DECLARATION OF COMPLIANCE		SAR RF EXPOSURE EVALUATION				FCC & IC
Test Lab Information	**Name**	**CELLTECH LABS INC.**				
	Address	21-364 Lougheed Road, Kelowna, B.C. V1X 7R8 Canada				
Test Lab Accreditation(s)	**ISO 17025**	A2LA Test Lab Certificate No. 2470.01				
Applicant Information	**Name**	**SEPURA PLC**				
	Address	Radio House, St. Andrews Road, Cambridge, UK, CB4 1GR				
Standard(s) Applied	**FCC**	47 CFR §2.1093				
	IC	Health Canada Safety Code 6				
Procedure(s) Applied	**FCC**	KDB 447498 D01v05r02		**IEEE**	1528-2013	
	IC	RSS-102 Issue 4		**IEC**	62209-1:2005; 62209-2:2010	
Device Classification(s)	**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 Identifier(s) Model STP-9080	**FCC ID:**	XX6STP9080		**IC:**	8739A-STP9080	
Device Identifier(s) Model STP9280	**FCC ID:**	XX6STP9280		**IC:**	8739A-STP9280	
Date of Sample Receipt	July 28, 2014					
Dates of Evaluation	August 11-18, 2014					
Device Description	Portable Tetra Radio Transceiver					
Device Model(s)	Model: STP-9080	Normal Variant w/ Bluetooth				
	Model: STP-9280	Reduced Keypad w/o Bluetooth				
	Note: Manufacturer states that model variants are mechanically similar and RF circuitry is identical.					
Transmit Frequency Range(s)	FCC/IC 809-824, 854-869MHz					
Manufacturer's Rated Output Power	32.5 dBm @100% Duty Cycle – Normal operating duty cycle:1 slot in 4, ~25% duty cycle max.					
Co-located Transmitter(s)	Bluetooth (2.5mW, Class 2)					
Antenna Type(s) Tested	See manufacturer's accessory listing (Section 5.0)					
Battery Type(s) Tested	See manufacturer's accessory listing (Section 5.0)					
Body-worn Accessories Tested	See manufacturer's accessory listing (Section 5.0)					
Audio Accessories Tested	See manufacturer's accessory listing (Section 5.0)					
Max. SAR Level(s) Evaluated FCC	Face	**0.353 W/kg**	1g	50% PTT duty factor	Occupational/Controlled	
	Head	**1.050 W/kg**	1g	50% PTT duty factor	Occupational/Controlled	
	Body	**1.008 W/kg**	1g	50% PTT duty factor	Occupational/Controlled	
Max. SAR Level(s) Evaluated IC	Face	**0.354 W/kg**	1g	50% PTT duty factor	Occupational/Controlled	
	Head	**1.133 W/kg**	1g	50% PTT duty factor	Occupational/Controlled	
	Body	**1.008 W/kg**	1g	50% PTT duty factor	Occupational/Controlled	
FCC/IC Spatial Peak SAR Limit	Head/Body	8 W/kg	1g	50% PTT duty factor	Occupational/Controlled	

Celltech Labs Inc. declares under its sole responsibility that this wireless portable device has demonstrated compliance with the Specific Absorption Rate (SAR) RF exposure requirements 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 OET KDB 865664, Industry Canada RSS-102 Issue 4, IEEE Standard 1528-2013 and IEC International Standard 62209-2:2010. All measurements were performed in accordance with the SAR system manufacturer recommendations.

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

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

Test Report Approved By		Art Voss	Engineer	Celltech Labs Inc.

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REVISION HISTORY			
REVISION NO.	**DESCRIPTION**	**IMPLEMENTED BY**	**RELEASE DATE**
1.0	Initial Release	Art Voss	August 21, 2014
1.1	Corrected Exposure limits and SAR adjustments	Art Voss	August 22, 2014
1.2	Final Release	Art Voss	September 4, 2014

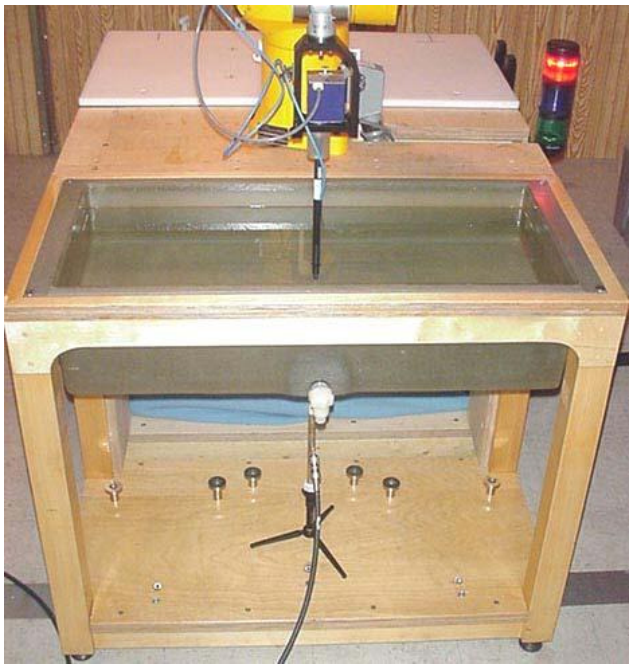
TEST REPORT SIGN-OFF			
DEVICE TESTED BY	**REPORT PREPARED BY**	**QA REVIEW BY**	**REPORT APPROVED BY**
Art Voss	Art Voss	Art Voss	Art Voss

1.0 INTRODUCTION

This measurement report demonstrates that the Sepura plc Models: STP-9080 and STP-9280 Portable TETRA Radio Transceivers comply with the SAR (Specific Absorption Rate) RF exposure requirements specified in FCC 47 CFR §2.1093 (see reference [1]) and Health Canada's Safety Code 6 (see reference [2]) for the Occupational / Controlled Exposure environment. The measurement procedures described in FCC KDB 865664 (see reference [3]), IC RSS-102 Issue 4 (see reference [4]), IEEE Standard 1528-2013 (see reference [5]) and IEC 62209-2:2010 (see reference [6]) were employed. A description of the device, operating configuration, detailed summary of the test results, methodology and procedures used in the evaluation, equipment used and the various provisions of the rules are included within this test report.

2.0 SAR MEASUREMENT SYSTEM

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



DASY4 SAR System with Barski Fiberglas Planar Phantom

DASY4 Measurement Server

3.0 RF CONDUCTED OUTPUT POWER MEASUREMENTS

MEASURED CONDUCTED OUTPUT POWER

Freq (MHz)	Mode	STP-9080 dBm	STP-9180 dBm	STP-9280 dBm	Rated dBm
806	100% DC	32.9	32.9	32.3	32.5
809	100% DC	32.9	32.9	32.3	32.5
815.5	100% DC	32.9	32.9	32.3	32.5
824	100% DC	32.9	32.9	32.3	32.5
825	100% DC	32.9	32.9	32.3	32.5
851	100% DC	32.85	32.9	32.2	32.5
854	100% DC	32.85	32.9	32.2	32.5
860.5	100% DC	32.85	32.85	32.15	32.5
869	100% DC	32.85	32.85	32.15	32.5
870	100% DC	32.85	32.85	32.15	32.5
Note: All channels were test at 100% TETRA Duty Cycle					
Note: Max normal operating TETRA duty cycle: 1 time slot in 4 = 25%					

4.0 NO. OF TEST CHANNELS (N_c)

Antenna Part No.		Antenna Type	Antenna Freq. Range	N_c	Test Frequencies (MHz)
1	300-00498	Stub	806 – 870 MHz	4	809, 824, 854, 869
Note: The number of test channels (*Nc*) were calculated in accordance with the procedures specified in FCC KDB 447498 (see reference [8]).					

5.0 MANUFACTURER'S DISCLOSED ACCESSORY LISTING

Accessory ID # for Test Report	ACCESSORY CATEGORY: ANTENNA		
	Part Number	**Description**	**SAR Evaluation**
1	300-00498	Stub (806-870 MHz)	Yes
Accessory ID # for Test Report	**ACCESSORY CATEGORY: BATTERY**		
	Part Number	**Description**	**SAR Evaluation**
-00634	300-00634	Li-Poly battery, 7.4V, 1280mAh	Yes
-00365	300-00635	Li-Poly battery, 7.4V, 1880mAh	Yes
Accessory ID # for Test Report	**ACCESSORY CATEGORY: BODY-WORN**		
	Part Number	**Description**	**SAR Evaluation**
BC	300-00442	Belt-Clip (Contains metal)	Yes
BL	300-00440	Soft Leather Case (Contains metal)	Yes
BB	300-00233	Rugged Leather Case (Contains metal)	Yes
BD	300-00439	Rugged Leather Case w/ Stud (Contains metal)	Yes
Accessory ID # for Test Report	**ACCESSORY CATEGORY: AUDIO**		
	Part Number	**Description**	**SAR Evaluation**
1	300-00388	Advanced RSM Speaker MIC w/ Antenna Port	Yes

Note:
Manufacturer's disclosed accessory listing information provided by Sepura.

6.0 FLUID DIELECTRIC PARAMETERS

FLUID DIELECTRIC PARAMETERS

Date: 08/11/2014		Frequency: 835 MHz			Tissue: Head	
Freq	Test_e	Test_s	Target_e	Target_s	Deviation Permittivity	Deviation Conductivity
735	43.16	0.78	42.02	0.89	2.71%	-12.36%
745	42.92	0.78	41.97	0.89	2.26%	-12.36%
755	42.76	0.80	41.92	0.89	2.00%	-10.11%
765	42.61	0.81	41.86	0.89	1.79%	-8.99%
775	42.43	0.81	41.81	0.90	1.48%	-10.00%
785	42.31	0.83	41.76	0.90	1.32%	-7.78%
795	42.44	0.85	41.71	0.90	1.75%	-5.56%
805	42.31	0.86	41.66	0.90	1.56%	-4.44%
806	42.31	0.86	41.65	0.90	1.58%	-4.33%
809	42.32	0.86	41.64	0.90	1.64%	-4.00%
815	42.33	0.87	41.60	0.90	1.75%	-3.33%
815.5	42.33	0.87	41.60	0.90	1.76%	-3.28%
824	42.35	0.88	41.56	0.90	1.91%	-2.33%
825	42.35	0.88	41.55	0.90	1.93%	-2.22%
835	42.33	0.89	41.50	0.90	2.00%	-1.11%
845	42.13	0.90	41.50	0.91	1.52%	-1.10%
851	42.01	0.90	41.50	0.92	1.23%	-1.75%
854	41.95	0.90	41.50	0.92	1.08%	-2.07%
855	41.93	0.90	41.50	0.92	1.04%	-2.17%
860.5	41.77	0.91	41.50	0.93	0.65%	-2.16%
865	41.64	0.91	41.50	0.93	0.34%	-2.15%
869	41.74	0.91	41.50	0.93	0.58%	-1.67%
870	41.53	0.91	41.50	0.94	0.07%	-2.67%
875	41.42	0.91	41.50	0.94	-0.19%	-3.19%
885	41.16	0.93	41.50	0.95	-0.82%	-2.11%
895	41.01	0.94	41.50	0.96	-1.18%	-2.08%
905	40.99	0.95	41.50	0.97	-1.23%	-2.06%
915	41.08	0.97	41.50	0.98	-1.01%	-1.02%
925	40.99	0.98	41.48	0.98	-1.18%	0.00%
935	41.21	0.99	41.46	0.99	-0.60%	0.00%

**interpolated using DASY4 software*

Test Date	Fluid Type	Ambient Temperature	Fluid Temperature	Fluid Depth	Atmospheric Pressure	Relative Humidity	ρ (Kg/m^3)
Aug 11	835 Head	25°C	23.1°C	≥ 15 cm	101.5 kPa	32%	1000

FLUID DIELECTRIC PARAMETERS

Date: 08/15/2014		Frequency: 835 MHz			Tissue: Body	
Freq	Test_e	Test_s	Target_e	Target_s	Deviation Permittivity	Deviation Conductivity
735	53.32	0.85	55.59	0.96	-4.08%	-11.46%
745	53.01	0.87	55.55	0.96	-4.57%	-9.38%
755	53.00	0.87	55.51	0.96	-4.52%	-9.38%
765	52.81	0.89	55.47	0.96	-4.80%	-7.29%
775	52.69	0.91	55.43	0.97	-4.94%	-6.19%
785	52.53	0.92	55.39	0.97	-5.16%	-5.15%
795	52.43	0.93	55.36	0.97	-5.29%	-4.12%
805	52.22	0.94	55.32	0.97	-5.60%	-3.09%
809	52.20	.094	55.30	0.97	-5.62%	-2.68%
815	52.16	0.95	55.28	0.97	-5.64%	-2.06%
824	52.11	0.96	55.24	0.97	-5.68%	-1.13%
825	52.10	0.96	55.24	0.97	-5.68%	-1.03%
835	51.97	0.97	55.20	0.97	-5.85%	0.00%
845	51.83	0.98	55.17	0.98	-6.05%	0.00%
854	51.57	0.99	55.14	0.99	-6.48%	0.00%
855	51.54	0.99	55.14	0.99	1.91%	-2.33%
865	51.51	0.99	55.11	1.01	1.93%	-2.22%
869	51.46	1.00	55.10	1.01	-6.60%	-1.58%
875	51.39	1.01	55.08	1.02	2.00%	-1.11%
885	51.28	1.02	55.05	1.03	1.52%	-1.10%
895	51.05	1.03	55.02	1.04	1.23%	-1.75%
905	51.11	1.04	55.00	1.05	1.08%	-2.07%
915	50.95	1.05	55.00	1.06	1.04%	-2.17%
925	50.92	1.07	54.98	1.06	0.65%	-2.16%
935	50.79	1.08	54.96	1.07	0.34%	-2.15%

Test Date	Fluid Type	Ambient Temperature	Fluid Temperature	Fluid Depth	Atmospheric Pressure	Relative Humidity	ρ (Kg/m^3)
Aug 15	835 Body	23°C	23.0°C	≥ 15 cm	101.5 kPa	46%	1000

7.0 SAR MEASUREMENT SUMMARY

Table 1	SAR EVALUATION RESULTS							
Test Config.	Plot #	Model Variant	Test Freq.	Battery	Antenna	Position	Measured SAR 50% PTT	SAR Drift During Test
			MHz				1g (W/kg)	dB
Face	F1	STP9080	806	-00634	-00498	25mm	0.292	-0.136
	F2	STP9080	806	-00635	-00498	25mm	0.292	-0.312
	F3	STP9080	815.5	-00635	-00498	25mm	0.295	-0.201
	F4	STP9080	825	-00635	-00498	25mm	0.312	-0.363
	F5	STP9080	851	-00635	-00498	25mm	0.298	-0.012
	F6	STP9080	860.5	-00635	-00498	25mm	0.290	0.115
	F7	STP9080	870	-00635	-00498	25mm	0.294	0.172
	F8	STP9180	825	-00635	-00498	25mm	0.333	-0.017
	F9	STP9280	825	-00635	-00498	25mm	0.258	-0.238
	F10	STP9180	825	-00635	-00498	25mm	0.057	0.095
	F11	STP9080	809	-00635	-00498	25mm	0.299	-0.014
	F12	STP9080	824	-00635	-00498	25mm	0.313	0.073
	F13	STP9080	854	-00635	-00498	25mm	0.303	0.662
	F14	STP9080	869	-00635	-00498	25mm	0.321	-0.116
	F15	STP9280	869	-00635	-00498	25mm	0.244	-0.342

SAR LIMIT(S)	HEAD / BODY	SPATIAL PEAK	RF EXPOSURE CATEGORY
FCC 47 CFR 2.1093 / Health Canada Safety Code 6	8.0 W/kg	averaged over 1 gram	Occupational/Controlled

Notes

1. Detailed measurement plots showing the maximum SAR location of the DUT are reported in Appendix A.
2. The DUT was tested at the maximum duty cycle of 1 time slot (~25%).
3. The STP-9180 and STP-9280 model variant was tested in the worst case configuration.

Table 2 — SAR EVALUATION RESULTS

Test Config.	Plot #	Model Variant	Test Freq.	Battery	Antenna	Position	Measured SAR 50% PTT	SAR Drift During Test
			MHz				1g (W/kg)	dB
Head	H1	STP9080	824	-00635	-00498	L-Touch	0.775	0.042
	H2	STP9080	869	-00635	-00498	L-Touch	0.870	-0.181
	H3	STP9080	869	-00635	-00498	L-Tilt	0.965	-0.171
	H4	STP9180	869	-00635	-00498	L Tilt	0.985	-0.027
	H5	STP9280	869	-00635	-00498	L Tilt	0.845	0.053
	H6	STP9080	824	-00635	-00498	R-Touch	0.775	0.234
	H7	STP9080	869	-00635	-00498	R-Touch	0.885	-0.123
	H8	STP9080	869	-00635	-00498	R-Tilt	0.870	0.306
	H9	STP9180	869	-00635	-00498	R-Touch	0.950	-0.333
	H10	STP9280	869	-00635	-00498	R Touch	0.735	0.309

SAR LIMIT(S)	HEAD / BODY	SPATIAL PEAK	RF EXPOSURE CATEGORY
FCC 47 CFR 2.1093 / Health Canada Safety Code 6	8.0 W/kg	averaged over 1 gram	Occupational/Controlled

Notes

1. Detailed measurement plots showing the maximum SAR location of the DUT are reported in Appendix A.
2. The DUT was tested at the maximum duty cycle of 1 time slot (~25%).
3. The STP-9180 and STP-9280 model variant was tested in the worst case configuration.

Table 3 — SAR EVALUATION RESULTS

Test Config.	Plot #	Model Variant	Test Freq.	Battery	Antenna	Accessories		Distance to Phantom		Measured SAR 50% PTT	SAR Drift During Test
			MHz			Body	Audio	DUT	Ant.	1g (W/kg)	dB
BODY	B14	STP9080	809	-00634	-00498	BC	n/a	15mm	35mm	0.555	-0.299
	B15	STP9080	809	-00635	-00498	BC	n/a	15mm	35mm	0.585	-0.047
	B16	STP9080	809	-00635	-00498	BB	n/a	15mm	35mm	0.760	-0.175
	B17	STP9080	809	-00634	-00498	BL	n/a	20mm	40mm	0.520	0.003
	B18	STP9080	809	-00634	-00498	BL	n/a	15mm	35mm	0.690	0.072
	B19	STP9080	809	-00634	-00498	BD	n/a	20mm	40mm	0.426	-0.109
	B20	STP9080	824	-00634	-00498	BB	n/a	15mm	35mm	0.815	-0.140
	B21	STP9080	854	-00634	-00498	BB	n/a	15mm	35mm	0.825	0.031
	B22	STP9080	869	-00634	-00498	BB	n/a	15mm	35mm	0.975	0.074
	B23	STP9280	869	-00634	-00498	BB	n/a	15mm	35mm	0.765	0.238
	B24	STP9080	869	-00634	-00498	n/a	1	15mm	35mm	0.140	-0.198

SAR LIMIT(S)	HEAD / BODY	SPATIAL PEAK	RF EXPOSURE CATEGORY
FCC 47 CFR 2.1093 / Health Canada Safety Code 6	8.0 W/kg	averaged over 1 gram	Occupational/Controlled

Notes

1. Detailed measurement plots showing the maximum SAR location of the DUT are reported in Appendix A.
2. The DUT was tested at the maximum duty cycle of 1 time slot (~25%).
3. The STP-9180 and STP-9280 model variant was tested in the worst case configuration.

8.0 SAR SCALING

Scaling of Maximum Measured SAR

Plot ID	Configuration	Freq	Measured FIluid Deviation		Measured Conducted Power	Measured Drift	Measured SAR
		(MHz)	Permitivity	Conductivity	(dBm)	(dBm)	(W/kg)
F8	Face	825	1.93%	2.22%	32.9	-0.017	0.333
H9	Head	869	0.59%	1.93%	32.9	-0.333	0.950
B22	Body	869	-6.60%	-1.58%	32.9	+0.074	0.975

Step 1

Fluid Sensitivity Adjustment (1)

Plot ID	Measured SAR	x	Scale Factor	=	Adjusted SAR
	(W/kg)		(%)		(W/kg)
F8	0.333	x	n/a	=	**0.333**
H9	0.950	x	n/a	=	**0.950**
B22	0.975	x	0.27% (1.0027)	=	**0.978**

Step 2

Manufacturer's Tune-Up Tolerance (2)

Plot ID	Measured Conducted	Rated Conducted	Delta	+	Adjusted SAR	=	Reported SAR
	Power (dBm)	Power (dBm)	(dB)		(W/kg)		(W/kg)
F8	32.9	32.5	+0.4	+	**0.333**	=	**0.333**
H9	32.9	32.5	+0.4	+	**0.950**	=	**0.950**
B22	32.9	32.5	+0.4	+	**0.978**	=	**0.978**

Step 3

Simultaneous Transmission (3) - Bluetooth

Plot ID	Output Power	Freq	Separation Distance	Estimated SAR	+	Reported SAR	=	Simultaneous Reported SAR
	Pmax (mW)	(GHz)	(mm)	(W/kg)		(W/kg)		(W/kg)
F8	2.5	2.45	25	.02	+	**0.333**	=	**0.353**
H9	2.5	2.45	5	.1	+	**0.950**	=	**1.050**
B22	2.5	2.45	15	.03	+	**0.978**	=	**1.008**

Step 4 (IC/EU/AU)

Drift Adjustment (4)

Plot ID	Measured	+	Reported or Simultaneous Reported SAR	=	Scaled
	Drift (dBm)		(W/kg)		SAR (W/kg)
F8	-0.017	+	**0.353**	=	0.354
H9	-0.333	+	**1.050**	=	1.133
B22	+0.074	+	**1.008**	=	1.008

Notes
(1) Per IEC-62209-1. Scaling required only when Measured Fluid Deviation is greater than 5% and only when the 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 DETAILS OF SAR EVALUATION

1. The number of test frequencies and the test channels selected for the SAR evaluations are in accordance with the procedures described in FCC KDB 447498 (see reference [8]).
2. The STP-9080 was selected as the worst case model variant due to the larger capacity battery. The STP-9280 model variant was evaluated for the worst case configuration only.
3. The SAR evaluations were performed with a fully charged battery.
4. The SAR drift of the DUT was measured by the DASY4 system for the duration of the SAR evaluations.
5. The fluid temperature remained within +/-2°C from the fluid dielectric parameter measurement to the completion of the SAR evaluation.
6. The dielectric parameters of the simulated tissue mixtures were measured prior to the SAR evaluations using a Dielectric Probe Kit and a Network Analyzer (see Appendix C).
7. The DUT utilized a software test mode to transmit at the desired frequency and the maximum power and duty cycle.

10.0 SAR EVALUATION PROCEDURES

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

(ii) For body-worn and face-held devices, a planar phantom was used.

b. The SAR was determined by a pre-defined procedure within the DASY4 software. Upon completion of a reference and optical surface check, the exposed region of the phantom was scanned near the inner surface with a grid spacing of 15mm x 15mm.

An area scan was determined as follows:

c. Based on the defined area scan grid, a more detailed grid is created to increase the points by a factor of 10. The interpolation function then evaluates all field values between corresponding measurement points.

d. A linear search is applied to find all the candidate maxima. Subsequently, all maxima are removed that are >2 dB from the global maximum. The remaining maxima are then used to position the cube scans.

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

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

f. Interpolated data is used to calculate the average SAR over 1g and 10g cubes by spatially discretizing the entire measured cube. The volume used to determine the averaged SAR is a 1mm grid (42875 interpolated points).

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

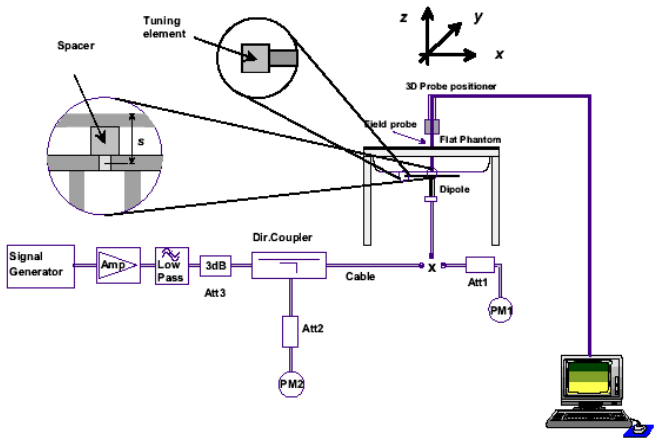
11.0 SYSTEM VERIFICATION

Prior to the SAR evaluations, system checks were performed with a SAM phantom and an 835 MHz SPEAG validation dipole (see Appendix B) in accordance with the procedures described in IEEE Standard 1528-2013 (see reference [5]). The dielectric parameters of the simulated tissue mixture were measured prior to the system performance check using a Dielectric Probe Kit and a Network Analyzer (see Appendix C). A forward power of 250 mW was applied to the dipole and the system was verified to a tolerance of ±10% from the system manufacturer's dipole calibration target SAR value (see Appendix E for system manufacturer's dipole calibration procedures).

SYSTEM PERFORMANCE CHECK EVALUATIONS

Test Date	Equiv. Tissue	SAR 1g (W/kg)			Dielectric Constant ε_r			Conductivity σ (mho/m)			ρ (Kg/m^3)	Amb. Temp. (°C)	Fluid Temp. (°C)	Fluid Depth (cm)	Humid. (%)	Barom. Press. (kPa)
	Freq. (MHz)	SPEAG Target	Meas.	Dev.	SPEAG Target	Meas.	Dev.	SPEAG Target	Meas.	Dev.						
Aug 11	Head 835	2.36 ±10%	2.55	+8.0%	41.5 ±5%	42.3	+2.0%	0.90 ±5%	0.89	-1.1%	1000	24.0	23.1	≥ 15	32	101.7
Aug 15	Body 835	2.47 ±10%	2.69	+8.1%	55.2 ±5%	51.9	-5.8%	0.97 ±5%	0.97	+0.0%	1000	22.0	23.0	≥ 15	45	101.5

Notes		
	1.	The target SAR values are the measured values from the SAR system manufacturer's dipole calibration (see Appendix E).
	2.	The target dielectric parameters are the nominal values from the SAR system manufacturer's dipole calibration (see Appendix E).
	3.	The fluid temperature was measured prior to and after the system performance check evaluations. The fluid temperature remained within +/-2°C during the system performance check evaluations.
	4.	The dielectric parameters of the simulated tissue mixture were measured prior to the system performance check using a Dielectric Probe Kit and a Network Analyzer (see Appendix C).



System Performance Check Measurement Setup (IEEE Standard 1528-2013)

SPEAG 835 MHz Validation Dipole Setup

12.0 SIMULATED EQUIVALENT TISSUES

The simulated equivalent tissue recipes in the table below are derived from the SAR system manufacturer's suggested recipes in the DASY4 manual (see references [9] and [10]) in accordance with the procedures and requirements specified in IEEE Standard 1528-2013 (see reference [5]). The ingredient percentage may have been adjusted minimally in order to achieve the appropriate target dielectric parameters within the specified tolerance.

SIMULATED TISSUE MIXTURES		
INGREDIENT	**835 MHz HEAD**	**835 MHz BODY**
Water	40.71 %	53.79 %
Sugar	56.63 %	45.13 %
Salt	1.48 %	0.98 %
HEC	0.99 %	0.0 %
Bactericide	0.19 %	0.10 %

13.0 SAR LIMITS

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

14.0 ROBOT SYSTEM SPECIFICATIONS

Specifications	
Positioner	Stäubli Unimation Corp. Robot Model: RX60L
Repeatability	0.02 mm
No. of axis	6
Data Acquisition Electronic (DAE) System	
Cell Controller	
Processor	AMD Athlon XP 2400+
Clock Speed	2.0 GHz
Operating System	Windows XP Professional
Data Converter	
Features	Signal Amplifier, multiplexer, A/D converter, and control logic
Software	Measurement Software: DASY4, V4.7 Build 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	±0.2 dB (30 MHz to 3 GHz)
Phantom	
Type	SAM V4.0C
Shell Material	Fiberglass
Thickness	2.0 ±0.1 mm
Volume	Approx. 25 liters

15.0 PROBE SPECIFICATION (ET3DV6)

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

ET3DV6 E-Field Probe

16.0 PHANTOM(S)

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

SAM Twin Phantom V4.0C

17.0 DEVICE HOLDER

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

Device Holder

18.0 TEST EQUIPMENT LIST

TEST EQUIPMENT		ASSET NO.	SERIAL NO.	DATE CALIBRATED	CALIBRATION INTERVAL
USED	DESCRIPTION				
x	Schmid & Partner DASY4 System	-	-	-	-
x	-DASY4 Measurement Server	00158	1078	CNR	CNR
x	-Robot	00046	599396-01	CNR	CNR
x	-DAE4	00019	353	9-Apr-14	Biennial
x	-EX$DV4-Field Probe	00213	3600	15-Apr-14	Annual
x	-D450V3 Validation Dipole	00221	1068	27-Apr-12**	Triennial
x	ELI Elliptical Phantom	00247	03-01	CNR	CNR
x	HP 85070C Dielectric Probe Kit	00033	none	CNR	CNR
x	Gigatronics 8652A Power Meter	00007	1835272	17-June-14	Biennial
x	Gigatronics 80701A Power Sensor	00248	1833687	18 March-14	Biennial
x	HP 8753ET Network Analyzer	00134	US39170292	26-Apr-12*	Biennial
x	Rohde & Schwarz SMR20 Signal Generator	00006	100104	08-May-14	Biennial
x	Amplifier Research 5S1G4 Power Amplifier	00106	26235	CNR	CNR
x	Schmid & Partner DASY4 System	-	-	-	-
x	-DASY4 Measurement Server	00158	1078	CNR	CNR
Abbr.	CNR = Calibration Not Required				

19.0 MEASUREMENT UNCERTAINTIES

UNCERTAINTY BUDGET FOR DEVICE EVALUATION (IEC 62209-2:2010)

Source of Uncertainty	IEC 62209-2 Section	Tolerance / Uncertainty ±%	Probability Distribution	Divisor	ci 1g	ci 10g	Standard Uncertainty ±% (1g)	Standard Uncertainty ±% (10g)	V_i or V_{eff}
Measurement System									
Probe Calibration (835 MHz)	7.2.2.1	6.7	Normal	1	1	1	6.7	6.7	∞
Isotropy	7.2.2.2	4.7	Rectangular	1.732050808	1	1	2.7	2.7	∞
Boundary Effect	7.2.2.6	1	Rectangular	1.732050808	1	1	0.6	0.6	∞
Linearity	7.2.2.3	4.7	Rectangular	1.732050808	1	1	2.7	2.7	∞
Detection Limits	7.2.2.5	1	Rectangular	1.732050808	1	1	0.6	0.6	∞
Readout Electronics	7.2.2.7	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	7.2.2.8	0.8	Rectangular	1.732050808	1	1	0.5	0.5	∞
Integration Time	7.2.2.9	2.6	Rectangular	1.732050808	1	1	1.5	1.5	∞
RF Ambient Conditions	7.2.4.5	3	Rectangular	1.732050808	1	1	1.7	1.7	∞
Probe Positioner Mechanical Restrictions	7.2.3.1	0.4	Rectangular	1.732050808	1	1	0.2	0.2	∞
Probe Positioning wrt Phantom Shell	7.2.3.3	2.9	Rectangular	1.732050808	1	1	1.7	1.7	∞
Post-processing	7.2.5	1	Rectangular	1.732050808	1	1	0.6	0.6	∞
Test Sample Related									
Test Sample Positioning	7.2.3.4.3	2.9	Normal	1	1	1	2.9	2.9	12
Device Holder Uncertainty	7.2.3.4.2	3.6	Normal	1	1	1	3.6	3.6	8
Drift of Output Power (meas. SAR drift)	7.2.2.10	5	Rectangular	1.732050808	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	7.2.3.2	4	Rectangular	1.732050808	1	1	2.3	2.3	∞
SAR Correction Algorithm for deviations in permittivity and conductivity	7.2.4.3	1.2	Normal	1	1	0.81	1.2	0.97	∞
Liquid Conductivity (measured)	7.2.4.3	3.45	Normal	1	0.78	0.71	2.7	2.4	∞
Liquid Permittivity (measured)	7.2.4.3	2.14	Normal	1	0.23	0.26	0.5	0.6	∞
Liquid Permittivity - temp. uncertainty	7.2.4.4	0.27	Rectangular	1.732050808	0.78	0.71	0.1	0.1	∞
Liquid Conductivity - temp. uncertainty	7.2.4.4	0.84	Rectangular	1.732050808	0.23	0.26	0.1	0.1	∞
Combined Standard Uncertainty	**7.3.1**		**RSS**				**10.63**	**10.55**	
Expanded Uncertainty (95% Confidence Interval)	**7.3.2**		**k=2**				**21.26**	**21.10**	
Measurement Uncertainty Table in accordance with International Standard IEC 62209-2:2010									

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2

20.0 REFERENCES

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

[2] Health Canada - “Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz”, Safety Code 6: 1999.

[3] Federal Communications Commission, Office of Engineering and Technology - “SAR Measurement Requirements for 100 MHz to 6 GHz”; KDB 865664 D01v01r01: May 2013.

[4] Industry Canada - “Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)”, Radio Standards Specification RSS-102 Issue 4: March 2010.

[5] IEEE Standard 1528-2013 - “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”: April 2013.

[6] International Standard IEC 62209-2 Edition 1.0 2010-03 - “Human exposure to radio frequency fields from hand-held & body-mounted wireless communication devices - 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)”.

[7] IEC International Standard 62209-1:2005 - “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures.”

[8] Federal Communications Commission, Office of Engineering and Technology - “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”; KDB 447498 D01v05r02: February 2014.

[9] Schmid & Partner Engineering AG - DASY4 Manual V4.6, Chapter 16 Application Note, Head Tissue Recipe: Sept. 2005.

[10] Schmid & Partner Engineering AG - DASY4 Manual V4.6, Chapter 17 Application Note, Body Tissue Recipe: Sept. 2005.

[11] ISO/IEC 17025 - “General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:2005).”

[12] Federal Communications Commission - “Measurements Required: RF Power Output”; Rule Part 47 CFR §2.1046.

[13] Industry Canada - “General Requirements and Information for the Certification of Radiocommunication Equipment”, Radio Standards Specification RSS-Gen Issue 3: December 2010.

APPENDIX A - SAR MEASUREMENT PLOTS

Plot F1

Date/Time: 11/08/2014 3:00:55 PM

835 Face - Aug 11

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

Program Notes: 11 JAug 2014 Ambient Temp: 25C; Fluid Temp: 23.1C; Humidity: 32%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 806 MHz; σ = 0.861 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3

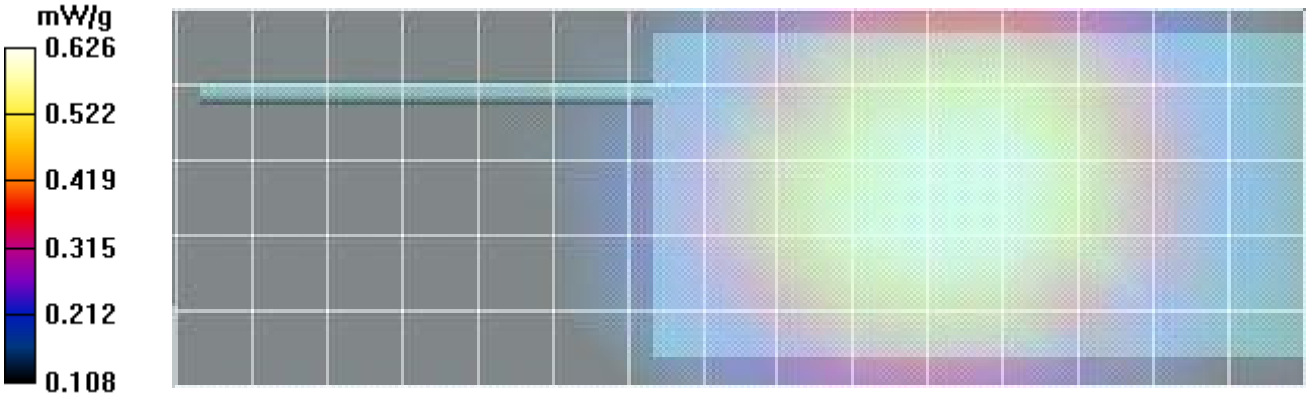
- Probe: EX3DV4 - SN3600; ConvF(8.55, 8.55, 8.55); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
-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

F1 Face 806MHz/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.603 mW/g

F1 Face 806MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 21.7 V/m; Power Drift = -0.136 dB
Peak SAR (extrapolated) = 0.754 W/kg
SAR(1 g) = 0.583 mW/g; SAR(10 g) = 0.439 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.626 mW/g



Plot F2

Date/Time: 12/08/2014 9:14:16 AM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

Procedure Notes:

Communication System: CW
Frequency: 806 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 806 MHz; σ = 0.861 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3

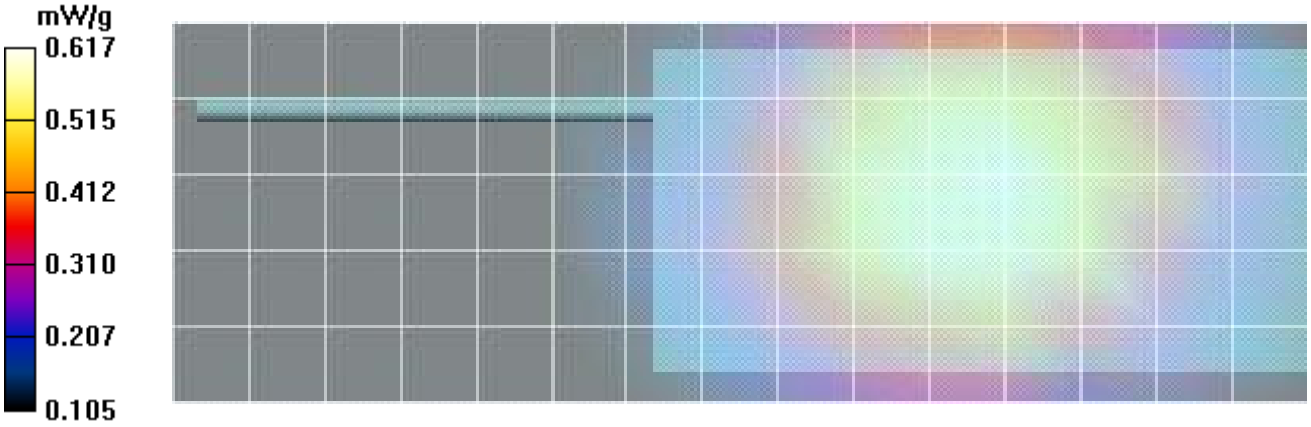
- Probe: EX3DV4 - SN3600; ConvF(8.55, 8.55, 8.55); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
-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

F2 Face 806MHz Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.613 mW/g

F2 Face 806MHz Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 20.3 V/m; Power Drift = -0.312 dB
Peak SAR (extrapolated) = 0.773 W/kg
SAR(1 g) = 0.583 mW/g; SAR(10 g) = 0.440 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.617 mW/g



Plot F3

Date/Time: 12/08/2014 9:46:01 AM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

Procedure Notes:

Communication System: CW
Frequency: 815.5 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 815.5 MHz; σ = 0.871 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3

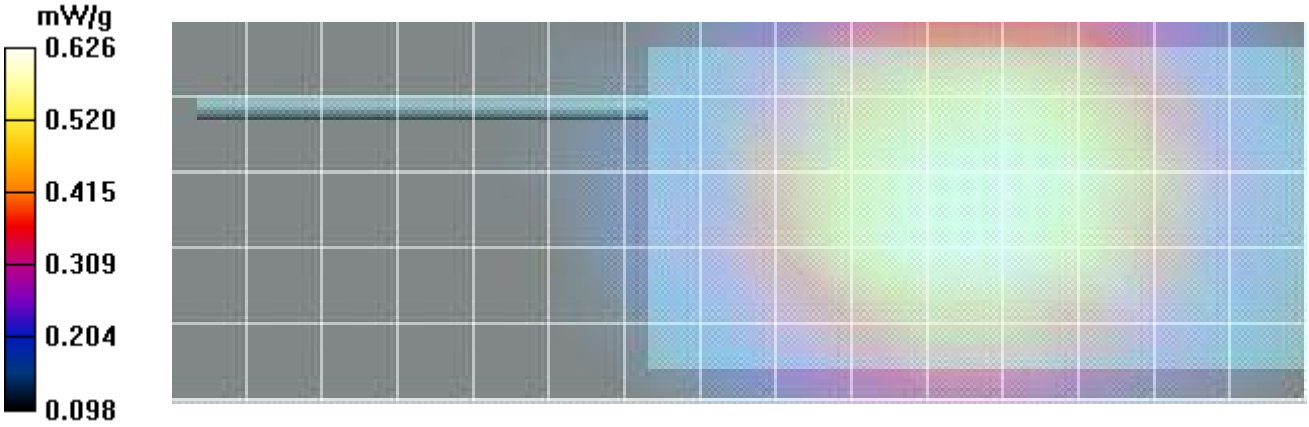
- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F3 Face 815.5MHz Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.598 mW/g

F3 Face 815.5MHz Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 19.9 V/m; Power Drift = -0.201 dB
Peak SAR (extrapolated) = 0.815 W/kg
SAR(1 g) = 0.590 mW/g; SAR(10 g) = 0.444 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.626 mW/g



Plot F4

Date/Time: 12/08/2014 10:08:17 AM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

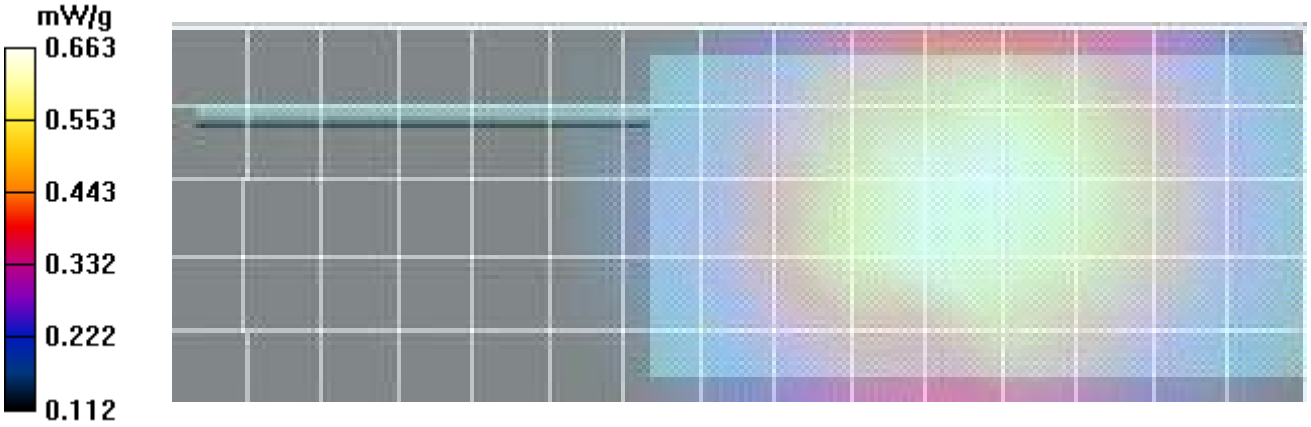
Procedure Notes:

Communication System: CW
Frequency: 825 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used: f = 825 MHz; σ = 0.88 mho/m; ε_r = 42.4; ρ = 1000 kg/m^3

- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); 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: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F4 Face 825MHz Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.659 mW/g

F4 Face 825MHz Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 20.4 V/m; Power Drift = -0.363 dB
Peak SAR (extrapolated) = 0.856 W/kg
SAR(1 g) = 0.624 mW/g; SAR(10 g) = 0.468 mW/g
Maximum value of SAR (measured) = 0.663 mW/g



Plot F5

Date/Time: 12/08/2014 10:27:19 AM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

Procedure Notes:

Communication System: CW
Frequency: 851 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 851 MHz; σ = 0.9 mho/m; ε_r = 42; ρ = 1000 kg/m^3

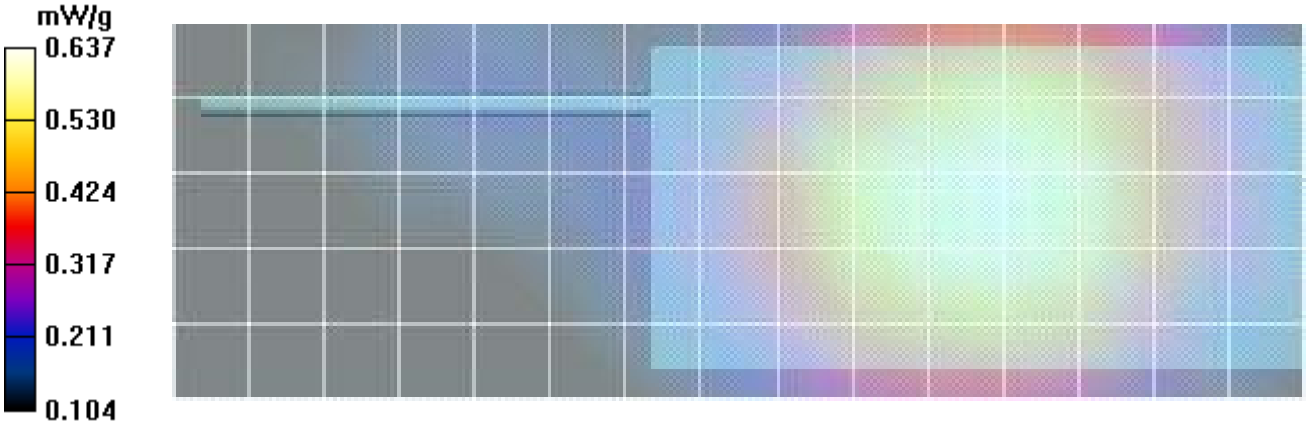
- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F5 Face 851MHz Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.645 mW/g

F5 Face 851MHz Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 19.9 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 0.748 W/kg
SAR(1 g) = 0.595 mW/g; SAR(10 g) = 0.449 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.637 mW/g



Plot F6

Date/Time: 12/08/2014 10:54:32 AM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

Procedure Notes:

Communication System: CW
Frequency: 860.5 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 860.5 MHz; σ = 0.905 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3

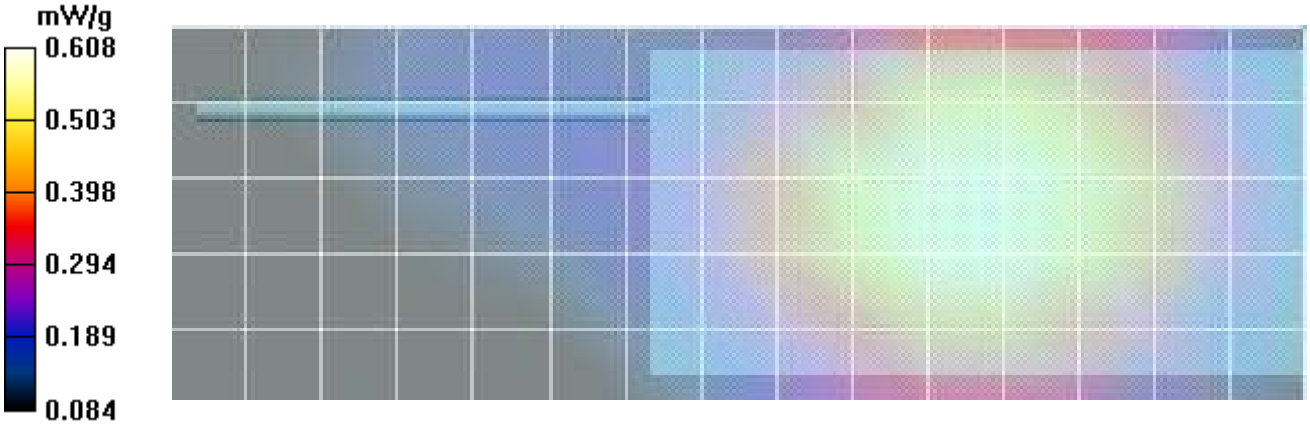
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F6 Face 860.5MHz Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.581 mW/g

F6 Face 860.5MHz Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 19.2 V/m; Power Drift = 0.115 dB
Peak SAR (extrapolated) = 0.787 W/kg
SAR(1 g) = 0.580 mW/g; SAR(10 g) = 0.424 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.608 mW/g



Plot F7

Date/Time: 12/08/2014 11:16:43 AM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

Procedure Notes:

Communication System: CW
Frequency: 870 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 870 MHz; σ = 0.91 mho/m; ε_r = 41.5; ρ = 1000 kg/m^3

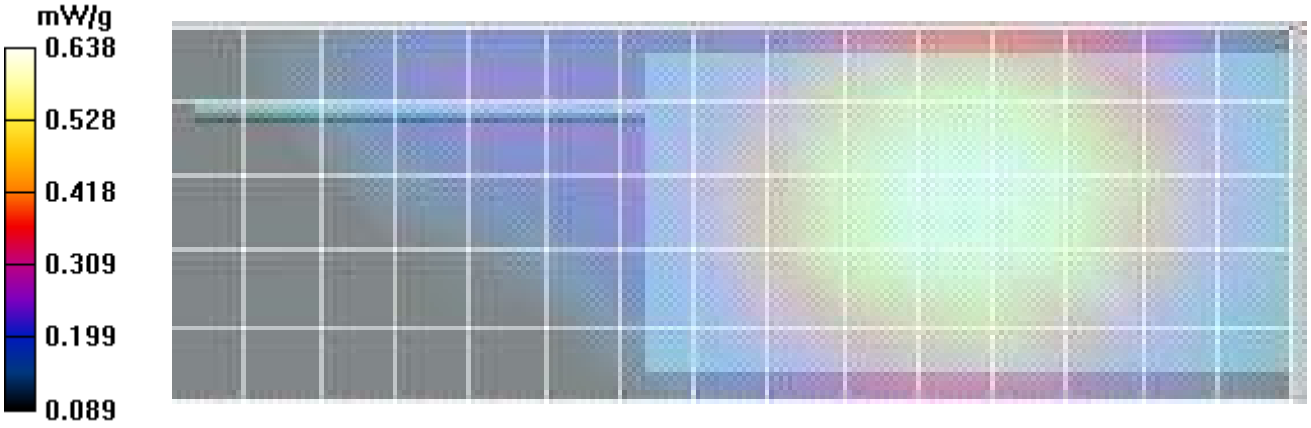
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F7 Face 870MHz Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.622 mW/g

F7 Face 870MHz Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 19.4 V/m; Power Drift = 0.172 dB
Peak SAR (extrapolated) = 0.769 W/kg
SAR(1 g) = 0.587 mW/g; SAR(10 g) = 0.438 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.638 mW/g



Plot F8

Date/Time: 12/08/2014 11:35:52 AM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

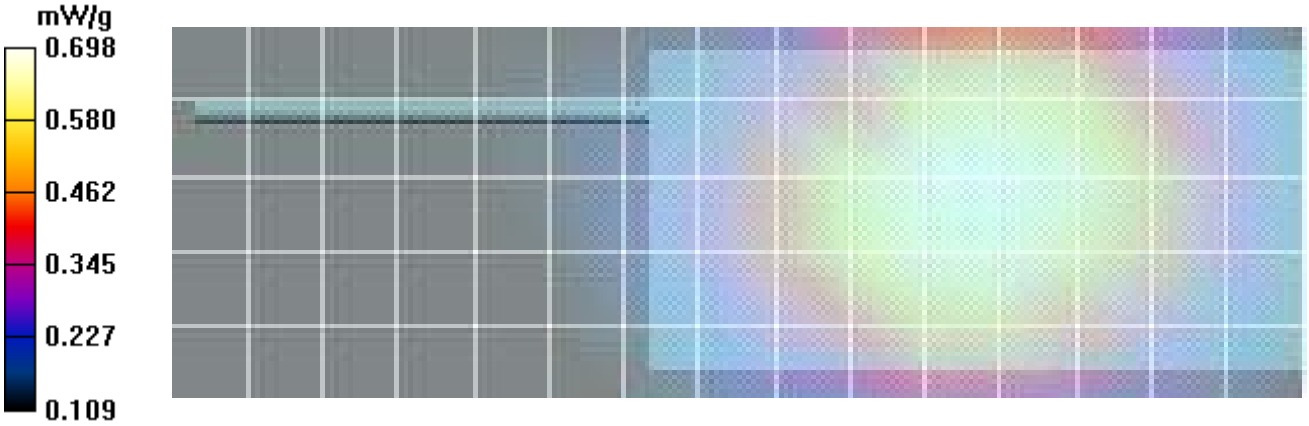
Procedure Notes:

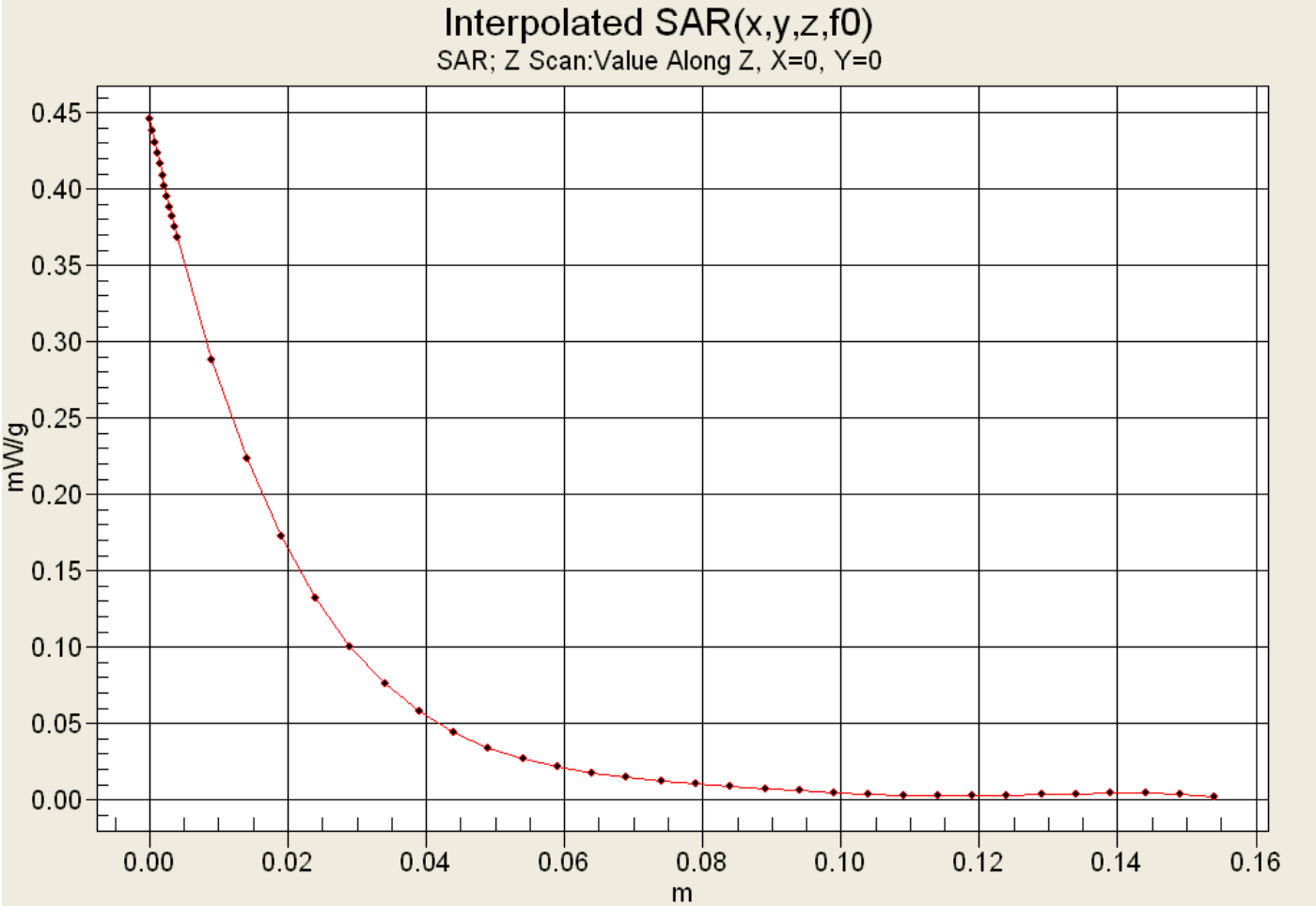
Communication System: CW
Frequency: 825 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used: f = 825 MHz; σ = 0.88 mho/m; ε_r = 42.4; ρ = 1000 kg/m^3

- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); 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: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F8 Face ST9180, 825MHz, Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.701 mW/g

F8 Face ST9180, 825MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 21.1 V/m; Power Drift = -0.016 dB
Peak SAR (extrapolated) = 0.956 W/kg
SAR(1 g) = 0.666 mW/g; SAR(10 g) = 0.494 mW/g
Maximum value of SAR (measured) = 0.698 mW/g





Plot F9

Date/Time: 12/08/2014 11:50:54 AM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

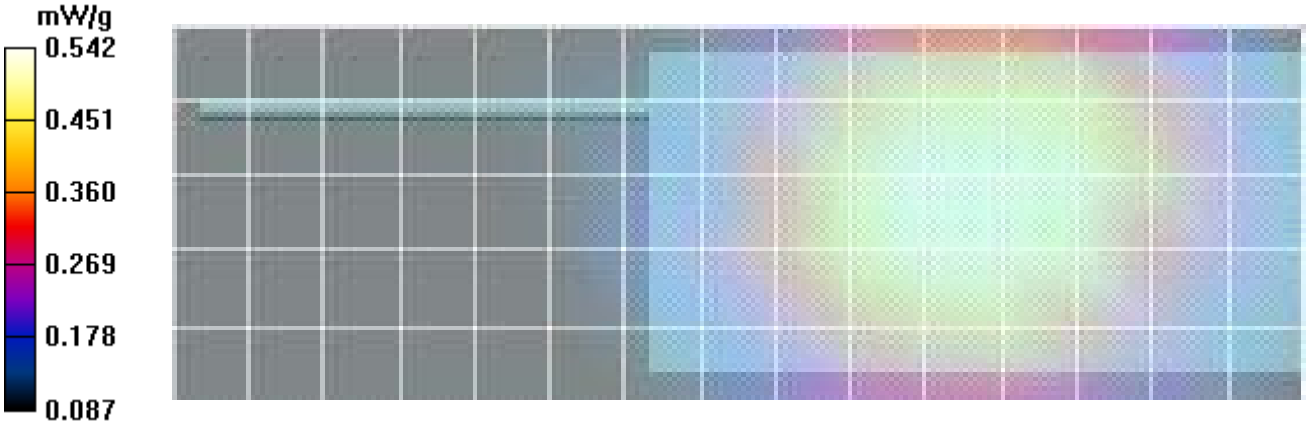
Procedure Notes:

Communication System: CW
Frequency: 825 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used: f = 825 MHz; σ = 0.88 mho/m; ε_r = 42.4; ρ = 1000 kg/m^3

- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); 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: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F9 Face ST9280, 825MHz, Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.529 mW/g

F9 Face ST9280, 825MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 18.4 V/m; Power Drift = -0.238 dB
Peak SAR (extrapolated) = 0.697 W/kg
SAR(1 g) = 0.516 mW/g; SAR(10 g) = 0.387 mW/g
Maximum value of SAR (measured) = 0.542 mW/g



Plot F10

Date/Time: 12/08/2014 1:54:41 PM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

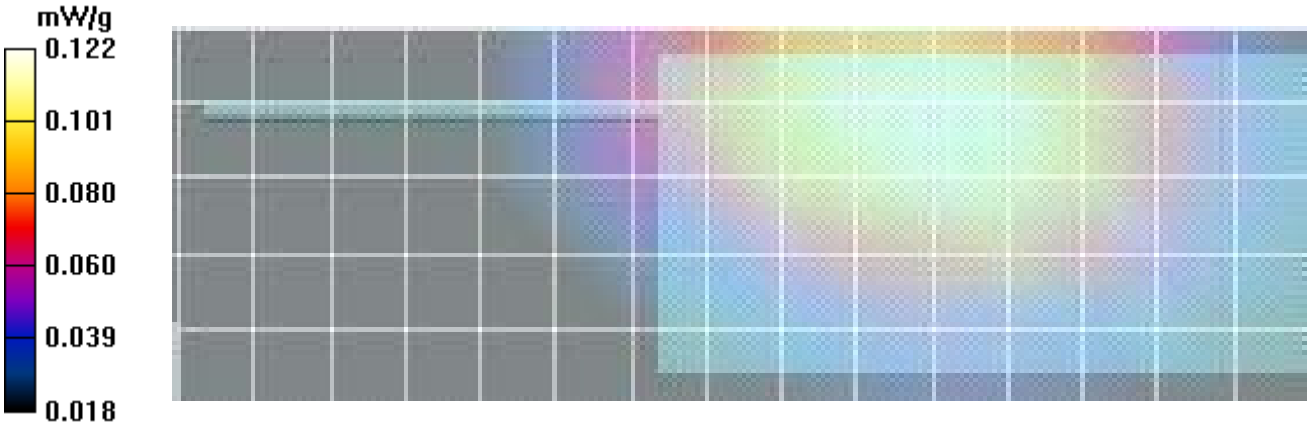
Procedure Notes:

Communication System: CW
Frequency: 825 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used: f = 825 MHz; σ = 0.88 mho/m; ε_r = 42.4; ρ = 1000 kg/m^3

- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); 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: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F10 Face Spkr-MIC on STP9180, 825MHz, Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.119 mW/g

F10 Face Spkr-MIC on STP9180, 825MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 8.82 V/m; Power Drift = 0.095 dB
Peak SAR (extrapolated) = 0.146 W/kg
SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.082 mW/g
Maximum value of SAR (measured) = 0.122 mW/g



Plot F11

Date/Time: 12/08/2014 12:11:45 PM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

Procedure Notes:

Communication System: CW
Frequency: 809 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 809 MHz; σ = 0.864 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3

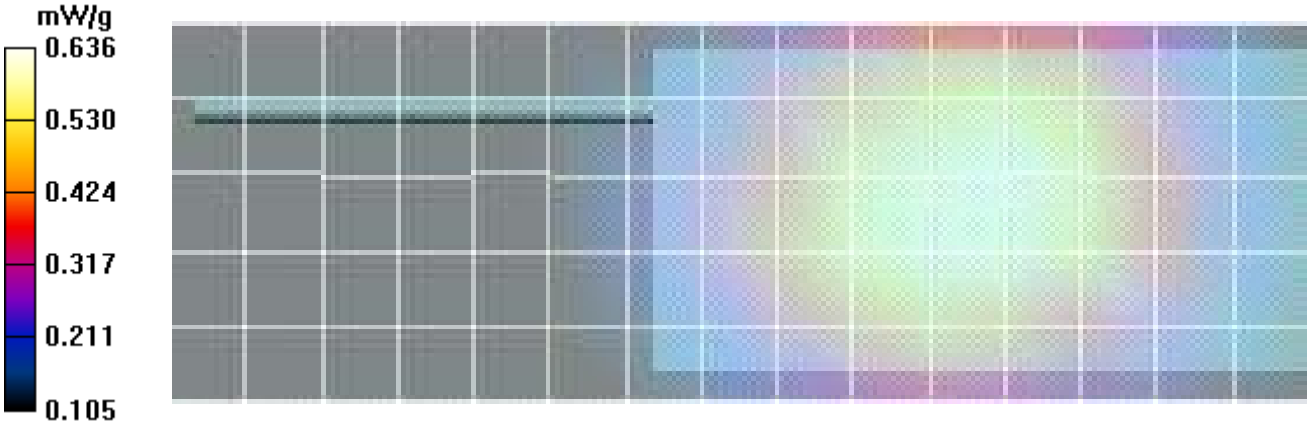
- Probe: EX3DV4 - SN3600; ConvF(8.55, 8.55, 8.55); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
-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

F11 Face ST9080, 809MHz, Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.624 mW/g

F11 Face ST9080, 809MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 21.0 V/m; Power Drift = -0.014 dB
Peak SAR (extrapolated) = 0.765 W/kg
SAR(1 g) = 0.597 mW/g; SAR(10 g) = 0.447 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.636 mW/g



Plot F12

Date/Time: 12/08/2014 12:38:22 PM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 824 MHz; σ = 0.879 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3

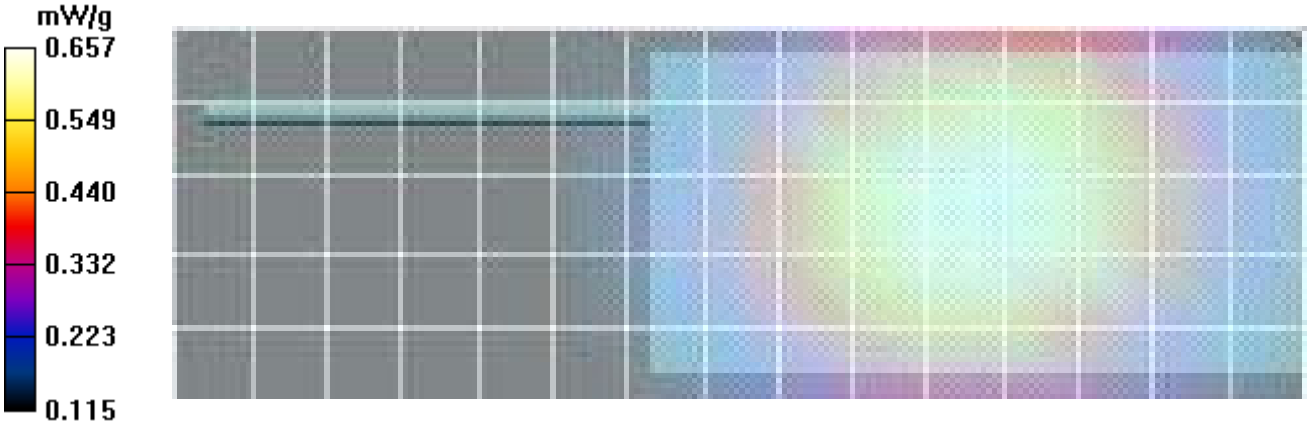
- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F12 Face ST9080, 824MHz, Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.656 mW/g

F12 Face ST9080, 824MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 20.2 V/m; Power Drift = 0.073 dB
Peak SAR (extrapolated) = 0.775 W/kg
SAR(1 g) = 0.626 mW/g; SAR(10 g) = 0.474 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.657 mW/g



Plot F13

Date/Time: 12/08/2014 12:56:59 PM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

Procedure Notes:

Communication System: CW
Frequency: 854 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 854 MHz; σ = 0.9 mho/m; ε_r = 42; ρ = 1000 kg/m^3

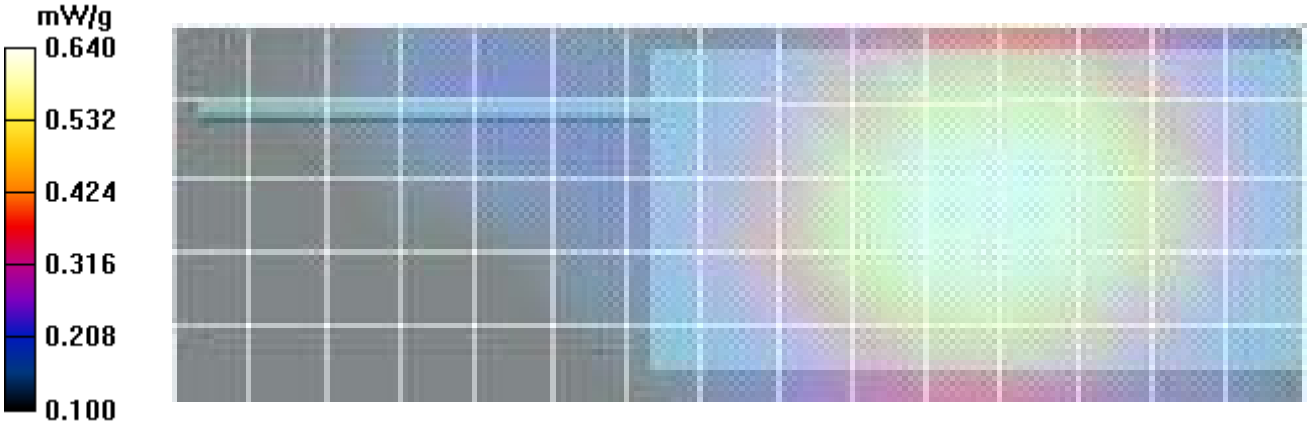
- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F13 Face ST9080, 854MHz, Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.646 mW/g

F13 Face ST9080, 854MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 17.9 V/m; Power Drift = 0.662 dB
Peak SAR (extrapolated) = 0.779 W/kg
SAR(1 g) = 0.606 mW/g; SAR(10 g) = 0.452 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.640 mW/g



Plot F14

Date/Time: 12/08/2014 1:13:15 PM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 869 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

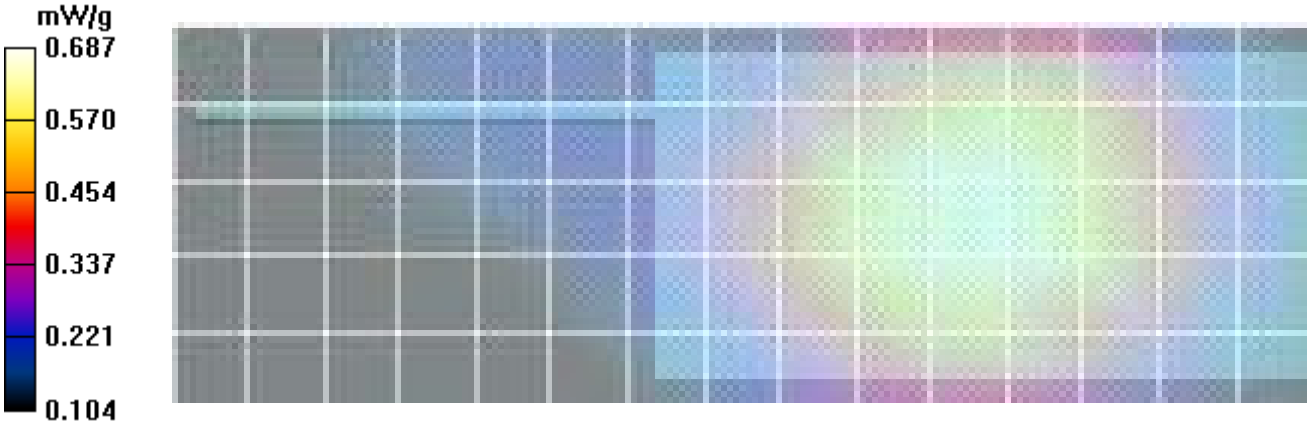
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F14 Face ST9080, 869MHz, Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.654 mW/g

F14 Face ST9080, 869MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 20.4 V/m; Power Drift = -0.116 dB
Peak SAR (extrapolated) = 0.849 W/kg
SAR(1 g) = 0.641 mW/g; SAR(10 g) = 0.474 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.687 mW/g



Plot F15

Date/Time: 12/08/2014 1:32:30 PM

835 Face - Aug 12

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

Program Notes: 12 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.6C; Humidity: 36%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 869 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

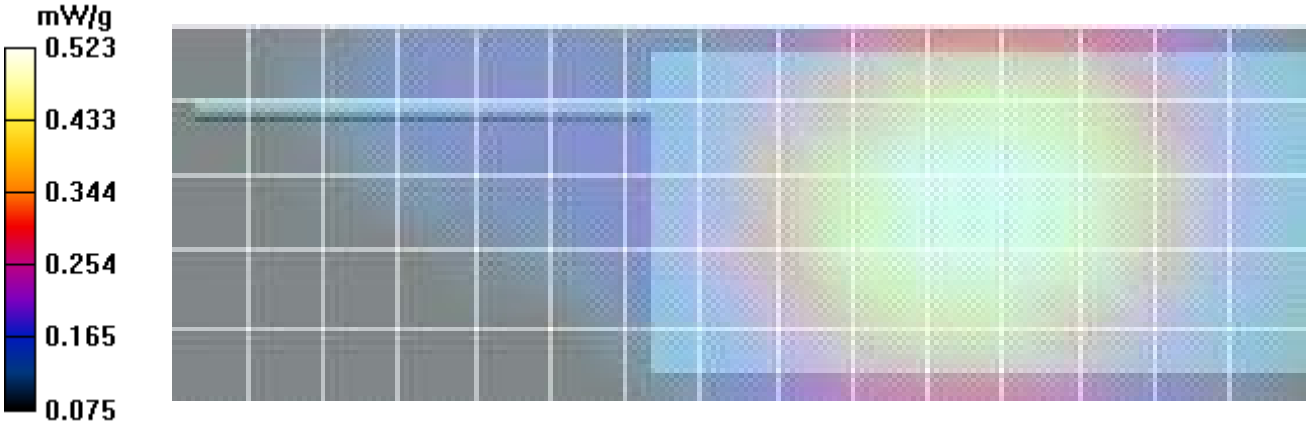
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

F15 Face ST9280, 869MHz, Batt=2/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.516 mW/g

F15 Face ST9280, 869MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 18.3 V/m; Power Drift = -0.342 dB
Peak SAR (extrapolated) = 0.663 W/kg
SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.366 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.523 mW/g



Plot H1

Date/Time: 14/08/2014 9:10:30 AM

835 Head - Aug 14

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

Program Notes: 14 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.5C; Humidity: 43%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 824 MHz; σ = 0.879 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3

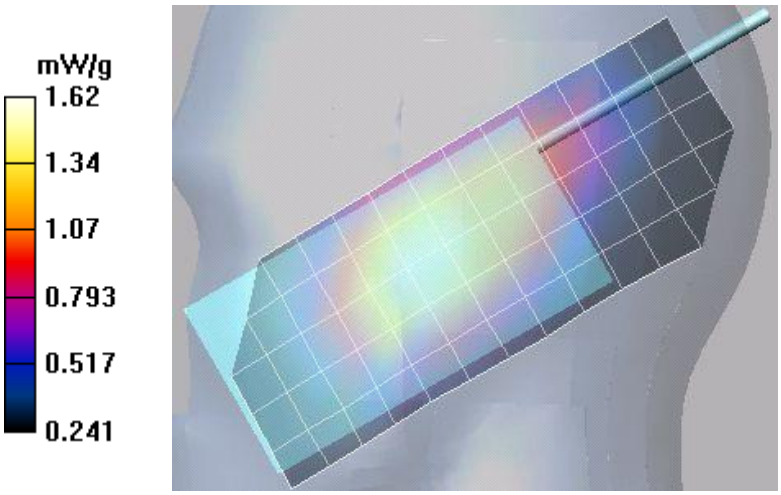
- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H1 Left Touch STP9080, 824MHz, Batt=2/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.66 mW/g

H1 Left Touch STP9080, 824MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 37.2 V/m; Power Drift = 0.042 dB
Peak SAR (extrapolated) = 1.95 W/kg
SAR(1 g) = 1.55 mW/g; SAR(10 g) = 1.18 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.62 mW/g



Plot H2

Date/Time: 14/08/2014 9:44:48 AM

835 Head - Aug 14

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

Program Notes: 14 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.5C; Humidity: 43%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 869 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

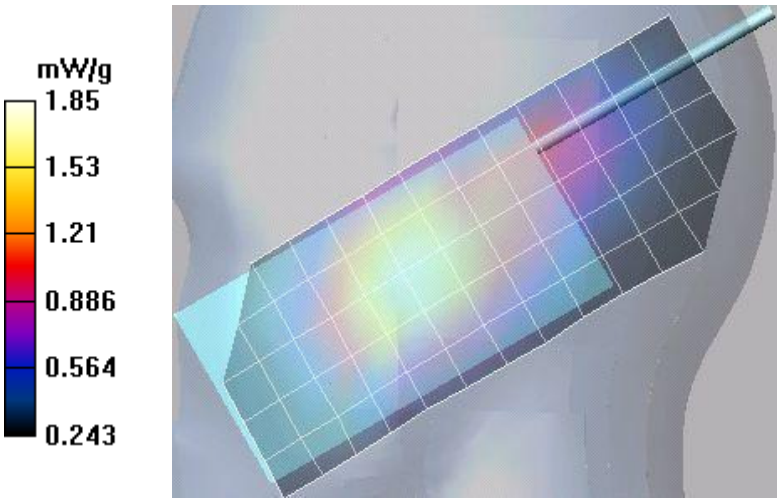
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H2 Left Touch STP9080, 869MHz, Batt=2/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.81 mW/g

H2 Left Touch STP9080, 869MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 35.8 V/m; Power Drift = -0.181 dB
Peak SAR (extrapolated) = 2.25 W/kg
SAR(1 g) = 1.74 mW/g; SAR(10 g) = 1.29 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.85 mW/g



Plot H3

Date/Time: 14/08/2014 10:14:06 AM

835 Head - Aug 14

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

Program Notes: 14 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.5C; Humidity: 43%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 869 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

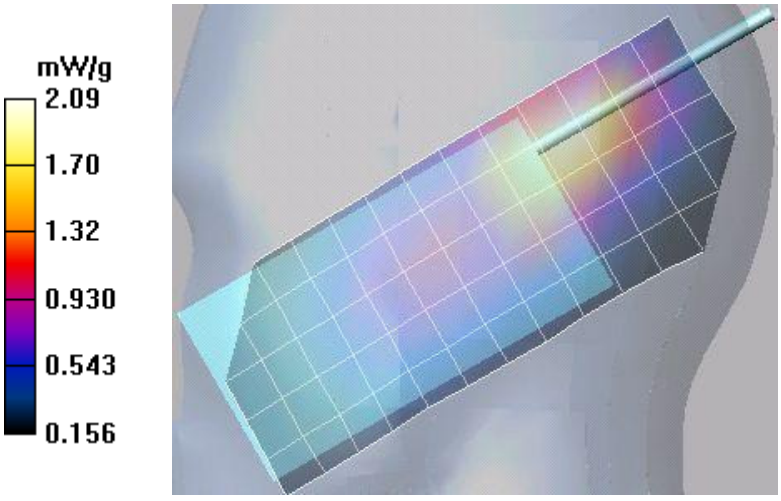
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H3 Left Tilt STP9080, 869MHz, Batt=2/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.00 mW/g

H3 Left Tilt STP9080, 869MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 34.6 V/m; Power Drift = -0.171 dB
Peak SAR (extrapolated) = 3.07 W/kg
SAR(1 g) = 1.93 mW/g; SAR(10 g) = 1.25 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.09 mW/g



Plot H4

Date/Time: 14/08/2014 10:38:28 AM

835 Head - Aug 14

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

Program Notes: 14 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.5C; Humidity: 43%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 869 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

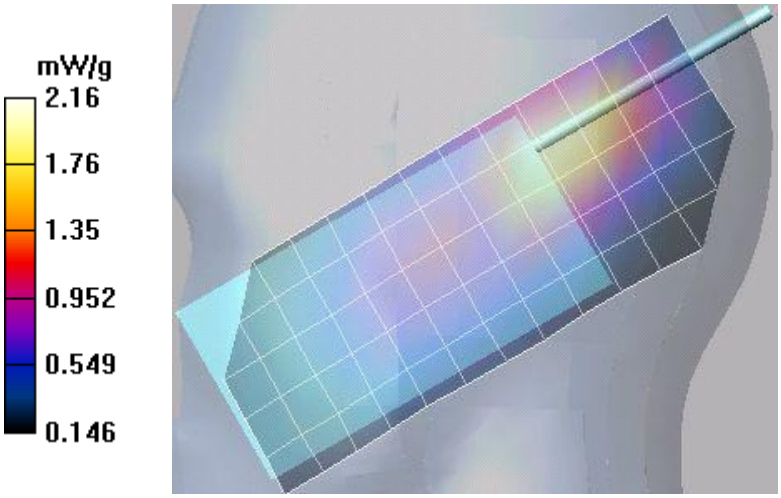
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

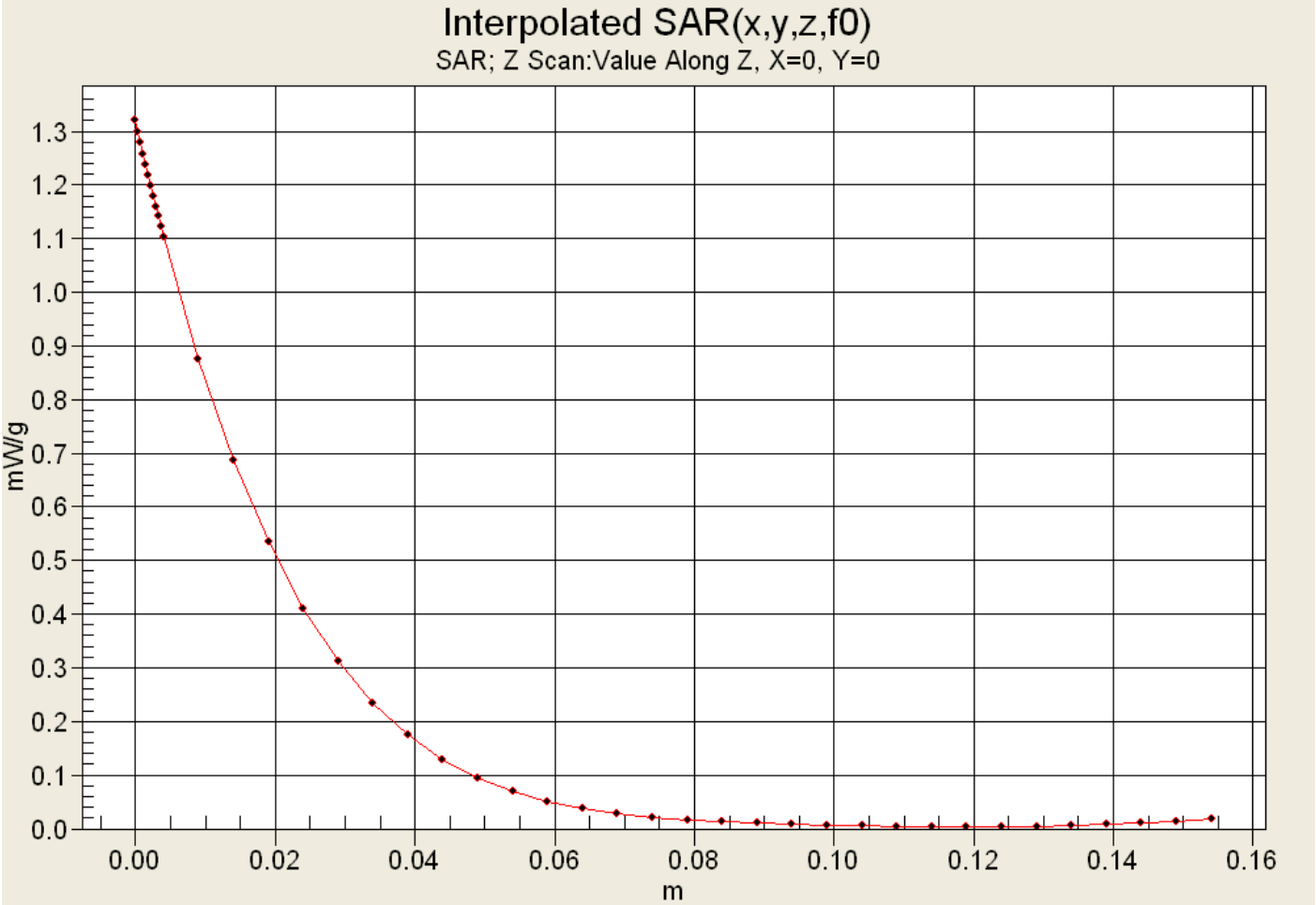
H4 Left Tilt STP9180, 869MHz, Batt=2/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.00 mW/g

H4 Left Tilt STP9180, 869MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 35.1 V/m; Power Drift = -0.027 dB
Peak SAR (extrapolated) = 3.26 W/kg
SAR(1 g) = 1.97 mW/g; SAR(10 g) = 1.27 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.16 mW/g





Plot H5

Date/Time: 14/08/2014 11:37:55 AM

835 Head - Aug 14

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

Program Notes: 14 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.5C; Humidity: 43%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 869 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

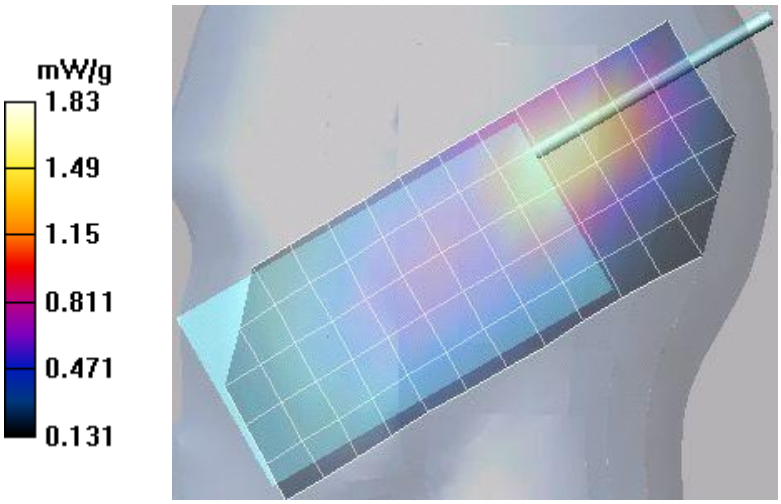
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H5 Left Tilt STP9180, 869MHz, Batt=2/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

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

H5 Left Tilt STP9180, 869MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 31.3 V/m; Power Drift = 0.053 dB
Peak SAR (extrapolated) = 2.82 W/kg
SAR(1 g) = 1.69 mW/g; SAR(10 g) = 1.09 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.83 mW/g



Plot H6

Date/Time: 14/08/2014 1:09:59 PM

835 Head Right - Aug 14

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

Program Notes: 14 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.5C; Humidity: 43%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 824 MHz; σ = 0.879 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3

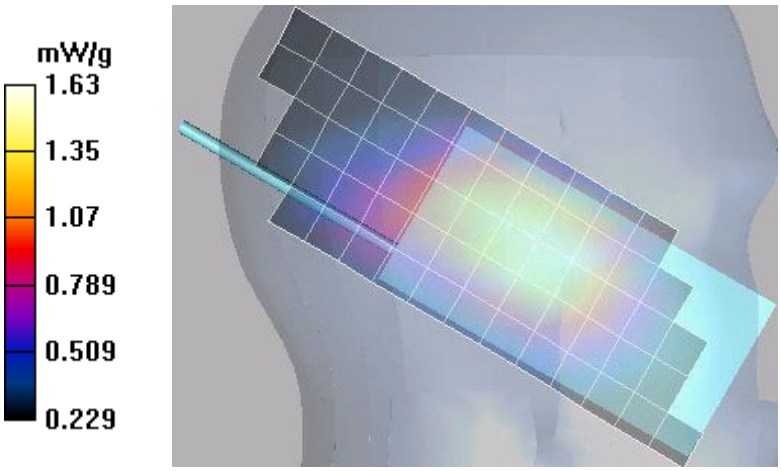
- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H6 Right Touch STP9080, 824MHz, Batt=2/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

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

H6 Right Touch STP9080, 824MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 36.3 V/m; Power Drift = 0.234 dB
Peak SAR (extrapolated) = 2.34 W/kg
SAR(1 g) = 1.55 mW/g; SAR(10 g) = 1.16 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.63 mW/g



Plot H7

Date/Time: 14/08/2014 2:09:11 PM

835 Head Right - Aug 14

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

Program Notes: 14 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.5C; Humidity: 43%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 869 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

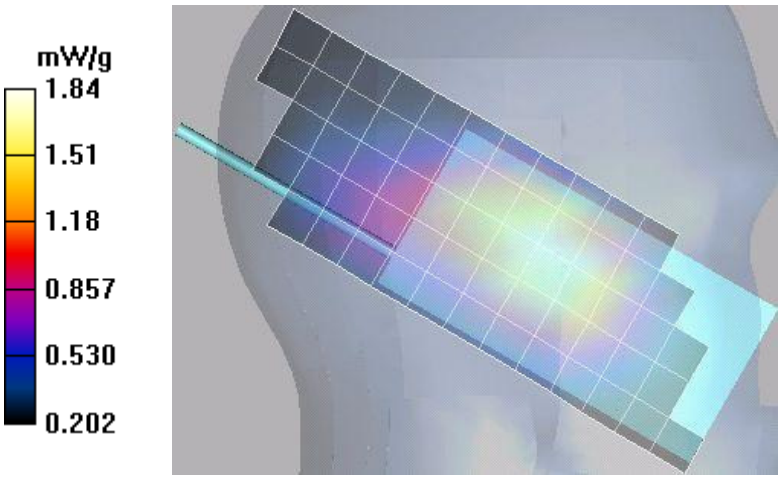
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H7 Right Touch STP9080, 869MHz, Batt=2/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

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

H7 Right Touch STP9080, 869MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 36.2 V/m; Power Drift = -0.123 dB
Peak SAR (extrapolated) = 2.32 W/kg
SAR(1 g) = 1.77 mW/g; SAR(10 g) = 1.31 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.84 mW/g



Plot H8

Date/Time: 14/08/2014 2:30:33 PM

835 Head Right - Aug 14

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

Program Notes: 14 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.5C; Humidity: 43%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 869 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

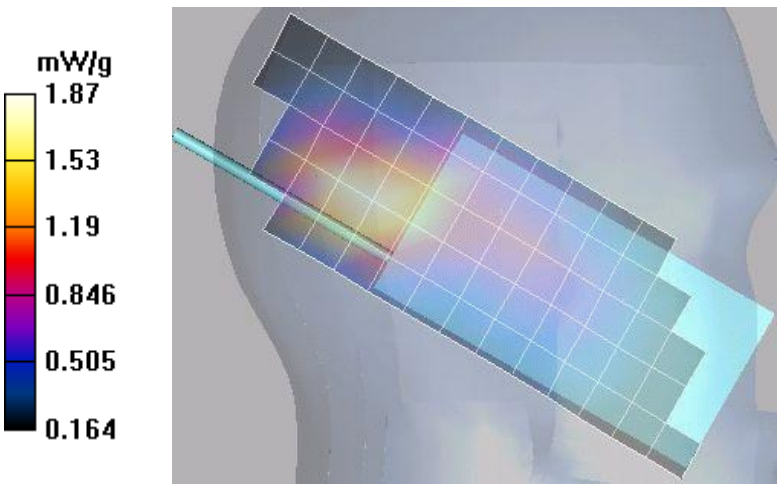
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H8 Right Tilt STP9080, 869MHz, Batt=2/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.76 mW/g

H8 Right Tilt STP9080, 869MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 30.8 V/m; Power Drift = 0.306 dB
Peak SAR (extrapolated) = 2.84 W/kg
SAR(1 g) = 1.74 mW/g; SAR(10 g) = 1.15 mW/g

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



Plot H9

Date/Time: 14/08/2014 2:48:17 PM

835 Head Right - Aug 14

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

Program Notes: 14 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.5C; Humidity: 43%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 869 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

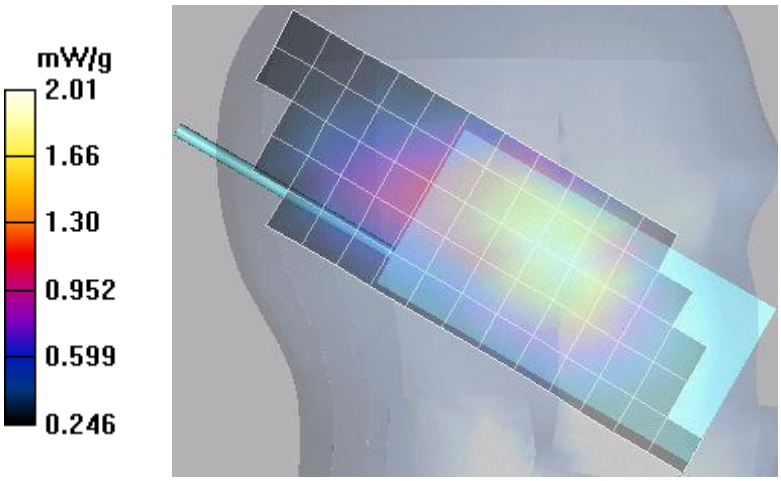
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

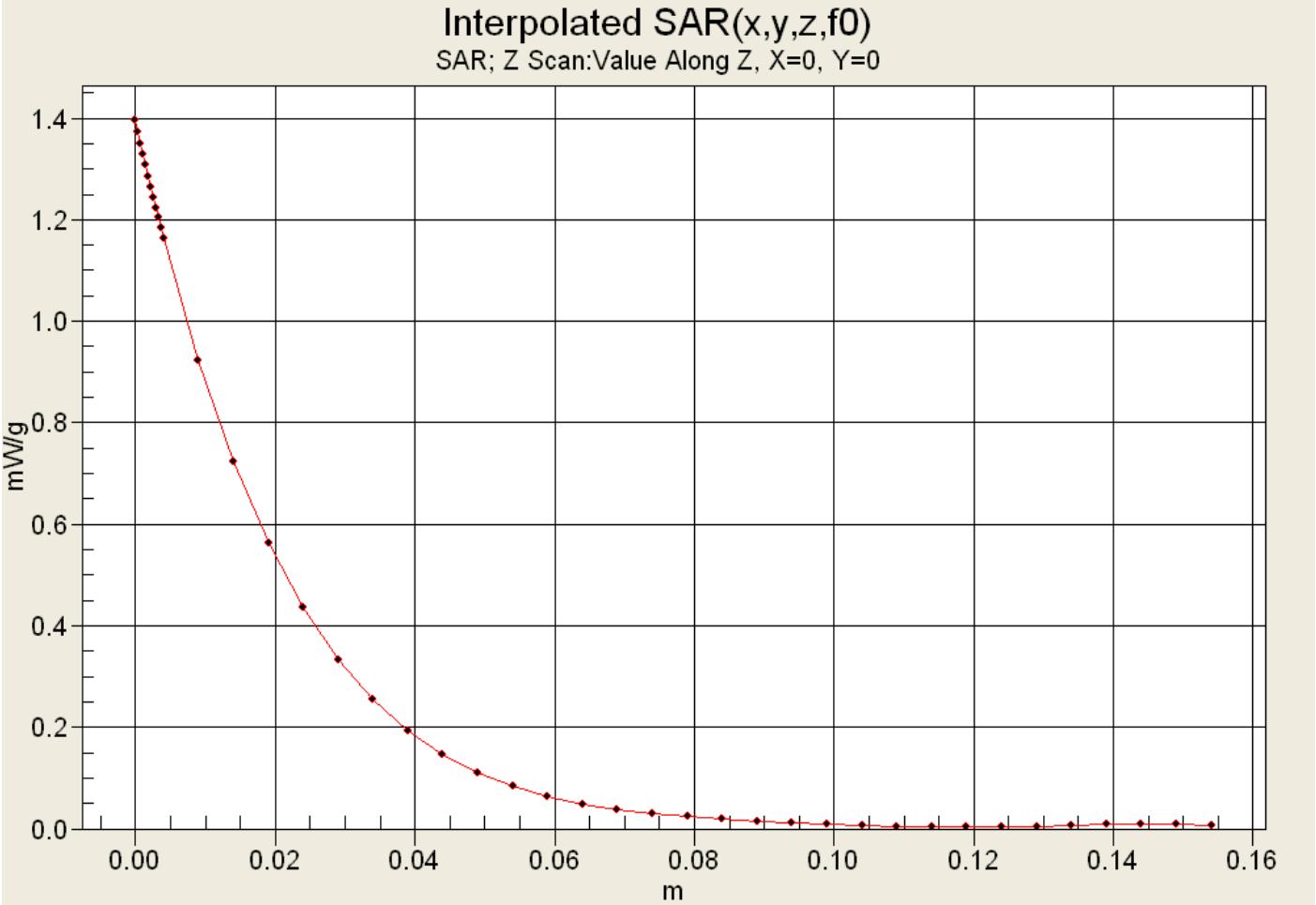
H9 Right Touch STP9180, 869MHz, Batt=2/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.86 mW/g

H9 Right Touch STP9180, 869MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 36.0 V/m; Power Drift = -0.333 dB
Peak SAR (extrapolated) = 2.67 W/kg
SAR(1 g) = 1.9 mW/g; SAR(10 g) = 1.38 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.01 mW/g





Plot H10

Date/Time: 14/08/2014 3:19:06 PM

835 Head Right - Aug 14

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

Program Notes: 14 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.5C; Humidity: 43%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL 835H Medium parameters used (interpolated): f = 869 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

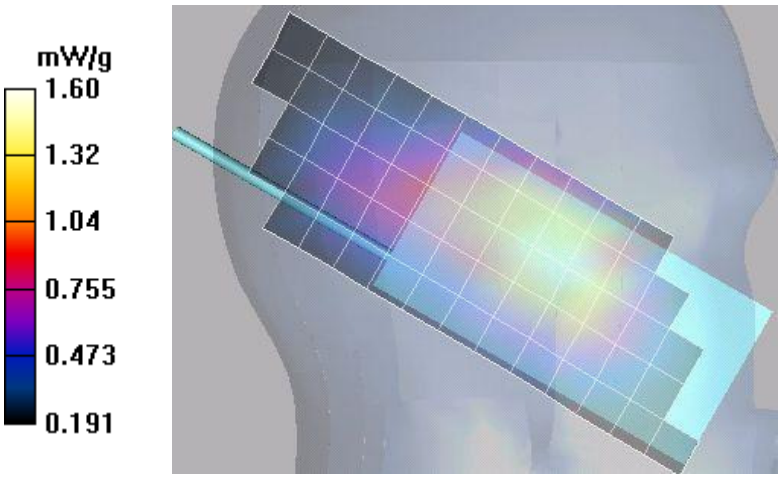
- Probe: EX3DV4 - SN3600; ConvF(8.09, 8.09, 8.09); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H10 Right Touch STP9280, 869MHz, Batt=2/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.57 mW/g

H10 Right Touch STP9280, 869MHz, Batt=2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 30.2 V/m; Power Drift = 0.309 dB
Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 1.47 mW/g; SAR(10 g) = 1.1 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.60 mW/g



Plot B14

Date/Time: 18/08/2014 10:07:38 AM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 809 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 809 MHz; σ = 0.944 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3

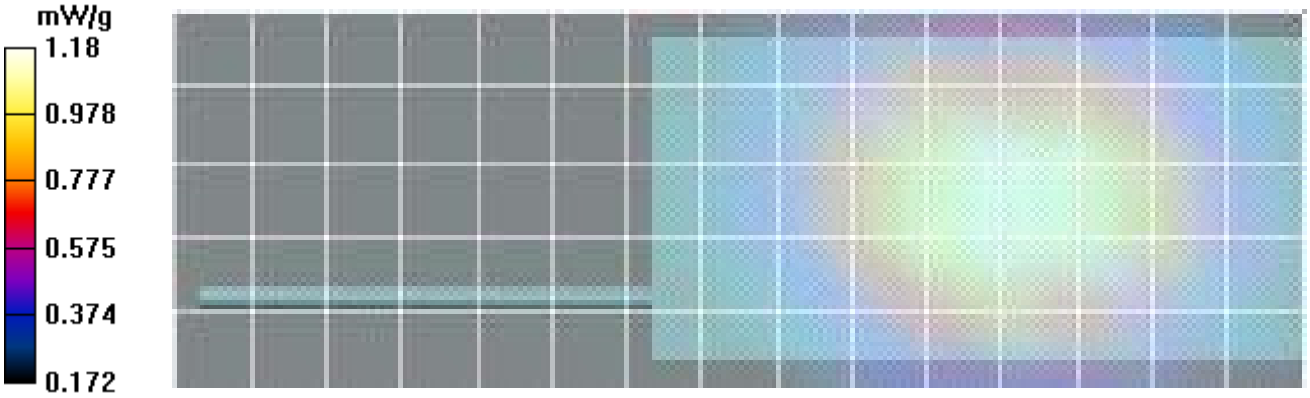
- Probe: EX3DV4 - SN3600; ConvF(8.14, 8.14, 8.14); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
-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

B14 Body STP9080, 809MHz, Batt=1, BC/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.14 mW/g

B14 Body STP9080, 809MHz, Batt=1, BC/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 18.9 V/m; Power Drift = -0.299 dB
Peak SAR (extrapolated) = 1.57 W/kg
SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.814 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.18 mW/g



Plot B15

Date/Time: 18/08/2014 9:36:58 AM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 809 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 809 MHz; σ = 0.944 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3

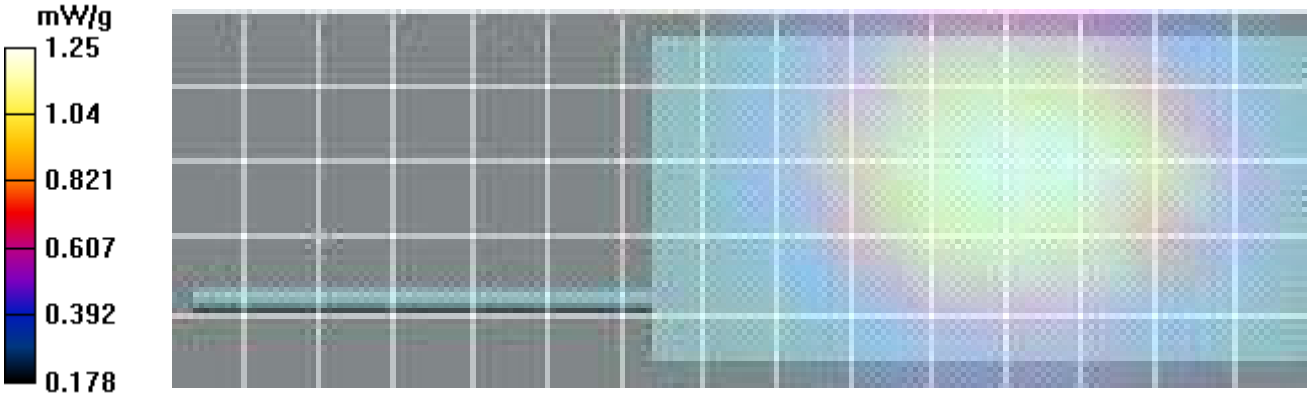
- Probe: EX3DV4 - SN3600; ConvF(8.14, 8.14, 8.14); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
-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

B15 Body STP9080, 809MHz, Batt=2, BC/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.21 mW/g

B15 Body STP9080, 809MHz, Batt=2, BC/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 18.5 V/m; Power Drift = -0.047 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.870 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.25 mW/g



Plot B16

Date/Time: 18/08/2014 11:43:46 AM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 809 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 809 MHz; σ = 0.944 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3

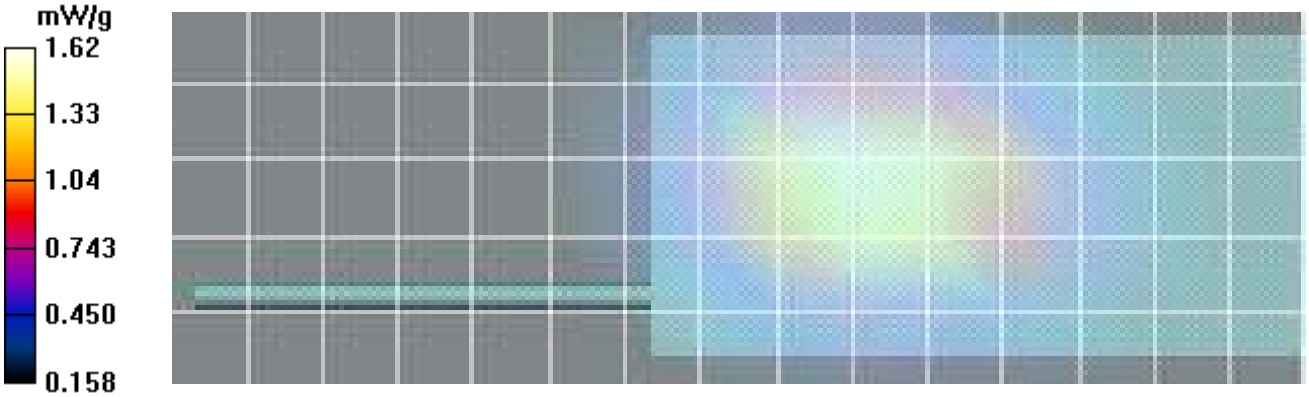
- Probe: EX3DV4 - SN3600; ConvF(8.14, 8.14, 8.14); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
-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

B16 Body STP9080, 809MHz, Batt=1, BB/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

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

B16 Body STP9080, 809MHz, Batt=1, BB/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 33.1 V/m; Power Drift = -0.175 dB
Peak SAR (extrapolated) = 2.61 W/kg
SAR(1 g) = 1.52 mW/g; SAR(10 g) = 1 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.62 mW/g



Plot B17

Date/Time: 18/08/2014 10:28:10 AM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 809 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 809 MHz; σ = 0.944 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3

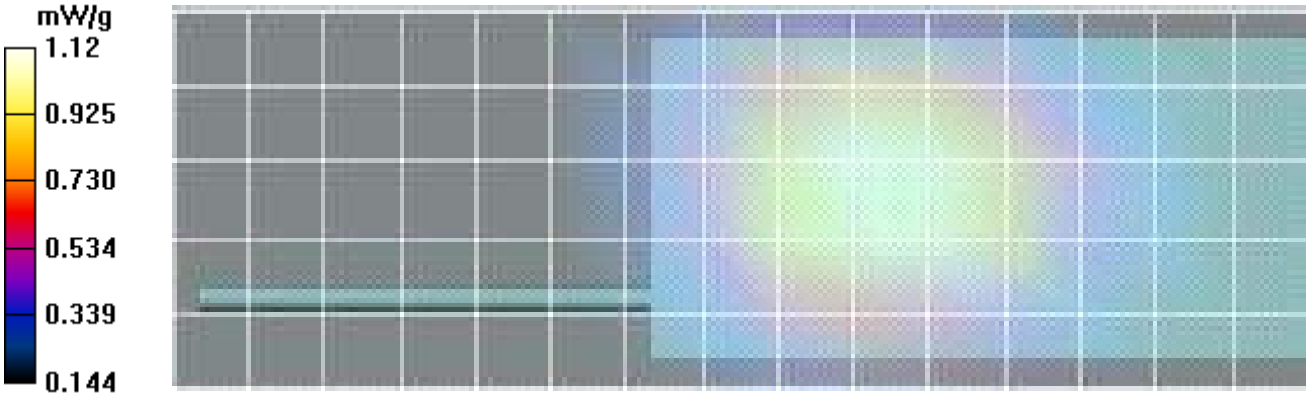
- Probe: EX3DV4 - SN3600; ConvF(8.14, 8.14, 8.14); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
-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

B17 Body STP9080, 809MHz, Batt=2, BL/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.05 mW/g

B17 Body STP9080, 809MHz, Batt=2, BL/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.0 V/m; Power Drift = 0.003 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.769 mW/g

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



Plot B18

Date/Time: 18/08/2014 11:01:34 AM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 809 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 809 MHz; σ = 0.944 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3

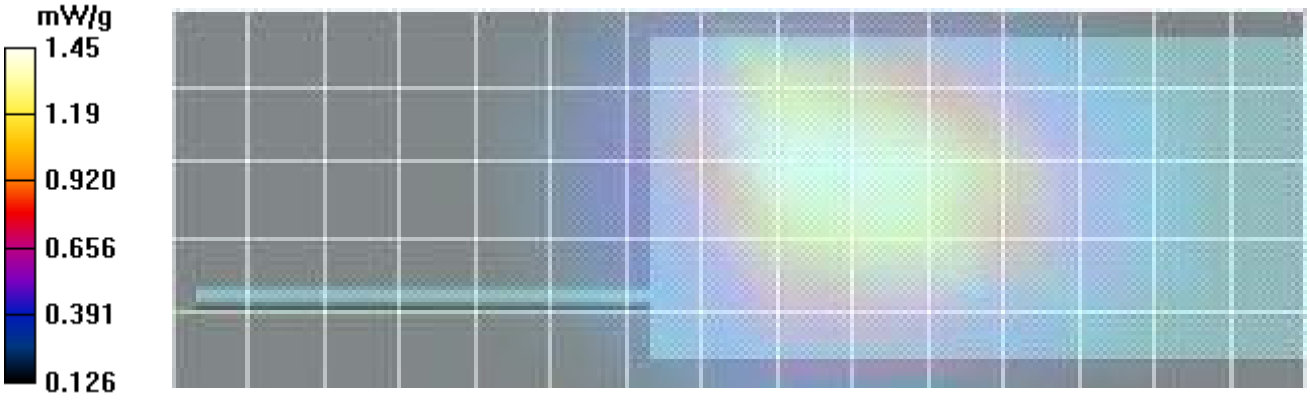
- Probe: EX3DV4 - SN3600; ConvF(8.14, 8.14, 8.14); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
-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

B18 Body STP9080, 809MHz, Batt=1, BL/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.42 mW/g

B18 Body STP9080, 809MHz, Batt=1, BL/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 32.6 V/m; Power Drift = 0.072 dB
Peak SAR (extrapolated) = 2.11 W/kg
SAR(1 g) = 1.38 mW/g; SAR(10 g) = 0.974 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.45 mW/g



Plot B19

Date/Time: 18/08/2014 12:25:12 PM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 809 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 809 MHz; σ = 0.944 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3

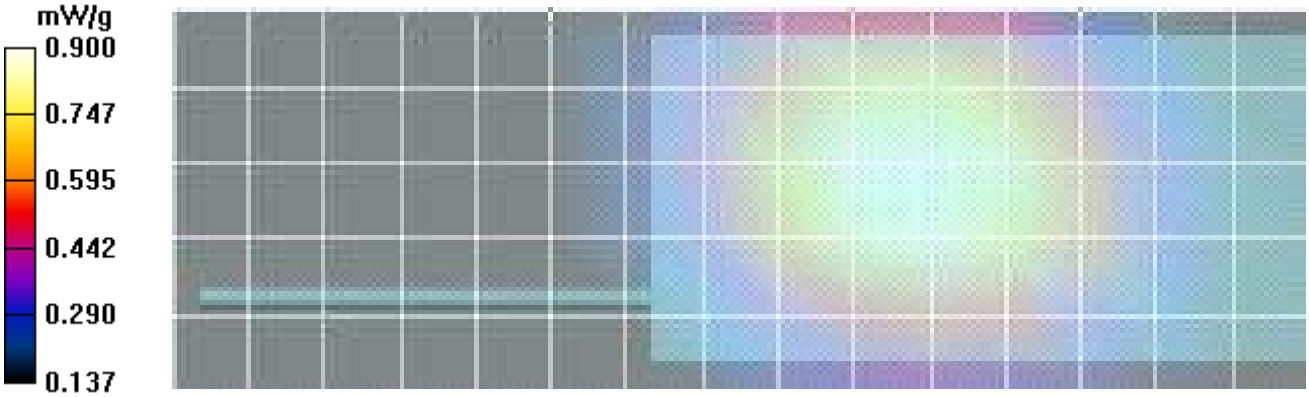
- Probe: EX3DV4 - SN3600; ConvF(8.14, 8.14, 8.14); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
-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

B19 Body STP9080, 809MHz, Batt=1, BD/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.925 mW/g

B19 Body STP9080, 809MHz, Batt=1, BD/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 25.0 V/m; Power Drift = -0.109 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.852 mW/g; SAR(10 g) = 0.641 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.900 mW/g



Plot B20

Date/Time: 18/08/2014 12:52:37 PM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 824 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 824 MHz; σ = 0.959 mho/m; ε_r = 52.1; ρ = 1000 kg/m^3

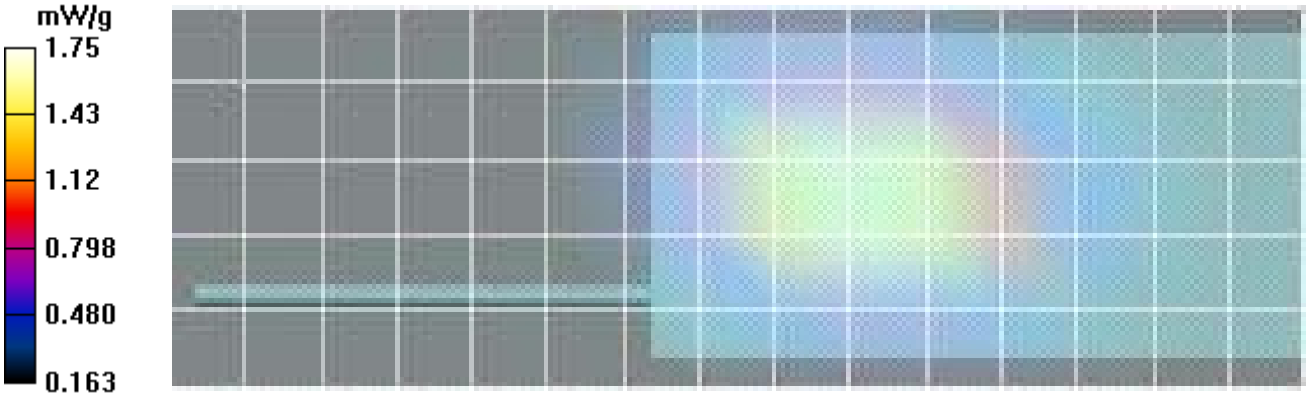
- Probe: EX3DV4 - SN3600; ConvF(8.11, 8.11, 8.11); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B20 Body STP9080, 824MHz, Batt=1, BB/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

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

B20 Body STP9080, 824MHz, Batt=1, BB/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 35.6 V/m; Power Drift = -0.140 dB
Peak SAR (extrapolated) = 2.61 W/kg
SAR(1 g) = 1.63 mW/g; SAR(10 g) = 1.07 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.75 mW/g



Plot B21

Date/Time: 18/08/2014 1:23:25 PM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 854 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 854 MHz; σ = 0.989 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3

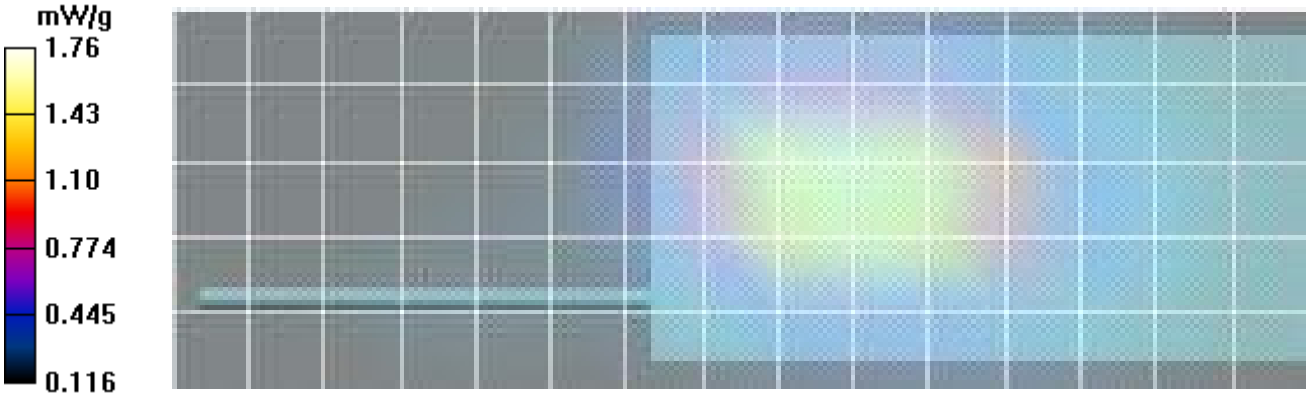
- Probe: EX3DV4 - SN3600; ConvF(8.11, 8.11, 8.11); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B21 Body STP9080, 854MHz, Batt=1, BB/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

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

B21 Body STP9080, 854MHz, Batt=1, BB/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 36.9 V/m; Power Drift = 0.031 dB
Peak SAR (extrapolated) = 2.58 W/kg
SAR(1 g) = 1.65 mW/g; SAR(10 g) = 1.07 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.76 mW/g



Plot B22

Date/Time: 18/08/2014 2:47:50 PM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 869 MHz; σ = 0.998 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3

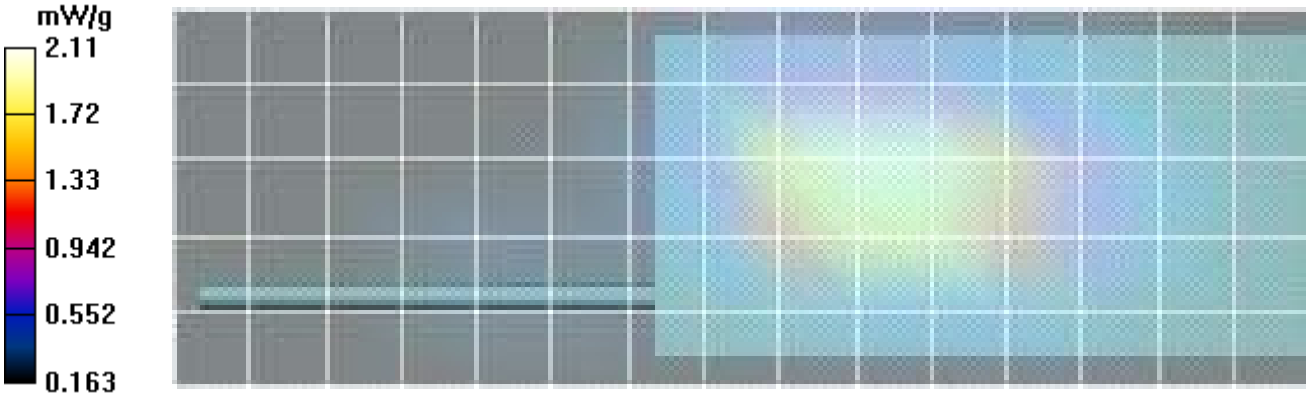
- Probe: EX3DV4 - SN3600; ConvF(7.92, 7.92, 7.92); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

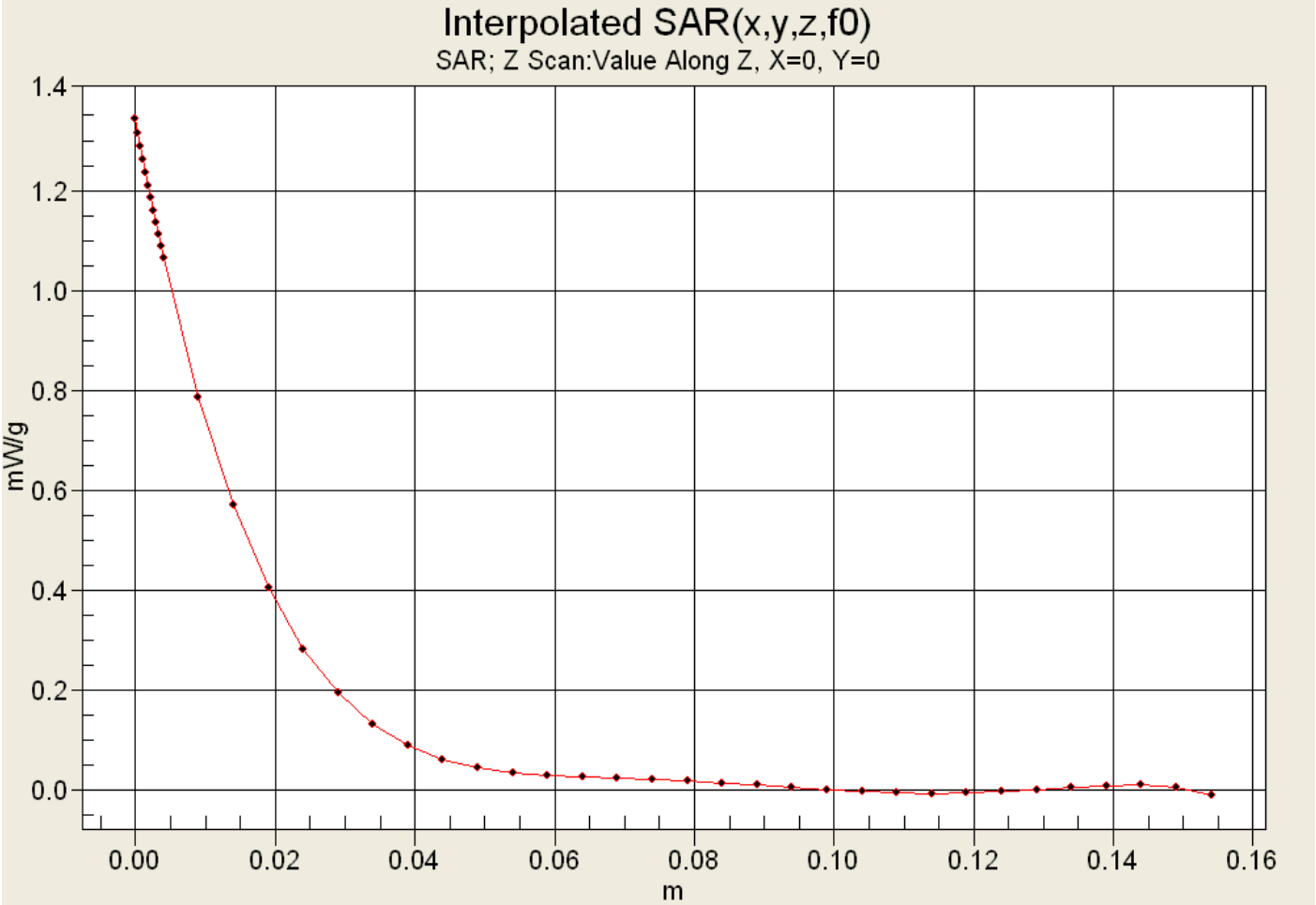
B22 Body STP9080, 869MHz, Batt=1, BB/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.92 mW/g

B22 Body STP9080, 869MHz, Batt=1, BB/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 33.1 V/m; Power Drift = 0.074 dB
Peak SAR (extrapolated) = 3.02 W/kg
SAR(1 g) = 1.95 mW/g; SAR(10 g) = 1.28 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.11 mW/g





Plot B23

Date/Time: 18/08/2014 3:04:16 PM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 869 MHz; σ = 0.998 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3

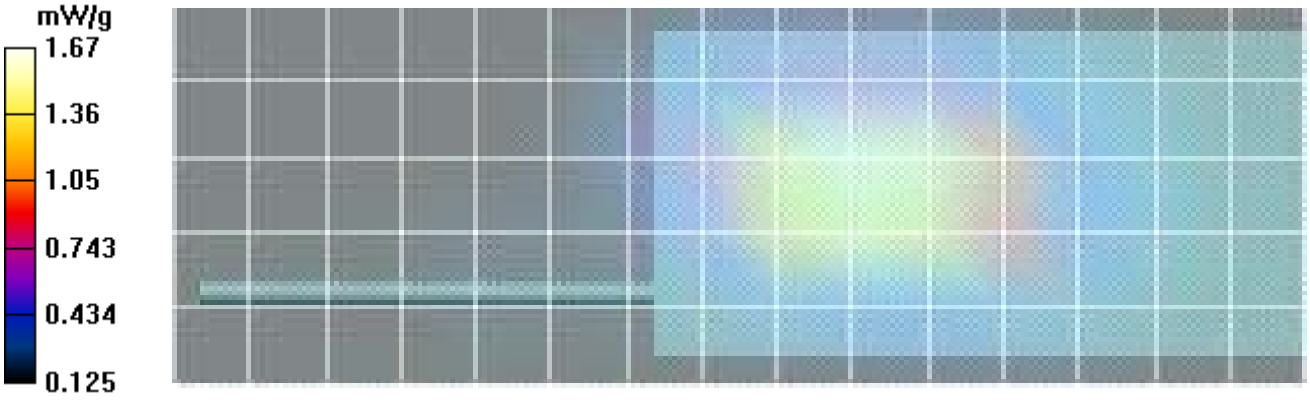
- Probe: EX3DV4 - SN3600; ConvF(7.92, 7.92, 7.92); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B23 Body STP9280, 869MHz, Batt=1, BB/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

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

B23 Body STP9280, 869MHz, Batt=1, BB/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 33.1 V/m; Power Drift = 0.238 dB
Peak SAR (extrapolated) = 2.28 W/kg
SAR(1 g) = 1.53 mW/g; SAR(10 g) = 0.999 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.67 mW/g



Plot B24

Date/Time: 18/08/2014 3:22:29 PM

835 Body - Aug 18

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

Program Notes: 18 JAug 2014 Ambient Temp: 23C; Fluid Temp: 23.0C; Humidity: 46%

Procedure Notes:

Communication System: CW
Frequency: 869 MHz; Duty Cycle: 1:4
Medium: TSL_835B Medium parameters used (interpolated): f = 869 MHz; σ = 0.998 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3

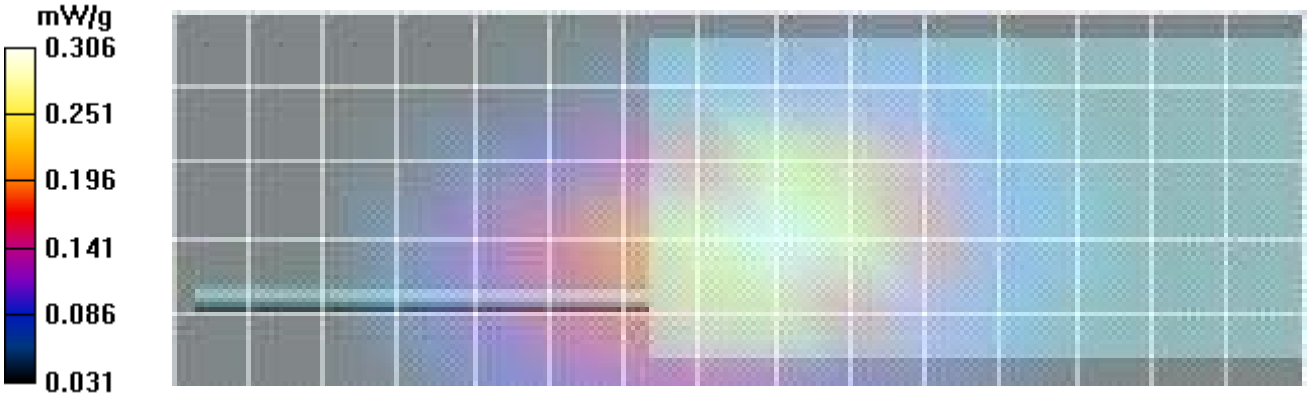
- Probe: EX3DV4 - SN3600; ConvF(7.92, 7.92, 7.92); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

B24 Body STP9080, 869MHz, Batt=21, Spkr MIC/Area Scan (6x17x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.301 mW/g

B24 Body STP9080, 869MHz, Batt=21, Spkr MIC/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 16.2 V/m; Power Drift = -0.198 dB
Peak SAR (extrapolated) = 0.399 W/kg
SAR(1 g) = 0.279 mW/g; SAR(10 g) = 0.186 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.306 mW/g



APPENDIX B – SYSTEM VERIFICATION PLOTS

Date/Time: 12/08/2014 8:41:49 AM

SPC - 835H - Aug 11

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d075; Calibrated: 04/20/2012

Program Notes: 11 Aug 2014 Ambient Temp: 24C; Fluid Temp: 23.1.1C; Humidity:32%

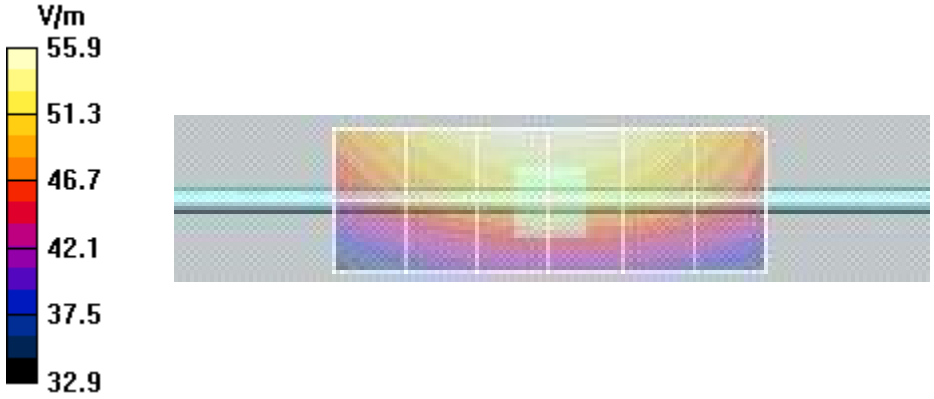
Procedure Notes:

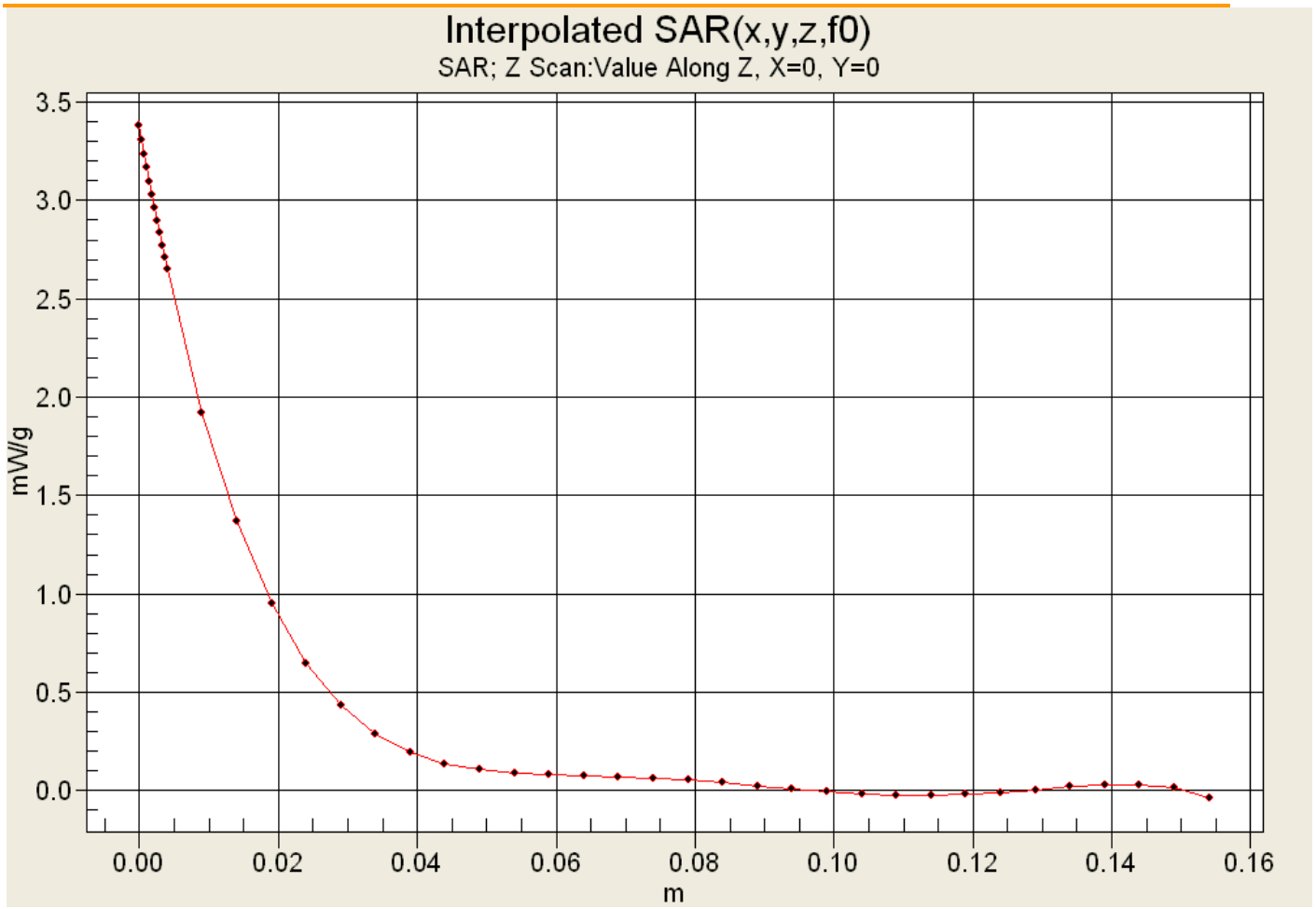
Communication System: CW
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835H Medium parameters used: f = 835 MHz; σ = 0.89 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3 Medium parameters used: σ = 0.89 mho/m, ε_r = 42.33; ρ = 1000 kg/m^3

- Probe: EX3DV4 - SN3600; ConvF(8.23, 8.23, 8.23); Calibrated: 15/04/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 09/04/2014
- Phantom: SAM with CRP; Type: SAM; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Head d=15mm Pin=250mW. TS=2.36W/kg 2 2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 52.3 V/m; Power Drift = -0.224 dB
Peak SAR (extrapolated) = 3.75 W/kg
SAR(1 g) = 2.55 mW/g; SAR(10 g) = 1.68 mW/g
Maximum value of SAR (measured) = 2.77 mW/g

Head d=15mm Pin=250mW. TS=2.36W/kg 2 2/Area Scan (3x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of Total (measured) = 55.9 V/m





Date/Time: 15/08/2014 2:20:13 PM

SPC - 835B - Aug 15

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d075; Calibrated: 04/20/2012

Program Notes: 15 Aug 2014 Ambient Temp: 22C; Fluid Temp: 23.0C; Humidity: 45%

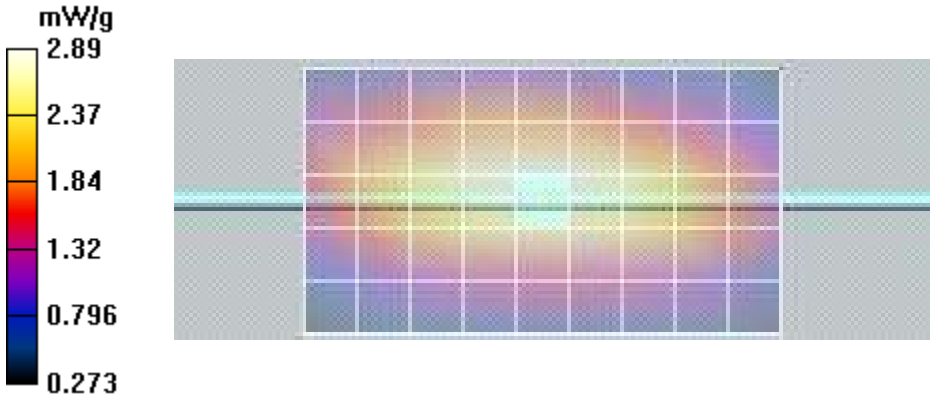
Procedure Notes:

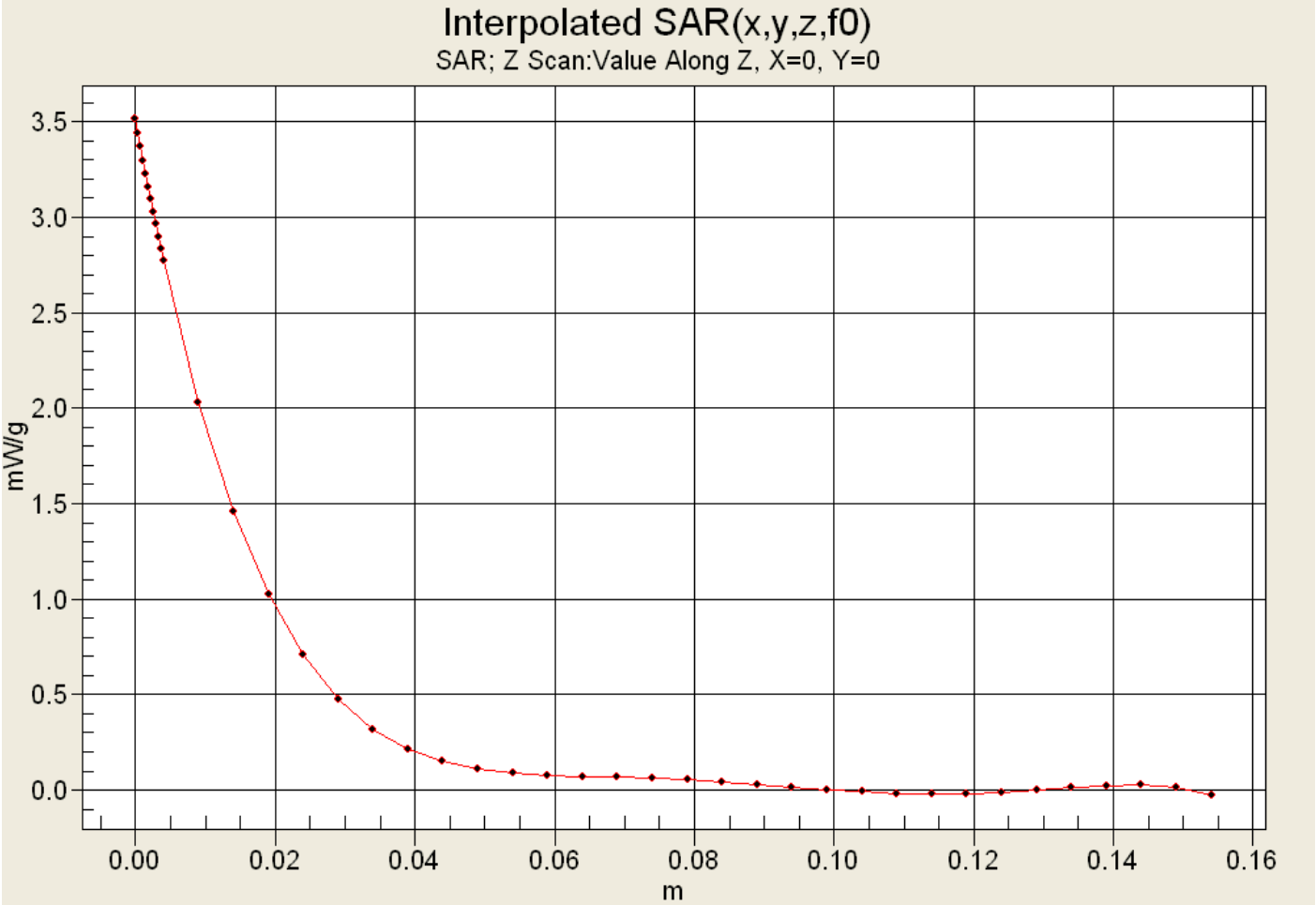
Communication System: CW
Frequency: 835 MHz; Duty Cycle: 1:1
Medium: M835 Medium parameters used: f = 835 MHz; σ = 0.97 mho/m; ε_r = 52; ρ = 1000 kg/m^3

- Probe: EX3DV4 - SN3600; ConvF(8.11, 8.11, 8.11); 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: SAM with CRP; Type: SAM; Serial: Not Specified
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body d=15mm Pin=250mW. TS=2.47W/kg 2/Area Scan 2 (6x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 2.86 mW/g

Body d=15mm Pin=250mW. TS=2.47W/kg 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.6 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 3.97 W/kg
SAR(1 g) = 2.69 mW/g; SAR(10 g) = 1.77 mW/g
Maximum value of SAR (measured) = 2.89 mW/g





APPENDIX C - MEASURED FLUID DIELECTRIC PARAMETERS

835 MHz Head

****

Aprel Laboratory
Test Result for UIM Dielectric Parameter
Mon 11/Aug/2014 13:25:00
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	43.16	0.78
0.7450	41.97	0.89	42.92	0.78
0.7550	41.92	0.89	42.76	0.80
0.7650	41.86	0.89	42.61	0.81
0.7750	41.81	0.90	42.43	0.81
0.7850	41.76	0.90	42.31	0.83
0.7950	41.71	0.90	42.44	0.85
0.8050	41.66	0.90	42.31	0.86
0.8150	41.60	0.90	42.33	0.87
0.8250	41.55	0.90	42.35	0.88
0.8350	41.50	0.90	42.33	0.89
0.8450	41.50	0.91	42.13	0.90
0.8550	41.50	0.92	41.93	0.90
0.8650	41.50	0.93	41.64	0.91
0.8750	41.50	0.94	41.42	0.91
0.8850	41.50	0.95	41.16	0.93
0.8950	41.50	0.96	41.01	0.94
0.9050	41.50	0.97	40.99	0.95
0.9150	41.50	0.98	41.08	0.97
0.9250	41.48	0.98	40.99	0.98
0.9350	41.46	0.99	41.21	0.99

835 MHz Body

****

Aprel Laboratory
Test Result for UIM Dielectric Parameter
Fri 15/Aug/2014 11:51:50
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	53.32	0.85
0.7450	55.55	0.96	53.01	0.87
0.7550	55.51	0.96	53.00	0.87
0.7650	55.47	0.96	52.81	0.89
0.7750	55.43	0.97	52.69	0.91
0.7850	55.39	0.97	52.53	0.92
0.7950	55.36	0.97	52.43	0.93
0.8050	55.32	0.97	52.22	0.94
0.8150	55.28	0.97	52.16	0.95
0.8250	55.24	0.97	52.10	0.96
0.8350	55.20	0.97	51.97	0.97
0.8450	55.17	0.98	51.83	0.98
0.8550	55.14	0.99	51.54	0.99
0.8650	55.11	1.01	51.51	0.99
0.8750	55.08	1.02	51.39	1.01
0.8850	55.05	1.03	51.28	1.02
0.8950	55.02	1.04	51.05	1.03
0.9050	55.00	1.05	51.11	1.04
0.9150	55.00	1.06	50.95	1.05
0.9250	54.98	1.06	50.92	1.07
0.9350	54.96	1.07	50.79	1.08