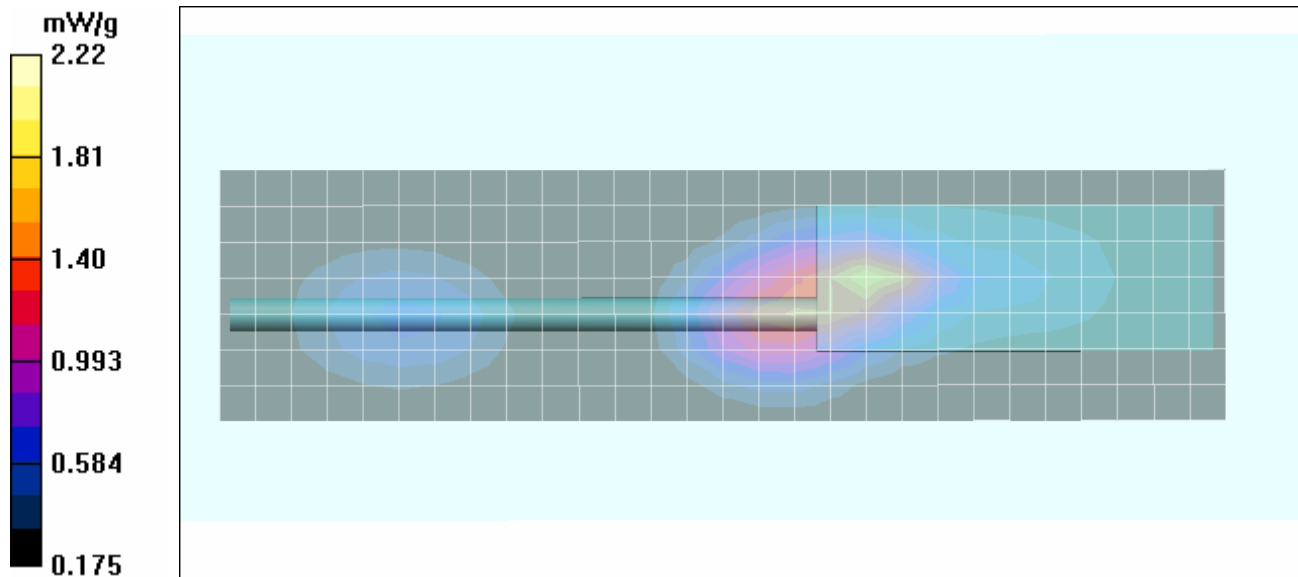
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 44.5 V/m; Power Drift = -0.631 dB



Peak SAR (extrapolated) = 3.34 W/kg

**SAR(1 g) = 2.07 mW/g; SAR(10 g) = 1.35 mW/g**

Maximum value of SAR (measured) = 2.22 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/23/2009

## Body-worn SAR - Lithium-ion Battery Pack - 805.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 805 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 805 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 55.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 3.69 mW/g

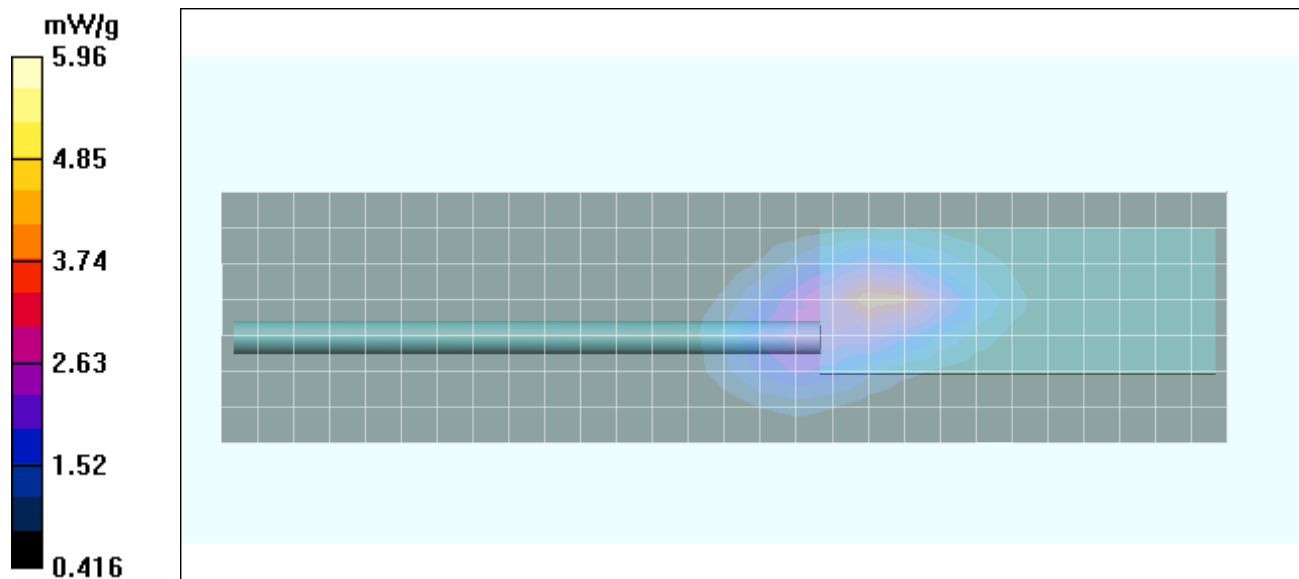
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 59.9 V/m; Power Drift = -0.751 dB

Peak SAR (extrapolated) = 9.26 W/kg

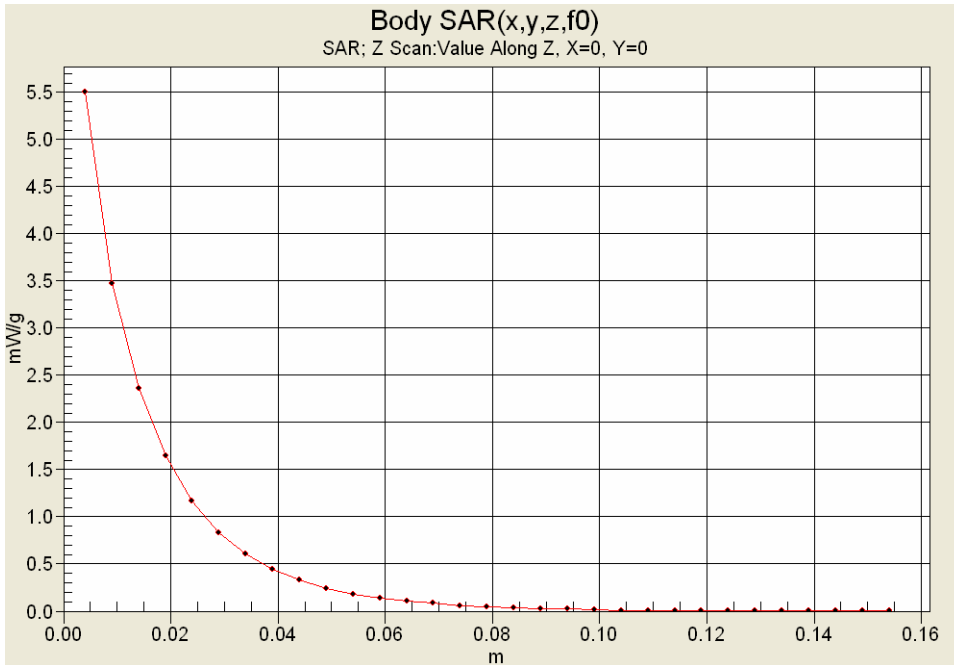
**SAR(1 g) = 5.49 mW/g; SAR(10 g) = 3.38 mW/g**

Maximum value of SAR (measured) = 5.96 mW/g



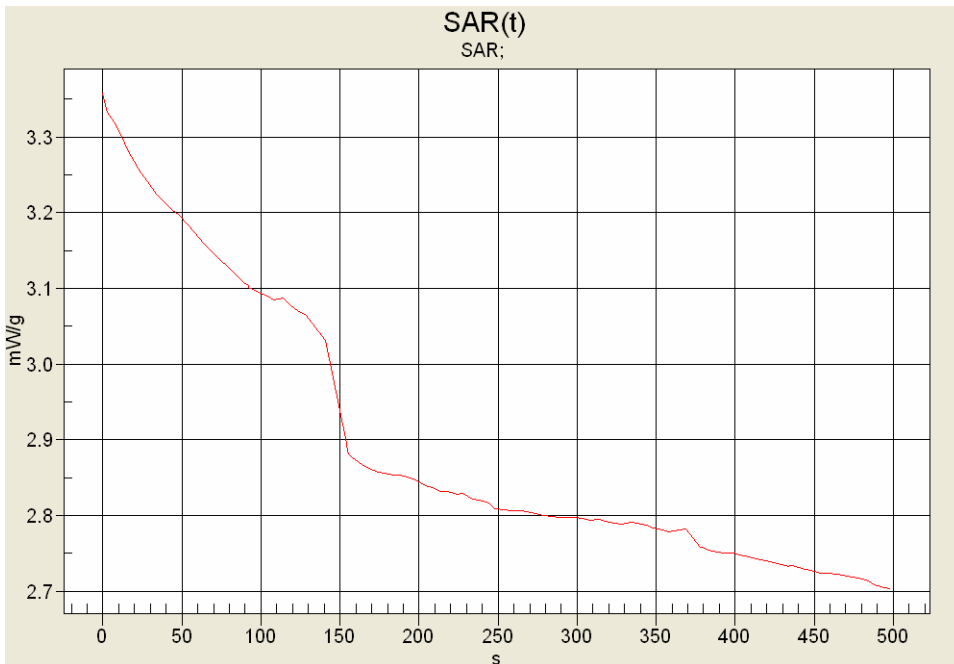
<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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### Z-Axis Scan





### SAR-versus-Time Droop Evaluation

**Body-worn Configuration**  
**805.0 MHz; Li-ion Battery**  
**Belt-Clip Accessory**



0s	3.35782		start
340s	2.79030	-0.804 dB	zoom scan
500s	2.70355	-1.09 dB	area scan



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Date Tested: 11/24/2009

## Body-worn SAR - Lithium-ion Battery Pack - 815.0 MHz - Battery "Baseline" Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 815 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Air-Gap Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.39 mW/g

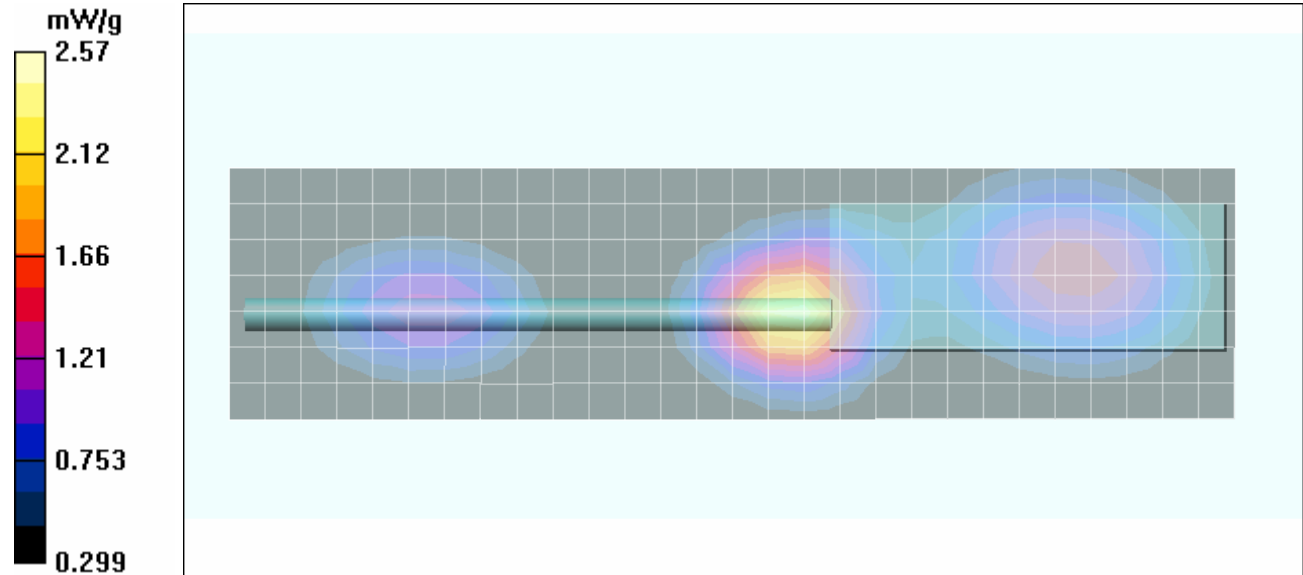
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 46.8 V/m; Power Drift = -0.894 dB



Peak SAR (extrapolated) = 3.20 W/kg

**SAR(1 g) = 2.4 mW/g; SAR(10 g) = 1.68 mW/g**

Maximum value of SAR (measured) = 2.57 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/24/2009

## Body-worn SAR - Alkaline Battery Case - 815.0 MHz - Battery “Baseline” Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 815 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Air-Gap Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.16 mW/g

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

Reference Value = 30.6 V/m; Power Drift = -1.50 dB

Peak SAR (extrapolated) = 1.50 W/kg

**SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.889 mW/g**

Maximum value of SAR (measured) = 1.27 mW/g

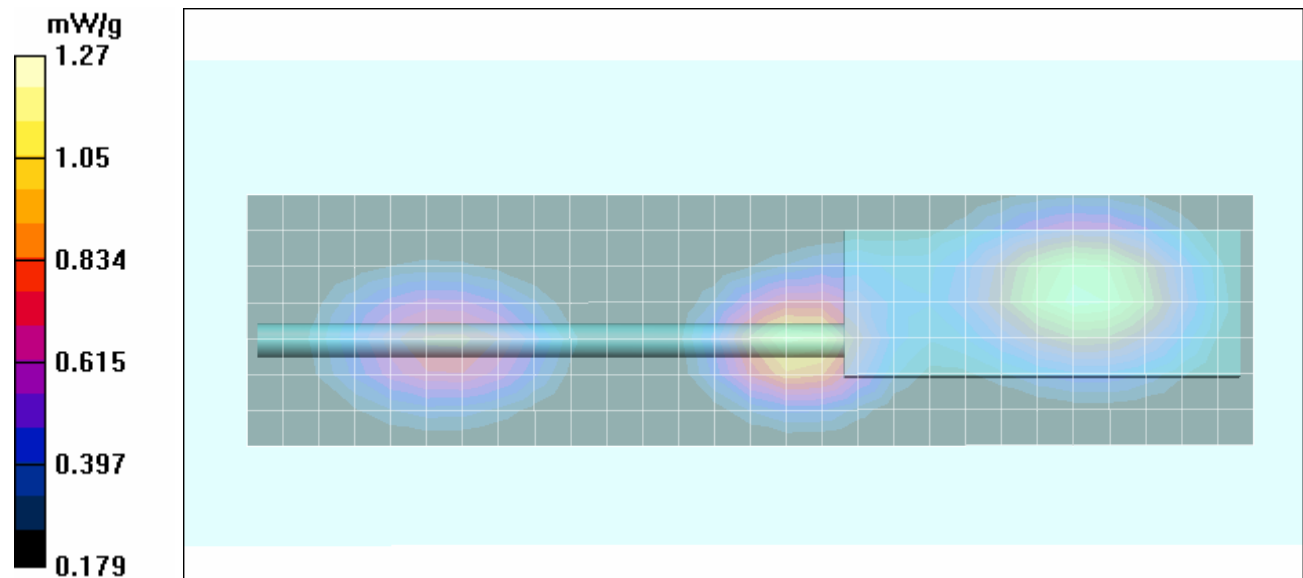
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 30.6 V/m; Power Drift = -1.50 dB



Peak SAR (extrapolated) = 1.22 W/kg

**SAR(1 g) = 0.926 mW/g; SAR(10 g) = 0.648 mW/g**

Maximum value of SAR (measured) = 0.985 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/24/2009

## Body-worn SAR - Lithium-ion Battery Pack - 815.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 815 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 4.52 mW/g

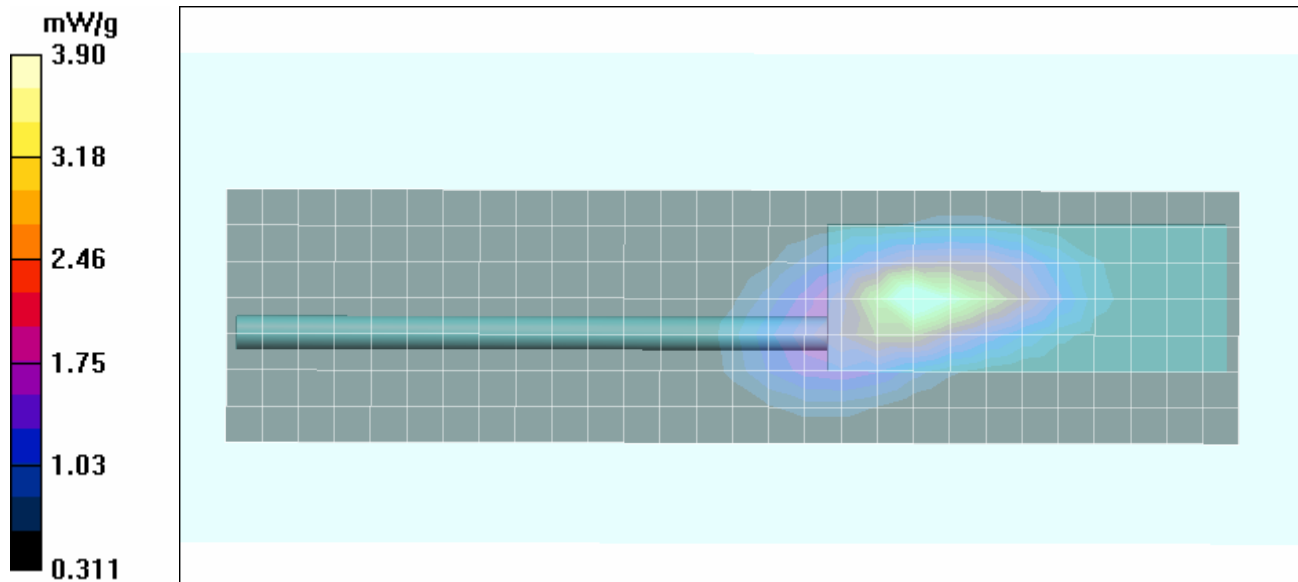
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 47.8 V/m; Power Drift = -1.34 dB



Peak SAR (extrapolated) = 5.93 W/kg

**SAR(1 g) = 3.6 mW/g; SAR(10 g) = 2.25 mW/g**

Maximum value of SAR (measured) = 3.90 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/24/2009

## Body-worn SAR - Alkaline Battery Case - 815.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 815 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.51 mW/g

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

Reference Value = 55.1 V/m; Power Drift = -1.63 dB

Peak SAR (extrapolated) = 4.05 W/kg

**SAR(1 g) = 2.56 mW/g; SAR(10 g) = 1.8 mW/g**

Maximum value of SAR (measured) = 2.84 mW/g

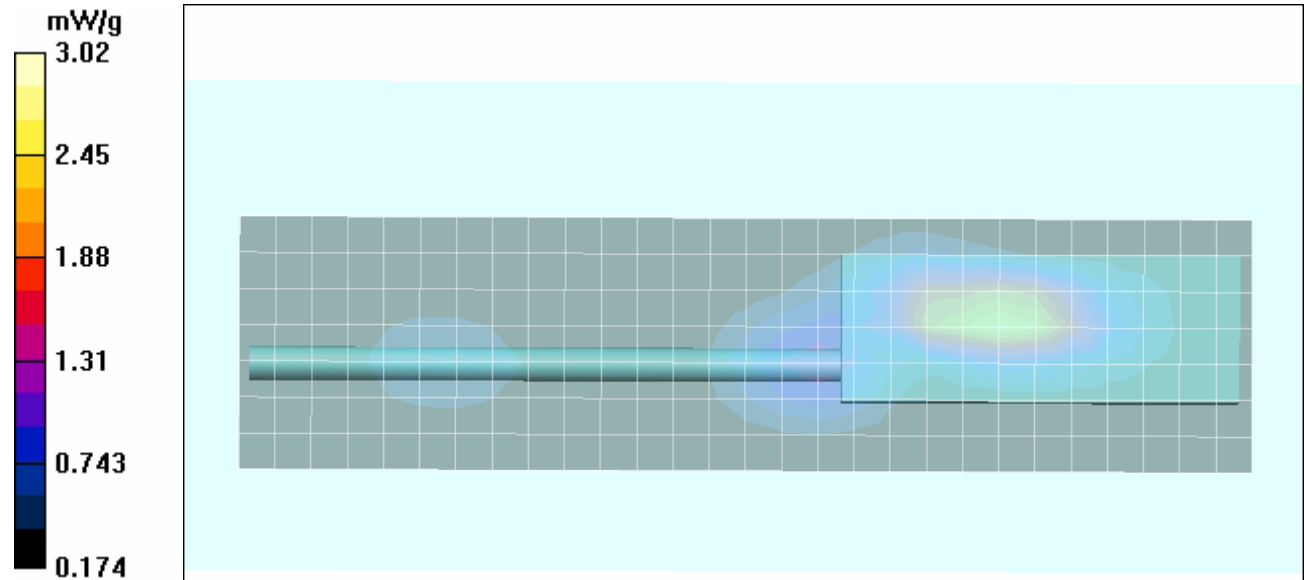
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 55.1 V/m; Power Drift = -1.63 dB



Peak SAR (extrapolated) = 5.00 W/kg

**SAR(1 g) = 2.79 mW/g; SAR(10 g) = 1.67 mW/g**

Maximum value of SAR (measured) = 3.02 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/24/2009

## Body-worn SAR - Lithium-ion Battery Pack - 815.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Nylon Case (Window) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 815 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Nylon Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.39 mW/g

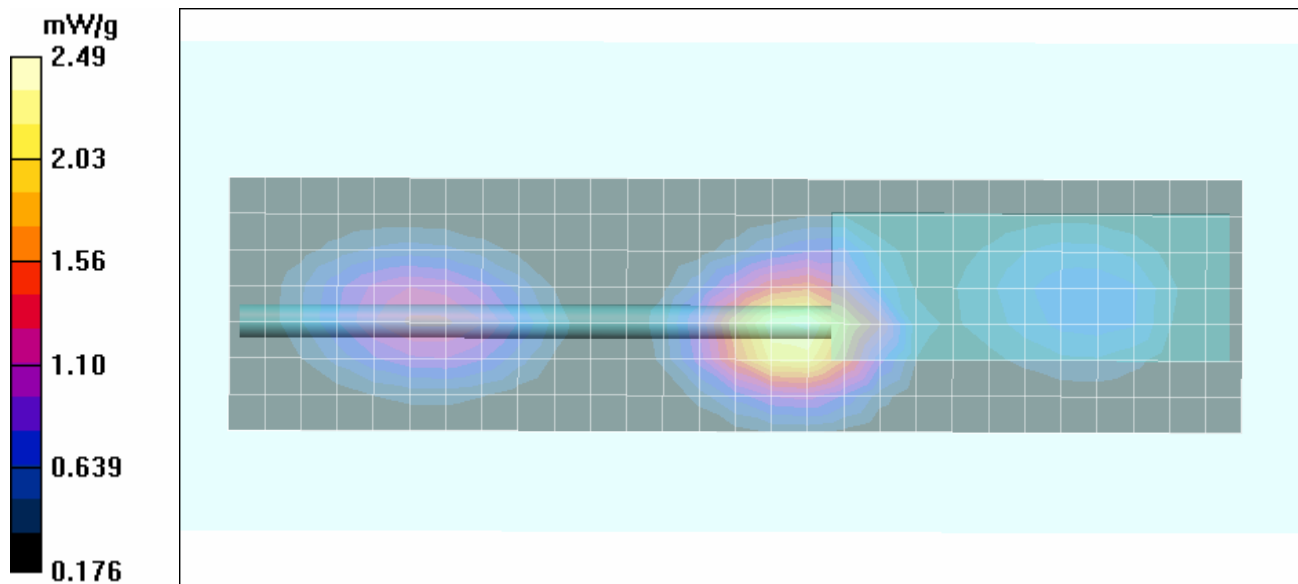
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 40.1 V/m; Power Drift = -1.01 dB



Peak SAR (extrapolated) = 3.14 W/kg

**SAR(1 g) = 2.3 mW/g; SAR(10 g) = 1.52 mW/g**

Maximum value of SAR (measured) = 2.49 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/24/2009

## Body-worn SAR - Alkaline Battery Case - 815.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Nylon Case (Window) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 815 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Nylon Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 3.50 mW/g

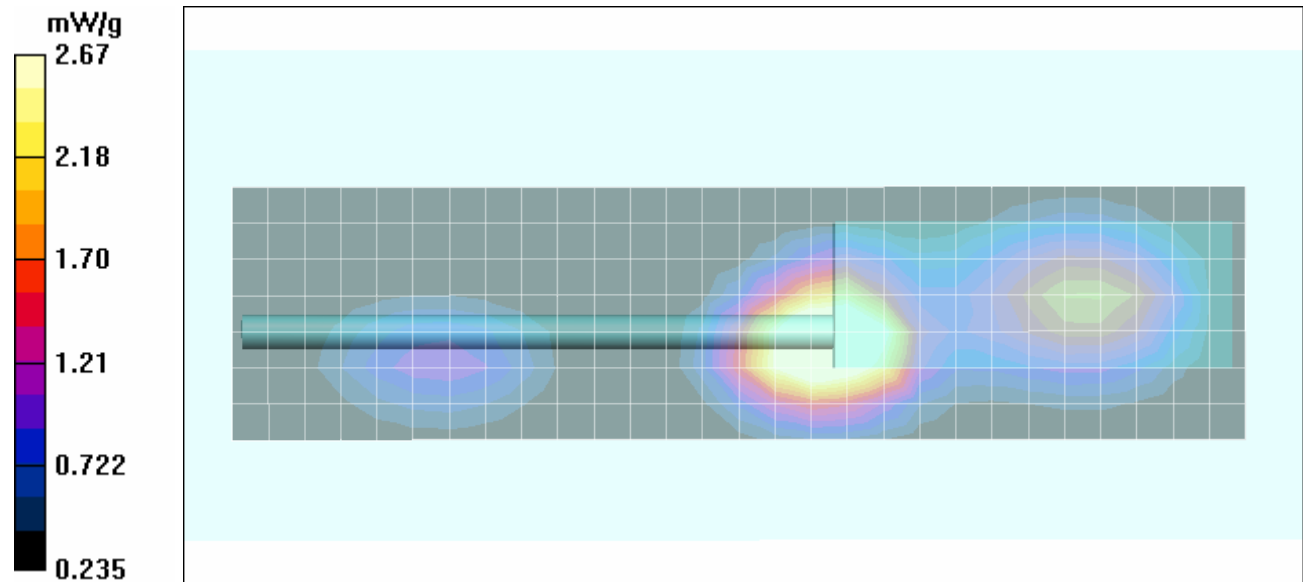
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 42.8 V/m; Power Drift = -1.44 dB



Peak SAR (extrapolated) = 3.34 W/kg

**SAR(1 g) = 2.51 mW/g; SAR(10 g) = 1.72 mW/g**

Maximum value of SAR (measured) = 2.67 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/24/2009

**Body-worn SAR - Lithium-ion Battery Pack - 815.0 MHz - B-w Accessory Highest SAR Search**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used: f = 815 MHz;  $\sigma = 0.95$  mho/m;  $\epsilon_r = 54.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Body-worn SAR - 1.5 cm Leather Case Spacing from Back of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.76 mW/g

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

Reference Value = 52.8 V/m; Power Drift = -1.48 dB

Peak SAR (extrapolated) = 3.80 W/kg

**SAR(1 g) = 2.9 mW/g; SAR(10 g) = 2.07 mW/g**

Maximum value of SAR (measured) = 3.08 mW/g

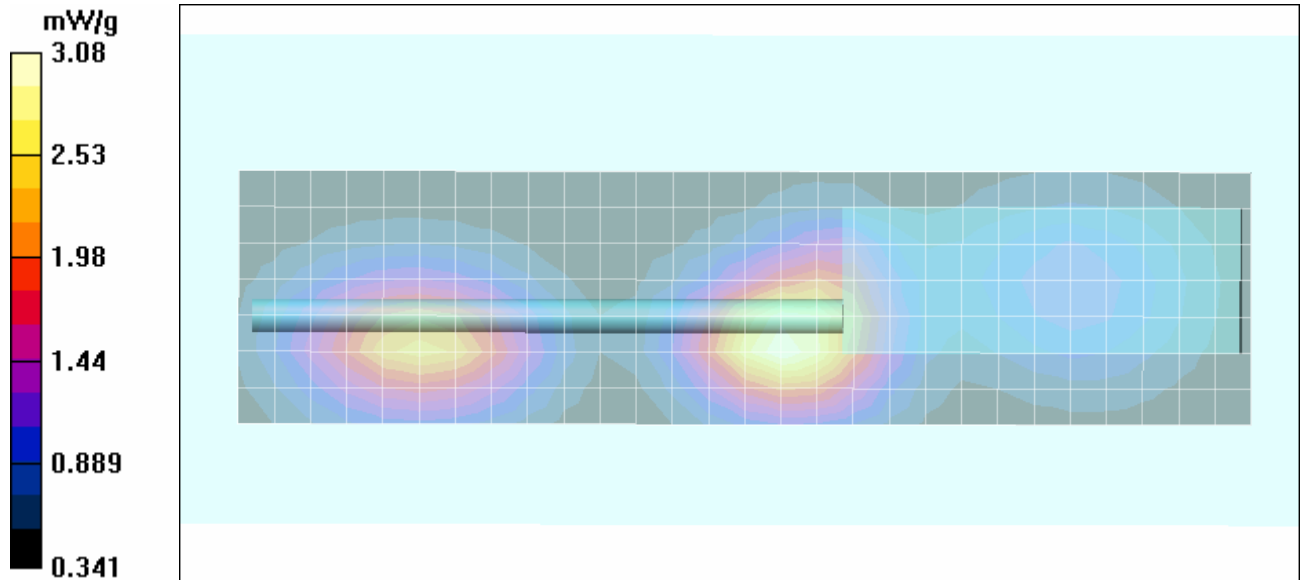
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=5mm


Reference Value = 52.8 V/m; Power Drift = -1.48 dB



Peak SAR (extrapolated) = 1.42 W/kg

**SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.786 mW/g**

Maximum value of SAR (measured) = 1.16 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/24/2009

## Body-worn SAR - Alkaline Battery Case - 815.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 815 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Leather Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

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

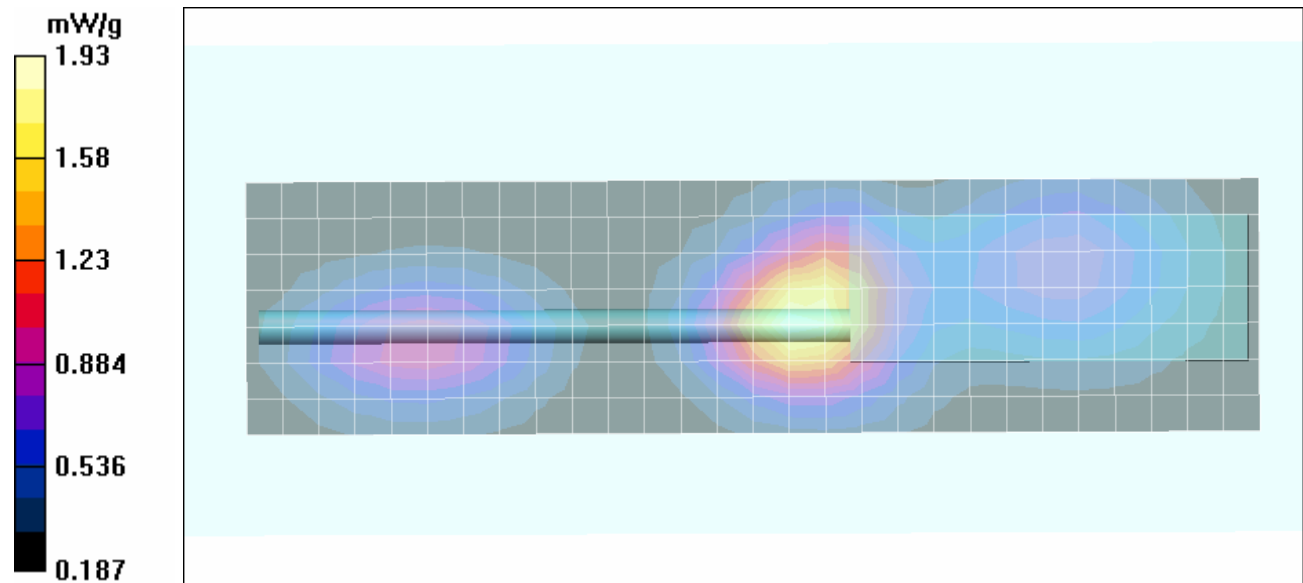
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 37.4 V/m; Power Drift = -1.18 dB

Peak SAR (extrapolated) = 2.41 W/kg



**SAR(1 g) = 1.75 mW/g; SAR(10 g) = 1.19 mW/g**

Maximum value of SAR (measured) = 1.93 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/24/2009

## Body-worn SAR - Lithium-ion Battery Pack - 815.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Swivel Belt-Loop (3"); Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 815 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 815 \text{ MHz}$ ;  $\sigma = 0.95 \text{ mho/m}$ ;  $\epsilon_r = 54.4$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 4.5 cm Leather Case & Swivel Belt-Loop Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.443 mW/g

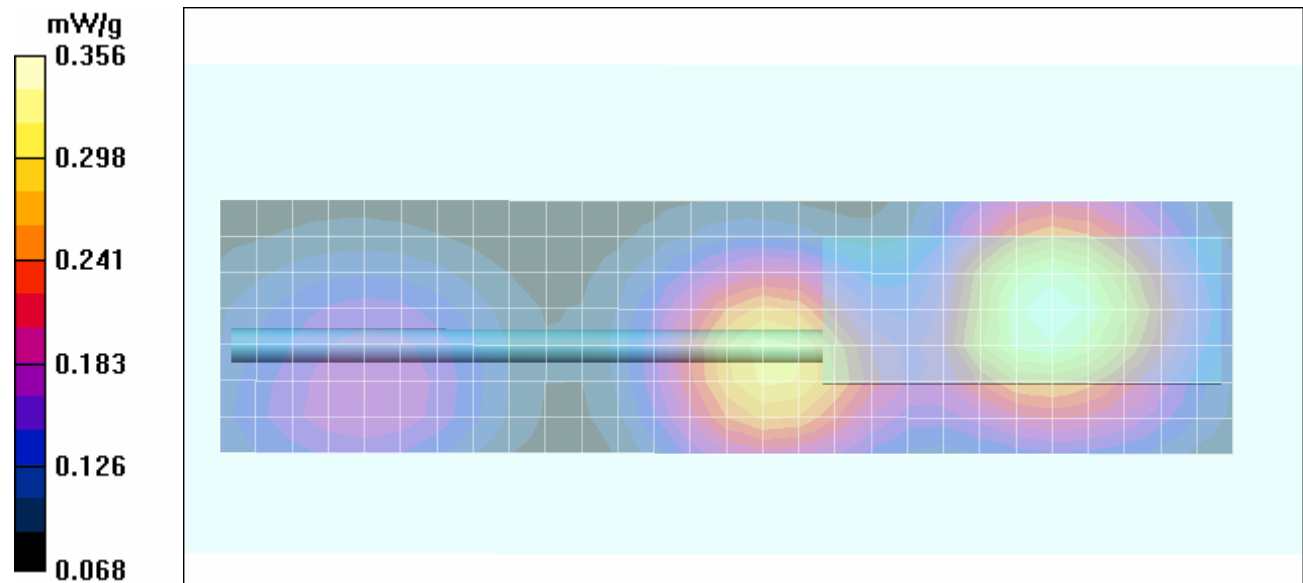
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 16.5 V/m; Power Drift = -0.790 dB



Peak SAR (extrapolated) = 0.417 W/kg

**SAR(1 g) = 0.338 mW/g; SAR(10 g) = 0.256 mW/g**

Maximum value of SAR (measured) = 0.356 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/24/2009

## Body-worn SAR - Lithium-ion Battery Pack - 806.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 806 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 806 \text{ MHz}$ ;  $\sigma = 0.94 \text{ mho/m}$ ;  $\epsilon_r = 54.7$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 5.50 mW/g

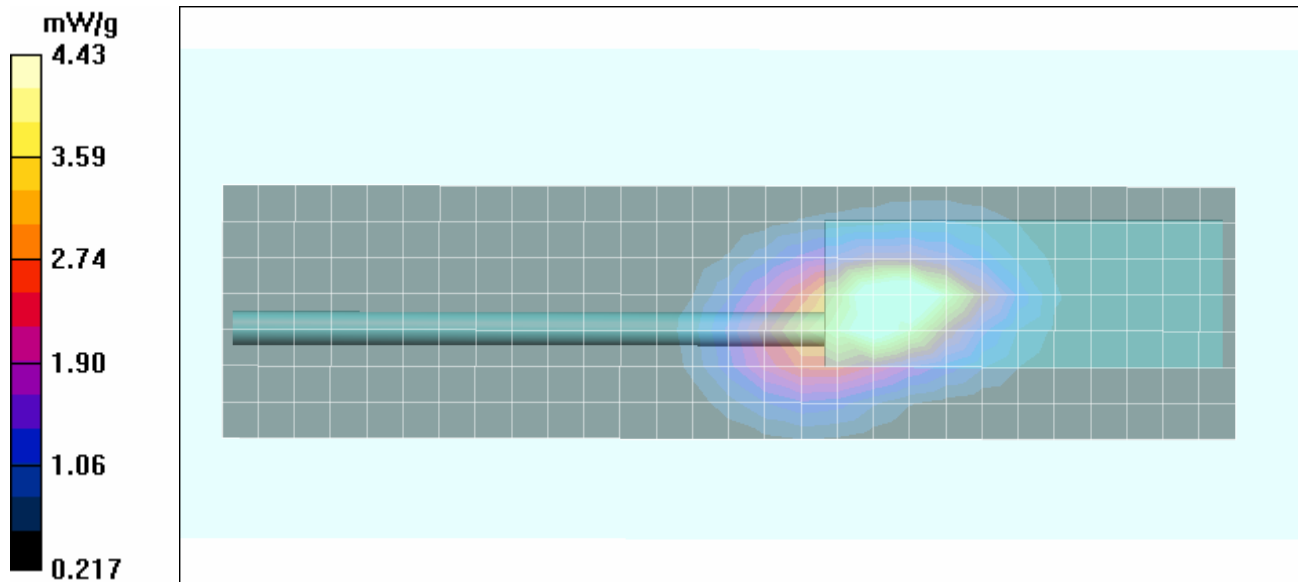
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 61.5 V/m; Power Drift = -0.568 dB



Peak SAR (extrapolated) = 6.37 W/kg

**SAR(1 g) = 4.07 mW/g; SAR(10 g) = 2.58 mW/g**

Maximum value of SAR (measured) = 4.43 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/24/2009

## Body-worn SAR - Lithium-ion Battery Pack - 824.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 824 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 824 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 3.05 mW/g

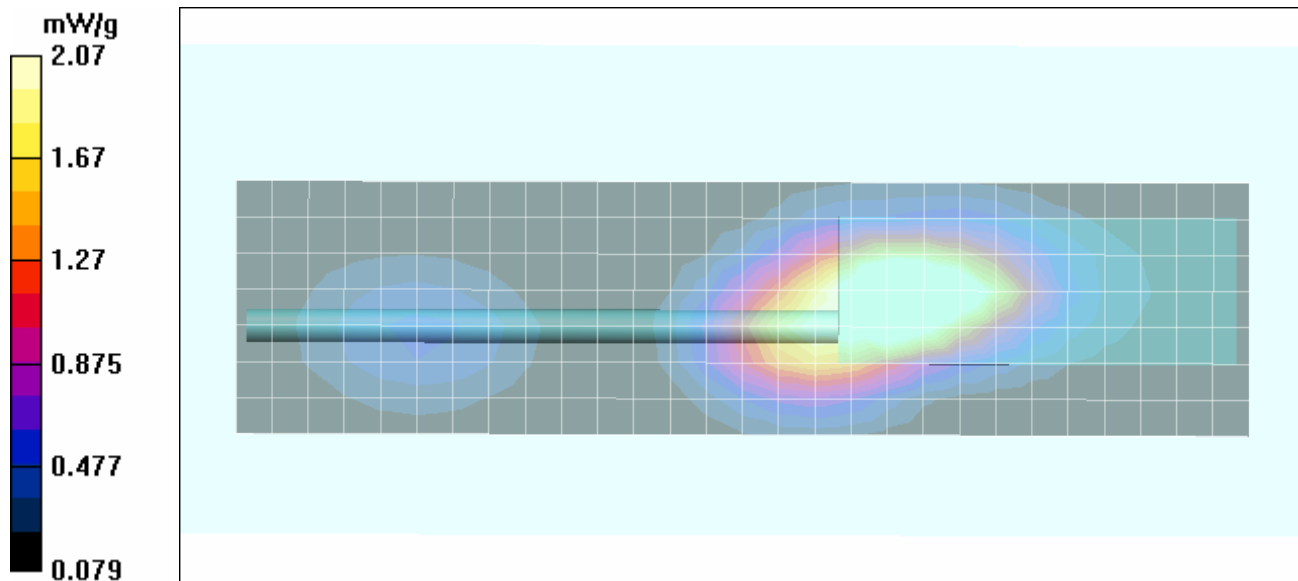
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 46.9 V/m; Power Drift = -0.599 dB



Peak SAR (extrapolated) = 2.62 W/kg

**SAR(1 g) = 1.84 mW/g; SAR(10 g) = 1.12 mW/g**

Maximum value of SAR (measured) = 2.07 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

## Body-worn SAR - Lithium-ion Battery Pack - 860.0 MHz - Battery "Baseline" Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 860 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Air-Gap Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.67 mW/g

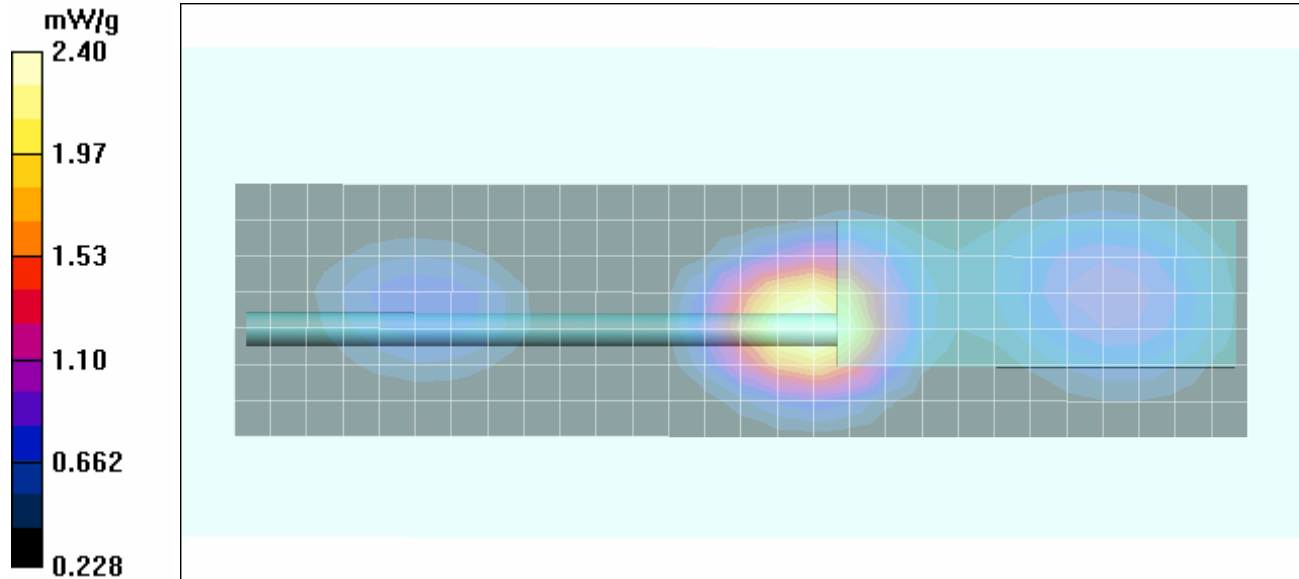
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 50.9 V/m; Power Drift = -1.23 dB



Peak SAR (extrapolated) = 2.99 W/kg

**SAR(1 g) = 2.25 mW/g; SAR(10 g) = 1.53 mW/g**

Maximum value of SAR (measured) = 2.40 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

## Body-worn SAR - Alkaline Battery Case - 860.0 MHz - Battery “Baseline” Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 860 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Air-Gap Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.59 mW/g

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

Reference Value = 45.1 V/m; Power Drift = -1.46 dB

Peak SAR (extrapolated) = 2.25 W/kg

**SAR(1 g) = 1.68 mW/g; SAR(10 g) = 1.16 mW/g**

Maximum value of SAR (measured) = 1.79 mW/g

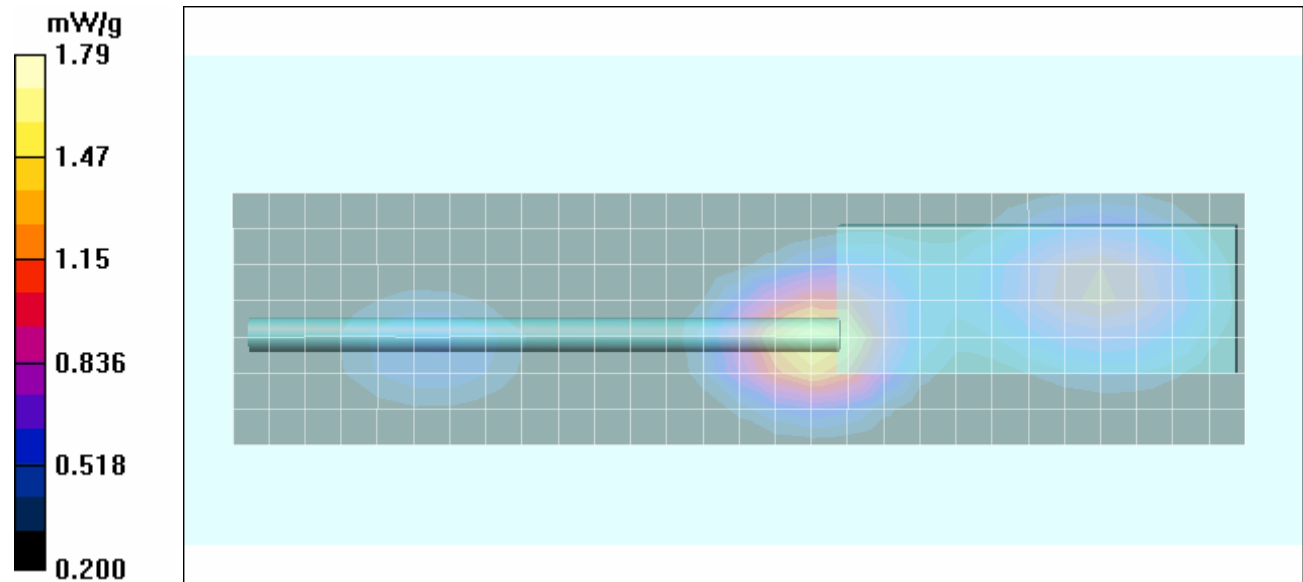
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 45.1 V/m; Power Drift = -1.46 dB



Peak SAR (extrapolated) = 1.62 W/kg

**SAR(1 g) = 1.27 mW/g; SAR(10 g) = 0.925 mW/g**

Maximum value of SAR (measured) = 1.34 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

## Body-worn SAR - Lithium-ion Battery Pack - 860.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 860 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 3.77 mW/g

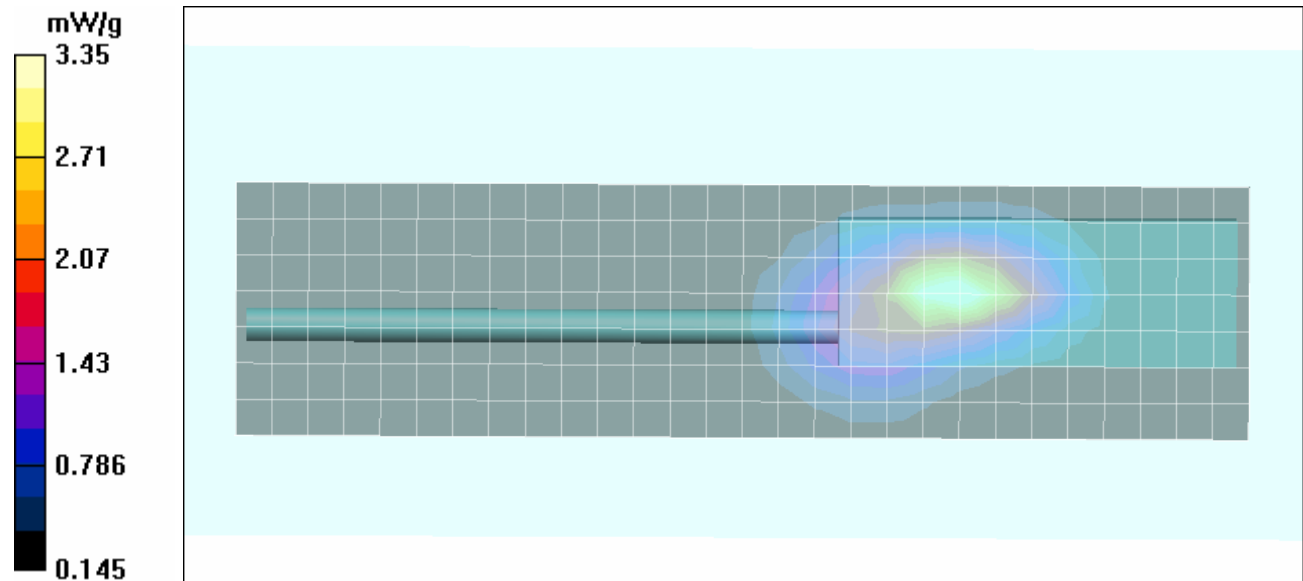
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 50.2 V/m; Power Drift = -1.29 dB



Peak SAR (extrapolated) = 5.02 W/kg

**SAR(1 g) = 2.95 mW/g; SAR(10 g) = 1.74 mW/g**

Maximum value of SAR (measured) = 3.35 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

## Body-worn SAR - Alkaline Battery Case - 860.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Metal Belt-Clip; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 860 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.2 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

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

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

Reference Value = 50.9 V/m; Power Drift = -1.59 dB

Peak SAR (extrapolated) = 4.47 W/kg

**SAR(1 g) = 2.76 mW/g; SAR(10 g) = 1.77 mW/g**

Maximum value of SAR (measured) = 2.98 mW/g

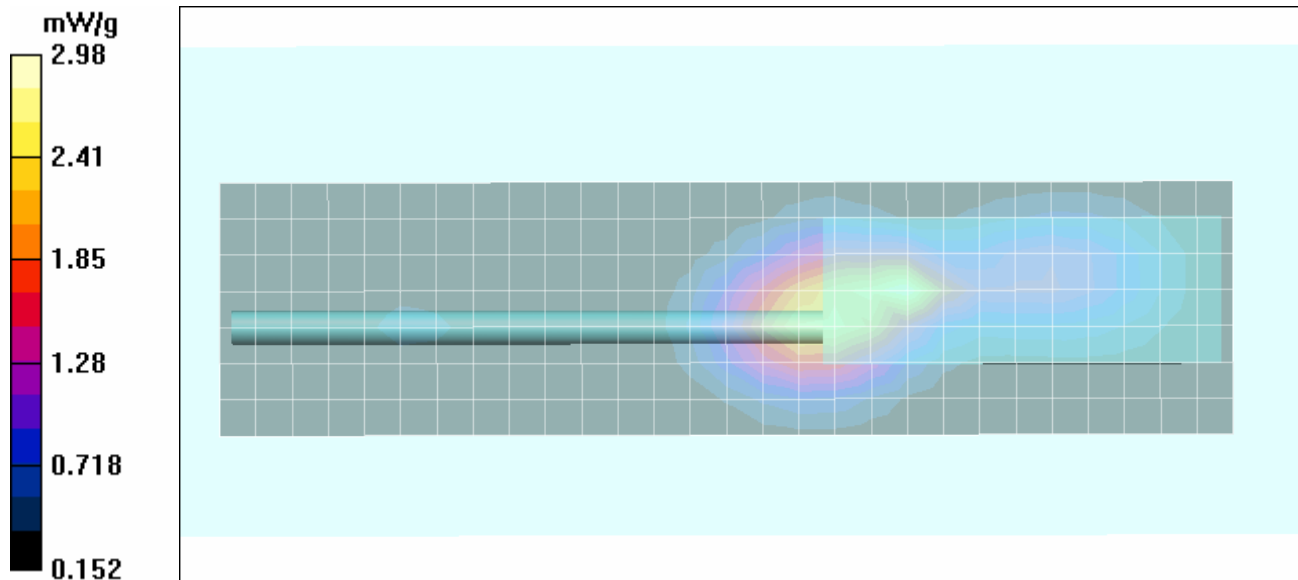
**Zoom Scan (7x7x7)/Cube 1:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 50.9 V/m; Power Drift = -1.59 dB



Peak SAR (extrapolated) = 2.76 W/kg

**SAR(1 g) = 2.09 mW/g; SAR(10 g) = 1.46 mW/g**

Maximum value of SAR (measured) = 2.30 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

**Body-worn SAR - Lithium-ion Battery Pack - 860.0 MHz - B-w Accessory Highest SAR Search**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Nylon Case (Window) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used: f = 860 MHz;  $\sigma = 0.97$  mho/m;  $\epsilon_r = 53.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Body-worn SAR - 1.5 cm Nylon Case Spacing from Back of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.85 mW/g

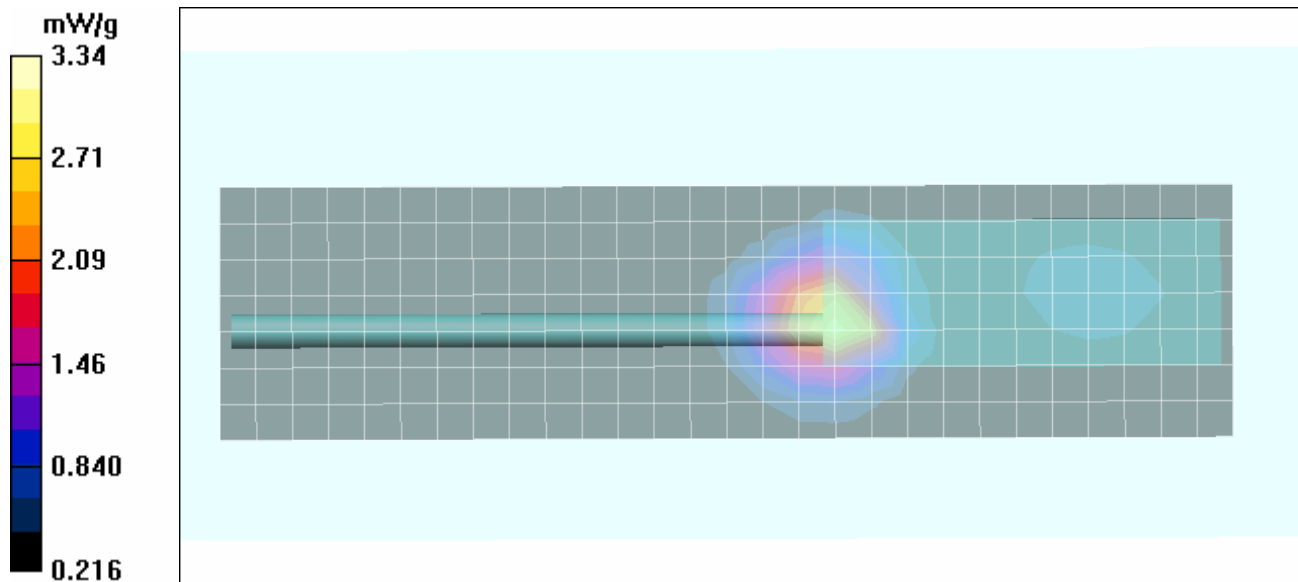
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm


Reference Value = 56.3 V/m; Power Drift = -1.36 dB

Peak SAR (extrapolated) = 4.19 W/kg



**SAR(1 g) = 3.07 mW/g; SAR(10 g) = 2.07 mW/g**

Maximum value of SAR (measured) = 3.34 mW/g



Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

## Body-worn SAR - Alkaline Battery Case - 860.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Nylon Case (Window) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 860 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Nylon Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.59 mW/g

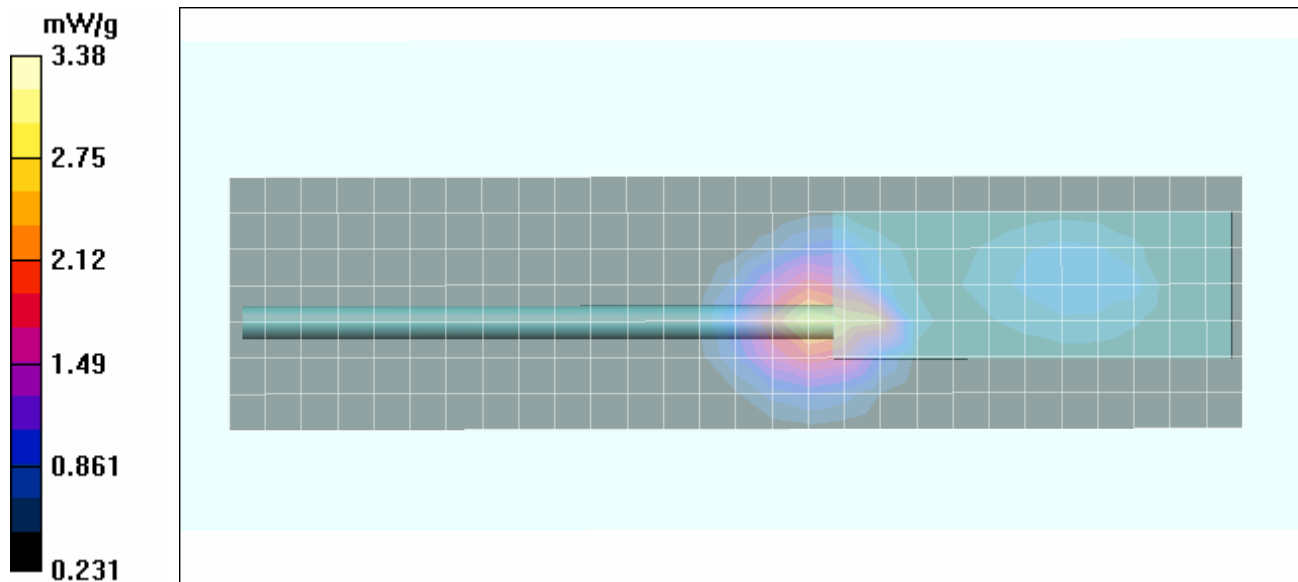
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 60.4 V/m; Power Drift = -1.62 dB



Peak SAR (extrapolated) = 4.45 W/kg

**SAR(1 g) = 3.09 mW/g; SAR(10 g) = 2.04 mW/g**

Maximum value of SAR (measured) = 3.38 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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Date Tested: 11/25/2009

## Body-worn SAR - Lithium-ion Battery Pack - 860.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 860 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Leather Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.26 mW/g

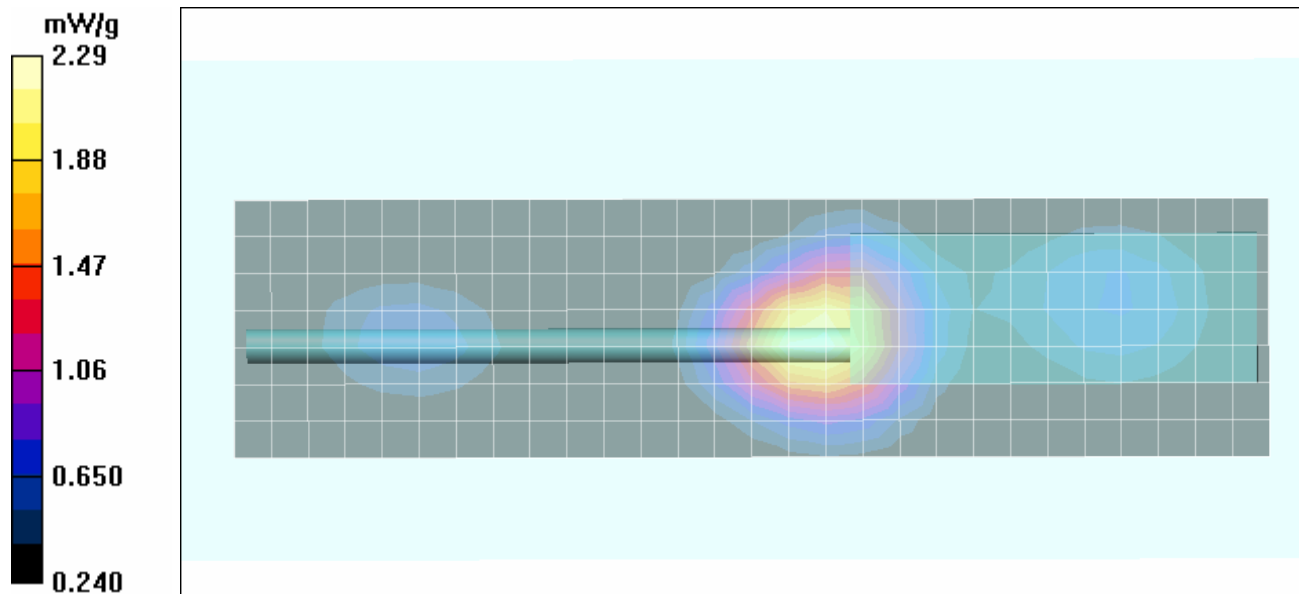
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 50.1 V/m; Power Drift = -1.15 dB



Peak SAR (extrapolated) = 2.84 W/kg

**SAR(1 g) = 2.16 mW/g; SAR(10 g) = 1.52 mW/g**

Maximum value of SAR (measured) = 2.29 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

## Body-worn SAR - Alkaline Battery Case - 860.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 860 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Leather Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 2.63 mW/g

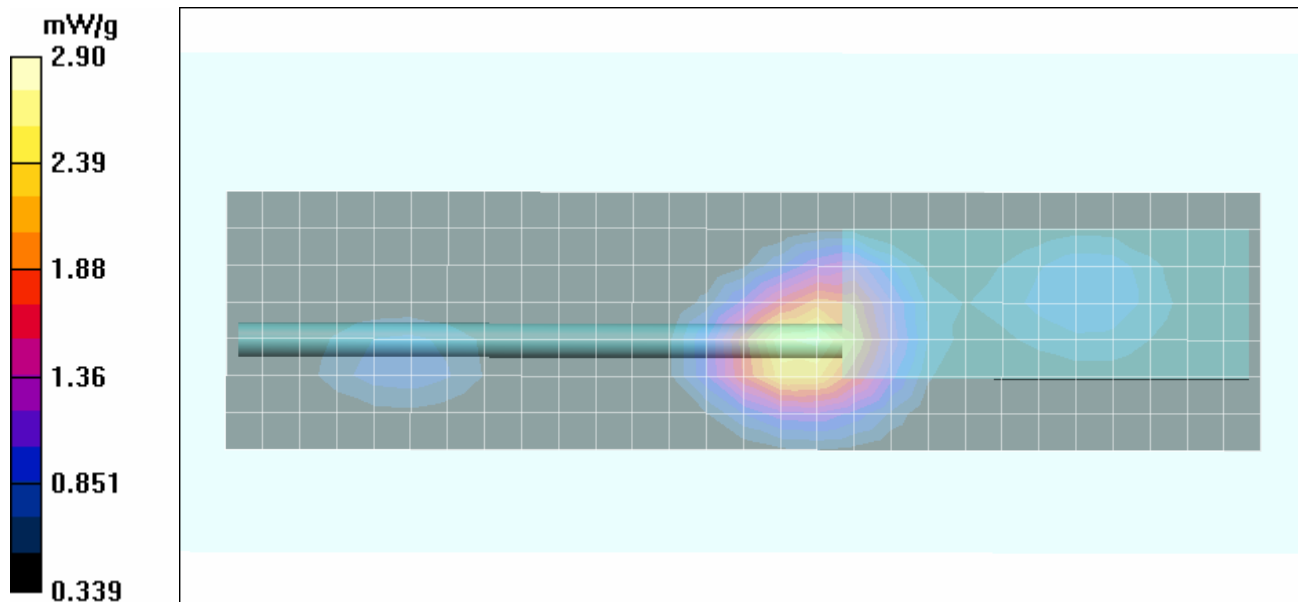
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 61.5 V/m; Power Drift = -1.72 dB

Peak SAR (extrapolated) = 3.59 W/kg

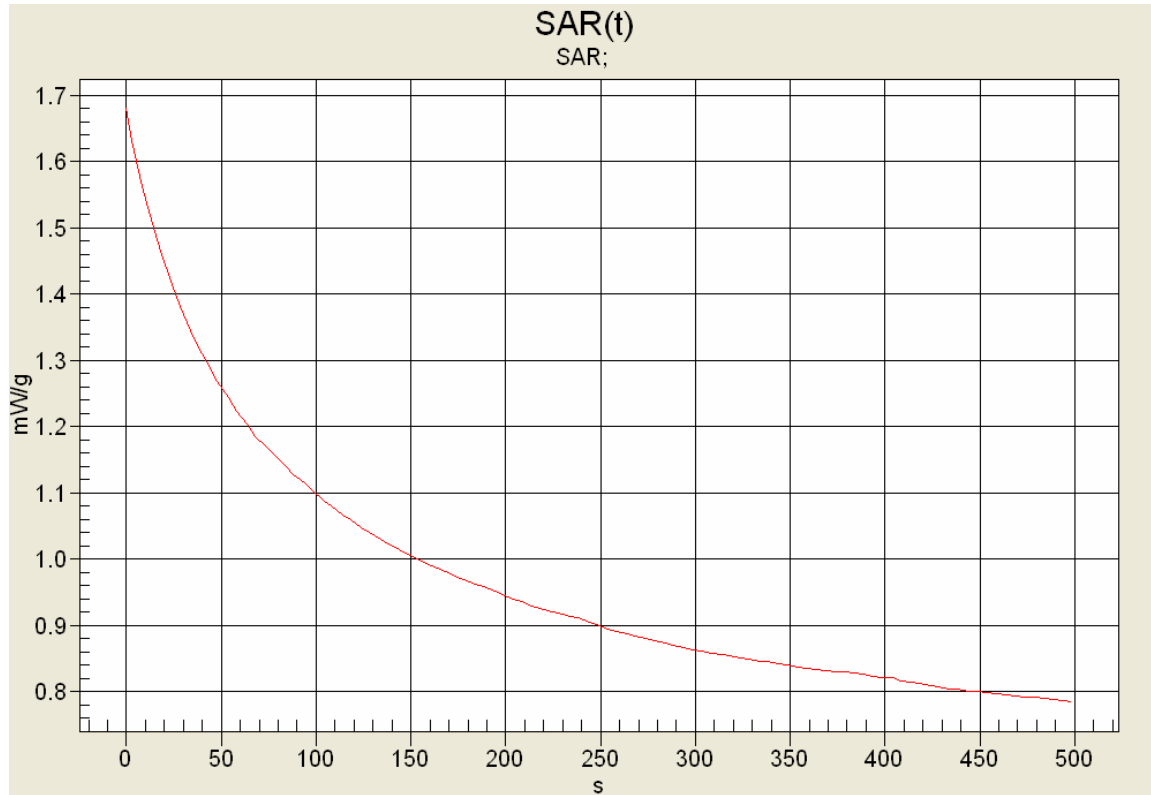
**SAR(1 g) = 2.7 mW/g; SAR(10 g) = 1.92 mW/g**

Maximum value of SAR (measured) = 2.90 mW/g





Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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**SAR-versus-Time Droop Evaluation**  
**Body-worn Configuration**  
**860.0 MHz; Alkaline Batt.**  
**Leather Case accessory**



0s	1.68009		start
340s	0.844929	-2.96 dB	zoom scan
500s	0.785142	-3.30 dB	area scan

	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

**Body-worn SAR - Lithium-ion Battery Pack - 860.0 MHz - B-w Accessory Highest SAR Search**

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Leather Case (Full) & Swivel Belt-Loop (3"); Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 860 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 860 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

**Body-worn SAR - 4.5 cm Leather Case & Swivel Belt-Loop Spacing from Back of DUT to Planar Phantom**

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.499 mW/g

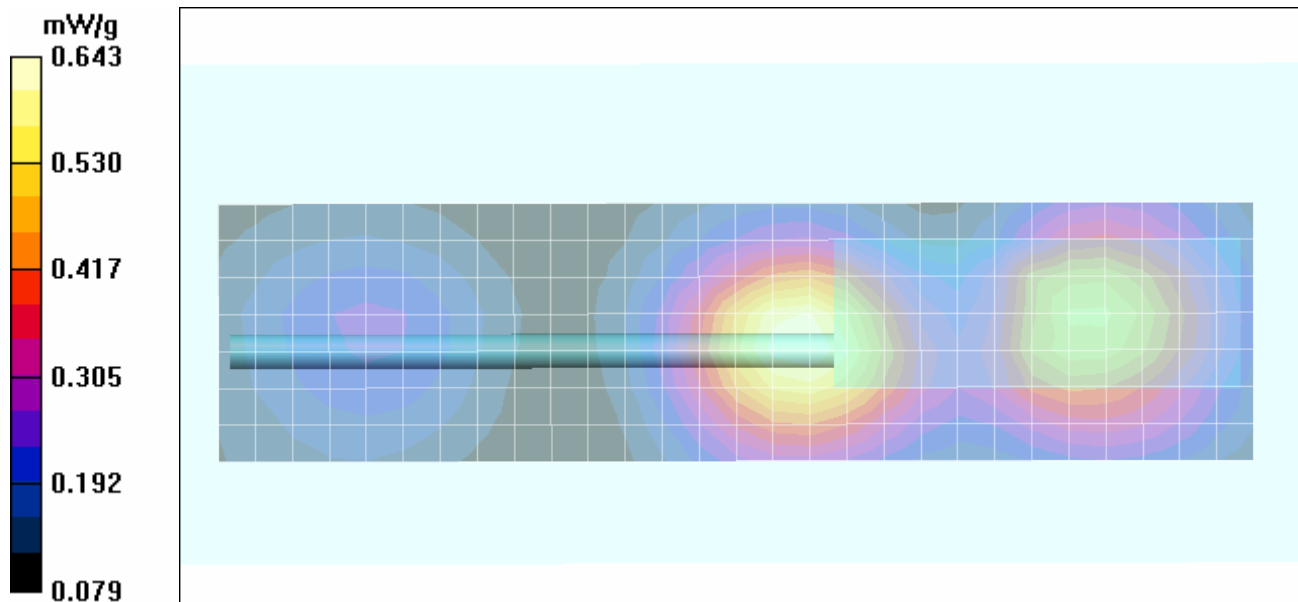
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 27.9 V/m; Power Drift = -1.05 dB



Peak SAR (extrapolated) = 0.777 W/kg

**SAR(1 g) = 0.585 mW/g; SAR(10 g) = 0.416 mW/g**

Maximum value of SAR (measured) = 0.643 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

## Body-worn SAR - Lithium-ion Battery Pack - 851.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Nylon Case (Window) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 851 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 851 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Nylon Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 4.55 mW/g

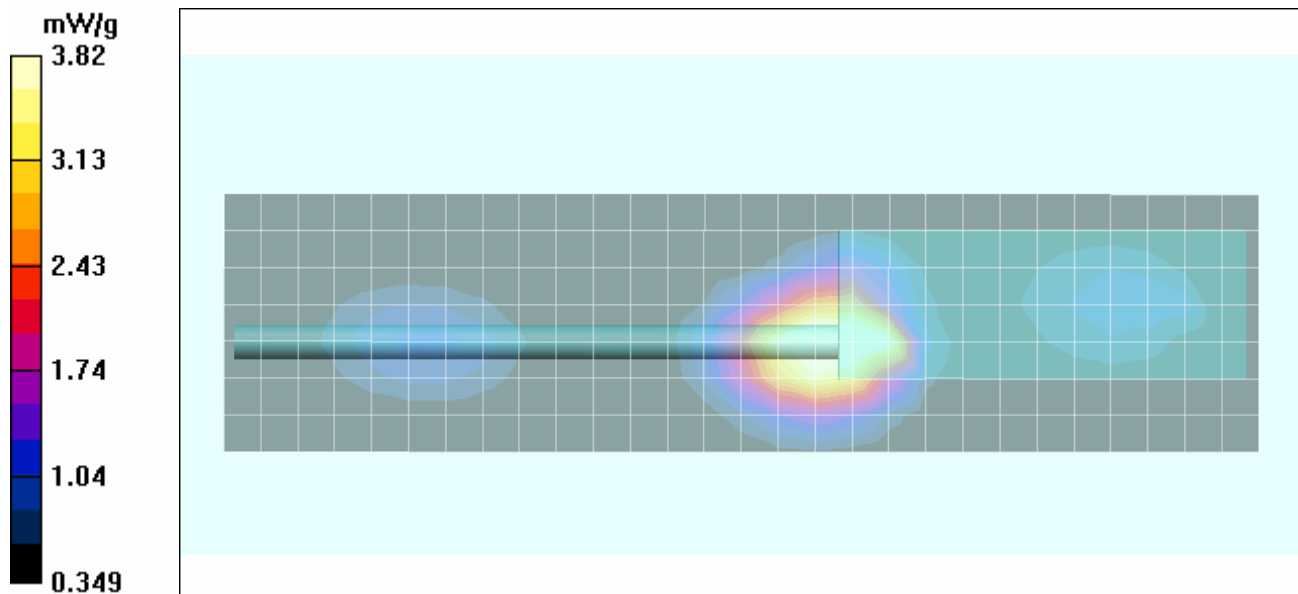
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 55.3 V/m; Power Drift = -1.33 dB

Peak SAR (extrapolated) = 4.89 W/kg

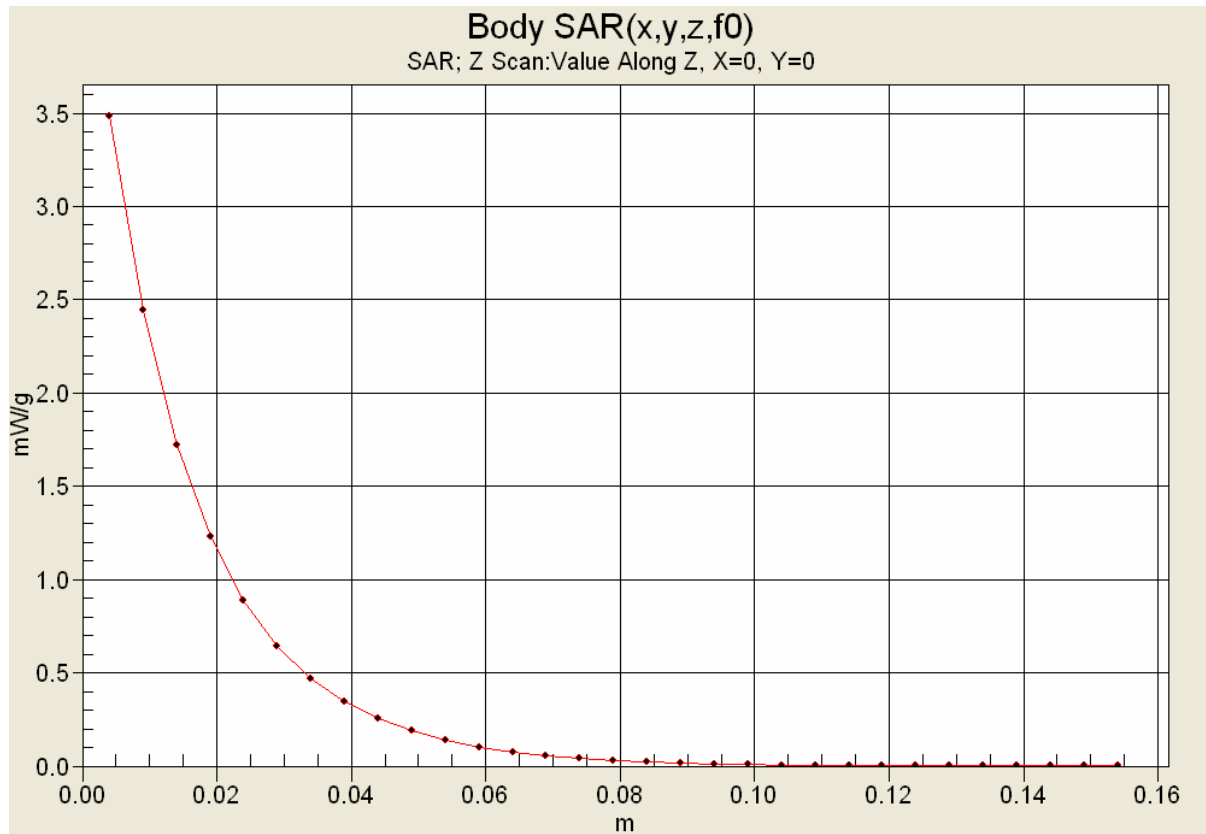
**SAR(1 g) = 3.54 mW/g; SAR(10 g) = 2.45 mW/g**



Maximum value of SAR (measured) = 3.82 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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## Z-Axis Scan



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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

## Body-worn SAR - Lithium-ion Battery Pack - 869.0 MHz - B-w Accessory Highest SAR Search

**DUT: HARRIS Unity XG-100P; Type: Multi-band PTT Radio Transceiver (700/800 Band); Serial: EM067**

**Body-worn Accessory: Nylon Case (Window) & Shoulder Strap; Audio Accessory: Speaker-Microphone**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 869 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 869 \text{ MHz}$ ;  $\sigma = 0.99 \text{ mho/m}$ ;  $\epsilon_r = 53.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### Body-worn SAR - 1.5 cm Nylon Case Spacing from Back of DUT to Planar Phantom

**Area Scan (8x29x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.73 mW/g

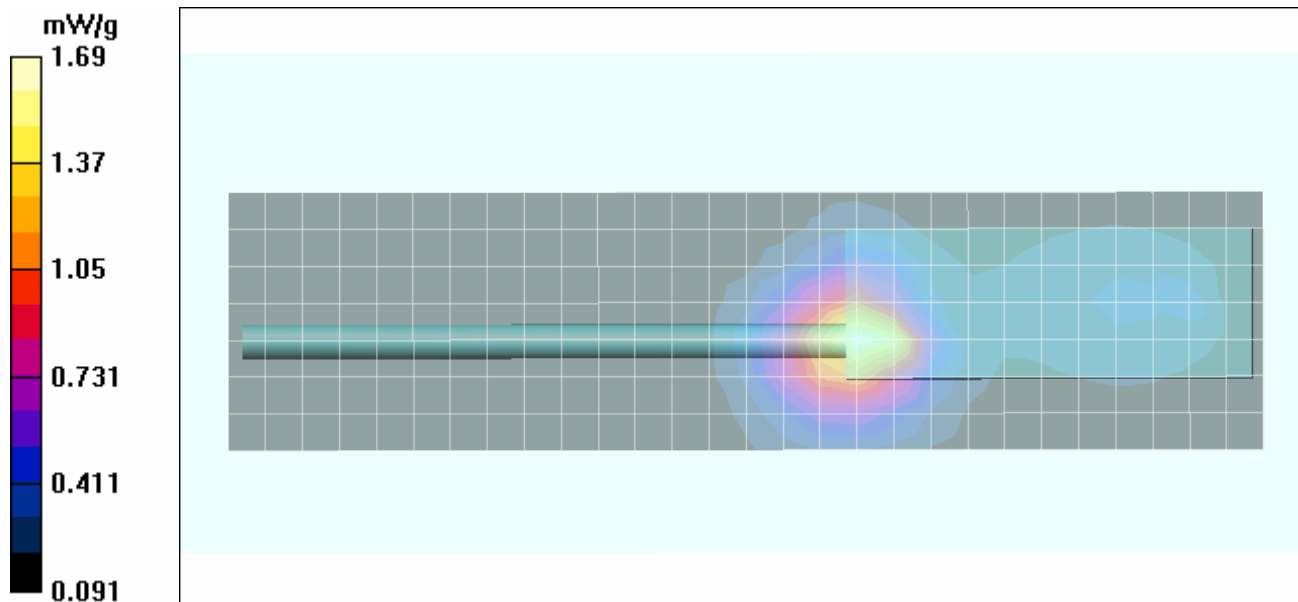
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 40.6 V/m; Power Drift = -1.69 dB

Peak SAR (extrapolated) = 2.39 W/kg



**SAR(1 g) = 1.48 mW/g; SAR(10 g) = 1 mW/g**

Maximum value of SAR (measured) = 1.69 mW/g




<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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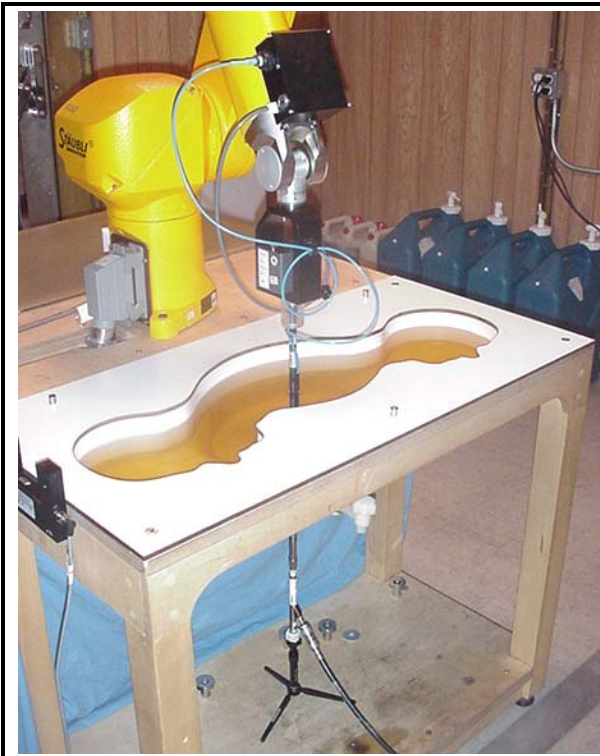


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**APPENDIX B - SYSTEM PERFORMANCE CHECK**

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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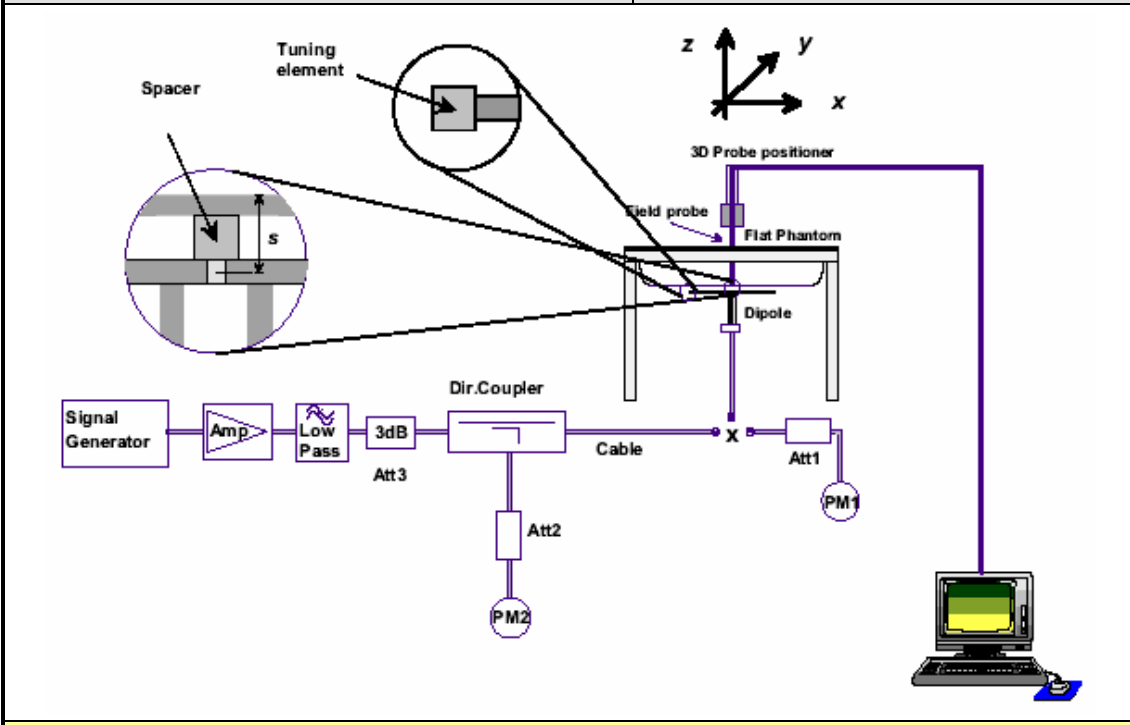
## SYSTEM PERFORMANCE CHECK MEASUREMENT SETUP





DASY4 System with SAM Phantom V4.0C



835 MHz Validation Dipole Setup



System Performance Check Measurement Setup Diagram (IEEE Standard 1528-2003)

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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/17/2009

## System Performance Check - 835 MHz Dipole - Head

**DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d075; Calibration: 04/20/2009**

Ambient Temp: 24.0°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835HSL Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.92 \text{ mho/m}$ ;  $\epsilon_r = 41.8$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.59, 6.59, 6.59); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### System Performance Check - 835 MHz Dipole

**Area Scan (6x10x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.42 mW/g

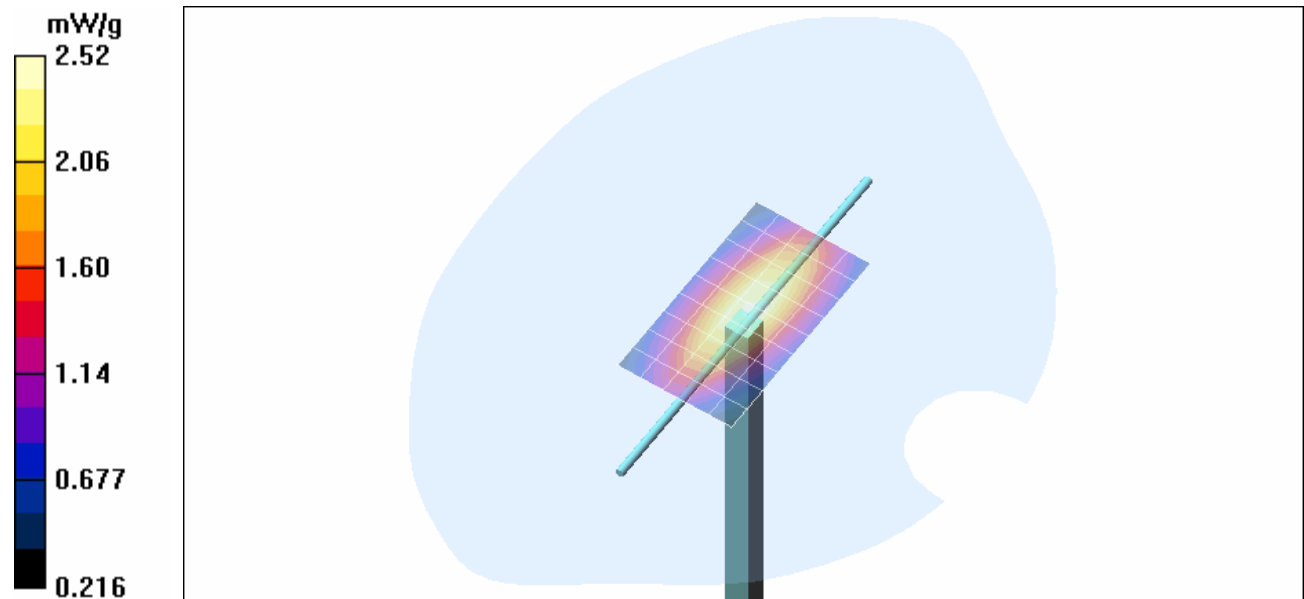
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 54.0 V/m; Power Drift = 0.087 dB

Peak SAR (extrapolated) = 3.44 W/kg

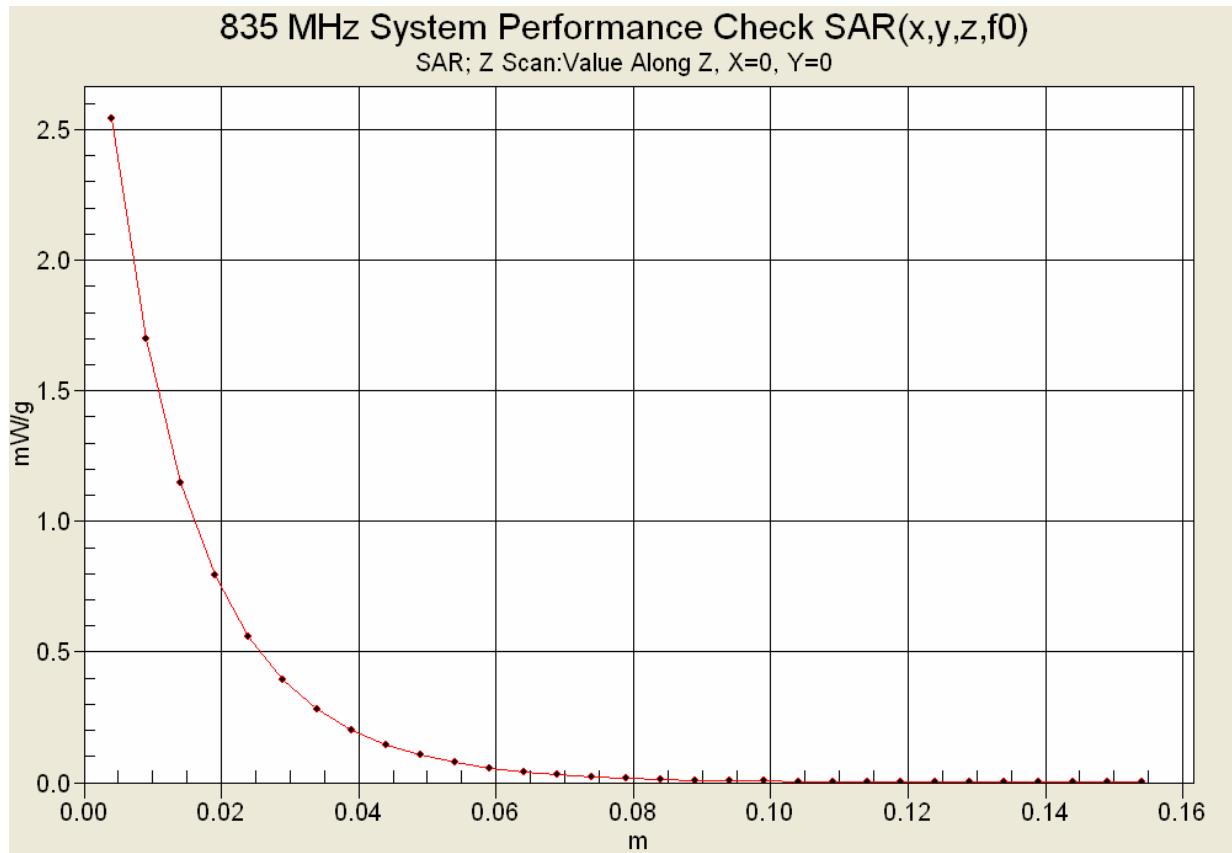
**SAR(1 g) = 2.32 mW/g; SAR(10 g) = 1.51 mW/g**



Maximum value of SAR (measured) = 2.52 mW/g



<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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### Z-Axis Scan



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Date Tested: 11/20/2009

## System Performance Check - 835 MHz Dipole - Body

**DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d075; Calibration: 04/20/2009**

Ambient Temp: 24.1°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.99 \text{ mho/m}$ ;  $\epsilon_r = 54.9$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### System Performance Check - 835 MHz Dipole

**Area Scan (6x10x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.62 mW/g

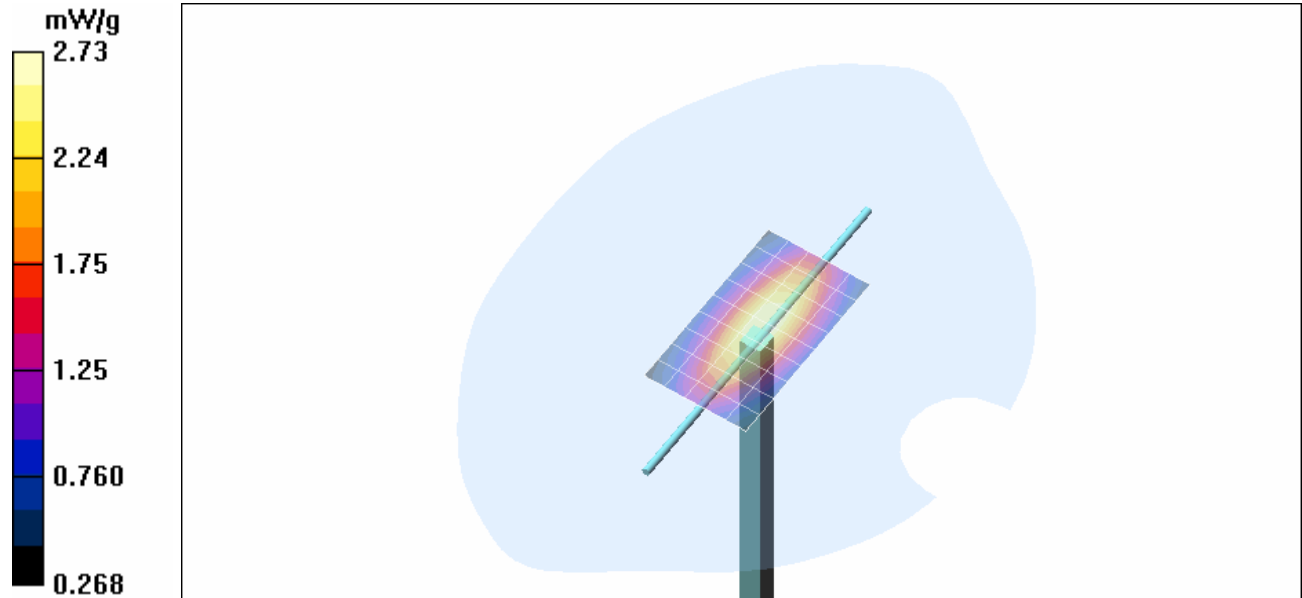
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 54.1 V/m; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 3.64 W/kg

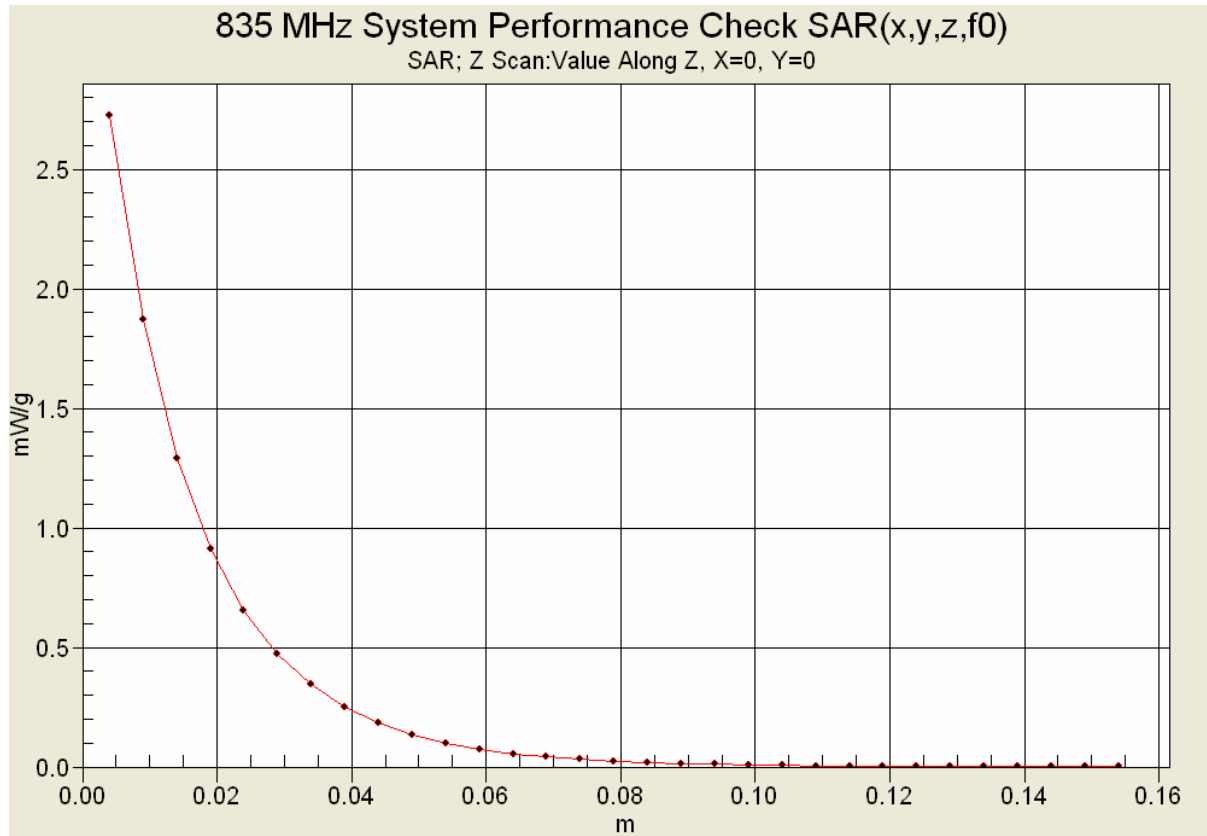
**SAR(1 g) = 2.52 mW/g; SAR(10 g) = 1.66 mW/g**



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



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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## Z-Axis Scan



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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/23/2009

## System Performance Check - 835 MHz Dipole - Body

**DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d075; Calibration: 04/20/2009**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.99 \text{ mho/m}$ ;  $\epsilon_r = 54.7$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### System Performance Check - 835 MHz Dipole

**Area Scan (6x10x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.62 mW/g

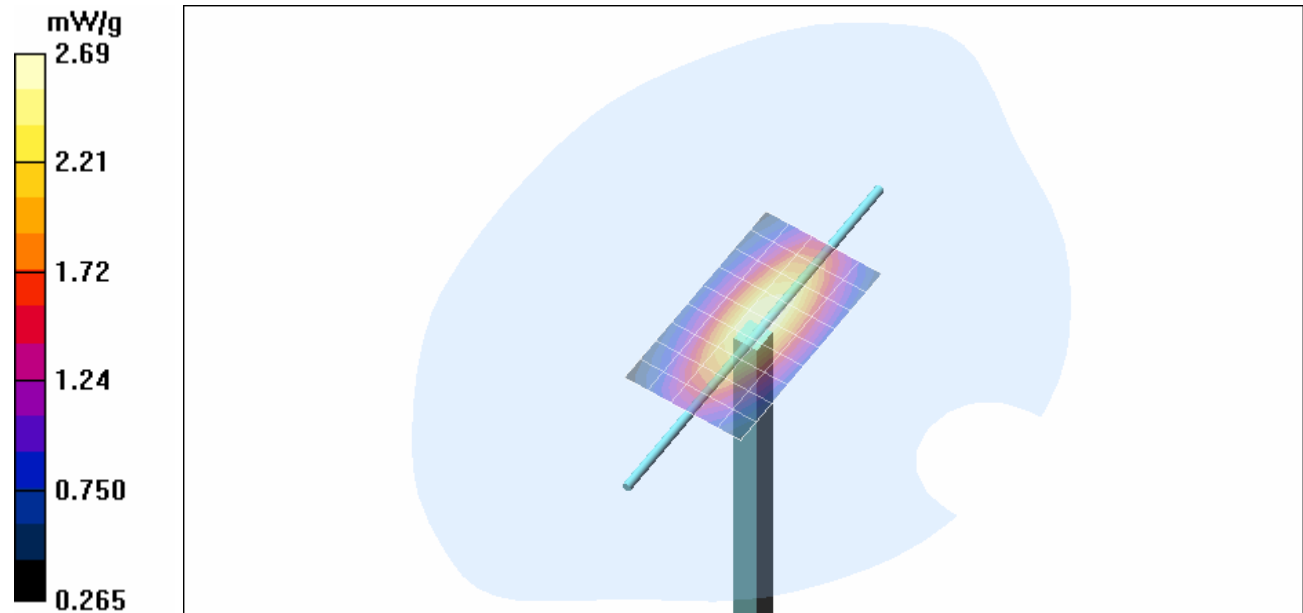
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 53.8 V/m; Power Drift = 0.001 dB

Peak SAR (extrapolated) = 3.60 W/kg

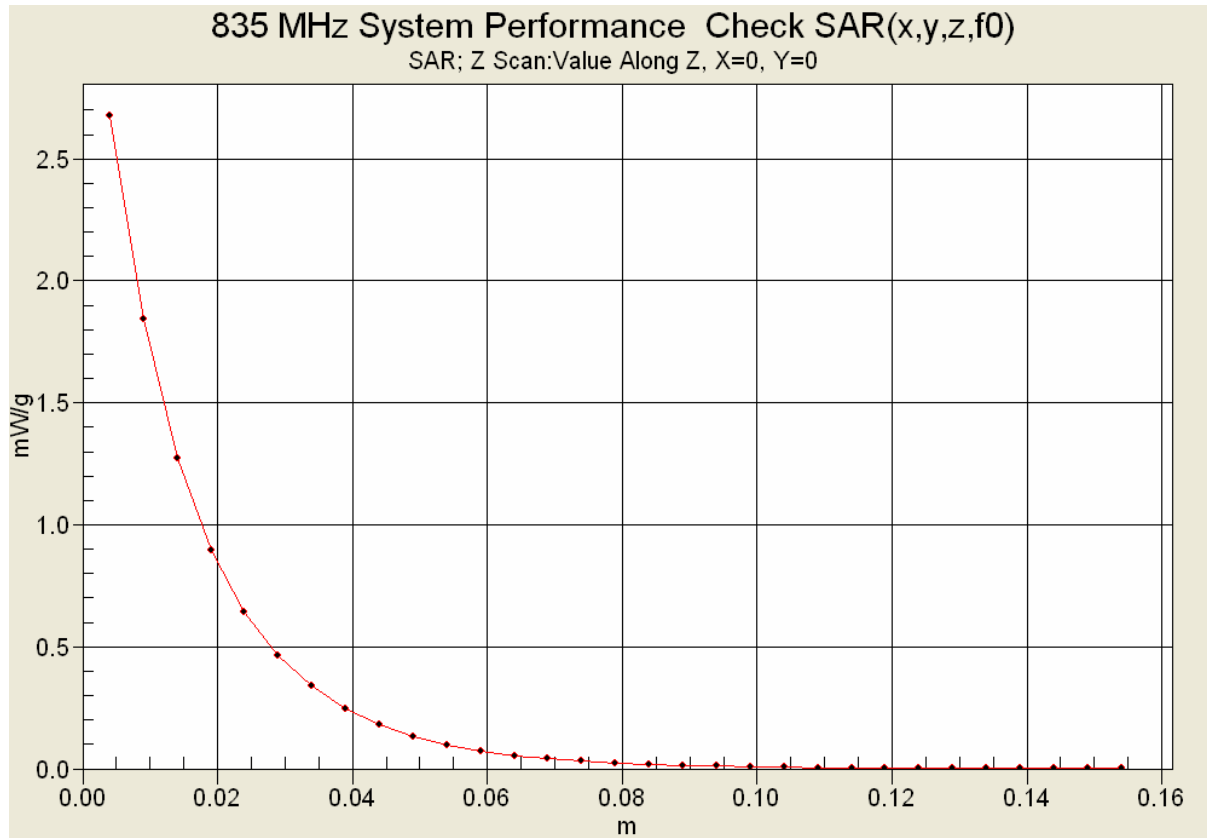
**SAR(1 g) = 2.49 mW/g; SAR(10 g) = 1.64 mW/g**

Maximum value of SAR (measured) = 2.69 mW/g





<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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### Z-Axis Scan





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Date Tested: 11/24/2009

## System Performance Check - 835 MHz Dipole - Body

**DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d075; Calibration: 04/20/2009**

Ambient Temp: 22.5°C; Fluid Temp: 22.1°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.97 \text{ mho/m}$ ;  $\epsilon_r = 54.2$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### System Performance Check - 835 MHz Dipole

**Area Scan (6x10x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.62 mW/g

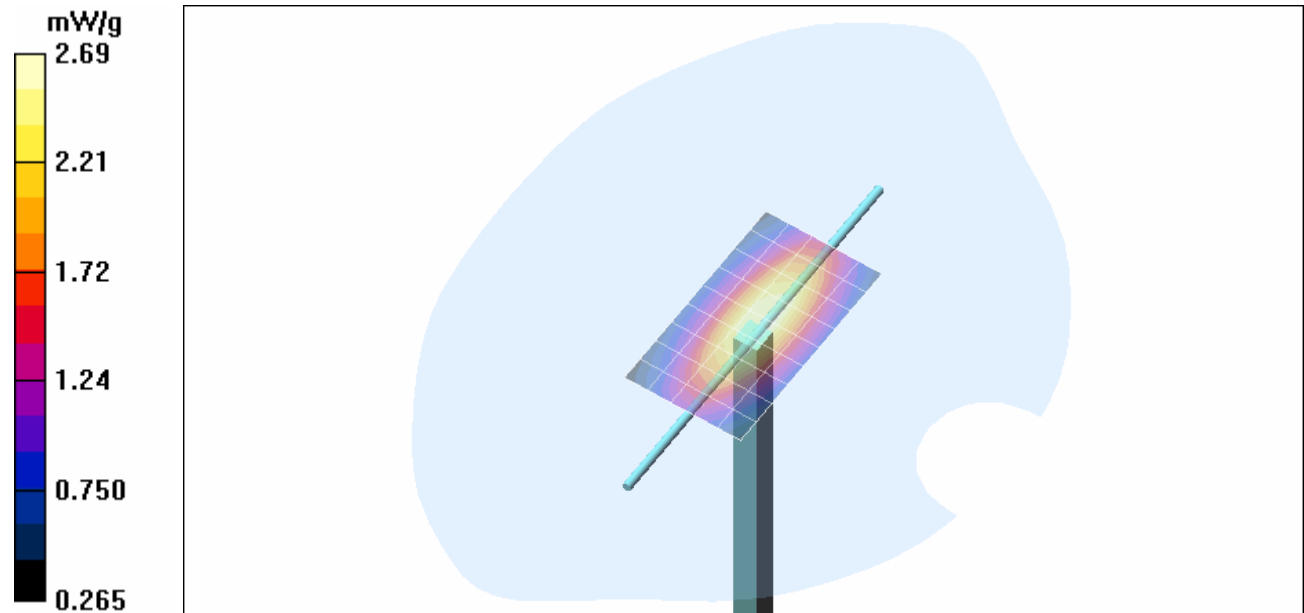
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 53.8 V/m; Power Drift = 0.001 dB

Peak SAR (extrapolated) = 3.60 W/kg

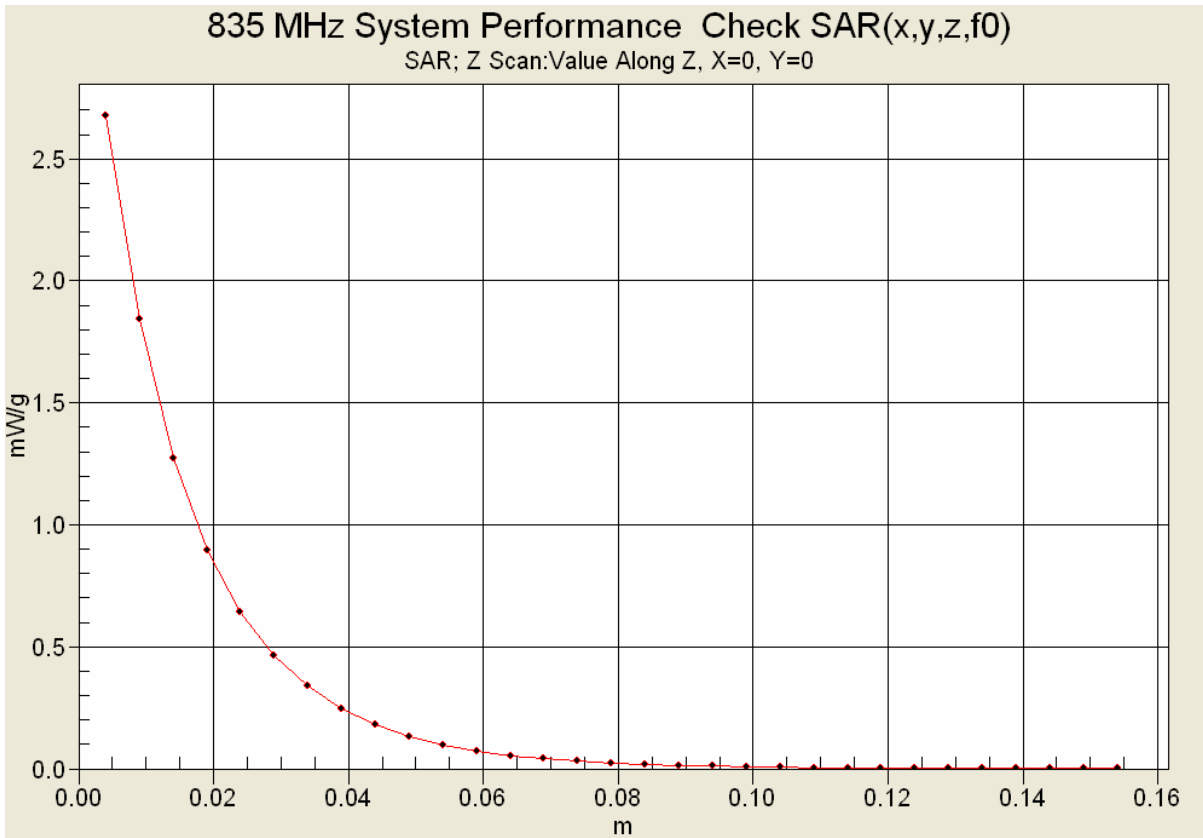
**SAR(1 g) = 2.49 mW/g; SAR(10 g) = 1.64 mW/g**



Maximum value of SAR (measured) = 2.69 mW/g



<b>Applicant:</b>	HARRIS CORPORATION	<b>FCC ID:</b>	AQZ-XG-100P00	<b>IC:</b>	122D-XG100P00	
<b>DUT Type:</b>	Portable PTT Multi-band Radio Transceiver	<b>Model:</b>	Unity XG-100P	Quad-Band 700/800 MHz		
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### Z-Axis Scan



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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Date Tested: 11/25/2009

## System Performance Check - 835 MHz Dipole - Body

**DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d075; Calibration: 04/20/2009**

Ambient Temp: 22.8°C; Fluid Temp: 22.2°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: M835 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.96 \text{ mho/m}$ ;  $\epsilon_r = 54.3$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(6.34, 6.34, 6.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Side Planar; Type: Plexiglas; Serial: 161
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

### System Performance Check - 835 MHz Dipole

**Area Scan (6x10x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

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

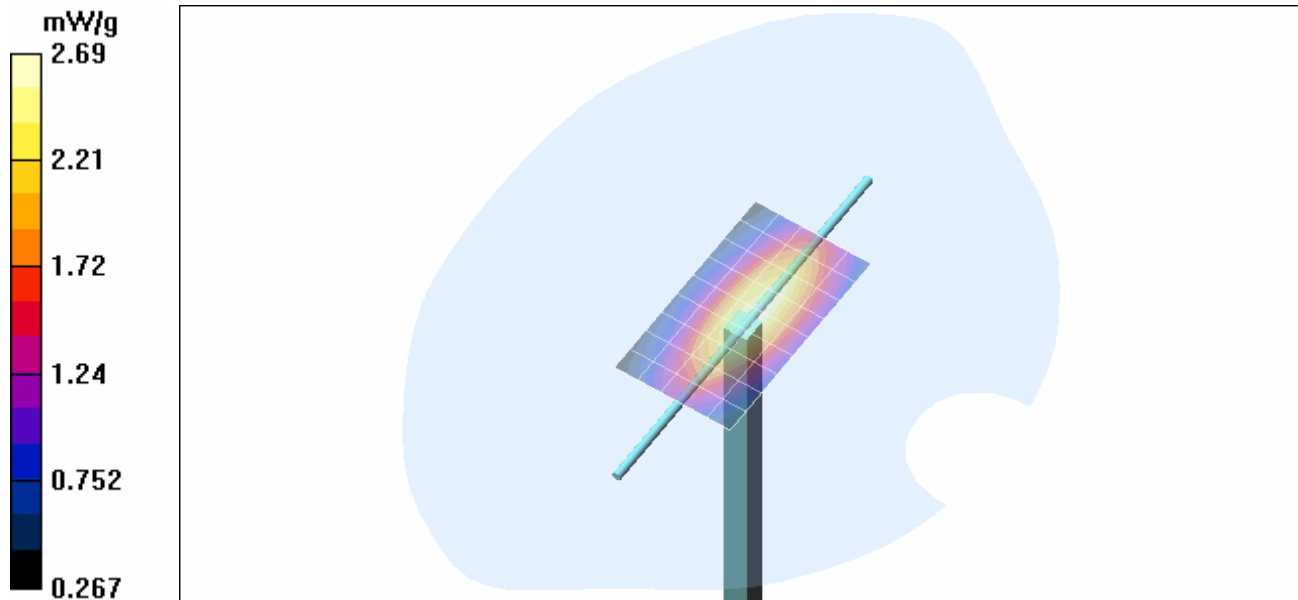
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$


Reference Value = 54.3 V/m; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 3.59 W/kg

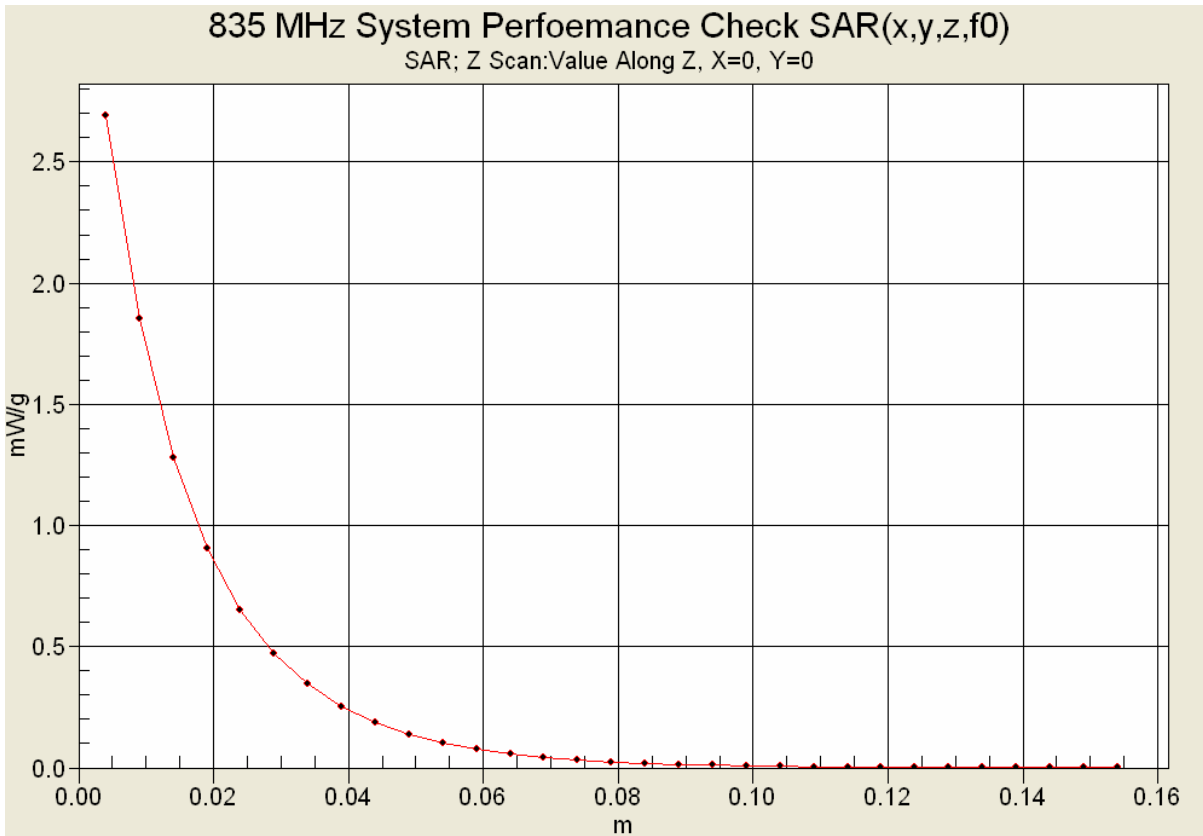
**SAR(1 g) = 2.49 mW/g; SAR(10 g) = 1.64 mW/g**



Maximum value of SAR (measured) = 2.69 mW/g




Applicant:	HARRIS CORPORATION	FCC ID:	AQZ-XG-100P00	IC:	122D-XG100P00	
DUT Type:	Portable PTT Multi-band Radio Transceiver	Model:	Unity XG-100P	Quad-Band 700/800 MHz		
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### Z-Axis Scan



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	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

**APPENDIX C - MEASURED FLUID DIELECTRIC PARAMETERS**

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	


### 835 MHz System Performance Check & 765/775/795/805/815/825/855/865 DUT Evaluation (Head)



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Celltech Labs Inc.  
Test Result for UIM Dielectric Parameter  
17/Nov/2009  
Frequency (GHz)  
FCC\_eHFCC OET 65 Supplement C (June 2001) Limits for Head Epsilon  
FCC\_sHFCC OET 65 Supplement C (June 2001) Limits for Head Sigma  
Test\_e Epsilon of UIM  
Test\_s Sigma of UIM

\*\*\*\*\*

Freq	FCC_eHF	FCC_sH	Test_e	Test_s
0.7350	42.02	0.89	42.67	0.82
0.7450	41.97	0.89	42.40	0.84
0.7550	41.92	0.89	42.55	0.85
0.7650	41.86	0.89	42.52	0.86
0.7750	41.81	0.90	42.18	0.87
0.7850	41.76	0.90	42.17	0.86
0.7950	41.71	0.90	42.08	0.88
0.8050	41.66	0.90	41.95	0.89
0.8150	41.60	0.90	41.95	0.90
0.8250	41.55	0.90	41.36	0.91
0.8350	41.50	0.90	41.79	0.92
0.8450	41.50	0.91	41.36	0.93
0.8550	41.50	0.92	41.27	0.93
0.8650	41.50	0.93	40.87	0.95
0.8750	41.50	0.94	41.04	0.96
0.8850	41.50	0.95	40.82	0.98
0.8950	41.50	0.96	40.79	0.99
0.9050	41.50	0.97	40.78	1.00
0.9150	41.50	0.98	40.52	1.01
0.9250	41.48	0.98	40.39	1.01
0.9350	41.46	0.99	40.17	1.03

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	


### 835 MHz System Performance Check & 765/775 MHz DUT Evaluation (Body)



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Celltech Labs Inc.  
Test Result for UIM Dielectric Parameter  
20/Nov/2009  
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

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Freq	FCC_eB	FCC_sB	Test_e	Test_s
0.7350	55.59	0.96	56.23	0.89
0.7450	55.55	0.96	56.12	0.90
0.7550	55.51	0.96	55.40	0.91
0.7650	55.47	0.96	55.67	0.92
0.7750	55.43	0.97	55.35	0.92
0.7850	55.39	0.97	55.78	0.93
0.7950	55.36	0.97	55.19	0.93
0.8050	55.32	0.97	55.46	0.94
0.8150	55.28	0.97	55.26	0.97
0.8250	55.24	0.97	55.17	0.98
0.8350	55.20	0.97	54.85	0.99
0.8450	55.17	0.98	54.57	0.99
0.8550	55.14	0.99	54.57	1.00
0.8650	55.11	1.01	54.42	1.01
0.8750	55.08	1.02	54.91	1.03
0.8850	55.05	1.03	54.53	1.02
0.8950	55.02	1.04	54.27	1.05
0.9050	55.00	1.05	54.51	1.06
0.9150	55.00	1.06	54.23	1.06
0.9250	54.98	1.06	54.33	1.08
0.9350	54.96	1.07	54.02	1.09

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	


## 835 MHz System Performance Check & 795/805 MHz DUT Evaluation (Body)

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Celltech Labs Inc.  
 Test Result for UIM Dielectric Parameter  
 23/Nov/2009  
 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
0.7350	55.59	0.96	56.14	0.88
0.7450	55.55	0.96	56.01	0.90
0.7550	55.51	0.96	55.57	0.92
0.7650	55.47	0.96	55.63	0.92
0.7750	55.43	0.97	55.53	0.93
0.7850	55.39	0.97	55.41	0.94
0.7950	55.36	0.97	55.32	0.93
0.8050	55.32	0.97	55.42	0.95
0.8150	55.28	0.97	54.81	0.96
0.8250	55.24	0.97	54.94	0.98
0.8350	55.20	0.97	54.70	0.99
0.8450	55.17	0.98	54.77	0.99
0.8550	55.14	0.99	54.78	1.01
0.8650	55.11	1.01	54.60	1.01
0.8750	55.08	1.02	54.72	1.04
0.8850	55.05	1.03	54.61	1.04
0.8950	55.02	1.04	54.23	1.04
0.9050	55.00	1.05	54.36	1.05
0.9150	55.00	1.06	54.21	1.07
0.9250	54.98	1.06	54.21	1.08
0.9350	54.96	1.07	53.95	1.08

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P0</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	


## 835 MHz System Performance Check & 805/815/825 MHz DUT Evaluation (Body)



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Celltech Labs Inc.  
 Test Result for UIM Dielectric Parameter  
 24/Nov/2009  
 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
0.7350	55.59	0.96	55.40	0.88
0.7450	55.55	0.96	55.48	0.89
0.7550	55.51	0.96	55.01	0.90
0.7650	55.47	0.96	54.87	0.90
0.7750	55.43	0.97	54.87	0.92
0.7850	55.39	0.97	54.79	0.93
0.7950	55.36	0.97	54.65	0.93
0.8050	55.32	0.97	54.65	0.94
0.8150	55.28	0.97	54.37	0.95
0.8250	55.24	0.97	54.32	0.97
0.8350	55.20	0.97	54.24	0.97
0.8450	55.17	0.98	54.01	0.99
0.8550	55.14	0.99	54.01	1.00
0.8650	55.11	1.01	53.83	1.00
0.8750	55.08	1.02	53.72	1.03
0.8850	55.05	1.03	53.78	1.02
0.8950	55.02	1.04	53.55	1.02
0.9050	55.00	1.05	53.83	1.04
0.9150	55.00	1.06	53.40	1.04
0.9250	54.98	1.06	53.59	1.05
0.9350	54.96	1.07	53.25	1.07

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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	<u>Date(s) of Evaluation</u> Nov. 17,20,23-25, 2009	<u>Test Report Serial No.</u> 102809AQZ-T991-S90P	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> December 23, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	


## 835 MHz System Performance Check & 855/865 MHz DUT Evaluation (Body)

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Celltech Labs Inc.  
Test Result for UIM Dielectric Parameter  
25/Nov/2009  
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
0.7350	55.59	0.96	55.68	0.87
0.7450	55.55	0.96	55.28	0.87
0.7550	55.51	0.96	55.18	0.89
0.7650	55.47	0.96	55.08	0.90
0.7750	55.43	0.97	55.15	0.90
0.7850	55.39	0.97	54.80	0.90
0.7950	55.36	0.97	54.67	0.91
0.8050	55.32	0.97	54.72	0.93
0.8150	55.28	0.97	54.49	0.94
0.8250	55.24	0.97	54.46	0.95
0.8350	55.20	0.97	54.30	0.96
0.8450	55.17	0.98	54.07	0.95
0.8550	55.14	0.99	53.93	0.97
0.8650	55.11	1.01	53.91	0.99
0.8750	55.08	1.02	54.06	1.00
0.8850	55.05	1.03	53.93	0.99
0.8950	55.02	1.04	53.80	1.01
0.9050	55.00	1.05	54.03	1.03
0.9150	55.00	1.06	53.35	1.03
0.9250	54.98	1.06	53.75	1.03
0.9350	54.96	1.07	53.46	1.05

<b>Applicant:</b>	<b>HARRIS CORPORATION</b>	<b>FCC ID:</b>	<b>AQZ-XG-100P00</b>	<b>IC:</b>	<b>122D-XG100P00</b>	
<b>DUT Type:</b>	<b>Portable PTT Multi-band Radio Transceiver</b>	<b>Model:</b>	<b>Unity XG-100P</b>	<b>Quad-Band 700/800 MHz</b>		
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