DECLARATION OF COMPLIANCE

SAR RF EXPOSURE EVALUATION - FCC / IC New Filing

TEST LAB INFORMATION	Name	Celltech Labs Inc.		
	Address	21-364 Lougheed Road, Kelowna, B.C. V1X 7R8 Canada		
TEST LAB ACCREDITATION	Type	ISO / IEC 17025	Accreditation	A2LA Test Lab Certificate No. 2470.01
APPLICANT INFORMATION	Name	HARRIS CORPORATION		
	Address	221 Jefferson Ridge Parkway, Lynchburg, VA 24501 U.S.A.		
STANDARDS APPLIED	FCC	47 CFR §2.1093	IC	Health Canada Safety Code 6
PROCEDURES APPLIED	FCC	KDB 447498 D01v05r02, KDB 865664 D01v01r03	IC	RSS 102 Issue 5
		KDB 865664 D02v01r01, KDB 643646 D01v01r01	IEEE	IEEE 1528 - 2013
PROCEDURES APPLIED	FCC	Licensed Non-Broadcast Transmitter Held to Face (TNF) - FCC Part 90		
	IC	Land Mobile Radio Transmitter/Receiver (27.41-960 MHz) - RSS-119		
DEVICE DESCRIPTION	Portable Digital Push-To-Talk (PTT) Radio Transceiver			
APPLICATION TYPE	New Filing			
DATE(S) OF EVALUATION	December 18-31, 2015		SAMPLES RECEIVED	18 Dec 2015

Device(s) Evaluated

FCC ID	IC Certification	Device Model	Device Part Number	Device Type	Band	Operating Frequency	Rated Output Power
OWDTR-0145	3636B-0145	XL-200P	XL-PFM2M	System & Scan	UHF	136-174MHz	6.0W (37.8dBm)
					VHF	378-522MHz	5.0W (37.0dBm)
					7/800	762-776MHz	3.0W (34.8dBm)
					7/800	794-806MHz	3.0W (34.8dBm)
					7/800	806-824MHz	3.0W (34.8dBm)
					7/800	851-870MHz	3.0W (34.8dBm)
					BLE	2402-2480MHz	6.9mW (8.4dBm)
					BT	2402-2480MHz	18.6mW (12.7dBM)
					WLAN	2412-2462MHz	234mW (23.7dBM)
					WLAN	5150-5850MHz	15mW (11.8dBM)

Accessories Tested	See Section 6.0				Duty Cycle	Exposure Category
Maximum SAR Level Evaluated FCC	Face	1.65	W/kg	1g	50% PTT	Occupational / Controlled
	Body	5.00				
Maximum SAR Level Evaluated IC	Face	1.68				
	Body	5.23				
FCC / IC Spatial Peak SAR Limit	Face/Body	8.0				

Statement of Compliance

Celltech Labs Inc. declares under its sole responsibility that this device has demonstrated compliance with the Specific Absorption Rate (SAR) RF exposure limits specified in FCC 47 CFR §2.1093 and Health Canada Safety Code 6 for the Occupational/Controlled Exposure environment. The device was tested in accordance with the measurement procedures specified in FCC KDB 865664 D01v01r03, Industry Canada RSS-102 Issue 5 and IEEE Standard 1528-2013.

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

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

Test Report Approved By:		Art Voss	Senior Engineer	14 Dec 2016	Celltech Labs Inc

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1.0 DOCUMENT CONTROL

REVISION HISTORY			
REVISION NO.	**DESCRIPTION**	**IMPLEMENTED BY**	**RELEASE DATE**
1.0	1st Release	Art Voss	14 Jan 2016
1.1	2nd Release	Art Voss	26 Jan 2016

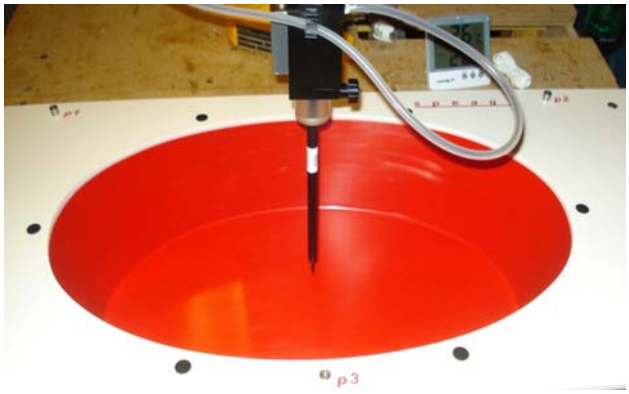
TEST REPORT SIGN-OFF			
DEVICE TESTED BY	**REPORT PREPARED BY**	**QA REVIEW BY**	**REPORT APPROVED BY**
Art Voss	Jasmeet Gill	Art Voss	Art Voss

2.0 INTRODUCTION

This measurement report demonstrates that the HARRIS Corporation XL-200P Portable PTT Radio Transceivers complies with the SAR (Specific Absorption Rate) RF exposure requirements specified in FCC 47 CFR §2.1093 and Health Canada's Safety Code 6 for the Occupational / Controlled Exposure environment. The measurement procedures were in accordance of KDB 447498; KDB 865664; IC RSS-102 Issue 4 and IEEE Standard 1528-2013. 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. Subsequent addendums were applied to the following Radio Transceivers:

3.0 SAR MEASUREMENT SYSTEM

Celltech Labs Inc. SAR measurement facility employs a Dosimetric Assessment System (DASY™) manufactured by Schmid & Partner Engineering AG (SPEAG™) of Zurich, Switzerland. The DASY4 measurement system is comprised of the measurement server, a robot controller, a computer, a near-field probe, a probe alignment sensor, an Elliptical Planar Phantom (ELI) phantom and a specific anthropomorphic mannequin (SAM) phantom 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 and a teach pendant (Joystick) to control the robot's servo 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 form the DAE to digital electronic signal 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, a command decoder and a 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 utilizes a controller with built in VME-bus computer.



DASY4 SAR System with ELI Planar Phantom

DASY4 Measurement Server

4.0 RF CONDUCTED POWER MEASUREMENT

Table 4.0

RF Conducted Power Measurement
Average Conducted Power(1)

Frequency Band	Frequency (MHz)	System Radio Measured Power (dBM)	System Radio Measured Power (W)	Scan Radio Measured Power (dBM)	Scan Radio Measured Power (W)	Rated Power (dBm)	Rated Power (W)	Test Channel(2)
VHF	136.0000	38.3	6.7	38.3	6.7	37.8	6.0	X
	138.0000	38.3	6.7	38.3	6.7	37.8	6.0	X
	141.0000	38.3	6.7	38.3	6.7	37.8	6.0	X
	144.0000	38.3	6.8	38.3	6.8	37.8	6.0	
	148.0000	38.3	6.8	38.3	6.8	37.8	6.0	X
	150.0000	38.3	6.8	38.3	6.8	37.8	6.0	
	156.8000	38.3	6.7	38.3	6.7	37.8	6.0	X
	162.0000	38.2	6.7	38.2	6.7	37.8	6.0	X
	174.0000	38.2	6.7	38.2	6.7	37.8	6.0	X
UHF	378.0000	37.2	5.2	37.2	5.2	37.0	5.0	X
	406.0000	37.2	5.2	37.2	5.2	37.0	5.0	X
	418.0000	37.2	5.2	37.2	5.2	37.0	5.0	X
	430.0000	38.3	6.8	38.3	6.8	37.0	5.0	X
	450.0000	38.3	6.8	38.3	6.8	37.0	5.0	X
	454.0000	37.2	5.2	37.2	5.2	37.0	5.0	X
	456.0000	37.2	5.2	37.2	5.2	37.0	5.0	
	459.0000	37.2	5.2	37.2	5.2	37.0	5.0	X
	470.0000	37.0	5.0	37.0	5.0	37.0	5.0	X
	512.0000	37.2	5.2	37.2	5.2	37.0	5.0	
	522.0000	37.1	5.1	37.1	5.1	37.0	5.0	X

(1) The RF conducted output power levels of the DUT were measured by Celltech Labs prior to the SAR evaluations using a Gigatronics 8652A Universal Power Meter at the external antenna connector of the radio in accordance with requirements of FCC 47 CFR §2.1046 and IC RSS-Gen.

(2) See Section 5.0

Table 4.1

RF Conducted Power Measurement

Average Conducted Power(1)

Frequency Band	Frequency (MHz)	System Radio Measured Power (dBM)	System Radio Measured Power (W)	System Radio Rated Power (dBm)	System Radio Rated Power (W)	Test Channel(2)
700 MHz	768	34.11	2.58	34.8	3.00	Y
	776	34.09	2.56	34.8	3.00	Y
	806	34.08	2.56	34.8	3.00	
800 MHz	806	34.6	2.88	34.8	3.00	Y
	811	34.63	2.90	34.8	3.00	
	816	34.67	2.93	34.8	3.00	
	817	34.64	2.91	34.8	3.00	
	820.5	34.68	2.94	34.8	3.00	
	824	34.71	2.96	34.8	3.00	Y
	851	34.67	2.93	34.8	3.00	Y
	856	34.63	2.90	34.8	3.00	
	861	34.68	2.94	34.8	3.00	Y
	862	34.64	2.91	34.8	3.00	
	866	34.62	2.90	34.8	3.00	
	870	34.67	2.93	34.8	3.00	Y

(1) The RF conducted output power levels of the DUT were measured by Celltech Labs prior to the SAR evaluations using a Gigatronics 8652A Universal Power Meter at the external antenna connector of the radio in accordance with requirements of FCC 47 CFR §2.1046 and IC RSS-Gen.

(2) See Section 5.0

5.0 NUMBER OF TEST CHANNELS (N_C)

Table 5.0

Number of Test Channels (N_C)				
Antenna Part Number	Antenna Type	Frequency Range (MHz)	N_C (1)	N_C (1)
KRE1011219/2	Helical Whip	150-162	n/a	n/a
KRE1011506/1	1/2 Wave Whip	7/800 Band		
KRE1011506/2	1/4 Wave Stub			
14035-4440-01	1/2 Wave Whip			
14035-4440-02	1/4 Wave Stub			
14035-4000-01	Whip(2)	136-861		
14035-4420-01	Wide Band Whip	UHF 7/800 Band		

(1) Test channels were selected based on the worst case configurations from previous SAR evaluations

(2) This is a full spectrum antenna

6.0 MANUFACTURER'S ACCESSORY LIST

Table 6.0

Change History

Change ID	Date	Change Type	Description of Change
1	14 Jan 2016	Initial	Initial Filing

Table 6.1

Manufacturer's Accessory List

Test Report ID Number	Manufacturer's Part Number	Description	Change ID(1)	UDC Group(2)	Type II Group(3)	SAR(4) Evaluated	SAR(5) Tested
Antenna							
T1	KRE1011506/1	1/2 Wave Whip Antenna, (764-870 MHz)	1			Y	Y
T2	KRE1011506/2	1/4 Wave Stub Antenna, (764-870 MHz)	1			Y	Y
T3	KRE1011219/2	Helical VHF	1			Y	Y
T4	14035-4420-01	Wideband Whip, UHF, 7/800 MHz	1			Y	Y
T5	14035-4000-01	Full Spectrum Whip Antenna	1			Y	Y
T6	14035-4440-01	1/2 Wave Whip Antenna, 7/800 MHz	1			Y	Y
T7	14035-4440-02	1/4 Wave Stub Antenna, 7/800 MHz	1			Y	Y
Battery							
P1	14034-4010-01	Li-Ion Battery 7.2VDC, 3300mAh	1			Y	Y

Table 6.1 Continued

Manufacturer's Accessory List

Audio Accessory							
A1	12082-0600-01	Standard Speaker Microphone	1	7A	PB	Y	Y
A2	12082-0600-02	Storm Speaker Microphone	1	7A	PB	Y	Y
A3	12150-1000-01	Premium Speaker MIC, Fire, NC	1	9	PB	Y	Y
A4	12082-0650-01	Microphone, Palm, 2-Wire Black	1	7A	IL	Y	Y
A5	12082-0650-02	Microphone, Palm, 2-Wire Beige	3	7A	IL	Y	
A6	12082-0650-03	Microphone, Mini Lapel, 3-Wire Black	1	7A	IL	Y	Y
A7	12082-0650-04	Microphone, Mini Lapel, 3-Wire Beige	3	7A	IL	Y	
A8	12082-0650-05	Earphone Kit, Black, XG-100P	**			Y	
A9	12082-0650-06	Earphone Kit, Beige, XG-100P	**			Y	
A10	12082-0650-07	Headset, In-Ear, Boom MIC, In-Line PTT	3	7A	IL	Y	
A11	12082-0650-08	Headset, LTWT, OTH, Single Ear, IN-Line PTT	3	7A	IL	Y	
A12	12082-0650-09	Headset, LTWT, BTH, Dual Ear, In_Line PTT	3	7A	IL	Y	
A13	12082-0650-10	Headset, LTWT, BTH, Dual Ear, Pig Tail PTT	3	7A	PT	Y	Y
A14	12082-0650-11	Headset, LTWT, BTH, Dual In-Ear, In_Line PTT	3	7A	IL	Y	
A15	12082-0650-12	Headset, LTWT, BTH, Dual In-Ear, Pig Tail PTT	3	7A	PT	Y	Y
A16	12082-0650-13	Headset, Heavy Duty, BTH, w/PTT, XG-100P	3	7A	IL	Y	Y
A17	12082-0650-14	Headset, Heavy Duty, OTH, w/PTT, XG-100P	3	7A	IL	Y	
A18	12082-0650-15	Headset, BTH, Boom MIC, Earpiece, w/PTT	**			Y	
A19	12082-0650-16	Headset, Tactical, Boom MIC, Earpiece, w/PTT	3	7A	PT	Y	
A20	12082-0650-17	Skull MIC, w/Body PTT, Earcup, XG-100P	3	9	BB	Y	Y
A21	12082-0650-18	Throat MIC, w/Acoustic Tube, Body PTT	3	9	BB	Y	
A22	12082-0650-19	Throat MIC, w/Acoustic Tube, Body & Ring PTT	3	9	RB	Y	
A23	12082-0681-01	Speaker MIC, Wireless Bluetooth	3	BT	PB	Y	
A24	12082-0684-01	BlueTooth, Covert, Earpiece, MIC, PTT	3	BT	n/a	Y	
A25	14002-0197-01	Hirose to Unity Adapter	1	7B	n/a	Y	Y
A26	LS103239V1	Earphone, Lapel MIC, 2.5mm	3	n/a	n/a	Y	Y
A27	LS103239V2	Earphone, Lapel MIC, 2.5mm, Right Angle	4	n/a	n/a	Y	

Table 6.1 Continued

Manufacturer's Accessory List

		Body-Worn Accessory					
B1	12082-1290-01	Metal Belt Clip	**1**			**Y**	**Y**
B2	12082-3230-01	D-Swivel (Used w/ 14002-0218-01 and KRY 1011609/1)	**1**			**Y**	**Y**
B3	14002-0218-01	Premium Belt Loop	**1**			**Y**	**Y**
B4	14035-4200-01	Holster, Leather, Radio, Premium	**3**			**Y**	**Y**
B5	14035-4200-02	Holster, Leather w/Rings for Shoulder Strap, Radio, Premium	**3**			**Y**	**Y**
B6	14035-4200-03	Holster, Nylon, Black, Radio, Premium	**			**Y**	
B7	14035-4200-04	Holster, Ring, Leather, Radio, Premium	**			**Y**	
B8	14035-4201-01	Kit, 14035-4200-01 Holster Assy w/ 14002-0218-01 Belt Loop	**			**Y**	
B9	14035-4202-02	Kit, 14035-4200-02 Holster Assy w/ 14002-0218-01 Belt Loop	**			**Y**	
B10	14035-4202-01	Holster, Leather, Radio, Standard	**			**Y**	
B11	14035-4202-02	Holster, Leather w/Rings for Shoulder Strap, Radio, Standard	**			**Y**	
B12	14035-4202-03	Holster, Nylon, Black, Radio, Standard	**			**Y**	
B13	14035-4202-04	Holster, Ring, Leather, Radio, Standard	**			**Y**	
B14	CC103333V1	Shoulder Strap	**1**			**Y**	**Y**
B15	KRY 1011609/1	Leather Belt Loop	**1**			**Y**	**Y**

(1) From Table 6.0 - Indicates which change the item was introduced or tested. A "**" in this column indicates these accessories were evaluated on similar product and are deemed compliant.

(2) UDC Group: 9 = 9 Pin, 7A = 7 Pin, 7B = 7 Pin Modified

(3) Type II Group: PB = Palm Button, IL = In-Line Pushbutton, PT = Pigtail Pushbutton, RB = Ring Pushbutton, BB = Body Button, BT = BlueTooth

(4) Accessories are categorized into groups of similar design and construction. Samples of individual groups are SAR Tested and the SAR results apply to ALL members of the Accessory Group. A "Y" in this column indicates the accessory is deemed acceptable.

(5) Accessories and/or Accessory Group members SAR Tested.

7.0 SAR MEASUREMENT SUMMARY

Table 7.0

Measured SAR Results (1g)- FACE Configuration (FCC/IC)

Date	Plot ID	DUT M/N	DUT Type	Test Frequency (*MHz*)	Modulation	Accessories: Antenna ID	Accessories: Battery ID	Accessories: Body ID	Accessories: Audio ID	DUT Spacing: DUT (*mm*)	DUT Spacing: Antenna (*mm*)	Measured SAR (1g): 100% DC (*W/kg*)	Measured SAR (1g): 50% DC (*W/kg*)	SAR Drift (dB)
22 Dec 2015	F6	**SYS**	**XL-200P**	806	**CW**	506/1	Default	N/A	N/A	**25**	**52**	2.000	1.000	-0.974
22 Dec 2015	F7	**SYS**	**XL-200P**	824	**CW**	506/1	Default	N/A	N/A	**25**	**52**	1.460	0.730	-0.946
19 Jan 2015	F41	**SYS**	**XL-200P**	768	**CW**	506-1	Default	N/A	N/A	**25**	**52**	0.950	0.475	-0.725
19 Jan 2015	F42	**SYS**	**XL-200P**	776	**CW**	506-1	Default	N/A	N/A	**25**	**52**	1.070	0.535	-0.676
22 Dec 2015	F8	**SYS**	**XL-200P**	806	**CW**	506/2	Default	N/A	N/A	**25**	**52**	1.780	0.890	-0.170
22 Dec 2015	F9	**SYS**	**XL-200P**	824	**CW**	506/2	Default	N/A	N/A	**25**	**52**	1.800	0.900	-0.345
19 Jan 2015	F34	**SYS**	**XL-200P**	768	**CW**	506-2	Default	N/A	N/A	**25**	**52**	1.430	0.715	-0.599
19 Jan 2015	F35	**SYS**	**XL-200P**	776	**CW**	506-2	Default	N/A	N/A	**25**	**52**	2.250	1.125	-0.411
22 Dec 2015	F10	**SYS**	**XL-200P**	851	**CW**	4440-01	Default	N/A	N/A	**25**	**55**	1.720	0.860	-0.109
22 Dec 2015	F11	**SYS**	**XL-200P**	861	**CW**	4440-01	Default	N/A	N/A	**25**	**55**	1.460	0.730	-0.051
25 Jun 2015	F1	**SYS**	**XL-200P**	768	**CW**	4440-01	Default	N/A	N/A	**25**	**55**	0.973	0.487	0.075
25 Jun 2015	F2	**SYS**	**XL-200P**	776	**CW**	4440-01	Default	N/A	N/A	**25**	**55**	1.140	0.570	-0.673
22 Dec 2015	F12	**SYS**	**XL-200P**	806	**CW**	4440-02	Default	N/A	N/A	**25**	**55**	2.600	1.300	-0.088
22 Dec 2015	F13	**SYS**	**XL-200P**	824	**CW**	4440-02	Default	N/A	N/A	**25**	**55**	2.540	1.270	-0.158
06 Oct 2015	F1	**SYS**	**XL-200P**	768	**CW**	4440-02	Default	N/A	N/A	**25**	**55**	1.190	0.595	-0.285
21 Dec 2015	F1	**SYS**	**XL-200P**	806	**CW**	4420-01	Default	N/A	N/A	**25**	**55**	1.790	0.895	-0.698
21 Dec 2015	F2	**SYS**	**XL-200P**	824	**CW**	4420.01	Default	N/A	N/A	**25**	**55**	2.110	1.055	-0.285
21 Dec 2015	F3	**SYS**	**XL-200P**	851	**CW**	4420.01	Default	N/A	N/A	**25**	**55**	2.070	1.035	-0.402
21 Dec 2015	F4	**SYS**	**XL-200P**	861	**CW**	4420.01	Default	N/A	N/A	**25**	**55**	0.828	0.414	-0.192
21 Dec 2015	F5	**SYS**	**XL-200P**	870	**CW**	4420.01	Default	N/A	N/A	**25**	**55**	1.420	0.710	-0.276
23 Dec 2015	F1	**SYS**	**XL-200P**	768	**CW**	4420-01	Default	N/A	N/A	**25**	**55**	1.690	0.845	-0.165

SAR Limit		Head/Body	Spatial Peak	RF Exposure Category
FCC 47 CFR 2.1093	**Health Canada Safety Code 6**	**8.0 W/kg**	**1 Gram Average**	**Occupational**

Table 7.1

Measured SAR Results (1g)- BODY Configuration (FCC/IC)

Date	Plot ID	DUT M/N	DUT Type	Test Frequency (*MHz*)	Modulation	Accessories: Antenna ID	Accessories: Battery ID	Accessories: Body ID	Accessories: Audio ID	DUT Spacing: DUT (*mm*)	DUT Spacing: Antenna (*mm*)	Measured SAR (1g): 100% DC (*W/kg*)	Measured SAR (1g): 50% DC (*W/kg*)	SAR Drift (dB)
17 Dec 2015	B1	**SYS**	**XL-200P**	806	**CW**	506/1	Default	BC	SPM	**20**	**22**	8.380	4.190	-0.168
17 Dec 2015	B2	**SYS**	**XL-200P**	824	**CW**	506/1	Default	BC	SPM	**20**	**22**	7.310	3.655	0.103
17 Dec 2015	B3	**SYS**	**XL-200P**	851	**CW**	506/1	Default	BC	SPM	**20**	**22**	5.720	2.860	-0.032
17 Dec 2015	B4	**SYS**	**XL-200P**	861	**CW**	506/1	Default	BC	SPM	**20**	**22**	4.570	2.285	-0.021
17 Dec 2015	B5	**SYS**	**XL-200P**	870	**CW**	506/1	Default	BC	SPM	**20**	**22**	2.730	1.365	0.050
21Jan 2015	B41	**SYS**	**XL-200P**	768	**CW**	506-1	Default	BC	SPM	**20**	**22**	3.540	1.770	-0.801
21Jan 2016	B42	**SYS**	**XL-200P**	776	**CW**	506-1	Default	BC	SPM	**20**	**22**	4.270	2.135	-0.609
17 Dec 2015	B5	**SYS**	**XL-200P**	806	**CW**	506/2	Default	BC	SPM	**20**	**22**	7.350	3.675	-0.167
17 Dec 2015	B7	**SYS**	**XL-200P**	824	**CW**	506/2	Default	BC	SPM	**20**	**22**	7.590	3.795	-0.208
17 Dec 2015	B8	**SYS**	**XL-200P**	851	**CW**	506/2	Default	BC	SPM	**20**	**22**	7.040	3.520	-0.285
18 Dec 2015	B9	**SYS**	**XL-200P**	861	**CW**	506/2	Default	BC	SPM	**20**	**22**	6.440	3.220	-0.202
18 Dec 2015	B10	**SYS**	**XL-200P**	870	**CW**	506/2	Default	BC	SPM	**20**	**22**	7.210	3.605	-0.294
21Jan 2016	B34	**SYS**	**XL-200P**	768	**CW**	506-2	Default	BC	SPM	**20**	**22**	3.220	1.610	-0.945
21Jan 2016	B35	**SYS**	**XL-200P**	776	**CW**	506-2	Default	BC	SPM	**20**	**22**	4.240	2.120	-0.510
18 Dec 2015	B11	**SYS**	**XL-200P**	806	**CW**	4440-01	Default	BC	SPM	**20**	**30**	6.800	3.400	0.147
18 Dec 2015	B12	**SYS**	**XL-200P**	824	**CW**	4440-01	Default	BC	SPM	**20**	**30**	8.410	4.205	0.092
18 Dec 2015	B13	**SYS**	**XL-200P**	851	**CW**	4440-01	Default	BC	SPM	**20**	**30**	7.670	3.835	-0.113
18 Dec 2015	B14	**SYS**	**XL-200P**	861	**CW**	4440-01	Default	BC	SPM	**20**	**30**	6.980	3.490	-0.149
18 Dec 2015	B15	**SYS**	**XL-200P**	870	**CW**	4440-01	Default	BC	SPM	**20**	**30**	5.460	2.730	-0.129
23 Jun 2015	B1	**SYS**	**XL-200P**	768	**CW**	4440-01	Default	BC	SPM	**20**	**30**	4.470	2.235	-0.202
23 Jun 2015	B2	**SYS**	**XL-200P**	776	**CW**	4440-01	Default	BC	SPM	**20**	**30**	4.310	2.155	0.385
20 Dec 2015	B16	**SYS**	**XL-200P**	806	**CW**	4440-02	Default	BC	SPM	**20**	**30**	9.000	4.500	-0.206
20 Dec 2015	B17	**SYS**	**XL-200P**	824	**CW**	4440-02	Default	BC	SPM	**20**	**30**	7.760	3.880	-0.441
20 Dec 2015	B18	**SYS**	**XL-200P**	851	**CW**	4440-02	Default	BC	SPM	**20**	**30**	6.800	3.400	0.016
20 Dec 2015	B19	**SYS**	**XL-200P**	861	**CW**	4440-02	Default	BC	SPM	**20**	**30**	6.890	3.445	-0.156
20 Dec 2015	B20	**SYS**	**XL-200P**	870	**CW**	4440-02	Default	BC	SPM	**20**	**30**	6.940	3.470	-0.046

08 Oct 2015	B4	**SYS**	**XL-200P**	776	**CW**	4440-02	Default	BC	SPM	**20**	**30**	6.920	3.460	-0.199
20 Dec 2015	B21	**SYS**	**XL-200P**	806	**CW**	4420-01	Default	BC	SPM	**20**	**30**	6.000	3.000	-0.208
20 Dec 2015	B22	**SYS**	**XL-200P**	824	**CW**	4420.01	Default	BC	SPM	**20**	**30**	6.650	3.325	-0.226
20 Dec 2015	B23	**SYS**	**XL-200P**	851	**CW**	4420.01	Default	BC	SPM	**20**	**30**	5.770	2.885	-0.261
20 Dec 2015	B24	**SYS**	**XL-200P**	861	**CW**	4420.01	Default	BC	SPM	**20**	**30**	6.130	3.065	-0.406
20 Dec 2015	B24b	**SYS**	**XL-200P**	861	**CW**	4420.01	Default	BC	SPM	**20**	**30**	6.250	3.125	-0.363
20 Dec 2015	B25	**SYS**	**XL-200P**	870	**CW**	4420.01	Default	BC	SPM	**20**	**30**	5.600	2.800	-0.323

SAR Limit		**Head/Body**	**Spatial Peak**	**RF Exposure Category**
FCC 47 CFR 2.1093	**Health Canada Safety Code 6**	**8.0 W/kg**	**1 Gram Average**	**Occupational**

Table 7.2

2.4GHz 802.11 Band - FACE SAR Evaluation Results (FCC/IC)

Date	Radio Model		Plot #	Freq	Batt. Type	Antenna	Accessories		DUT Spacing		Measured SAR 1g (W/kg)
	M/N	Type		(MHz)			Body	Audio	DUT (mm)	ANT (mm)	PTT Duty Cycle 100%
02 Mar 2015	XL-200P	System	F48	2412	Li-Ion	4000-01	n/a	n/a	25	52	0.004
02 Mar 2015	XL-200P	System	F49	2437	Li-Ion	4000-01	n/a	n/a	25	52	0.004
02 Mar 2015	XL-200P	System	F50	2462	Li-Ion	4000-01	n/a	n/a	25	52	0.003
03 Mar 2015	XL-200P	System	F51	2472	Li-Ion	4000-01	n/a	n/a	25	52	0.002

SAR LIMIT(S)		Head/Body	Spatial Peak	RF Exposure Category
FCC 47 CFR 2.1093	Health Canada Safety Code 6	8.0 W/kg	1g average	Occupational

Table 7.3

2.4GHz 802.11 Band - BODY SAR Evaluation Results (FCC/IC)

Date	Radio Model		Plot #	Freq	Batt. Type	Antenna	Accessories		DUT Spacing		Measured SAR 1g (W/kg)
	M/N	Type		(MHz)			Body	Audio	DUT (mm)	ANT (mm)	PTT Duty Cycle 100%
04 Mar 2015	XL-200P	System	B53	2412	Li-Ion	4000-1	B1	A1	20	22	0.004
04 Mar 2015	XL-200P	System	B54	2437	Li-Ion	4000-1	B1	A1	20	22	0.005
05 Mar 2015	XL-200P	System	B55	2462	Li-Ion	4000-1	B1	A1	20	22	0.004
05 Mar 2015	XL-200P	System	B56	2472	Li-Ion	4000-1	B1	A1	20	22	0.005

SAR LIMIT(S)		Head/Body	Spatial Peak	RF Exposure Category
FCC 47 CFR 2.1093	Health Canada Safety Code 6	8.0 W/kg	1g average	Occupational

Table 7.4

2.4GHz Bluetooth Band - FACE SAR Evaluation Results (FCC/IC)

Date	Radio Model		Plot #	Freq	Batt. Type	Antenna	Accessories		DUT Spacing		Measured SAR 1g (W/kg)
	M/N	Type		(MHz)			Body	Audio	DUT (mm)	ANT (mm)	PTT Duty Cycle 100%
03 Mar 2015	**XL-200P**	**System**	F53	2480	Li-Ion	4000-01	n/a	n/a	25	52	0.003

SAR LIMIT(S)		Head/Body	Spatial Peak	RF Exposure Category
FCC 47 CFR 2.1093	Health Canada Safety Code 6	8.0 W/kg	1g average	Occupational

Table 7.5

2.4GHz Bluetooth - BODY SAR Evaluation Results (FCC/IC)

Date	Radio Model		Plot #	Freq	Batt. Type	Antenna	Accessories		DUT Spacing		Measured SAR 1g (W/kg)
	M/N	Type		(MHz)			Body	Audio	DUT (mm)	ANT (mm)	PTT Duty Cycle 100%
05 Mar 2015	**XL-200P**	**System**	B58	2480	Li-Ion	4000-1	B1	A1	20	22	0.006

SAR LIMIT(S)		Head/Body	Spatial Peak	RF Exposure Category
FCC 47 CFR 2.1093	Health Canada Safety Code 6	8.0 W/kg	1g average	Occupational

8.0 SCALING OF MAXIMUM MEASURE SAR

Table 8.0

Scaling of Maximum Measured SAR (1g Average)

Plot ID	Configuration	Freq (MHz)	Measured Fluid Deviation: Permittivity	Measured Fluid Deviation: Conductivity	Conducted Power: Measured (dBm)	Conducted Power: Rated (dBm)	Measured Drift (dB)	Measured SAR (W/kg)	Notes
F12	Face	806	3.31%	1.11%	34.60	34.80	-0.088	1.30	
B16	Body	806	-2.82%	0.93%	34.60	34.80	-0.206	4.50	

Step 1 — Fluid Sensitivity Adjustment (1)

Plot ID	Scale Factor (%)	x	Measured SAR (W/kg)	=	Adjusted SAR (W/kg)
F12	0.11%	x	1.30	=	1.30
B16	1.32%	x	4.50	=	4.50

Step 2 — Manufacturer's Tune-Up Tolerance (2)

Plot ID	Measured Conducted Power (dBm)	Rated Power (dBm)	Delta (dB)	+	Adjusted SAR (W/kg)	=	Reported SAR (W/kg)
F12	34.60	34.80	-0.20	+	1.30	=	1.36
B16	34.60	34.80	-0.20	+	4.50	=	4.71

Step 3 — Simultaneous Transmission - Bluetooth and/or WiFi (3)

Plot ID	Rated Output Power (Pmax) (mW)	Freq (MHz)	Separation Distance (mm)	Estimated SAR (W/kg)	+	Reported SAR (W/kg)	=	Simultaneous Reported SAR (W/kg)
F12	6.9	2480	5.0	0.29	+	1.36	=	1.65
B16	6.9	2480	5.0	0.29	+	4.71	=	5.00

Step 4 (IC/EU/AU) — Drift Adjustment (4)

Plot ID	Measured Drift (dB)	+	Reported or Simultaneous Reported SAR (W/kg)	=	Scaled SAR (W/kg)
F12	-0.088	+	1.65	=	1.68
B16	-0.206	+	5.00	=	5.23

Notes

(1) Per KDB 865664 and IEC-62209-1. Scaling required only when Measured Fluid Deviation is greater than 5% and only when the Fluid Sensitivity Scale Factor is (+) Positive.

(2) Per KDB 447498. Scaling required only when Delta is (-) Negative. The absolute value of Delta is added to Adjusted SAR.

(3) Per KDB 447498 4.3.2.

(4) Per IEC 62209-1. Scaling required only when Measured Drift is (-) Negative. The absolute value of Measured Drift is added to Reported or Simultaneous Reported SAR.

9.0 SAR EXPOSURE LIMITS

Table 9.0

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

10.0 DETAILS OF SAR EVALUATION

EVALUATION DETAILS	
1	The test channels selected for the SAR evaluations were based test procedures FCC KDB 447498 and IEC 62209-1. The procedure yielding the highest channel count was applied.
2	The DUT was evaluated for SAR in accordance with the procedures described in FCC KDB 643646.
3	The Scan radio model differs from the System radio model in front keypad only. The scan radio was evaluated for the worst case configuration of the SAR evaluation.
4	The DUT was evaluated for SAR at the maximum conducted output power level, preset by the manufacturer, in unmodulated continuous transmit operation (Continuous Wave mode at 100% duty cycle) with the transmit key continuously depressed. For a Push-To-Talk (PTT) device, the 50% duty cycle compensation reported assumes a transmit/receive cycle of equal time base.
5	A single point SAR measurement was taken prior to the Area Scan and after the Zoom Scan and the SAR drift of the DUT was evaluated. The measured SAR drift was added to the measured SAR levels of the Maximum ***reported*** SAR (IC/EU only).
6	Each SAR evaluations were performed with a fully charged battery.
7	The fluid temperature remained within +/-2°C from the time of the fluid dielectric parameter measurement to the completion of the SAR evaluation.
8	The fluid temperature remained within +/-0.5°C throughout the test day.

SCAN PROCEDURE	
Maximum distance from the closest measurement point to phantom surface.	4 ± 1mm
Maximum probe angle normal to phantom surface.	$5^{o} \pm 1^{o}$
Area Scan Spatial Resolution ΔX, ΔY	15mm
Zoom Scan Spatial Resolution ΔX, ΔY	7.5mm
Zoom Scan Spatial Resolution ΔZ	5mm
Zoom Scan Volume X, Y, Z	30mm x 30mm x 30mm
Phantom	Elliptical Planar (ELI)
Fluid Depth	150mm
An Area Scan with an area extending beyond the device was used to locate the candidate maximas within 2dB of the global maxima.	
A Zoom Scan centered over the peak SAR location(s) determined by the Area Scan was used to determine the 1 gram and 10 gram peak spatial-averge SAR	

11.0 MEASUREMENT UNCERTAINTIES

Table 11.0

UNCERTAINTY BUDGET FOR DEVICE EVALUATION (IEEE 1528-2013 Table 9)

Uncertainty Component	IEEE 1528 Section	Uncertainty Value ±%	Probability Distribution	Divisor	ci 1g	ci 10g	Uncertainty Value ±% (1g)	Uncertainty Value ±% (10g)	V_i or V_{eff}
Measurement System									
Probe Calibration*	E.2.1	6.6	Normal	1	1	1	6.60	6.60	∞
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	8.3	Rectangular	1.732050808	1	1	4.8	4.8	∞
Linearity*	E.2.4	4.7	Rectangular	1.732050808	1	1	2.7	2.7	∞
System Detection Limits*	E.2.4	1.0	Rectangular	1.732050808	1	1	0.6	0.6	∞
Modulation Response	E.2.5	4.0	Rectangular	1.732050808	1	1	2.3	2.3	∞
Readout Electronics*	E.2.6	1.0	Normal	1	1	1	1.0	1.0	∞
Response Time*	E.2.7	0.8	Rectangular	1.732050808	1	1	0.5	0.5	∞
Integration Time*	E.2.8	1.4	Rectangular	1.732050808	1	1	0.8	0.8	∞
RF Ambient Conditions - Noise	E.6.1	0.0	Rectangular	1.732050808	1	1	0.0	0.0	∞
RF Ambient Conditions - Reflection	E.6.1	0.0	Rectangular	1.732050808	1	1	0.0	0.0	∞
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	3.9	Rectangular	1.732050808	1	1	2.3	2.3	∞
Test Sample Related									
Test Sample Positioning	E.4.2	0.3	Normal	1	1	1	0.3	0.3	5
Device Holder Uncertainty*	E.4.1	3.6	Normal	1	1	1	3.6	3.6	∞
SAR Drift Measurement**	E.2.9	0.0	Rectangular	1.732050808	1	1	0.0	0.0	∞
SAR Scaling***	E.6.5	2.0	Rectangular	1.732050808	1	1	1.2	1.2	∞
Phantom and Tissue Parameters									
Phantom Uncertainty*	E.3.1	4.0	Rectangular	1.732050808	1	1	2.3	2.3	∞
SAR Correction Uncertainty	E.3.2	1.2	Normal	1	1	0.84	1.2	1.0	∞
Liquid Conductivity (measurement)	E.3.3	6.8	Normal	1	0.78	0.71	5.3	4.8	10
Liquid Permittivity (measurement)	E.3.3	5.3	Normal	1	0.23	0.26	1.2	1.4	10
Liquid Conductivity (Temperature)	E.3.2	0.1	Rectangular	1.732050808	0.78	0.71	0.1	0.0	∞
Liquid Permittivity Temperature)	E.3.2	0.0	Rectangular	1.732050808	0.23	0.26	0.0	0.0	∞
Effective Degrees of Freedom(1)								**V_{eff} =**	**873.2**
Combined Standard Uncertainty			**RSS**				**12.59**	**12.40**	
Expanded Uncertainty (95% Confidence Interval)			**k=2**				**25.18**	**24.80**	

Measurement Uncertainty Table in accordance with IEEE Standard 1528-2003

(1) The Effective Degrees of Freedom is > 30 therefore a coverage factor of k=2 represents an approximate confidence level of 95%.

* Provided by SPEAG

Table 11.1

Calculation of the Degrees and Effective Degrees of Freedom	
$v_i = n - 1$	$v_{eff} = \dfrac{u_c^4}{\sum_{i=1}^{m} \dfrac{c_i^4 u_i^4}{v_i}}$

12.0 TISSUE SIMULATING LIQUID (TSL) RECIPE

Table 12.0

Simulated Tissue Mixture	
Frequency:	**Fluid Type**
835 MHz	**HEAD**
Ingredient	**% by Weight**
Water	40.71
Sugar	56.63
Salt	1.48
HEC	0.99
Bacteriacide	0.01

Table 12.1

Simulated Tissue Mixture	
Frequency:	**Fluid Type**
835MHz	**BODY**
Ingredient	**% by Weight**
Water	53.79
Sugar	45.13
Salt	0.98
HEC	
Bacteriacide	0.1

13.0 FLUID DIELECTRIC PARAMETERS

Table 13.0

FLUID DIELECTRIC PARAMETERS

Date:	21-Dec-15	Fluid Temp:	23.7	Frequency:	835MHz	Tissue:	Head

Freq (MHz)	Test_e	Test_s	Target_e	Target_s	Deviation Permittivity	Deviation Conductivity
735.0000	44.0300	0.8400	42.0200	0.89	4.78%	-5.62%
745.0000	44.4200	0.8300	41.9700	0.89	5.84%	-6.74%
755.0000	43.9600	0.8600	41.9200	0.89	4.87%	-3.37%
765.0000	43.7900	0.8600	41.8600	0.89	4.61%	-3.37%
775.0000	43.5900	0.8600	41.8100	0.90	4.26%	-4.44%
785.0000	43.7000	0.8700	41.7600	0.90	4.65%	-3.33%
795.0000	43.2900	0.8800	41.7100	0.90	3.79%	-2.22%
805.0000	43.0500	0.9100	41.6600	0.90	3.34%	1.11%
806.0000	43.0340	0.9100	41.6540	0.90	3.31%	1.11%
815.0000	42.8900	0.9100	41.6000	0.90	3.10%	1.11%
824.0000	43.0790	0.9100	41.5550	0.90	3.67%	1.11%
825.0000	43.1000	0.9100	41.5500	0.90	3.73%	1.11%
835.0000	42.9300	0.9300	41.5000	0.90	3.45%	3.33%
845.0000	42.9700	0.9500	41.5000	0.91	3.54%	4.40%
851.0000	43.0780	0.9560	41.5000	0.92	3.80%	4.37%
855.0000	43.1500	0.9600	41.5000	0.92	3.98%	4.35%
861.0000	42.8740	0.9600	41.5000	0.93	3.31%	3.67%
865.0000	42.6900	0.9600	41.5000	0.93	2.87%	3.23%
870.0000	42.8400	0.9700	41.5000	0.94	3.23%	3.74%
875.0000	42.9900	0.9800	41.5000	0.94	3.59%	4.26%
885.0000	42.4300	0.9900	41.5000	0.95	2.24%	4.21%
895.0000	42.7300	1.0100	41.5000	0.96	2.96%	5.21%
905.0000	42.2700	1.0100	41.5000	0.97	1.86%	4.12%
915.0000	42.2000	1.0100	41.5000	0.98	1.69%	3.06%
925.0000	42.1800	1.0300	41.4800	0.98	1.69%	5.10%
935.0000	42.0200	1.0200	41.4600	0.99	1.35%	3.03%

Table 13.1

FLUID DIELECTRIC PARAMETERS

Date:	16-Dec-15	Fluid Temp:	23.3	Frequency:	835MHz	Tissue:	Body

Freq (MHz)	Test_e	Test_s	Target_e	Target_s	Deviation Permittivity	Deviation Conductivity
735.0000	54.7000	0.8900	55.5900	0.96	-1.60%	-7.29%
745.0000	54.5900	0.9100	55.5500	0.96	-1.73%	-5.21%
755.0000	54.2900	0.9200	55.5100	0.96	-2.20%	-4.17%
765.0000	54.0700	0.9300	55.4700	0.96	-2.52%	-3.12%
775.0000	54.1700	0.9400	55.4300	0.97	-2.27%	-3.09%
785.0000	53.8400	0.9600	55.3900	0.97	-2.80%	-1.03%
795.0000	53.7100	0.9600	55.3600	0.97	-2.98%	-1.03%
805.0000	53.7600	0.9800	55.3200	0.97	-2.82%	1.03%
806.0000	53.7510	0.9790	55.3160	0.97	-2.82%	0.93%
815.0000	53.6700	0.9700	55.2800	0.97	-2.91%	0.00%
824.0000	53.7510	0.9970	55.2440	0.97	-2.70%	2.78%
825.0000	53.7600	1.0000	55.2400	0.97	-2.68%	3.09%
835.0000	53.5300	1.0100	55.2000	0.97	-3.03%	4.12%
845.0000	53.1300	1.0100	55.1700	0.98	-3.70%	3.06%
851.0000	53.1840	1.0100	55.1520	0.99	-3.57%	2.43%
855.0000	53.2200	1.0100	55.1400	0.99	-3.48%	2.02%
861.0000	53.2440	1.0220	55.1220	1.00	-3.41%	2.00%
865.0000	53.2600	1.0300	55.1100	1.01	-3.36%	1.98%
870.0000	53.0750	1.0350	55.0950	1.02	-3.67%	1.97%
875.0000	52.8900	1.0400	55.0800	1.02	-3.98%	1.96%
885.0000	52.9400	1.0700	55.0500	1.03	-3.83%	3.88%
895.0000	52.7200	1.0700	55.0200	1.04	-4.18%	2.88%
905.0000	52.5400	1.0800	55.0000	1.05	-4.47%	2.86%
915.0000	52.7000	1.0900	55.0000	1.06	-4.18%	2.83%
925.0000	52.4500	1.1000	54.9800	1.06	-4.60%	3.77%
935.0000	52.6400	1.1200	54.9600	1.07	-4.22%	4.67%

****

Aprel Laboratory
Test Result for UIM Dielectric Parameter
Mon 21/Dec/2015 12:32:16
Freq Frequency(GHz)
FCC_eH FCC OET 65 Supplement C (June 2001) Limits for Head Epsilon
FCC_sH FCC OET 65 Supplement C (June 2001) Limits for Head Sigma
Test_e Epsilon of UIM
Test_s Sigma of UIM

****

Freq	FCC_eH	FCC_sH	Test_e	Test_s
0.7350	42.02	0.89	44.03	0.84
0.7450	41.97	0.89	44.42	0.83
0.7550	41.92	0.89	43.96	0.86
0.7650	41.86	0.89	43.79	0.86
0.7750	41.81	0.90	43.59	0.86
0.7850	41.76	0.90	43.70	0.87
0.7950	41.71	0.90	43.29	0.88
0.8050	41.66	0.90	43.05	0.91
0.8150	41.60	0.90	42.89	0.91
0.8250	41.55	0.90	43.10	0.91
0.8350	41.50	0.90	42.93	0.93
0.8450	41.50	0.91	42.97	0.95
0.8550	41.50	0.92	43.15	0.96
0.8650	41.50	0.93	42.69	0.96
0.8750	41.50	0.94	42.99	0.98
0.8850	41.50	0.95	42.43	0.99
0.8950	41.50	0.96	42.73	1.01
0.9050	41.50	0.97	42.27	1.01
0.9150	41.50	0.98	42.20	1.01
0.9250	41.48	0.98	42.18	1.03
0.9350	41.46	0.99	42.02	1.02

****

Aprel Laboratory
Test Result for UIM Dielectric Parameter
Wed 16/Dec/2015 14:48:07
Freq Frequency(GHz)
FCC_eH FCC Bulletin 65 Supplement C (June 2001) Limits for Head Epsilon
FCC_sH FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB FCC Limits for Body Epsilon
FCC_sB FCC Limits for Body Sigma
Test_e Epsilon of UIM
Test_s Sigma of UIM

****

Freq	FCC_eB	FCC_sB	Test_e	Test_s
0.7350	55.59	0.96	54.70	0.89
0.7450	55.55	0.96	54.59	0.91
0.7550	55.51	0.96	54.29	0.92
0.7650	55.47	0.96	54.07	0.93
0.7750	55.43	0.97	54.17	0.94
0.7850	55.39	0.97	53.84	0.96
0.7950	55.36	0.97	53.71	0.96
0.8050	55.32	0.97	53.76	0.98
0.8150	55.28	0.97	53.67	0.97
0.8250	55.24	0.97	53.76	1.00
0.8350	55.20	0.97	53.53	1.01
0.8450	55.17	0.98	53.13	1.01
0.8550	55.14	0.99	53.22	1.01
0.8650	55.11	1.01	53.26	1.03
0.8750	55.08	1.02	52.89	1.04
0.8850	55.05	1.03	52.94	1.07
0.8950	55.02	1.04	52.72	1.07
0.9050	55.00	1.05	52.54	1.08
0.9150	55.00	1.06	52.70	1.09
0.9250	54.98	1.06	52.45	1.10
0.9350	54.96	1.07	52.64	1.12

14.0 SYSTEM VERIFICATION TEST RESULTS

Table 14.0

System Verification Test Results

Date	Frequency (MHz)	Fluid Type	Fluid Temp °C	Ambient Temp °C	Ambient Humidity (%)	Forward Power (mW)	Dipole Spacing (mm)	Validation Source P/N	Validation Source S/N
21 Dec 2015	835	Head	23.7	26	9%	250	15	D835V2	4d075

SAR						Fluid Parameters					
1 gram			10 gram			Permittivity			Conductivity		
Measured	Target	Deviation	Measured	Target	Deviation	Measured	Target	Deviation	Measured	Target	Deviation
2.48	2.41	2.90%	1.60	1.56	2.56%	42.93	41.50	3.45%	0.93	0.90	3.33%

Prior to the SAR evaluations, system checks were performed on the planar section of the phantom and a SPEAG validation dipole in accordance with the procedures described in IEEE 1528-2013, FCC KDB 846224 and IEC 62209-1. The dielectric parameters of the

Table 14.1

System Verification Test Results

Date	Frequency (MHz)	Fluid Type	Fluid Temp °C	Ambient Temp °C	Ambient Humidity (%)	Forward Power (mW)	Dipole Spacing (mm)	Validation Source P/N	Validation Source S/N
16 Dec 2015	835	Body	23.3	24	12%	250	15	D835V2	4d075

SAR						Fluid Parameters					
1 gram			10 gram			Permittivity			Conductivity		
Measured	Target	Deviation	Measured	Target	Deviation	Measured	Target	Deviation	Measured	Target	Deviation
2.43	2.42	0.41%	1.58	1.59	-0.63%	53.53	55.20	-3.03%	1.01	0.97	4.12%

Prior to the SAR evaluations, system checks were performed on the planar section of the phantom and a SPEAG validation dipole in accordance with the procedures described in IEEE 1528-2013, FCC KDB 846224 and IEC 62209-1. The dielectric parameters of the

15.0 MEASUREMENT SYSTEM SPECIFICATIONS

Table 15.0

Measurement System Specification	
Specifications	
Positioner	Stäubli Unimation Corp. Robot Model: RX60L
Repeatability	0.02 mm
No. of axis	6
Data Acquisition Electronic (DAE) System	
Cell Controller	
Processor	AMD Athlon XP 2400+
Clock Speed	2.0 GHz
Operating System	Windows XP Professional
Data Converter	
Features	Signal Amplifier, multiplexer, A/D converter, and control logic
Software	Measurement Software: DASY4, V4.7 Build 80
	Postprocessing Software: SEMCAD, V1.8 Build 186
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	EX3DV4
Serial No.	3600
Construction	Triangular core fiber optic detection system
Frequency	10 MHz to 6 GHz
Linearity	±)ζΗΓ 3 οτ ζΗΜ 03(Βδ 2.0
Phantom	
Type	ELI Elliptical Planar Phantom
Shell Material	Fiberglass
Thickness	2mm +/- .2mm
Volume	> 30 Liter

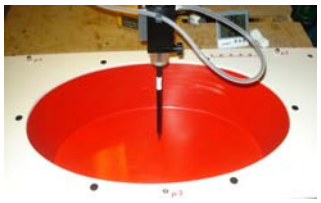
Table 15.1

Measurement System Specification (Continued)

Probe Specification

Construction:	Symmetrical design with triangular core; Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, glycol)	
Calibration:	In air from 10 MHz to 2.5 GHz In head simulating tissue at frequencies of 900 MHz and 1.8 GHz (accuracy ± 8%)	
Frequency:	10 MHz to > 6 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)	
Directivity:	± 0.2 dB in head tissue (rotation around probe axis) ± 0.4 dB in head tissue (rotation normal to probe axis)	
Dynamic Range:	5 μW/g to > 100 mW/g; Linearity: ± 0.2 dB	
Surface Detect:	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces	
Dimensions:	Overall length: 330 mm; Tip length: 16 mm; Body diameter: 12 mm; Tip diameter: 6.8 mm Distance from probe tip to dipole centers: 2.7 mm	
Application:	General dosimetry up to 3 GHz; Compliance tests of mobile phone	**EX3DV4 E-Field Probe**

Phantom Specification

The ELI V5.0 phantom is an elliptical planar fiberglass shell phantom with a shell thickness of 2.0mm +/- .2mm at the planar area. This phantom conforms to OET Bulletin 65, Supplement C, IEEE 1528-2013, IEC 62209-1 and IEC 62209-2.	 **ELI Elliptical Planar Phantom**

Device Positioner Specification

The DASY4 device positioner 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 Positioner**

16.0 TEST EQUIPMENT LIST

Table 16.0

Test Equipment List

DESCRIPTION	ASSET NO.	SERIAL NO.	DATE CALIBRATED	CALIBRATION INTERVAL
Schmid & Partner DASY4 System	-	-	-	-
-DASY4 Measurement Server	00158	1078	CNR	CNR
-Robot	00046	599396-01	CNR	CNR
-DAE4	00019	353	9 April 2014	Biennial
-DAE3	00018	370	23 April 2015	Biennial
-EX3DV6 E-Field Probe	00017	3600	23 April 2015	Annual
-D450V3 Validation Dipole	00221	1068	21 April 2015	Triennial
ELI Elliptical Planar Phantom	00247	-	CNR	CNR
HP 85070C Dielectric Probe Kit	00033	none	CNR	CNR
Gigatronics 8652A Power Meter	00110	1835801	17 March 2014	Biennial
Gigatronics 80701A Power Sensor	00249	1834473	17 March 2014	Biennial
Gigatronics 80701A Power Sensor	00248	1833687	17 March 2014	Biennial
HP 8753ET Network Analyzer	00134	US39170292	22 Oct 2014	Biennial
Rohde & Schwarz SMR20 Signal Generator	00006	100104	8 May 2014	Biennial
Amplifier Research 5S1G4 Power Amplifier	00106	26235	CNR	CNR

CNR = Calibration Not Required

APPENDIX A - SAR MEASUREMENT PLOTS

Plot B1

Date/Time: 17/12/2015 10:56:31 AM

835 Body 17-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 17 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 806 MHz; σ = 0.979 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3

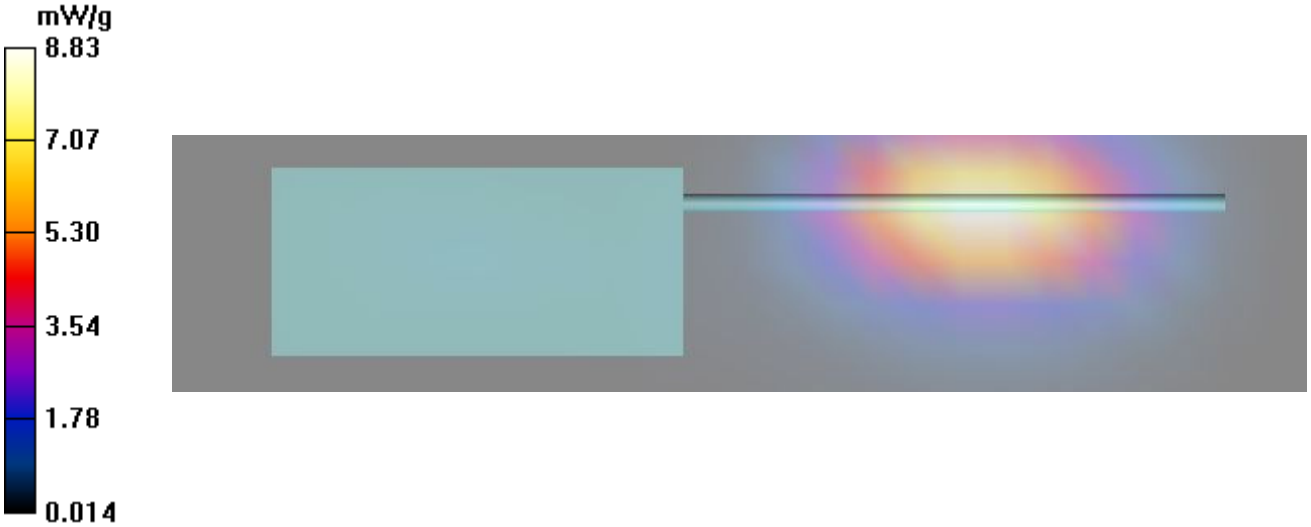
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B1 Body XL-200P Ext, 806 MHz, 506-1, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.83 mW/g

B1 Body XL-200P Ext, 806 MHz, 506-1, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 15.3 V/m; Power Drift = -0.168 dB
Peak SAR (extrapolated) = 11.2 W/kg
SAR(1 g) = 8.38 mW/g; SAR(10 g) = 5.94 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.93 mW/g



Plot B2

Date/Time: 17/12/2015 11:33:04 AM

835 Body 17-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 17 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 824 MHz; σ = 0.997 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3

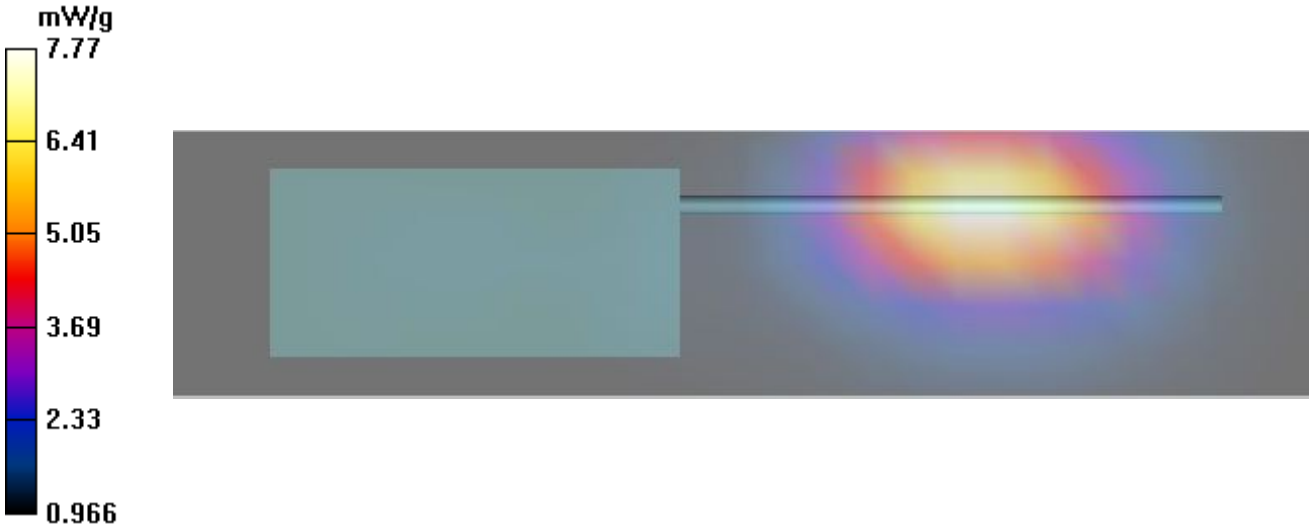
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B2 Body XL-200P Ext, 824 MHz, 506-1, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.03 mW/g

B2 Body XL-200P Ext, 824 MHz, 506-1, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 16.1 V/m; Power Drift = 0.103 dB
Peak SAR (extrapolated) = 9.77 W/kg
SAR(1 g) = 7.31 mW/g; SAR(10 g) = 5.2 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.77 mW/g



Plot B3

Date/Time: 17/12/2015 12:03:09 PM

835 Body 17-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 17 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 851 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 851 MHz; σ = 1.01 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

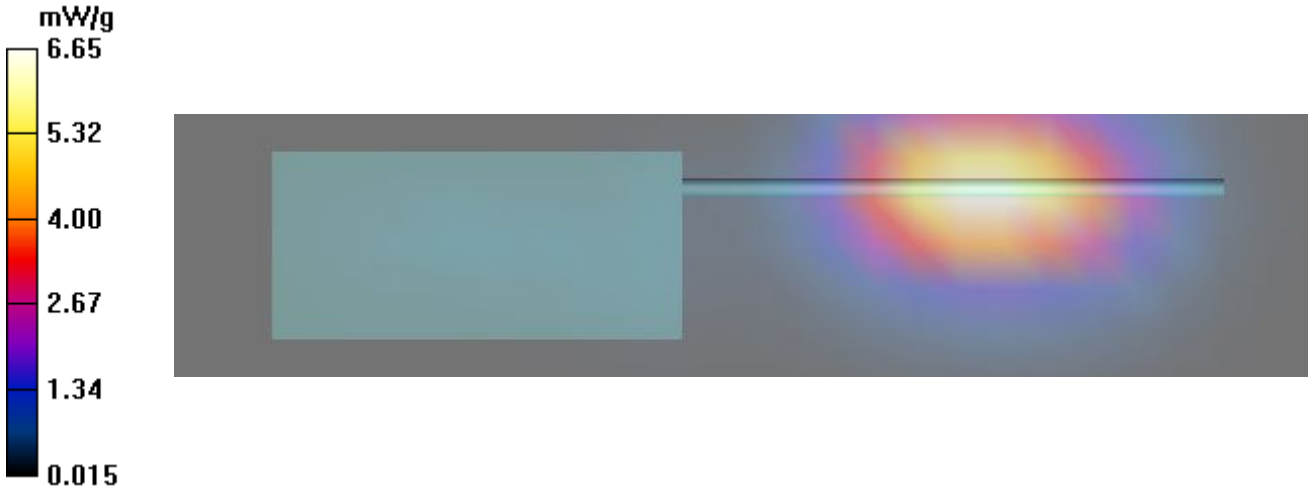
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B3 Body XL-200P Ext, 851 MHz, 506-1, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.65 mW/g

B3 Body XL-200P Ext, 851 MHz, 506-1, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 16.8 V/m; Power Drift = -0.032 dB
Peak SAR (extrapolated) = 7.73 W/kg
SAR(1 g) = 5.72 mW/g; SAR(10 g) = 4.02 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.09 mW/g



Plot B4

Date/Time: 17/12/2015 12:44:31 PM

835 Body 17-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 17 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 861 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 861 MHz; σ = 1.02 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

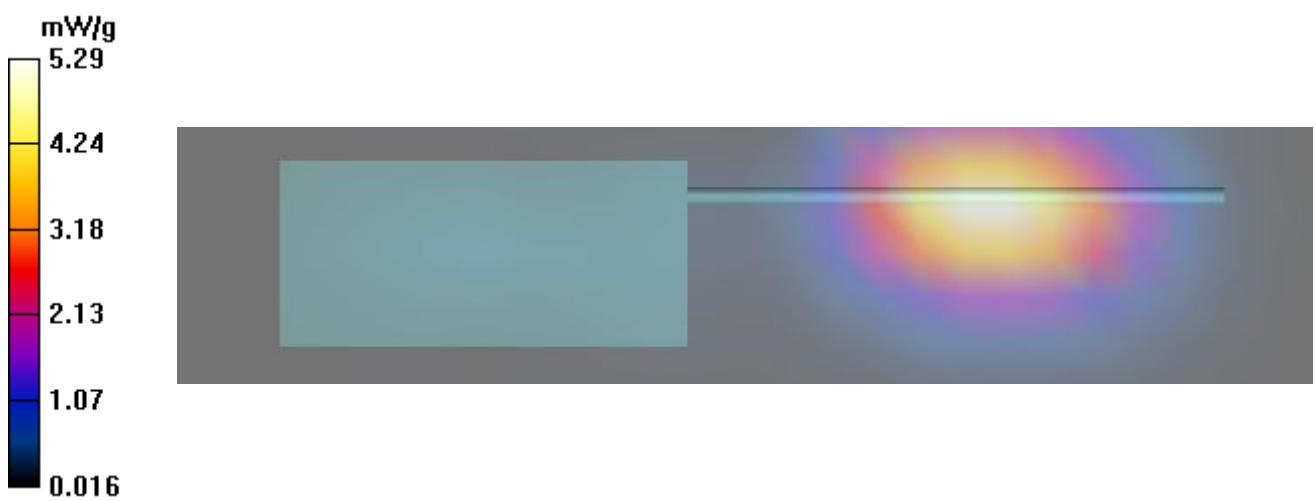
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B4 Body XL-200P Ext, 861 MHz, 506-1, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 5.29 mW/g

B4 Body XL-200P Ext, 861 MHz, 506-1, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 16.0 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 6.17 W/kg
SAR(1 g) = 4.57 mW/g; SAR(10 g) = 3.21 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.86 mW/g



Plot B5

Date/Time: 17/12/2015 1:42:23 PM

835 Body 17-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 17 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 870 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 870 MHz; σ = 1.04 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3

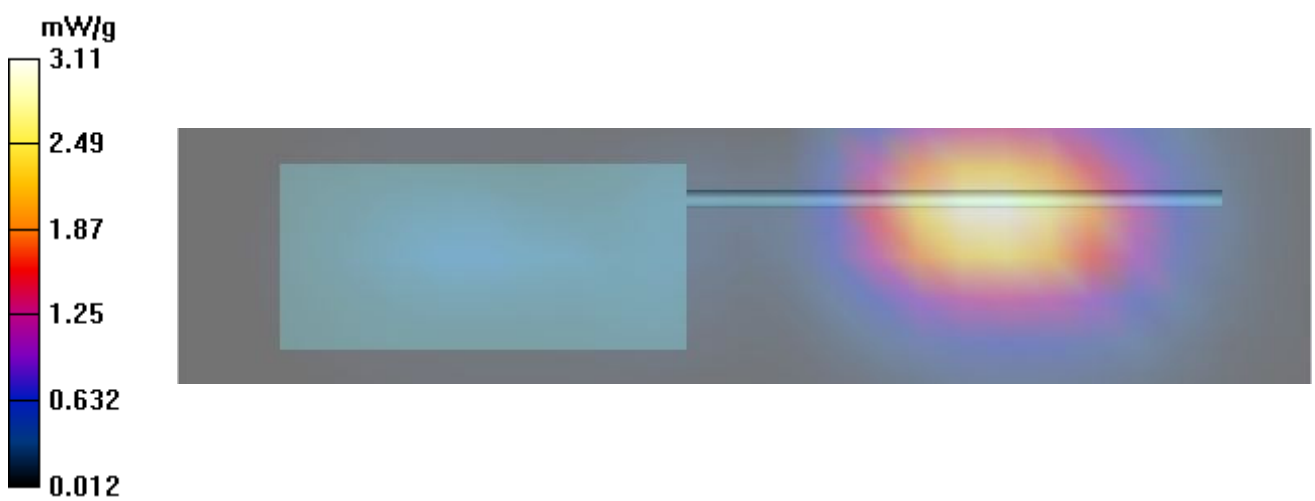
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B5 Body XL-200P Ext, 870 MHz, 506-1, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 3.11 mW/g

B5 Body XL-200P Ext, 870 MHz, 506-1, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 15.5 V/m; Power Drift = 0.050 dB
Peak SAR (extrapolated) = 3.64 W/kg
SAR(1 g) = 2.73 mW/g; SAR(10 g) = 1.96 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.90 mW/g



Plot B6

Date/Time: 17/12/2015 2:16:15 PM

835 Body 17-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 17 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 806 MHz; σ = 0.979 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3

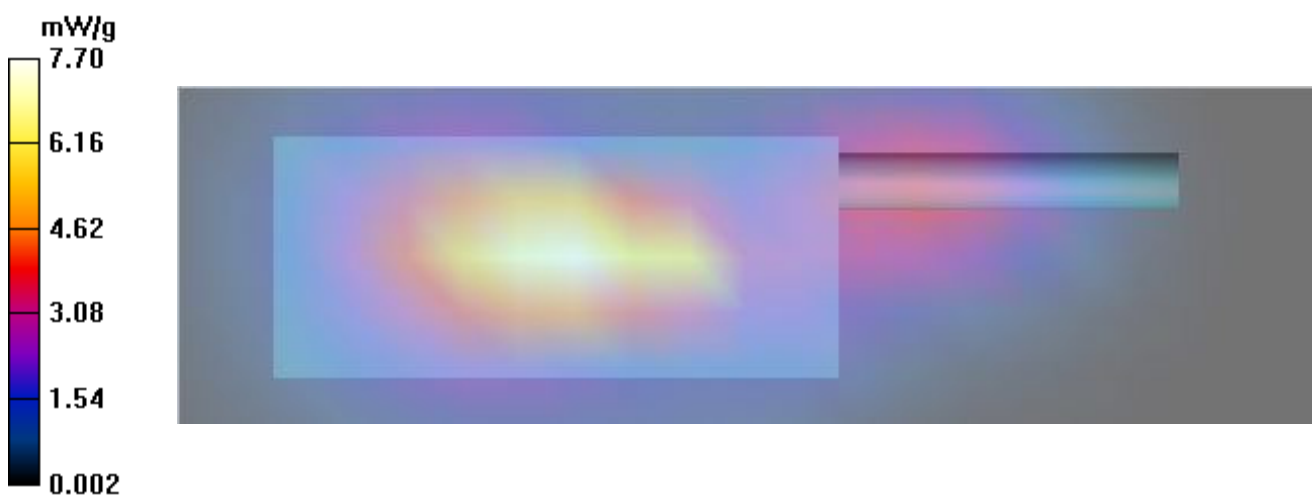
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B6 Body XL-200P Ext, 806 MHz, 506-2, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.70 mW/g

B6 Body XL-200P Ext, 806 MHz, 506-2, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 53.9 V/m; Power Drift = -0.167 dB
Peak SAR (extrapolated) = 9.62 W/kg
SAR(1 g) = 7.35 mW/g; SAR(10 g) = 5.2 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.76 mW/g



Plot B7

Date/Time: 17/12/2015 2:56:11 PM

835 Body 17-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 17 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 824 MHz; σ = 0.997 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3

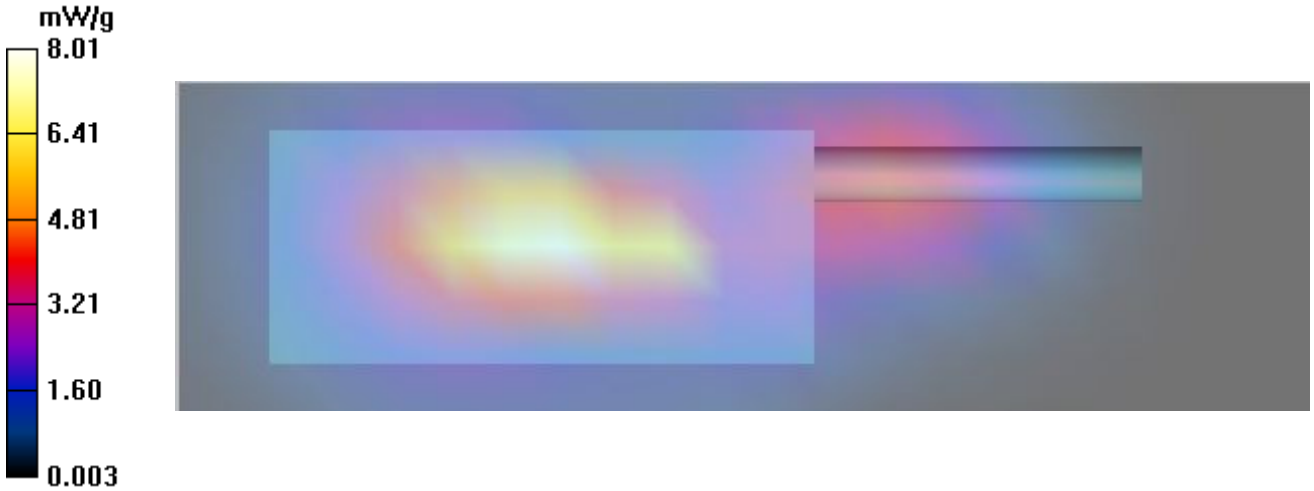
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B7 Body XL-200P Ext, 824 MHz, 506-2, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.01 mW/g

B7 Body XL-200P Ext, 824 MHz, 506-2, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.2 V/m; Power Drift = -0.208 dB
Peak SAR (extrapolated) = 10.1 W/kg
SAR(1 g) = 7.59 mW/g; SAR(10 g) = 5.29 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.00 mW/g



Plot B8

Date/Time: 17/12/2015 3:24:22 PM

835 Body 17-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 17 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 851 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 851 MHz; σ = 1.01 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

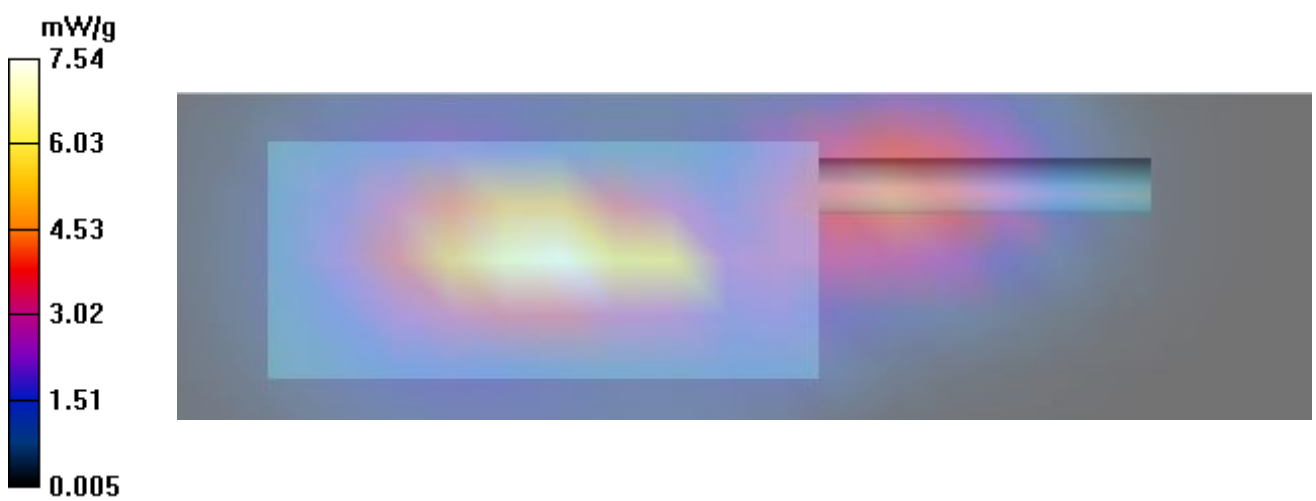
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B8 Body XL-200P Ext, 851 MHz, 506-2, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.54 mW/g

B8 Body XL-200P Ext, 851 MHz, 506-2, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 54.5 V/m; Power Drift = -0.285 dB
Peak SAR (extrapolated) = 9.45 W/kg
SAR(1 g) = 7.04 mW/g; SAR(10 g) = 4.82 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.43 mW/g



Plot B9

Date/Time: 18/12/2015 9:47:32 AM

835 Body 18-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 18 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 861 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 861 MHz; σ = 1.02 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

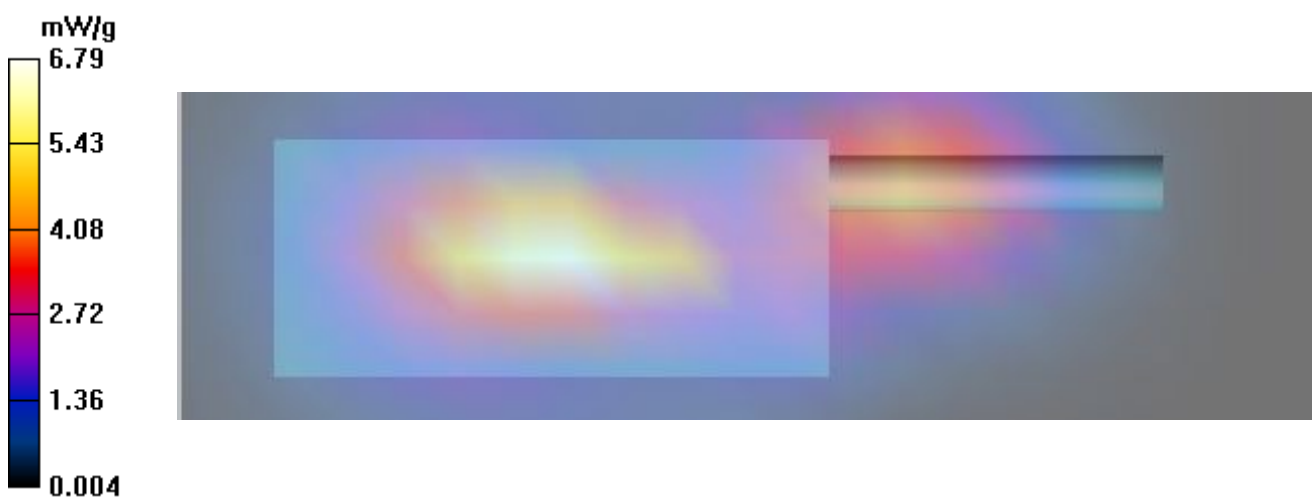
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B9 Body XL-200P Ext, 861 MHz, 506-2, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.79 mW/g

B9 Body XL-200P Ext, 861 MHz, 506-2, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 55.0 V/m; Power Drift = -0.202 dB
Peak SAR (extrapolated) = 8.53 W/kg
SAR(1 g) = 6.44 mW/g; SAR(10 g) = 4.45 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.85 mW/g



Plot B10

Date/Time: 18/12/2015 10:19:44 AM

835 Body 18-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 18 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 870 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 870 MHz; σ = 1.04 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3

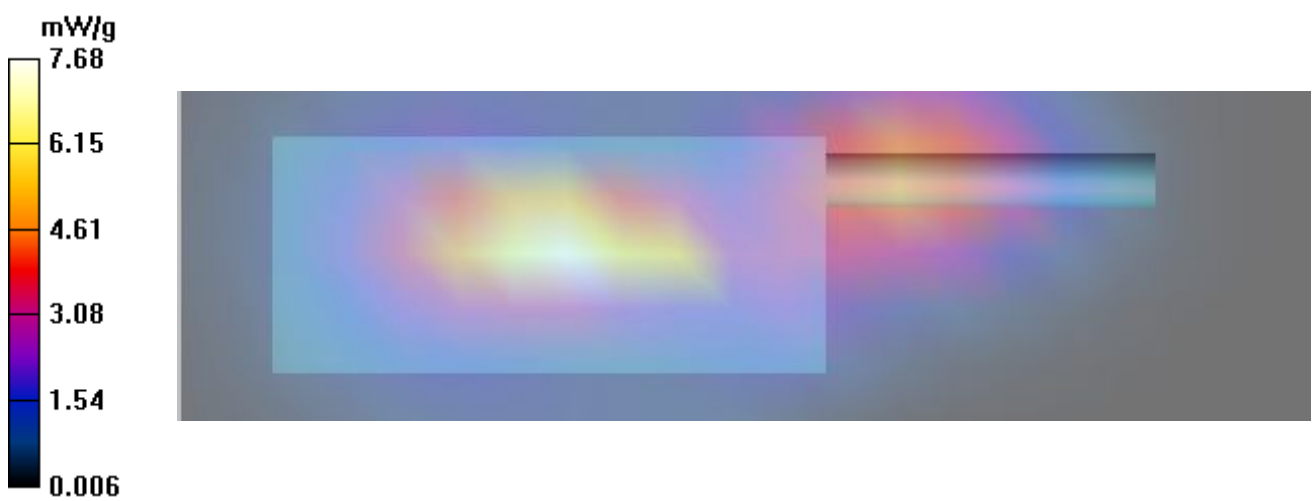
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B10 Body XL-200P Ext, 870 MHz, 506-2, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.68 mW/g

B10 Body XL-200P Ext, 870 MHz, 506-2, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.1 V/m; Power Drift = -0.294 dB
Peak SAR (extrapolated) = 9.80 W/kg
SAR(1 g) = 7.21 mW/g; SAR(10 g) = 4.83 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.55 mW/g



Plot B11

Date/Time: 18/12/2015 10:52:05 AM

835 Body 18-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 18 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 806 MHz; σ = 0.979 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3

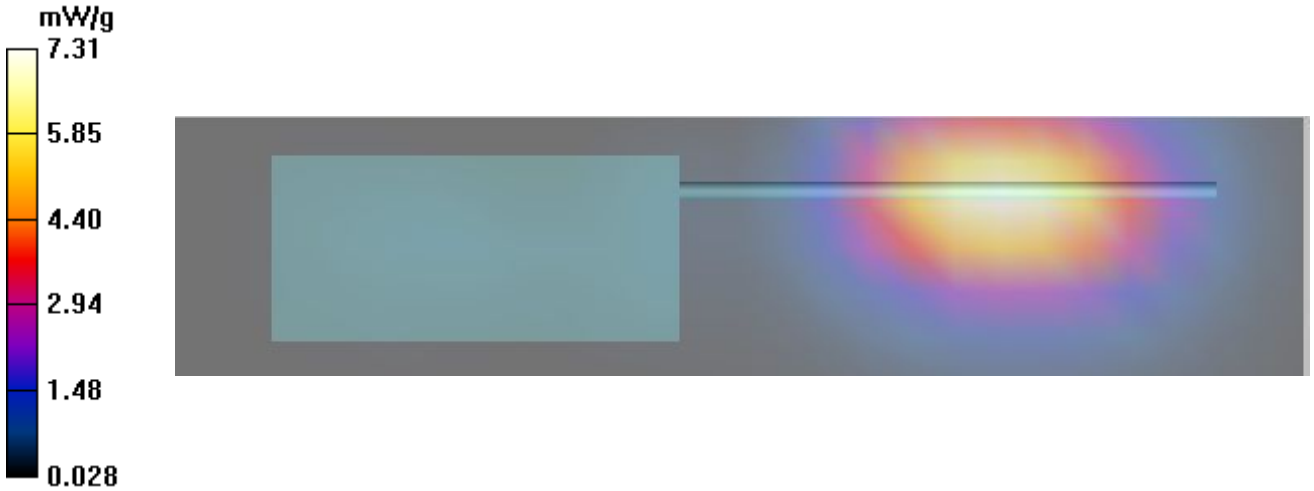
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B11 Body XL-200P Ext, 806 MHz, 4440-01, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.31 mW/g

B11 Body XL-200P Ext, 806 MHz, 4440-01, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 18.3 V/m; Power Drift = 0.147 dB
Peak SAR (extrapolated) = 8.89 W/kg
SAR(1 g) = 6.8 mW/g; SAR(10 g) = 4.93 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.20 mW/g



Plot B12

Date/Time: 18/12/2015 11:20:17 AM

835 Body 18-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 18 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 824 MHz; σ = 0.997 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3

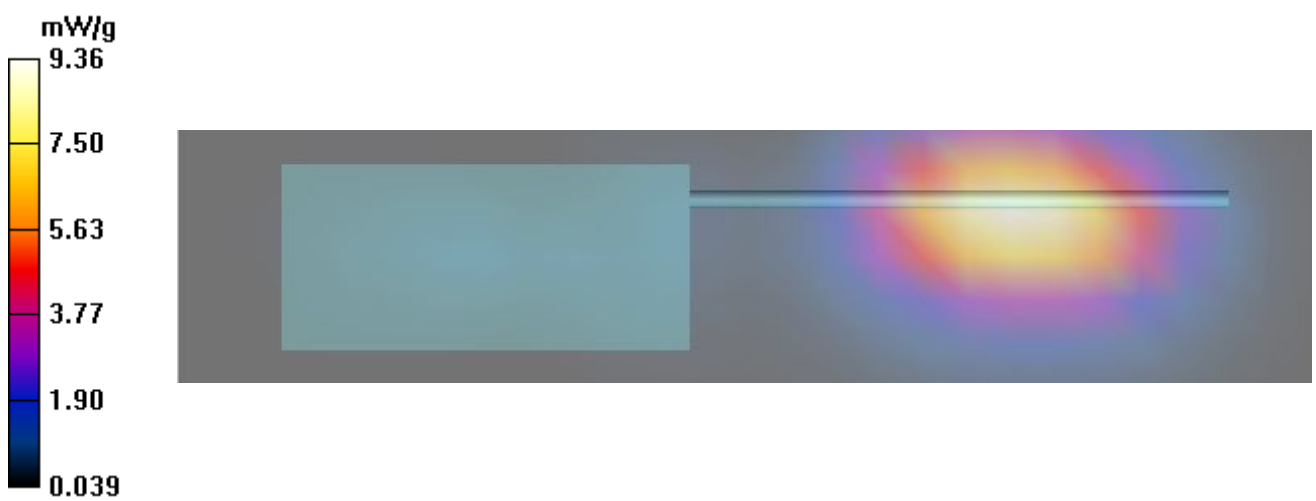
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B12 Body XL-200P Ext, 824 MHz, 4440-01, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 9.36 mW/g

B12 Body XL-200P Ext, 824 MHz, 4440-01, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 23.7 V/m; Power Drift = 0.092 dB
Peak SAR (extrapolated) = 11.2 W/kg
SAR(1 g) = 8.41 mW/g; SAR(10 g) = 6.02 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.94 mW/g



Plot B13

Date/Time: 18/12/2015 12:07:31 PM

835 Body 18-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 18 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 851 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 851 MHz; σ = 1.01 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

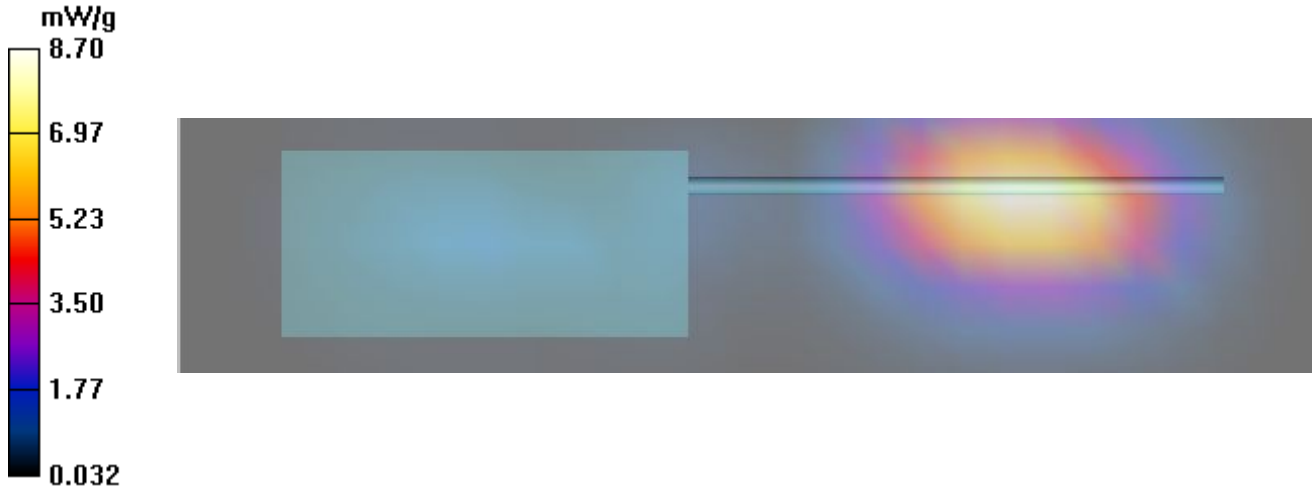
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B13 Body XL-200P Ext, 851 MHz, 4440-01, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.70 mW/g

B13 Body XL-200P Ext, 851 MHz, 4440-01, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 26.1 V/m; Power Drift = -0.113 dB
Peak SAR (extrapolated) = 10.3 W/kg
SAR(1 g) = 7.67 mW/g; SAR(10 g) = 5.42 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.17 mW/g



Plot B14

Date/Time: 18/12/2015 12:42:55 PM

835 Body 18-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 18 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 861 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 861 MHz; σ = 1.02 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

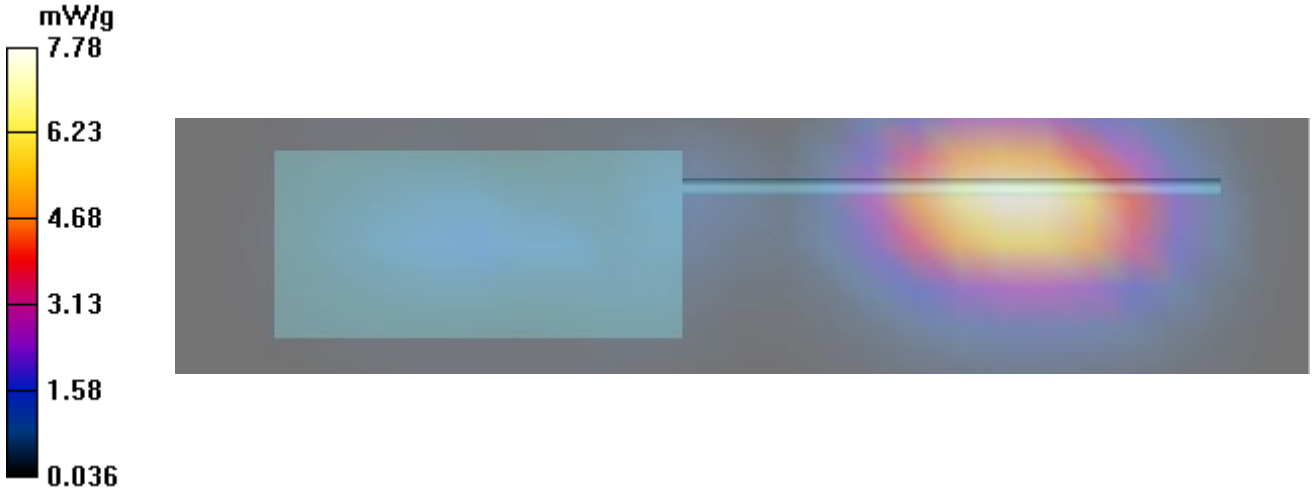
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B14 Body XL-200P Ext, 861 MHz, 4440-01, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.78 mW/g

B14 Body XL-200P Ext, 861 MHz, 4440-01, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 26.8 V/m; Power Drift = -0.149 dB
Peak SAR (extrapolated) = 9.39 W/kg
SAR(1 g) = 6.98 mW/g; SAR(10 g) = 4.93 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.43 mW/g



Plot B15

Date/Time: 18/12/2015 1:49:44 PM

835 Body 18-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 18 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 870 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 870 MHz; σ = 1.04 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3

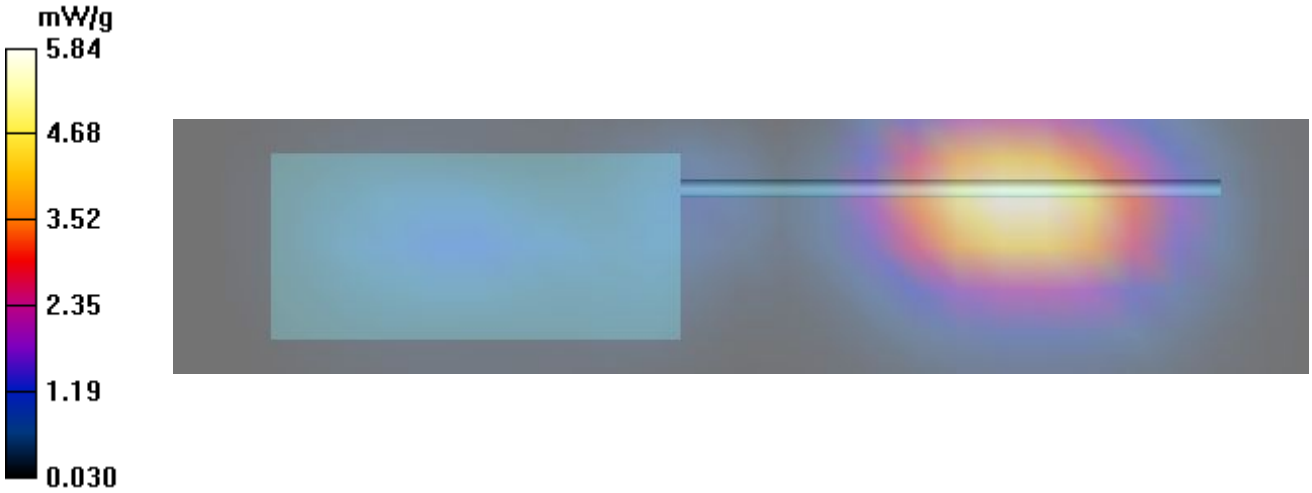
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B15 Body XL-200P Ext, 870 MHz, 4440-01, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 5.84 mW/g

B15 Body XL-200P Ext, 870 MHz, 4440-01, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 26.6 V/m; Power Drift = -0.129 dB
Peak SAR (extrapolated) = 7.33 W/kg
SAR(1 g) = 5.46 mW/g; SAR(10 g) = 3.87 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 5.81 mW/g



Plot B16

Date/Time: 20/12/2015 8:29:10 AM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 806 MHz; σ = 0.979 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3

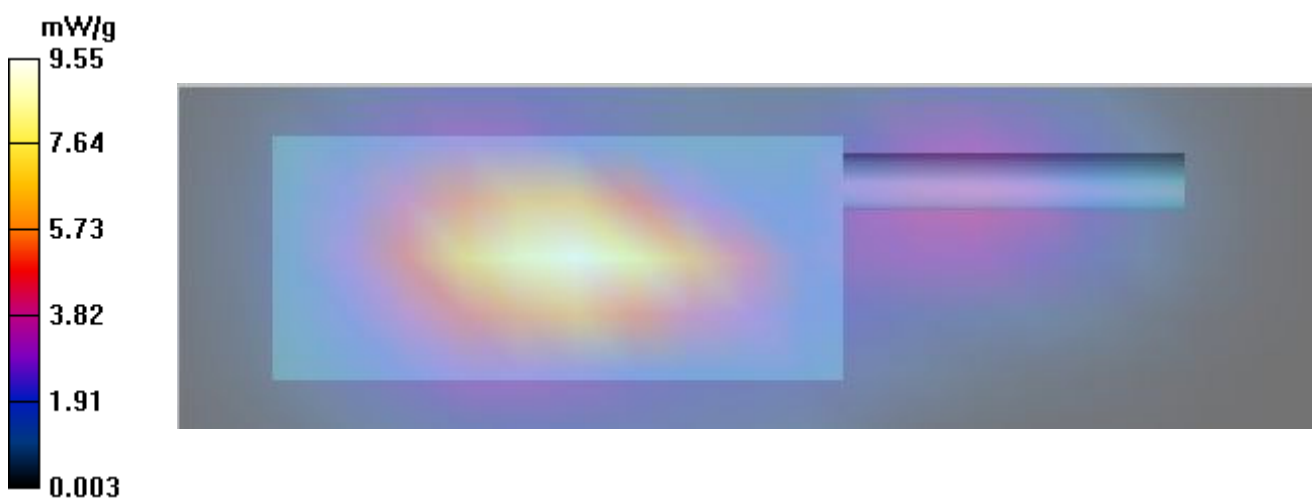
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B16 Body XL-200P Ext, 806 MHz, 4440-02, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 9.55 mW/g

B16 Body XL-200P Ext, 806 MHz, 4440-02, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 50.6 V/m; Power Drift = -0.206 dB
Peak SAR (extrapolated) = 11.8 W/kg
SAR(1 g) = 9.02 mW/g; SAR(10 g) = 6.4 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 9.50 mW/g



Plot B17

Date/Time: 20/12/2015 8:54:21 AM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 824 MHz; σ = 0.997 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3

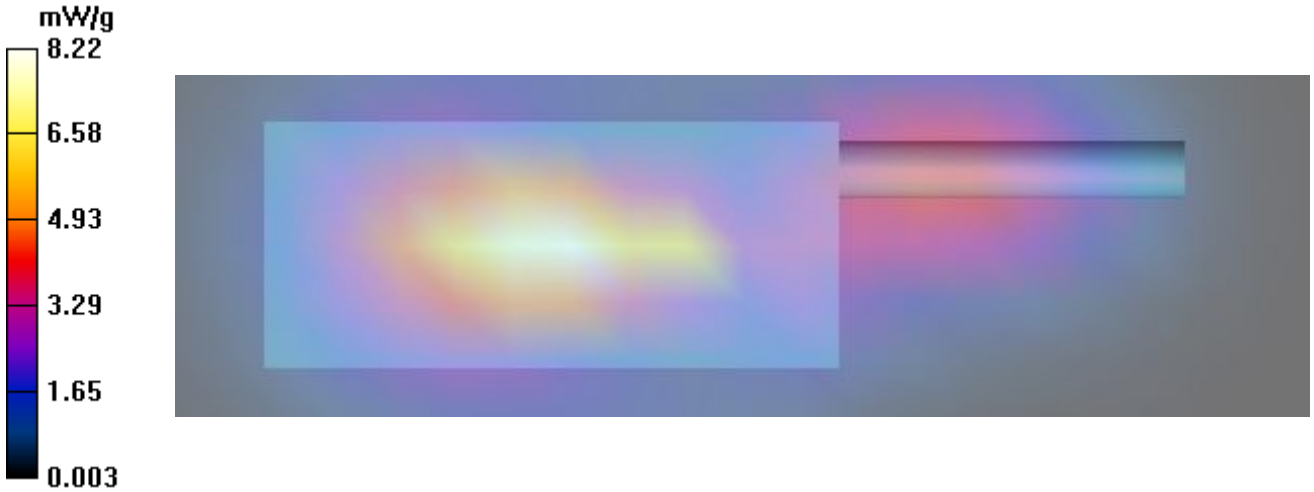
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B17 Body XL-200P Ext, 824 MHz, 4440-02, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.22 mW/g

B17 Body XL-200P Ext, 824 MHz, 4440-02, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 57.0 V/m; Power Drift = -0.441 dB
Peak SAR (extrapolated) = 10.2 W/kg
SAR(1 g) = 7.76 mW/g; SAR(10 g) = 5.44 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.26 mW/g



Plot B18

Date/Time: 20/12/2015 9:14:40 AM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 851 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 851 MHz; σ = 1.01 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

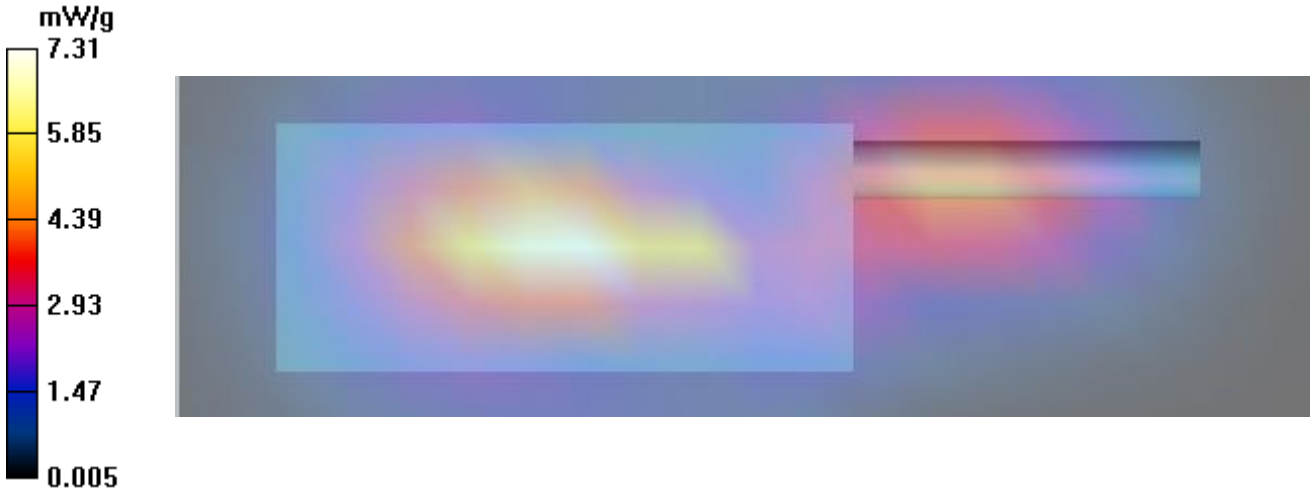
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B18 Body XL-200P Ext, 851 MHz, 4440-02, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.31 mW/g

B18 Body XL-200P Ext, 851 MHz, 4440-02, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 55.5 V/m; Power Drift = 0.016 dB
Peak SAR (extrapolated) = 8.95 W/kg
SAR(1 g) = 6.8 mW/g; SAR(10 g) = 4.71 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.16 mW/g



Plot B19

Date/Time: 20/12/2015 9:36:03 AM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 861 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 861 MHz; σ = 1.02 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

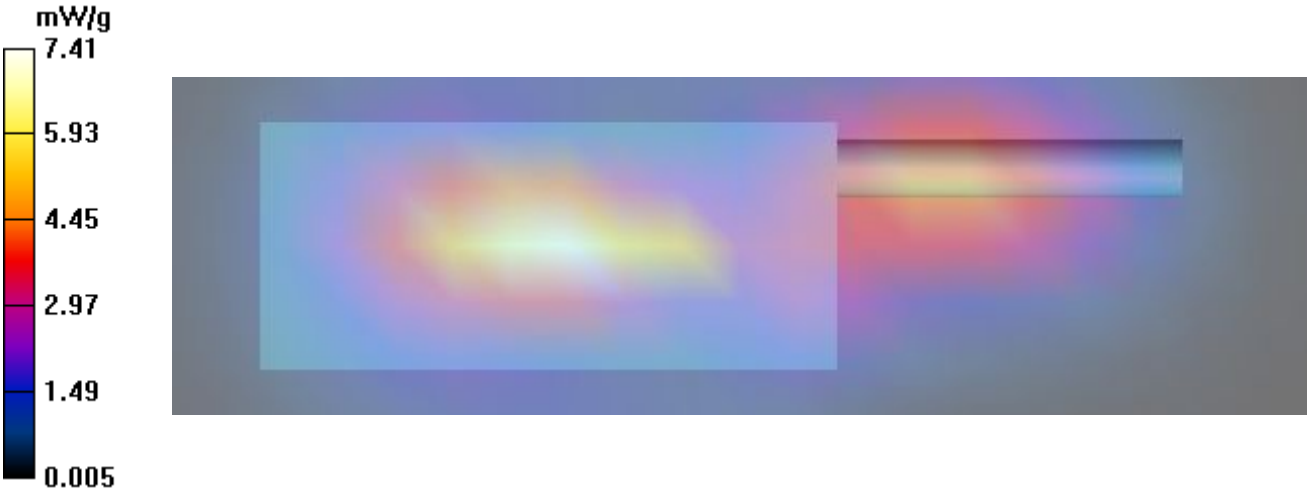
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B19 Body XL-200P Ext, 861 MHz, 4440-02, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.41 mW/g

B19 Body XL-200P Ext, 861 MHz, 4440-02, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 58.0 V/m; Power Drift = -0.156 dB
Peak SAR (extrapolated) = 9.18 W/kg
SAR(1 g) = 6.89 mW/g; SAR(10 g) = 4.7 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.28 mW/g



Plot B20

Date/Time: 20/12/2015 9:57:08 AM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 870 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 870 MHz; σ = 1.04 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3

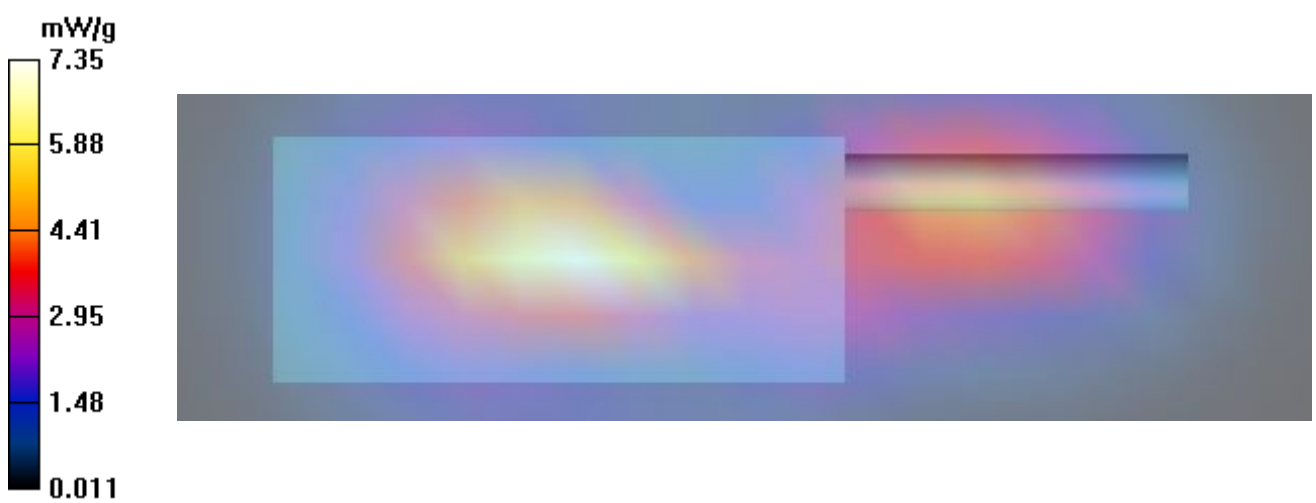
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B20 Body XL-200P Ext, 870 MHz, 4440-02, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.35 mW/g

B20 Body XL-200P Ext, 870 MHz, 4440-02, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 56.3 V/m; Power Drift = -0.046 dB
Peak SAR (extrapolated) = 9.24 W/kg
SAR(1 g) = 6.94 mW/g; SAR(10 g) = 4.74 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.31 mW/g



Plot B21

Date/Time: 20/12/2015 10:17:16 AM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 806 MHz; σ = 0.979 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3

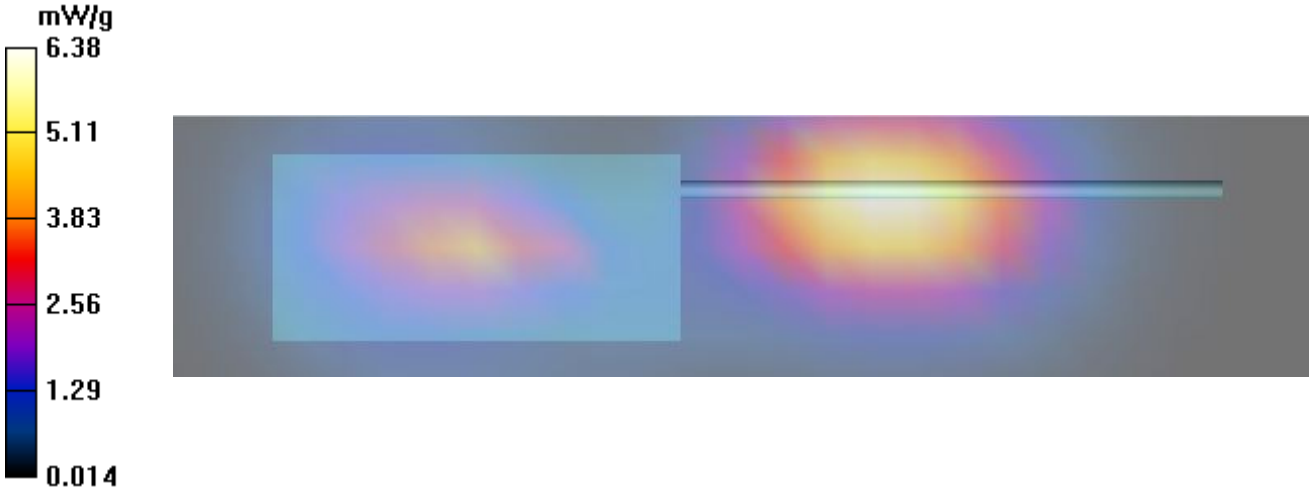
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B21 Body XL-200P Ext, 806 MHz, 4420-01, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.38 mW/g

B21 Body XL-200P Ext, 806 MHz, 4420-01, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 33.8 V/m; Power Drift = -0.208 dB
Peak SAR (extrapolated) = 7.85 W/kg
SAR(1 g) = 6 mW/g; SAR(10 g) = 4.34 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.37 mW/g



Plot B22

Date/Time: 20/12/2015 10:35:18 AM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 824 MHz; σ = 0.997 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3

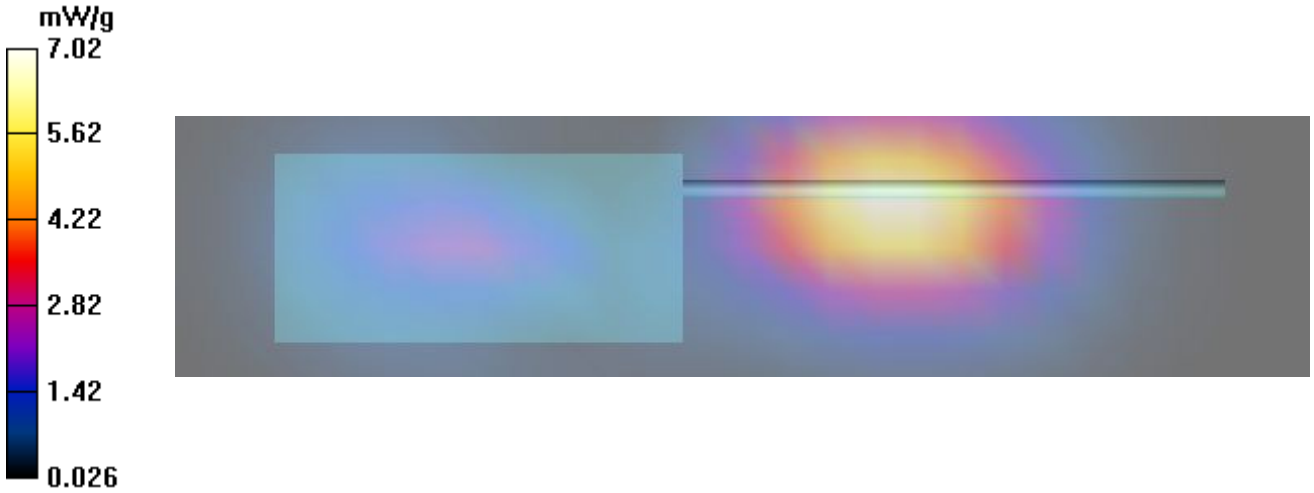
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B22 Body XL-200P Ext, 824 MHz, 4420-01, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.02 mW/g

B22 Body XL-200P Ext, 824 MHz, 4420-01, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 31.2 V/m; Power Drift = -0.226 dB
Peak SAR (extrapolated) = 8.70 W/kg
SAR(1 g) = 6.65 mW/g; SAR(10 g) = 4.8 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 7.05 mW/g



Plot B23

Date/Time: 20/12/2015 11:12:01 AM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 851 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 851 MHz; σ = 1.01 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

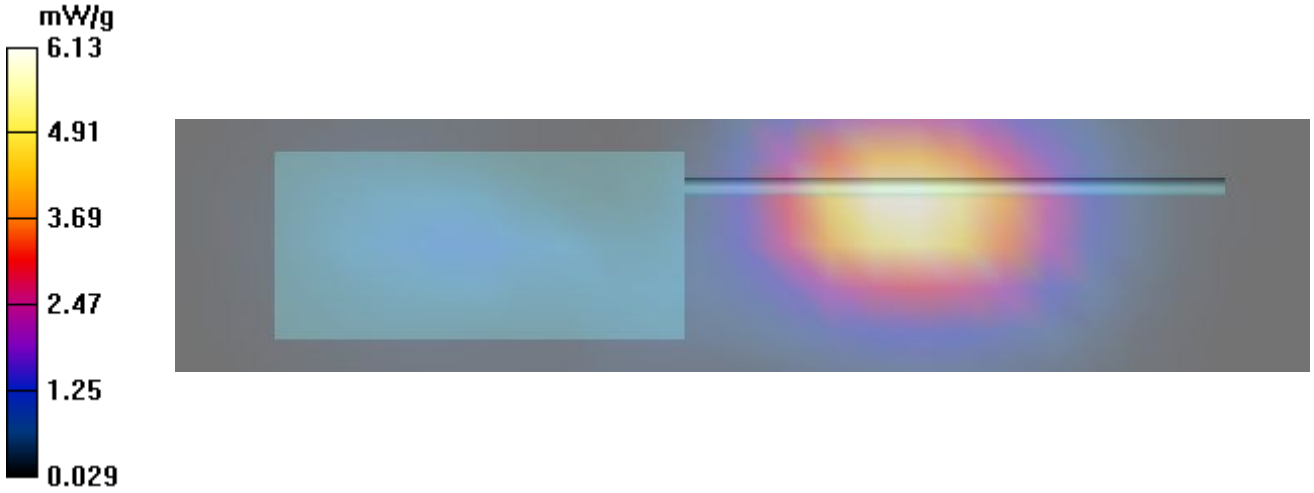
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B23 Body XL-200P Ext, 851 MHz, 4420-01, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.13 mW/g

B23 Body XL-200P Ext, 851 MHz, 4420-01, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 24.5 V/m; Power Drift = -0.261 dB
Peak SAR (extrapolated) = 7.61 W/kg
SAR(1 g) = 5.77 mW/g; SAR(10 g) = 4.16 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.11 mW/g



Plot B24

Date/Time: 20/12/2015 11:31:10 AM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 861 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 861 MHz; σ = 1.02 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

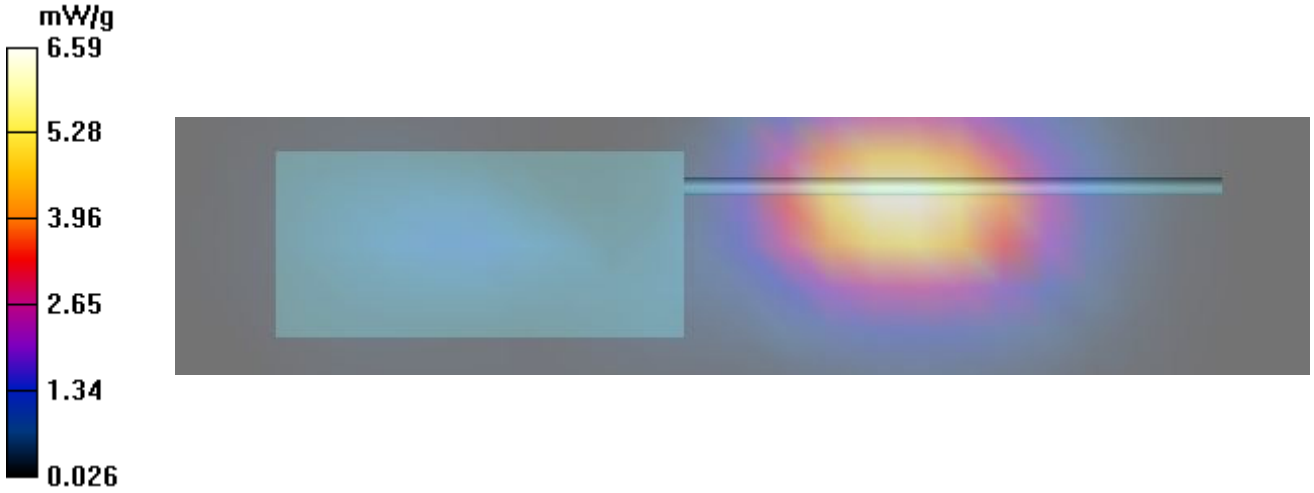
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B24 Body XL-200P Ext, 861 MHz, 4420-01, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.59 mW/g

B24 Body XL-200P Ext, 861 MHz, 4420-01, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 23.9 V/m; Power Drift = -0.406 dB
Peak SAR (extrapolated) = 8.13 W/kg
SAR(1 g) = 6.13 mW/g; SAR(10 g) = 4.38 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.51 mW/g



Plot B24b

Date/Time: 20/12/2015 12:13:20 PM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 861 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 861 MHz; σ = 1.02 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

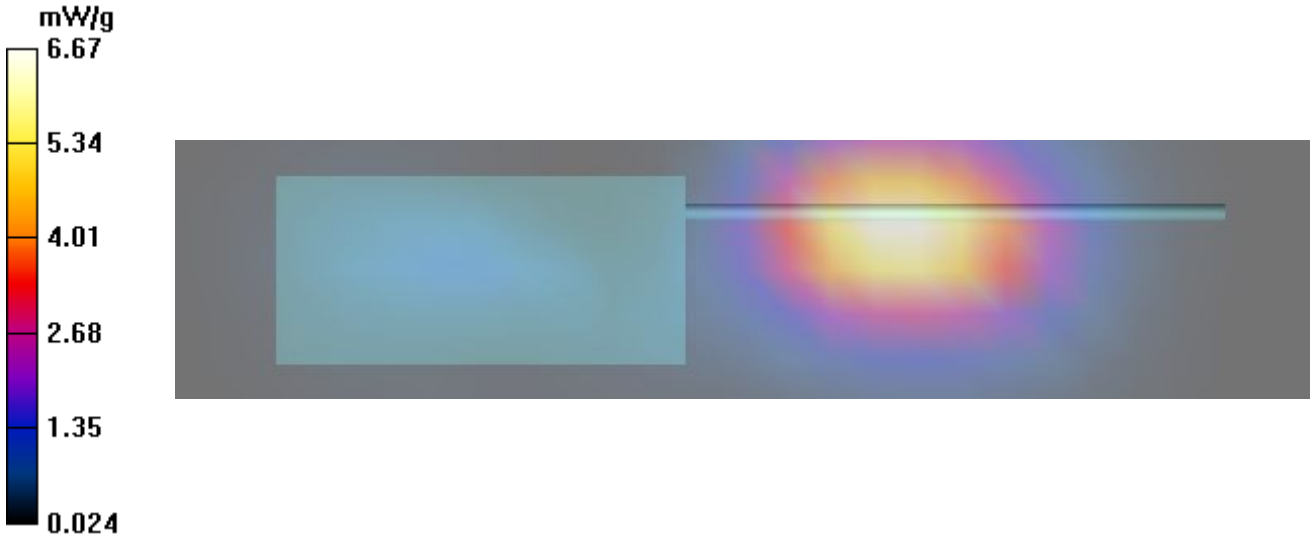
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B24b Body XL-200P Ext, 861 MHz, 4420-01, BC, SPM, SYS 2/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.67 mW/g

B24b Body XL-200P Ext, 861 MHz, 4420-01, BC, SPM, SYS 2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 23.9 V/m; Power Drift = -0.363 dB
Peak SAR (extrapolated) = 8.29 W/kg
SAR(1 g) = 6.25 mW/g; SAR(10 g) = 4.47 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.64 mW/g



Plot B25

Date/Time: 20/12/2015 11:52:27 AM

835 Body 20-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 20 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.0C; Humidity: 10%

Procedure Notes:

Communication System: CW
Frequency: 870 MHz; Duty Cycle: 1:1
Medium: TSL_835B[16DE15] Medium parameters used (interpolated): f = 870 MHz; σ = 1.04 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3

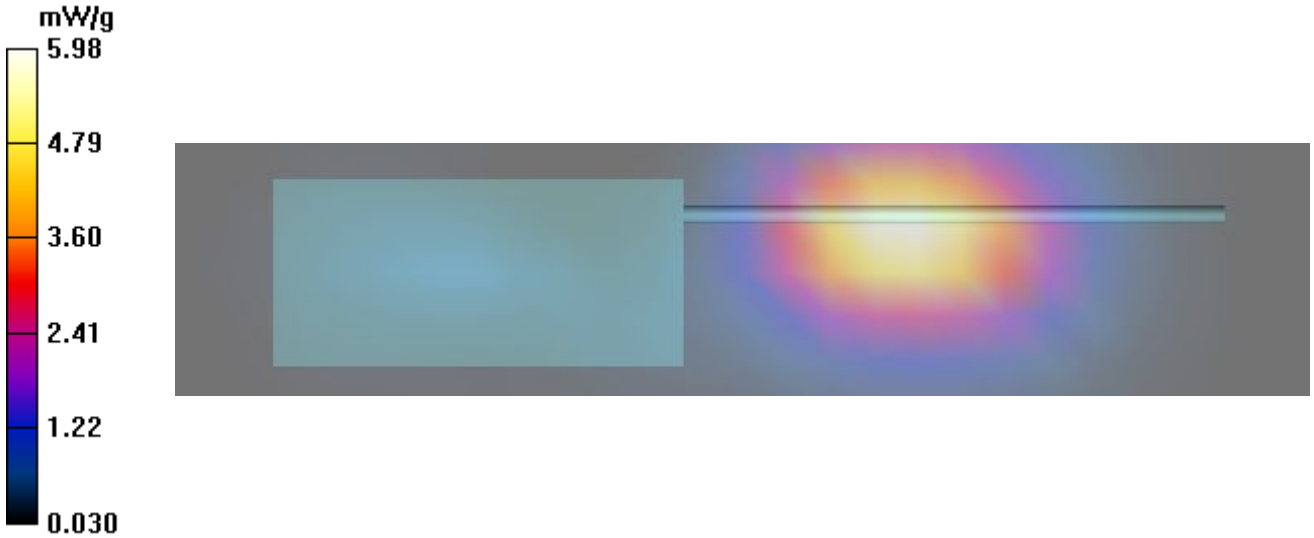
- Probe: EX3DV4 - SN3600 2015; ConvF(7.73, 7.73, 7.73); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B25 Body XL-200P Ext, 870 MHz, 4420-01, BC, SPM, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 5.98 mW/g

B25 Body XL-200P Ext, 870 MHz, 4420-01, BC, SPM, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 20.7 V/m; Power Drift = -0.323 dB
Peak SAR (extrapolated) = 7.45 W/kg
SAR(1 g) = 5.6 mW/g; SAR(10 g) = 4 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 5.95 mW/g



Plot F1

Date/Time: 21/12/2015 1:37:24 PM

835 Head 21-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 21 Dec 2015 Ambient Temp: 26C; Fluid Temp: 23.7C; Humidity: 9%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 806 MHz; σ = 0.91 mho/m; ε_r = 43; ρ = 1000 kg/m^3

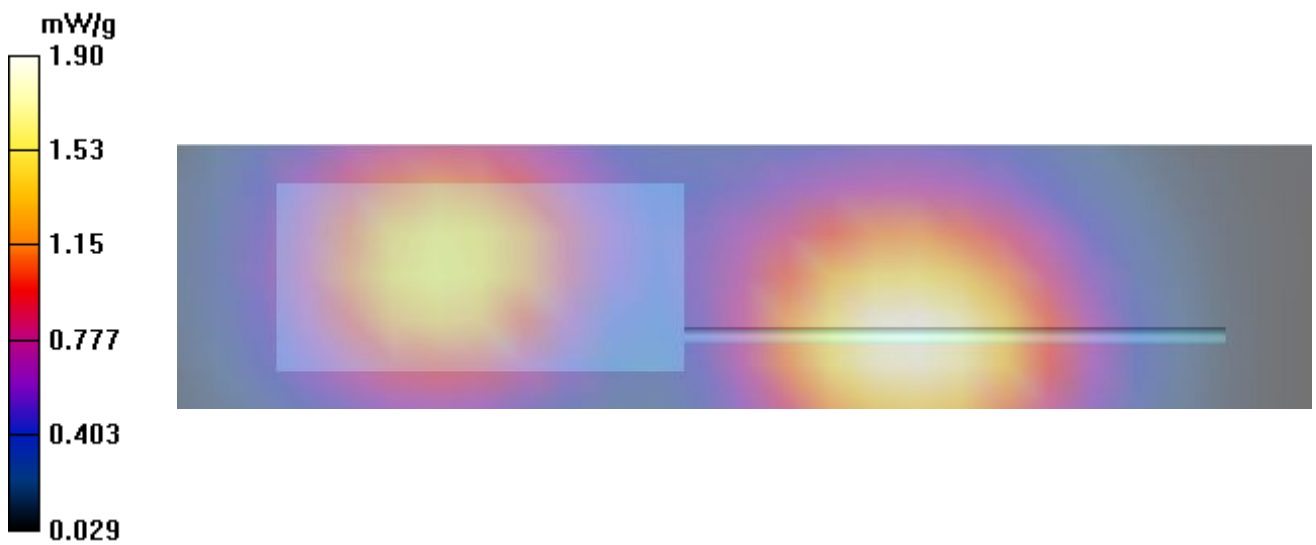
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F1 Face XL-200P Ext, 806 MHz,4420-01, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.90 mW/g

F1 Face XL-200P Ext, 806 MHz,4420-01, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 24.1 V/m; Power Drift = -0.698 dB
Peak SAR (extrapolated) = 2.31 W/kg
SAR(1 g) = 1.79 mW/g; SAR(10 g) = 1.32 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.88 mW/g



Plot F2

Date/Time: 21/12/2015 2:18:05 PM

835 Head 21-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 21 Dec 2015 Ambient Temp: 26C; Fluid Temp: 23.7C; Humidity: 9%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 824 MHz; σ = 0.91 mho/m; ε_r = 43.1; ρ = 1000 kg/m^3

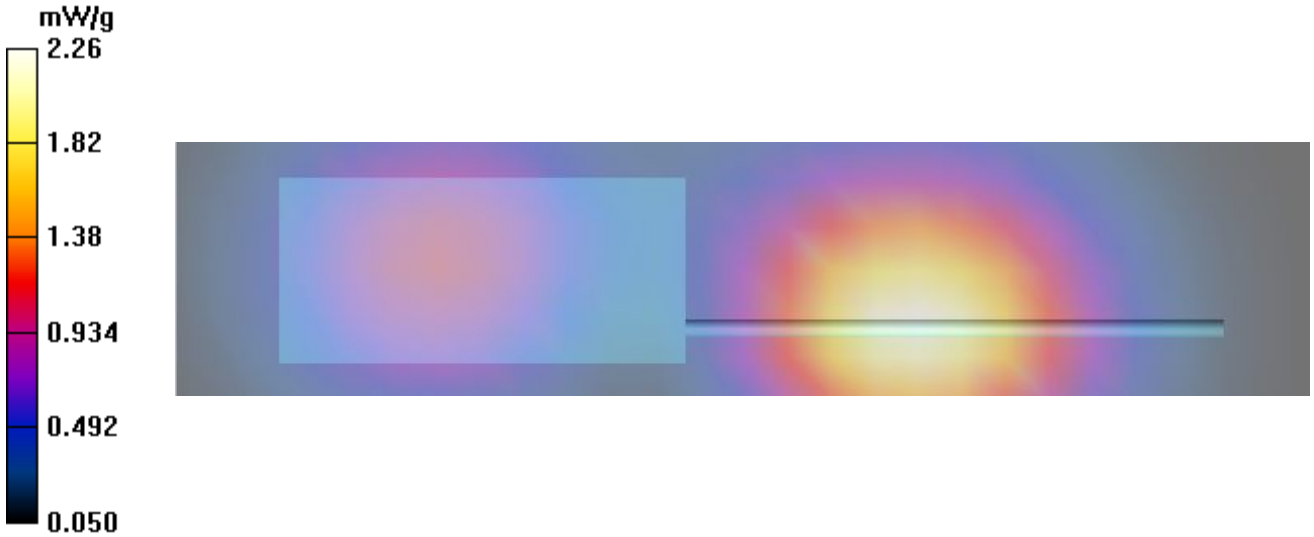
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F2 Face XL-200P Ext, 824 MHz,4420-01, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.26 mW/g

F2 Face XL-200P Ext, 824 MHz,4420-01, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 21.2 V/m; Power Drift = -0.285 dB
Peak SAR (extrapolated) = 2.74 W/kg
SAR(1 g) = 2.11 mW/g; SAR(10 g) = 1.56 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.23 mW/g



Plot F3

Date/Time: 21/12/2015 2:56:24 PM

835 Head 21-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 21 Dec 2015 Ambient Temp: 26C; Fluid Temp: 23.7C; Humidity: 9%

Procedure Notes:

Communication System: CW
Frequency: 851 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 851 MHz; σ = 0.956 mho/m; ε_r = 43.1; ρ = 1000 kg/m^3

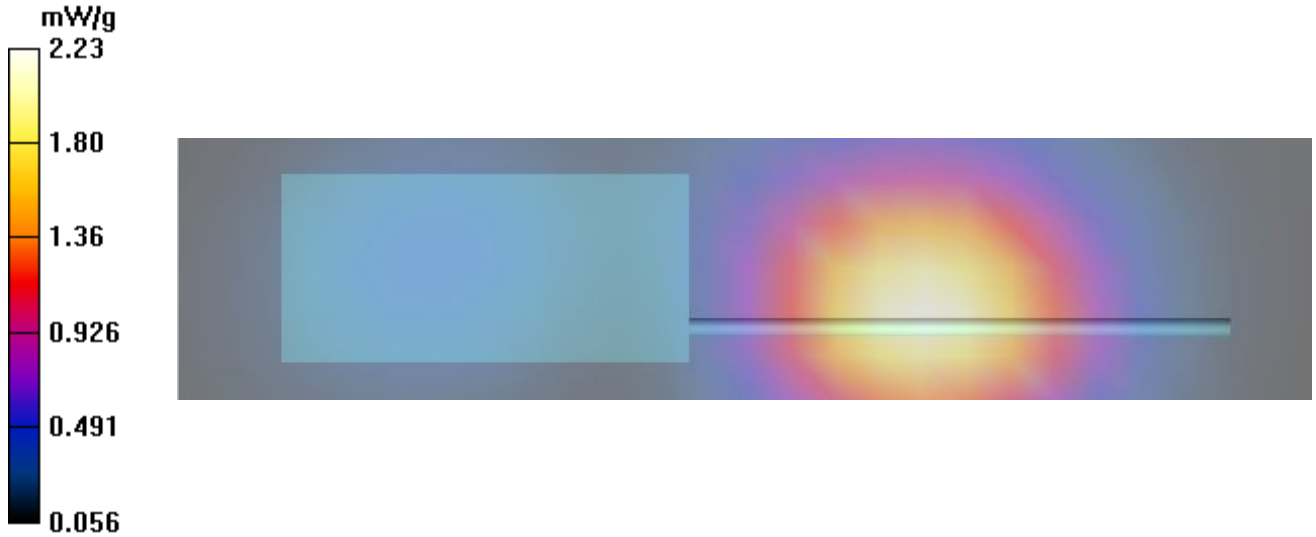
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F3 Face XL-200P Ext, 851 MHz,4420-01, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.23 mW/g

F3 Face XL-200P Ext, 851 MHz,4420-01, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 19.0 V/m; Power Drift = -0.402 dB
Peak SAR (extrapolated) = 2.70 W/kg
SAR(1 g) = 2.07 mW/g; SAR(10 g) = 1.52 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.18 mW/g



Plot F4

Date/Time: 21/12/2015 3:28:07 PM

835 Head 21-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 21 Dec 2015 Ambient Temp: 26C; Fluid Temp: 23.7C; Humidity: 9%

Procedure Notes:

Communication System: CW
Frequency: 861 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 861 MHz; σ = 0.96 mho/m; ε_r = 42.9; ρ = 1000 kg/m^3

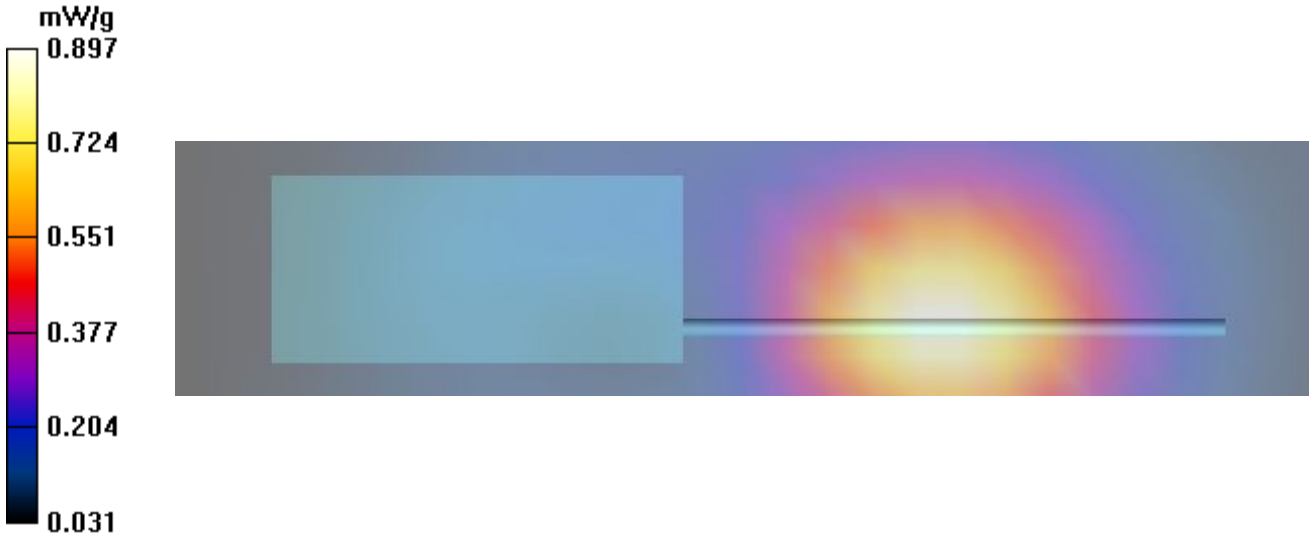
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F4 Face XL-200P Ext, 861 MHz,4420-01, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.897 mW/g

F4 Face XL-200P Ext, 861 MHz,4420-01, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 12.7 V/m; Power Drift = -0.192 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.828 mW/g; SAR(10 g) = 0.607 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.874 mW/g



Plot F5

Date/Time: 21/12/2015 3:51:19 PM

835 Head 21-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 21 Dec 2015 Ambient Temp: 26C; Fluid Temp: 23.7C; Humidity: 9%

Procedure Notes:

Communication System: CW
Frequency: 870 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 870 MHz; σ = 0.97 mho/m; ε_r = 42.8; ρ = 1000 kg/m^3

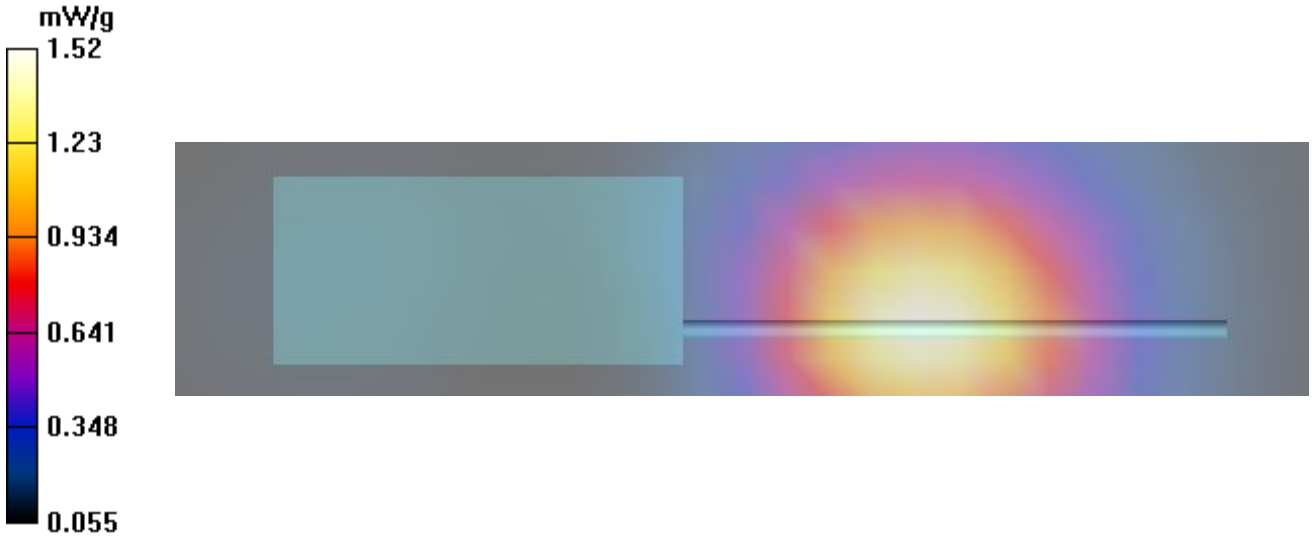
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F5 Face XL-200P Ext, 870 MHz,4420-01, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.52 mW/g

F5 Face XL-200P Ext, 870 MHz,4420-01, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 15.1 V/m; Power Drift = -0.276 dB
Peak SAR (extrapolated) = 1.87 W/kg
SAR(1 g) = 1.42 mW/g; SAR(10 g) = 1.04 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.50 mW/g



Plot F6

Date/Time: 22/12/2015 10:18:54 AM

835 Head 22-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 22 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.6C; Humidity: 8%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 806 MHz; σ = 0.91 mho/m; ε_r = 43; ρ = 1000 kg/m^3

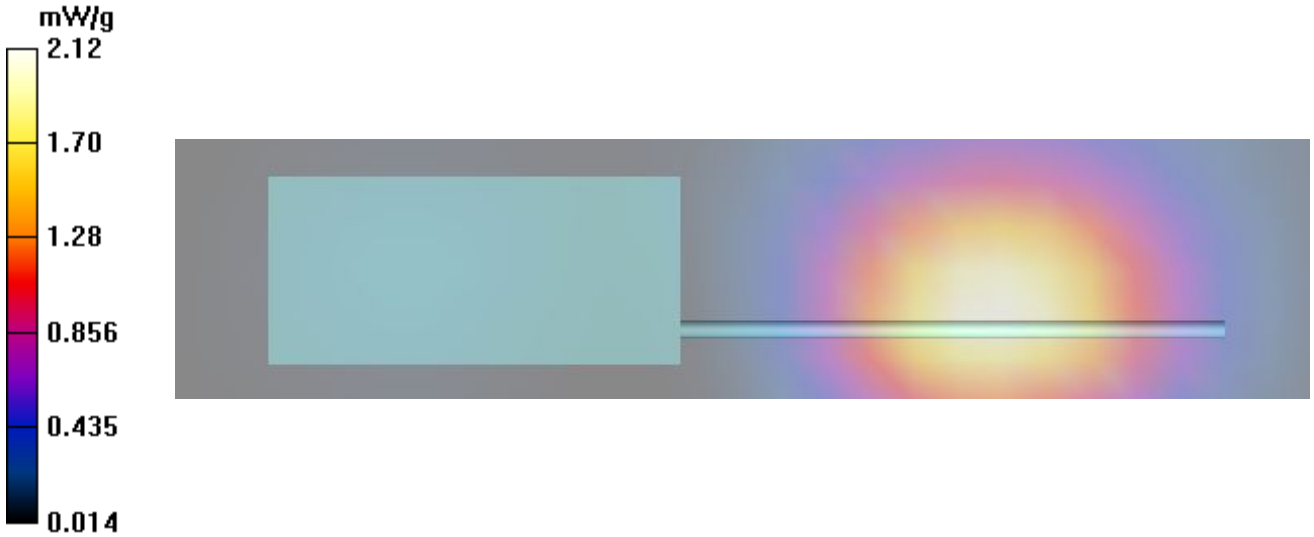
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F6 Face XL-200P Ext, 806 MHz,506/1, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.12 mW/g

F6 Face XL-200P Ext, 806 MHz,506/1, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 9.16 V/m; Power Drift = -0.974 dB
Peak SAR (extrapolated) = 2.59 W/kg
SAR(1 g) = 2 mW/g; SAR(10 g) = 1.49 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.10 mW/g



Plot F7

Date/Time: 22/12/2015 10:49:38 AM

835 Head 22-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 22 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.6C; Humidity: 8%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 824 MHz; σ = 0.91 mho/m; ε_r = 43.1; ρ = 1000 kg/m^3

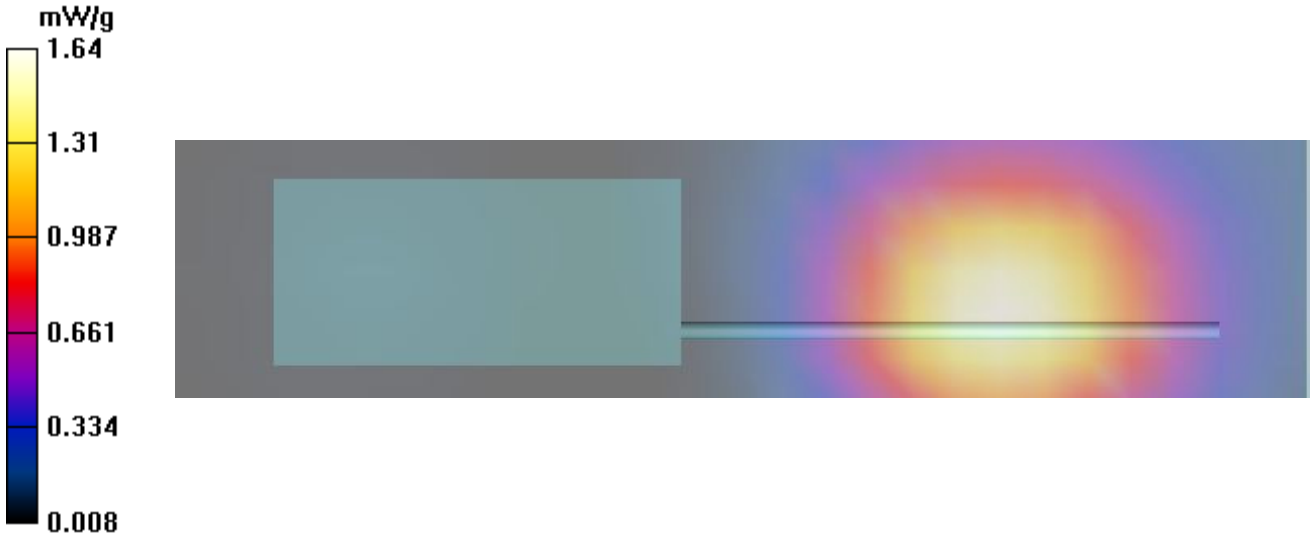
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F7 Face XL-200P Ext, 824 MHz,506/1, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.64 mW/g

F7 Face XL-200P Ext, 824 MHz,506/1, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 7.50 V/m; Power Drift = -0.946 dB
Peak SAR (extrapolated) = 1.89 W/kg
SAR(1 g) = 1.46 mW/g; SAR(10 g) = 1.09 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.53 mW/g



Plot F8

Date/Time: 22/12/2015 11:25:38 AM

835 Head 22-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 22 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.6C; Humidity: 8%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 806 MHz; σ = 0.91 mho/m; ε_r = 43; ρ = 1000 kg/m^3

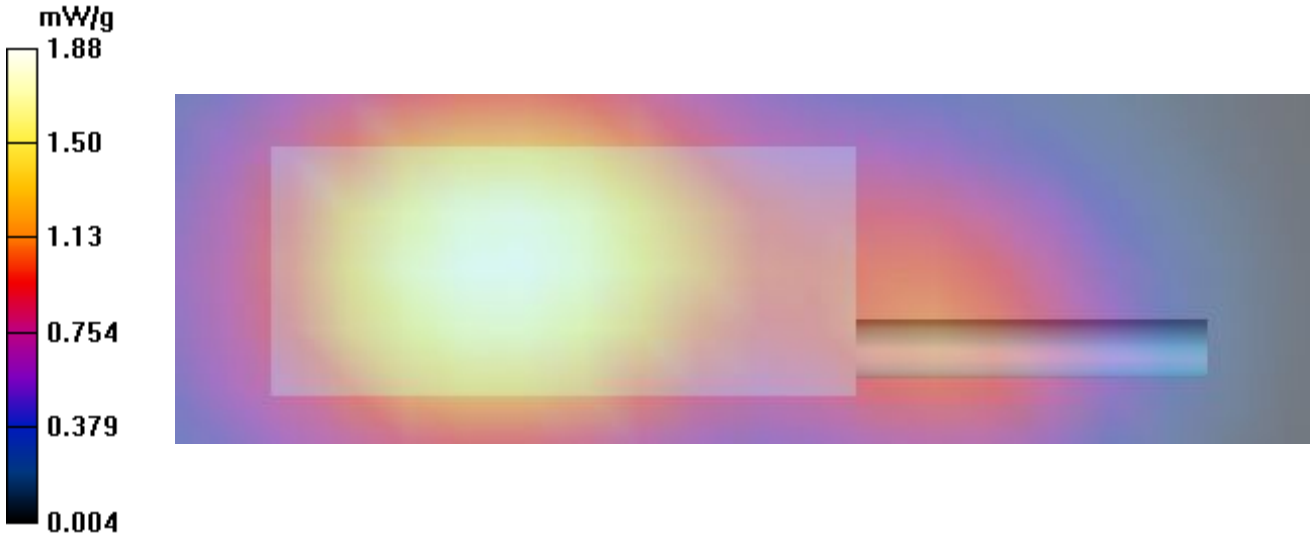
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F8 Face XL-200P Ext, 806 MHz,506/2, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.88 mW/g

F8 Face XL-200P Ext, 806 MHz,506/2, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 33.6 V/m; Power Drift = -0.170 dB
Peak SAR (extrapolated) = 2.27 W/kg
SAR(1 g) = 1.78 mW/g; SAR(10 g) = 1.34 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.87 mW/g



Plot F9

Date/Time: 22/12/2015 12:21:29 PM

835 Head 22-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 22 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.6C; Humidity: 8%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 806 MHz; σ = 0.91 mho/m; ε_r = 43; ρ = 1000 kg/m^3

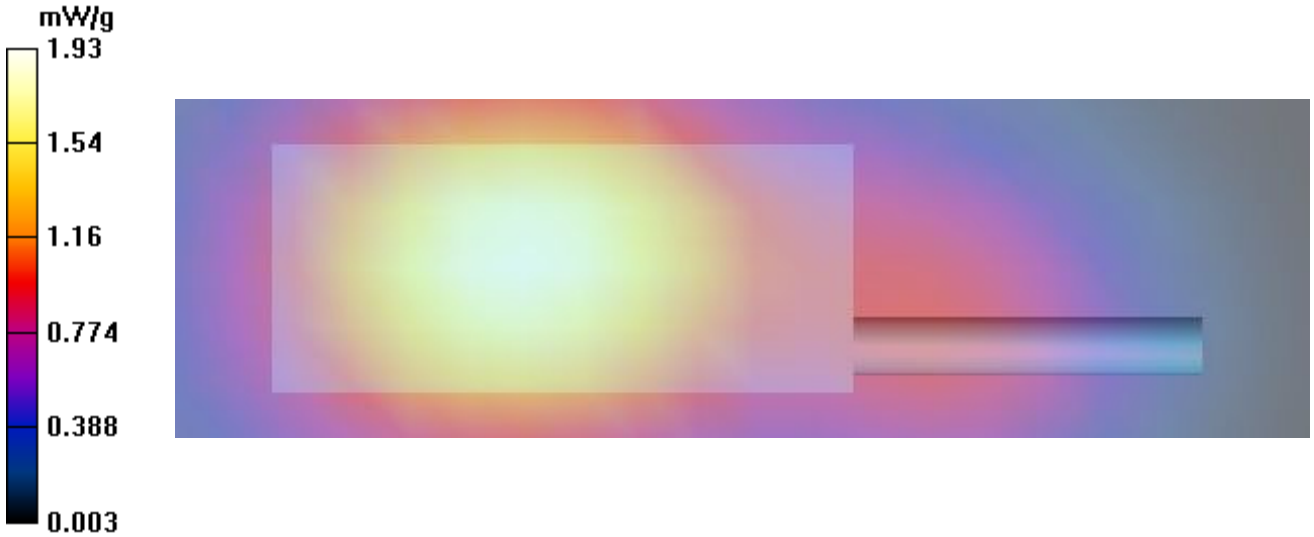
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F9 Face XL-200P Ext, 824 MHz,506/2, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.93 mW/g

F9 Face XL-200P Ext, 824 MHz,506/2, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 32.4 V/m; Power Drift = -0.345 dB
Peak SAR (extrapolated) = 2.30 W/kg
SAR(1 g) = 1.8 mW/g; SAR(10 g) = 1.35 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.89 mW/g



Plot F10

Date/Time: 22/12/2015 2:06:45 PM

835 Head 22-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 22 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.6C; Humidity: 8%

Procedure Notes:

Communication System: CW
Frequency: 851 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 851 MHz; σ = 0.956 mho/m; ε_r = 43.1; ρ = 1000 kg/m^3

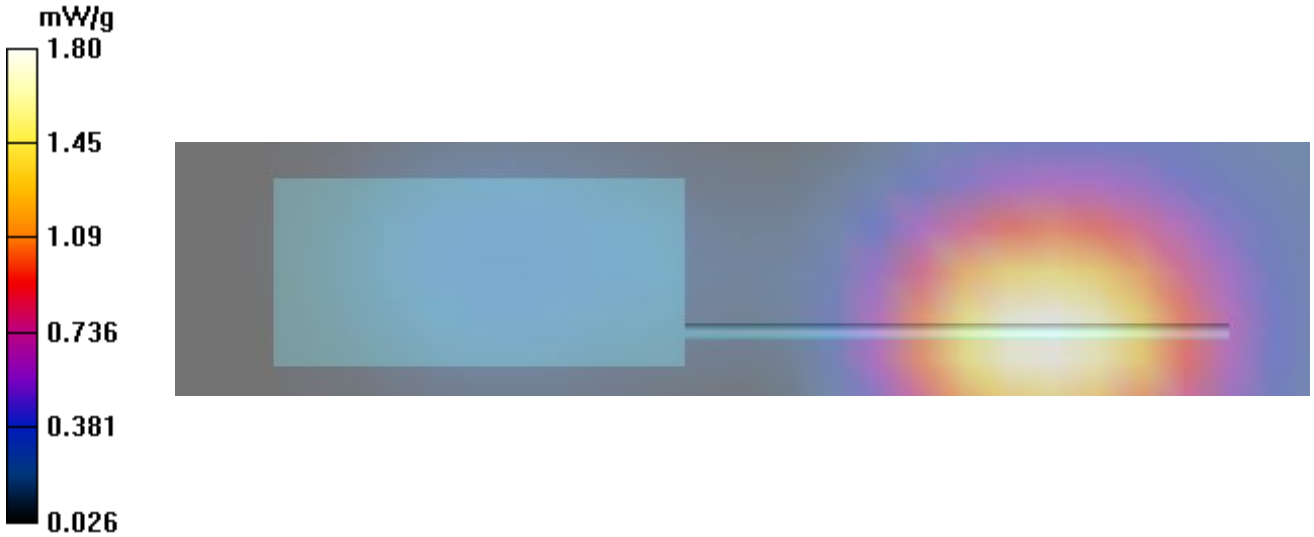
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F10 Face XL-200P Ext, 851 MHz,4440-01, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.80 mW/g

F10 Face XL-200P Ext, 851 MHz,4440-01, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 14.3 V/m; Power Drift = -0.109 dB
Peak SAR (extrapolated) = 2.25 W/kg
SAR(1 g) = 1.72 mW/g; SAR(10 g) = 1.26 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.82 mW/g



Plot F11

Date/Time: 22/12/2015 2:37:52 PM

835 Head 22-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 22 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.6C; Humidity: 8%

Procedure Notes:

Communication System: CW
Frequency: 861 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 861 MHz; σ = 0.96 mho/m; ε_r = 42.9; ρ = 1000 kg/m^3

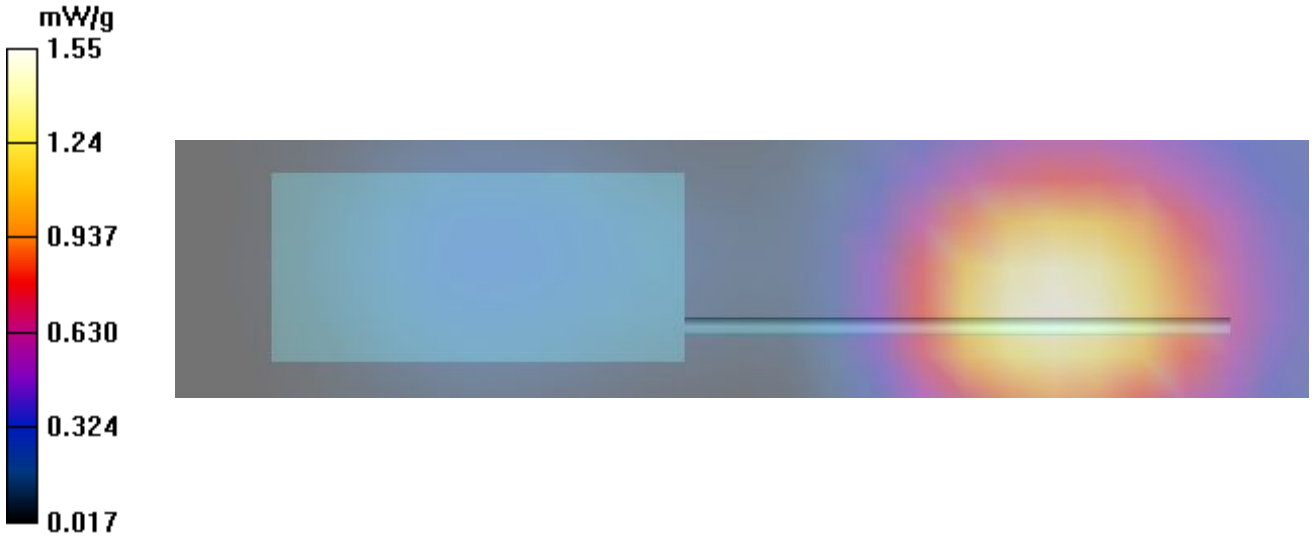
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F11 Face XL-200P Ext, 851 MHz,4440-01, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.55 mW/g

F11 Face XL-200P Ext, 851 MHz,4440-01, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 12.9 V/m; Power Drift = -0.051 dB
Peak SAR (extrapolated) = 1.92 W/kg
SAR(1 g) = 1.46 mW/g; SAR(10 g) = 1.07 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.54 mW/g



Plot F12

Date/Time: 22/12/2015 3:16:51 PM

835 Head 22-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 22 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.6C; Humidity: 8%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 806 MHz; σ = 0.91 mho/m; ε_r = 43; ρ = 1000 kg/m^3

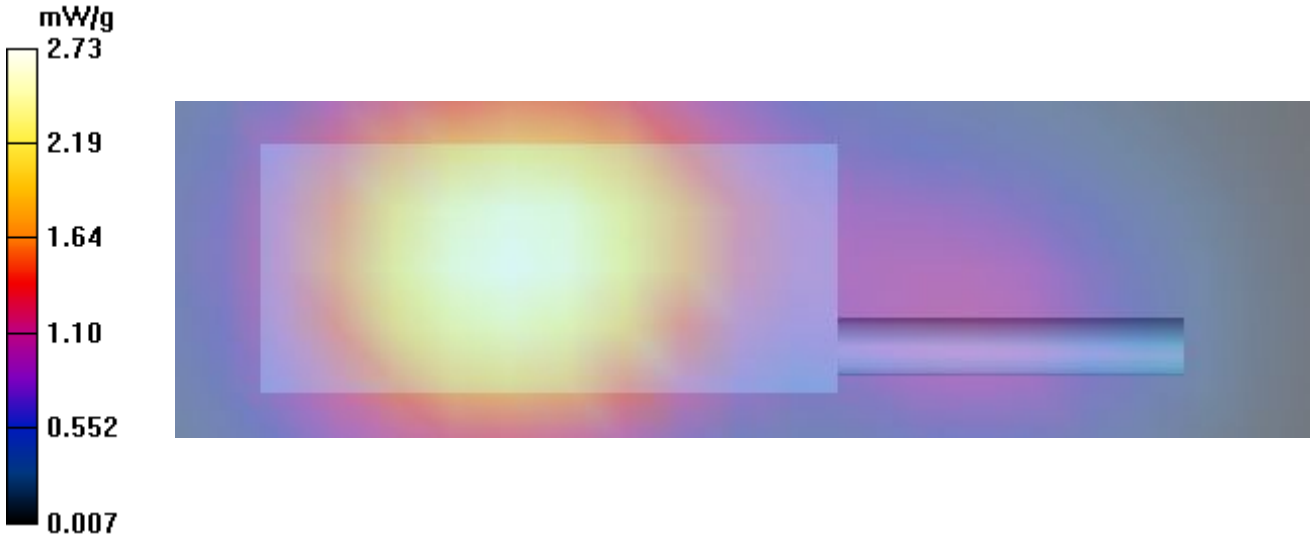
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F12 Face XL-200P Ext, 806 MHz,4440-02, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.73 mW/g

F12 Face XL-200P Ext, 806 MHz,4440-02, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 31.1 V/m; Power Drift = -0.088 dB
Peak SAR (extrapolated) = 3.30 W/kg
SAR(1 g) = 2.6 mW/g; SAR(10 g) = 1.96 mW/g

Info: Interpolated medium parameters used for SAR evaluation.



Plot F13

Date/Time: 22/12/2015 3:52:35 PM

835 Head 22-Dec-2015

DUT: Harris XG-15; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 22 Dec 2015 Ambient Temp: 24C; Fluid Temp: 23.6C; Humidity: 8%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:1
Medium: TSL_835H[21DE15] Medium parameters used (interpolated): f = 824 MHz; σ = 0.91 mho/m; ε_r = 43.1; ρ = 1000 kg/m^3

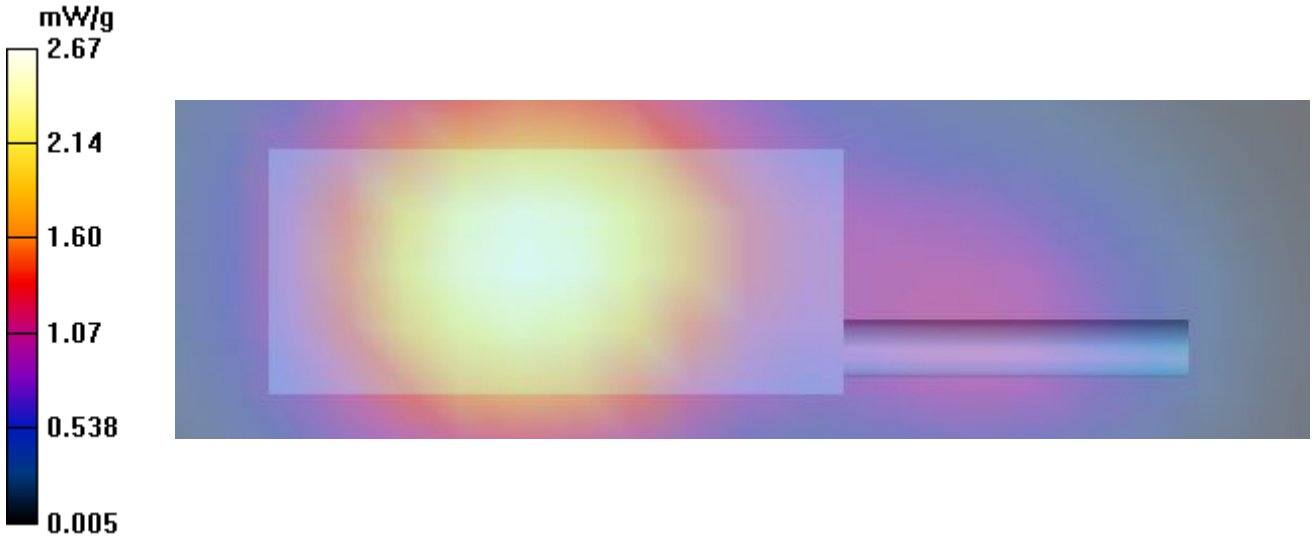
- Probe: EX3DV4 - SN3600 2015; ConvF(7.94, 7.94, 7.94); Calibrated: 23/04/2015
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn370 2015; Calibrated: 23/04/2015
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F13 Face XL-200P Ext, 824 MHz,4440-02, SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.67 mW/g

F13 Face XL-200P Ext, 824 MHz,4440-02, SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 31.9 V/m; Power Drift = -0.158 dB
Peak SAR (extrapolated) = 3.25 W/kg
SAR(1 g) = 2.54 mW/g; SAR(10 g) = 1.9 mW/g

Info: Interpolated medium parameters used for SAR evaluation.



Plot B41

Date/Time: 21/01/2015 1:27:53 PM

835 Body (506-1)21 Jan 2015

DUT: Harris; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 21 Jan 2015 Ambient Temp: 24C; Fluid Temp: 23.1C; Humidity: 13%

Procedure Notes:

Communication System: CW
Frequency: 768 MHz; Duty Cycle: 1:1
Medium: TSL_835B Medium parameters used (interpolated): f = 768 MHz; σ = 0.916 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3

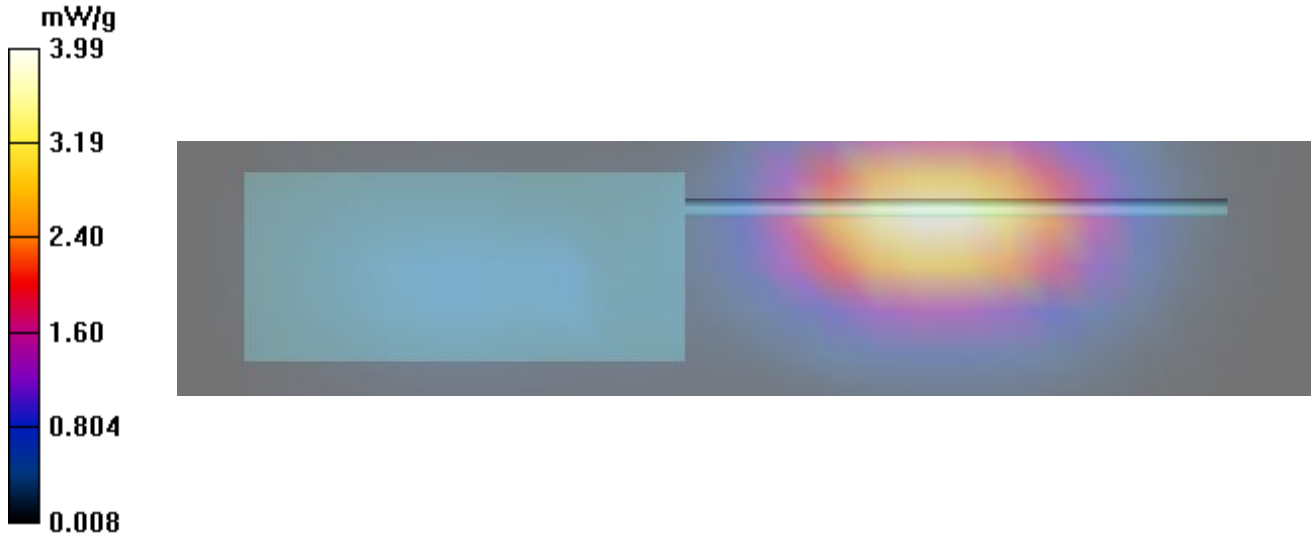
- Probe: EX3DV4 - SN3600; ConvF(8.14, 8.14, 8.14); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B41 Body XL-200, 768MHz 506-1 SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 3.99 mW/g

B41 Body XL-200, 768MHz 506-1 SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 19.0 V/m; Power Drift = -0.801 dB
Peak SAR (extrapolated) = 4.69 W/kg
SAR(1 g) = 3.54 mW/g; SAR(10 g) = 2.56 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 3.75 mW/g



Plot B42

Date/Time: 21/01/2015 1:46:57 PM

835 Body (506-1)21 Jan 2015

DUT: Harris; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 21 Jan 2015 Ambient Temp: 24C; Fluid Temp: 23.1C; Humidity: 13%

Procedure Notes:

Communication System: CW
Frequency: 776 MHz; Duty Cycle: 1:1
Medium: TSL_835B Medium parameters used (interpolated): f = 776 MHz; σ = 0.93 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3

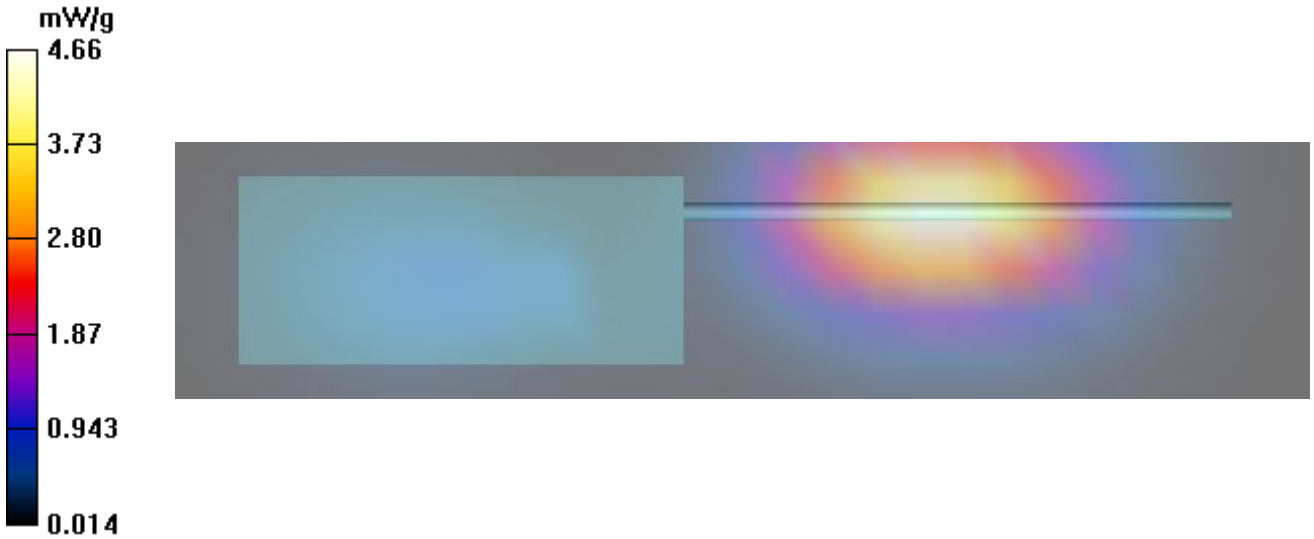
- Probe: EX3DV4 - SN3600; ConvF(8.14, 8.14, 8.14); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B42 Body XL-200, 776MHz 506-1 SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.66 mW/g

B42 Body XL-200, 776MHz 506-1 SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 16.1 V/m; Power Drift = -0.609 dB
Peak SAR (extrapolated) = 5.70 W/kg
SAR(1 g) = 4.27 mW/g; SAR(10 g) = 3.08 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.53 mW/g



Plot F41

Date/Time: 19/01/2015 12:11:17 PM

835 Head (506-1) 19 Jan 2015

DUT: Harris; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 19 Jan 2015 Ambient Temp: 24C; Fluid Temp: 21.7C; Humidity: 13%

Procedure Notes:

Communication System: CW
Frequency: 768 MHz; Duty Cycle: 1:1
Medium: TSL_835H Medium parameters used (interpolated): f = 768 MHz; σ = 0.806 mho/m; ε_r = 43.3; ρ = 1000 kg/m^3

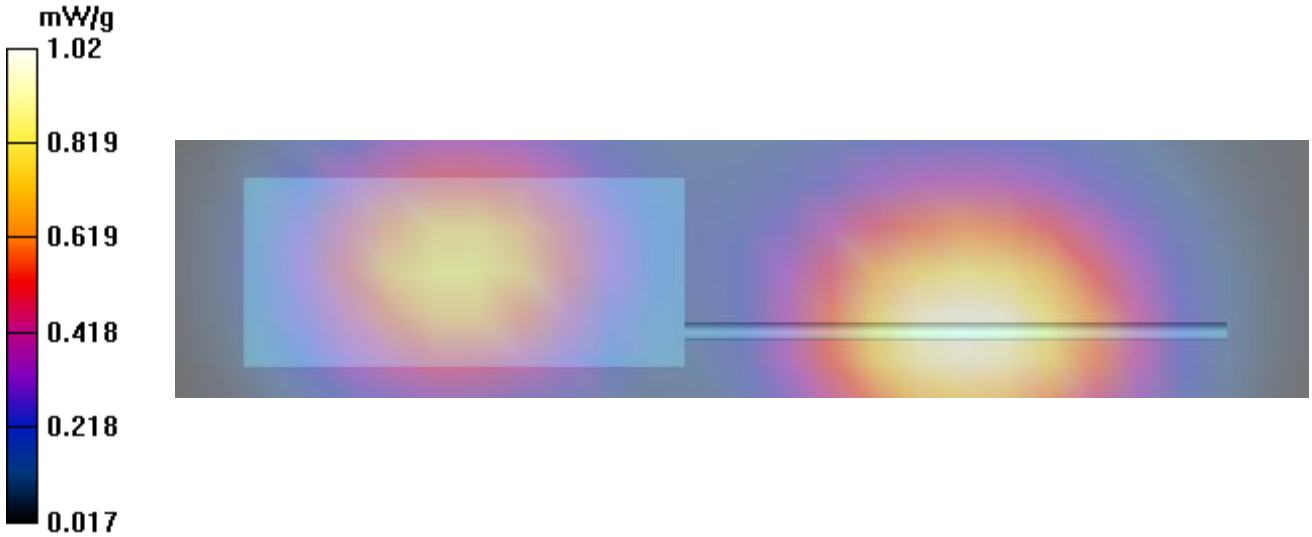
- Probe: EX3DV4 - SN3600; ConvF(8.55, 8.55, 8.55); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F41 Head XL-200, 768MHz 506-1 SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.02 mW/g

F41 Head XL-200, 768MHz 506-1 SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 14.7 V/m; Power Drift = -0.725 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.950 mW/g; SAR(10 g) = 0.713 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.00 mW/g



Plot F42

Date/Time: 19/01/2015 12:32:49 PM

835 Head (506-1) 19 Jan 2015

DUT: Harris; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 19 Jan 2015 Ambient Temp: 24C; Fluid Temp: 21.7C; Humidity: 13%

Procedure Notes:

Communication System: CW
Frequency: 776 MHz; Duty Cycle: 1:1
Medium: TSL_835H Medium parameters used (interpolated): f = 776 MHz; σ = 0.821 mho/m; ε_r = 43.1; ρ = 1000 kg/m^3

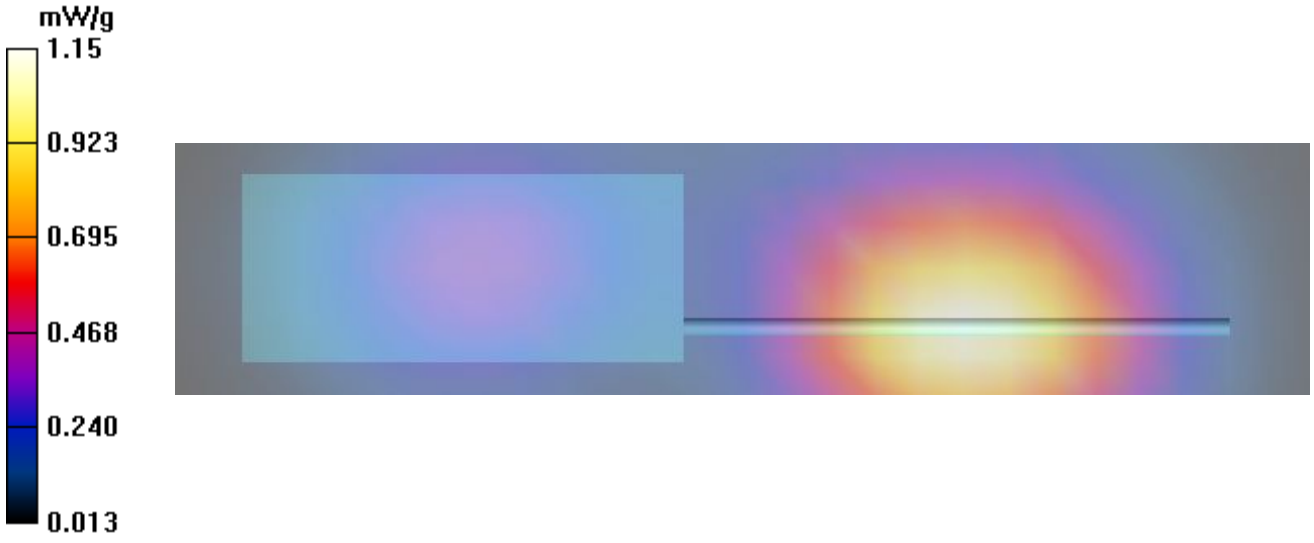
- Probe: EX3DV4 - SN3600; ConvF(8.55, 8.55, 8.55); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F42 Head XL-200, 776MHz 506-1 SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.15 mW/g

F42 Head XL-200, 776MHz 506-1 SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 15.5 V/m; Power Drift = -0.676 dB
Peak SAR (extrapolated) = 1.38 W/kg
SAR(1 g) = 1.07 mW/g; SAR(10 g) = 0.800 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.12 mW/g



Plot B34

Date/Time: 21/01/2015 3:10:53 PM

835 Body (506-2)21 Jan 2015

DUT: Harris; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 21 Jan 2015 Ambient Temp: 24C; Fluid Temp: 23.1C; Humidity: 13%

Procedure Notes:

Communication System: CW
Frequency: 768 MHz; Duty Cycle: 1:1
Medium: TSL_835B Medium parameters used (interpolated): f = 768 MHz; σ = 0.916 mho/m; ε_r = 54.9; ρ = 1000 kg/m^3

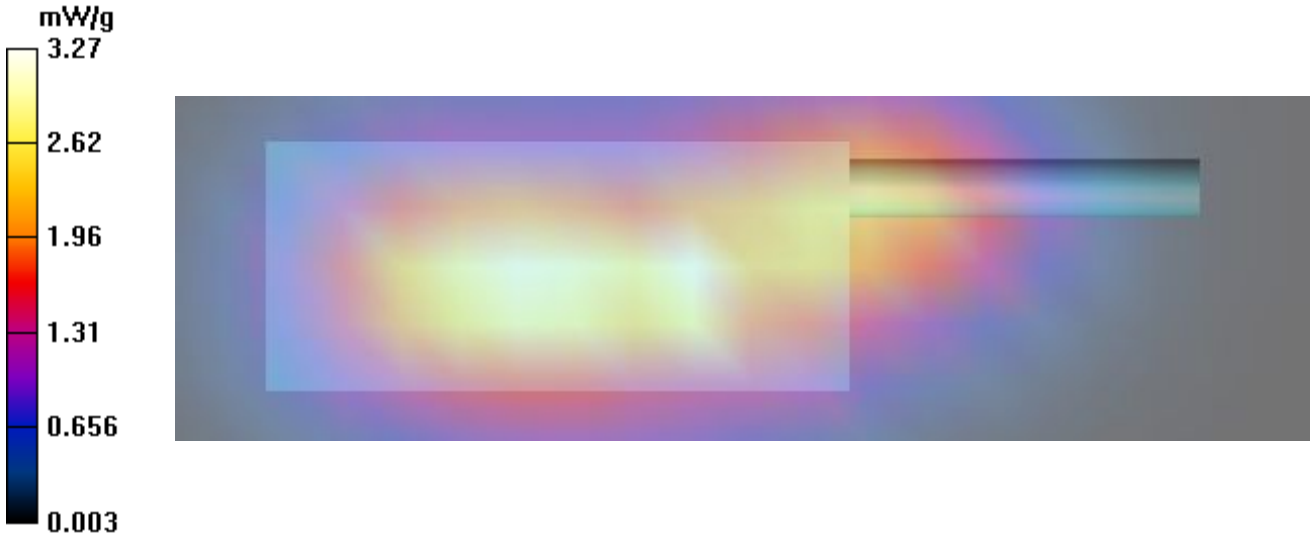
- Probe: EX3DV4 - SN3600; ConvF(8.14, 8.14, 8.14); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B34 Body XL-200, 768MHz 506-2 SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 3.27 mW/g

B34 Body XL-200, 768MHz 506-2 SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 52.2 V/m; Power Drift = -0.945 dB
Peak SAR (extrapolated) = 5.53 W/kg
SAR(1 g) = 3.22 mW/g; SAR(10 g) = 2.06 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 3.64 mW/g



Plot B35

Date/Time: 21/01/2015 3:33:00 PM

835 Body (506-2)21 Jan 2015

DUT: Harris; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 21 Jan 2015 Ambient Temp: 24C; Fluid Temp: 23.1C; Humidity: 13%

Procedure Notes:

Communication System: CW
Frequency: 776 MHz; Duty Cycle: 1:1
Medium: TSL_835B Medium parameters used (interpolated): f = 776 MHz; σ = 0.93 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3

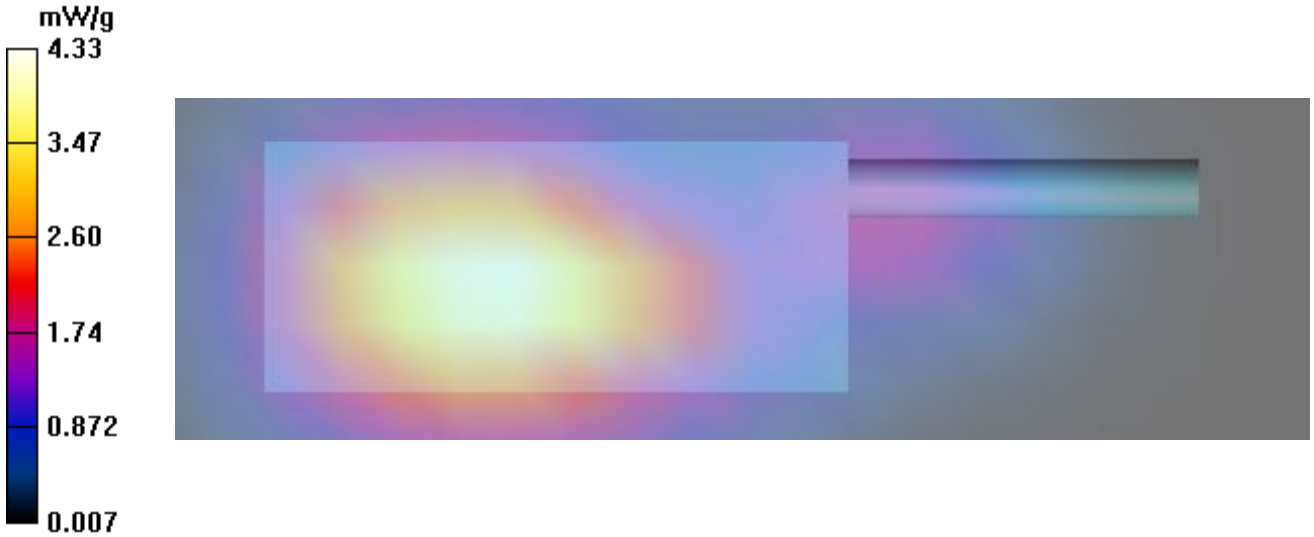
- Probe: EX3DV4 - SN3600; ConvF(8.14, 8.14, 8.14); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B35 Body XL-200, 776MHz 506-2 SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.33 mW/g

B35 Body XL-200, 776MHz 506-2 SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 39.2 V/m; Power Drift = -0.510 dB
Peak SAR (extrapolated) = 5.36 W/kg
SAR(1 g) = 4.24 mW/g; SAR(10 g) = 3.16 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.46 mW/g



Plot F34

Date/Time: 19/01/2015 9:11:14 AM

835 Head 19 Jan 2015

DUT: Harris; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 19 Jan 2015 Ambient Temp: 24C; Fluid Temp: 21.7C; Humidity: 13%

Procedure Notes:

Communication System: CW
Frequency: 768 MHz; Duty Cycle: 1:1
Medium: TSL_835H Medium parameters used (interpolated): f = 768 MHz; σ = 0.806 mho/m; ε_r = 43.3; ρ = 1000 kg/m^3

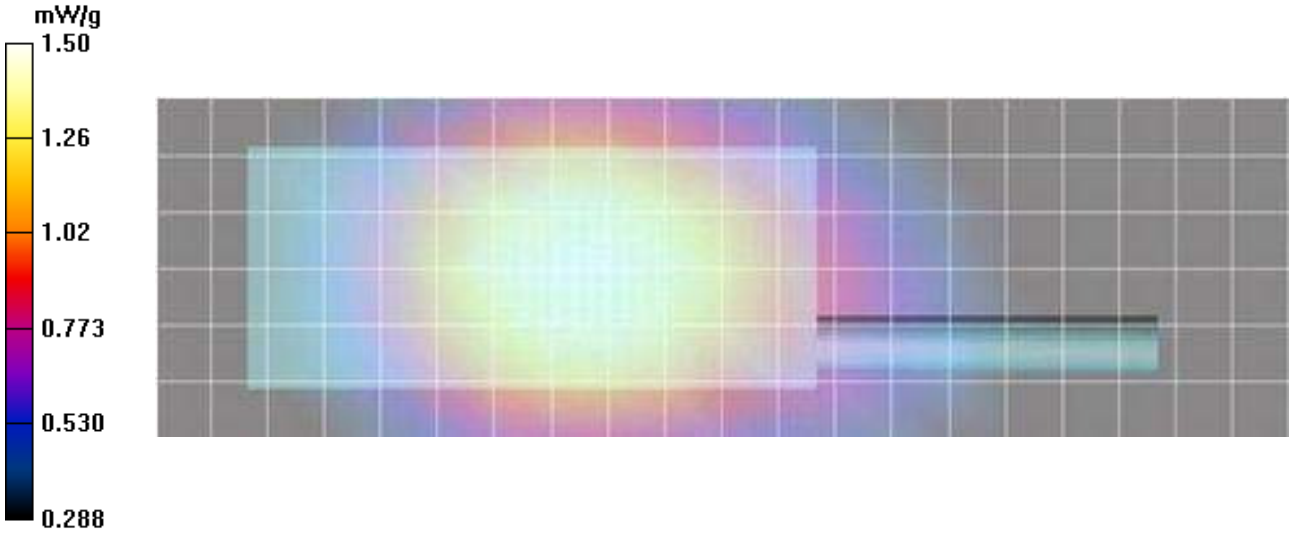
- Probe: EX3DV4 - SN3600; ConvF(8.55, 8.55, 8.55); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F34 Head XL-200, 768MHz 506-2 SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.54 mW/g

F34 Head XL-200, 768MHz 506-2 SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 33.3 V/m; Power Drift = -0.599 dB
Peak SAR (extrapolated) = 1.81 W/kg
SAR(1 g) = 1.43 mW/g; SAR(10 g) = 1.1 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.50 mW/g



Plot F35

Date/Time: 19/01/2015 9:33:13 AM

835 Head 19 Jan 2015

DUT: Harris; Type: PTT Radio Transceiver; Serial: Not Specified

Program Notes: 19 Jan 2015 Ambient Temp: 24C; Fluid Temp: 21.7C; Humidity: 13%

Procedure Notes:

Communication System: CW
Frequency: 776 MHz; Duty Cycle: 1:1
Medium: TSL_835H Medium parameters used (interpolated): f = 776 MHz; σ = 0.821 mho/m; ε_r = 43.1; ρ = 1000 kg/m^3

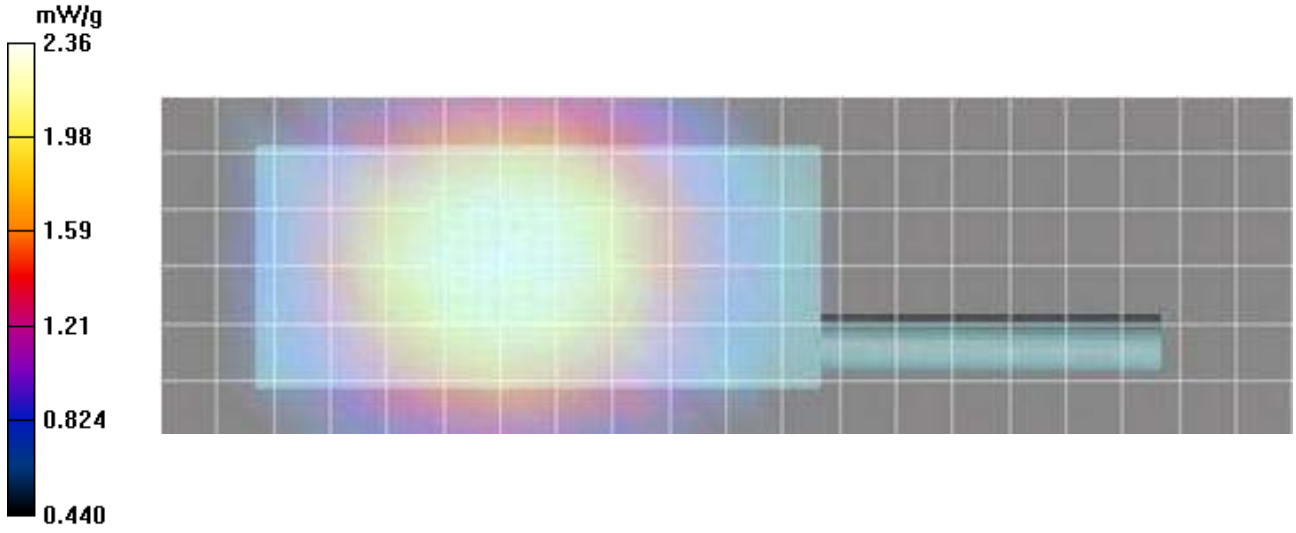
- Probe: EX3DV4 - SN3600; ConvF(8.55, 8.55, 8.55); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F35 Head XL-200, 776MHz 506-2 SYS/Area Scan (7x27x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.44 mW/g

F35 Head XL-200, 776MHz 506-2 SYS/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 24.8 V/m; Power Drift = -0.411 dB
Peak SAR (extrapolated) = 2.83 W/kg
SAR(1 g) = 2.25 mW/g; SAR(10 g) = 1.71 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.36 mW/g



APPENDIX E – DIPOLE CALIBRATION

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **Celltech**

Certificate No: D835V2-4d075_Apr15

CALIBRATION CERTIFICATE

Object	D835V2 - SN: 4d075
Calibration procedure(s)	QA CAL-05.v9 Calibration procedure for dipole validation kits above 700 MHz
Calibration date:	April 23, 2015

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	07-Oct-14 (No. 217-02020)	Oct-15
Power sensor HP 8481A	US37292783	07-Oct-14 (No. 217-02020)	Oct-15
Power sensor HP 8481A	MY41092317	07-Oct-14 (No. 217-02021)	Oct-15
Reference 20 dB Attenuator	SN: 5058 (20k)	01-Apr-15 (No. 217-02131)	Mar-16
Type-N mismatch combination	SN: 5047.2 / 06327	01-Apr-15 (No. 217-02134)	Mar-16
Reference Probe ES3DV3	SN: 3205	30-Dec-14 (No. ES3-3205_Dec14)	Dec-15
DAE4	SN: 601	18-Aug-14 (No. DAE4-601_Aug14)	Aug-15

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-13)	In house check: Oct-16
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-14)	In house check: Oct-15

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 24, 2015

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.9 ± 6 %	0.94 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**9.30 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.56 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.07 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.4 ± 6 %	1.01 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.42 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**9.40 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.59 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**6.21 W/kg ± 16.5 % (k=2)**

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.2 Ω - 2.0 jΩ
Return Loss	- 32.8 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.6 Ω - 5.1 jΩ
Return Loss	- 24.0 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.391 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	November 09, 2007

DASY5 Validation Report for Head TSL

Date: 23.04.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d075

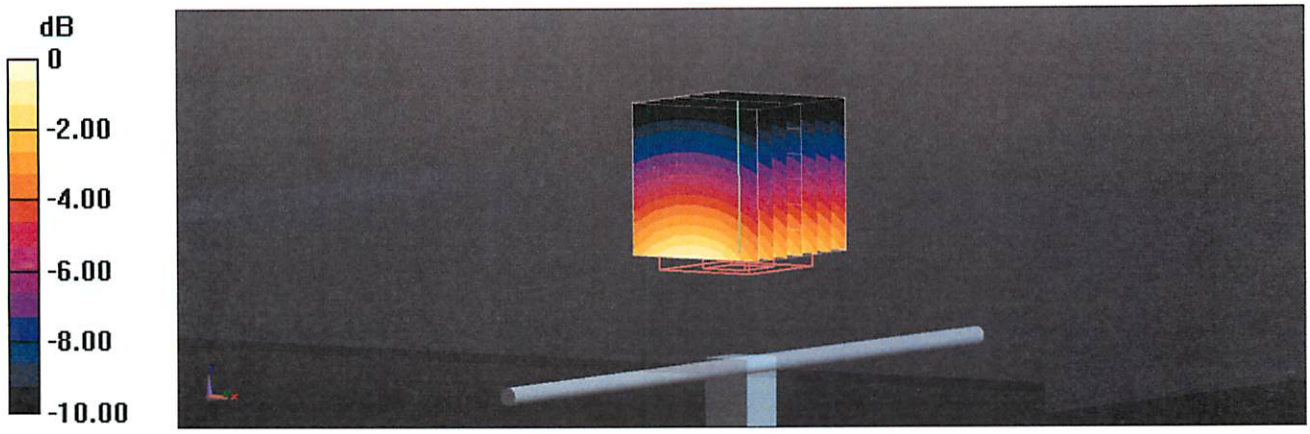
Communication System: UID 0 - CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.94 S/m; ε_r = 40.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.2, 6.2, 6.2); Calibrated: 30.12.2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

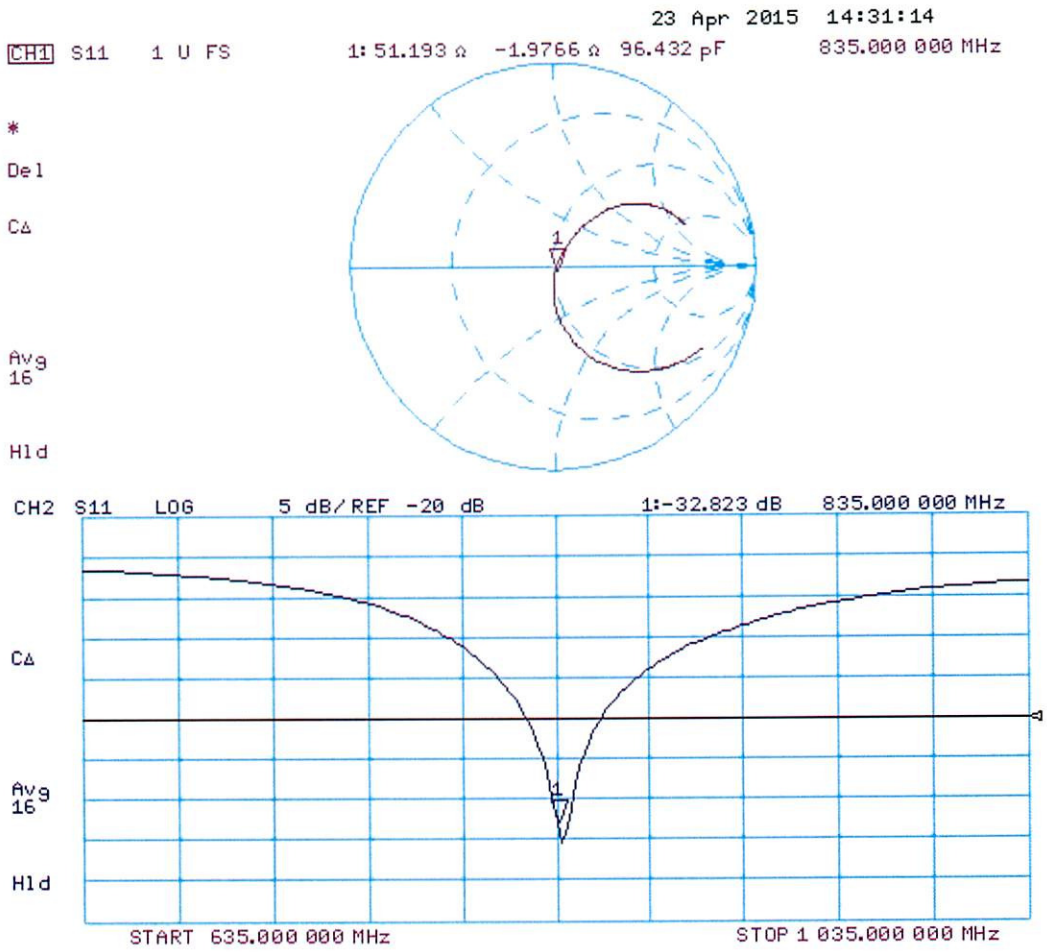
Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.90 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 3.60 W/kg
SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.56 W/kg
Maximum value of SAR (measured) = 2.82 W/kg



0 dB = 2.82 W/kg = 4.50 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 23.04.2015

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d075

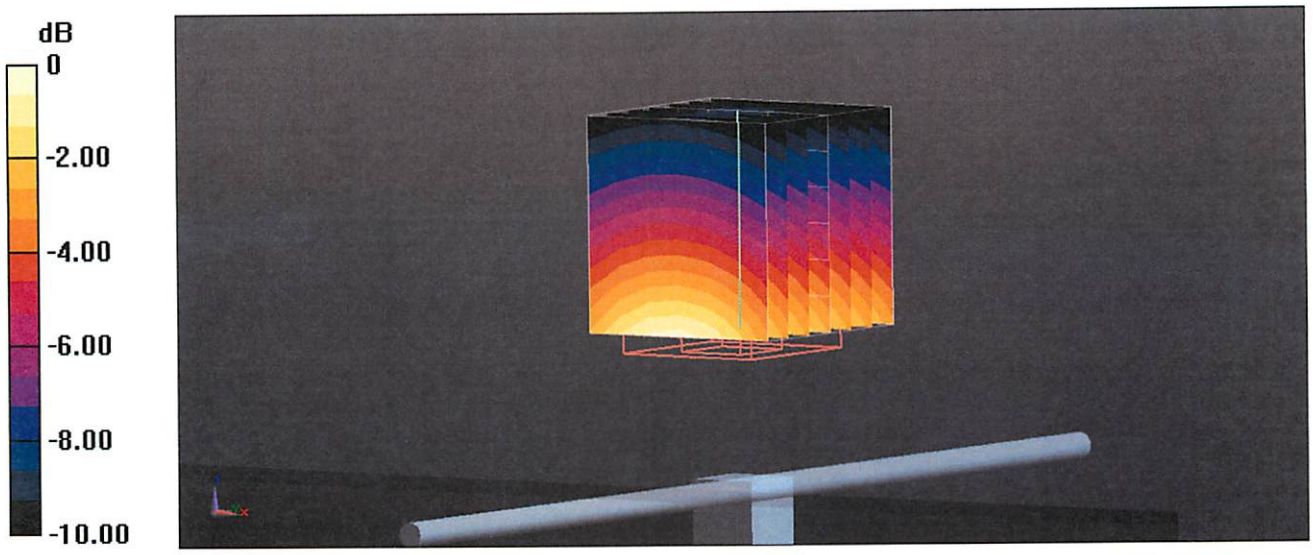
Communication System: UID 0 - CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 1.01 S/m; ε_r = 55.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.17, 6.17, 6.17); Calibrated: 30.12.2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

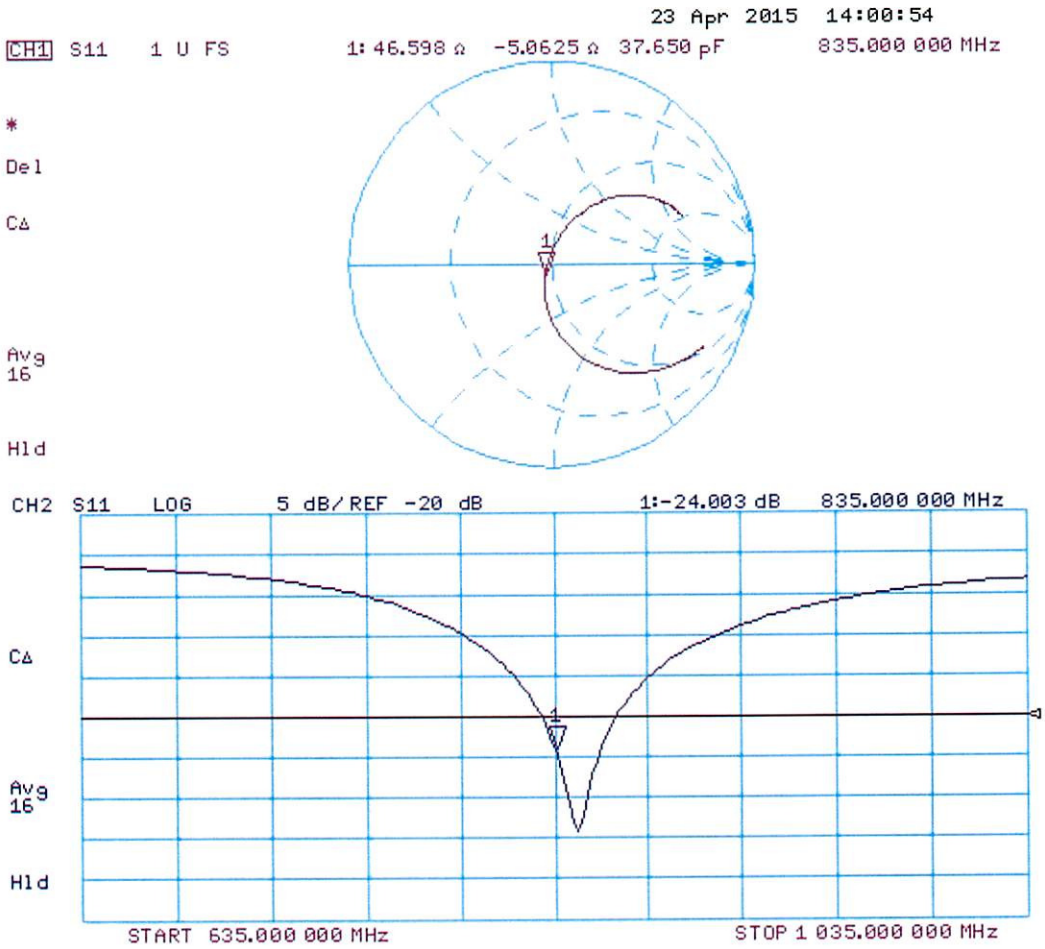
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.70 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.54 W/kg
SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.59 W/kg
Maximum value of SAR (measured) = 2.82 W/kg



0 dB = 2.82 W/kg = 4.50 dBW/kg

Impedance Measurement Plot for Body TSL



APPENDIX F – PROBE CALIBRATION

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **Celltech**

Certificate No: EX3-3600_Apr15

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:3600
Calibration procedure(s)	QA CAL-01.v9, QA CAL-12.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6 Calibration procedure for dosimetric E-field probes
Calibration date:	April 23, 2015

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	01-Apr-15 (No. 217-02128)	Mar-16
Power sensor E4412A	MY41498087	01-Apr-15 (No. 217-02128)	Mar-16
Reference 3 dB Attenuator	SN: S5054 (3c)	01-Apr-15 (No. 217-02129)	Mar-16
Reference 20 dB Attenuator	SN: S5277 (20x)	01-Apr-15 (No. 217-02132)	Mar-16
Reference 30 dB Attenuator	SN: S5129 (30b)	01-Apr-15 (No. 217-02133)	Mar-16
Reference Probe ES3DV2	SN: 3013	30-Dec-14 (No. ES3-3013_Dec14)	Dec-15
DAE4	SN: 660	14-Jan-15 (No. DAE4-660_Jan15)	Jan-16
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-13)	In house check: Apr-16
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-14)	In house check: Oct-15

	Name	Function	Signature
Calibrated by:	Israe Elnaouq	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 25, 2015

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle*: The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

Probe EX3DV4

SN:3600

Manufactured: January 10, 2007
Calibrated: April 23, 2015

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3600

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.49	0.49	0.41	± 10.1 %
DCP (mV)[B]	98.1	100.9	98.6	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc[E] (k=2)
0	CW	X	0.0	0.0	1.0	0.00	151.4	±2.7 %
		Y	0.0	0.0	1.0		158.5	
		Z	0.0	0.0	1.0		152.6	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3600

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unct. (k=2)
150	52.3	0.76	9.42	9.42	9.42	0.00	1.00	± 13.3 %
300	45.3	0.87	9.10	9.10	9.10	0.10	1.70	± 13.3 %
450	43.5	0.87	9.03	9.03	9.03	0.18	1.70	± 13.3 %
835	41.5	0.90	7.94	7.94	7.94	0.33	1.15	± 12.0 %
1900	40.0	1.40	6.70	6.70	6.70	0.30	0.80	± 12.0 %
2450	39.2	1.80	6.06	6.06	6.06	0.40	0.81	± 12.0 %
5250	35.9	4.71	4.55	4.55	4.55	0.35	1.80	± 13.1 %
5600	35.5	5.07	4.10	4.10	4.10	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.21	4.21	4.21	0.40	1.80	± 13.1 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.
[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

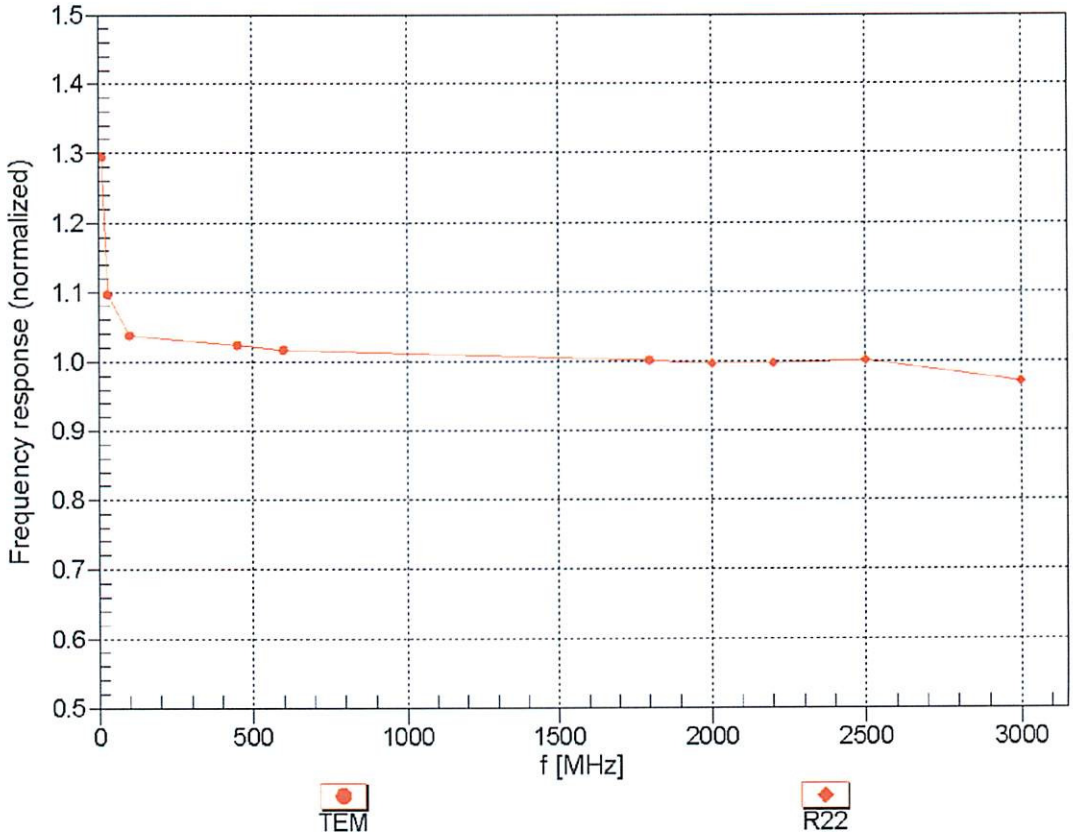
DASY/EASY - Parameters of Probe: EX3DV4 - SN:3600

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unct. (k=2)
150	61.9	0.80	8.94	8.94	8.94	0.00	1.00	± 13.3 %
300	58.2	0.92	8.89	8.89	8.89	0.08	1.20	± 13.3 %
450	56.7	0.94	8.80	8.80	8.80	0.09	1.10	± 13.3 %
835	55.2	0.97	7.73	7.73	7.73	0.21	1.50	± 12.0 %
1900	53.3	1.52	6.49	6.49	6.49	0.31	0.94	± 12.0 %
2450	52.7	1.95	6.19	6.19	6.19	0.33	0.80	± 12.0 %
5250	48.9	5.36	3.87	3.87	3.87	0.50	1.90	± 13.1 %
5600	48.5	5.77	3.25	3.25	3.25	0.55	1.90	± 13.1 %
5750	48.3	5.94	3.60	3.60	3.60	0.55	1.90	± 13.1 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.
[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

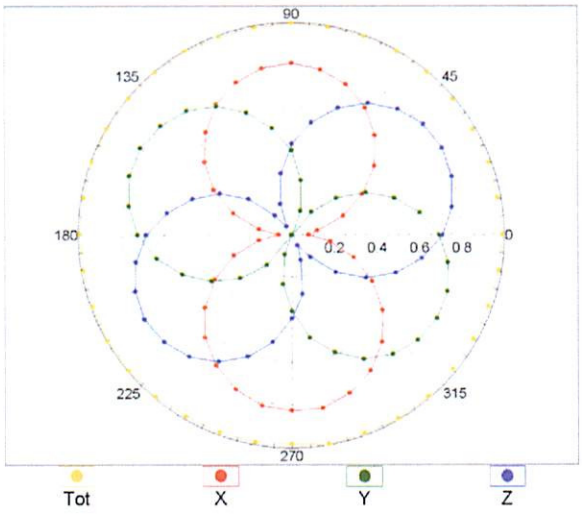
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



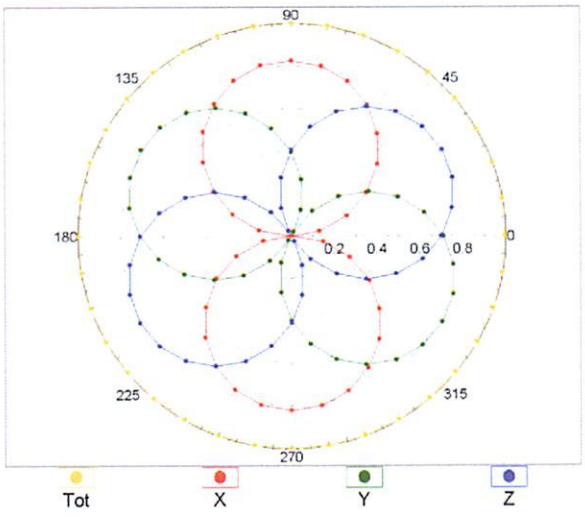
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

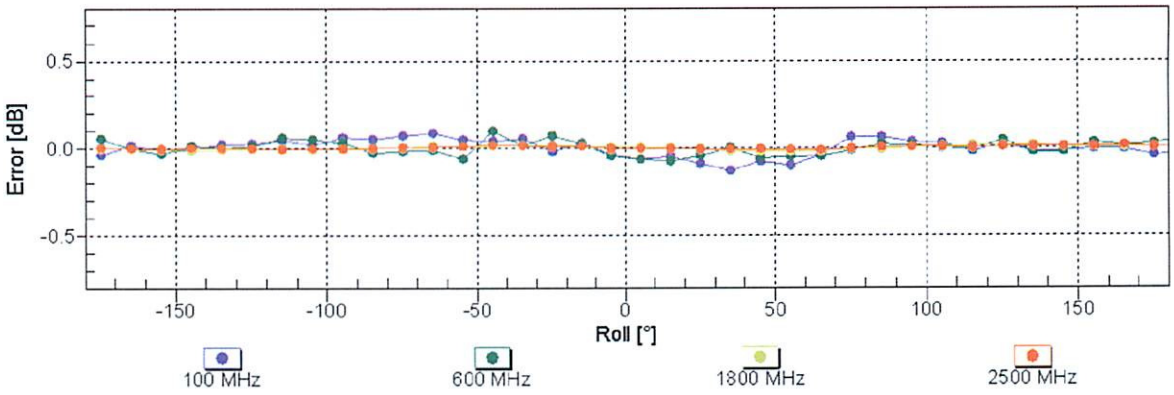
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



f=1800 MHz,R22

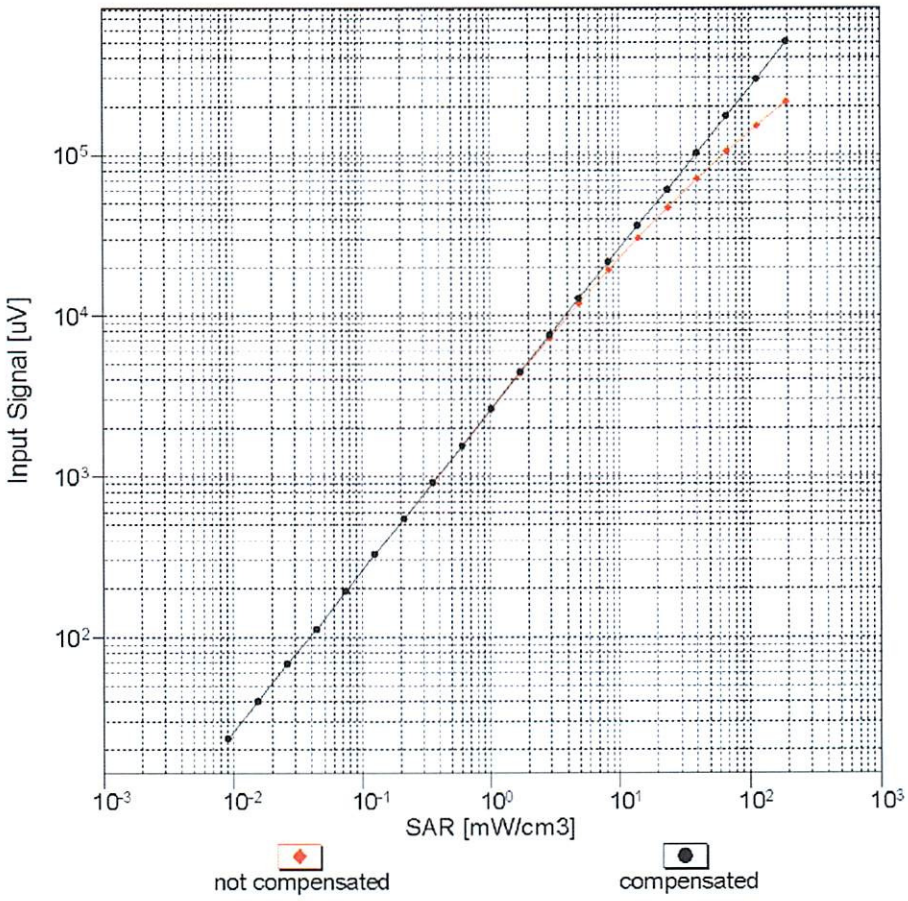


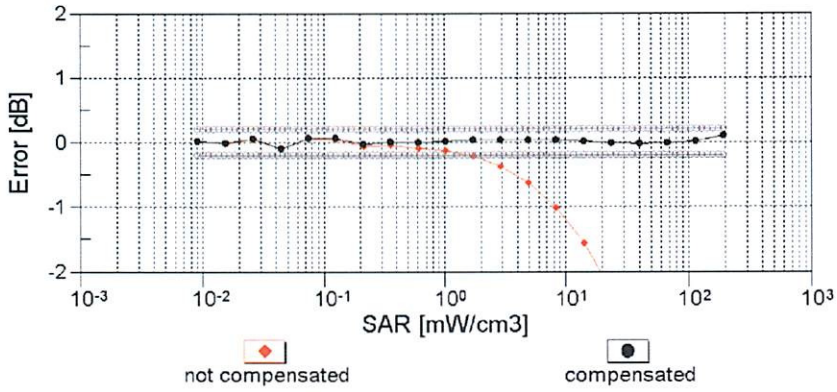


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head})

(TEM cell , f_{eval}= 1900 MHz)

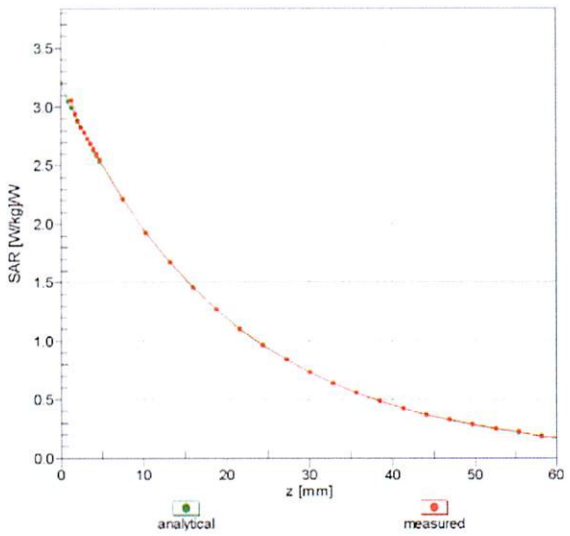




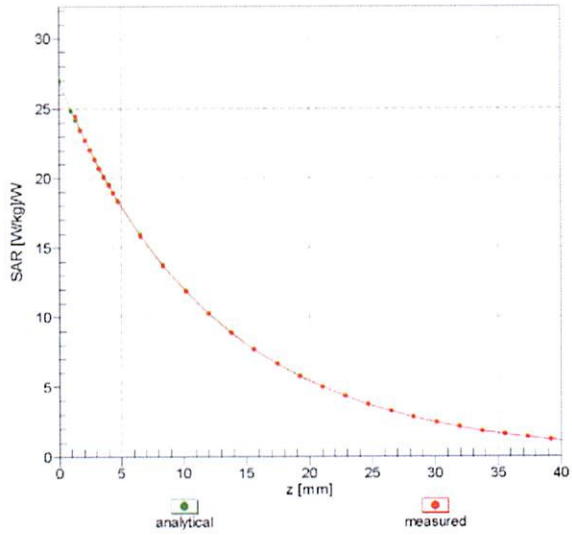
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment

f = 835 MHz,WGLS R9 (H_convF)

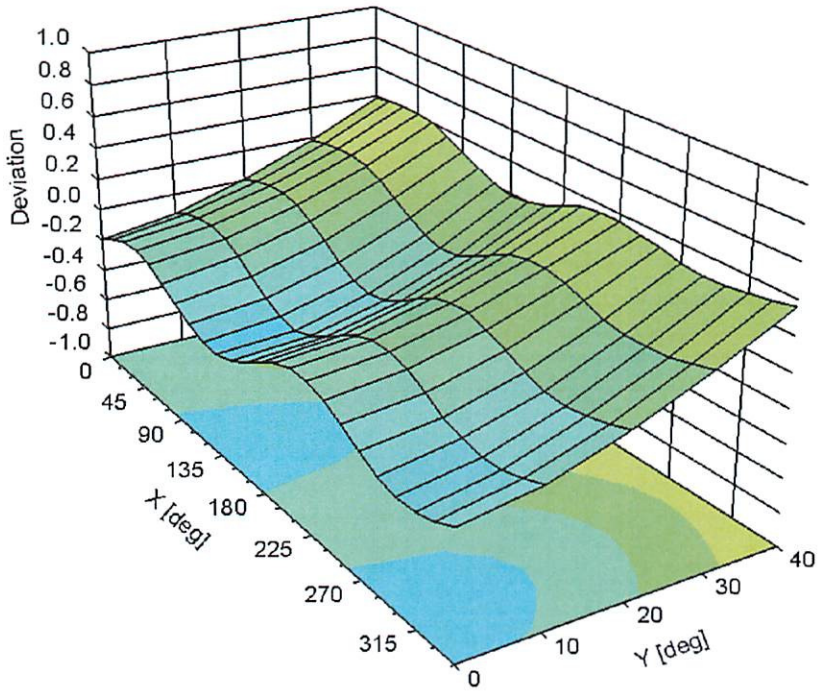


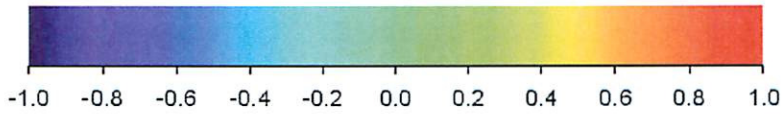
f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3600

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	35.3
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

APPENDIX G – PHANTOM COC

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Certificate of Conformity / First Article Inspection

Item	Oval Flat Phantom ELI 5.0
Type No	QD OVA 002 A
Series No	1108 and higher
Manufacturer	Untersee Composites Knebelstrasse 8, CH-8268 Mannenbach, Switzerland

Tests
Complete tests were made on the prototype units QD OVA 001 A, pre-series units QD OVA 001 B as well as on some series units QD OVA 001 B. Some tests are made on all series units QD OVA 002 A.

Test	Requirement	Details	Units tested
Shape	Internal dimensions, depth and sagging are compatible with standards	Bottom elliptical 600 x 400 mm, Depth 190 mm, dimension compliant with [1] for f > 375 MHz	Prototypes
Material thickness	Bottom: 2.0mm +/- 0.2mm	dimension compliant with [3] for f > 800 MHz	all
Material parameters	rel. permittivity 2 – 5, loss tangent ≤ 0.05, at f ≤ 6 GHz	rel. permittivity 3.5 +/- 0.5 loss tangent ≤ 0.05	Material samples
Material resistivity	Compatibility with tissue simulating liquids .	Compatible with SPEAG liquids. **	Phantoms, Material sample
Sagging	Sagging of the flat section in tolerance when filled with tissue simulating liquid.	within tolerance for filling height up to 155 mm	Prototypes, samples

** Note: Compatibility restrictions apply certain liquid components mentioned in the standard, containing e.g. DGBE, DGMHE or Triton X-100. Observe technical note on material compatibility.

Standards
[1] OET Bulletin 65, Supplement C, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 01-01
[2] IEEE 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
[3] IEC 62209–1 ed1.0, "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", 2005-02-18
[4] IEC 62209–2 ed1.0, "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", 2010-03-30

Conformity
Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of **body-worn** SAR measurements and system performance checks as specified in [1 – 4] and further standards.

Date 25.7.2011

Signature / Stamp

s p e a g
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