

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

RF EXPOSURE EVALUATION

SPECIFIC ABSORPTION RATE

SAR TEST REPORT

FOR

LECTROSONICS, INC.

WIRELESS BELT-PACK BODY-WORN AUDIO TRANSMITTER

MODEL(S): SM, SMD, SMQ

FCC ID: DBZSMQ

Test Report Serial Number

022706DBZ-T724U-S74F

Test Report Issue No.

S724U-031406-R0

Test Lab

**Celltech Compliance Testing & Engineering Lab
(Celltech Labs Inc.)
1955 Moss Court
Kelowna, BC
Canada
V1Y 9L3**

Test Report Prepared By:

Cheri Frangiadakis

**Cheri Frangiadakis
Test Report Writer
Celltech Labs Inc.**

Test Report Approved By:

[Signature]

**Jonathan Hughes
General Manager
Celltech Labs Inc.**

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 1 of 47

	Test Report Serial No.:	022706DBZ-T724U-S74F	Report Issue No.:	S724U-031406-R0
	Date(s) of Evaluation:	March 02 & 07, 2006	Report Issue Date:	March 14, 2006
	Description of Tests:	RF Exposure SAR	FCC 47 CFR §2.1093	IC RSS-102 Issue 2

DECLARATION OF COMPLIANCE SAR RF EXPOSURE EVALUATION

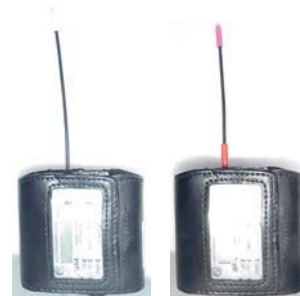
<u>Test Lab</u> CELLTECH LABS INC. Testing and Engineering Services 1955 Moss Court Kelowna, B.C. Canada V1Y 9L3 Phone: 250-448-7047 Fax: 250-448-7046 e-mail: info@celltechlabs.com web site: www.celltechlabs.com		<u>Applicant Information</u> LECTROSONICS, INC. 581 Laser Road Rio Rancho, NM 87124 United States	
FCC IDENTIFIER: Model(s):		DBZSMQ SM, SMD, SMQ	
SAR Test Requirement(s): SAR Test Procedure(s): FCC Device Classification: Device Description: Modulation Type:		FCC 47 CFR §2.1093; Health Canada Safety Code 6 FCC OET Bulletin 65, Supplement C (Edition 01-01) Industry Canada RSS-102 Issue 2 Licensed Broadcast Transmitter Worn on Body (TBT) Wireless Belt-Pack Body-Worn Audio Transmitter FM	
Transmit Frequency Range(s) Tested: Max. RF Output Power Tested: Antenna Type(s) Tested: Battery Type(s) Tested:		742.4 - 767.9 MHz (Block 29) 944.1 - 951.9 MHz (Block 37) 255.3 mW (24.1 dBm) ERP 755.0 MHz (Block 29) 202.8 mW (23.1 dBm) ERP 947.0 MHz (Block 37) External Fixed Quarter-Wave Energizer NiMH 1.2 V AA (x2) Energizer E-Squared Lithium 1.5 V AA (x2) Industrial Panasonic Alkaline 1.5 V AA (x2)	
Body-Worn Accessories Tested: Audio Accessories Tested:		Leather Belt-Clip Holster (P/N: 36001) Electret Microphone (P/N: M152)	
Max. SAR Level(s) Evaluated:		Body-worn: 0.842 W/kg (1g average) Block 29 Body-worn: 1.25 W/kg (1g average) Block 37	

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

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

This test report shall not be reproduced partially, or in full, without the prior written approval of Celltech Labs Inc. The results and statements contained in this report pertain only to the device(s) evaluated.

Tested By:  Sean Johnston Compliance Technologist Celltech Labs Inc.	Reviewed By:  Spencer Watson Senior Compliance Technologist Celltech Labs Inc.
---	---



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 2 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

TABLE OF CONTENTS	
1.0 INTRODUCTION	4
2.0 DESCRIPTION OF DEVICE UNDER TEST (DUT)	4
3.0 SAR MEASUREMENT SYSTEM	5
4.0 SAR MEASUREMENT SUMMARY	6
5.0 DETAILS OF SAR EVALUATION	7
6.0 EVALUATION PROCEDURES	7
7.0 SYSTEM PERFORMANCE CHECK	8
8.0 SIMULATED EQUIVALENT TISSUES	9
9.0 SAR SAFETY LIMITS	9
10.0 ROBOT SYSTEM SPECIFICATIONS	10
11.0 PROBE SPECIFICATION (ET3DV6)	11
12.0 SAM PHANTOM V4.0C	11
13.0 DEVICE HOLDER	11
14.0 TEST EQUIPMENT LIST	12
15.0 MEASUREMENT UNCERTAINTIES	13
MEASUREMENT UNCERTAINTIES (Cont.)	14
16.0 REFERENCES	15
APPENDIX A - SAR MEASUREMENT DATA	16
APPENDIX B - SYSTEM PERFORMANCE CHECK DATA	27
APPENDIX C - MEASURED FLUID DIELECTRIC PARAMETERS	32
APPENDIX D - SAR TEST SETUP & DUT PHOTOGRAPHS	36
APPENDIX E - SYSTEM VALIDATION	45
APPENDIX F - PROBE CALIBRATION	46
APPENDIX G - SAM PHANTOM CERTIFICATE OF CONFORMITY	47

	Test Report Serial No.:	022706DBZ-T724U-S74F	Report Issue No.:	S724U-031406-R0
	Date(s) of Evaluation:	March 02 & 07, 2006	Report Issue Date:	March 14, 2006
	Description of Tests:	RF Exposure SAR	FCC 47 CFR §2.1093	IC RSS-102 Issue 2

1.0 INTRODUCTION

This measurement report demonstrates that the Lectrosonics Model(s): SM, SMD, SMQ Wireless Belt-Pack Body-Worn Audio Transmitter FCC ID: DBZSMQ complies with the SAR (Specific Absorption Rate) RF exposure requirements specified in FCC 47 CFR §2.1093 (see reference [1]) and Health Canada's Safety Code 6 (see reference [2]) for the General Population / Uncontrolled Exposure environment. The test procedures described in FCC OET Bulletin 65, Supplement C, Edition 01-01 (see reference [3]) and IC RSS-102 Issue 2 (see reference [4]) 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.

2.0 DESCRIPTION OF DEVICE UNDER TEST (DUT)

FCC Rule Part(s)	47 CFR §2.1093				
Test Procedure(s)	FCC OET Bulletin 65, Supplement C (Edition 01-01)				
FCC Device Classification	Licensed Broadcast Transmitter Worn on Body (TBT)			\$74.861	
Device Description	Wireless Belt-Pack Body-Worn Audio Transmitter				
RF Exposure Category	General Population / Uncontrolled Environment				
Modulation Type	FM				
FCC IDENTIFIER	DBZSMQ				
Model(s)	SM		SMD		SMQ
Test Sample Serial No.(s)	P413		Identical Prototype		Block 29
	P415		Identical Prototype		Block 37
Transmit Frequency Range(s) Tested	742.4 - 767.9 MHz			Block 29	
	944.1 - 951.9 MHz			Block 37	
Max. RF Output Power Measured	255.3 mW	24.1 dBm	ERP	755.0 MHz	Block 29
	202.8 mW	23.1 dBm	ERP	947.0 MHz	Block 37
Antenna Type(s) Tested	External Fixed Quarter-Wave Flexible Antenna				
Battery Type(s) Tested	Battery Type		Brand	Voltage (V)	mAh
	NiMH	AA (x2)	Energizer	1.2	2200
	Lithium	AA (x2)	Energizer E-Squared	1.5	3000
	Alkaline	AA (x2)	Industrial Panasonic	1.5	2870
Body-worn Accessories Tested	Leather Belt-Clip Holster (contains metal components)			P/N: 36001	
Audio Accessories Tested	Electret Microphone			P/N: M152	

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 4 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

3.0 SAR MEASUREMENT SYSTEM

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



DASY4 Measurement System with SAM Phantom and validation dipole



DASY4 SAR Measurement System with SAM phantom and device holder

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 5 of 47

	Test Report Serial No.:	022706DBZ-T724U-S74F	Report Issue No.:	S724U-031406-R0
	Date(s) of Evaluation:	March 02 & 07, 2006	Report Issue Date:	March 14, 2006
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

4.0 SAR MEASUREMENT SUMMARY

BODY-WORN SAR EVALUATION RESULTS

Test Date	Freq. Block	Freq. (MHz)	Chan.	Test Mode	Battery Type	DUT Position	Accessories Tested		Separation Distance to Planar Phantom (cm)	RF Output Power ERP (mW)	SAR Drift During Test (dB)	Measured SAR 1g (W/kg)				
							Body-Worn	Audio								
Mar 2	37	947.0	Mid	CW	Lithium	Back Side	Belt-Clip Holster	Microphone	1.7	202.8	-0.0682	1.16				
Mar 2	37	947.0	Mid	CW	NiMH	Back Side	Belt-Clip Holster	Microphone	1.7	202.8	-0.0235	1.25				
Mar 2	37	947.0	Mid	CW	Alkaline	Back Side	Belt-Clip Holster	Microphone	1.7	202.8	-0.206	1.16				
Mar 7	29	755.0	Mid	CW	Lithium	Back Side	Belt-Clip Holster	Microphone	1.7	255.3	-0.137	0.760				
Mar 7	29	755.0	Mid	CW	NiMH	Back Side	Belt-Clip Holster	Microphone	1.7	255.3	-0.0932	0.812				
Mar 7	29	755.0	Mid	CW	Alkaline	Back Side	Belt-Clip Holster	Microphone	1.7	255.3	-0.015	0.765				
Mar 7	29	742.4	Low	CW	NiMH	Back Side	Belt-Clip Holster	Microphone	1.7	255.3	-0.114	0.788				
Mar 7	29	767.9	High	CW	NiMH	Back Side	Belt-Clip Holster	Microphone	1.7	255.3	-0.0837	0.842				
ANSI / IEEE C95.1 1999 - SAFETY LIMIT					BODY: 1.6 W/kg (averaged over 1 gram)			Spatial Peak General Population / Uncontrolled Exposure								
Test Date(s)		March 02, 2006			March 07, 2006			Measured Fluid Type		950 MHz		755 MHz		Unit		
Dielectric Constant ϵ_r		950 MHz Body			755 MHz Body			Relative Humidity		30		30		%		
		IEEE Target (Interpolated)		Meas.	Dev.	IEEE Target (Interpolated)		Meas.	Dev.	Atmospheric Pressure		101.1		101.1		KPa
		54.9	$\pm 5\%$	52.6	-4.2%	55.5	$\pm 5\%$	55.9	+0.7%	Ambient Temperature		24.3		24.3		°C
Conductivity σ (mho/m)		950 MHz Body			755 MHz Body			Fluid Temperature		23.5		22.0		°C		
		IEEE Target (Interpolated)		Meas.	Dev.	IEEE Target (Interpolated)		Meas.	Dev.	Fluid Depth		≥ 15		≥ 15		cm
		1.08	$\pm 5\%$	1.08	0.0%	0.96	$\pm 5\%$	0.92	-4.2%	ρ (Kg/m ³)		1000				

Note(s):

- The measurement results were obtained with the DUT tested in the conditions described in this report. Detailed measurement data and plots showing the maximum SAR location of the DUT are reported in Appendix A.
- Block 29: If the measured SAR levels at the mid channel were ≥ 3 dB below the SAR limit, SAR evaluation for the low and high channels was optional per FCC OET Bulletin 65, Supplement C, Edition 01-01 (see reference [3]).
- Block 37: The transmission band of the DUT is less than 10 MHz; therefore mid channel data only is reported (per FCC OET Bulletin 65, Supplement C, Edition 01-01 - see reference [3]).
- The DUT batteries were fully charged prior to the SAR evaluations.
- The power drifts measured by the DASY4 system for the duration of the SAR evaluations were $\leq 5\%$ from the start power.
- The ambient and fluid temperatures were measured prior to, and during, the fluid dielectric parameter check and the SAR evaluations. The temperatures reported were consistent for all measurement periods.
- The dielectric parameters of the simulated tissue mixtures were measured prior to the SAR evaluations using an ALS-PR-DIEL Dielectric Probe Kit and an HP 8753ET Network Analyzer (see Appendix C).
- SAR measurements were performed within 24 hours of the system performance check.

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 6 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

5.0 DETAILS OF SAR EVALUATION

The Lectrosonics Model(s): SM, SMD, SMQ Wireless Belt-Pack Body-Worn Audio Transmitter FCC ID: DBZSMQ was compliant for localized Specific Absorption Rate (General Population / Uncontrolled Exposure) based on the test provisions and conditions described below. Detailed photographs of the test setup are shown in Appendix D.

1. The DUT was tested in a body-worn configuration placed inside the belt-clip holster accessory. The back side of the DUT was placed facing parallel to the outer surface of the SAM phantom (planar section) with the belt-clip accessory touching the phantom surface. The belt-clip holster accessory provided a 1.7 cm separation distance between the back side of the DUT and the outer surface of the SAM phantom (planar section). The belt-clip holster is a leather material, with metal on the tip of the belt-clip and metal snaps on the holster. The Electret microphone audio accessory was connected to the audio input jack on the DUT.
2. The conducted output power of the DUT could not be measured due to a non-detachable antenna. The DUT was evaluated for SAR at the maximum conducted power level preset by the manufacturer.
3. The DUT was evaluated for SAR at the maximum ERP level measured prior to the SAR evaluations by Roger's Labs.
4. The power drift of the DUT during the SAR evaluations was measured by the DASY4 system.
5. The DUT was tested in unmodulated continuous transmit operation at maximum power level.
6. The DUT batteries were fully charged prior to the SAR evaluations.
7. The ambient and fluid temperatures were measured prior to, and during, the fluid dielectric parameter check and the SAR evaluations. The temperatures reported were consistent for all measurement periods.
8. The dielectric parameters of the simulated tissue mixtures were measured prior to the evaluations using an ALS-PR-DIEL Dielectric Probe Kit and an HP 8753ET Network Analyzer (see Appendix C).
9. The SAR evaluations were performed within 24 hours of the system performance check.

6.0 EVALUATION PROCEDURES

- (i) The evaluation was performed in the applicable area of the phantom depending on the type of device being tested. For devices held to the ear during normal operation, both the left and right ear positions were evaluated using the SAM phantom.
- (ii) For body-worn and face-held devices a planar phantom was used.
- The SAR was determined by a pre-defined procedure within the DASY4 software. Upon completion of a reference and optical surface check, the exposed region of the phantom was scanned near the inner surface with a grid spacing of 15mm x 15mm.

An area scan was determined as follows:

- Based on the defined area scan grid, a more detailed grid is created to increase the points by a factor of 10. The interpolation function then evaluates all field values between corresponding measurement points.
- A linear search is applied to find all the candidate maxima. Subsequently, all maxima are removed that are >2 dB from the global maximum. The remaining maxima are then used to position the cube scans.

A 1g and 10g spatial peak SAR was determined as follows:

- Extrapolation is used to 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 (5x5x7 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 (7x7x7) to ensure complete capture of the peak spatial-average SAR.

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 7 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

7.0 SYSTEM PERFORMANCE CHECK

Prior to the SAR evaluations a system check was performed at the planar section of the SAM phantom with an 835 MHz and a 900 MHz dipole (see Appendix E for system validation procedures). Prior to the system performance check the dielectric parameters of the simulated tissue mixtures were measured using an ALS-PR-DIEL Dielectric Probe Kit and an HP 8753ET Network Analyzer (see Appendix C). A forward power of 250 mW was applied to the dipole and the system was verified to a tolerance of $\pm 10\%$ (see Appendix B for system performance check test plots). See Table 1 below for the SAR system manufacturer's reference body SAR values from the DASY4 Operation Manual (see reference [6]).

SYSTEM PERFORMANCE CHECK EVALUATION

Test Date	Equiv. Tissue	SAR 1g (W/kg)			Dielectric Constant ϵ_r			Conductivity σ (mho/m)			ρ (Kg/m ³)	Amb. Temp. (°C)	Fluid Temp. (°C)	Fluid Depth (cm)	Humid. (%)	Barom. Press. (kPa)
	Body (MHz)	IEEE Target	Meas.	Dev.	IEEE Target	Meas.	Dev.	IEEE Target	Meas.	Dev.						
3/2/06	900	2.78 $\pm 10\%$	2.53	-9.0%	55.0 $\pm 5\%$	53.1	-3.5%	1.05 $\pm 5\%$	1.03	-1.9%	1000	24.3	23.5	≥ 15	30	101.1
3/7/06	835	2.43 $\pm 10\%$	2.48	+2.1%	55.2 $\pm 5\%$	54.2	-1.8%	0.97 $\pm 5\%$	0.95	-2.1%	1000	23.5	22.2	≥ 15	30	101.1

Note(s):

1. The ambient and fluid temperatures were measured prior to, and during, the fluid dielectric parameter check and the system performance check. The temperatures listed in the table above were consistent for all measurement periods.

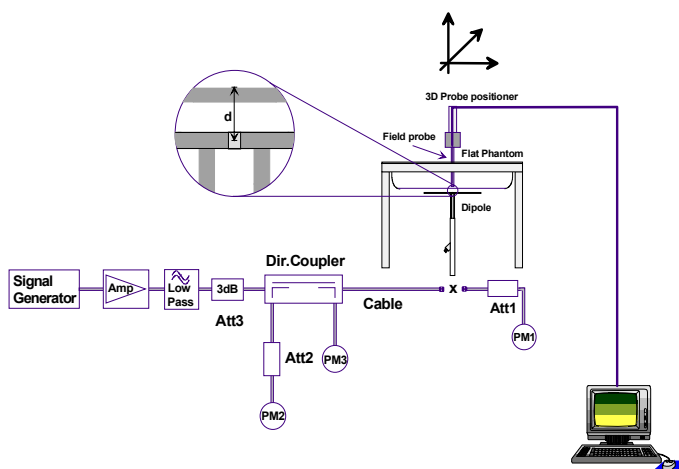


Figure 1. System Performance Check Setup Diagram

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

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

Table 1. SAR system manufacturer's reference body SAR values



835MHz Dipole Setup



900MHz Dipole Setup

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.					Page 8 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

8.0 SIMULATED EQUIVALENT TISSUES

The 755/835/900/950MHz simulated tissue mixture consisted of a viscous gel using saline solution. Preservation with a bactericide is added and visual inspection is made to ensure air bubbles are not trapped during the mixing process. The fluid was prepared according to standardized procedures and measured for dielectric parameters (permittivity and conductivity).

SIMULATED TISSUE MIXTURES		
INGREDIENT	835/900 MHz Body	755/950 MHz Body
	System Performance Check	DUT Evaluation
Water	53.79 %	53.79 %
Sugar	45.13 %	45.13 %
Salt	0.98 %	0.98 %
Bactericide	0.10 %	0.10 %

9.0 SAR SAFETY LIMITS

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

Notes:

1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
2. Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 9 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

10.0 ROBOT SYSTEM SPECIFICATIONS

Specifications

POSITIONER: Stäubli Unimation Corp. Robot Model: RX60L
Repeatability: 0.02 mm
No. of axis: 6

Data Acquisition Electronic (DAE) System

Cell Controller

Processor: AMD Athlon XP 2400+
Clock Speed: 2.0 GHz
Operating System: Windows XP Professional

Data Converter

Features: Signal Amplifier, multiplexer, A/D converter, and control logic
Software: DASY4 software
Connecting Lines: Optical downlink for data and status info.
 Optical uplink for commands and clock

DASY4 Measurement Server

Function: Real-time data evaluation for field measurements and surface detection
Hardware: PC/104 166MHz Pentium CPU; 32 MB chipdisk; 64 MB RAM
Connections: COM1, COM2, DAE, Robot, Ethernet, Service Interface

E-Field Probe

Model: ET3DV6
Serial No.: 1590
Construction: Triangular core fiber optic detection system
Frequency: 10 MHz to 6 GHz
Linearity: ± 0.2 dB (30 MHz to 3 GHz)

Phantom(s)

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

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 10 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

11.0 PROBE SPECIFICATION (ET3DV6)

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



**ET3DV6
E-Field Probe**

12.0 SAM PHANTOM V4.0C

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 (see Appendix G for specifications of the SAM phantom V4.0C).



SAM Phantom

13.0 DEVICE HOLDER

The DASY4 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65° . The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections.



Device Holder

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 11 of 47

	Test Report Serial No.:	022706DBZ-T724U-S74F	Report Issue No.:	S724U-031406-R0
	Date(s) of Evaluation:	March 02 & 07, 2006	Report Issue Date:	March 14, 2006
	Description of Tests:	RF Exposure SAR	FCC 47 CFR §2.1093	IC RSS-102 Issue 2

14.0 TEST EQUIPMENT LIST

USED	TEST EQUIPMENT DESCRIPTION	ASSET NO.	SERIAL NO.	DATE CALIBRATED		CALIBRATION DUE DATE
x	Schmid & Partner DASY4 System	-	-	-	-	-
x	-DASY4 Measurement Server	00158	1078	N/A	N/A	N/A
x	-Robot	00046	599396-01	N/A	N/A	N/A
x	-DAE4	00019	353	15Jun05	15Jun06	15Jun06
	-DAE3	00018	370	08Feb06	08Feb07	08Feb07
	-ET3DV6 E-Field Probe	00016	1387	18Mar05	18Mar06	18Mar06
x	-ET3DV6 E-Field Probe	00017	1590	20May05	20May06	20May06
	-EX3DV4 E-Field Probe	00125	3547	14Feb06	14Feb07	14Feb07
	-300MHz Validation Dipole	00023	135	25Oct05	25Oct06	25Oct06
	-450MHz Validation Dipole	00024	136	25Oct05	25Oct06	25Oct06
x	-835MHz Validation Dipole	00022	411	Brain	30Mar05	30Mar06
				Body	12Apr05	12Apr06
x	-900MHz Validation Dipole	00020	054	Brain	10Jun05	10Jun06
				Body	10Jun05	10Jun06
	-1800MHz Validation Dipole	00021	247	Brain	14Jun05	14Jun06
				Body	14Jun05	14Jun06
	-1900MHz Validation Dipole	00032	151	Brain	17Jun05	17Jun06
				Body	22Apr05	22Apr06
	-2450MHz Validation Dipole	00025	150	Brain	20Sep05	20Sep06
				Body	22Apr05	22Apr06
x	-SAM Phantom V4.0C	00154	1033	N/A	N/A	N/A
	-Barski Planar Phantom	00155	03-01	N/A	N/A	N/A
	-Plexiglas Side Planar Phantom	00156	161	N/A	N/A	N/A
	-Plexiglas Validation Planar Phantom	00157	137	N/A	N/A	N/A
	HP 85070C Dielectric Probe Kit	00033	N/A	N/A	N/A	N/A
x	ALS-PR-DIEL Dielectric Probe Kit	00160	260-00953	N/A	N/A	N/A
	Gigatronics 8652A Power Meter	00110	1835801	16Apr05	16Apr06	16Apr06
x	Gigatronics 8652A Power Meter	00008	1835267	29Apr05	29Apr06	29Apr06
x	Gigatronics 80701A Power Sensor	00012	1834350	12Sep05	12Sep06	12Sep06
	Gigatronics 80701A Power Sensor	00014	1833699	07Sep05	07Sep06	07Sep06
x	Gigatronics 80701A Power Sensor	00109	1834366	16Apr05	16Apr06	16Apr06
x	HP 8753ET Network Analyzer	00134	US39170292	04May05	04May06	04May06
x	HP 8648D Signal Generator	00005	3847A00611	29Apr05	29Apr06	29Apr06
	Rohde & Schwarz SMR40 Signal Generator	00006	100104	12Apr05	12Apr06	12Apr06
x	Amplifier Research 5S1G4 Power Amplifier	00106	26235	N/A	N/A	N/A

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 12 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

15.0 MEASUREMENT UNCERTAINTIES

UNCERTAINTY BUDGET FOR DEVICE EVALUATION						
Error Description	Uncertainty Value ±%	Probability Distribution	Divisor	ci 1g	Uncertainty Value ±% (1g)	V _i or V _{eff}
Measurement System						
Probe calibration (950 MHz)	5.5	Normal	1	1	5.5	∞
Probe calibration (755 MHz)	3.5	Normal	1	1	3.5	∞
Axial isotropy of the probe	4.7	Rectangular	1.732050808	0.7	1.9	∞
Spherical isotropy of the probe	9.6	Rectangular	1.732050808	0.7	3.9	∞
Spatial resolution	0	Rectangular	1.732050808	1	0.0	∞
Boundary effects	1	Rectangular	1.732050808	1	0.6	∞
Probe linearity	4.7	Rectangular	1.732050808	1	2.7	∞
Detection limit	1	Rectangular	1.732050808	1	0.6	∞
Readout electronics	0.3	Normal	1	1	0.3	∞
Response time	0.8	Rectangular	1.732050808	1	0.5	∞
Integration time	2.6	Rectangular	1.732050808	1	1.5	∞
RF ambient conditions	3	Rectangular	1.732050808	1	1.7	∞
Mech. constraints of robot	0.4	Rectangular	1.732050808	1	0.2	∞
Probe positioning	2.9	Rectangular	1.732050808	1	1.7	∞
Extrapolation & integration	1	Rectangular	1.732050808	1	0.6	∞
Test Sample Related						
Device positioning	2.9	Normal	1	1	2.9	12
Device holder uncertainty	3.6	Normal	1	1	3.6	8
Power drift	5	Rectangular	1.732050808	1	2.9	∞
Phantom and Setup						
Phantom uncertainty	4	Rectangular	1.732050808	1	2.3	∞
Liquid conductivity (target)	5	Rectangular	1.732050808	0.64	1.8	∞
Liquid conductivity (measured)	2.5	Normal	1	0.64	1.6	∞
Liquid permittivity (target)	5	Rectangular	1.732050808	0.6	1.7	∞
Liquid permittivity (measured)	2.5	Normal	1	0.6	1.5	∞
Combined Standard Uncertainty						
950 MHz					10.58	
755 MHz					9.69	
Expanded Uncertainty (k=2)						
950 MHz					21.16	
755 MHz					19.39	

Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 (see reference [5])

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 13 of 47

	Test Report Serial No.:	022706DBZ-T724U-S74F	Report Issue No.:	S724U-031406-R0
	Date(s) of Evaluation:	March 02 & 07, 2006	Report Issue Date:	March 14, 2006
	Description of Tests:	RF Exposure SAR	FCC 47 CFR §2.1093	IC RSS-102 Issue 2

MEASUREMENT UNCERTAINTIES (CONT.)

UNCERTAINTY BUDGET FOR SYSTEM VALIDATION						
Error Description	Uncertainty Value ±%	Probability Distribution	Divisor	ci 1g	Uncertainty Value ±% (1g)	V _i or V _{eff}
Measurement System						
Probe calibration	5.5	Normal	1	1	5.5	∞
Axial isotropy of the probe	4.7	Rectangular	1.732050808	1	2.7	∞
Spherical isotropy of the probe	0	Rectangular	1.732050808	1	0.0	∞
Spatial resolution	0	Rectangular	1.732050808	1	0.0	∞
Boundary effects	1	Rectangular	1.732050808	1	0.6	∞
Probe linearity	4.7	Rectangular	1.732050808	1	2.7	∞
Detection limit	1	Rectangular	1.732050808	1	0.6	∞
Readout electronics	0.3	Normal	1	1	0.3	∞
Response time	0	Rectangular	1.732050808	1	0.0	∞
Integration time	0	Rectangular	1.732050808	1	0.0	∞
RF ambient conditions	3	Rectangular	1.732050808	1	1.7	∞
Mech. constraints of robot	0.4	Rectangular	1.732050808	1	0.2	∞
Probe positioning	2.9	Rectangular	1.732050808	1	1.7	∞
Extrapolation & integration	1	Rectangular	1.732050808	1	0.6	∞
Dipole						
Dipole Positioning	2	Normal	1.732050808	1	1.2	∞
Power & Power Drift	4.7	Normal	1.732050808	1	2.7	∞
Phantom and Setup						
Phantom uncertainty	4	Rectangular	1.732050808	1	2.3	∞
Liquid conductivity (target)	5	Rectangular	1.732050808	0.64	1.8	∞
Liquid conductivity (measured)	2.5	Normal	1	0.64	1.6	∞
Liquid permittivity (target)	5	Rectangular	1.732050808	0.6	1.7	∞
Liquid permittivity (measured)	2.5	Normal	1	0.6	1.5	∞
Combined Standard Uncertainty					8.79	
Expanded Uncertainty (k=2)					17.57	

Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003 (see reference [5])

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 14 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

16.0 REFERENCES

- [1] Federal Communications Commission, "Radiofrequency radiation exposure evaluation: portable devices", Rule Part 47 CFR §2.1093: 1999.
- [2] Health Canada, "Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz", Safety Code 6: 1999.
- [3] Federal Communications Commission, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields", OET Bulletin 65, Supplement C (Edition 01-01), FCC, Washington, D.C.: June 2001.
- [4] Industry Canada, "Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)", Radio Standards Specification RSS-102 Issue 2: November 2005.
- [5] IEEE Standard 1528-2003, "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques": December 2003.
- [6] Schmid & Partner Engineering AG, "DASY4 Manual", V4.5: March 2005.

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 15 of 47

	Test Report Serial No.:		022706DBZ-T724U-S74F	Report Issue No.:		S724U-031406-R0
	Date(s) of Evaluation:		March 02 & 07, 2006	Report Issue Date:		March 14, 2006
	Description of Tests:		RF Exposure	SAR	FCC 47 CFR §2.1093	IC RSS-102 Issue 2

APPENDIX A - SAR MEASUREMENT DATA

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 16 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Date Tested: 03/02/2006

Body-Worn SAR - Back Side of DUT - Lithium Battery - Block 37 - 947.0 MHz - Mid Channel

DUT: Lectrosonic Model: SMQ; Type: Wireless Belt-Pack Body-Worn Audio Transmitter; Serial: P415

Body-Worn Accessory: Belt-Clip Holster (P/N: 36001); Audio Accessory: Electret Microphone (P/N: M152)

Ambient Temp: 24.3 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: FM

RF Output Power: 202.8 mW (ERP)

Frequency: 947.0 MHz; Duty Cycle: 1:1

1.5V 3000mAh Energizer E-Squared Lithium AA Battery (x2)

Medium: M950 ($\sigma = 1.08$ mho/m; $\epsilon_r = 52.6$; $\rho = 1000$ kg/m³)

- Probe: ET3DV6 - SN1590; ConvF(6.47, 6.47, 6.47); Calibrated: 20/05/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 15/06/2005
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

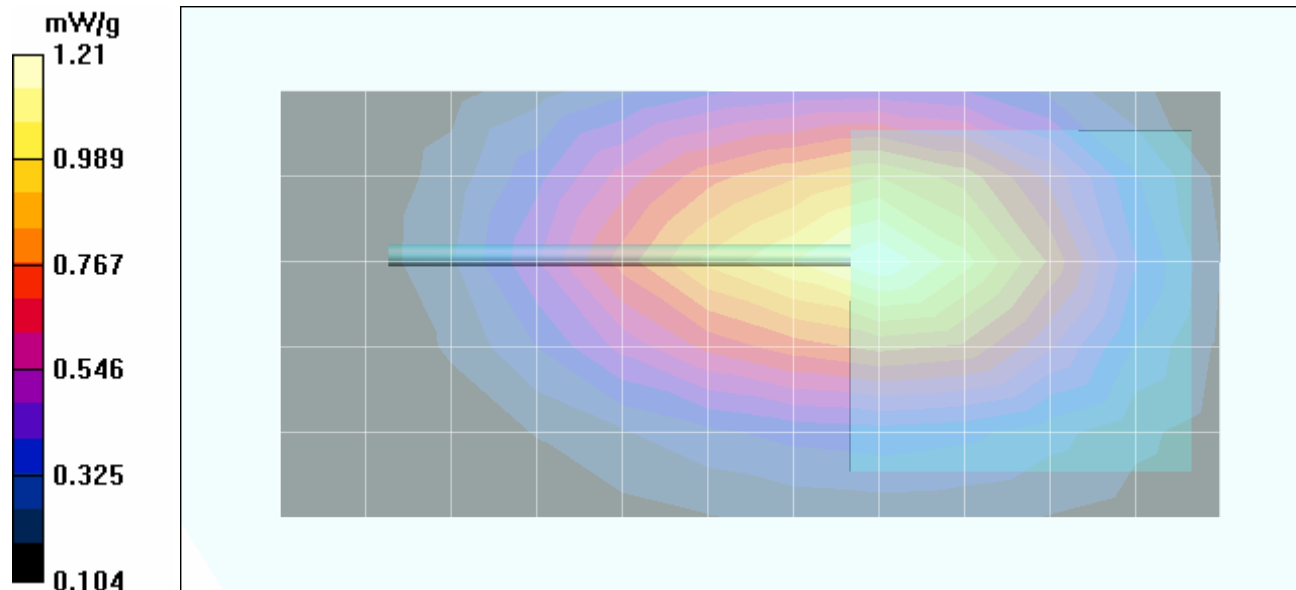
Body-Worn SAR - Block 37 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel Area Scan (6x12x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Block 37 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 30.6 V/m; Power Drift = -0.0682 dB

Peak SAR (extrapolated) = 1.82 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.698 mW/g



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 17 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Date Tested: 03/02/2006

Body-Worn SAR - Back Side of DUT - NiMH Battery - Block 37 - 947.0 MHz - Mid Channel

DUT: Lectrosonic Model: SMQ; Type: Wireless Belt-Pack Body-Worn Audio Transmitter; Serial: P415

Body-Worn Accessory: Belt-Clip Holster (P/N: 36001); **Audio Accessory:** Electret Microphone (P/N: M152)

Ambient Temp: 24.3 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: FM

RF Output Power: 202.8 mW (ERP)

Frequency: 947.0 MHz; Duty Cycle: 1:1

1.2V 2200mAh Energizer NiMH AA Battery (x2)

Medium: M950 ($\sigma = 1.08 \text{ mho/m}$; $\epsilon_r = 52.6$; $\rho = 1000 \text{ kg/m}^3$)

- Probe: ET3DV6 - SN1590; ConvF(6.47, 6.47, 6.47); Calibrated: 20/05/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 15/06/2005
- Phantom: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body-Worn SAR - Block 37 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel
Area Scan (6x12x1): Measurement grid: dx=15mm, dy=15mm

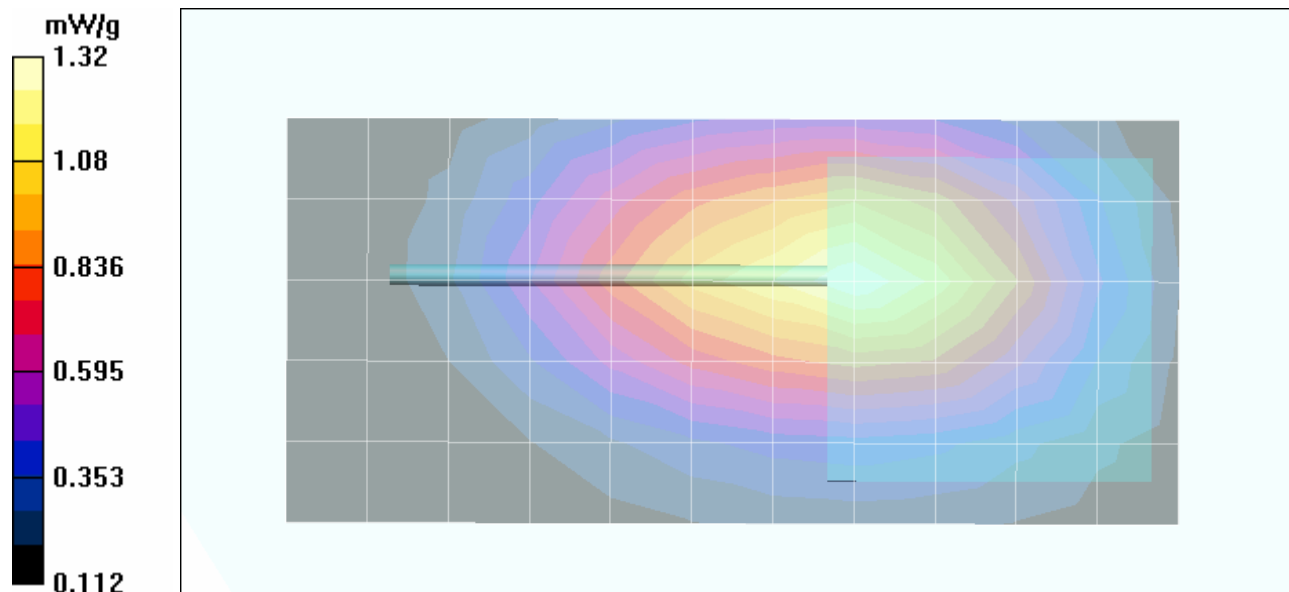
Body-Worn SAR - Block 37 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel

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

Reference Value = 31.5 V/m; Power Drift = -0.0235 dB

Peak SAR (extrapolated) = 1.98 W/kg

SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.753 mW/g



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 18 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Date Tested: 03/02/2006

Body-Worn SAR - Back Side of DUT - Alkaline Battery - Block 37 - 947.0 MHz - Mid Channel

DUT: Lectrosonic Model: SMQ; Type: Wireless Belt-Pack Body-Worn Audio Transmitter; Serial: P415

Body-Worn Accessory: Belt-Clip Holster (P/N: 36001); Audio Accessory: Electret Microphone (P/N: M152)

Ambient Temp: 24.3 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: FM

RF Output Power: 202.8 mW (ERP)

Frequency: 947.0 MHz; Duty Cycle: 1:1

1.5V 2870mAh Industrial Panasonic Alkaline AA Battery (x2)

Medium: M950 ($\sigma = 1.08 \text{ mho/m}$; $\epsilon_r = 52.6$; $\rho = 1000 \text{ kg/m}^3$)

- Probe: ET3DV6 - SN1590; ConvF(6.47, 6.47, 6.47); Calibrated: 20/05/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 15/06/2005
- Phantom: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body-Worn SAR - Block 37 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel

Area Scan (6x12x1): Measurement grid: dx=15mm, dy=15mm

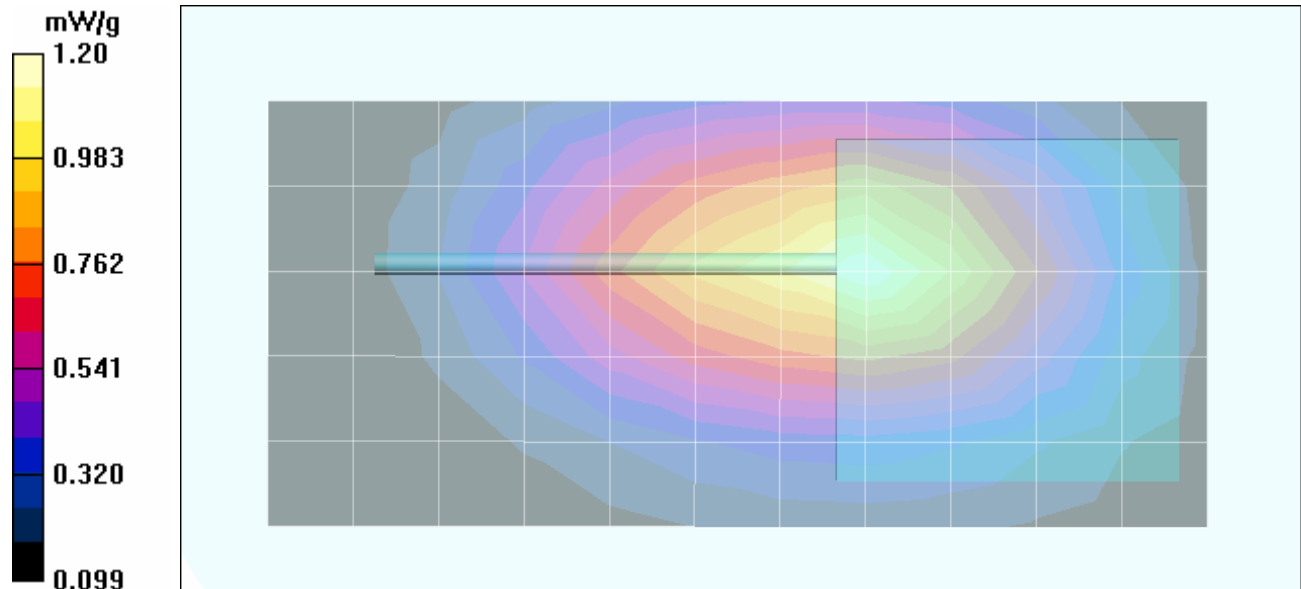
Body-Worn SAR - Block 37 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel

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

Reference Value = 31.0 V/m; Power Drift = -0.206 dB

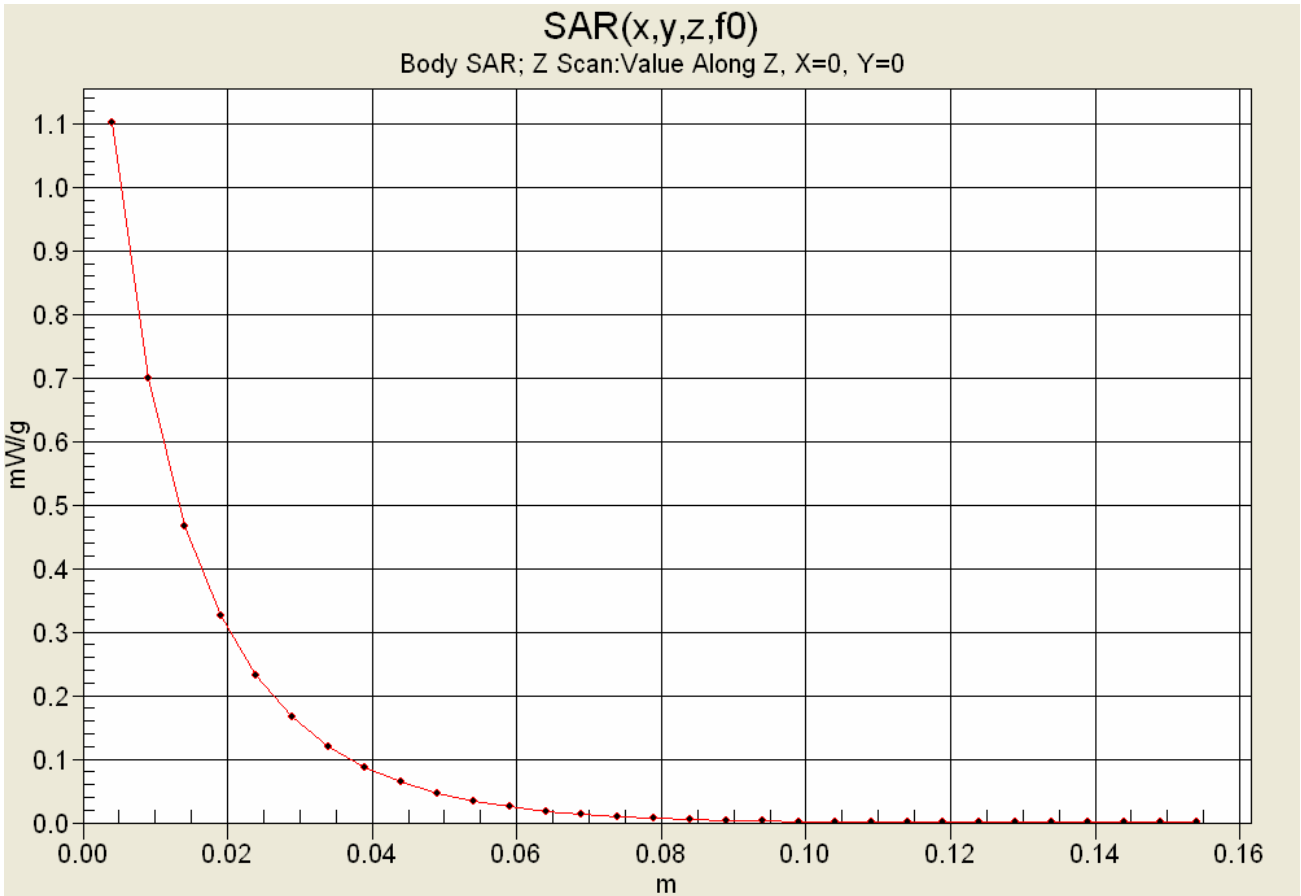
Peak SAR (extrapolated) = 1.80 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.701 mW/g



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 19 of 47

Z-Axis Scan



	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Date Tested: 03/07/2006

Body-Worn SAR - Back Side of DUT - Lithium Battery - Block 29 - 755.0 MHz - Mid Channel

DUT: Lectrosonic Model: SMQ; Type: Wireless Belt-Pack Body-Worn Audio Transmitter; Serial: P413

Body-Worn Accessory: Belt-Clip Holster (P/N: 36001); Audio Accessory: Electret Microphone (P/N: M152)

Ambient Temp: 24.3 °C; Fluid Temp: 22.0 °C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: FM
RF Output Power: 255.3 mW (ERP)
Frequency: 755.0 MHz; Duty Cycle: 1:1
1.5V 3000mAh Energizer E-Squared Lithium AA Battery (x2)
Medium: M755 ($\sigma = 0.92$ mho/m; $\epsilon_r = 55.9$; $\rho = 1000$ kg/m³)

- Probe: ET3DV6 - SN1590; ConvF(6.9, 6.9, 6.9); Calibrated: 20/05/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 15/06/2005
- Phantom: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body-Worn SAR - Block 29 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel

Area Scan (6x12x1): Measurement grid: dx=15mm, dy=15mm

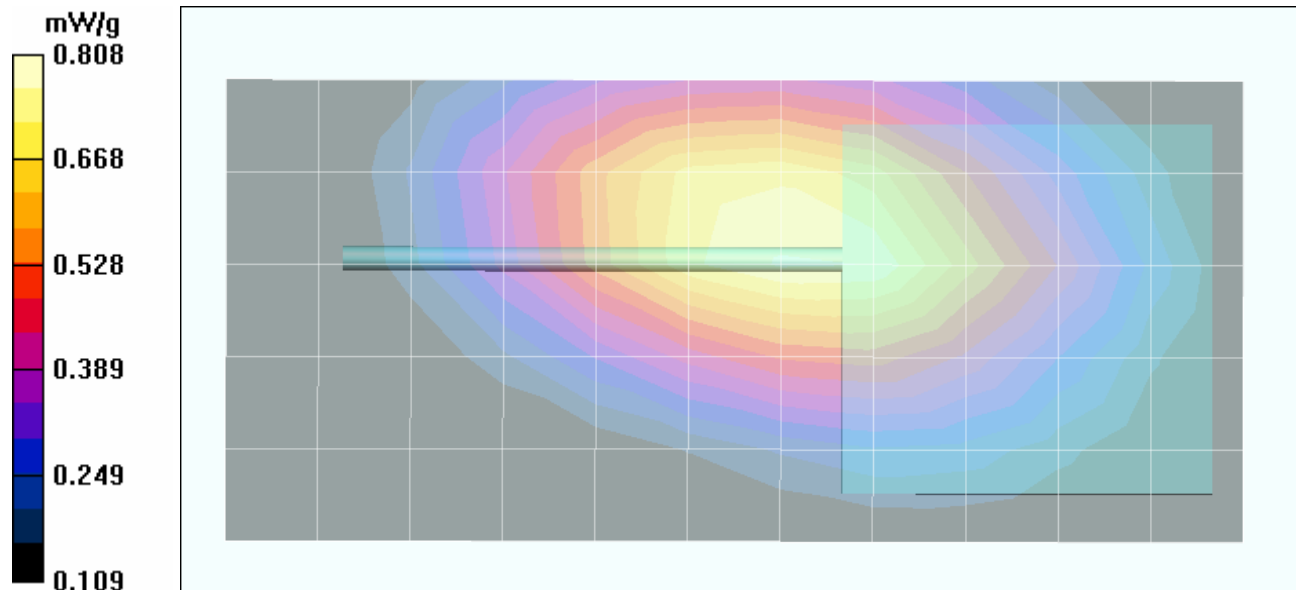
Body-Worn SAR - Block 29 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel

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

Reference Value = 28.3 V/m; Power Drift = -0.137 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.760 mW/g; SAR(10 g) = 0.542 mW/g



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 21 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Date Tested: 03/07/2006

Body-Worn SAR - Back Side of DUT - NiMH Battery - Block 29 - 755.0 MHz - Mid Channel

DUT: Lectrosonic Model: SMQ; Type: Wireless Belt-Pack Body-Worn Audio Transmitter; Serial: P413

Body-Worn Accessory: Belt-Clip Holster (P/N: 36001); Audio Accessory: Electret Microphone (P/N: M152)

Ambient Temp: 24.3 °C; Fluid Temp: 22.0 °C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: FM

RF Output Power: 255.3 mW (ERP)

Frequency: 755.0 MHz; Duty Cycle: 1:1

1.2V 2200mAh Energizer NiMH AA Battery (x2)

Medium: M755 ($\sigma = 0.92$ mho/m; $\epsilon_r = 55.9$; $\rho = 1000$ kg/m³)

- Probe: ET3DV6 - SN1590; ConvF(6.9, 6.9, 6.9); Calibrated: 20/05/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 15/06/2005
- Phantom: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

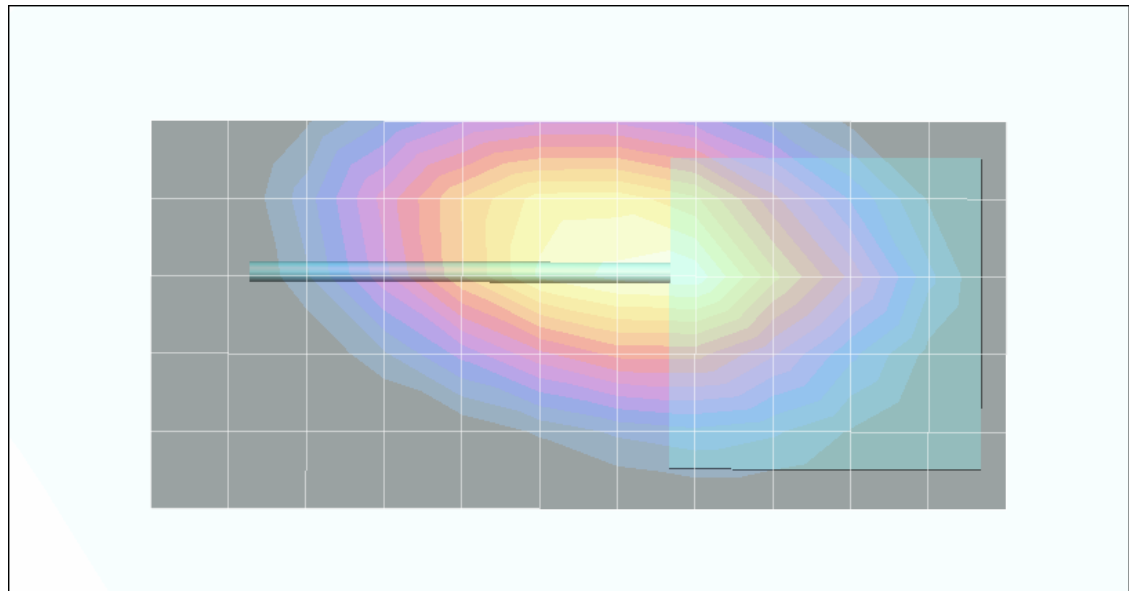
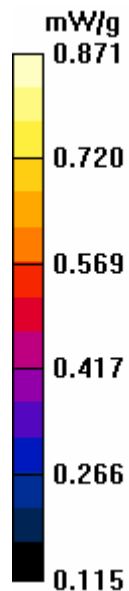
Body-Worn SAR - Block 29 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel
Area Scan (6x12x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Block 29 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 29.3 V/m; Power Drift = -0.0932 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.812 mW/g; SAR(10 g) = 0.577 mW/g



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 22 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Date Tested: 03/07/2006

Body-Worn SAR - Back Side of DUT - Alkaline Battery - Block 29 - 755.0 MHz - Mid Channel

DUT: Lectrosonic Model: SMQ; Type: Wireless Belt-Pack Body-Worn Audio Transmitter; Serial: P413

Body-Worn Accessory: Belt-Clip Holster (P/N: 36001); Audio Accessory: Electret Microphone (P/N: M152)

Ambient Temp: 24.3 °C; Fluid Temp: 22.0 °C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: FM

RF Output Power: 255.3 mW (ERP)

Frequency: 755.0 MHz; Duty Cycle: 1:1

1.5V 2870mAh Industrial Panasonic Alkaline AA Battery (x2)

Medium: M755 ($\sigma = 0.92$ mho/m; $\epsilon_r = 55.9$; $\rho = 1000$ kg/m³)

- Probe: ET3DV6 - SN1590; ConvF(6.9, 6.9, 6.9); Calibrated: 20/05/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 15/06/2005
- Phantom: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body-Worn SAR - Block 29 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel

Area Scan (6x12x1): Measurement grid: dx=15mm, dy=15mm

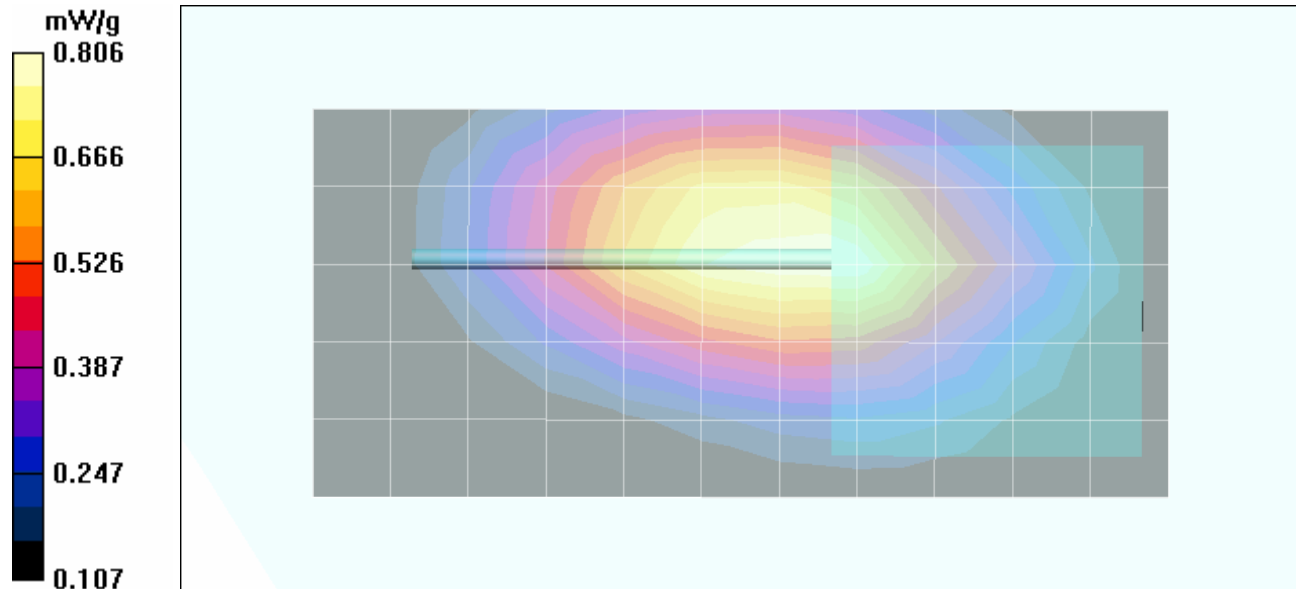
Body-Worn SAR - Block 29 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Mid Channel

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

Reference Value = 28.4 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.765 mW/g; SAR(10 g) = 0.542 mW/g



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 23 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Date Tested: 03/07/2006

Body-Worn SAR - Back Side of DUT - NiMH Battery - Block 29 - 742.4 MHz - Low Channel

DUT: Lectrosonic Model: SMQ; Type: Wireless Belt-Pack Body-Worn Audio Transmitter; Serial: P413

Body-Worn Accessory: Belt-Clip Holster (P/N: 36001); Audio Accessory: Electret Microphone (P/N: M152)

Ambient Temp: 24.3 °C; Fluid Temp: 22.0 °C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: FM
RF Output Power: 255.3 mW (ERP)
Frequency: 742.4 MHz; Duty Cycle: 1:1
1.2V 2200mAh Energizer NiMH AA Battery (x2)
Medium: M755 ($\sigma = 0.92$ mho/m; $\epsilon_r = 55.9$; $\rho = 1000$ kg/m³)

- Probe: ET3DV6 - SN1590; ConvF(6.9, 6.9, 6.9); Calibrated: 20/05/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 15/06/2005
- Phantom: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Body-Worn SAR - Block 29 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Low Channel

Area Scan (6x12x1): Measurement grid: dx=15mm, dy=15mm

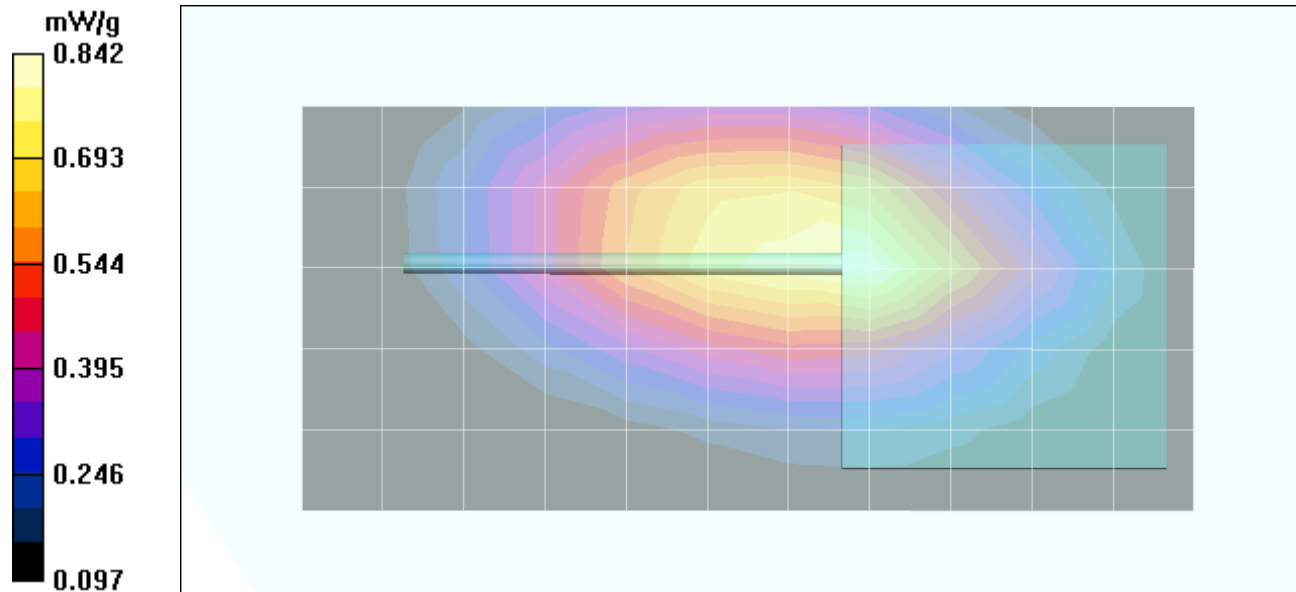
Body-Worn SAR - Block 29 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - Low Channel

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

Reference Value = 27.5 V/m; Power Drift = -0.114 dB

Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.788 mW/g; SAR(10 g) = 0.531 mW/g



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 24 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Date Tested: 03/07/2006

Body-Worn SAR - Back Side of DUT - NiMH Battery - Block 29 - 767.9 MHz - High Channel

DUT: Lectrosonic Model: SMQ; Type: Wireless Belt-Pack Body-Worn Audio Transmitter; Serial: P413

Body-Worn Accessory: Belt-Clip Holster (P/N: 36001); Audio Accessory: Electret Microphone (P/N: M152)

Ambient Temp: 24.3 °C; Fluid Temp: 22.0 °C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: FM

RF Output Power: 255.3 mW (ERP)

Frequency: 767.9 MHz; Duty Cycle: 1:1

1.2V 2200mAh Energizer NiMH AA Battery (x2)

Medium: M755 ($\sigma = 0.92$ mho/m; $\epsilon_r = 55.9$; $\rho = 1000$ kg/m³)

- Probe: ET3DV6 - SN1590; ConvF(6.9, 6.9, 6.9); Calibrated: 20/05/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 15/06/2005
- Phantom: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

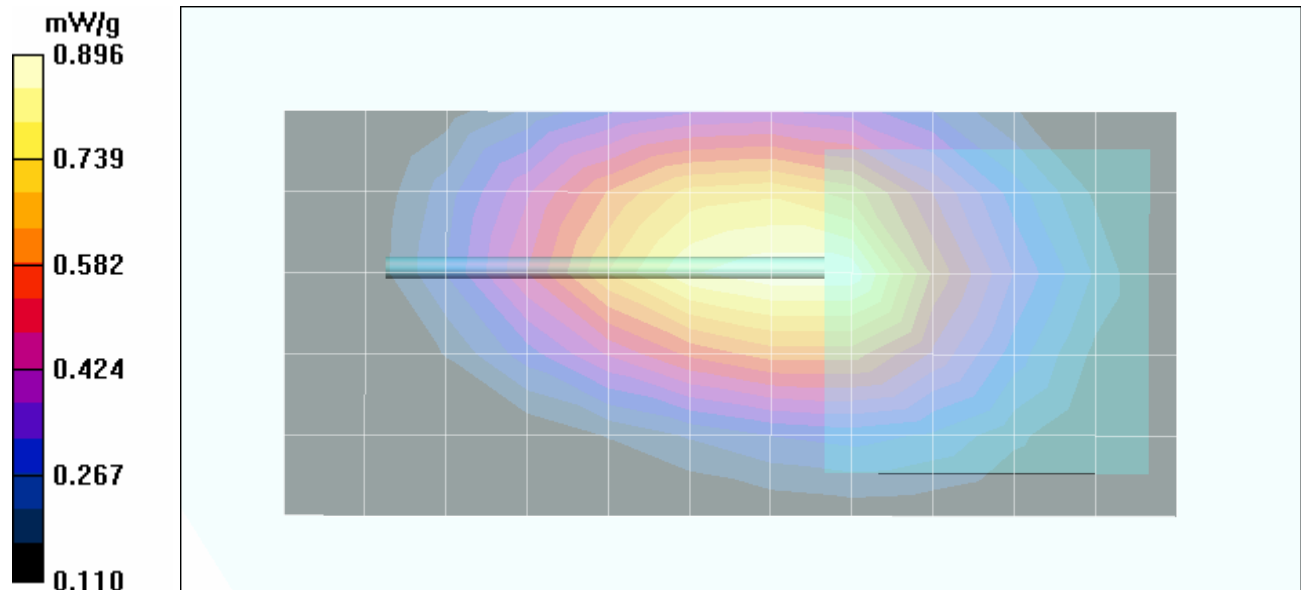
Body-Worn SAR - Block 29 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - High Channel Area Scan (6x12x1): Measurement grid: dx=15mm, dy=15mm

Body-Worn SAR - Block 29 - 1.7 cm Belt-Clip Holster Separation Distance to Planar Phantom - High Channel Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 30.5 V/m; Power Drift = -0.0837 dB

Peak SAR (extrapolated) = 1.22 W/kg

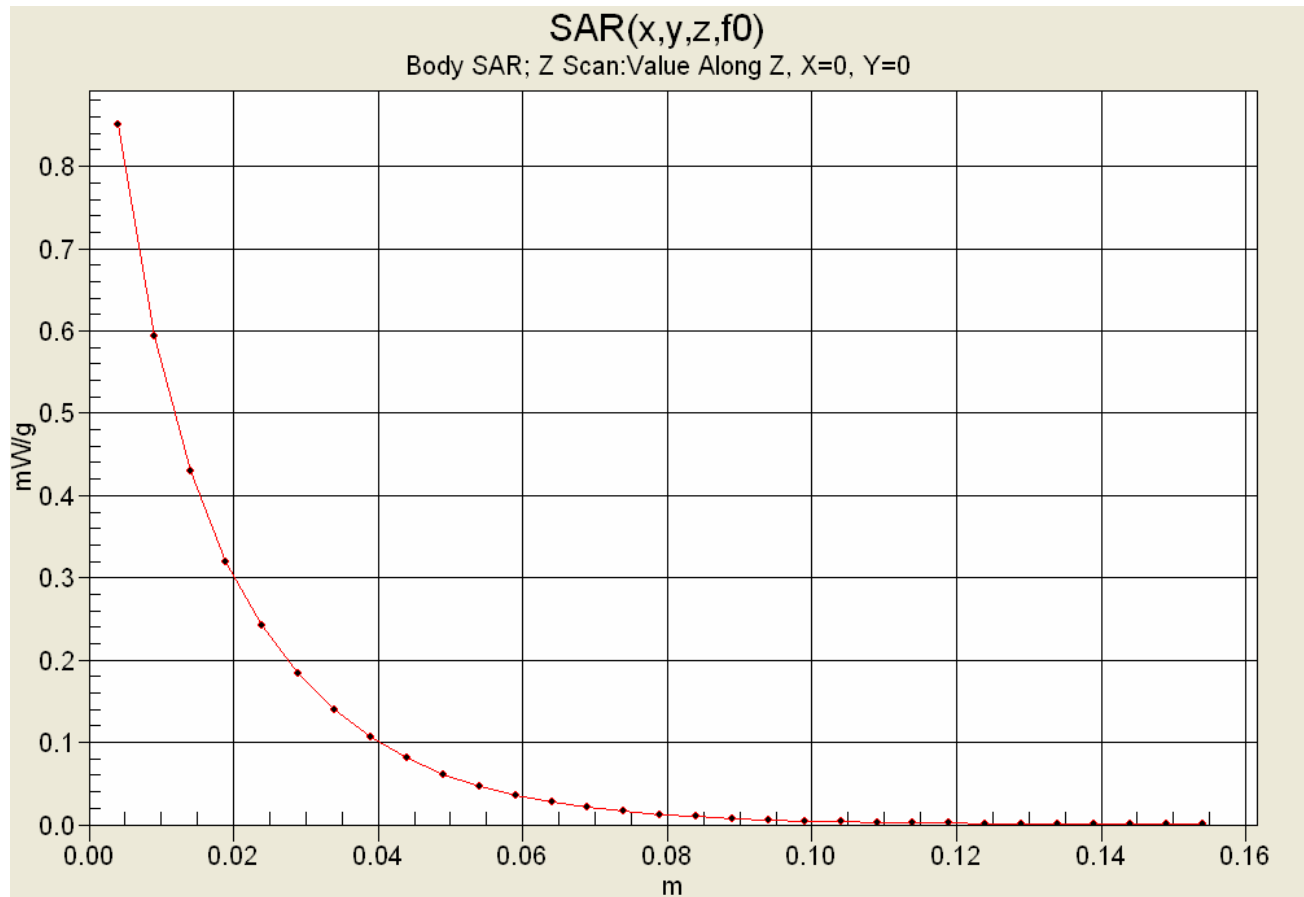
SAR(1 g) = 0.842 mW/g; SAR(10 g) = 0.591 mW/g



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 25 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Z-Axis Scan



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 26 of 47

	Test Report Serial No.:		022706DBZ-T724U-S74F	Report Issue No.:		S724U-031406-R0
	Date(s) of Evaluation:		March 02 & 07, 2006	Report Issue Date:		March 14, 2006
	Description of Tests:		RF Exposure	SAR	FCC 47 CFR §2.1093	IC RSS-102 Issue 2

APPENDIX B - SYSTEM PERFORMANCE CHECK DATA

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 27 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Date Tested: 03/02/2006

System Performance Check (Body) - 900 MHz Dipole

DUT: Dipole 900 MHz; Model: D900V2; Type: System Performance Check; Serial: 054; Calibrated: 06/10/2005

Ambient Temp: 24.3 °C; Fluid Temp: 23.5 °C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 900 MHz; Duty Cycle: 1:1

Medium: M900 ($\sigma = 1.03 \text{ mho/m}$; $\epsilon_r = 53.1$; $\rho = 1000 \text{ kg/m}^3$)

- Probe: ET3DV6 - SN1590; ConvF(6.47, 6.47, 6.47); Calibrated: 20/05/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 15/06/2005
- Phantom: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

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

Measurement grid: dx=10mm, dy=10mm

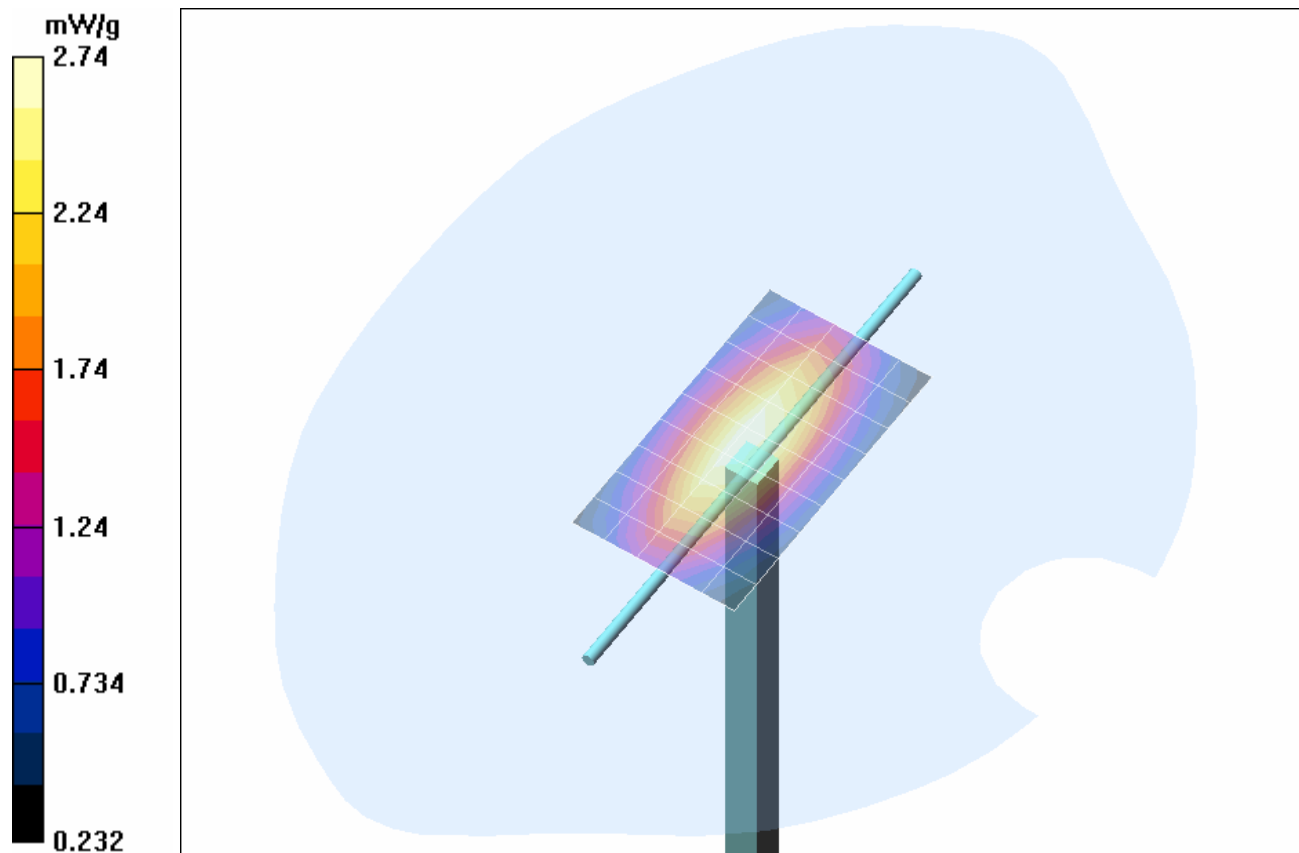
900 MHz Dipole - System Performance Check/Zoom Scan (7x7x7)/Cube 0:

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

Reference Value = 53.9 V/m; Power Drift = -0.037 dB

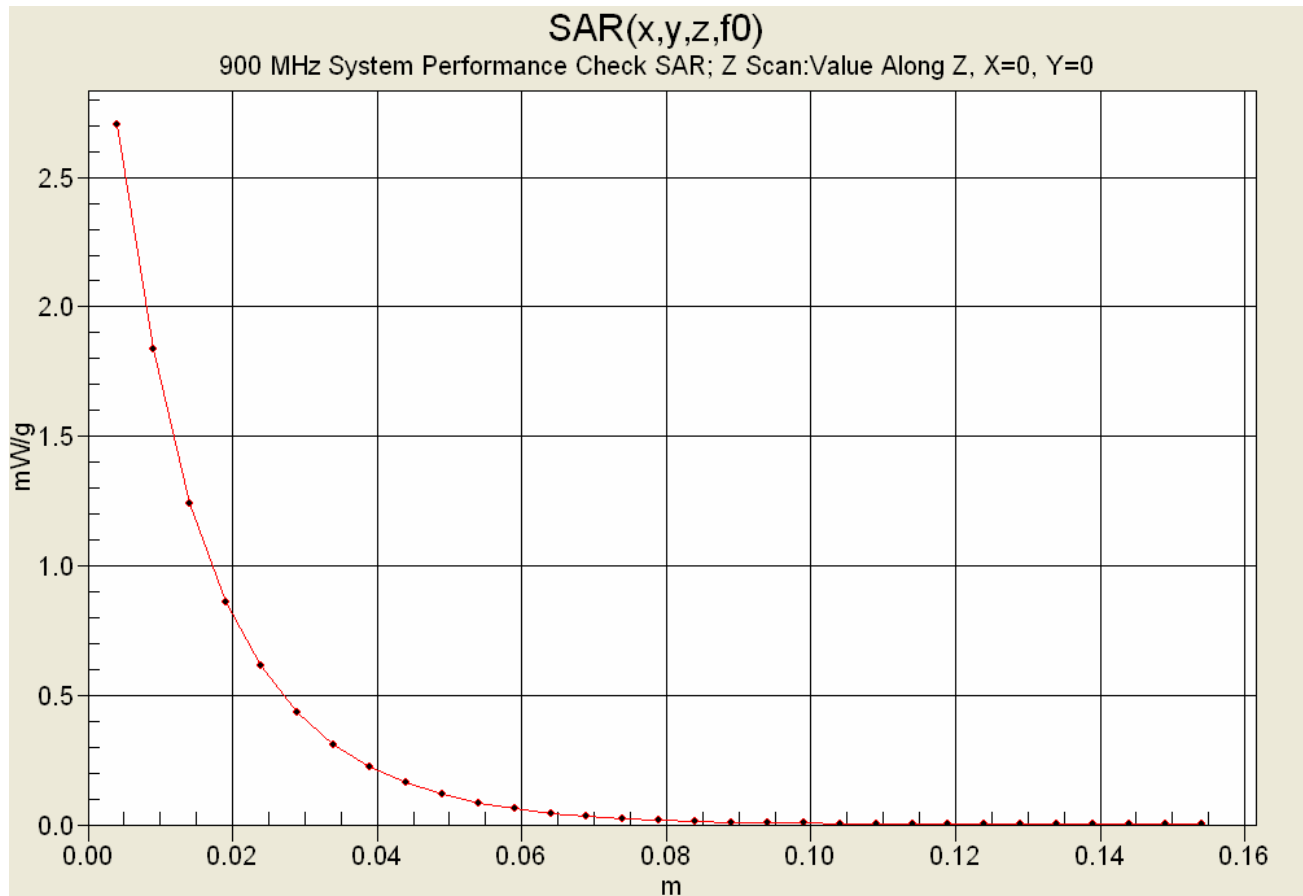
Peak SAR (extrapolated) = 3.74 W/kg

SAR(1 g) = 2.53 mW/g; SAR(10 g) = 1.64 mW/g



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 28 of 47

Z-Axis Scan



	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests: RF Exposure SAR		FCC 47 CFR §2.1093 IC RSS-102 Issue 2	

Date Tested: 03/07/06

System Performance Check (Body) - 835 MHz Dipole

DUT: Dipole 835 MHz; Model: D835V2; Type: System Performance Check; Serial: 411; Calibrated: 04/12/2005

Ambient Temp: 23.5 °C; Fluid Temp: 22.2 °C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: M835 ($\sigma = 0.95$ mho/m; $\epsilon_r = 54.2$; $\rho = 1000$ kg/m³)

- Probe: ET3DV6 - SN1590; ConvF(6.47, 6.47, 6.47); Calibrated: 20/05/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 15/06/2005
- Phantom: SAM 4.0; Type: Fiberglass; Serial: 1033
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

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

Measurement grid: dx=10mm, dy=10mm

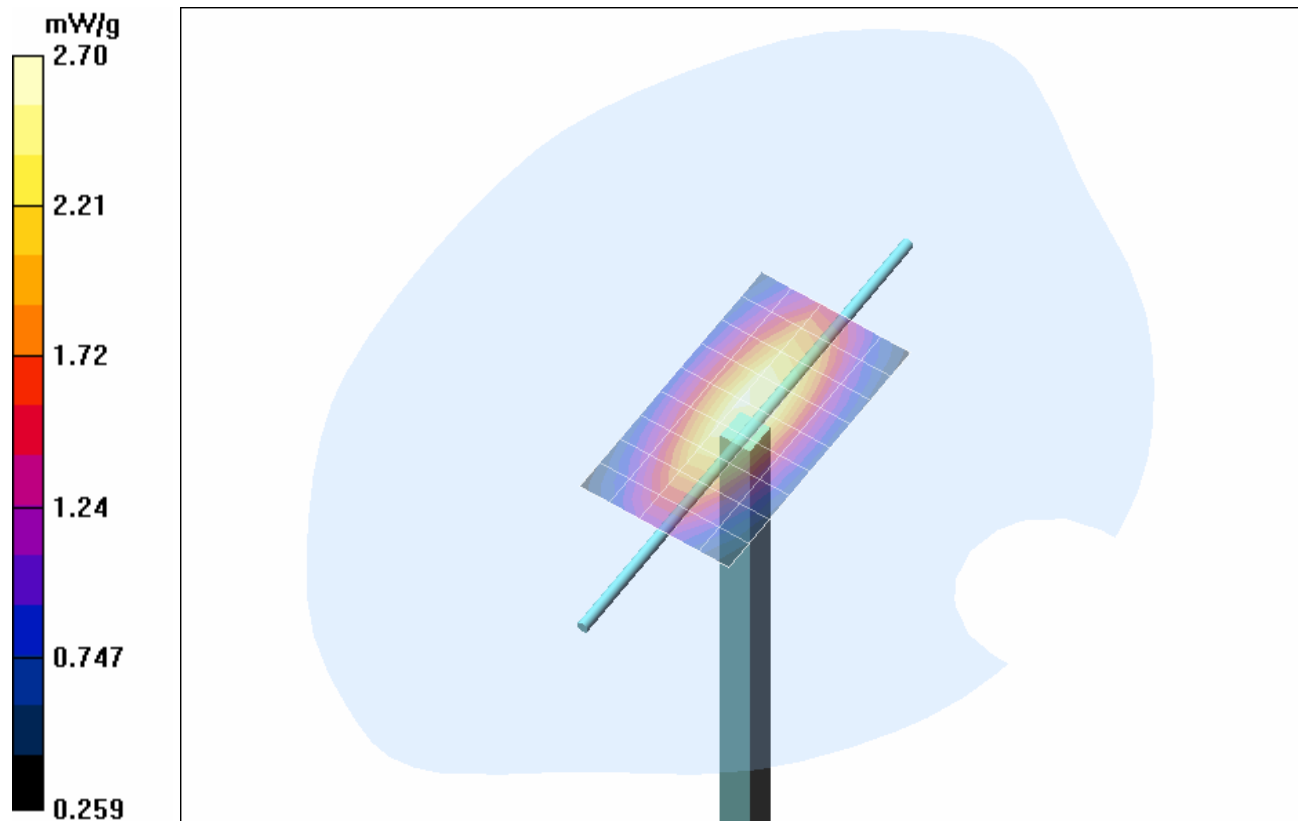
835 MHz Dipole - System Performance Check/Zoom Scan (7x7x7)/Cube 0:

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

Reference Value = 54.6 V/m; Power Drift = 0.001 dB

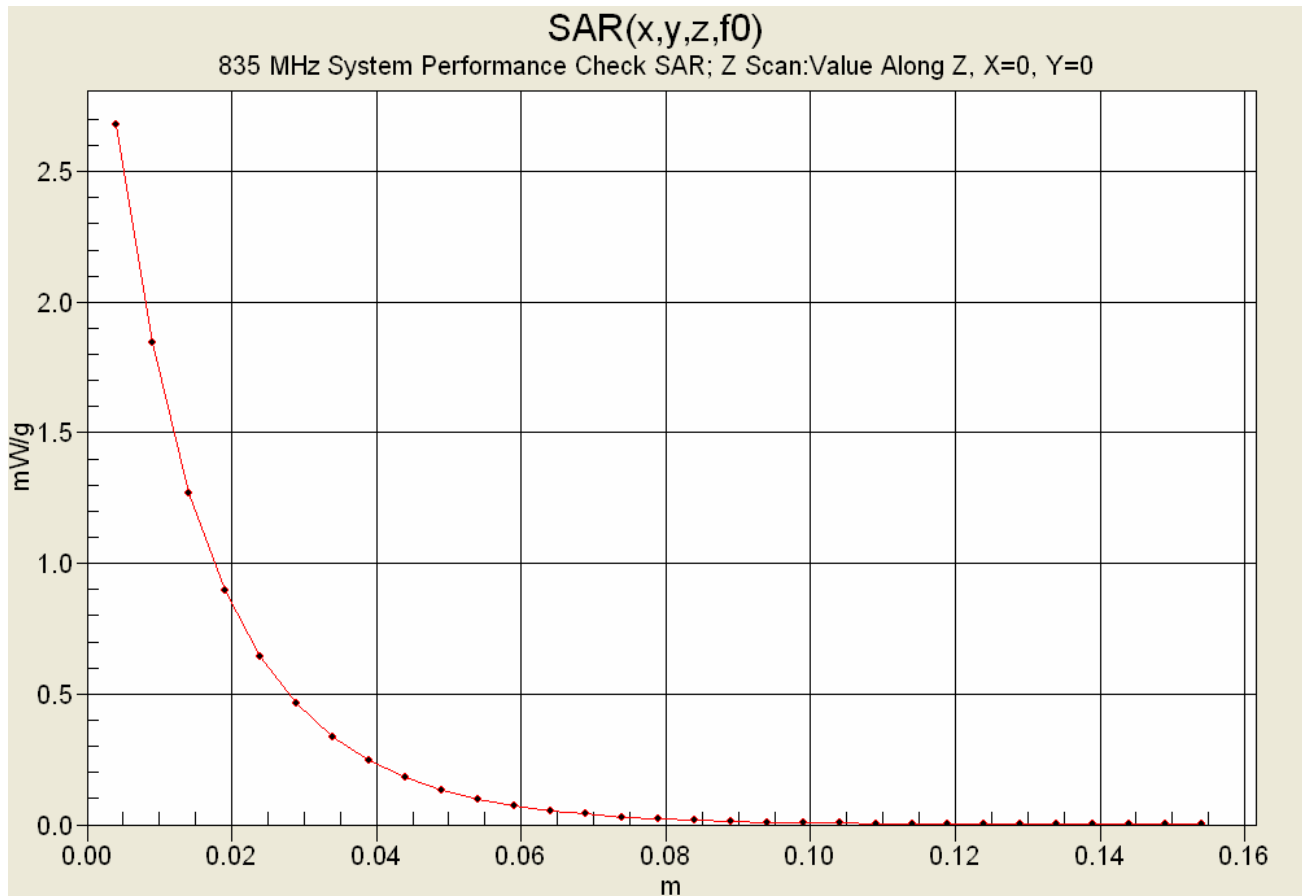
Peak SAR (extrapolated) = 3.59 W/kg

SAR(1 g) = 2.48 mW/g; SAR(10 g) = 1.64 mW/g



Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 30 of 47

Z-Axis Scan



	Test Report Serial No.:	022706DBZ-T724U-S74F	Report Issue No.:	S724U-031406-R0
	Date(s) of Evaluation:	March 02 & 07, 2006	Report Issue Date:	March 14, 2006
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

APPENDIX C - MEASURED FLUID DIELECTRIC PARAMETERS

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter	Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz			
2006 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.					Page 32 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

900 MHz System Performance Check & 950 MHz DUT Evaluation (Body)

Celltech Labs Inc.
Test Result for UIM Dielectric Parameter
Thu 02/Mar/2006
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
0.8000	55.34	0.97	54.20	0.92
0.8100	55.30	0.97	53.93	0.94
0.8200	55.26	0.97	53.86	0.94
0.8300	55.22	0.97	53.76	0.97
0.8400	55.18	0.98	53.58	0.97
0.8500	55.15	0.99	53.37	0.98
0.8600	55.12	1.00	53.44	0.99
0.8700	55.09	1.01	53.43	1.00
0.8800	55.06	1.03	53.27	1.01
0.8900	55.03	1.04	53.25	1.03
0.9000	55.00	1.05	53.06	1.03
0.9100	55.00	1.06	52.92	1.04
0.9200	54.99	1.06	52.85	1.05
0.9300	54.97	1.07	52.81	1.06
0.9400	54.95	1.07	52.67	1.06
0.9500	54.93	1.08	52.58	1.08
0.9600	54.92	1.08	52.45	1.09
0.9700	54.90	1.08	52.40	1.10
0.9800	54.88	1.09	52.19	1.11
0.9900	54.86	1.09	52.20	1.12
1.0000	54.84	1.10	52.21	1.13

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 33 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

755 MHz DUT Evaluation (Body)

Celltech Labs Inc.
Test Result for UIM Dielectric Parameter
Tue 07/Mar/2006
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	55.93	0.91
0.7450	55.55	0.96	56.08	0.92
0.7550	55.51	0.96	55.92	0.92
0.7650	55.47	0.96	55.68	0.93
0.7750	55.43	0.97	55.61	0.93
0.7850	55.39	0.97	55.53	0.94
0.7950	55.36	0.97	55.62	0.95
0.8050	55.32	0.97	55.31	0.96
0.8150	55.28	0.97	55.38	0.97
0.8250	55.24	0.97	55.32	0.98
0.8350	55.20	0.97	55.13	0.99
0.8450	55.17	0.98	55.30	1.00
0.8550	55.14	0.99	55.07	1.01
0.8650	55.11	1.01	55.01	1.01
0.8750	55.08	1.02	54.86	1.02
0.8850	55.05	1.03	54.88	1.03
0.8950	55.02	1.04	54.69	1.03
0.9050	55.00	1.05	54.68	1.04
0.9150	55.00	1.06	54.63	1.05
0.9250	54.98	1.06	54.49	1.06
0.9350	54.96	1.07	54.35	1.07

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 34 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

835 MHz System Performance Check (Body)

Celltech Labs Inc.

Test Result for UIM Dielectric Parameter

Tue 07/Mar/2006

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	55.00	0.87
0.7450	55.55	0.96	54.95	0.88
0.7550	55.51	0.96	54.94	0.88
0.7650	55.47	0.96	54.74	0.89
0.7750	55.43	0.97	54.62	0.90
0.7850	55.39	0.97	54.55	0.90
0.7950	55.36	0.97	54.52	0.92
0.8050	55.32	0.97	54.29	0.93
0.8150	55.28	0.97	54.37	0.93
0.8250	55.24	0.97	54.26	0.94
0.8350	55.20	0.97	54.15	0.95
0.8450	55.17	0.98	54.17	0.97
0.8550	55.14	0.99	54.06	0.97
0.8650	55.11	1.01	53.85	0.98
0.8750	55.08	1.02	54.00	0.99
0.8850	55.05	1.03	53.79	1.00
0.8950	55.02	1.04	53.80	1.00
0.9050	55.00	1.05	53.84	1.01
0.9150	55.00	1.06	53.75	1.02
0.9250	54.98	1.06	53.52	1.03
0.9350	54.96	1.07	53.59	1.04

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 35 of 47

	Test Report Serial No.:	022706DBZ-T724U-S74F	Report Issue No.:	S724U-031406-R0
	Date(s) of Evaluation:	March 02 & 07, 2006	Report Issue Date:	March 14, 2006
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

APPENDIX D - SAR TEST SETUP & DUT PHOTOGRAPHS

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter	Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz			
2006 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.					Page 36 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

DUT PHOTOGRAPHS

Serial No.: P413 (Block 29)



Front Side of DUT



Back Side of DUT

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 39 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

DUT PHOTOGRAPHS

Serial No.: P413 (Block 29)



Top Side of DUT



Bottom Side of DUT



Left Side of DUT



Right Side of DUT

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 40 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0	
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006	
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

DUT PHOTOGRAPHS

Serial No.: P415 (Block 37)



Front Side of DUT



Back Side of DUT

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 41 of 47

	Test Report Serial No.: 022706DBZ-T724U-S74F		Report Issue No.: S724U-031406-R0
	Date(s) of Evaluation: March 02 & 07, 2006		Report Issue Date: March 14, 2006
	Description of Tests:	RF Exposure SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

DUT PHOTOGRAPHS

Serial No.: P415 (Block 37)



Top Side of DUT



Bottom Side of DUT



Left Side of DUT



Right Side of DUT

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 42 of 47

	Test Report Serial No.:	022706DBZ-T724U-S74F	Report Issue No.:	S724U-031406-R0
	Date(s) of Evaluation:	March 02 & 07, 2006	Report Issue Date:	March 14, 2006
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093
				IC RSS-102 Issue 2

DUT PHOTOGRAPHS

With Leather Belt-Clip Holster (P/N: 36001)



Front Side of DUT with Belt-Clip Holster and Electret Microphone Audio Accessory



Back Side of DUT with Belt-Clip Holster



Top Side of DUT with Belt-Clip Holster

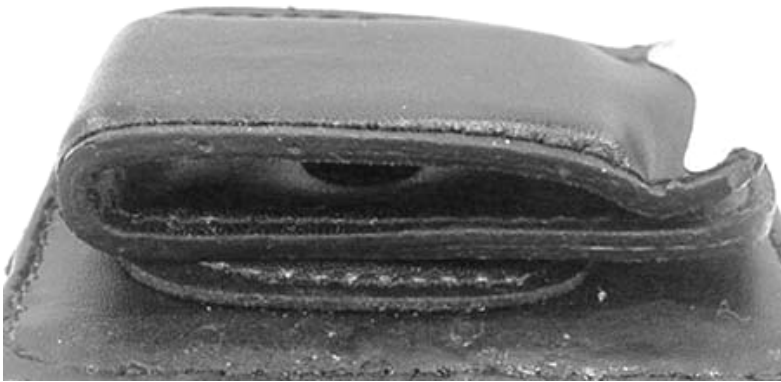


Bottom Side of DUT with Belt-Clip Holster

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 43 of 47

	Test Report Serial No.:	022706DBZ-T724U-S74F	Report Issue No.:	S724U-031406-R0
	Date(s) of Evaluation:	March 02 & 07, 2006	Report Issue Date:	March 14, 2006
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093
				IC RSS-102 Issue 2

DUT PHOTOGRAPHS



Belt-Clip



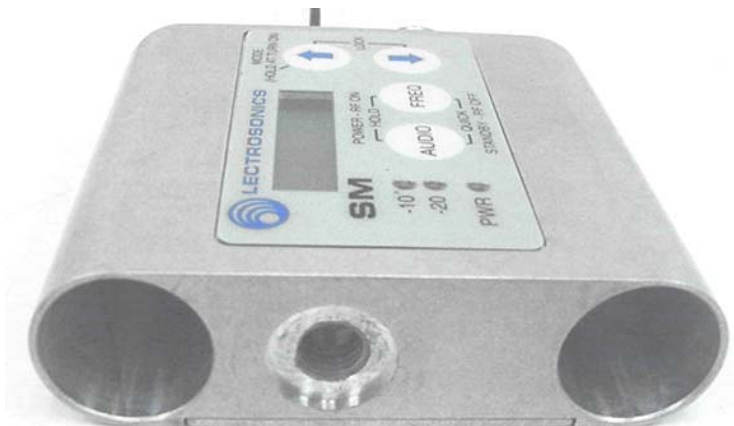
Energizer E-Squared Lithium Battery



Energizer NiMH Battery



Industrial Panasonic Alkaline Battery



DUT Battery Compartment

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter			Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz	
2006 Celltech Labs Inc.		This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 44 of 47

	Test Report Serial No.:	022706DBZ-T724U-S74F	Report Issue No.:	S724U-031406-R0
	Date(s) of Evaluation:	March 02 & 07, 2006	Report Issue Date:	March 14, 2006
	Description of Tests:	RF Exposure	SAR	FCC 47 CFR §2.1093 IC RSS-102 Issue 2

APPENDIX G - SAM PHANTOM CERTIFICATE OF CONFORMITY

Applicant:	Lectrosonics, Inc.	FCC ID:	DBZSMQ	Model(s):	SM, SMD, SMQ	
DUT Type:	Wireless Belt-Pack Body-Worn Audio Transmitter	Block 29: 742.4 - 767.9 MHz	Block 37: 944.1 - 951.9 MHz			
2006 Celltech Labs Inc.	This document is not to be reproduced in whole or in part without the prior written permission of Celltech Labs Inc.				Page 47 of 47	

Schmid & Partner Engineering AG

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

Certificate of conformity / First Article Inspection

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

Tests

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

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

Standards

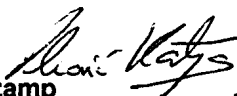
- [1] CENELEC EN 50361
- [2] IEEE P1528-200x draft 6.5
- [3] IEC PT 62209 draft 0.9
- (*) The IT'IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of [1] and [3].

Conformity

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

Date 18.11.2001

Signature / Stamp



**Schmid & Partner
Engineering AG**



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