

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

Small Planar Phantom

Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0

835 MHz Muscle: $\sigma = 0.92$ mho/m $\epsilon_r = 52.9$ $\rho = 1.00$ g/cm³**SAR DRIFT VERSUS TIME (30 mins)**

Body-Worn SAR with Nylon T-Strap (KRY1011656/1)

with Speaker-Microphone (KRY1011617/83R1A)

1.6cm T-Strap Separation Distance to Planar Phantom

J7100(PI) Portable FM PTT Radio Transceiver

Flexible Gain Antenna (KRE1011506/01)

NiCd Battery (BKB191210/3)

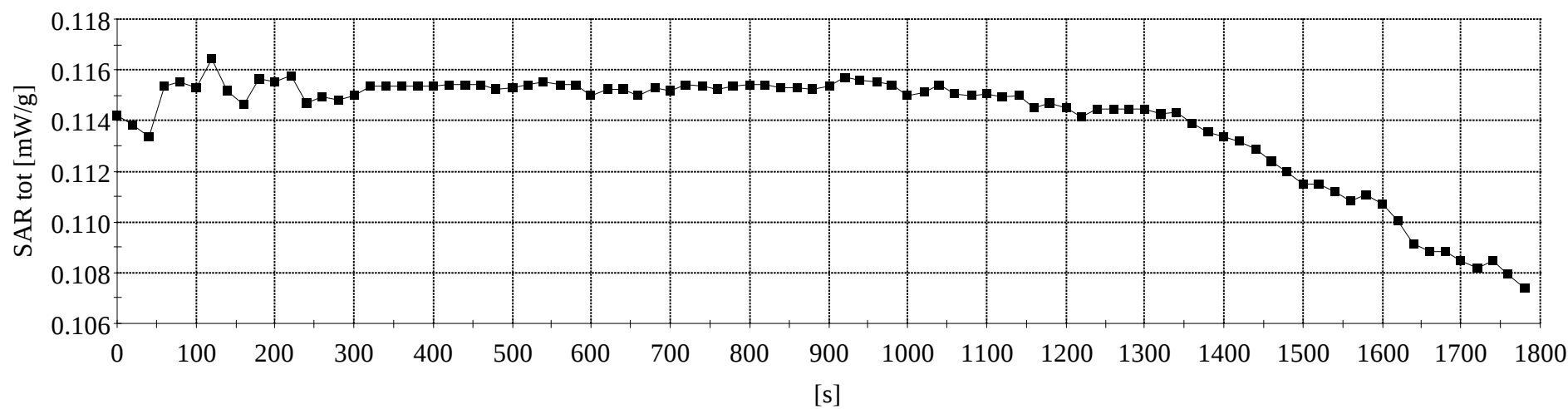
Continuous Wave Mode

Low Band Mid Channel [815.5000 MHz]

Conducted Power: 3.35 Watts

Ambient Temp: 23.2°C; Fluid Temp: 22.7°C

Date Tested: January 20, 2003



SAR MEASUREMENT DATA

SAR Comparison Between 20 Second Stabilizing Period & No Turn-On Delay (Two Worst-Case Body Configs.)														
Turn-on Delay Period	Freq. (MHz)	Chan.	Test Mode	Measured Conducted Power (Watts)			Antenna Type	Battery Type	Body-worn Accessory	Access. Separ. Dist. (cm)	SAR 1g (W/kg)			
				Before	After	Drift					100% Duty Cycle		50% Duty Cycle	
											Without Scaling	Scaled by Drift	Without Scaling	Scaled by Drift
20 sec.	815.5000	LB Mid	CW	3.35	3.23	-0.12	Flexible Gain	NiCd	Nylon T-Strap	1.6	13.2	13.8	6.60	6.90
No delay*	815.5000	LB Mid	CW	3.35	2.95	-0.40	Flexible Gain	NiCd	Nylon T-Strap	1.6	10.4	10.8	5.20	5.40
20 sec.	823.9875	LB High	CW	3.33	3.17	-0.16	Flexible Gain	NiCd	Metal Belt-Clip	1.1	12.1	12.7	6.05	6.35
No delay*	823.9875	LB High	CW	3.33	2.95	-0.38	Flexible Gain	NiCd	Metal Belt-Clip	1.1	9.46	10.7	4.73	5.35

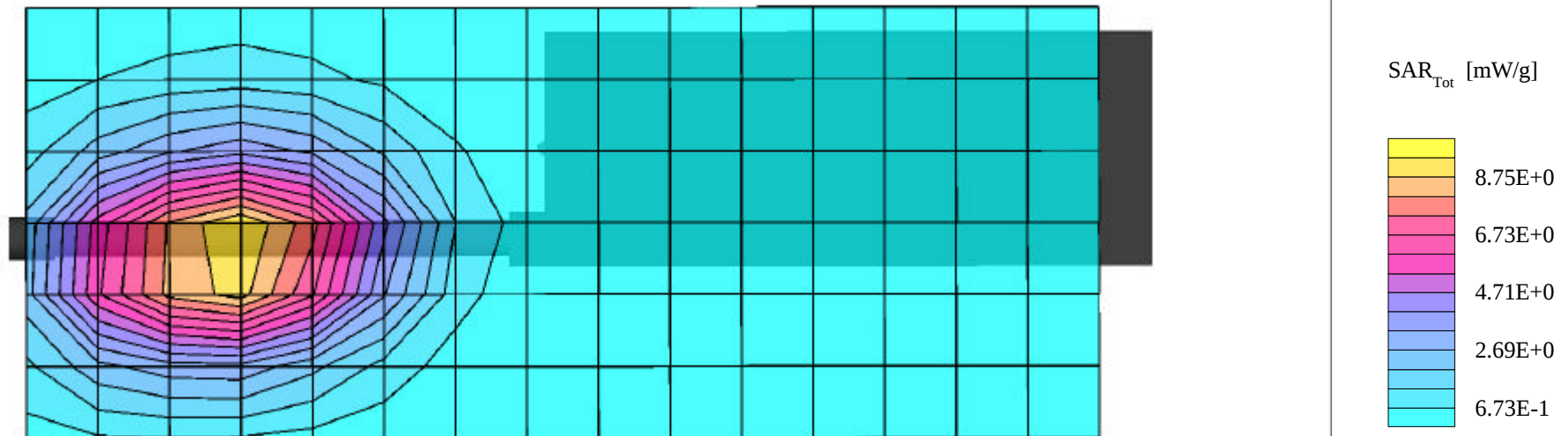
* Test Date: 01/20/03
 * Conductivity: 0.92
 * Dielectric Constant: 52.9
 * Ambient Temp.: 23.2°C
 * Fluid Temp.: 22.7°C
 * Fluid Depth: 15 cm
 * Atmospheric Pressure: 102.4 kPa
 * Relative Humidity: 41%
 Abbreviation(s): LB = Low-Band

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

Small Planar Phantom; Planar Section; Position: (270°,180°)
 Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
 835 MHz Muscle: $\sigma = 0.92$ mho/m $\epsilon_r = 52.9$ $\rho = 1.00$ g/cm³
 Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
 Cube 5x5x7; Powerdrift: -0.55 dB
 SAR (1g): 10.4 mW/g, SAR (10g): 7.18 mW/g

Body-Worn SAR with Nylon T-Strap (KRY1011656/1)
 with Speaker-Microphone (KRY1011617/83R1A)
 1.6cm T-Strap Separation Distance to Planar Phantom
 J7100(PI) Portable FM PTT Radio Transceiver
 Flexible Gain Antenna (KRE1011506/01)
 NiCd Battery (BKB191210/3)
 Continuous Wave Mode
 Low Band Mid Channel [815.5000 MHz]
 Conducted Power: 3.35 Watts
 Ambient Temp: 23.2°C; Fluid Temp: 22.7°C
 Date Tested: January 20, 2003

SAR TEST WITH NO TURN-ON DELAY

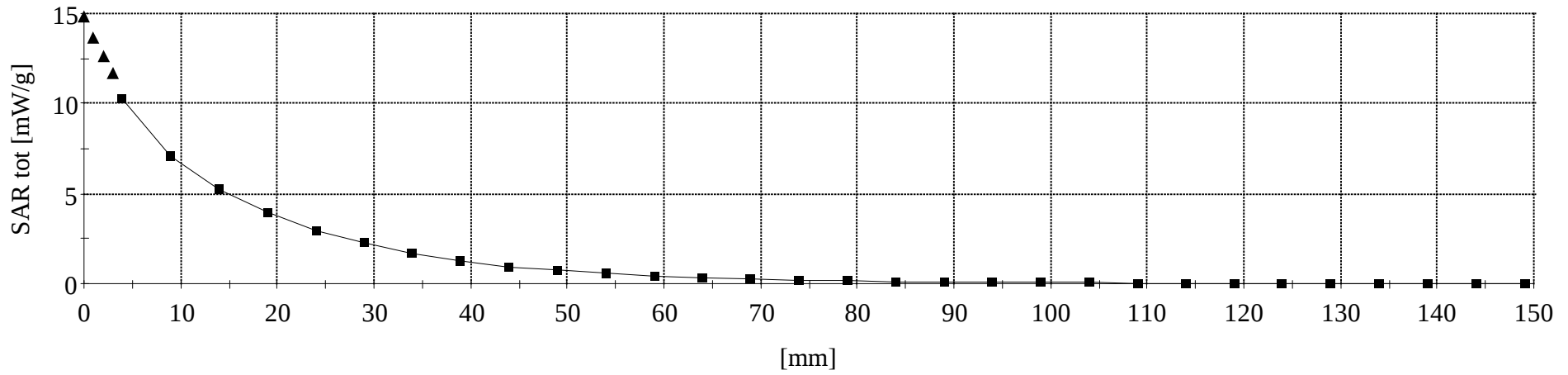


M/A-COM PRS INC. FCC ID: OWDTR-0018-E

Small Planar Phantom; Planar Section
Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
835 MHz Muscle: $\sigma = 0.92$ mho/m $\epsilon_r = 52.9$ $\rho = 1.00$ g/cm³

Z-Axis Extrapolation at Peak SAR Location

Body-Worn SAR with Nylon T-Strap (KRY1011656/1)
with Speaker-Microphone (KRY1011617/83R1A)
1.6cm T-Strap Separation Distance to Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/01)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 23.2°C; Fluid Temp: 22.7°C
Date Tested: January 20, 2003

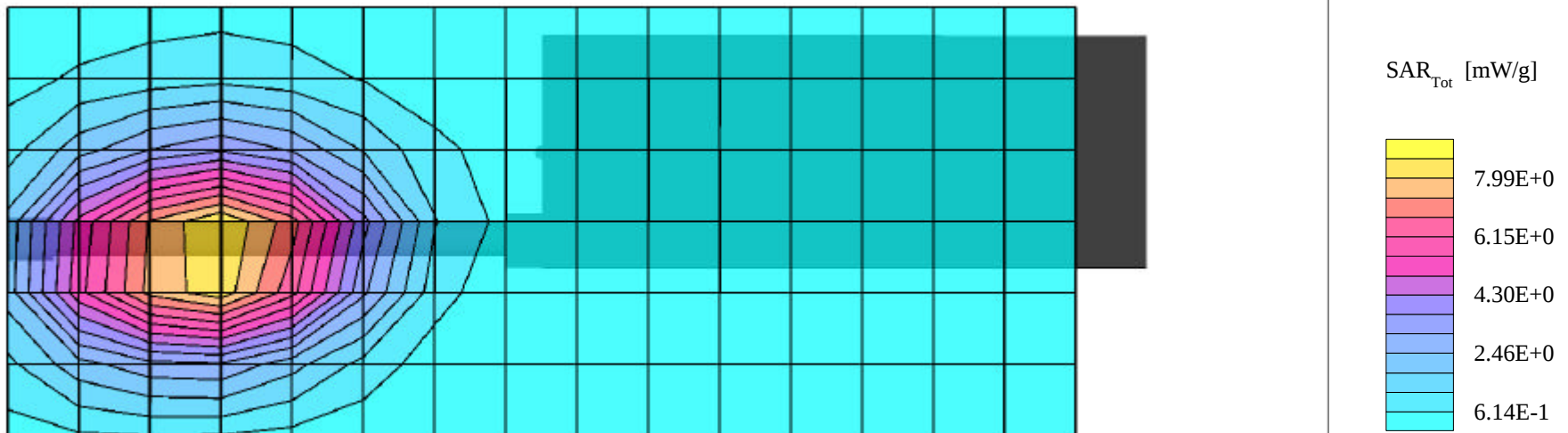
SAR TEST WITH NO TURN-ON DELAY

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

Small Planar Phantom; Planar Section; Position: (270°,180°)
 Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
 835 MHz Muscle: $\sigma = 0.92$ mho/m $\epsilon_r = 52.9$ $\rho = 1.00$ g/cm³
 Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
 Cube 5x5x7; Powerdrift: -0.52 dB
 SAR (1g): 9.46 mW/g, SAR (10g): 6.55 mW/g

Body-Worn SAR with Metal Belt-Clip (KRY1011647/1)
 with Speaker-Microphone (KRY1011617/83R1A)
 1.1cm Belt-Clip Separation Distance to Planar Phantom
 J7100(PI) Portable FM PTT Radio Transceiver
 Flexible Gain Antenna (KRE1011506/01)
 NiCd Battery (BKB191210/3)
 Continuous Wave Mode
 Low Band High Channel [823.9875 MHz]
 Conducted Power: 3.33 Watts
 Ambient Temp: 23.2°C; Fluid Temp: 22.7°C
 Date Tested: January 20, 2003

SAR TEST WITH NO TURN-ON DELAY



835MHz EUT Evaluation (Body)

Measured Fluid Dielectric Parameters (Muscle)

January 20, 2003

Frequency	e'	e''
735.000000 MHz	53.8720	20.4364
745.000000 MHz	53.7294	20.3771
755.000000 MHz	53.6559	20.2968
765.000000 MHz	53.5300	20.2235
775.000000 MHz	53.4469	20.1608
785.000000 MHz	53.3711	20.1081
795.000000 MHz	53.2895	20.1262
805.000000 MHz	53.2211	20.0718
815.000000 MHz	53.1260	20.0109
825.000000 MHz	53.0072	19.9652
835.000000 MHz	52.9028	19.9319
845.000000 MHz	52.8162	19.8768
855.000000 MHz	52.6860	19.8388
865.000000 MHz	52.5881	19.7901
875.000000 MHz	52.5019	19.7908
885.000000 MHz	52.4056	19.7537
895.000000 MHz	52.3572	19.6422
905.000000 MHz	52.2975	19.6033
915.000000 MHz	52.1885	19.5739
925.000000 MHz	52.1356	19.5487
935.000000 MHz	52.0499	19.5216



Electronics

M/A-COM

Response to FCC Question 7, Reference # 6483:

PAGE 1 of 1

PREPARED BY: Bryan McWatters	PHONE: 434-845-6243	DATE: 02-03-03	REV. A	DOCUMENT INFO: BM020303-7
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Question:

7.) Updated user manual RF exposure training information. Control of power is key parameter in controlling exposure. This is not discussed.

Answer:

Control of power is not available to the end user other than by switching from 1.1 to 3 watts, the measurements made where taken under the 3 watt option as stated in the SAR report. We have discussed limiting the duty cycle to 50 percent however as stated below:

DO NOT transmit for more than 50% of total radio use time ("50% duty cycle"). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the "TX" indicator appears in the display. The radio will transmit by pressing the "PTT" button.

The seems to be the only and best way to help the user control exposure. See page 4 of "Users Manual".

Response to Question 8

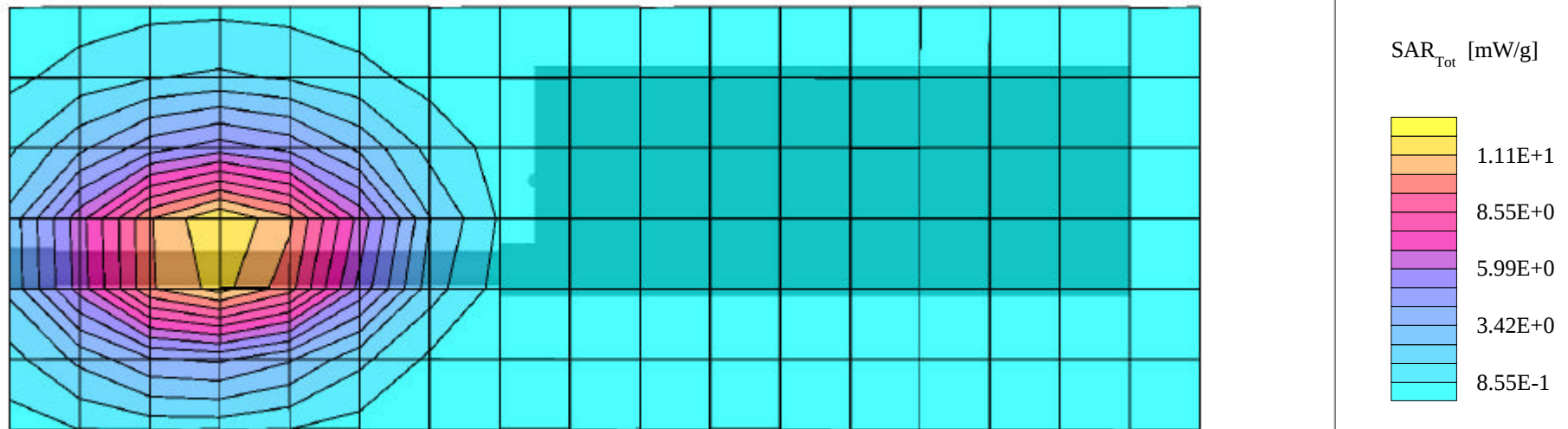
8.) Justification for phantom. The phantom does not appear to meet Supplement C size requirements of twice the EUT's critical dimensions. Please consider testing with validation phantom to show that SAR contours plots are substantially the same as seen with the small phantom and are small area compared to the size of the phantom.

See following exhibit

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

Large Planar Phantom; Planar Section; Position: (270°,90°)
Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
835 MHz Muscle: $\sigma = 1.14$ mho/m $\epsilon_r = 44.7$ $\rho = 1.00$ g/cm³
Coarse: Dx = 20.0, Dy = 20.0, Dz = 20.0

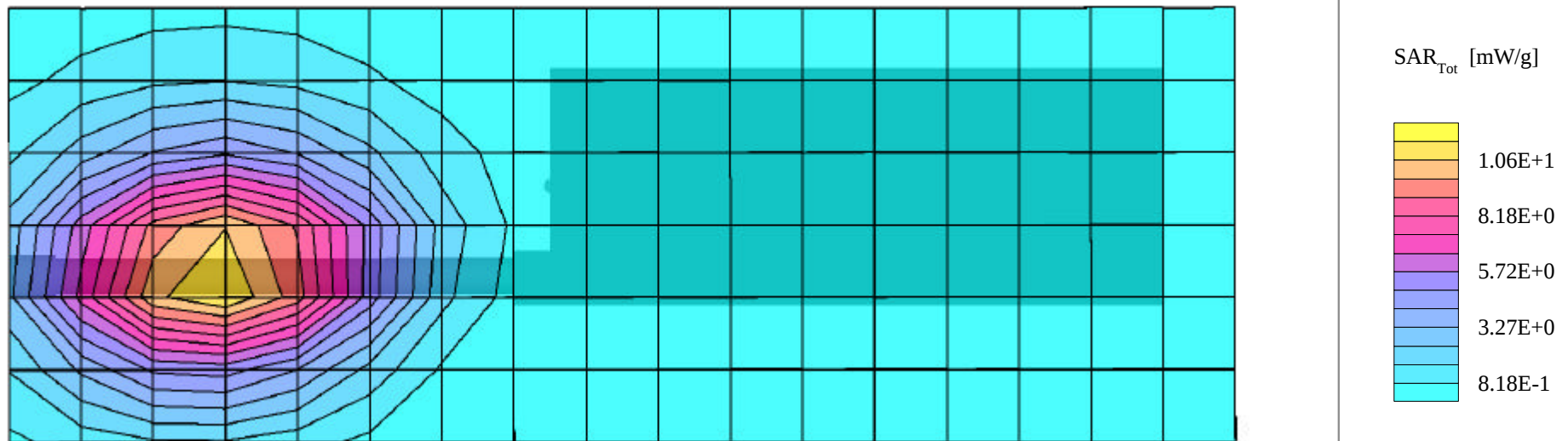
Body-Worn SAR with Nylon T-Strap (KRY1011656/1)
with Speaker-Microphone (KRY1011617/83R1A)
1.6cm T-Strap Separation Distance to Planar Phantom
Jaguar 7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/01)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 22.3°C; Fluid Temp: 21.8°C
Date Tested: January 16, 2003

Coarse scan contour with large planar phantom

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

Large Planar Phantom; Planar Section; Position: (270°,90°)
Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
835 MHz Muscle: $\sigma = 1.14$ mho/m $\epsilon_r = 44.7$ $\rho = 1.00$ g/cm³
Coarse: Dx = 20.0, Dy = 20.0, Dz = 20.0

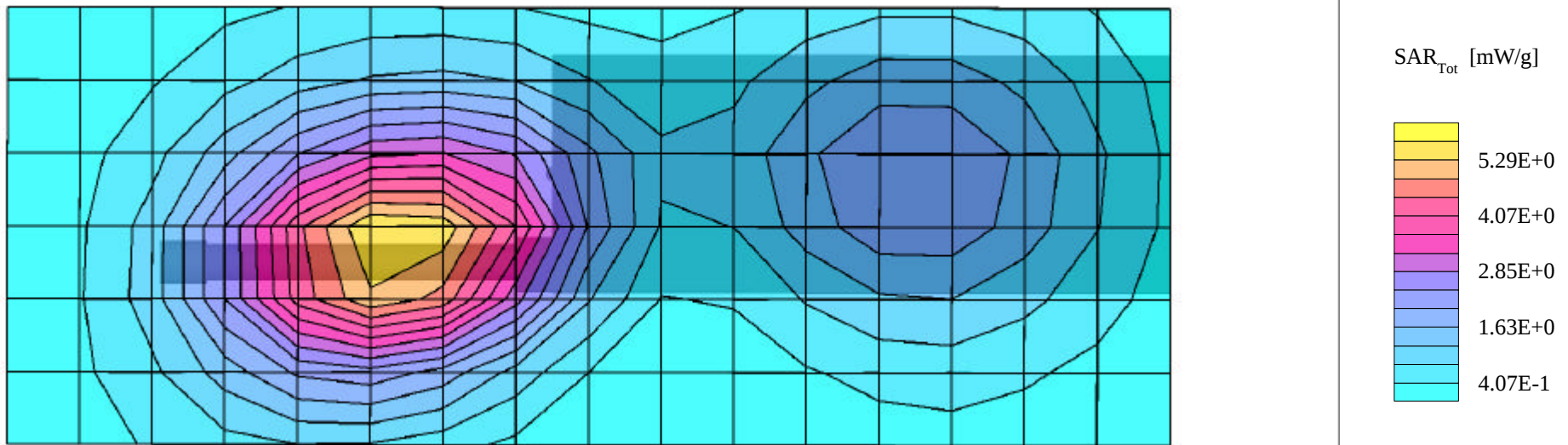
Body-Worn SAR with Nylon T-Strap (KRY1011656/1)
with Speaker-Microphone (KRY1011617/83R1A)
1.6cm T-Strap Separation Distance to Planar Phantom
Jaguar 7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/01)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 22.3°C; Fluid Temp: 21.8°C
Date Tested: January 16, 2003

Coarse scan contour with large planar phantom

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

Large Planar Phantom; Planar Section; Position: (270°,90°)
Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
835 MHz Muscle: $\sigma = 1.14$ mho/m $\epsilon_r = 44.7$ $\rho = 1.00$ g/cm³
Coarse: Dx = 20.0, Dy = 20.0, Dz = 20.0

Body-Worn SAR with Nylon T-Strap (KRY1011656/1)
with Speaker-Microphone (KRY1011617/83R1A)
1.6cm T-Strap Separation Distance to Planar Phantom
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: 22.3°C; Fluid Temp: 21.8°C
Date Tested: January 16, 2003

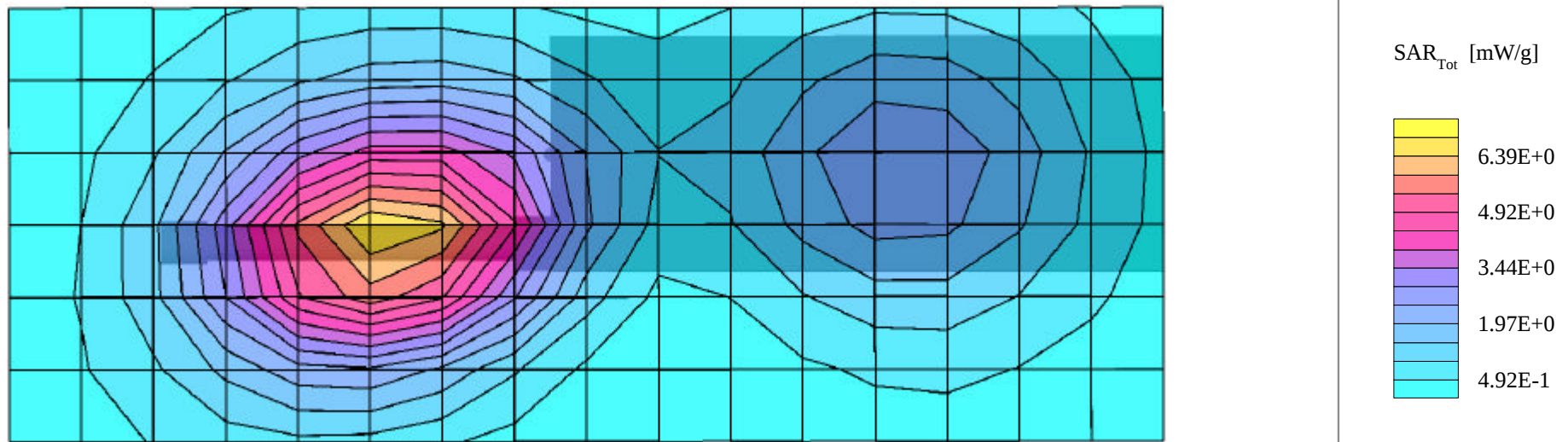
Coarse scan contour with large planar phantom

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

Large Planar Phantom; Planar Section; Position: (270°,90°)
 Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
 835 MHz Muscle: $\sigma = 1.14$ mho/m $\epsilon_r = 44.7$ $\rho = 1.00$ g/cm³
 Coarse: Dx = 20.0, Dy = 20.0, Dz = 20.0

Body-Worn SAR with Nylon T-Strap (KRY1011656/1)
 with Speaker-Microphone (KRY1011617/83R1A)
 1.6cm T-Strap Separation Distance to Planar Phantom
 J7100(PI) Portable FM PTT Radio Transceiver
 Whip Antenna (KRE1011223/01)
 NiMH Battery (BKB191210/4)
 Continuous Wave Mode
 Low Band Mid Channel [815.5000MHz]
 Conducted Power: 3.35 Watts
 Ambient Temp: 22.3°C; Fluid Temp: 21.8°C
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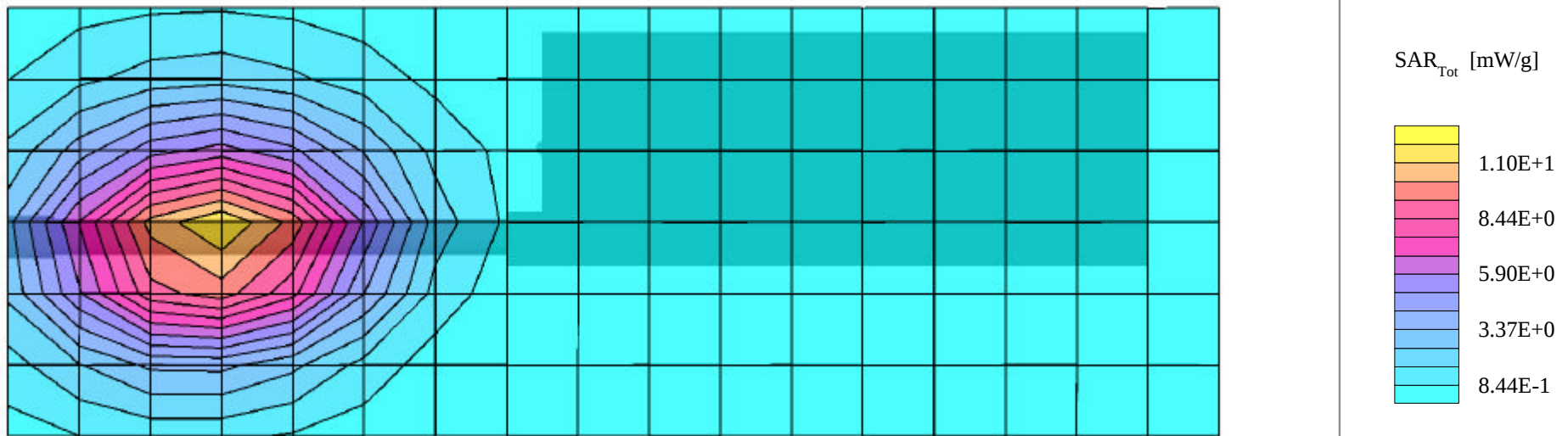
Coarse scan contour with large planar phantom



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

Large Planar Phantom; Planar Section; Position: (270°,90°)
Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
835 MHz Muscle: $\sigma = 1.14$ mho/m $\epsilon_r = 44.7$ $\rho = 1.00$ g/cm³
Coarse: Dx = 20.0, Dy = 20.0, Dz = 20.0

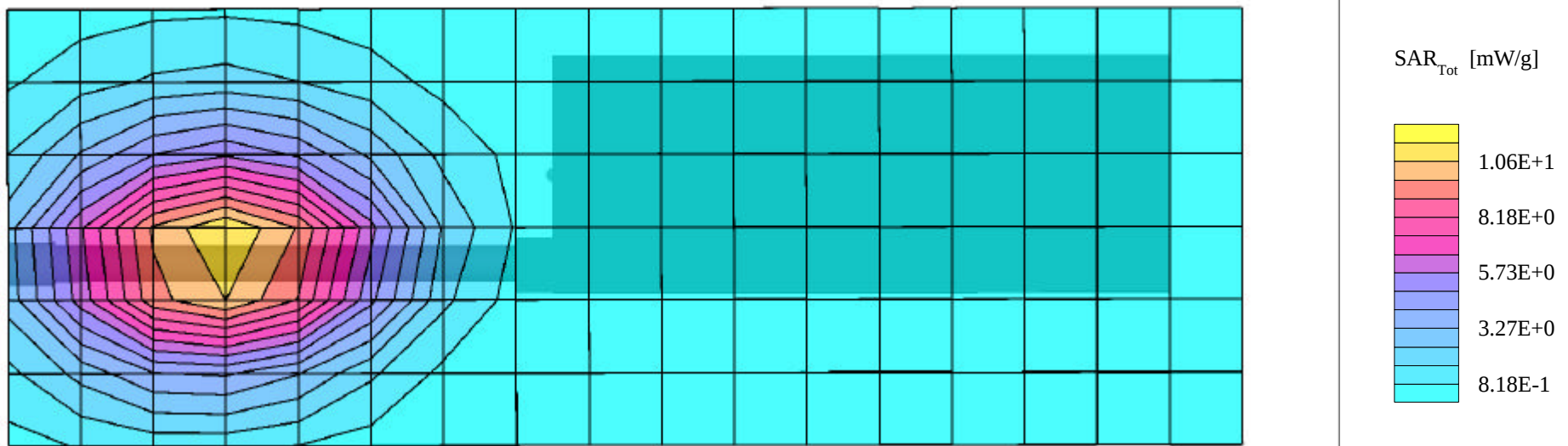
Body-Worn SAR with Metal Belt-Clip (KRY1011647/1)
with Speaker-Microphone (KRY1011617/83R1A)
1.1cm Belt-Clip Separation Distance to Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/01)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band High Channel [823.9875 MHz]
Conducted Power: 3.33 Watts
Ambient Temp: 22.3°C; Fluid Temp: 21.8°C
Date Tested: January 16, 2003

Coarse scan contour with large planar phantom

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

Large Planar Phantom; Planar Section; Position: (270°,90°)
Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
835 MHz Muscle: $\sigma = 1.14$ mho/m $\epsilon_r = 44.7$ $\rho = 1.00$ g/cm³
Coarse: Dx = 20.0, Dy = 20.0, Dz = 20.0

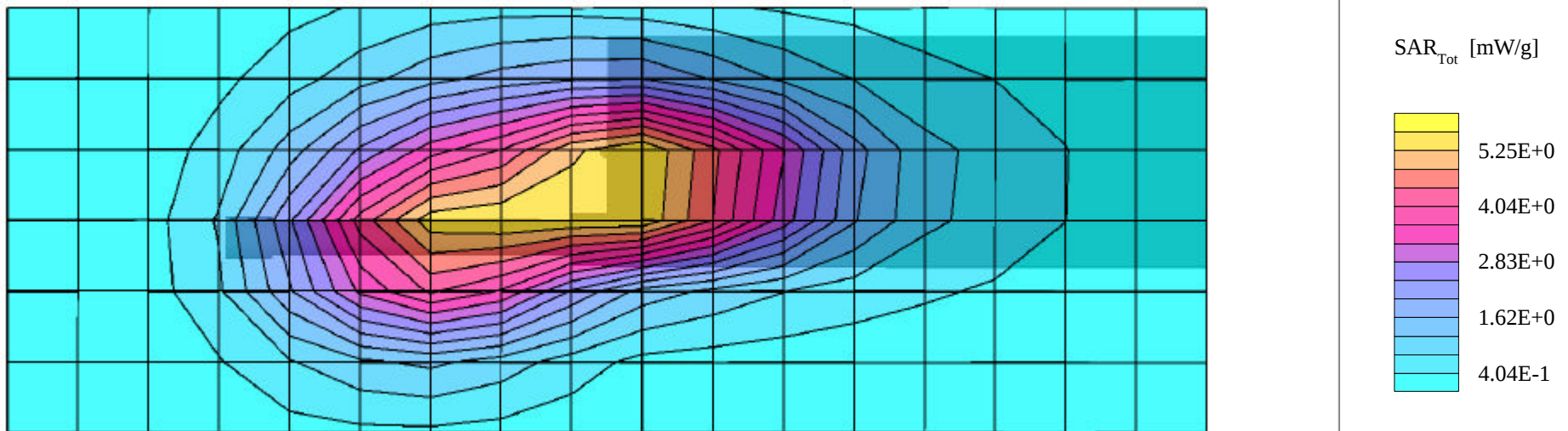
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Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 22.3°C; Fluid Temp: 21.8°C
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Coarse scan contour with large planar phantom

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

Large Planar Phantom; Planar Section; Position: (270°,90°)
Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
835 MHz Muscle: $\sigma = 1.14$ mho/m $\epsilon_r = 44.7$ $\rho = 1.00$ g/cm³
Coarse: Dx = 20.0, Dy = 20.0, Dz = 20.0

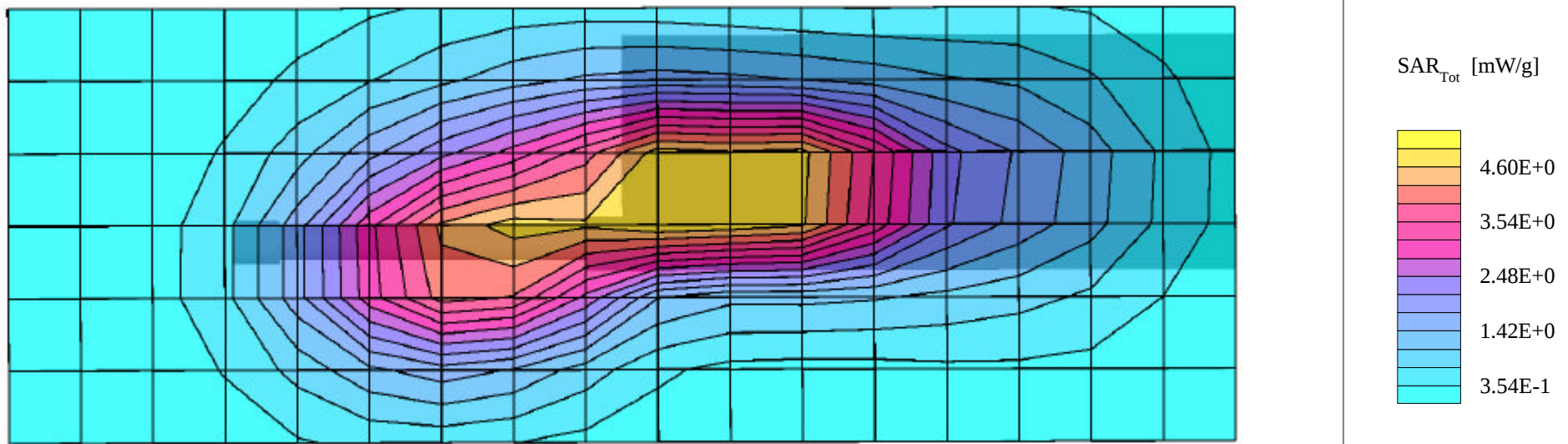
Body-Worn SAR with Metal Belt-Clip (KRY1011647/1)
with Speaker-Microphone (KRY1011617/83R1A)
1.1cm Belt-Clip Separation Distance to Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Whip Antenna (KRE1011223/01)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 22.3°C; Fluid Temp: 21.8°C
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Coarse scan contour with large planar phantom

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

Large Planar Phantom; Planar Section; Position: (270°,90°)
Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
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Coarse: Dx = 20.0, Dy = 20.0, Dz = 20.0

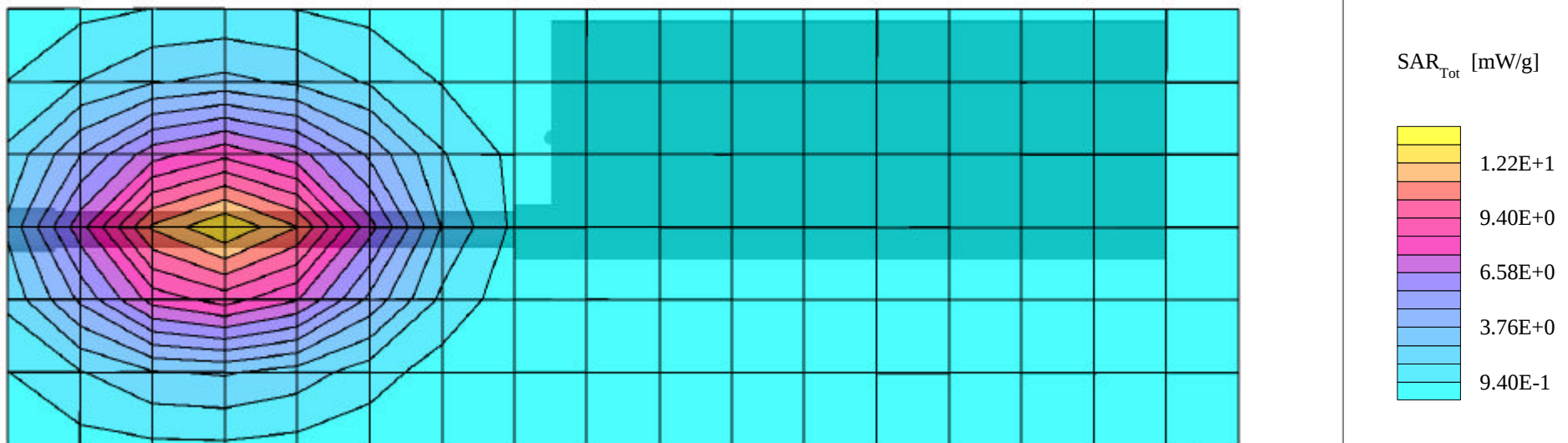
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1.1cm Belt-Clip Separation Distance to Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
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Low Band Mid Channel [815.5000 MHz]
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Coarse scan contour with large planar phantom

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Large Planar Phantom; Planar Section; Position: (270°,90°)
Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
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Coarse: Dx = 20.0, Dy = 20.0, Dz = 20.0

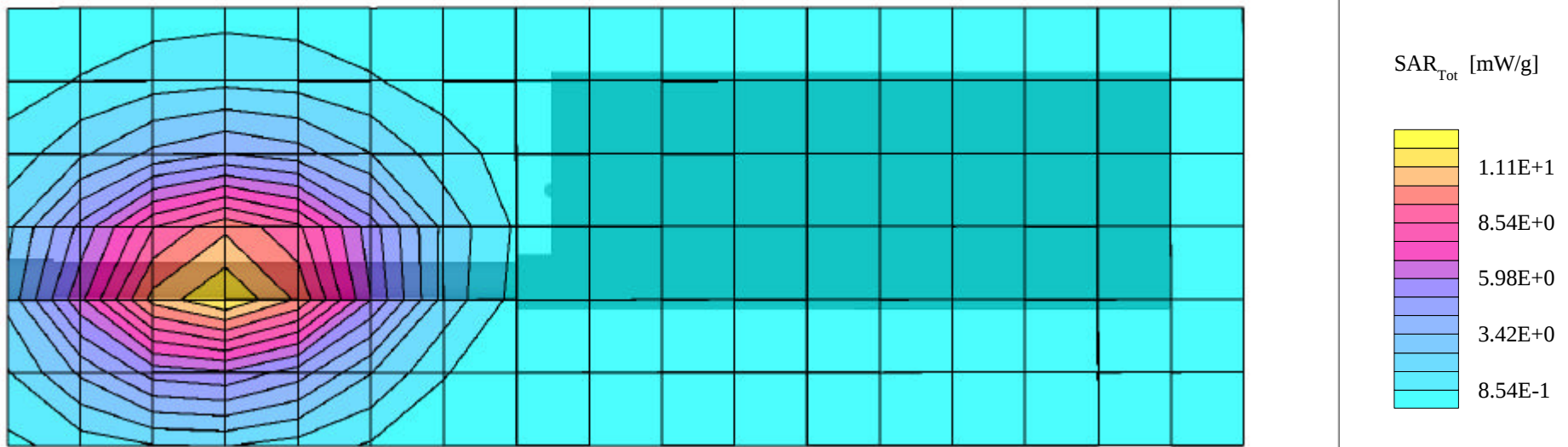
Body-Worn SAR with Leather Case/Belt-Loop (KRY1011638/1)
with Speaker-Microphone (KRY1011617/83R1A)
1.7cm Leather Case/Belt-Loop Separation Distance to Planar Phantom
J7100(PI) Portable FM PTT Radio Transceiver
Flexible Gain Antenna (KRE1011506/01)
NiCd Battery (BKB191210/3)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 22.3°C; Fluid Temp: 21.8°C
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Coarse scan contour with large planar phantom

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

Large Planar Phantom; Planar Section; Position: (270°,90°)
Probe: ET3DV6 - SN1387; ConvF(6.30,6.30,6.30); Crest factor: 1.0
835 MHz Muscle: $\sigma = 1.14$ mho/m $\epsilon_r = 44.7$ $\rho = 1.00$ g/cm³
Coarse: Dx = 20.0, Dy = 20.0, Dz = 20.0

Body-Worn SAR with Leather Case/Belt-Loop (KRY1011638/1)
with Speaker-Microphone (KRY1011617/83R1A)
1.7cm Leather Case/Belt-Loop Separation Distance to Planar Phantom
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Flexible Gain Antenna (KRE1011506/01)
NiMH Battery (BKB191210/4)
Continuous Wave Mode
Low Band Mid Channel [815.5000 MHz]
Conducted Power: 3.35 Watts
Ambient Temp: 22.3°C; Fluid Temp: 21.8°C
Date Tested: January 16, 2003

Coarse scan contour with large planar phantom

835MHz Body Fluid Parameters

(using 450MHz Fluid Mixture)

January 16, 2003

Frequency	ϵ'	ϵ''
735.000000 MHz	45.7751	25.0713
745.000000 MHz	45.6420	25.0185
755.000000 MHz	45.5321	24.9476
765.000000 MHz	45.4162	24.8804
775.000000 MHz	45.3331	24.8617
785.000000 MHz	45.2574	24.8177
795.000000 MHz	45.1926	24.7933
805.000000 MHz	45.0991	24.7565
815.000000 MHz	44.9984	24.7343
825.000000 MHz	44.8909	24.6653
835.000000 MHz	44.6738	24.6342
845.000000 MHz	44.5954	24.5847
855.000000 MHz	44.5397	24.5645
865.000000 MHz	44.4113	24.5249
875.000000 MHz	44.3258	24.5023
885.000000 MHz	44.2382	24.4915
895.000000 MHz	44.1786	24.4076
905.000000 MHz	44.0973	24.3541
915.000000 MHz	44.0305	24.3164
925.000000 MHz	43.9447	24.2869
935.000000 MHz	43.8493	24.1126

**SAR TEST SETUP WITH LARGE PLANAR PHANTOM
Body-worn with Nylon T-Strap Accessory**



With Flexible Gain Antenna

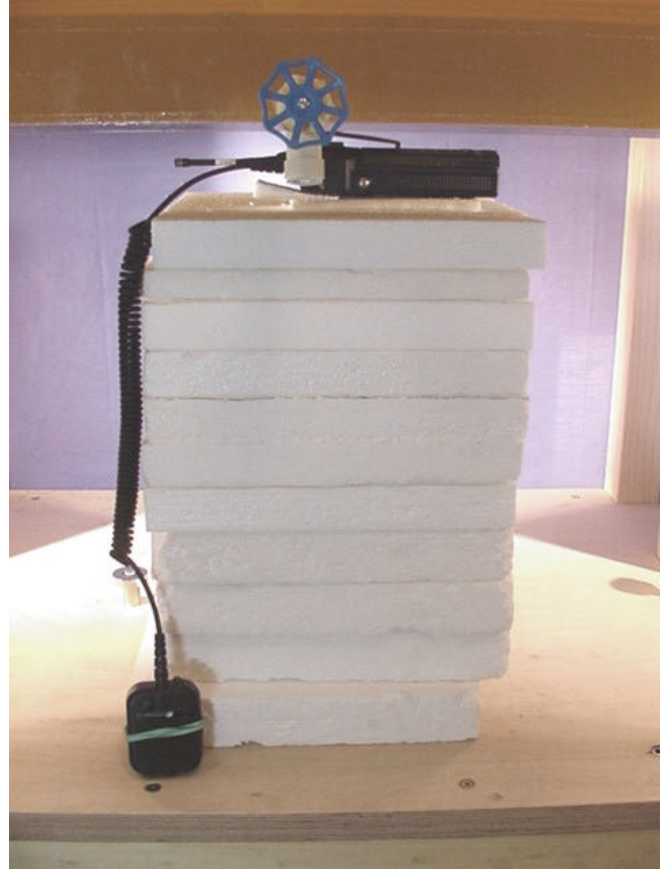


With Whip Antenna

**SAR TEST SETUP WITH LARGE PLANAR PHANTOM
Body-worn with Metal Belt-Clip Accessory**

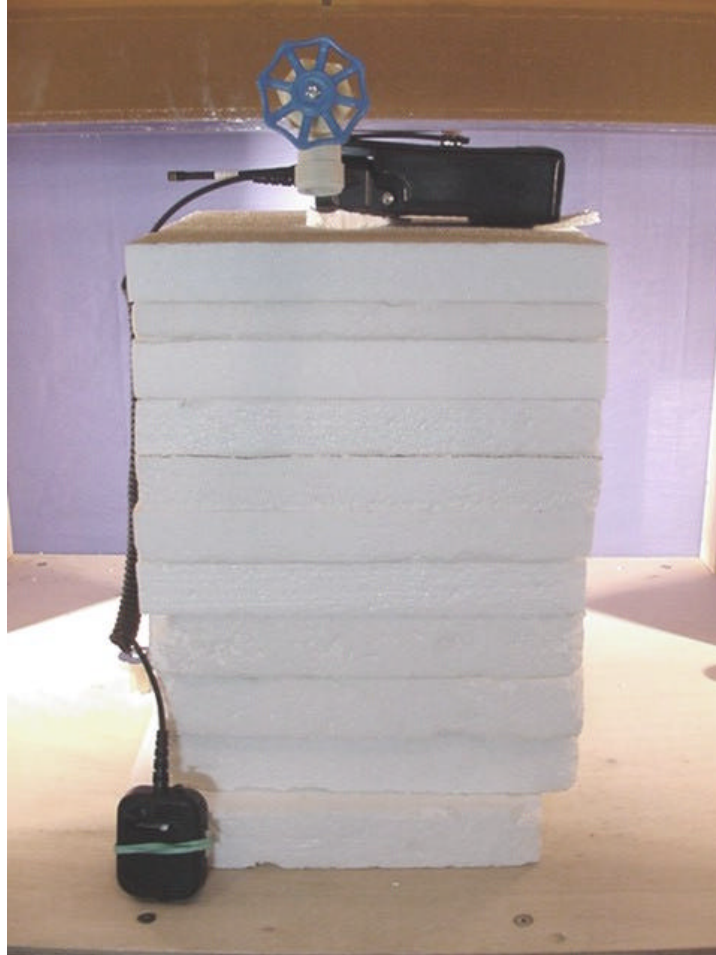


With Flexible Gain Antenna



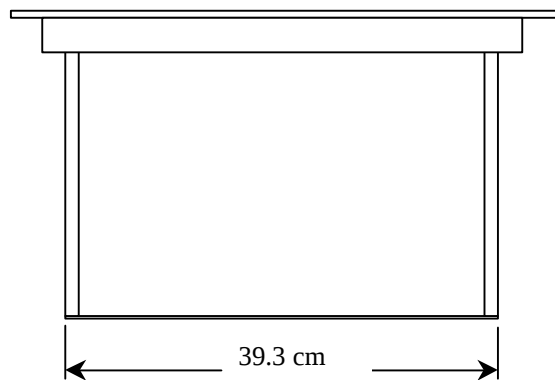
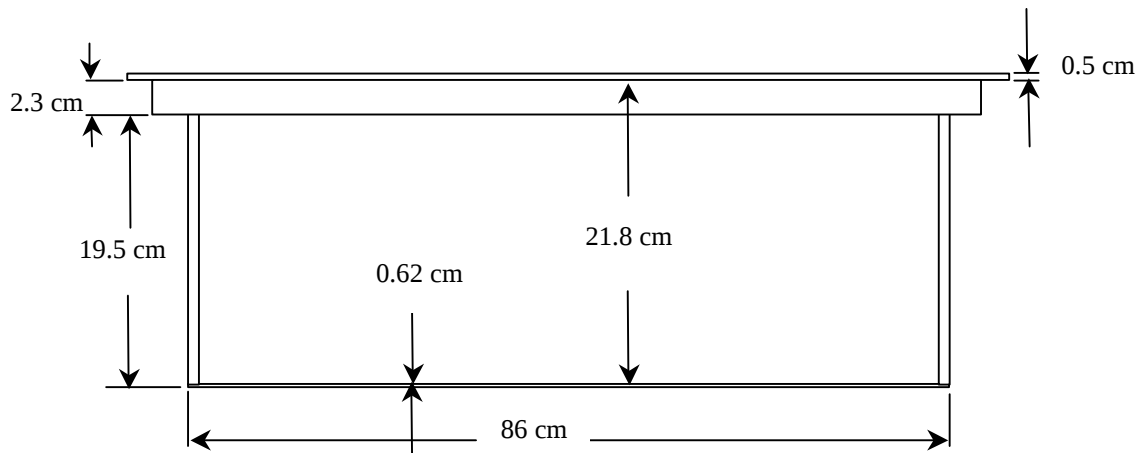
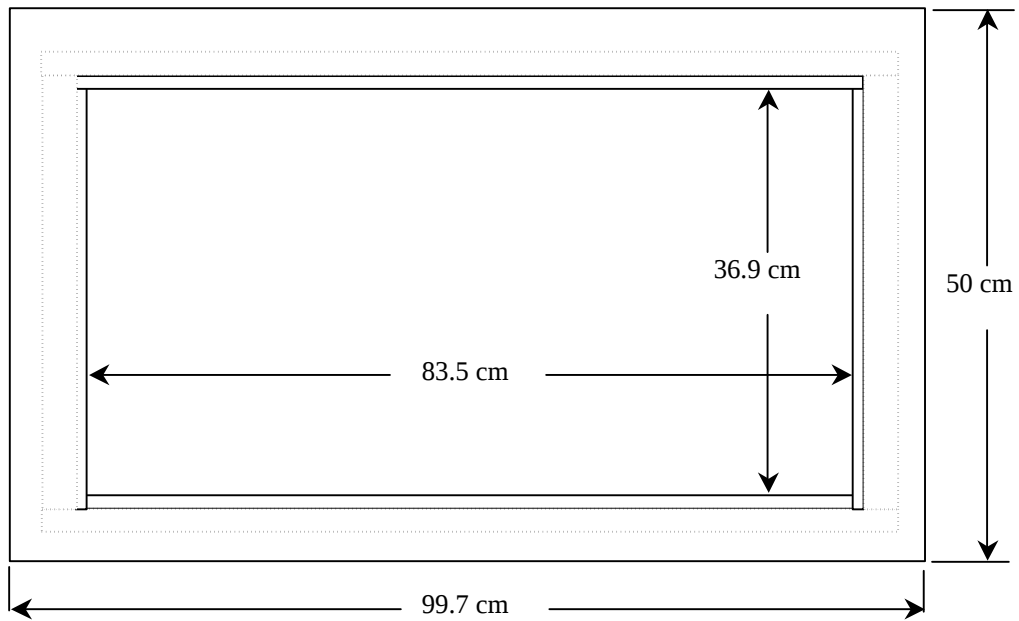
With Whip Antenna

**SAR TEST SETUP WITH LARGE PLANAR PHANTOM
Body-worn with Leather Case/Belt-Loop Accessory**



With Whip Antenna

Dimensions of Large Plexiglas Planar Phantom



Large Plexiglas Planar Phantom

