DECLARATION OF COMPLIANCE
SAR EVALUATION

Test Lab

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Applicant Information

M/A-COM PRIVATE RADIO SYSTEMS, INC.
3315 Old Forest Road
Lynchburg, VA 24501

FCC Rule Part(s):	**47 CFR §2.1093**
Test Procedure(s):	**FCC OET Bulletin 65, Supplement C (01-01)**
Equipment Class:	**Licensed Broadcast Transmitter Held to Face (TBF)**
Equipment Type:	**Portable FM PTT Radio Transceiver (TMS1-P1SAR01, TMS1-P1SAR02)**
FCC ID:	**OWDTR-0018-E**
Model(s):	**J7100(PI)**
Modulation:	**FM**
Tx Frequency Range(s):	**806-821 MHz (Repeater Input mode) / 821-824 MHz (NPSPAC, Repeater Input mode)** **851-866 MHz (Talk-Around mode) / 866-869 MHz (NPSPAC, Talk-Around mode)**
Max. Cond. Power Tested:	**3.38 Watts (806.0125 MHz)**
Antenna Type(s):	**1: Flexible Gain Antenna (KRE1011506/01)** **2: Whip Antenna (KRE1011223/01)**
Battery Type(s):	**1. 7.5V Nickel Cadmium - Immersion (BKB191210/3)** **2. 7.5V Nickel Metal Hydride - Immersion (BKB191210/4)** **3. 7.5V Nickel Cadmium - Immersion - Intrinsically Safe (BKB191210/5)** **4. 7.5V Nickel Metal Hydride - Immersion - Intrinsically Safe (BKB191210/6)** **5. 7.5V Nickel Cadmium (BKB191210/23)** **6. 7.5V Nickel Metal Hydride (BKB191210/24)** **7. 7.5V Nickel Cadmium - Intrinsically Safe (BKB191210/25)** **8. 7.5V Nickel Metal Hydride - Intrinsically Safe (BKB191210/26)**
Body-Worn Accessories:	**1. Speaker Microphone Antenna Version Plus (KRY1011617/84R1A, KRY1011617/184R1A)** **2. Speaker-Microphone (KRY1011617/83R1A, KRY1011617/183R1A)** **3. Metal Belt-Clip (KRY1011647/1)** **4. Leather Belt-Loop (19B226627G2) & Swivel (19B233243G3)** **5. Leather Case (Belt-Loop type) (KRY1011638/1)** **6. Nylon Case with Swivel (KRY1011648/1) & Belt-Loop (19B226627G2)** **7. Nylon T-Strap (KRY1011656/1)**

Celltech Research Inc. declares under its sole responsibility that this device was found to be in compliance with the Specific Absorption Rate (SAR) RF exposure requirements specified in FCC 47 CFR §2.1093. The device was tested in accordance with the measurement standards and procedures specified in FCC OET Bulletin 65, Supplement C, Edition 01-01 (Occupational Environment / Controlled Exposure).

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.

Russell W. Pipe
Senior Compliance Technologist
Celltech Research Inc.

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1.0 INTRODUCTION

This measurement report demonstrates compliance of the M/A-COM PRS INC. Model: J7100(PI) Portable FM PTT Radio Transceiver FCC ID: OWDTR-0018-E with FCC 47 CFR §2.1093 (Occupational Environment / Controlled Exposure limits) (see reference [1]). The test procedures described in FCC OET Bulletin 65, Supplement C, Edition 01-01 (see reference [2]) were employed. A description of the device, operating configuration, detailed summary of the test results, methodology and procedures used in the evaluation, equipment used, and the various provisions of the rules are included within this test report.

2.0 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

FCC Rule Part(s)	47 CFR §2.1093	**FCC ID**	OWDTR-0018-E
Test Procedure	FCC OET Bulletin 65, Supplement C (01-01)	**Modulation**	FM
Equipment Class	Licensed Broadcast Transmitter Held to Face (TBF)	**Tx Frequency Range**	806-821 MHz (Repeater Input mode) 821-824 MHz (NPSPAC, Repeater Input mode) 851-866 MHz (Talk-Around mode) 866-869 MHz (NPSPAC, Talk-Around mode)
Equipment Type	Portable FM PTT Radio Transceiver	**Measured RF Conducted Power**	3.38 Watts (806.0125 MHz) 3.35 Watts (815.5000 MHz) 3.33 Watts (823.9875 MHz) 3.22 Watts (851.0125 MHz) 3.18 Watts (863.0000 MHz) 3.18 Watts (868.9875 MHz)
Model(s)	J7100(PI)	**Antenna Type(s)**	1. Flexible Gain (KRE1011506/01) 2. Whip (KRE1011223/01)
Serial No.	Pre-production	**Batteries Tested**	1. 7.5V NiCd - Immersion (BKB191210/3) 2. 7.5V NiMH - Immersion (BKB191210/4)
Available Battery Options	1. 7.5V Nickel Cadmium - Immersion (BKB191210/3) 2. 7.5V Nickel Metal Hydride - Immersion (BKB191210/4) 3. 7.5V Nickel Cadmium - Immersion - Intrinsically Safe (BKB191210/5) 4. 7.5V Nickel Metal Hydride - Immersion - Intrinsically Safe (BKB191210/6) 5. 7.5V Nickel Cadmium (BKB191210/23) 6. 7.5V Nickel Metal Hydride (BKB191210/24) 7. 7.5V Nickel Cadmium - Intrinsically Safe (BKB191210/25) 8. 7.5V Nickel Metal Hydride - Intrinsically Safe (BKB191210/26)		
Body-worn Accessories	1. Speaker Microphone Antenna Version Plus (KRY1011617/84R1A, KRY1011617/184R1A) 2. Speaker Microphone (KRY1011617/83R1A, KRY1011617/183R1A) 3. Metal Belt-Clip (KRY1011647/1) 4. Leather Belt-Loop (19B226627G2) & Swivel (19B233243G3) 5. Leather Case (Belt-Loop type) (KRY1011638/1) 6. Nylon Case with Swivel (KRY1011648/1) & Belt-Loop (19B226627G2) 7. Nylon T-Strap (KRY1011656/1)		

3.0 SAR MEASUREMENT SYSTEM

The Celltech Research SAR measurement facility utilizes the Dosimetric Assessment System (DASY™) manufactured by Schmid & Partner Engineering AG (SPEAG™) of Zurich, Switzerland. The SAR measurement system is comprised of the robot controller, computer, near-field probe, probe alignment sensor, specific anthropomorphic mannequin (SAM) phantom, and various planar phantoms for brain and/or body SAR evaluations. The robot is a six-axis industrial robot performing precise movements to position the probe at 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 PC plug-in card. The DAE3 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 PC-card 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. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

DASY3 SAR Measurement System with small planar phantom

4.0 SAR COMPARISON

SAR measurements were performed with radio P/N: TMS1-P1SAR01. The only difference between the radio P/N: TMS1-P1SAR01 and P/N: TMS1-P1SAR02 is the number of keys on the front keypad as shown below. The test configuration with the highest SAR level for face-held and body-worn measurements with radio P/N: TMS1-P1SAR01 were also performed for radio P/N: TMS1-P1SAR02. As shown in the comparison table below, the SAR results were lower for radio P/N: TMS1-P1SAR02, therefore no further measurements were performed.

SAR COMPARISON TABLE				
Radio P/N	**Test Type**	**Test Configuration**	**Max. SAR 1g (W/kg)**	
			100% Duty Cycle	**50% Duty Cycle**
TMS1-P1SAR01	Face-held	Flexible Gain Antenna	3.22	1.61
TMS1-P1SAR02	Face-held	Flexible Gain Antenna	2.38	1.19
TMS1-P1SAR01	Body-worn	Flexible Gain Antenna (Nylon T-Strap Accessory)	13.2	6.60
TMS1-P1SAR02	Body-worn	Flexible Gain Antenna (Nylon T-Strap Accessory)	12.9	6.45
ANSI / IEEE C95.1 1992 - SAFETY LIMIT BRAIN: 8.0 W/kg (averaged over 1 gram) Spatial Peak - Controlled Exposure / Occupational				

P/N: TMS1-P1SAR01

P/N: TMS1-P1SAR02

5.0 MEASUREMENT SUMMARY

The measurement results were obtained with the EUT tested in the conditions described in this report. Detailed measurement data and plots showing the maximum SAR location of the EUT are reported in Appendix A.

FACE-HELD SAR MEASUREMENT RESULTS

Handheld Radio Transceiver (TMS1-P1SAR01)

Freq. (MHz)	Channel	Test Mode	Conducted Pwr. (Watts)		Antenna Type	Battery Type	Phantom Section	Separation Distance to Phantom (cm)	SAR 1g (W/kg)	
			Before	After					100% Duty Cycle	50% Duty Cycle
815.5000	LB Mid	CW	3.35	3.20	Flexible Gain	NiMH	Planar	2.5	3.17	1.59
863.0000	HB Mid	CW	3.18	3.05	Flexible Gain	NiMH	Planar	2.5	2.11	1.06
815.5000	LB Mid	CW	3.35	3.20	Flexible Gain	NiCd	Planar	2.5	3.22	1.61
863.0000	HB Mid	CW	3.18	3.05	Flexible Gain	NiCd	Planar	2.5	2.02	1.01
806.0125	LB Low	CW	3.38	3.23	Flexible Gain	NiCd	Planar	2.5	3.05	1.53
823.9875	LB High	CW	3.33	3.18	Flexible Gain	NiCd	Planar	2.5	3.12	1.56
851.0125	HB Low	CW	3.22	3.10	Flexible Gain	NiMH	Planar	2.5	2.11	1.06
868.9875	HB High	CW	3.18	3.06	Flexible Gain	NiMH	Planar	2.5	1.91	0.96
815.5000	LB Mid	CW	3.35	3.22	Whip	NiMH	Planar	2.5	2.68	1.34
863.0000	HB Mid	CW	3.18	3.04	Whip	NiMH	Planar	2.5	2.04	1.02
815.5000	LB Mid	CW	3.35	3.22	Whip	NiCd	Planar	2.5	2.81	1.41
863.0000	HB Mid	CW	3.18	3.03	Whip	NiCd	Planar	2.5	2.02	1.01
806.0125	LB Low	CW	3.38	3.25	Whip	NiCd	Planar	2.5	1.90	0.95
823.9875	LB High	CW	3.33	3.20	Whip	NiCd	Planar	2.5	1.96	0.98
851.0125	HB Low	CW	3.22	3.09	Whip	NiMH	Planar	2.5	1.91	0.96
868.9875	HB High	CW	3.18	3.05	Whip	NiMH	Planar	2.5	2.04	1.02

ANSI / IEEE C95.1 1992 - SAFETY LIMIT
BRAIN: 8.0 W/kg (averaged over 1 gram)
Spatial Peak - Controlled Exposure / Occupational

Measured Mixture Type	835MHz Brain (10/24/02)		**Relative Humidity**	66 %
Dielectric Constant	**Target**	**Measured**	**Ambient Temperature**	21.6 °C
	41.5 (+/- 5%)	40.6		
Conductivity	**Target**	**Measured**	**Fluid Temperature**	23.0 °C
	0.90 (+/- 5%)	0.91		
Atmospheric Pressure	102.2 kPa		**Fluid Depth**	≥ 15 cm
r (Kg/m^3)	1000		**Abbreviation(s)**	LB = Low Band HB = High Band

MEASUREMENT SUMMARY (Cont.)

FACE-HELD SAR MEASUREMENT RESULTS

Speaker-Microphone Antenna Version Plus (KRY1011617/84R1A, KRY1011617/184R1A)

Freq. (MHz)	Channel	Test Mode	Conducted Pwr. (Watts)		Antenna Type	Battery Type	Phantom Section	Separation Distance to Phantom (cm)	SAR 1g (W/kg)	
			Before	After					100% Duty Cycle	50% Duty Cycle
815.5000	LB Mid	CW	3.35	3.18	Flexible Gain	NiMH	Planar	2.5	1.05	0.53
863.0000	HB Mid	CW	3.18	3.03	Flexible Gain	NiMH	Planar	2.5	2.69	1.35
815.5000	LB Mid	CW	3.35	3.20	Flexible Gain	NiCd	Planar	2.5	1.08	0.54
863.0000	HB Mid	CW	3.18	3.04	Flexible Gain	NiCd	Planar	2.5	1.48	0.74
806.0125	LB Low	CW	3.38	3.22	Flexible Gain	NiCd	Planar	2.5	0.996	0.498
823.9875	LB High	CW	3.33	3.17	Flexible Gain	NiCd	Planar	2.5	1.05	0.53
851.0125	HB Low	CW	3.22	3.07	Flexible Gain	NiMH	Planar	2.5	1.64	0.82
868.9875	HB High	CW	3.18	3.02	Flexible Gain	NiMH	Planar	2.5	1.58	0.79
815.5000	LB Mid	CW	3.35	3.19	Whip	NiMH	Planar	2.5	3.02	1.51
863.0000	HB Mid	CW	3.18	3.06	Whip	NiMH	Planar	2.5	2.70	1.35
815.5000	LB Mid	CW	3.35	3.21	Whip	NiCd	Planar	2.5	3.02	1.51
863.0000	HB Mid	CW	3.18	3.05	Whip	NiCd	Planar	2.5	2.31	1.12
806.0125	LB Low	CW	3.38	3.24	Whip	NiCd	Planar	2.5	3.42	1.71
823.9875	LB High	CW	3.33	3.16	Whip	NiCd	Planar	2.5	2.14	1.07
851.0125	HB Low	CW	3.22	3.08	Whip	NiMH	Planar	2.5	2.02	1.01
868.9875	HB High	CW	3.18	3.03	Whip	NiMH	Planar	2.5	2.60	1.30

ANSI / IEEE C95.1 1992 - SAFETY LIMIT
BRAIN: 8.0 W/kg (averaged over 1 gram)
Spatial Peak - Controlled Exposure / Occupational

Measured Mixture Type	835MHz Brain (10/25/02)		**Relative Humidity**	80 %
Dielectric Constant	**Target**	**Measured**	**Ambient Temperature**	21.6 °C
	41.5 (+/- 5%)	41.3		
Conductivity	**Target**	**Measured**	**Fluid Temperature**	22.0 °C
	0.90 (+/- 5%)	0.92		
Atmospheric Pressure	102.0 kPa		**Fluid Depth**	≥ 15 cm
r (Kg/m^3)	1000		**Abbreviation(s)**	LB = Low Band HB = High Band

MEASUREMENT SUMMARY (Cont.)

BODY-WORN SAR MEASUREMENT RESULTS										
Speaker-Microphone Antenna Version Plus with Lapel-Clip (KRY1011617/84R1A, KRY1011617/184R1A)										
Freq. (MHz)	Channel	Test Mode	Conducted Pwr. (Watts)		Antenna Type	Battery Type	Phantom Section	Lapel-Clip Separation Distance (cm)	SAR 1g (W/kg)	
			Before	After					100% Duty Cycle	50% Duty Cycle
815.5000	LB Mid	CW	3.35	3.20	Flexible Gain	NiMH	Planar	1.3	1.56	0.78
863.0000	HB Mid	CW	3.18	3.07	Flexible Gain	NiMH	Planar	1.3	2.70	1.35
815.5000	LB Mid	CW	3.35	3.21	Flexible Gain	NiCd	Planar	1.3	1.61	0.81
863.0000	HB Mid	CW	3.18	3.03	Flexible Gain	NiCd	Planar	1.3	2.38	1.19
806.0125	LB Low	CW	3.38	3.23	Flexible Gain	NiCd	Planar	1.3	1.37	0.69
823.9875	LB High	CW	3.33	3.18	Flexible Gain	NiCd	Planar	1.3	1.48	0.74
851.0125	HB Low	CW	3.22	3.06	Flexible Gain	NiMH	Planar	1.3	2.24	1.12
868.9875	HB High	CW	3.18	3.04	Flexible Gain	NiMH	Planar	1.3	2.62	1.31
815.5000	LB Mid	CW	3.35	3.19	Whip	NiMH	Planar	1.3	4.38	2.19
863.0000	HB Mid	CW	3.18	3.07	Whip	NiMH	Planar	1.3	3.75	1.88
815.5000	LB Mid	CW	3.35	3.22	Whip	NiCd	Planar	1.3	4.00	2.00
863.0000	HB Mid	CW	3.18	3.04	Whip	NiCd	Planar	1.3	3.96	1.98
806.0125	LB Low	CW	3.38	3.24	Whip	NiMH	Planar	1.3	4.78	2.39
823.9875	LB High	CW	3.33	3.17	Whip	NiMH	Planar	1.3	3.36	1.68
851.0125	HB Low	CW	3.22	3.08	Whip	NiCd	Planar	1.3	3.31	1.66
868.9875	HB High	CW	3.18	3.02	Whip	NiCd	Planar	1.3	4.93	2.47

ANSI / IEEE C95.1 1992 - SAFETY LIMIT
BODY: 8.0 W/kg (averaged over 1 gram)
Spatial Peak - Controlled Exposure / Occupational

Measured Mixture Type	835MHz Body (10/26/02)		**Atmospheric Pressure**	102.1 kPa
Dielectric Constant	**Target**	**Measured**	**Relative Humidity**	74 %
	55.2 (+/- 5%)	54.3	**Ambient Temperature**	21.6 °C
Conductivity	**Target**	**Measured**	**Fluid Temperature**	22.2 °C
	0.97 (+/- 5%)	0.98	**Fluid Depth**	≥ 15 cm
r (Kg/m^3)	1000		**Abbreviation(s)**	LB = Low Band HB = High Band

MEASUREMENT SUMMARY (Cont.)

BODY-WORN SAR MEASUREMENT RESULTS

Radio with Metal Belt-Clip (KRY1011647/1) & Speaker-Microphone (KRY1011617/83R1A, KRY1011617/183R1A)

Freq. (MHz)	Channel	Test Mode	Conducted Pwr. (Watts)		Antenna Type	Battery Type	Phantom Section	Belt-Clip Separation Distance (cm)	SAR 1g (W/kg)	
			Before	After					100% Duty Cycle	50% Duty Cycle
815.5000	LB Mid	CW	3.35	3.20	Flexible Gain	NiMH	Planar	1.1	9.83	4.92
863.0000	HB Mid	CW	3.18	3.04	Flexible Gain	NiMH	Planar	1.1	6.91	3.46
815.5000	LB Mid	CW	3.35	3.18	Flexible Gain	NiCd	Planar	1.1	10.2	5.10
863.0000	HB Mid	CW	3.18	3.03	Flexible Gain	NiCd	Planar	1.1	6.54	3.27
806.0125	LB Low	CW	3.38	3.21	Flexible Gain	NiCd	Planar	1.1	10.3	5.15
823.9875	LB High	CW	3.33	3.17	Flexible Gain	NiCd	Planar	1.1	12.1	6.05
851.0125	HB Low	CW	3.22	3.11	Flexible Gain	NiMH	Planar	1.1	9.55	4.78
868.9875	HB High	CW	3.18	3.05	Flexible Gain	NiMH	Planar	1.1	7.82	3.91
815.5000	LB Mid	CW	3.35	3.19	Whip	NiMH	Planar	1.1	5.89	2.95
863.0000	HB Mid	CW	3.18	3.06	Whip	NiMH	Planar	1.1	5.82	2.91
815.5000	LB Mid	CW	3.35	3.20	Whip	NiCd	Planar	1.1	7.68	3.84
863.0000	HB Mid	CW	3.18	3.04	Whip	NiCd	Planar	1.1	6.24	3.12
806.0125	LB Low	CW	3.38	3.22	Whip	NiCd	Planar	1.1	7.10	3.55
823.9875	LB High	CW	3.33	3.18	Whip	NiCd	Planar	1.1	6.69	3.35
851.0125	HB Low	CW	3.22	3.10	Whip	NiCd	Planar	1.1	6.31	3.16
868.9875	HB High	CW	3.18	3.05	Whip	NiCd	Planar	1.1	6.73	3.37

ANSI / IEEE C95.1 1992 - SAFETY LIMIT
BODY: 8.0 W/kg (averaged over 1 gram)
Spatial Peak - Controlled Exposure / Occupational

Measured Mixture Type	835MHz Body (10/28/02)		**Atmospheric Pressure**	101.9 kPa
Dielectric Constant	**Target**	**Measured**	**Relative Humidity**	44 %
	55.2 (+/- 5%)	52.7	**Ambient Temperature**	21.4 °C
Conductivity	**Target**	**Measured**	**Fluid Temperature**	21.9 °C
	0.97 (+/- 5%)	0.95	**Fluid Depth**	≥ 15 cm
r (Kg/m^3)	1000		**Abbreviation(s)**	LB = Low Band HB = High Band

MEASUREMENT SUMMARY (Cont.)

BODY-WORN SAR MEASUREMENT RESULTS

Radio with Leather Belt-Loop (19B226627G2), Swivel (19B233243G3) & Speaker-Microphone (KRY1011617/83R1A, KRY1011617/183R1A)

Freq. (MHz)	Channel	Test Mode	Conducted Pwr. (Watts)		Antenna Type	Battery Type	Phantom Section	Belt-Loop Separation Distance (cm)	SAR 1g (W/kg)	
			Before	After					100% Duty Cycle	50% Duty Cycle
815.5000	LB Mid	CW	3.35	3.18	Flexible Gain	NiMH	Planar	3.3	3.28	1.64
863.0000	HB Mid	CW	3.18	3.02	Flexible Gain	NiMH	Planar	3.3	2.15	1.08
815.5000	LB Mid	CW	3.35	3.21	Flexible Gain	NiCd	Planar	3.3	3.09	1.55
863.0000	HB Mid	CW	3.18	3.06	Flexible Gain	NiCd	Planar	3.3	2.11	1.06
806.0125	LB Low	CW	3.38	3.25	Flexible Gain	NiMH	Planar	3.3	3.16	1.58
823.9875	LB High	CW	3.33	3.17	Flexible Gain	NiMH	Planar	3.3	2.92	1.46
851.0125	HB Low	CW	3.22	3.07	Flexible Gain	NiMH	Planar	3.3	1.98	0.99
868.9875	HB High	CW	3.18	3.03	Flexible Gain	NiMH	Planar	3.3	1.80	0.90
815.5000	LB Mid	CW	3.35	3.20	Whip	NiMH	Planar	3.3	1.82	0.91
863.0000	HB Mid	CW	3.18	3.04	Whip	NiMH	Planar	3.3	1.89	0.95
815.5000	LB Mid	CW	3.35	3.22	Whip	NiCd	Planar	3.3	1.90	0.95
863.0000	HB Mid	CW	3.18	3.07	Whip	NiCd	Planar	3.3	1.79	0.90
806.0125	LB Low	CW	3.38	3.26	Whip	NiCd	Planar	3.3	1.85	0.93
823.9875	LB High	CW	3.33	3.16	Whip	NiCd	Planar	3.3	1.93	0.97
851.0125	HB Low	CW	3.22	3.08	Whip	NiMH	Planar	3.3	2.17	1.09
868.9875	HB High	CW	3.18	3.05	Whip	NiMH	Planar	3.3	2.26	1.13

ANSI / IEEE C95.1 1992 - SAFETY LIMIT
BODY: 8.0 W/kg (averaged over 1 gram)
Spatial Peak - Controlled Exposure / Occupational

Measured Mixture Type	835MHz Body (10/29/02)		**Atmospheric Pressure**	102.3 kPa
Dielectric Constant	**Target**	**Measured**	**Relative Humidity**	45 %
	55.2 (+/- 5%)	53.0	**Ambient Temperature**	21.4 °C
Conductivity	**Target**	**Measured**	**Fluid Temperature**	21.5 °C
	0.97 (+/- 5%)	0.96	**Fluid Depth**	≥ 15 cm
r (Kg/m^3)	1000		**Abbreviation(s)**	LB = Low Band HB = High Band

MEASUREMENT SUMMARY (Cont.)

BODY-WORN SAR MEASUREMENT RESULTS

Radio with Leather Case/Belt-Loop (KRY1011638/1) & Speaker-Microphone (KRY1011617/83R1A, KRY1011617/183R1A)

Freq. (MHz)	Channel	Test Mode	Conducted Pwr. (Watts)		Antenna Type	Battery Type	Phantom Section	Belt-Loop Separation Distance (cm)	SAR 1g (W/kg)	
			Before	After					100% Duty Cycle	50% Duty Cycle
815.5000	LB Mid	CW	3.35	3.18	Flexible Gain	NiMH	Planar	1.7	7.97	3.99
863.0000	HB Mid	CW	3.18	3.03	Flexible Gain	NiMH	Planar	1.7	5.56	2.78
815.5000	LB Mid	CW	3.35	3.20	Flexible Gain	NiCd	Planar	1.7	9.13	4.57
863.0000	HB Mid	CW	3.18	3.04	Flexible Gain	NiCd	Planar	1.7	5.64	2.82
806.0125	LB Low	CW	3.38	3.22	Flexible Gain	NiCd	Planar	1.7	8.91	4.46
823.9875	LB High	CW	3.33	3.18	Flexible Gain	NiCd	Planar	1.7	9.01	4.51
851.0125	HB Low	CW	3.22	3.10	Flexible Gain	NiCd	Planar	1.7	6.74	3.37
868.9875	HB High	CW	3.18	3.04	Flexible Gain	NiCd	Planar	1.7	5.56	2.78
815.5000	LB Mid	CW	3.35	3.20	Whip	NiMH	Planar	1.7	5.12	2.56
863.0000	HB Mid	CW	3.18	3.05	Whip	NiMH	Planar	1.7	5.02	2.51
815.5000	LB Mid	CW	3.35	3.22	Whip	NiCd	Planar	1.7	5.57	2.79
863.0000	HB Mid	CW	3.18	3.06	Whip	NiCd	Planar	1.7	5.57	2.79
806.0125	LB Low	CW	3.38	3.25	Whip	NiCd	Planar	1.7	6.11	3.06
823.9875	LB High	CW	3.33	3.21	Whip	NiCd	Planar	1.7	5.28	2.64
851.0125	HB Low	CW	3.22	3.08	Whip	NiCd	Planar	1.7	5.45	2.73
868.9875	HB High	CW	3.18	3.03	Whip	NiCd	Planar	1.7	5.11	2.56

ANSI / IEEE C95.1 1992 - SAFETY LIMIT
BODY: 8.0 W/kg (averaged over 1 gram)
Spatial Peak - Controlled Exposure / Occupational

Measured Mixture Type	835MHz Body (10/30/02)		**Atmospheric Pressure**	102.0 kPa
Dielectric Constant	**Target**	**Measured**	**Relative Humidity**	50 %
	55.2 (+/- 5%)	52.7	**Ambient Temperature**	21.5 °C
Conductivity	**Target**	**Measured**	**Fluid Temperature**	21.3 °C
	0.97 (+/- 5%)	0.96	**Fluid Depth**	≥ 15 cm
r (Kg/m^3)	1000		**Abbreviation(s)**	LB = Low Band HB = High Band

MEASUREMENT SUMMARY (Cont.)

BODY-WORN SAR MEASUREMENT RESULTS

Radio with Nylon Case (KRY1011648/1), Leather Belt-Loop (19B226627G2), & Speaker-Microphone (KRY1011617/83R1A, KRY1011617/183R1A)

Freq. (MHz)	Channel	Test Mode	Conducted Pwr. (Watts)		Antenna Type	Battery Type	Phantom Section	Belt-Loop Separation Distance (cm)	SAR 1g (W/kg)	
			Before	After					100% Duty Cycle	50% Duty Cycle
815.5000	LB Mid	CW	3.35	3.19	Flexible Gain	NiMH	Planar	4.0	2.60	1.30
863.0000	HB Mid	CW	3.18	3.04	Flexible Gain	NiMH	Planar	4.0	1.83	0.92
815.5000	LB Mid	CW	3.35	3.20	Flexible Gain	NiCd	Planar	4.0	2.68	1.34
863.0000	HB Mid	CW	3.18	3.02	Flexible Gain	NiCd	Planar	4.0	1.30	0.65
806.0125	LB Low	CW	3.38	3.24	Flexible Gain	NiCd	Planar	4.0	2.65	1.33
823.9875	LB High	CW	3.33	3.17	Flexible Gain	NiCd	Planar	4.0	2.36	1.18
851.0125	HB Low	CW	3.22	3.10	Flexible Gain	NiMH	Planar	4.0	1.63	0.82
868.9875	HB High	CW	3.18	3.05	Flexible Gain	NiMH	Planar	4.0	1.36	0.68
815.5000	LB Mid	CW	3.35	3.22	Whip	NiMH	Planar	4.0	1.37	0.69
863.0000	HB Mid	CW	3.18	3.06	Whip	NiMH	Planar	4.0	1.27	0.64
815.5000	LB Mid	CW	3.35	3.21	Whip	NiCd	Planar	4.0	1.39	0.70
863.0000	HB Mid	CW	3.18	3.03	Whip	NiCd	Planar	4.0	1.15	0.58
806.0125	LB Low	CW	3.38	3.21	Whip	NiCd	Planar	4.0	1.45	0.73
823.9875	LB High	CW	3.33	3.16	Whip	NiCd	Planar	4.0	1.32	0.66
851.0125	HB Low	CW	3.22	3.06	Whip	NiMH	Planar	4.0	1.34	0.67
868.9875	HB High	CW	3.18	3.05	Whip	NiMH	Planar	4.0	1.09	0.55

ANSI / IEEE C95.1 1992 - SAFETY LIMIT
BODY: 8.0 W/kg (averaged over 1 gram)
Spatial Peak - Controlled Exposure / Occupational

Measured Mixture Type	835MHz Body (10/31/02)		**Atmospheric Pressure**	102.3 kPa
Dielectric Constant	**Target**	**Measured**	**Relative Humidity**	44 %
	55.2 (+/- 5%)	52.4	**Ambient Temperature**	21.0 °C
Conductivity	**Target**	**Measured**	**Fluid Temperature**	21.4 °C
	0.97 (+/- 5%)	0.96	**Fluid Depth**	≥ 15 cm
r (Kg/m^3)	1000		**Abbreviation(s)**	LB = Low Band HB = High Band

MEASUREMENT SUMMARY (Cont.)

BODY-WORN SAR MEASUREMENT RESULTS

Radio with Nylon T-Strap (KRY1011656/1) & Speaker-Microphone (KRY1011617/83R1A, KRY1011617/183R1A)

Freq. (MHz)	Channel	Test Mode	Conducted Pwr. (Watts)		Antenna Type	Battery Type	Phantom Section	T-Strap Separation Distance (cm)	SAR 1g (W/kg)	
			Before	After					100% Duty Cycle	50% Duty Cycle
815.5000	LB Mid	CW	3.35	3.21	Flexible Gain	NiMH	Planar	1.6	10.8	5.40
863.0000	HB Mid	CW	3.18	3.03	Flexible Gain	NiMH	Planar	1.6	8.86	4.43
815.5000	LB Mid	CW	3.35	3.23	Flexible Gain	NiCd	Planar	1.6	13.2	6.60
863.0000	HB Mid	CW	3.18	3.07	Flexible Gain	NiCd	Planar	1.6	8.48	4.24
806.0125	LB Low	CW	3.38	3.23	Flexible Gain	NiCd	Planar	1.6	10.9	5.45
823.9875	LB High	CW	3.33	3.17	Flexible Gain	NiCd	Planar	1.6	9.09	4.55
851.0125	HB Low	CW	3.22	3.11	Flexible Gain	NiMH	Planar	1.6	7.81	3.91
868.9875	HB High	CW	3.18	3.04	Flexible Gain	NiMH	Planar	1.6	5.57	2.79
815.5000	LB Mid	CW	3.35	3.18	Whip	NiMH	Planar	1.6	7.68	3.84
863.0000	HB Mid	CW	3.18	3.05	Whip	NiMH	Planar	1.6	6.08	3.04
815.5000	LB Mid	CW	3.35	3.22	Whip	NiCd	Planar	1.6	8.21	4.11
863.0000	HB Mid	CW	3.18	3.02	Whip	NiCd	Planar	1.6	6.81	3.41
806.0125	LB Low	CW	3.38	3.21	Whip	NiCd	Planar	1.6	9.78	4.89
823.9875	LB High	CW	3.33	3.21	Whip	NiCd	Planar	1.6	7.94	3.97
851.0125	HB Low	CW	3.22	3.09	Whip	NiCd	Planar	1.6	7.95	3.98
868.9875	HB High	CW	3.18	3.04	Whip	NiCd	Planar	1.6	7.41	3.71

ANSI / IEEE C95.1 1992 - SAFETY LIMIT
BODY: 8.0 W/kg (averaged over 1 gram)
Spatial Peak - Controlled Exposure / Occupational

Measured Mixture Type	835MHz Body (11/01/02)		**Atmospheric Pressure**	102.0 kPa
Dielectric Constant	**Target**	**Measured**	**Relative Humidity**	50 %
	55.2 (+/- 5%)	54.0	**Ambient Temperature**	22.0 °C
Conductivity	**Target**	**Measured**	**Fluid Temperature**	21.8 °C
	0.97 (+/- 5%)	0.98	**Fluid Depth**	≥ 15 cm
r (Kg/m^3)	1000		**Abbreviation(s)**	LB = Low Band HB = High Band

6.0 DETAILS OF SAR EVALUATION

The M/A-COM PRS INC. Model: J7100(PI) Portable FM PTT Radio Transceiver FCC ID: OWDTR-0018-E was found to be compliant for localized Specific Absorption Rate (Controlled Exposure) based on the test provisions and conditions described below. Detailed photographs of the test setup are shown in Appendix G.

1. The EUT was tested in a face-held configuration with the front of the radio placed parallel to the outer surface of the small planar phantom with a 2.5 cm separation distance.
2. The speaker microphone with antenna was tested in a face-held configuration with the front of the speaker-microphone placed parallel to the outer surface of the small planar phantom with a 2.5 cm separation distance. The speaker microphone was connected to the radio for the duration of the tests.
3. The speaker microphone with antenna was tested in a body-worn configuration with the back of the speaker microphone placed parallel to the outer surface of the small planar phantom. The attached lapel-clip was touching the outer surface of the small planar phantom and provided a 1.3 cm separation distance. The speaker microphone was connected to the radio for the duration of the tests.
4. The EUT was tested in a body-worn configuration with the back of the radio placed parallel to the outer surface of the small planar phantom. The attached metal belt-clip was touching the outer surface of the small planar phantom and provided a 1.1 cm separation distance.
5. The EUT was tested in a body-worn configuration with the back of the radio placed parallel to the outer surface of the small planar phantom. The attached leather belt-loop was touching the outer surface of the small planar phantom and provided a 3.3 cm separation distance.
6. The EUT was tested in a body-worn configuration with the radio placed inside the leather case and the back of the radio placed parallel to the outer surface of the small planar phantom. The back of the leather case/belt-loop was touching the outer surface of the small planar phantom and provided a 1.7 cm separation distance.
7. The EUT was tested in a body-worn configuration with the radio placed inside the nylon case with rear swivel mount attached to the belt-loop and the back of the radio facing parallel to the outer surface of the small planar phantom. The back of the belt-loop was touching the outer surface of the small planar phantom and provided a 4.0 cm separation distance.
8. The EUT was tested in a body-worn configuration with the back of the radio placed parallel to the outer surface of the small planar phantom. The attached T-strap was touching the outer surface of the small planar phantom and provided a 1.6 cm separation distance.
9. A speaker-microphone accessory (model without antenna) was attached to the radio for body-worn tests #4-#8.
10. The EUT was first tested at the mid channel of both frequency bands (815.5000MHz, 863.0000MHz) with both NiMH and NiCd battery options showing a full area scan. The battery option with the highest SAR level at the mid channel of each frequency band was also further tested at the low and high channels showing a partial area scan (except face-held for the radio with whip antenna where a peak SAR location also occurred at the keypad section of the radio).
11. The EUT was evaluated for SAR at maximum power and the unit was operated for an appropriate period prior to the evaluation to minimize power drift. The conducted power levels were measured before and after each test according to the procedures described in FCC Part 2.1046. If the conducted power level drifted more than +/-5% of the initial power level, then the EUT was retested. Any unusual anomalies over the course of the test also warranted a re-evaluation.
12. The EUT was tested with the transmit button depressed and the transmitter in unmodulated continuous transmit operation (Continuous Wave mode at 100% duty cycle) throughout the SAR evaluation. As a push-to-talk device the 50% duty cycle compensation reported assumes a transmit/receive cycle of equal time base.
13. The location of the maximum spatial SAR distribution (Hot Spot) was determined relative to the device and its antenna.
14. The EUT was tested with fully charged NiMH and NiCd batteries.
15. For this evaluation a stack of low-density, low-loss dielectric foamed polystyrene was used in place of the device holder.

7.0 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 in accordance with FCC OET Bulletin 65, Supplement C (Edition 01-01) 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 DASY3 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 20mm x 20mm.

c. Based on the area scan data, the area of maximum absorption was determined by spline interpolation. Around this point, a volume of 40 x 40 x 35 mm (fine resolution volume scan, zoom scan) was assessed by measuring 5 x 5 x 7 points.

d. The 1g and 10g spatial peak SAR was determined as follows:

1. The first step was an extrapolation 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 form the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm (see probe calibration document in Appendix D). The extrapolation was based on a least square algorithm [W. Gander, Computermathematik, p.168-180] (see reference [4]). Through the points in the first 3 cm in all z-axis, polynomials of the fourth order were calculated. This polynomial was then used to evaluate the points between the surface and the probe tip.

2. The next step used 3D-spline interpolation to get all points within the measured volume in a 1mm grid (35000 points). The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition [W. Gander, Computermathematik, p.141-150] (x, y and z -direction) [Numerical Recipes in C, Second Edition, p.123ff] (see reference [4]).

3. The maximal interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) were computed using the 3D-spline interpolation algorithm. 8000 points (20x20x20) were interpolated to calculate the average.

Device Positioning

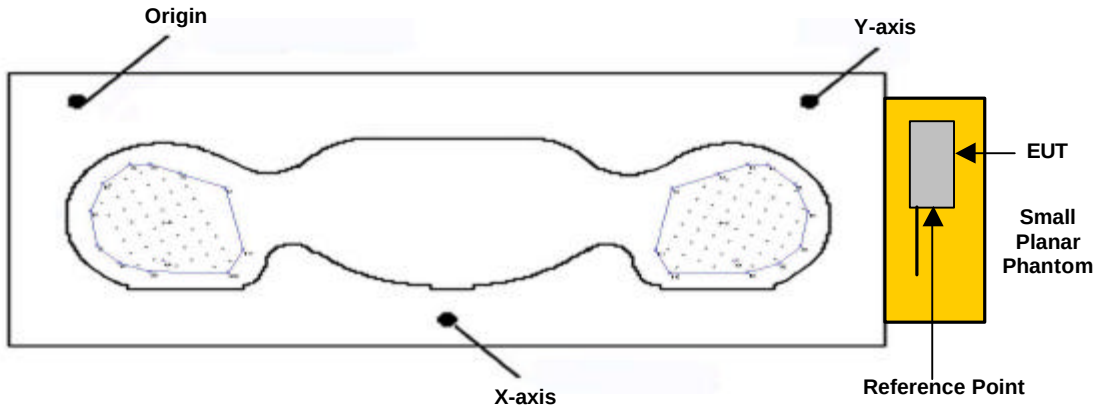


Figure 1. Phantom Reference Point & EUT Positioning
Radio Transceiver - Face-held Configuration

EVALUATION PROCEDURES (Cont.)

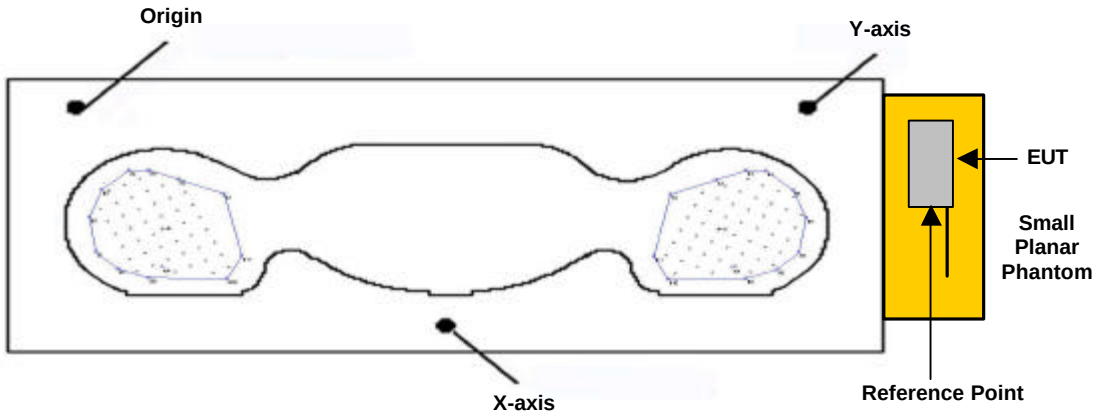


Figure 2. Phantom Reference Point & EUT Positioning
Radio Transceiver - Body-Worn Configuration

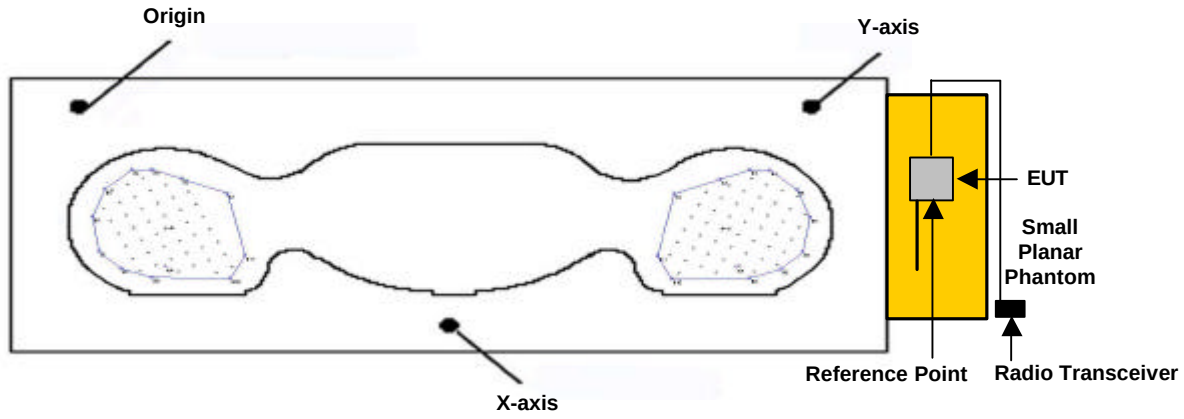


Figure 3. Phantom Reference Point & EUT Positioning
Speaker-Microphone Antenna Version Plus - Face-Held Configuration

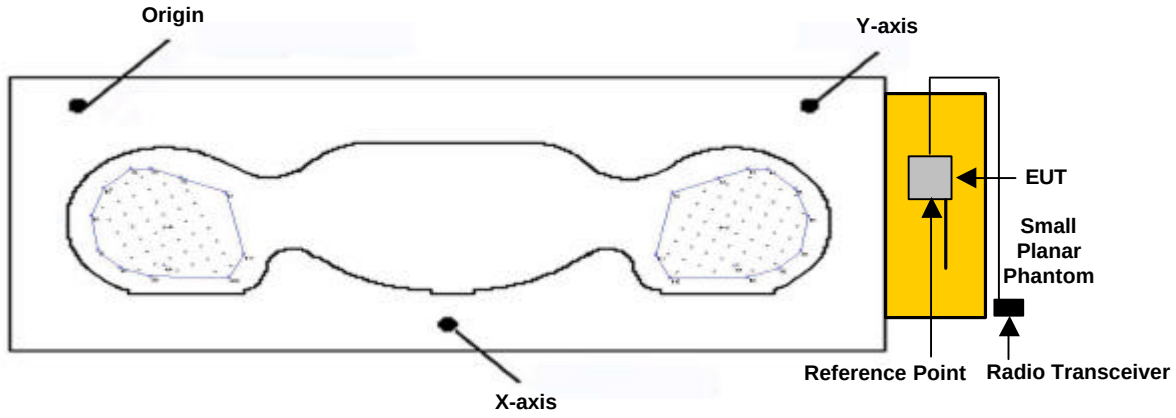


Figure 4. Phantom Reference Point & EUT Positioning
Speaker-Microphone Antenna Version Plus - Body-Worn Configuration

8.0 SYSTEM VALIDATION

Prior to the SAR evaluation the system was verified in the planar section of the SAM phantom with a 900MHz dipole (see Appendix C for detailed dipole calibration procedures). The fluids were verified using an 85070C Dielectric Probe Kit and an 8753E Network Analyzer (see Appendix E for printout of measured fluid dielectric parameters). A forward power of 250 mW was applied to the dipole and the system was verified to a tolerance of ±10% (see Appendix B for system validation test plots).

Test Date	Equiv. Tissue	SAR 1g (W/kg)		Dielectric Constant e_r		Conductivity s (mho/m)		r (Kg/m^3)	Ambient Temp.	Fluid Temp.	Fluid Depth
		Target	Measured	Target	Measured	Target	Measured				
10/24/02	900MHz (Brain)	2.78	2.67	41.5 ±5%	39.8	0.97 ±5%	0.97	1000	21.6 °C	23.0 °C	≥ 15 cm
10/25/02	900MHz (Brain)	2.78	2.68	41.5 ±5%	40.5	0.97 ±5%	0.97	1000	21.6 °C	22.0 °C	≥ 15 cm
10/26/02	900MHz (Brain)	2.78	2.71	41.5 ±5%	40.3	0.97 ±5%	0.98	1000	21.6 °C	22.2 °C	≥ 15 cm
10/28/02	900MHz (Brain)	2.78	2.66	41.5 ±5%	40.2	0.97 ±5%	0.97	1000	21.4 °C	21.9 °C	≥ 15 cm
10/29/02	900MHz (Brain)	2.78	2.69	41.5 ±5%	40.1	0.97 ±5%	0.96	1000	21.4 °C	21.5 °C	≥ 15 cm
10/30/02	900MHz (Brain)	2.78	2.68	41.5 ±5%	40.2	0.97 ±5%	0.98	1000	21.5 °C	21.3 °C	≥ 15 cm
10/31/02	900MHz (Brain)	2.78	2.70	41.5 ±5%	40.3	0.97 ±5%	0.97	1000	21.0 °C	21.4 °C	≥ 15 cm
11/01/02	900MHz (Brain)	2.78	2.71	41.5 ±5%	40.2	0.97 ±5%	0.97	1000	22.0 °C	21.8 °C	≥ 15 cm

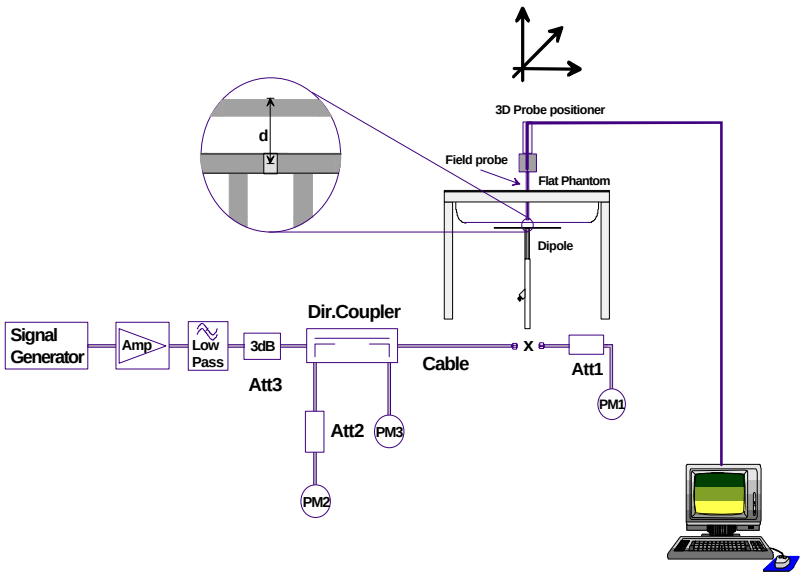


Figure 5. System Validation Setup Diagram

900MHz Dipole Validation Setup

9.0 SIMULATED TISSUES

The 835MHz and 900MHz simulated tissues consist of a viscous gel using hydroxethylcellulose (HEC) gelling agent and saline solution. Preservation with a bactericide is added and visual inspection is made to ensure air bubbles are not trapped during the mixing process. The fluid was prepared according to standardized procedures, and measured for dielectric parameters (permittivity and conductivity).

TISSUE MIXTURES			
INGREDIENT	**900MHz Brain Mixture (System Validation)**	**835MHz Brain Mixture (EUT Evaluation)**	**835MHz Body Mixture (EUT Evaluation)**
Water	40.71 %	40.71 %	53.70 %
Sugar	56.63 %	56.63 %	45.10 %
Salt	1.48 %	1.48 %	0.97 %
HEC	1.00 %	1.00 %	0.13%
Bactericide	0.18 %	0.18 %	0.10 %

10.0 SAR SAFETY LIMITS

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

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

11.0 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:	Pentium III
Clock Speed:	450 MHz
Operating System:	Windows NT
Data Card:	DASY3 PC-Board

Data Converter

Features:	Signal Amplifier, multiplexer, A/D converter, and control logic
Software:	DASY3 software
Connecting Lines:	Optical downlink for data and status info. Optical uplink for commands and clock

PC Interface Card

Function:	24 bit (64 MHz) DSP for real time processing Link to DAE3 16-bit A/D converter for surface detection system serial link to robot direct emergency stop output for robot

E-Field Probe

Model:	ET3DV6
Serial No.:	1387
Construction:	Triangular core fiber optic detection system
Frequency:	10 MHz to 6 GHz
Linearity:	±0.2 dB (30 MHz to 3 GHz)

Phantom Type(s)

Type 1:	SAM V4.0C
Shell Material:	Fiberglass
Thickness:	2.0 ±0.1 mm
Volume:	Approx. 20 liters
Type 2:	Small Planar Phantom
Shell Material:	Plexiglas
Bottom Thickness:	2.0 mm ±0.1mm
Dimensions:	Box: 36.5cm (L) x 22.5cm (W) x 20.3cm (H); Back Plane: 25.3cm (H)

12.0 PROBE SPECIFICATION (ET3DV6)

Construction:	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g. glycol)
Calibration:	In air from 10 MHz to 2.5 GHz In brain simulating tissue at frequencies of 900 MHz and 1.8 GHz (accuracy ± 8%)
Frequency:	10 MHz to >6 GHz; Linearity: ±0.2 dB (30 MHz to 3 GHz)
Directivity:	±0.2 dB in brain tissue (rotation around probe axis) ±0.4 dB in brain tissue (rotation normal to probe axis)
Dynam. Rnge:	5 µW/g to >100 mW/g; Linearity: ±0.2 dB
Srfce. 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

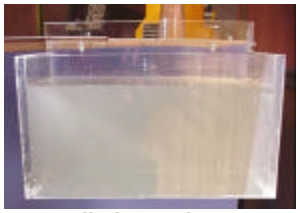
13.0 SAM PHANTOM V4.0C

The SAM phantom V4.0C is a fiberglass shell phantom with a 2.0 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.


SAM Phantom

14.0 SMALL PLANAR PHANTOM

The small planar phantom is constructed of Plexiglas material with a 2.0 mm shell thickness for face-held and body-worn SAR evaluations. The small planar phantom is mounted onto the outer left hand section of the DASY3 compact system.


Small Planar Phantom

15.0 DEVICE HOLDER

The DASY3 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

16.0 TEST EQUIPMENT LIST

SAR MEASUREMENT SYSTEM		
EQUIPMENT	**SERIAL NO.**	**CALIBRATION DATE**
DASY3 System	-	-
-Robot	599396-01	N/A
-ET3DV6 E-Field Probe	1387	Feb 2002
-300MHz Validation Dipole	135	Oct 2002
-450MHz Validation Dipole	136	Oct 2002
-900MHz Validation Dipole	054	June 2001
-1800MHz Validation Dipole	247	June 2001
-2450MHz Validation Dipole	150	Oct 2002
-SAM Phantom V4.0C	N/A	N/A
-Small Planar Phantom	N/A	N/A
-Medium Planar Phantom	N/A	N/A
-Large Planar Phantom	N/A	N/A
85070C Dielectric Probe Kit	N/A	N/A
Gigatronics 8652A Power Meter	1835272	Feb 2002
-Power Sensor 80701A	1833535	Feb 2002
-Power Sensor 80701A	1833542	Mar 2002
E4408B Spectrum Analyzer	US39240170	Nov 2001
8594E Spectrum Analyzer	3543A02721	Feb 2002
8753E Network Analyzer	US38433013	Feb 2002
8648D Signal Generator	3847A00611	Feb 2002
5S1G4 Amplifier Research Power Amplifier	26235	N/A

17.0 MEASUREMENT UNCERTAINTIES

Error Description	Uncertainty Value ±%	Probability Distribution	Divisor	c_i 1g	Standard Uncertainty ±% (1g)	v_i or v_{eff}
Measurement System						
Probe calibration	± 4.8	Normal	1	1	± 4.8	∞
Axial isotropy of the probe	± 4.7	Rectangular	√3	$(1-c_p)$	± 1.9	∞
Spherical isotropy of the probe	± 9.6	Rectangular	√3	(c_p)	± 3.9	∞
Spatial resolution	± 0.0	Rectangular	√3	1	± 0.0	∞
Boundary effects	± 5.5	Rectangular	√3	1	± 3.2	∞
Probe linearity	± 4.7	Rectangular	√3	1	± 2.7	∞
Detection limit	± 1.0	Rectangular	√3	1	± 0.6	∞
Readout electronics	± 1.0	Normal	1	1	± 1.0	∞
Response time	± 0.8	Rectangular	√3	1	± 0.5	∞
Integration time	± 1.4	Rectangular	√3	1	± 0.8	∞
RF ambient conditions	± 3.0	Rectangular	√3	1	± 1.7	∞
Mech. constraints of robot	± 0.4	Rectangular	√3	1	± 0.2	∞
Probe positioning	± 2.9	Rectangular	√3	1	± 1.7	∞
Extrapolation & integration	± 3.9	Rectangular	√3	1	± 2.3	∞
Test Sample Related						
Device positioning	± 6.0	Normal	√3	1	± 6.7	12
Device holder uncertainty	± 5.0	Normal	√3	1	± 5.9	8
Power drift	± 5.0	Rectangular	√3		± 2.9	∞
Phantom and Setup						
Phantom uncertainty	± 4.0	Rectangular	√3	1	± 2.3	∞
Liquid conductivity (target)	± 5.0	Rectangular	√3	0.6	± 1.7	∞
Liquid conductivity (measured)	± 10.0	Rectangular	√3	0.6	± 3.5	∞
Liquid permittivity (target)	± 5.0	Rectangular	√3	0.6	± 1.7	∞
Liquid permittivity (measured)	± 5.0	Rectangular	√3	0.6	± 1.7	∞
Combined Standard Uncertainty					± **13.7**	
Expanded Uncertainty (k=2)					± **27.5**	

Measurement Uncertainty Table in accordance with IEEE Std 1528 (Draft - see reference [3])

18.0 REFERENCES

[1] Federal Communications Commission, “Radiofrequency radiation exposure evaluation: portable devices”, Rule Part 47 CFR §2.1093: 1999.

[2] Federal Communications Commission, “Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields”, OET Bulletin 65, Supplement C (Edition 01-01), FCC, Washington, D.C.: June 2001.

[3] IEEE Standards Coordinating Committee 34, Std 1528-200X, “DRAFT Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”.

[4] W. Gander, *Computermathematick*, Birkhaeuser, Basel: 1992.

APPENDIX A - SAR MEASUREMENT DATA

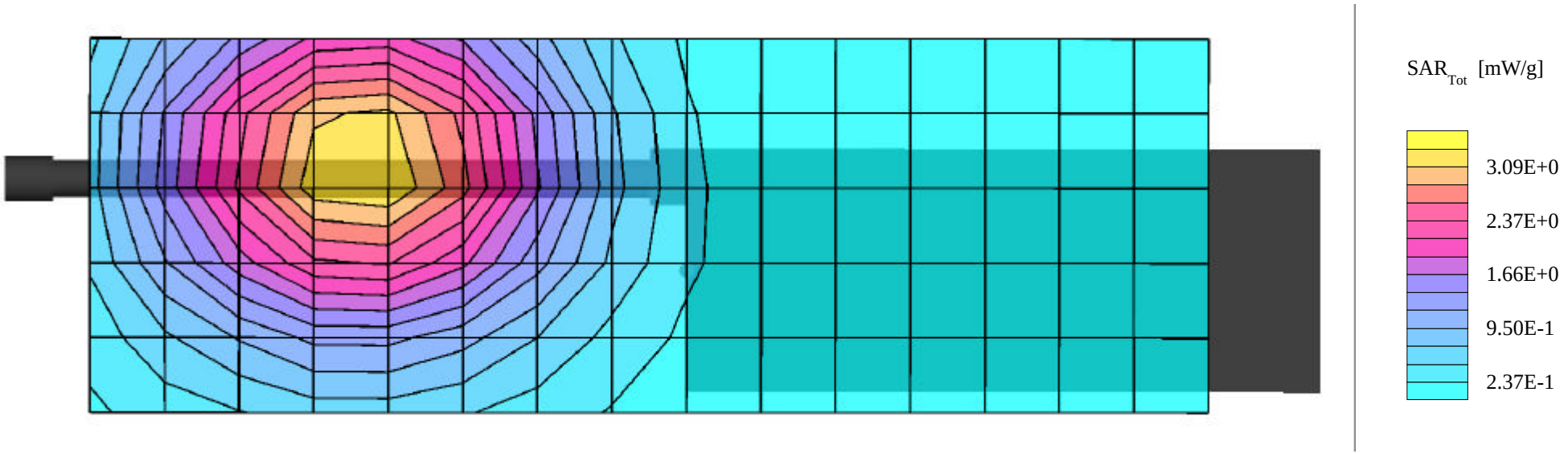
Face-held SAR Test Plots (Radio Transceiver)

M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.22 dB
SAR (1g): 3.17 mW/g, SAR (10g): 2.28 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device

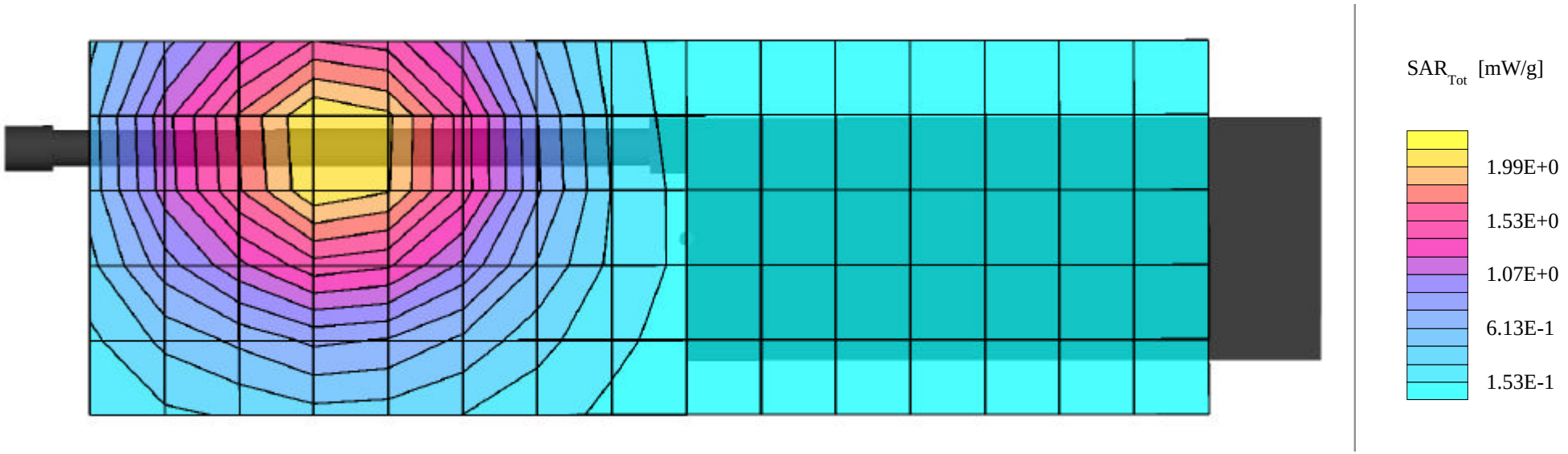


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.21 dB
SAR (1g): 2.11 mW/g, SAR (10g): 1.51 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
High Band Mid Channel [863.0000 MHz]
Conducted Power: 3.18 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device

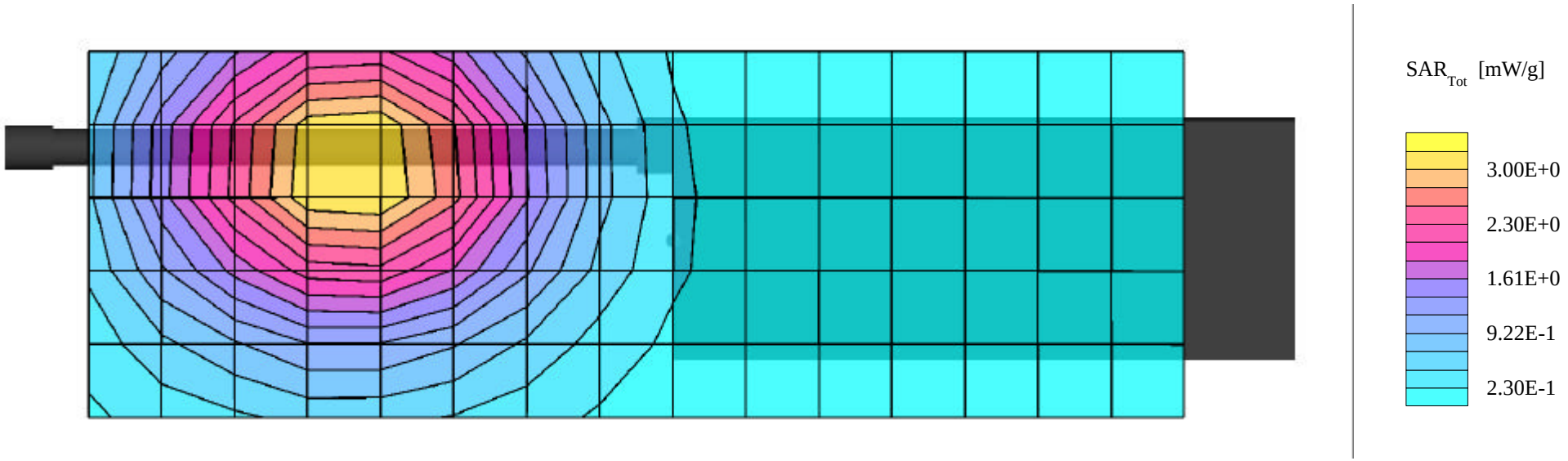


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.22 dB
SAR (1g): 3.22 mW/g, SAR (10g): 2.32 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device

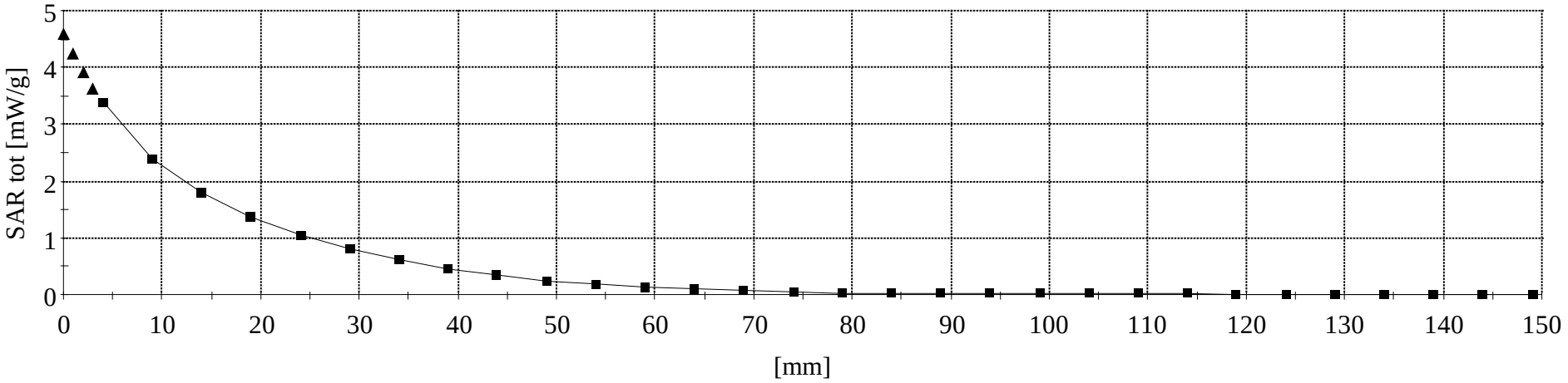


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3

Z-Axis Extrapolation at Peak SAR Location

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

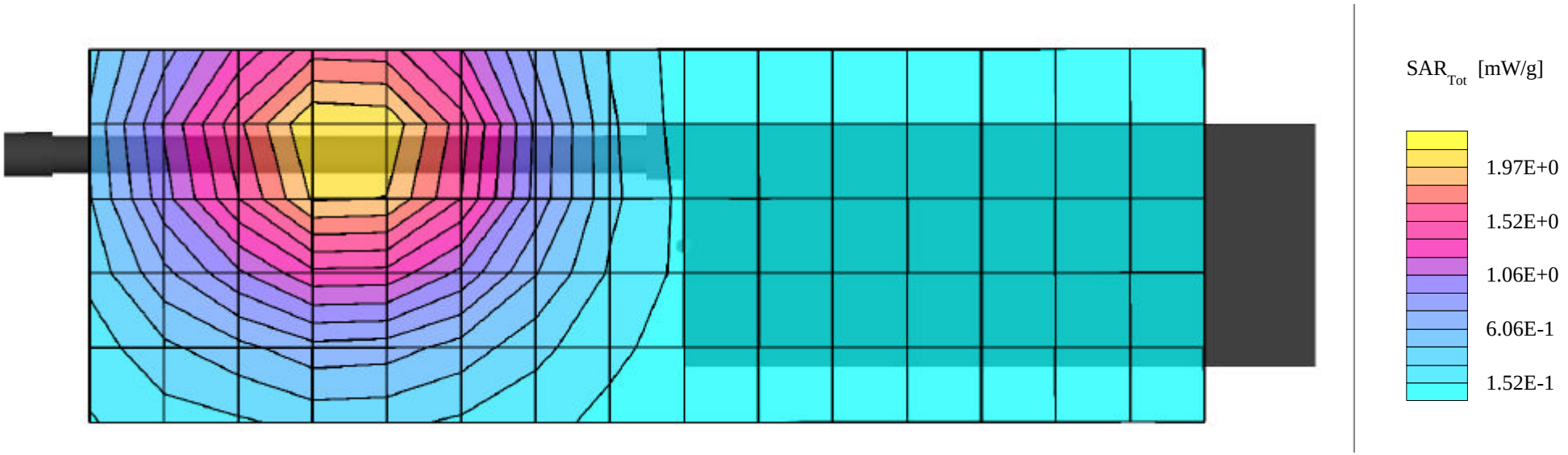


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.21 dB
SAR (1g): 2.02 mW/g, SAR (10g): 1.45 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
High Band Mid Channel [863.0000 MHz]
Conducted Power: 3.18 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device



M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.20 dB
SAR (1g): 3.05 mW/g, SAR (10g): 2.22 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Low Channel [806.0125 MHz]
Conducted Power: 3.38 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.17 dB
SAR (1g): 3.12 mW/g, SAR (10g): 2.26 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band High Channel [823.9875 MHz]
Conducted Power: 3.33 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.20 dB
SAR (1g): 2.11 mW/g, SAR (10g): 1.52 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
High Band Low Channel [851.0125 MHz]
Conducted Power: 3.22 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.22 dB
SAR (1g): 1.91 mW/g, SAR (10g): 1.36 mW/g

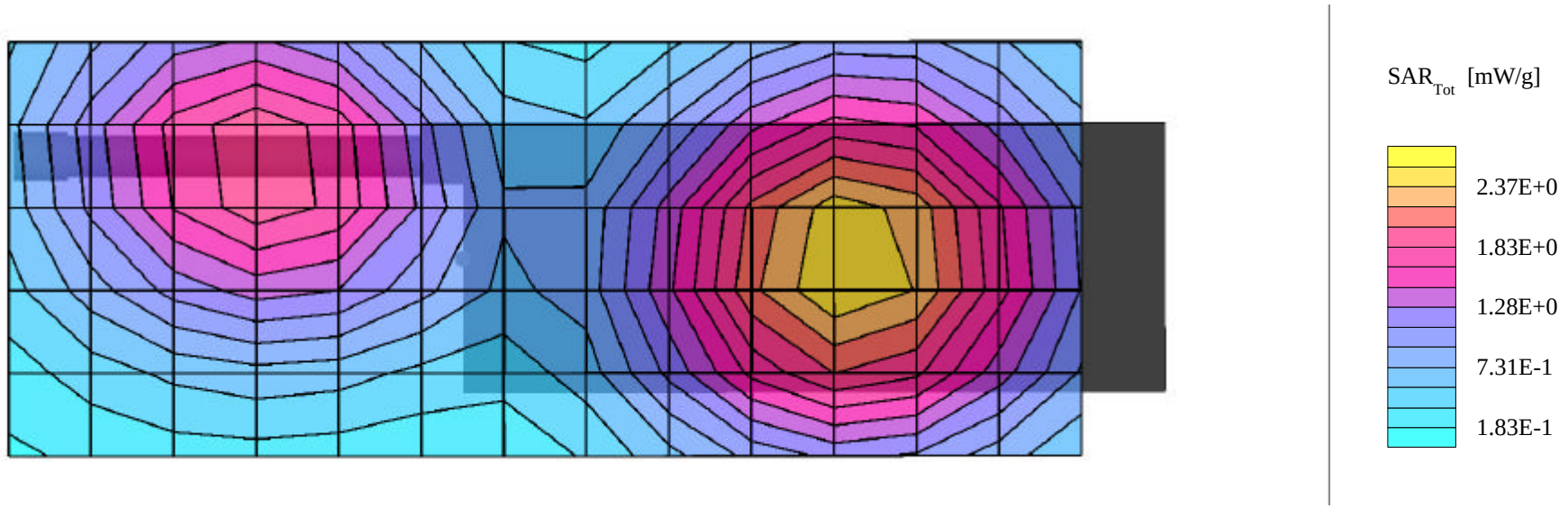
Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
High Band High Channel [868.9875 MHz]
Conducted Power: 3.18 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.22 dB
SAR (1g): 2.68 mW/g, SAR (10g): 2.00 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Whip Antenna (KRE1011223/01)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device

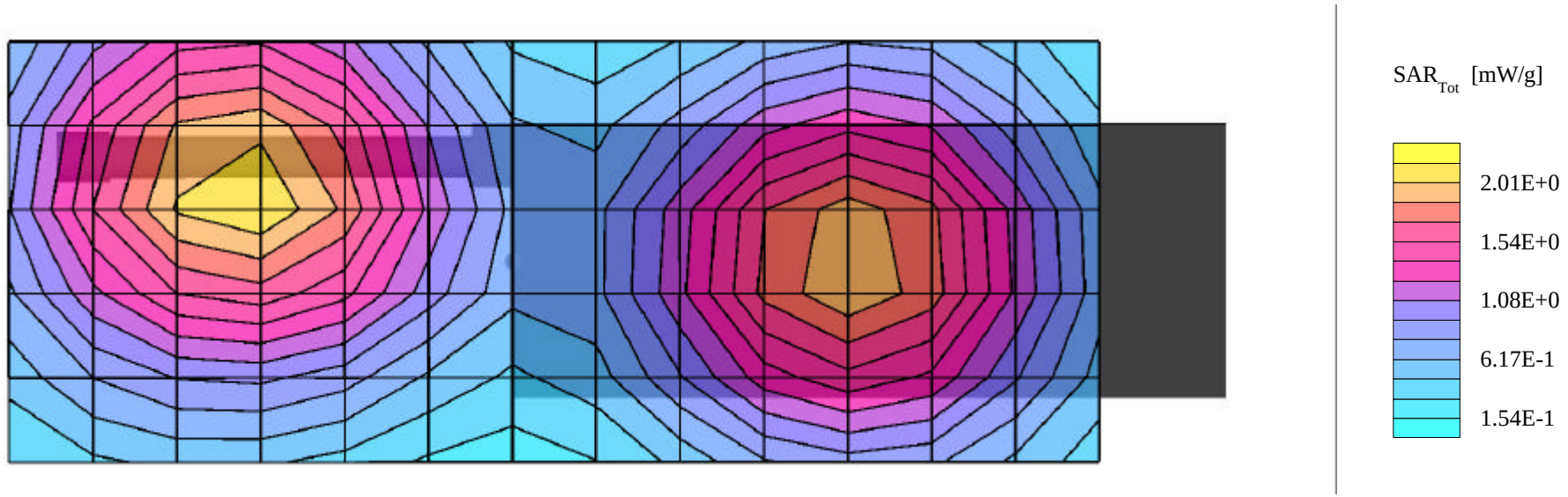


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.21 dB
SAR (1g): 2.04 mW/g, SAR (10g): 1.44 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Whip Antenna (KRE1011223/01)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
High Band Mid Channel [863.0000 MHz]
Conducted Power: 3.18 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device

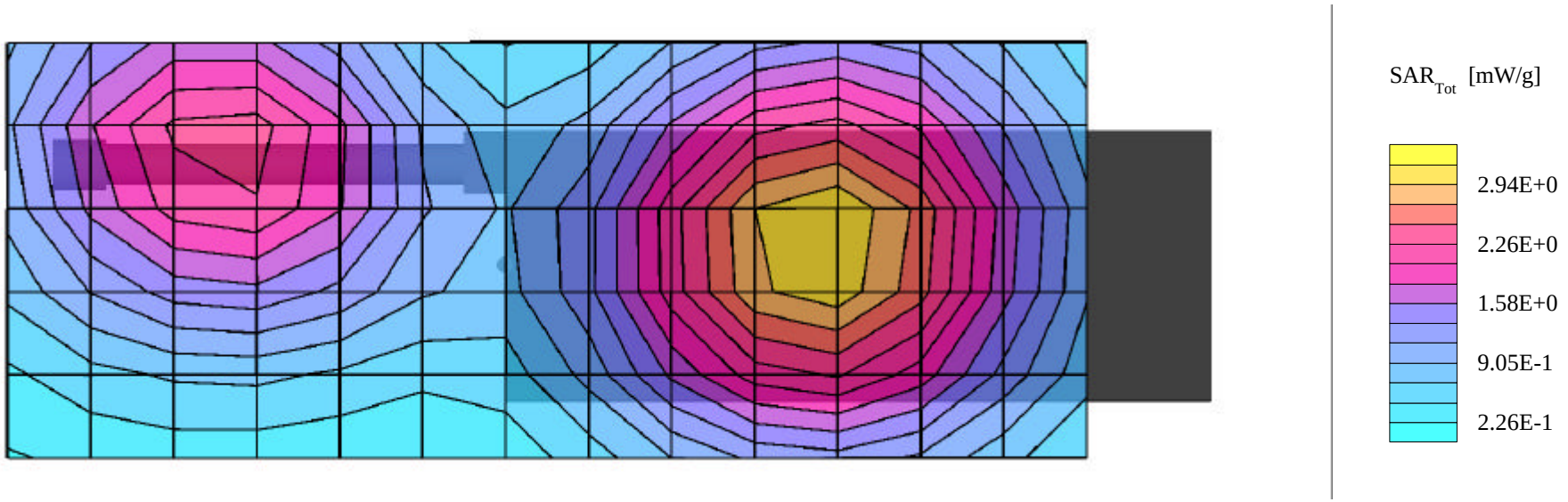


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.20 dB
SAR (1g): 2.81 mW/g, SAR (10g): 2.04 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Whip Antenna (KRE1011223/01)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device

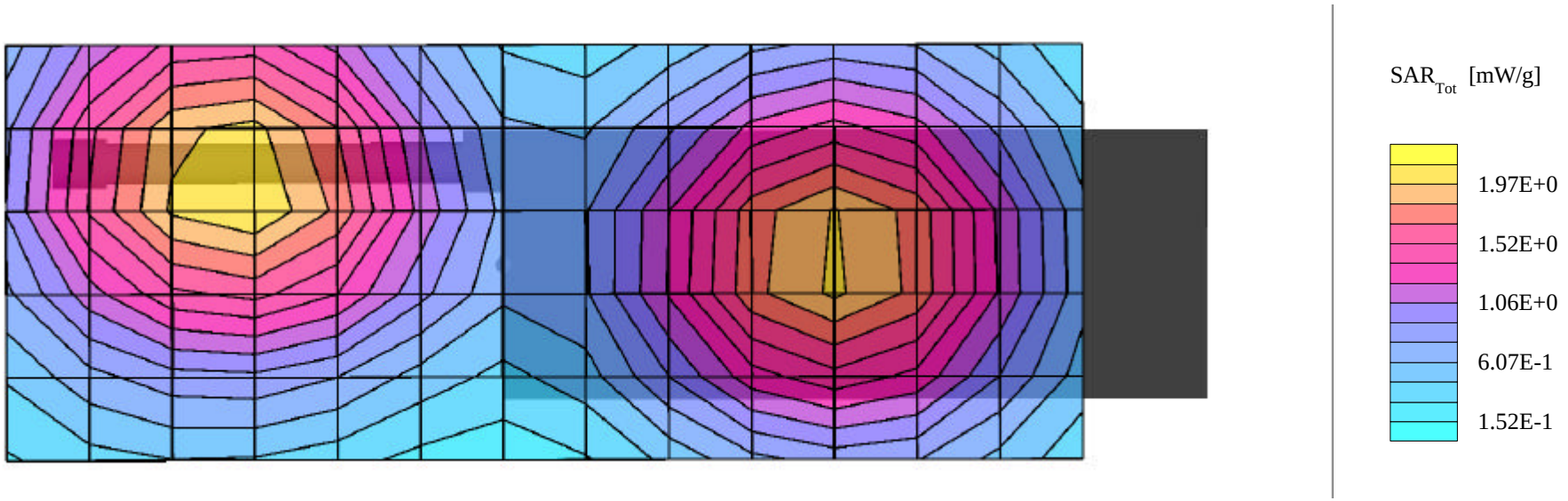


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.16 dB
SAR (1g): 2.02 mW/g, SAR (10g): 1.44 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Whip Antenna (KRE1011223/01)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
High Band Mid Channel [863.0000 MHz]
Conducted Power: 3.18 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device

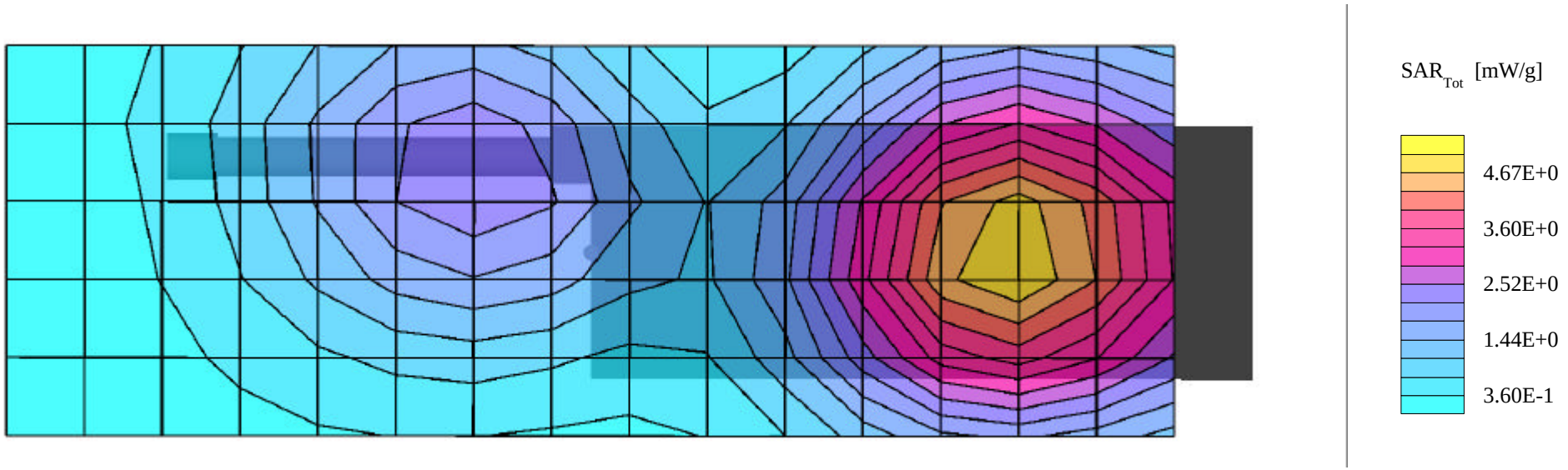


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: $\sigma = 0.91$ mho/m $\varepsilon_r = 40.6$ $\rho = 1.00$ g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.20 dB
SAR (1g): 1.90 mW/g, SAR (10g): 1.36 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Whip Antenna (KRE1011223/01)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Low Channel [806.0125 MHz]
Conducted Power: 3.38 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device

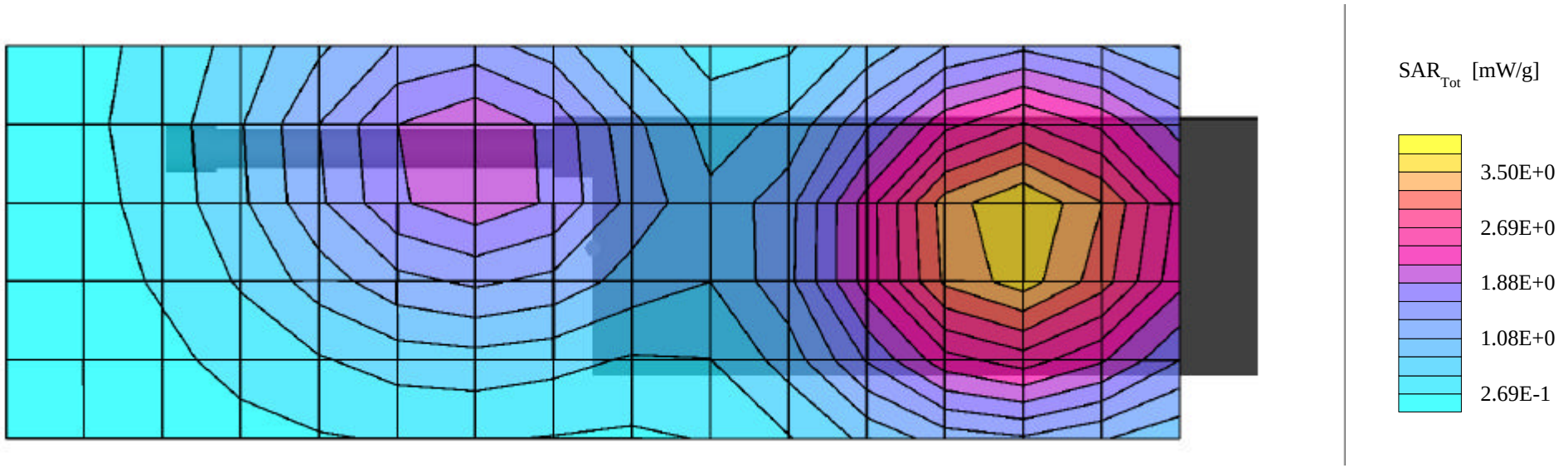


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.22 dB
SAR (1g): 1.96 mW/g, SAR (10g): 1.41 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Whip Antenna (KRE1011223/01)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band High Channel [823.9875 MHz]
Conducted Power: 3.33 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device

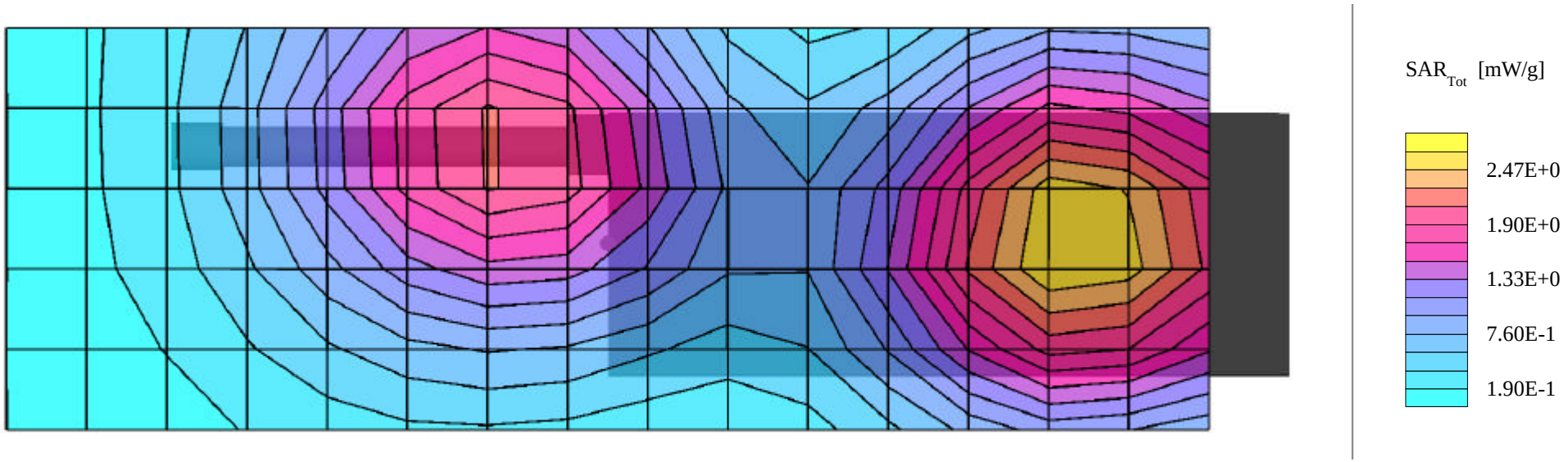


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.21 dB
SAR (1g): 1.91 mW/g, SAR (10g): 1.37 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Whip Antenna (KRE1011223/01)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
High Band Low Channel [851.0125 MHz]
Conducted Power: 3.22 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device

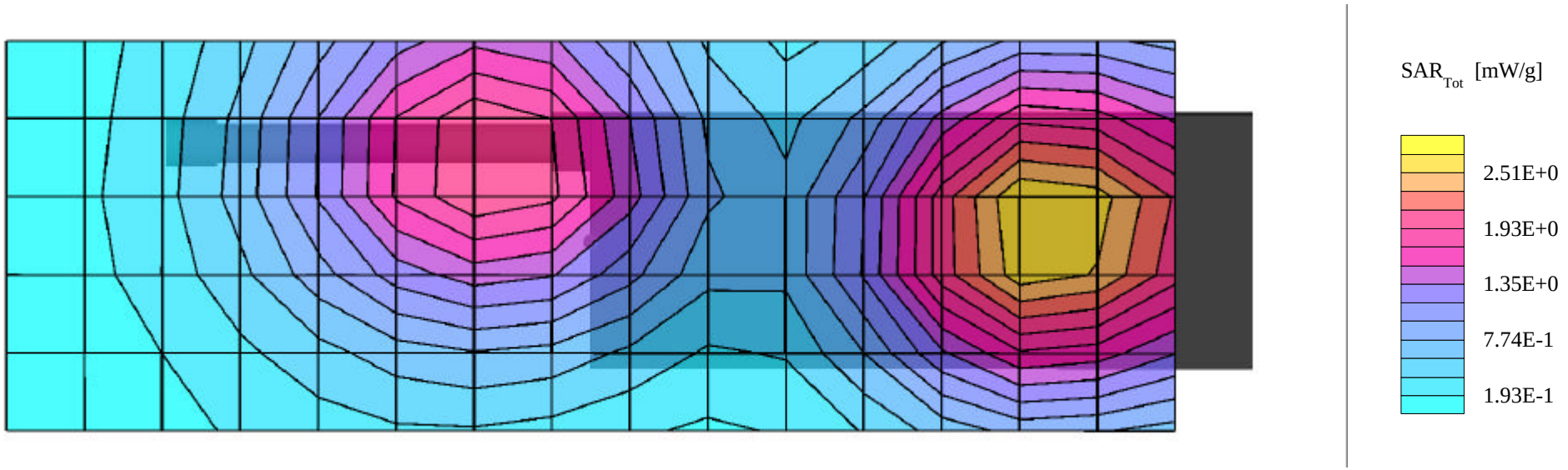


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.91 mho/m ε_r = 40.6 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.19 dB
SAR (1g): 2.04 mW/g, SAR (10g): 1.45 mW/g

Face-Held SAR at 2.5cm Separation Distance
J7100(PI) Portable FM PTT Radio Transceiver
Whip Antenna (KRE1011223/01)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
High Band High Channel [868.9875 MHz]
Conducted Power: 3.18 Watts
Ambient Temp: 21.6°C; Fluid Temp: 23.0°C
Date Tested: October 24, 2002

This large area scan is intended to show the peak SAR location relative to the device



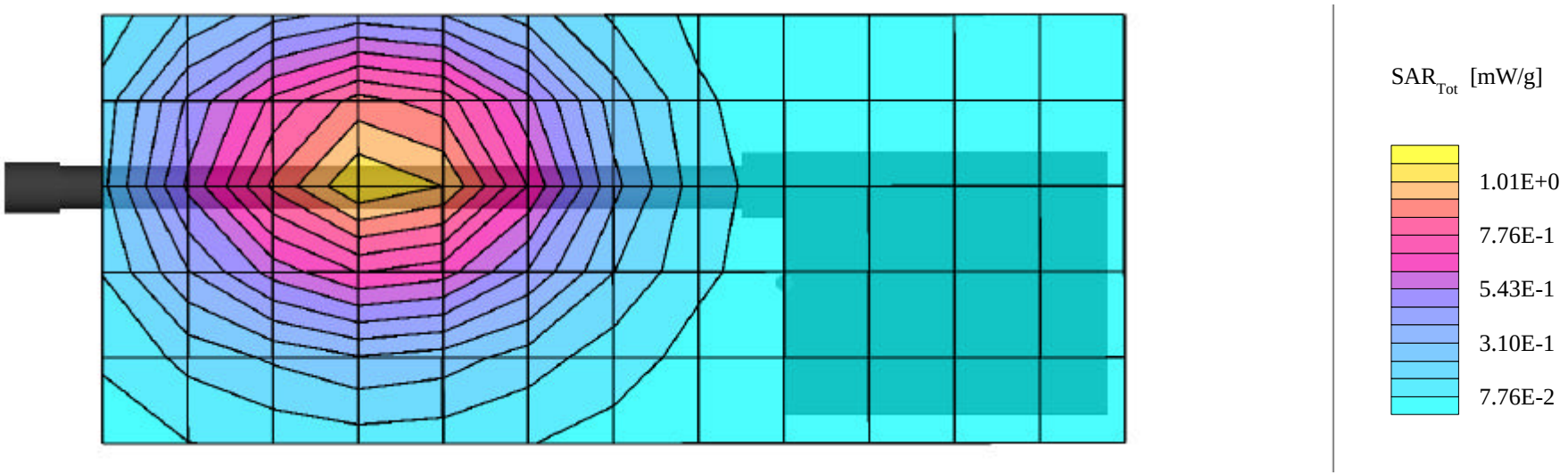
Face-held SAR Test Plots (with Speaker-Microphone Antenna Version Plus)

M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.92 mho/m ε_r = 41.3 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.22 dB
SAR (1g): 1.05 mW/g, SAR (10g): 0.738 mW/g

Face-Held SAR with Speaker-Microphone Antenna Version Plus (KRY1011617/84R1A, KRY1011617/184R1A)
2.5cm Separation Distance from Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 21.6°C; Fluid Temp: 22.0°C
Date Tested: October 25, 2002

This large area scan is intended to show the peak SAR location relative to the device

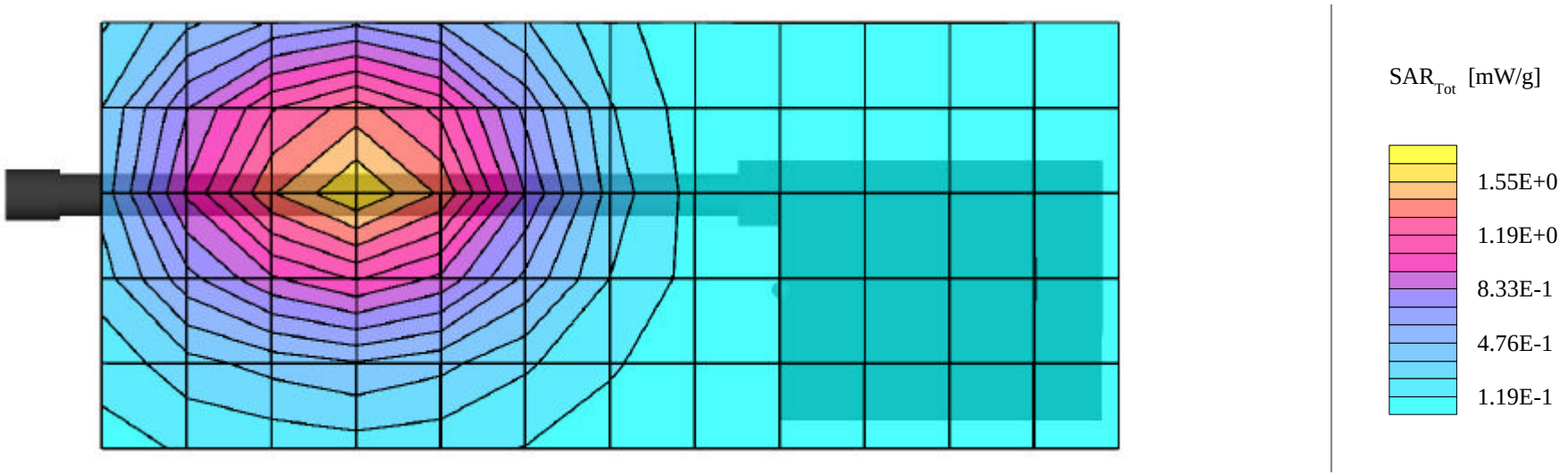


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.92 mho/m ε_r = 41.3 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.21 dB
SAR (1g): 2.69 mW/g, SAR (10g): 1.86 mW/g

Face-Held SAR with Speaker-Microphone Antenna Version Plus (KRY1011617/84R1A, KRY1011617/184R1A)
2.5cm Separation Distance from Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
High Band Mid Channel [863.0000 MHz]
Conducted Power: 3.18 Watts
Ambient Temp: 21.6°C; Fluid Temp: 22.0°C
Date Tested: October 25, 2002

This large area scan is intended to show the peak SAR location relative to the device

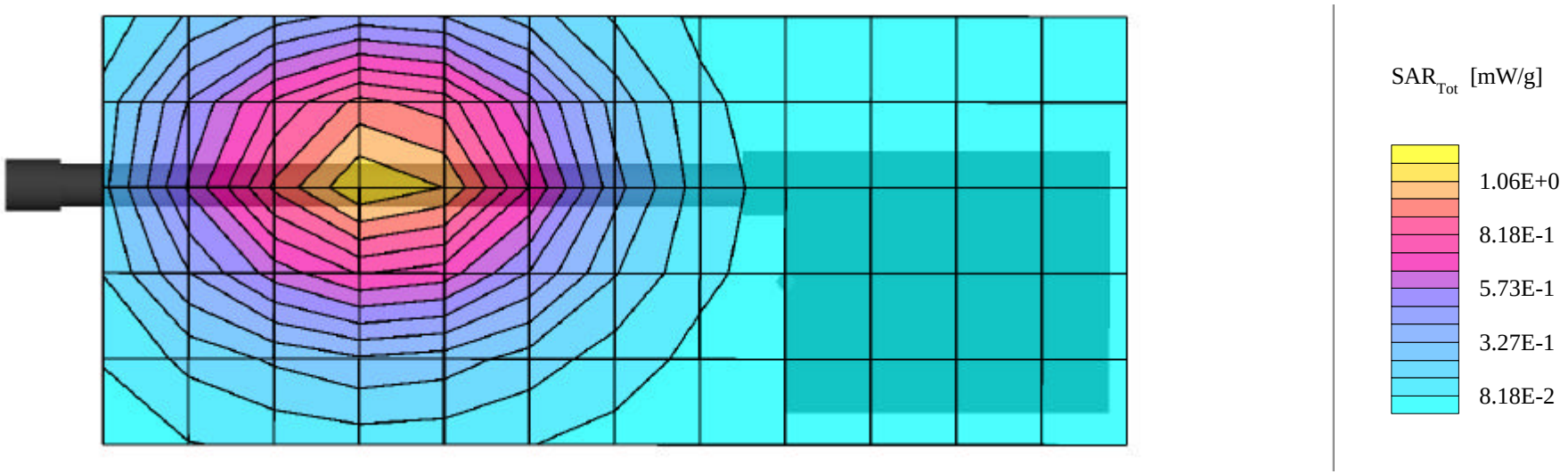


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.92 mho/m ε_r = 41.3 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.22 dB
SAR (1g): 1.08 mW/g, SAR (10g): 0.759 mW/g

Face-Held SAR with Speaker-Microphone Antenna Version Plus (KRY1011617/84R1A, KRY1011617/184R1A)
2.5cm Separation Distance from Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 21.6°C; Fluid Temp: 22.0°C
Date Tested: October 25, 2002

This large area scan is intended to show the peak SAR location relative to the device

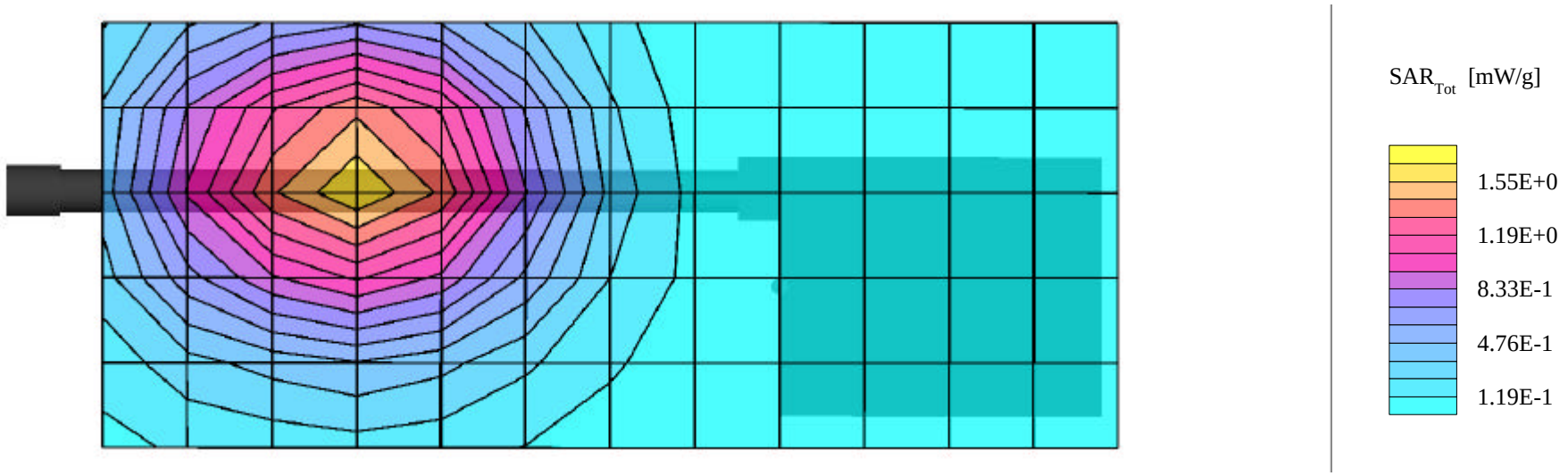


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.92 mho/m ε_r = 41.3 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.17 dB
SAR (1g): 1.48 mW/g, SAR (10g): 1.03 mW/g

Face-Held SAR with Speaker-Microphone Antenna Version Plus (KRY1011617/84R1A, KRY1011617/184R1A)
2.5cm Separation Distance from Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
High Band Mid Channel [863.0000 MHz]
Conducted Power: 3.18 Watts
Ambient Temp: 21.6°C; Fluid Temp: 22.0°C
Date Tested: October 25, 2002

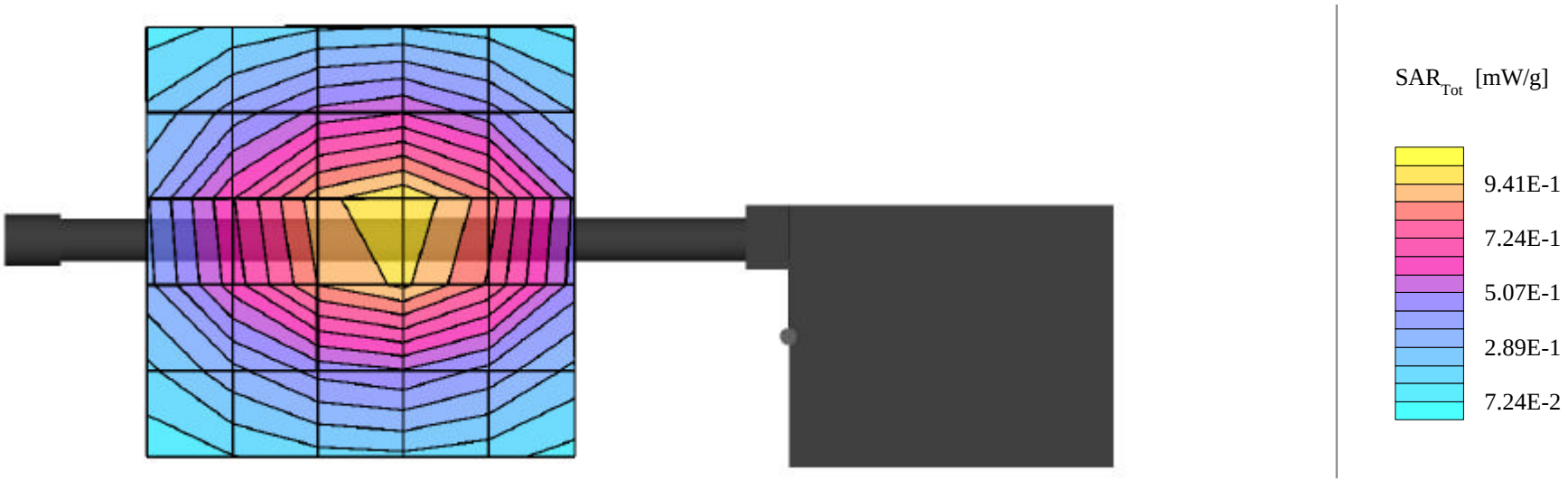
This large area scan is intended to show the peak SAR location relative to the device



M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.92 mho/m ε_r = 41.3 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.17 dB
SAR (1g): 0.996 mW/g, SAR (10g): 0.701 mW/g

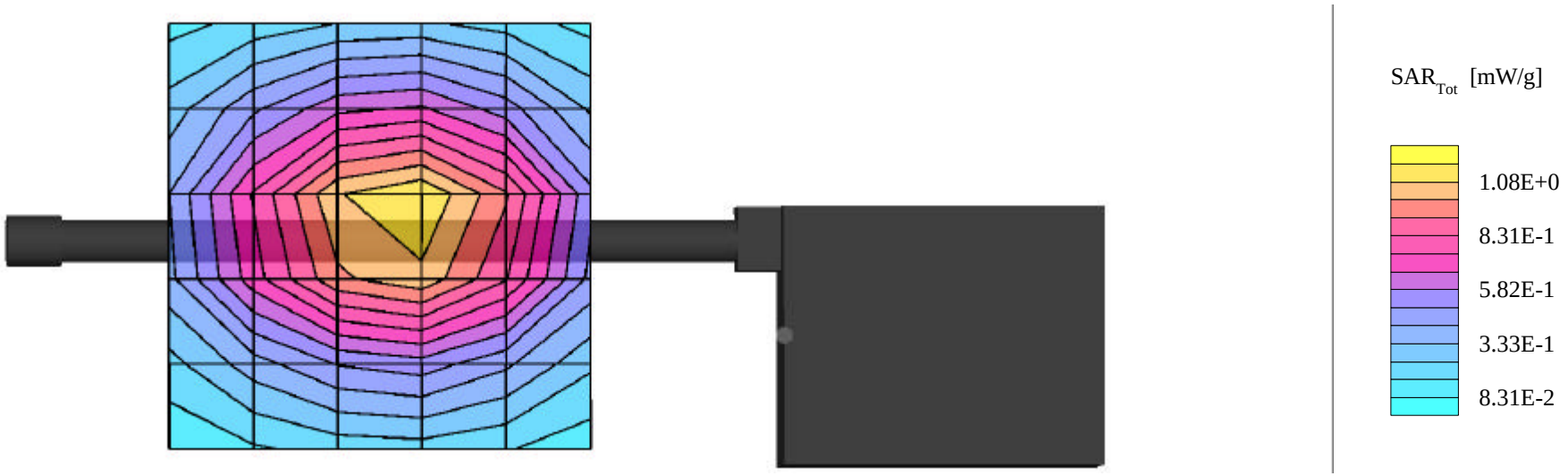
Face-Held SAR with Speaker-Microphone Antenna Version Plus (KRY1011617/84R1A, KRY1011617/184R1A)
2.5cm Separation Distance from Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Low Channel [806.0125 MHz]
Conducted Power: 3.38 Watts
Ambient Temp: 21.6°C; Fluid Temp: 22.0°C
Date Tested: October 25, 2002



M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.92 mho/m ε_r = 41.3 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.22 dB
SAR (1g): 1.05 mW/g, SAR (10g): 0.737 mW/g

Face-Held SAR with Speaker-Microphone Antenna Version Plus (KRY1011617/84R1A, KRY1011617/184R1A)
2.5cm Separation Distance from Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band High Channel [823.9875 MHz]
Conducted Power: 3.33 Watts
Ambient Temp: 21.6°C; Fluid Temp: 22.0°C
Date Tested: October 25, 2002



M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section; Position: (90°,0°)
Probe: ET3DV6 - SN1387; ConvF(6.60,6.60,6.60); Crest factor: 1.0
835 MHz Brain: σ = 0.92 mho/m ε_r = 41.3 ρ = 1.00 g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.20 dB
SAR (1g): 1.64 mW/g, SAR (10g): 1.15 mW/g

Face-Held SAR with Speaker-Microphone Antenna Version Plus (KRY1011617/84R1A, KRY1011617/184R1A)
2.5cm Separation Distance from Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/1)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
High Band Low Channel [851.0125 MHz]
Conducted Power: 3.22 Watts
Ambient Temp: 21.6°C; Fluid Temp: 22.0°C
Date Tested: October 25, 2002