DECLARATION OF COMPLIANCE
SAR EVALUATION

Test Lab

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Applicant Information

VERTEX STANDARD CO., LTD.
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Tokyo 153-8644, Japan

Rule Part(s):	**FCC §2.1093; IC RSS-102 Issue 1 (Provisional)**
Test Procedure(s):	**FCC OET Bulletin 65 Supplement C (01-01)**
FCC ID:	**K66VXA-700**
Model:	**VXA-700**
EUT Type:	**Portable AirBand PTT Radio Transceiver**
Modulation:	**AM**
Tx Frequency Range:	**118 - 136.975 MHz**
RF Conducted Power Tested:	**31.73 dBm (118.000 MHz)** **31.76 dBm (128.000 MHz)** **31.78 dBm (136.975 MHz)**
Antenna Type(s):	**Whip**
Battery Type(s):	**7.4V Lithium-ion (1300mAh)**
Body-Worn Accessories:	**Belt-Clip, Speaker-Microphone**

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 §2.1093 and Health Canada's Safety Code 6. The device was tested in accordance with the measurement standards and procedures specified in FCC OET Bulletin 65, Supplement C, Edition 01-01 and Industry Canada RSS-102 Issue 1 (General Population/Uncontrolled 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 that the VERTEX STANDARD CO., LTD. Model: VXA-700 Portable AM AirBand PTT Radio Transceiver FCC ID: K66VXA-700 complies with FCC 47 CFR §2.1093 (see reference [1]) and Health Canada Safety Code 6 (see reference [2]). The test procedures described in FCC OET Bulletin 65, Supplement C, Edition 01-01 (see reference [3]) and IC RSS-102 Issue 1 (Provisional) (see reference [4]), were employed. A description of the product and 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)

Rule Part(s)	FCC §2.1093; IC RSS-102 Issue 1
Test Procedure(s)	OET Bulletin 65, Supplement C (01-01)
EUT Type	Portable AirBand PTT Radio Transceiver
Trade Name / Model	VXA-700
Serial No.	Pre-production
Modulation	AM
Tx Frequency Range	118 - 136.975 MHz
Measured RF Conducted Power	31.73 dBm (118.000 MHz) 31.76 dBm (128.000 MHz) 31.78 dBm (136.975 MHz)
Antenna Type	Whip
Antenna Length	175 mm
Battery Type(s)	7.4V Lithium-ion (1300mAh)
Body-Worn Accessories	Belt-Clip, Speaker-Microphone

3.0 SAR MEASUREMENT SYSTEM

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, SAM phantom, and various planar phantoms for face and body SAR evaluations. The robot is a six-axis industrial robot performing precise movements to position the probe in order to measure the location (points) of 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

DASY3 SAR Measurement System with validation phantom

4.0 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									
Freq. (MHz)	Chan.	Mode	Cond. Power Before (dBm)	Cond. Power After (dBm)	Antenna Position	Separation Distance (cm)	Phantom Section	Measured SAR 1g (w/kg)	
								100% Duty Cycle	50% Duty Cycle
118.000	Low	CW	31.73	31.68	Fixed	2.5	Planar	0.0572	0.0286
128.000	Mid	CW	31.76	31.71	Fixed	2.5	Planar	0.611	0.306
136.975	High	CW	31.78	31.74	Fixed	2.5	Planar	0.171	0.0855

ANSI / IEEE C95.1 1992 - SAFETY LIMIT BRAIN: 1.6 W/kg (averaged over 1 gram) Spatial Peak - Uncontrolled Exposure / General Population				
Mixture Type	150MHz Brain		**Relative Humidity**	43 %
Dielectric Constant	**Measured**	**Target**	**Ambient Temperature**	24.3 °C
	53.9	52.3		
Conductivity	**Measured**	**Target**	**Fluid Temperature**	23.3 °C
	0.76	0.76		
Atmospheric Pressure	101.8 kPa		**Fluid Depth**	≥ 15 cm

Notes:

1. The face-held SAR values measured were below the maximum limit of 1.6 W/kg (uncontrolled exposure).
2. The highest face-held SAR value measured was 0.611 w/kg (100% duty cycle, mid channel).
3. The EUT was tested for face-held SAR with a 2.5cm separation distance between the front of the EUT and the outer surface of the planar phantom.
4. During the entire test the conducted power was maintained to within 5% of the initial conducted power.

MEASUREMENT SUMMARY (Cont.)

BODY-WORN SAR MEASUREMENT RESULTS									
Freq. (MHz)	Chan.	Mode	Cond. Power Before (dBm)	Cond. Power After (dBm)	Antenna Position	Belt-Clip Separation Distance (cm)	Phantom Section	Measured SAR 1g (w/kg)	
								100% Duty Cycle	50% Duty Cycle
118.000	Low	CW	31.73	31.70	Fixed	2.3	Planar	0.140	0.0700
128.000	Mid	CW	31.76	31.73	Fixed	2.3	Planar	0.934	0.467
136.975	High	CW	31.78	31.75	Fixed	2.3	Planar	0.169	0.0845

ANSI / IEEE C95.1 1992 - SAFETY LIMIT
BODY: 1.6 W/kg (averaged over 1 gram)
Spatial Peak - Uncontrolled Exposure / General Population

Mixture Type	150MHz Body		**Relative Humidity**	43 %
Dielectric Constant	**Measured**	**Target**	**Ambient Temperature**	24.3 °C
	61.5	61.9		
Conductivity	**Measured**	**Target**	**Fluid Temperature**	23.3 °C
	0.81	0.80		
Atmospheric Pressure	101.8 kPa		**Fluid Depth**	≥ 15 cm

Notes:

1. The body-worn SAR values measured were below the maximum limit of 1.6 W/kg (uncontrolled exposure).
2. The highest body-worn SAR value measured was 0.934 w/kg (100% duty cycle, mid channel).
3. The EUT was tested for body-worn SAR with the attached belt-clip providing a 2.3cm separation distance between the back of the EUT and the outer surface of the planar phantom. A speaker-microphone accessory was also connected to the EUT for the duration of the body-worn evaluation.
4. During the entire test the conducted power was maintained to within 5% of the initial conducted power.

5.0 DETAILS OF SAR EVALUATION

The VERTEX STANDARD CO., LTD. Model: VXA-700 Portable AM AirBand PTT Radio Transceiver FCC ID: K66VXA-700 was found to be compliant for localized Specific Absorption Rate (uncontrolled exposure) based on the test provisions and conditions described below.

1. The EUT was evaluated for face-held SAR with the front of the radio placed parallel to the outer surface of the planar phantom. A 2.5cm separation distance was maintained between the front of the radio and the outer surface of the planar phantom for the duration of the test.
2. The EUT was evaluated for body-worn SAR with the belt-clip and speaker-microphone accessories connected to the radio and the back of the device placed parallel to the outer surface of the planar phantom. The belt-clip provided a 2.3cm separation distance between the back of the radio and the outer surface of the planar phantom.
3. The EUT was evaluated for SAR at maximum power and the unit was operated for an appropriate period prior to the evaluation in order to minimize drift.
4. The conducted power levels were measured before and after each test according to the procedures described in FCC Rule Part 2.1046. If the conducted power level measured after each test had drifted beyond 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.
5. The EUT was tested with the transmitter in continuous transmit operation (100% duty cycle) throughout the SAR evaluation. For a push-to-talk radio device the 50% duty cycle compensation reported assumes a transmit/receive cycle of equal time base.
6. The location of the maximum spatial SAR distribution (Hot Spot) was determined relative to the device and its antenna.
7. The EUT was tested with a fully charged battery.

6.0 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. The positioning of the ear-held device relative to the phantom was performed in accordance with FCC OET Bulletin 65, Supplement C (Edition 01-01) using the SAM phantom.

(ii) For face-held and body-worn 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 using a uniform grid spacing.

c. A 5x5x7 matrix was performed around the greatest spatial SAR distribution found during the area scan of the applicable exposed region. SAR values were then calculated using a 3-D spline interpolation algorithm and averaged over spatial volumes of 1 and 10 grams.

d. The depth of the simulating tissue in the phantom used for the SAR evaluation and system validation was no less than 15.0cm.

e. For this particular evaluation a stack of low-density, low-loss dielectric foamed polystyrene was used in place of the device holder.

7.0 SYSTEM VALIDATION

Prior to the assessment, the system was verified using a planar phantom with a 300MHz dipole. A forward power of 250mW was applied to the dipole and the system was verified to a tolerance of ±10%. The applicable verifications are listed below (see Appendix B for system validation test plot and Appendix C for dipole calibration information).

Dipole Validation Kit	Target SAR 1g (w/kg)	Measured SAR 1g (w/kg)	Ambient Temp.	Fluid Temp.	Fluid Depth	Validation Date
300MHz	0.877	0.876	24.3 °C	23.3 °C	≥ 15cm	07/22/02

8.0 TISSUE PARAMETERS

The dielectric parameters of the fluid were verified prior to the SAR evaluation using an 85070C Dielectric Probe Kit and an 8753E Network Analyzer. The dielectric parameters of the fluid are shown below (see Appendix E for printout of measured fluid dielectric parameters).

TISSUE PARAMETERS – SYSTEM VALIDATION			
Equivalent Tissue	**Dielectric Constant ε_r**	**Conductivity σ (mho/m)**	**ρ (Kg/m^3)**
300MHz Brain (Target)	45.3 ±5%	0.87 ±5%	1000
300MHz Brain (Measured: 07/22/02)	**45.6**	**0.87**	**1000**

TISSUE PARAMETERS – EUT EVALUATION			
Equivalent Tissue	**Dielectric Constant ε_r**	**Conductivity σ (mho/m)**	**ρ (Kg/m^3)**
150MHz Brain (Target)	52.3 ±5%	0.76 ±5%	1000
150MHz Brain (Measured: 07/22/02)	**53.9**	**0.76**	**1000**
150MHz Body (Target)	61.9 ±5%	0.80 ±5%	1000
150MHz Body (Measured: 07/22/02)	**61.5**	**0.81**	**1000**

9.0 SIMULATED TISSUES

The brain and body tissue mixtures 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 (permitivity and conductivity).

TISSUE MIXTURES			
INGREDIENT	**300MHz Brain (%) (System Validation)**	**150MHz Brain (%) (EUT Evaluation)**	**150MHz Body (%) (EUT Evaluation)**
Water	37.56	38.35	46.6
Sugar	55.32	55.5	49.7
Salt	5.95	5.15	2.6
HEC	0.98	0.9	1.0
Bactericide	0.19	0.1	0.1

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 1g of tissue)	1.60	8.0
Spatial Peak (hands/wrists/feet/ankles averaged over 10g)	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)

Evaluation Phantom

Type:	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)

Validation Phantom (≤ 450MHz)

Type:	Large Planar Phantom
Shell Material:	Plexiglas
Bottom Thickness:	6.2 mm ± 0.1mm
Dimensions:	86.0cm (L) x 39.5cm (W) x 21.8cm (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 ?W/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 SMALL PLANAR PHANTOM

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


Small Planar Phantom

14.0 LARGE PLANAR PHANTOM

The large planar phantom is constructed of Plexiglas material with a 6.0 mm shell thickness for SAR validations at 450MHz and below. The large planar phantom is mounted in the DASY3 compact system in place of the SAM phantom.


Large 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 -ET3DV6 E-Field Probe -300MHz Validation Dipole -450MHz Validation Dipole -900MHz Validation Dipole -1800MHz Validation Dipole -2450MHz Validation Dipole -SAM Phantom V4.0C -Small Planar Phantom -Large Planar Phantom	 599396-01 1387 135 136 054 247 150 N/A N/A N/A	 N/A Feb 2002 Oct 2001 Oct 2001 June 2001 June 2001 Oct 2001 N/A N/A N/A
85070C Dielectric Probe Kit	N/A	N/A
Gigatronics 8652A Power Meter -Power Sensor 80701A -Power Sensor 80701A	1835272 1833535 1833542	Feb 2002 Feb 2002 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 permitivity (target)	± 5.0	Rectangular	√3	0.6	± 1.7	∞
Liquid permitivity (measured)	± 5.0	Rectangular	√3	0.6	± 1.7	∞
Combined Standard Uncertainty					**± 13.7**	
Expanded Uncertainty (k=2) (95% Confidence Interval)					**± 27.5**	

Measurement Uncertainty Table in accordance with IEEE Std 1528-200X (Draft - see reference [5])

18.0 REFERENCES

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

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

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

[4] Industry Canada, “Evaluation Procedure for Mobile and Portable Radio Transmitters with respect to Health Canada’s Safety Code 6 for Exposure of Humans to Radio Frequency Fields”, Radio Standards Specification RSS-102 Issue 1 (Provisional): September 1999.

[5] 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”: Draft CBD 1.0, April 2002.

[6] Thomas Schmid, Oliver Egger, and Niels Kuster, “Automated E-field scanning system for dosimetric assessments”, IEEE Transaction on Microwave Theory and Techniques, Vol. 44, pp. 105-113: January 1996.

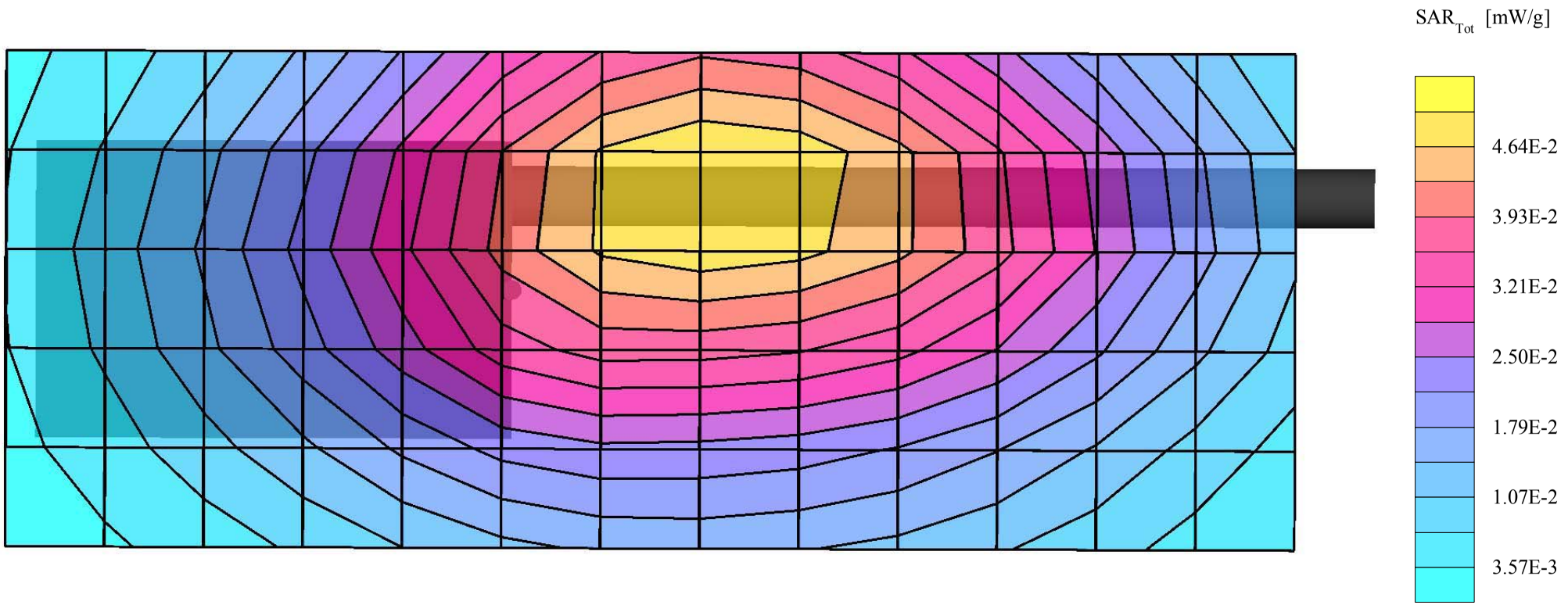
[7] Niels Kuster, Ralph Kastle, and Thomas Schmid, “Dosimetric evaluation of mobile communications equipment with known precision”, IEICE Transactions of Communications, vol. E80-B, no. 5, pp. 645-652: May 1997.

APPENDIX A - SAR MEASUREMENT DATA

Vertex Standard Co., Ltd. FCC ID: K66VXA-700

Small Planar Phantom; Planar Section; Position: (90°,180°)
Probe: ET3DV6 - SN1387; ConvF(9.20,9.20,9.20); Crest factor: 1.0
150 MHz Brain : $\sigma = 0.76$ mho/m $\varepsilon_r = 53.9$ $\rho = 1.00$ g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.10 dB
SAR (1g): 0.0572 mW/g, SAR (10g): 0.0427 mW/g

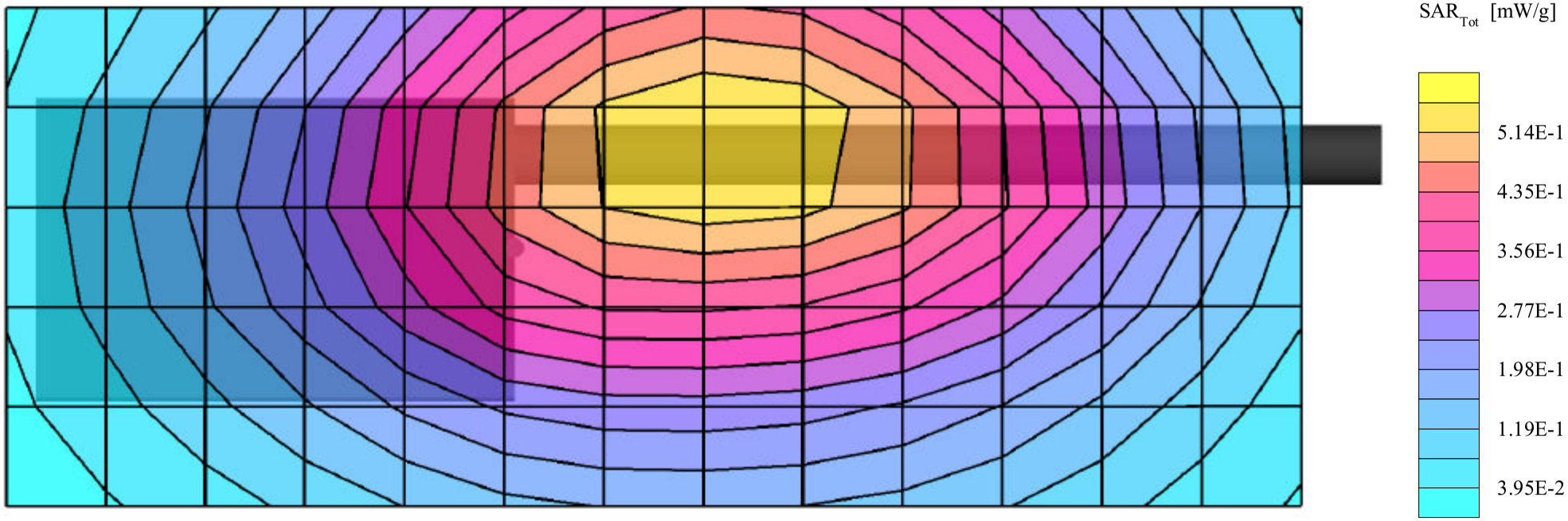
Face-Held SAR at 2.5cm Separation Distance
VXA-700 AM AirBand PTT Radio Transceiver
CW Mode
Low Channel [118.000 MHz]
Conducted Power 31.73 dBm
Ambient Temp. 24.3° C; Fluid Temp. 23.3° C
Date Tested: July 22, 2002



Vertex Standard Co., Ltd. FCC ID: K66VXA-700

Small Planar Phantom; Planar Section; Position: (90°,180°)
Probe: ET3DV6 - SN1387; ConvF(9.20,9.20,9.20); Crest factor: 1.0
150 MHz Brain : $\sigma = 0.76$ mho/m $\varepsilon_r = 53.9$ $\rho = 1.00$ g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.05 dB
SAR (1g): 0.611 mW/g, SAR (10g): 0.457 mW/g

Face-Held SAR at 2.5cm Separation Distance
VXA-700 AM AirBand PTT Radio Transceiver
CW Mode
Mid Channel [128.000 MHz]
Conducted Power: 31.76 dBm
Ambient Temp. 24.3° C; Fluid Temp. 23.3° C
Date Tested: July 22, 2002

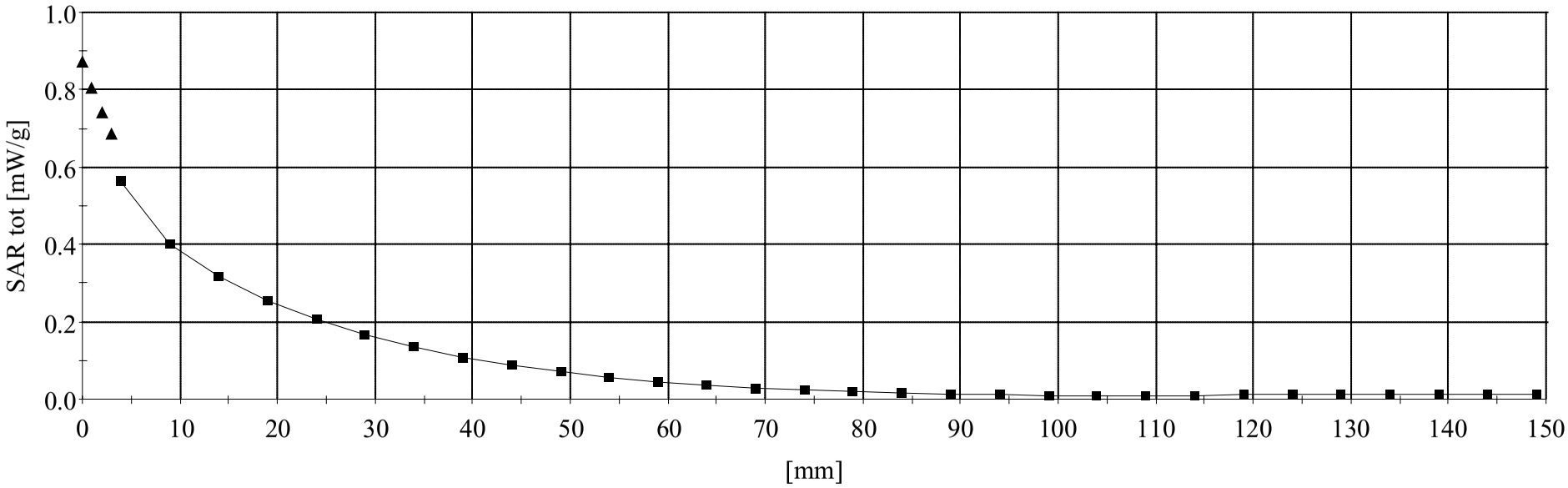


Vertex Standard Co., Ltd. FCC ID: K66VXA-700

Small Planar Phantom; Planar Section
Probe: ET3DV6 - SN1387; ConvF(9.20,9.20,9.20); Crest factor: 1.0
150 MHz Brain : $\sigma = 0.76$ mho/m $\varepsilon_r = 53.9$ $\rho = 1.00$ g/cm^3

Z-Axis Extrapolation at Peak SAR Location

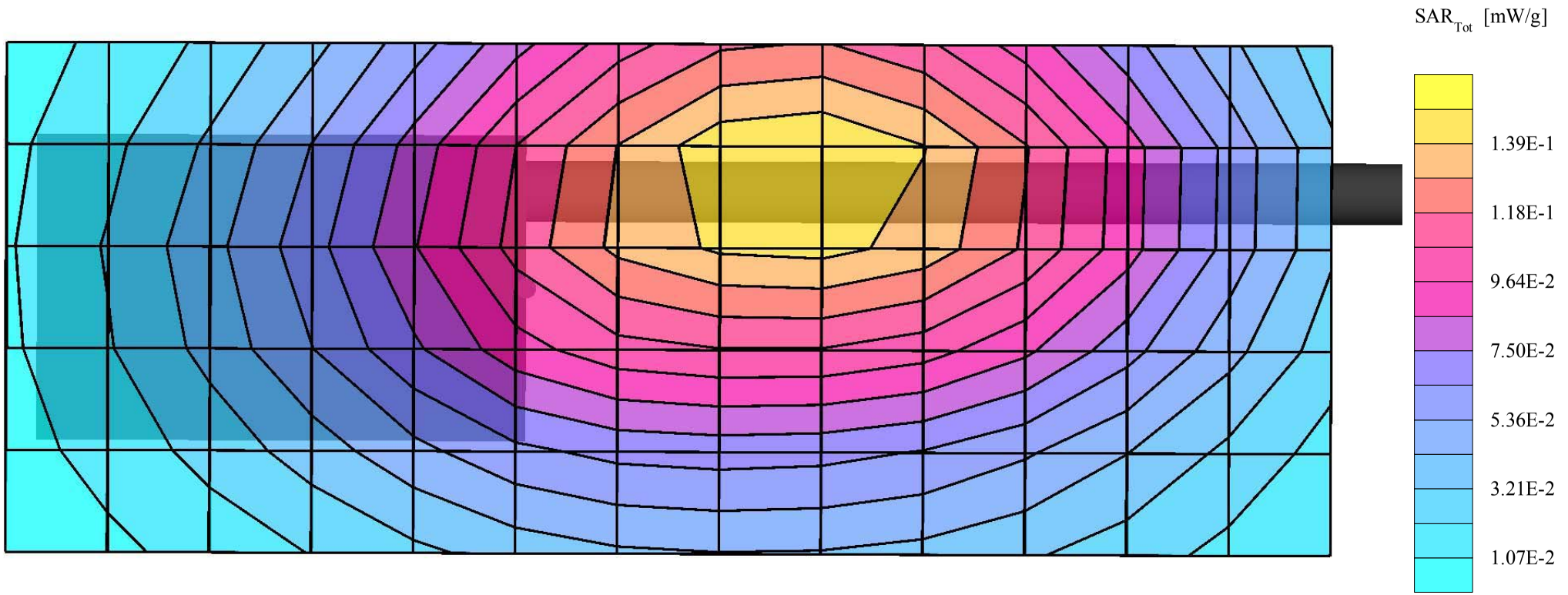
Face-Held SAR at 2.5cm Separation Distance
VXA-700 AM AirBand PTT Radio Transceiver
CW Mode
Mid Channel [128.000 MHz]
Conducted Power: 31.76 dBm
Ambient Temp. 24.3° C; Fluid Temp. 23.3° C
Date Tested: July 22, 2002



Vertex Standard Co., Ltd. FCC ID: K66VXA-700

Small Planar Phantom; Planar Section; Position: (90°,180°)
Probe: ET3DV6 - SN1387; ConvF(9.20,9.20,9.20); Crest factor: 1.0
150 MHz Brain : $\sigma = 0.76$ mho/m $\varepsilon_r = 53.9$ $\rho = 1.00$ g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.08 dB
SAR (1g): 0.171 mW/g, SAR (10g): 0.128 mW/g

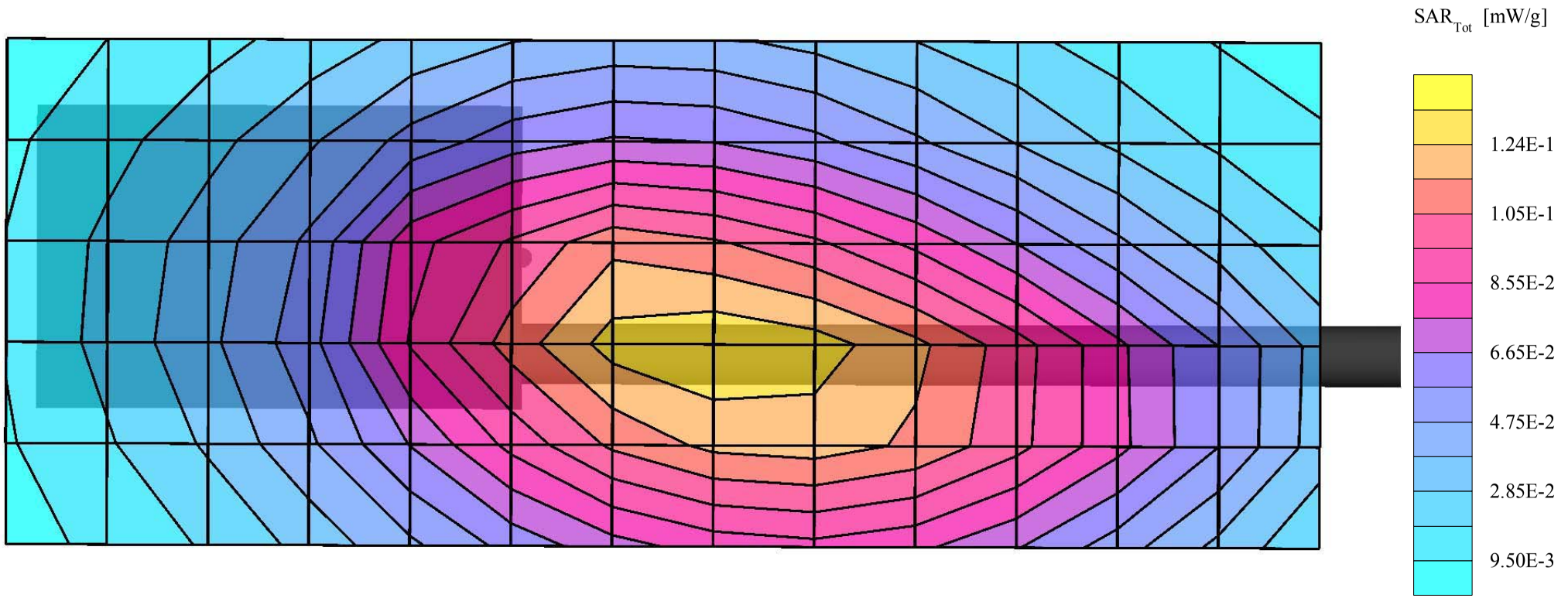
Face-Held SAR at 2.5cm Separation Distance
VXA-700 AM AirBand PTT Radio Transceiver
CW Mode
High Channel [136.975 MHz]
Conducted Power 31.78 dBm
Ambient Temp. 24.3° C; Fluid Temp. 23.3° C
Date Tested: July 22, 2002



Vertex Standard Co., Ltd. FCC ID: K66VXA-700

Small Planar Phantom; Planar Section; Position: (270°,0°)
Probe: ET3DV6 - SN1387; ConvF(8.80,8.80,8.80); Crest factor: 1.0
150 MHz Muscle: $\sigma = 0.81$ mho/m $\varepsilon_r = 61.5$ $\rho = 1.00$ g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.07 dB
SAR (1g): 0.140 mW/g, SAR (10g): 0.104 mW/g

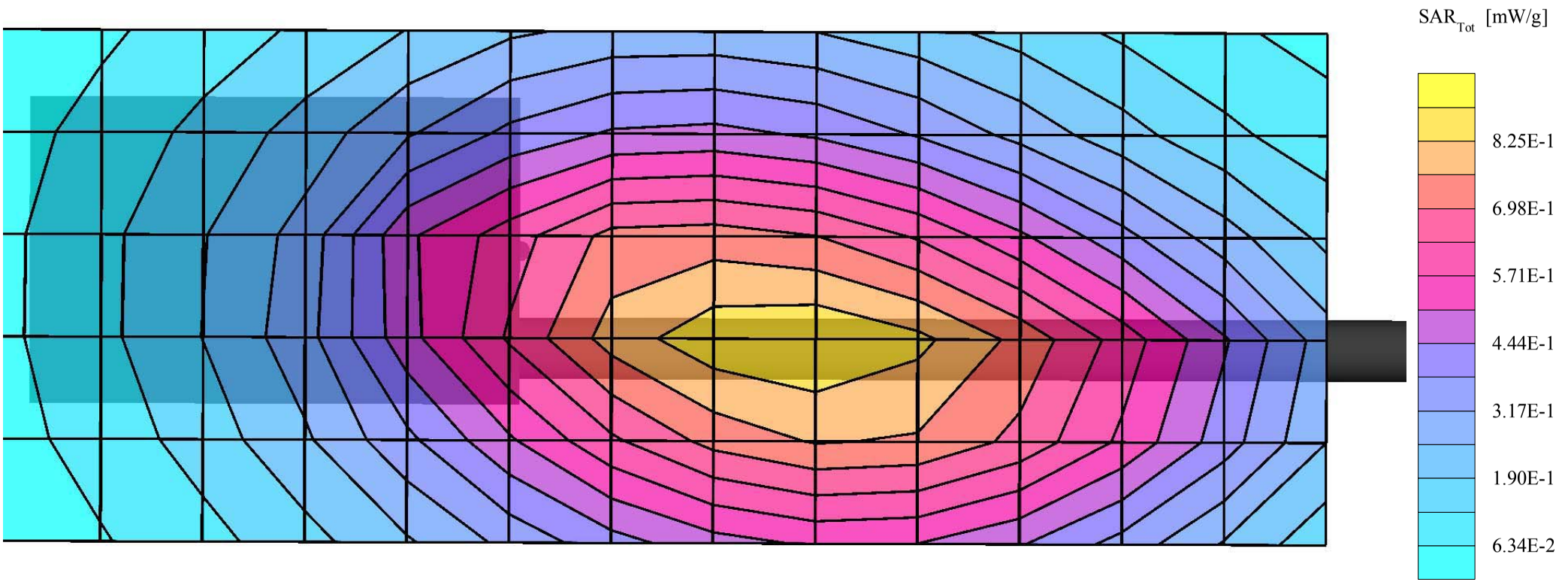
Body-Worn SAR with 2.3cm Belt-Clip Separation Distance
VXA-700 AM AirBand PTT Radio Transceiver
CW Mode
Low Channel [118.000 MHz]
Conducted Power 31.73 dBm
Ambient Temp. 24.3° C; Fluid Temp. 23.3° C
Date Tested: July 22, 2002



Vertex Standard Co., Ltd. FCC ID: K66VXA-700

Small Planar Phantom; Planar Section; Position: (270°,0°)
Probe: ET3DV6 - SN1387; ConvF(8.80,8.80,8.80); Crest factor: 1.0
150 MHz Muscle: $\sigma = 0.81$ mho/m $\varepsilon_r = 61.5$ $\rho = 1.00$ g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.05 dB
SAR (1g): 0.934 mW/g, SAR (10g): 0.694 mW/g

Body-Worn SAR with 2.3cm Belt-Clip Separation Distance
VXA-700 AM AirBand PTT Radio Transceiver
CW Mode
Mid Channel [128.000 MHz]
Conducted Power 31.76 dBm
Ambient Temp. 24.3° C; Fluid Temp. 23.3° C
Date Tested: July 22, 2002

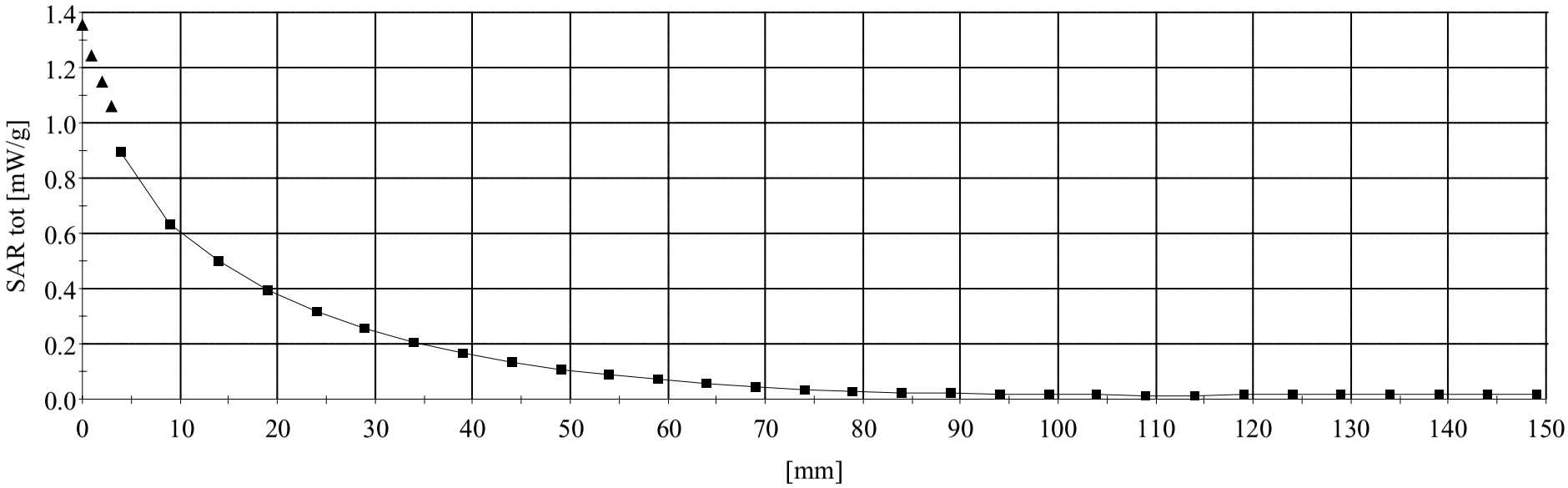


Vertex Standard Co., Ltd. FCC ID: K66VXA-700

Small Planar Phantom; Planar Section
Probe: ET3DV6 - SN1387; ConvF(8.80,8.80,8.80); Crest factor: 1.0
150 MHz Muscle: σ = 0.81 mho/m ε_r = 61.5 ρ = 1.00 g/cm^3

Z-Axis Extrapolation at Peak SAR Location

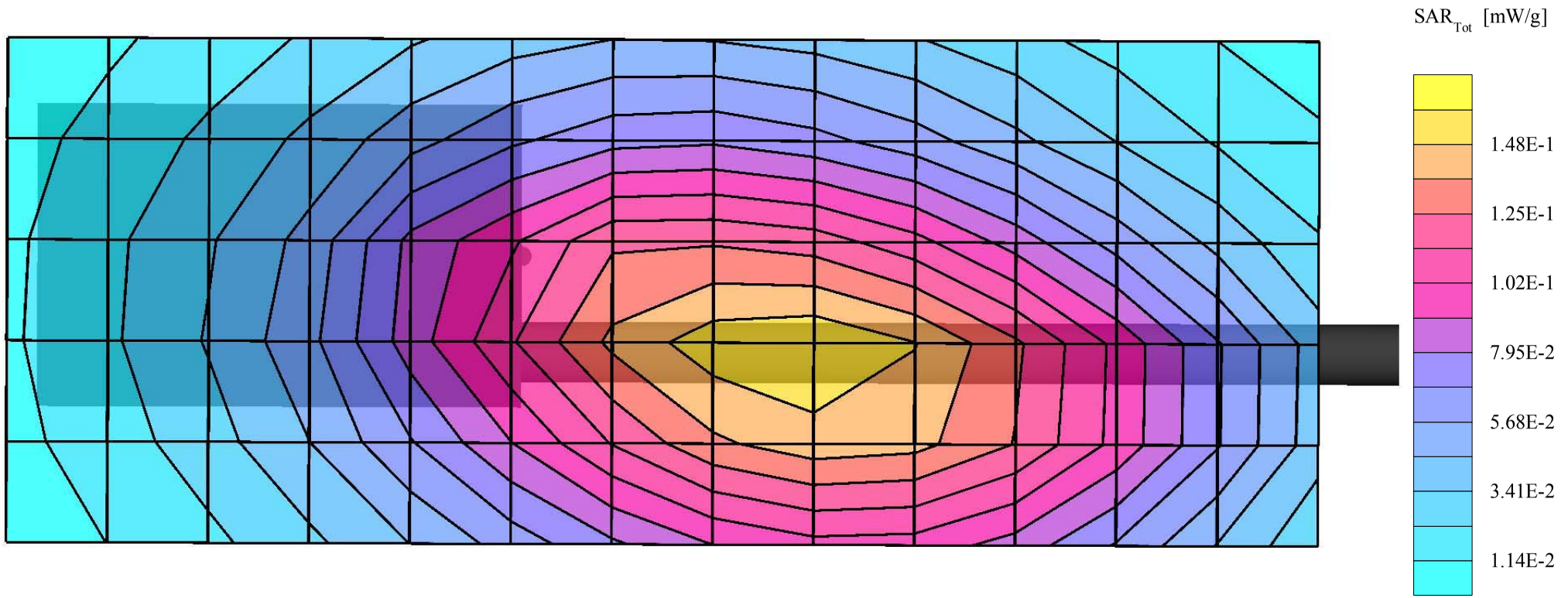
Body-Worn SAR with 2.3cm Belt-Clip Separation Distance
VXA-700 AM AirBand PTT Radio Transceiver
CW Mode
Mid Channel [128.000 MHz]
Conducted Power 31.76 dBm
Ambient Temp. 24.3° C; Fluid Temp. 23.3° C
Date Tested: July 22, 2002



Vertex Standard Co., Ltd. FCC ID: K66VXA-700

Small Planar Phantom; Planar Section; Position: (270°,0°)
Probe: ET3DV6 - SN1387; ConvF(8.80,8.80,8.80); Crest factor: 1.0
150 MHz Muscle: $\sigma = 0.81$ mho/m $\varepsilon_r = 61.5$ $\rho = 1.00$ g/cm^3
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Cube 5x5x7; Powerdrift: -0.06 dB
SAR (1g): 0.169 mW/g, SAR (10g): 0.126 mW/g

Body-Worn SAR with 2.3cm Belt-Clip Separation Distance
VXA-700 AM AirBand PTT Radio Transceiver
CW Mode
High Channel [136.975 MHz]
Conducted Power 31.78 dBm
Ambient Temp. 24.3° C; Fluid Temp. 23.3° C
Date Tested: July 22, 2002



APPENDIX B - SYSTEM VALIDATION

Dipole 300 MHz

Large Planar Phantom; Planar Section

Probe: ET3DV6 - SN1387; ConvF(8.00,8.00,8.00); Crest factor: 1.0; 300 MHz Brain: σ = 0.87 mho/m ε_r = 45.6 ρ = 1.00 g/cm^3

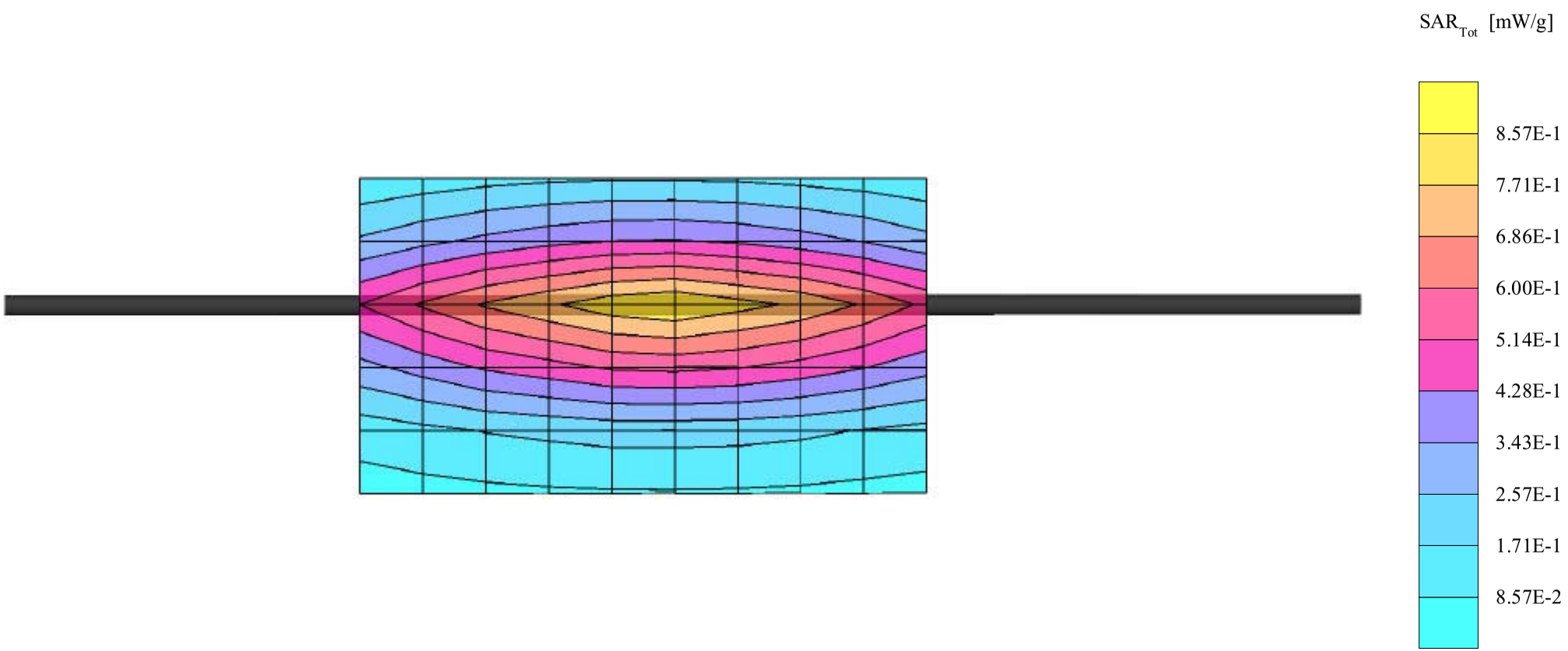
Cube 5x5x7: Peak: 1.40 mW/g, SAR (1g): 0.876 mW/g, SAR (10g): 0.577 mW/g, (Worst-case extrapolation)

Penetration depth: 12.4 (10.7, 14.6) [mm]; Ambient Temp: 24.3°C; Fluid Temp: 23.3°C

Powerdrift: -0.07 dB

Conducted Power: 250mW

Validation Date: July 22, 2002



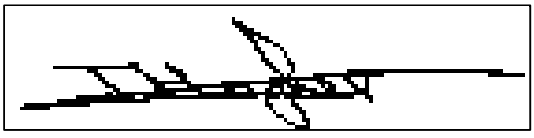
APPENDIX C - DIPOLE CALIBRATION

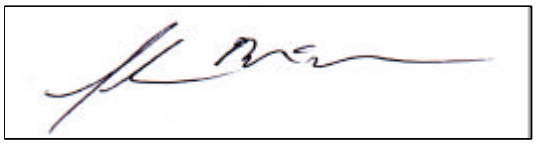
Celltech
Testing and Engineering Services Lab

300MHz SYSTEM VALIDATION DIPOLE

Type:	**300MHz Validation Dipole**
Serial Number:	**135**
Place of Calibration:	**Celltech Research Inc.**
Date of Calibration:	**October 15, 2001**

Celltech Research Inc. hereby certifies that this device has been calibrated on the date indicated above.

Calibrated by: 

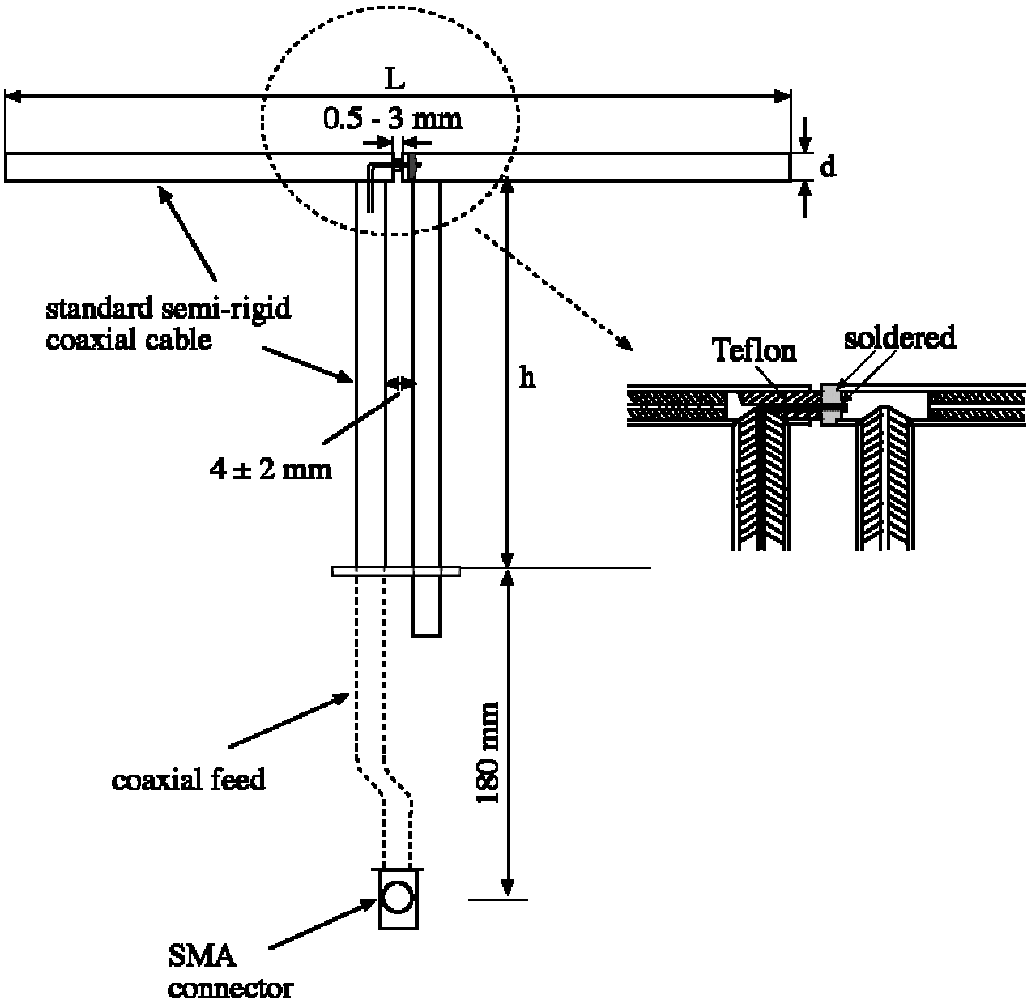
Approved by: 

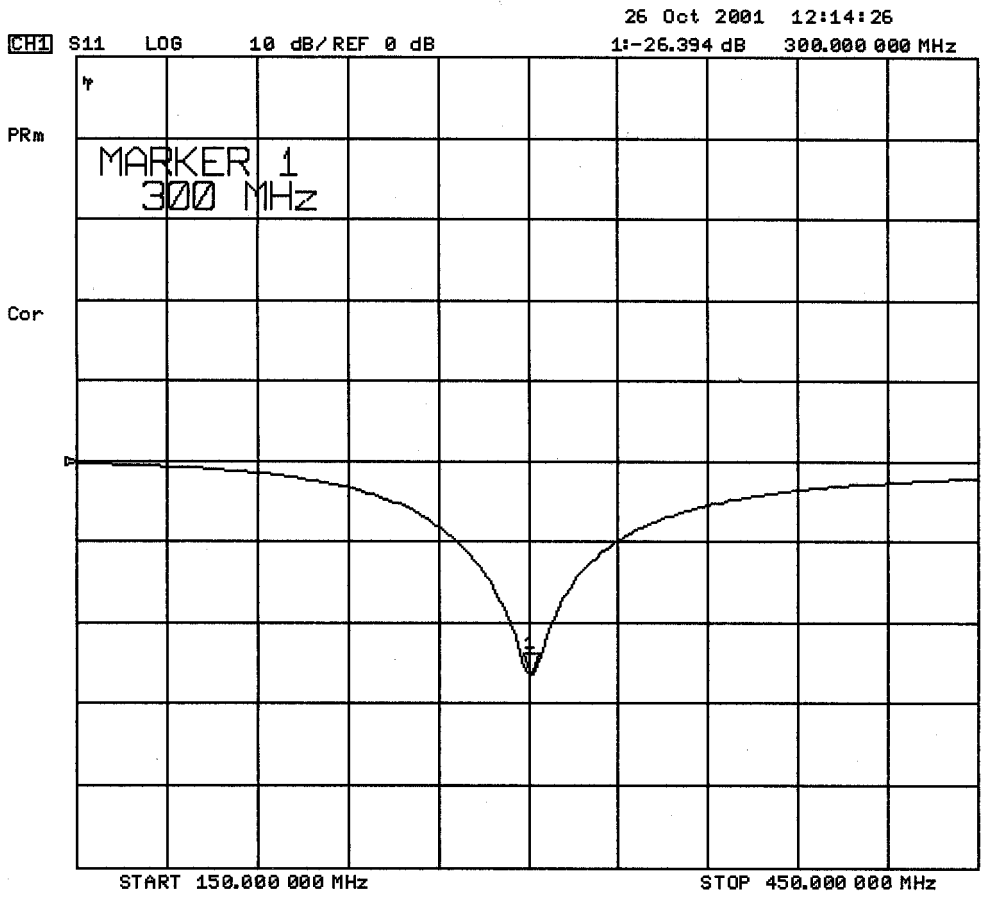
Celltech Research Inc. 1955 Moss Court, Kelowna, B.C. Canada V1Y 9L3
Tel. 250-860-3130 • Fax. 250-860-3110 • e-mail: info@celltechlabs.com
www.celltechlabs.com

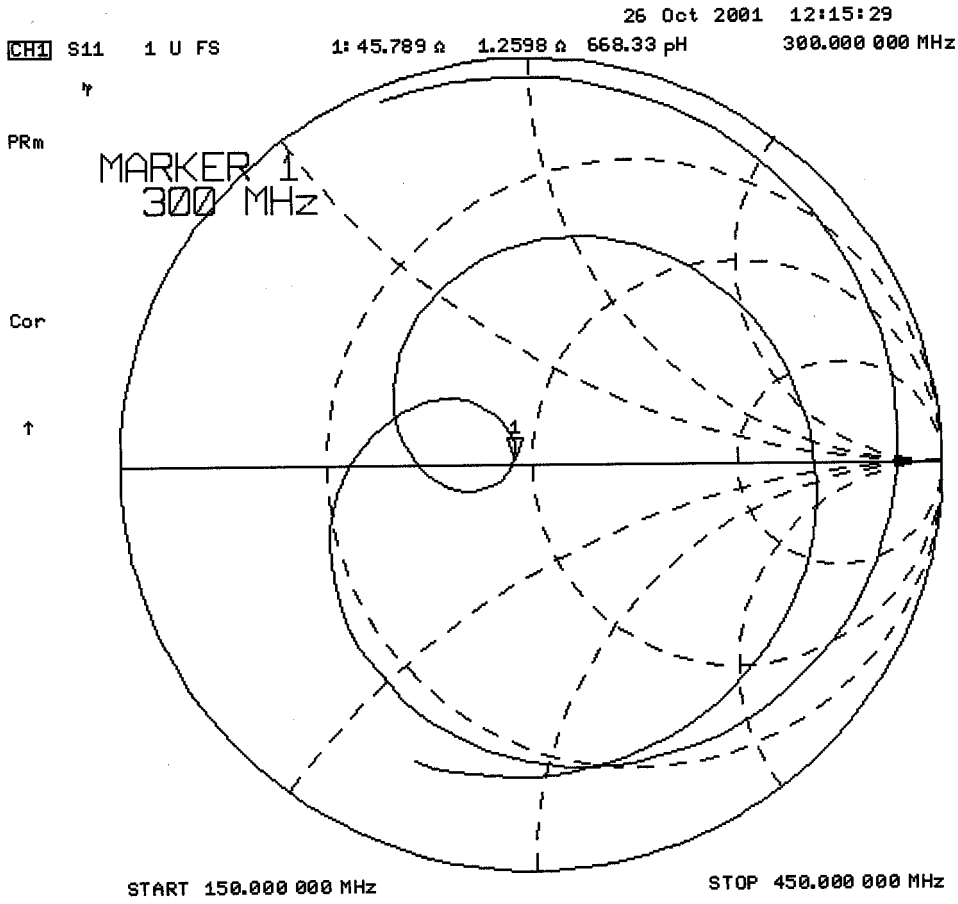
1. Dipole Construction & Electrical Characteristics

The validation dipole was constructed in accordance with the IEEE Std "Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques". The electrical properties were measured using an HP 8753E Network Analyzer. The network analyzer was calibrated to the validation dipole N-type connector feed point using an HP85032E Type N calibration kit. The dipole was placed parallel to a planar phantom at a separation distance of 15.0mm from the simulating fluid using a loss-less dielectric spacer. The measured input impedance is:

Feed point impedance at 300MHz	Re{Z} = 45.789Ω
	Im{Z} = 1.2598Ω
Return Loss at 300MHz	-26.394dB




26 Oct 2001 12:14:26
CH1 S11 LOG 10 dB/ REF 0 dB
1:-26.394 dB 300.000 000 MHz
PRm
MARKER 1
300 MHz
Cor
START 150.000 000 MHz
STOP 450.000 000 MHz


26 Oct 2001 12:15:29
CH1 S11 1 U FS
1: 45.789 Ω 1.2598 Ω 668.33 pH
300.000 000 MHz
PRm
MARKER 1
300 MHz
Cor
START 150.000 000 MHz
STOP 450.000 000 MHz

Validation Dipole Dimensions

Frequency (MHz)	L (mm)	h (mm)	d (mm)
300	420.0	250.0	6.2
450	288.0	167.0	6.2
835	161.0	89.8	3.6
900	149.0	83.3	3.6
1450	89.1	51.7	3.6
1800	72.0	41.7	3.6
1900	68.0	39.5	3.6
2000	64.5	37.5	3.6
2450	51.8	30.6	3.6
3000	41.5	25.0	3.6

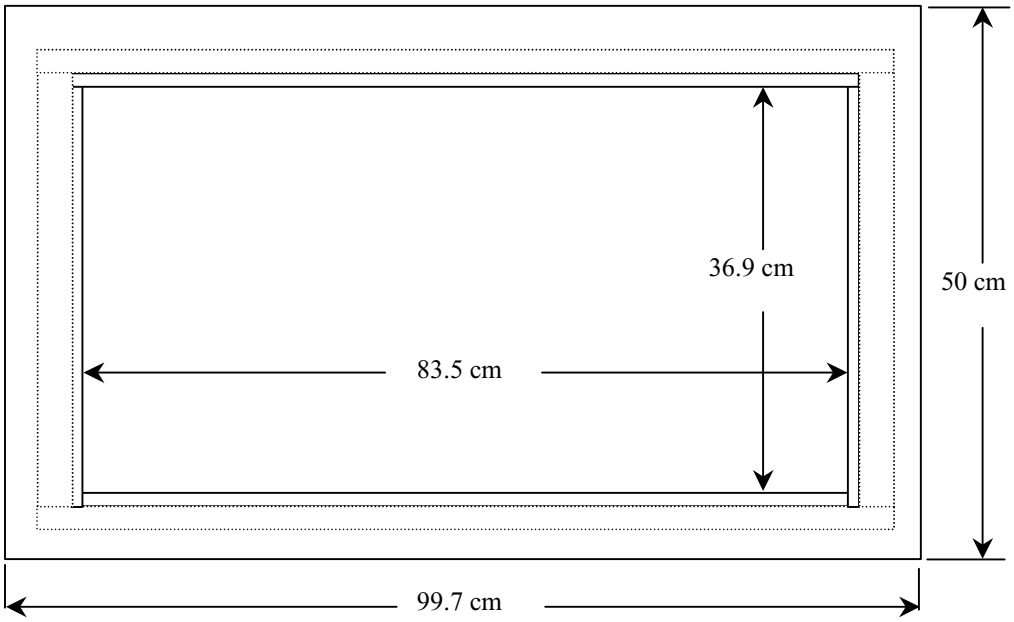
2. Validation Phantom

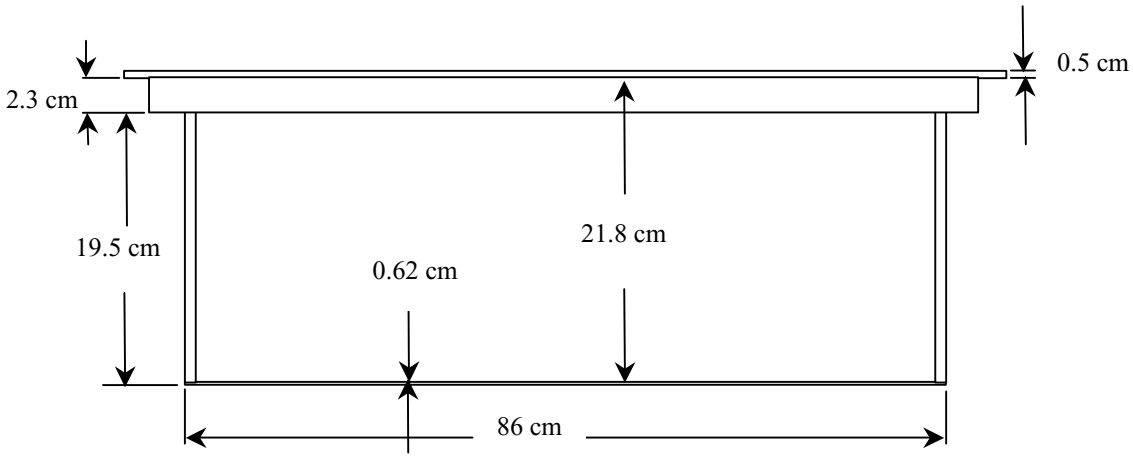
The validation phantom was constructed using relatively low-loss tangent Plexiglas material. The dimensions of the phantom are as follows:

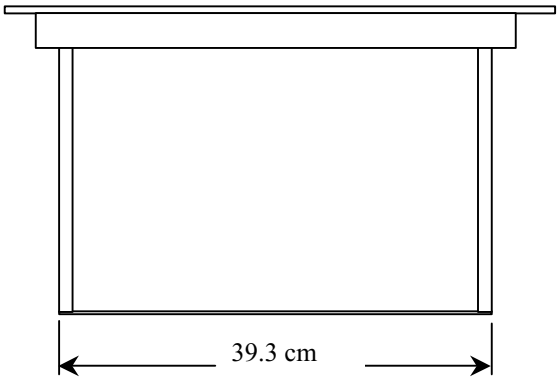
Length: 83.5 cm
Width: 36.9 cm
Height: 21.8 cm

The bottom of the phantom is constructed of 6.2 ± 0.1mm Plexiglas.

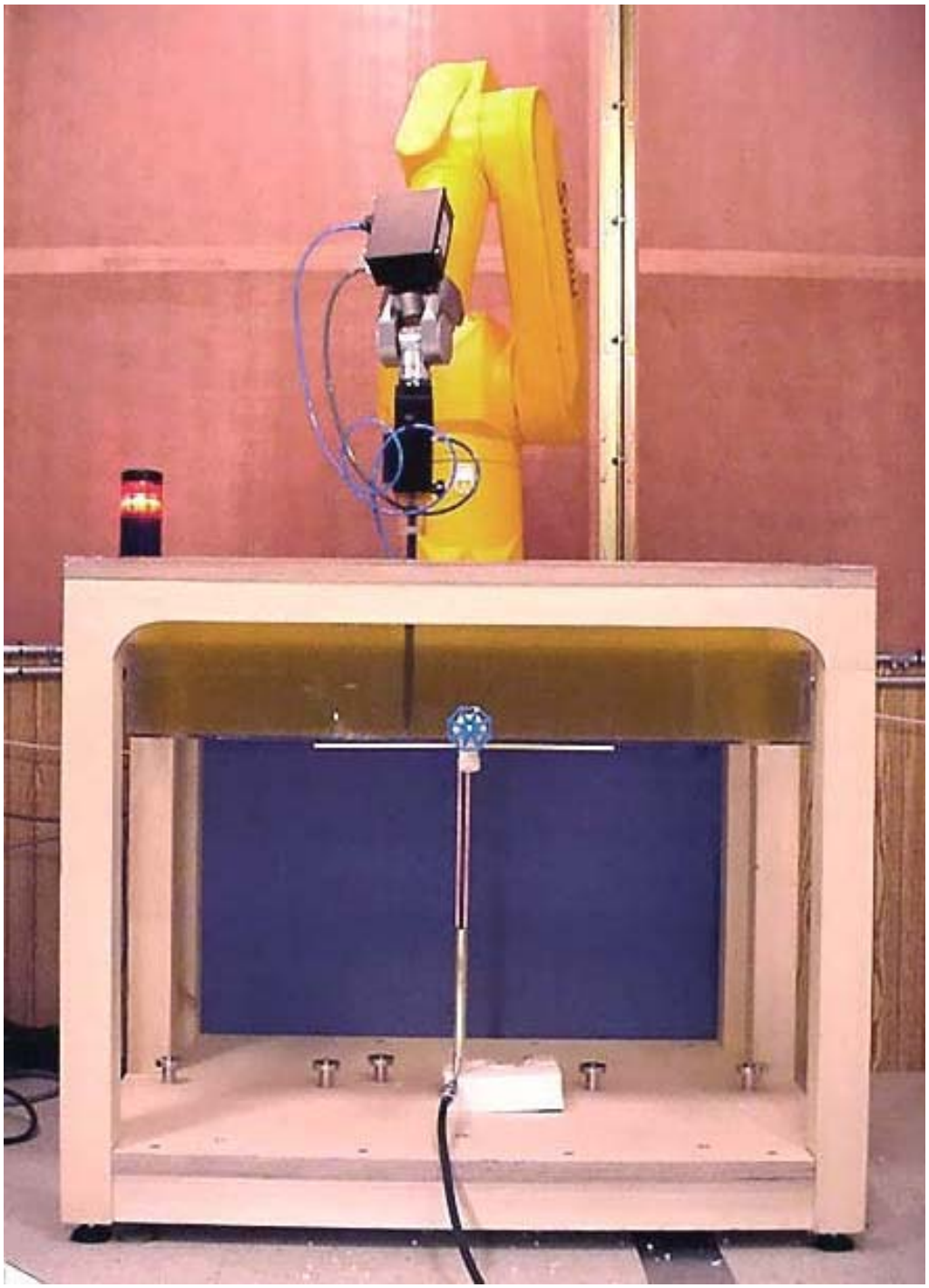
Dimensions of Plexiglas Planar Phantom







300MHz Dipole Calibration Photo



300MHz Dipole Calibration Photo

3. Measurement Conditions

The planar phantom was filled with brain simulating tissue having the following electrical parameters at 300MHz:

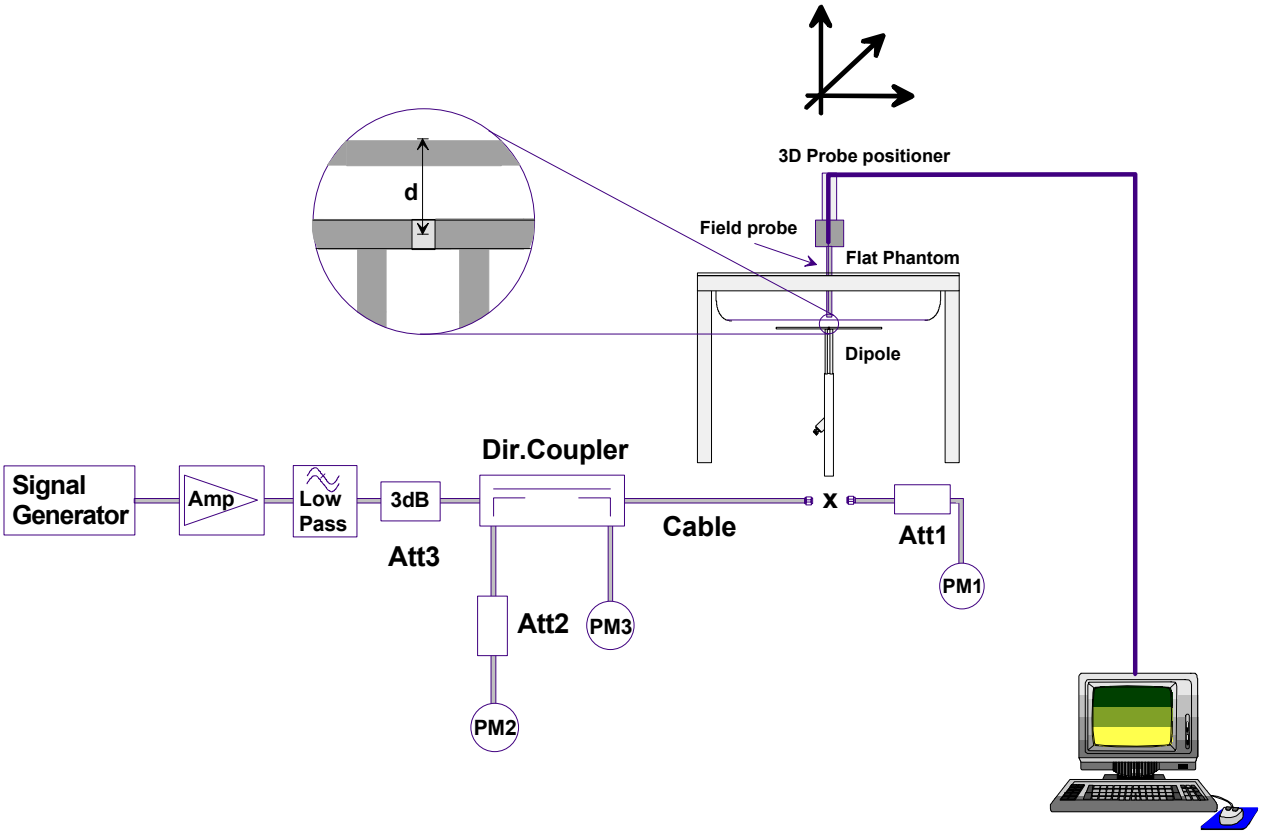
Relative Permitivity:	45.3	± 5%
Conductivity:	0.86 mho/m	± 5%
Temperature:	22.5°C	

The 300MHz simulating tissue consists of the following ingredients:

Ingredient	Percentage by weight
Water	37.56%
Sugar	55.32%
Salt	5.95%
HEC	0.98%
Dowicil 75	0.19%
Target Dielectric Parameters at 22°C	$\varepsilon_r = 45.3$ $\sigma = 0.87$ S/m

4. SAR Measurement

The SAR measurement was performed with the E-field probe in mechanical detection mode only. The setup and determination of the forward power into the dipole was performed using the following procedures.



First the power meter PM1 (including attenuator Att1) is connected to the cable to measure the forward power at the location of the dipole connector (X). The signal generator is adjusted for the desired forward power at the dipole connector (taking into account the attenuation of Att1) as read by power meter PM2. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter PM2. If the signal generator does not allow adjustment in 0.01dB steps, the remaining difference at PM2 must be taken into consideration. PM3 records the reflected power from the dipole to ensure that the value is not changed from the previous value. The reflected power should be 20dB below the forward power.

Ten SAR measurements were performed in order to achieve repeatability and to establish an average target value.

Validation Dipole SAR Test Results

Validation Measurement	SAR @ 0.25W Input averaged over 1g	SAR @ 1W Input averaged over 1g	SAR @ 0.25W Input averaged over 10g	SAR @ 1W Input averaged over 10g	Peak SAR @ 0.25W Input
Test 1	0.872	3.488	0.579	2.316	1.38
Test 2	0.876	3.504	0.580	2.320	1.39
Test 3	0.876	3.504	0.581	2.324	1.39
Test 4	0.878	3.512	0.583	2.332	1.39
Test 5	0.881	3.524	0.581	2.324	1.39
Test 6	0.875	3.500	0.580	2.320	1.38
Test 7	0.884	3.536	0.582	2.328	1.40
Test 8	0.879	3.516	0.581	2.324	1.39
Test 9	0.876	3.504	0.580	2.320	1.39
Test10	0.873	3.492	0.579	2.316	1.39
Average Value	0.877	3.508	0.581	2.322	1.39

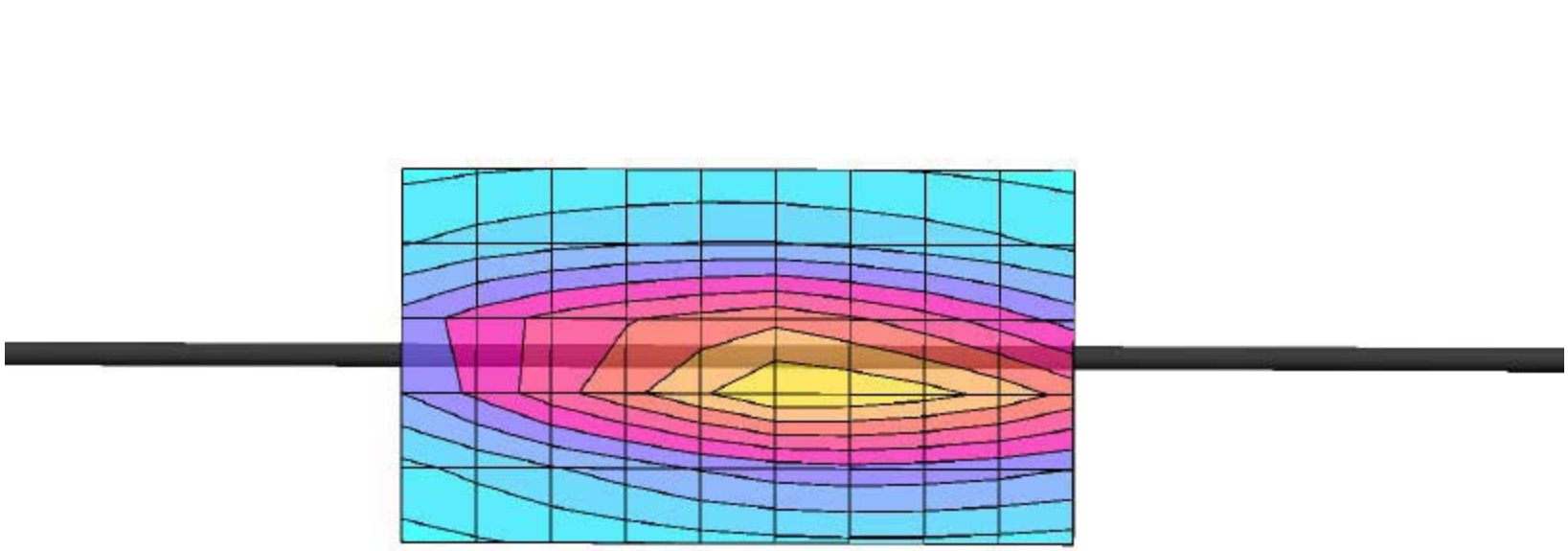
The results have been normalized to 1W (forward power) into the dipole.

Averaged over 1cm (1g) of tissue: 3.51 mW/g

Averaged over 10cm (10g) of tissue: 2.32 mW/g

Dipole 300 MHz

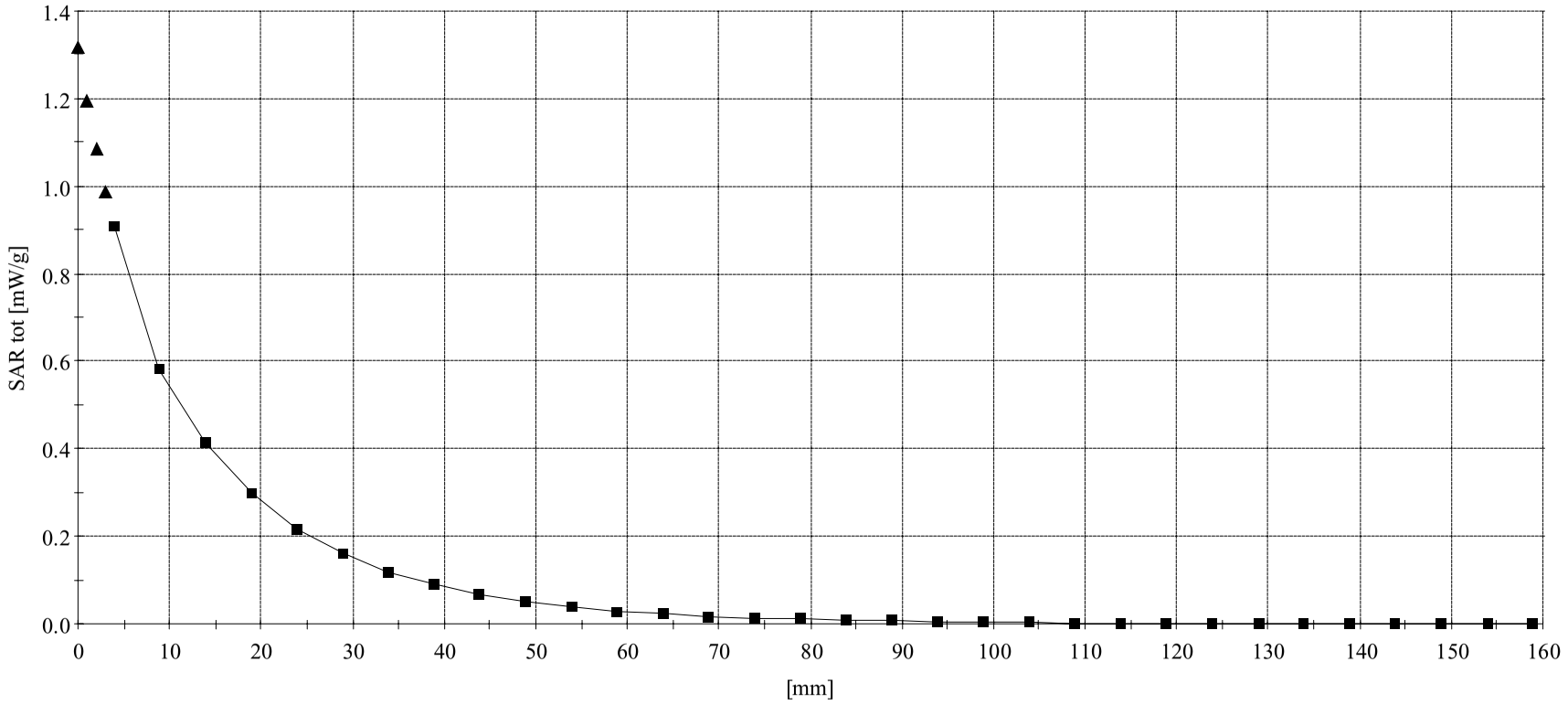
Frequency: 300 MHz; Conducted Input Power: 250 [mW]
Flat Phantom; Planar Section
Probe: ET3DV6 - SN1590; ConvF(7.54,7.54,7.54); Crest factor: 1.0; 300 MHz Brain: $\sigma = 0.87$ mho/m $\varepsilon_r = 45.3$ $\rho = 1.00$ g/cm^3
Cube 5x5x7: Peak: 1.43 mW/g, SAR (1g): 0.899 mW/g, SAR (10g): 0.592 mW/g, (Worst-case extrapolation)
Penetration depth: 12.4 (10.6, 14.7) [mm]; Ambient Temp. 23.8 °C; Fluid Temp. 22.5 °C
Powerdrift: -0.08 dB
Calibration Date: Oct. 15, 2001



Dipole 300 MHz

Flat Phantom; Section; Position:
Probe: ET3DV6 - SN1590; ConvF(7.54,7.54,7.54); Crest factor: 1.0
300 MHz Brain: σ = 0.87 mho/m ε_r = 45.3 ρ = 1.00 g/cm^3
Z-Axis: Dx = 0.0, Dy = 0.0, Dz = 5.0

Date of Calibration: October 15, 2001



APPENDIX D - PROBE CALIBRATION

Schmid & Partner
Engineering AG

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

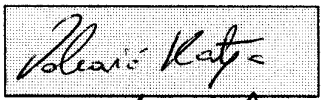
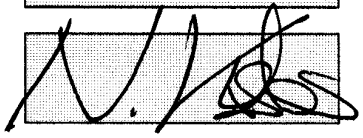
Calibration Certificate

Dosimetric E-Field Probe

Type:	**ET3DV6**
Serial Number:	**1387**
Place of Calibration:	**Zurich**
Date of Calibration:	**February 22, 2002**
Calibration Interval:	**12 months**

Schmid & Partner Engineering AG hereby certifies, that this device has been calibrated on the date indicated above. The calibration was performed in accordance with specifications and procedures of Schmid & Partner Engineering AG.

Wherever applicable, the standards used in the calibration process are traceable to international standards. In all other cases the standards of the Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland have been applied.

Calibrated by:	
Approved by:	

Probe ET3DV6

SN:1387

Manufactured:	September 21, 1999
Last calibration:	September 22, 1999
Recalibrated:	February 22, 2002

Calibrated for System DASY3

DASY3 - Parameters of Probe: ET3DV6 SN:1387

Sensitivity in Free Space

Diode Compression

NormX	**1.58**	$\mu V/(V/m)^2$	DCP X	**97**	mV
NormY	**1.67**	$\mu V/(V/m)^2$	DCP Y	**97**	mV
NormZ	**1.67**	$\mu V/(V/m)^2$	DCP Z	**97**	mV

Sensitivity in Tissue Simulating Liquid

Head **900 MHz** **ε_r = 41.5 ± 5%** **σ = 0.97 ± 5% mho/m**
Head **835 MHz** **ε_r = 41.5 ± 5%** **σ = 0.90 ± 5% mho/m**

ConvF X	**6.6**	± 9.5% (k=2)	Boundary effect:	
ConvF Y	**6.6**	± 9.5% (k=2)	Alpha	**0.40**
ConvF Z	**6.6**	± 9.5% (k=2)	Depth	**2.38**

Head **1800 MHz** **ε_r = 40.0 ± 5%** **σ = 1.40 ± 5% mho/m**
Head **1900 MHz** **ε_r = 40.0 ± 5%** **σ = 1.40 ± 5% mho/m**

ConvF X	**5.4**	± 9.5% (k=2)	Boundary effect:	
ConvF Y	**5.4**	± 9.5% (k=2)	Alpha	**0.57**
ConvF Z	**5.4**	± 9.5% (k=2)	Depth	**2.18**

Boundary Effect

Head **900 MHz** **Typical SAR gradient: 5 % per mm**

Probe Tip to Boundary		**1 mm**	**2 mm**
SAR_{be} [%]	Without Correction Algorithm	9.7	5.4
SAR_{be} [%]	With Correction Algorithm	0.3	0.6

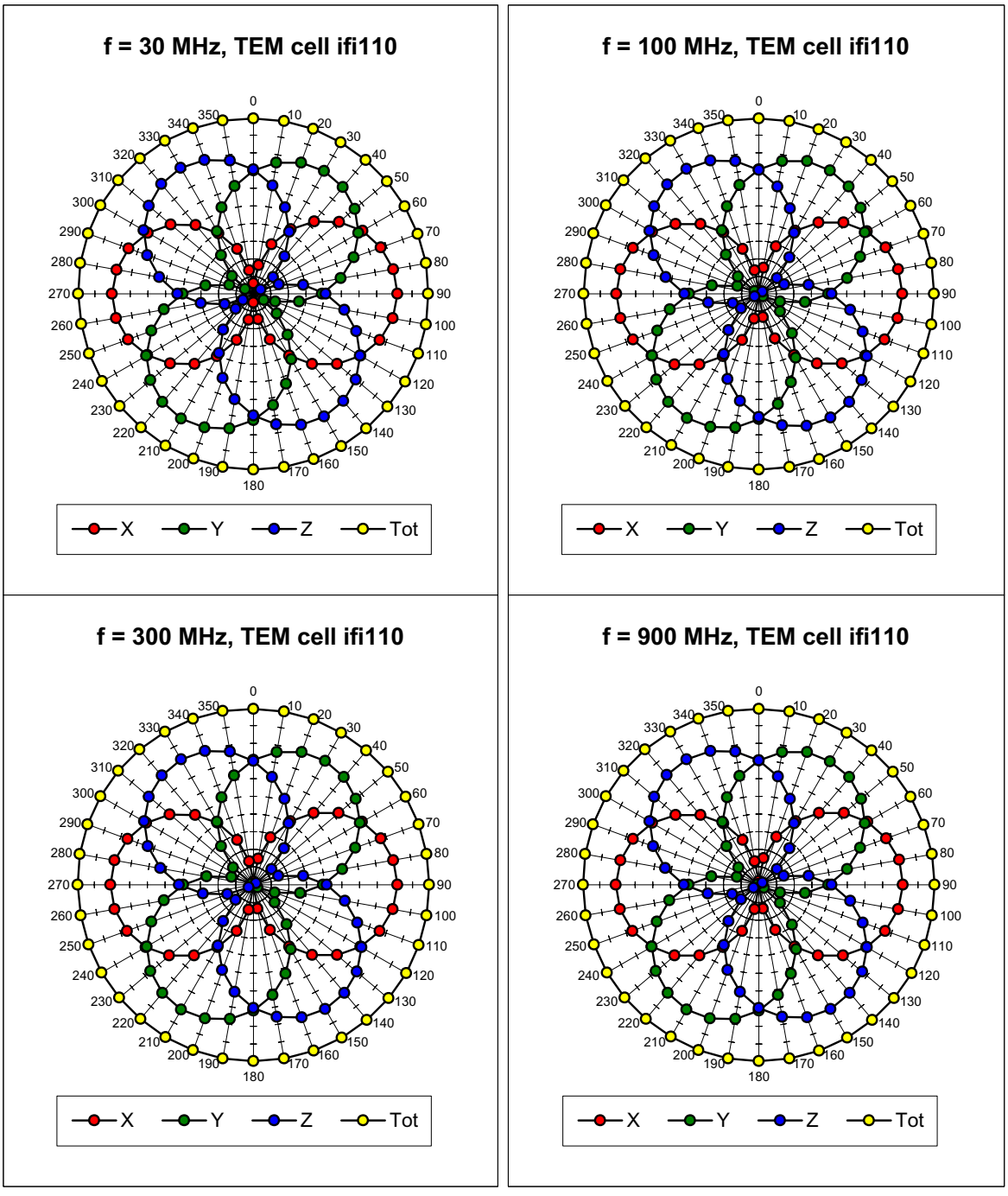
Head **1800 MHz** **Typical SAR gradient: 10 % per mm**

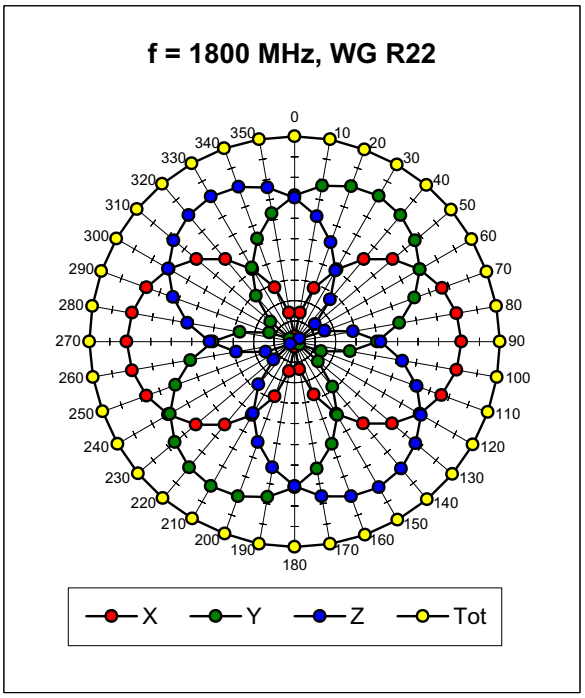
Probe Tip to Boundary		**1 mm**	**2 mm**
SAR_{be} [%]	Without Correction Algorithm	11.5	7.3
SAR_{be} [%]	With Correction Algorithm	0.1	0.3

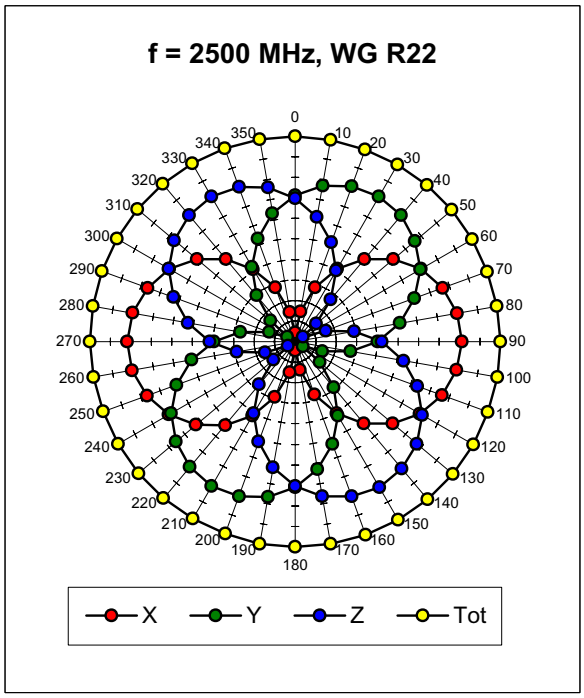
Sensor Offset

Probe Tip to Sensor Center	**2.7**	mm
Optical Surface Detection	**1.3 ± 0.2**	mm

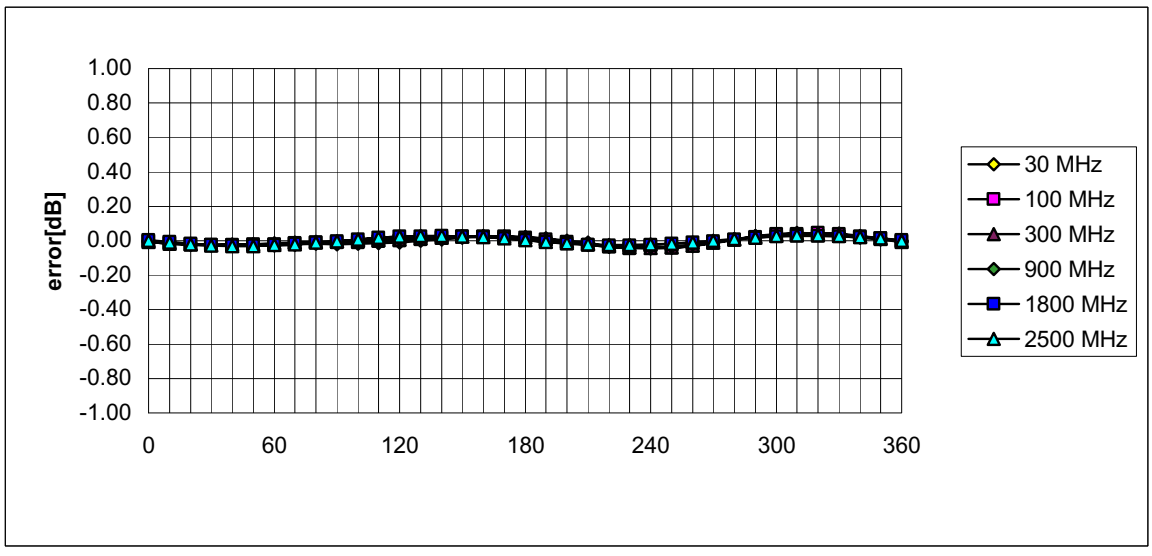
Receiving Pattern (ϕ , θ = 0°





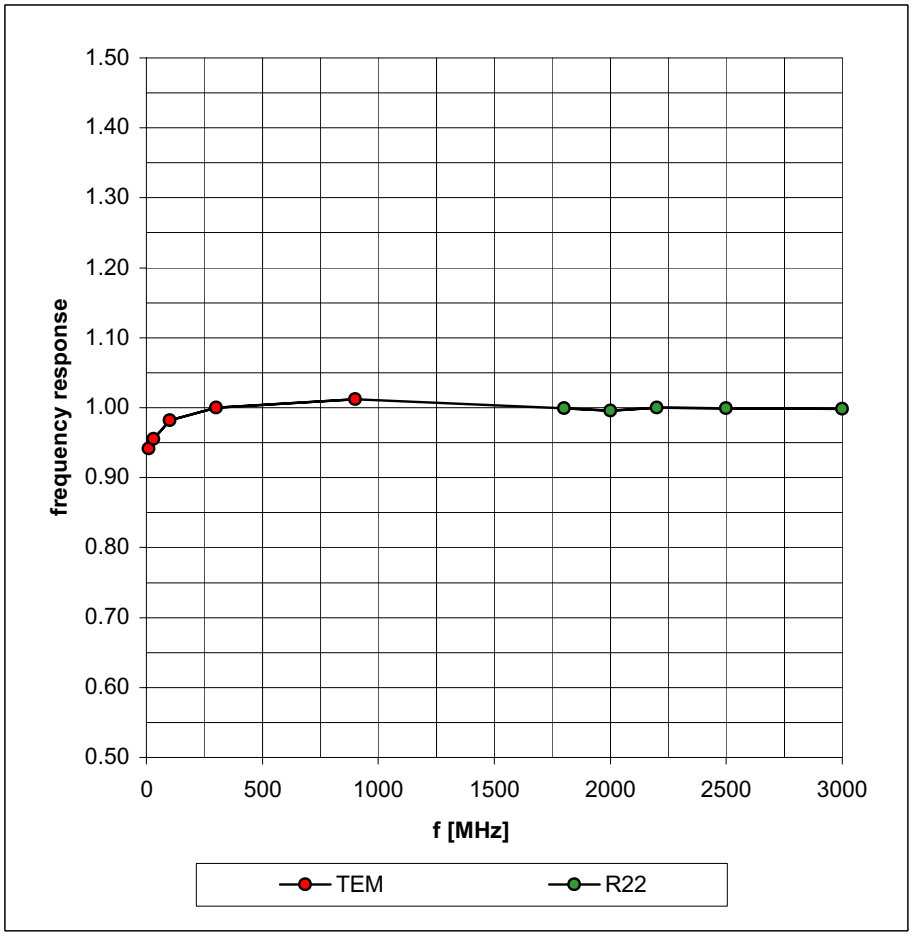


Isotropy Error (ϕ), θ = 0°



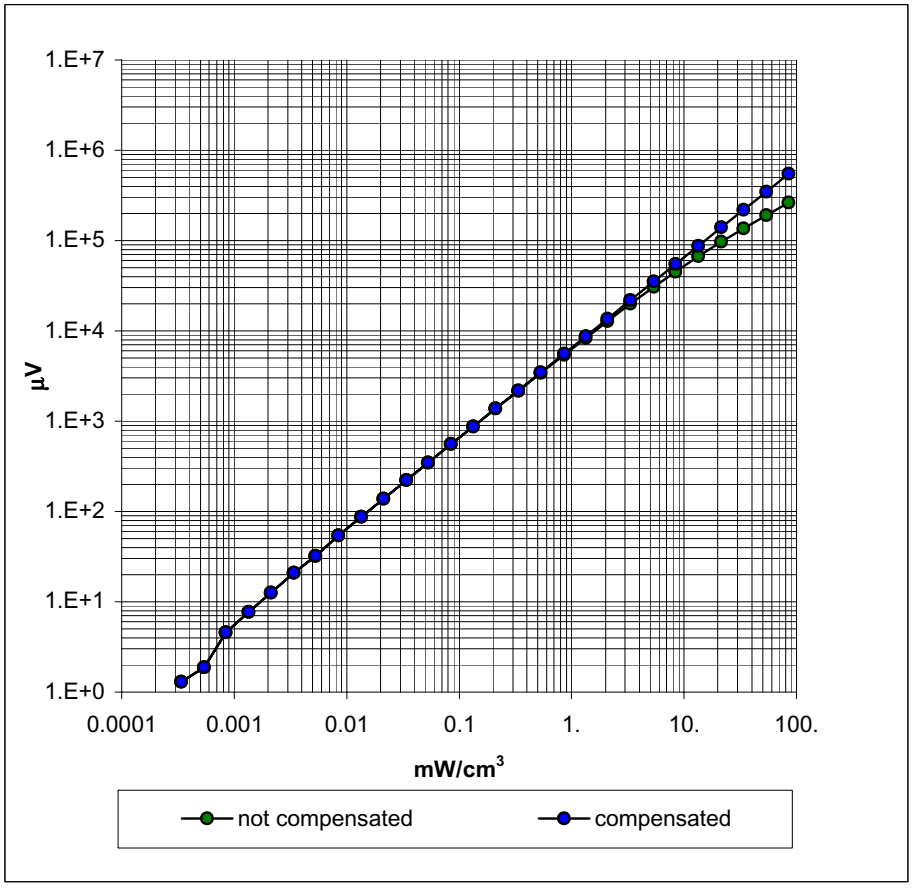
Frequency Response of E-Field

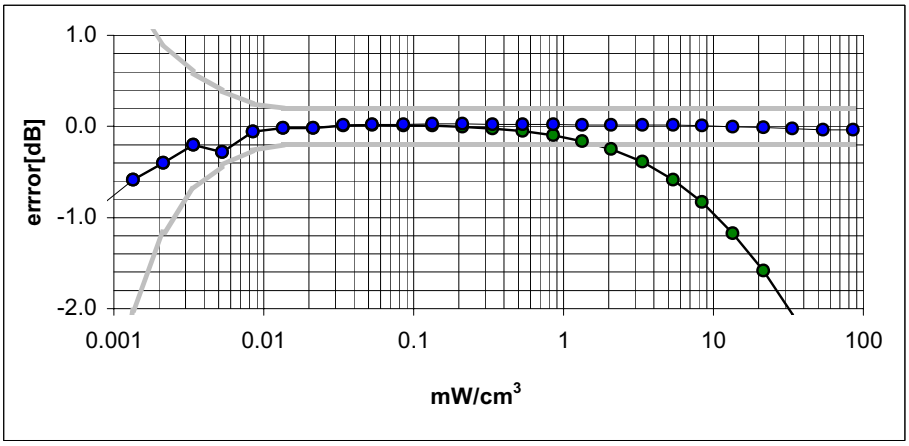
(TEM-Cell:ifi110, Waveguide R22)



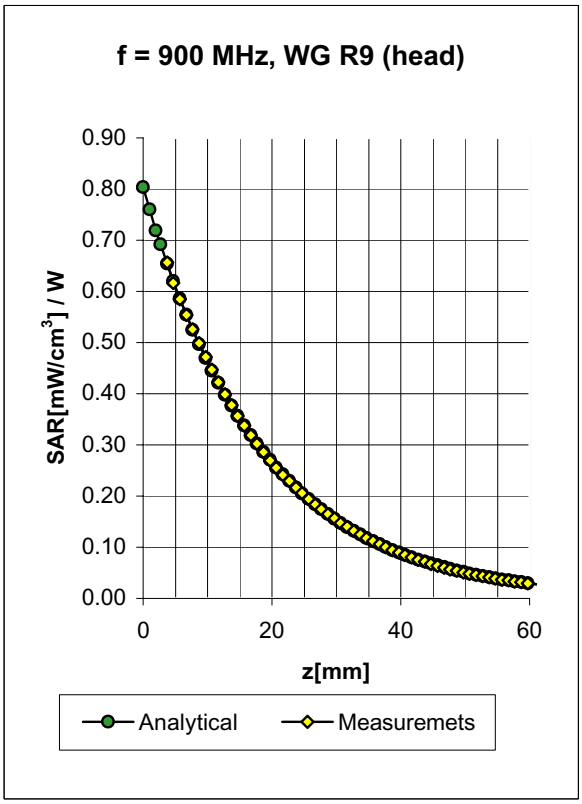
Dynamic Range f(SAR_{brain})

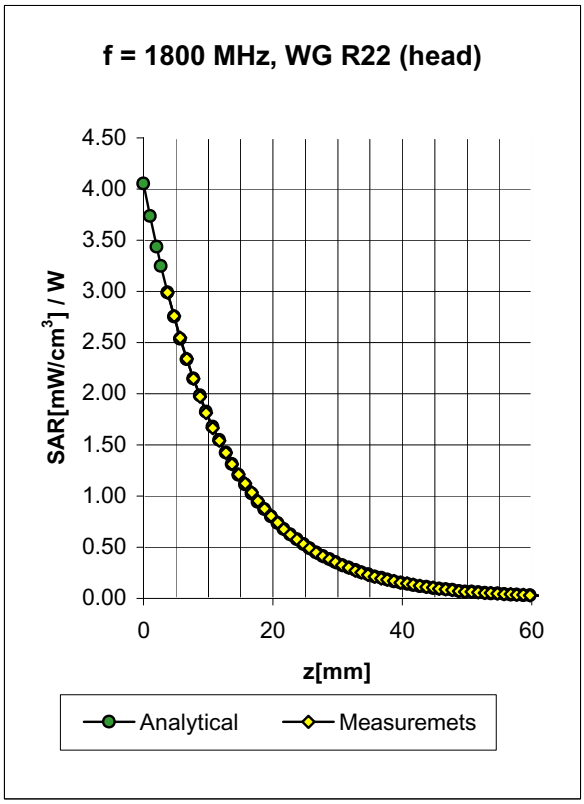
(Waveguide R22)





Conversion Factor Assessment



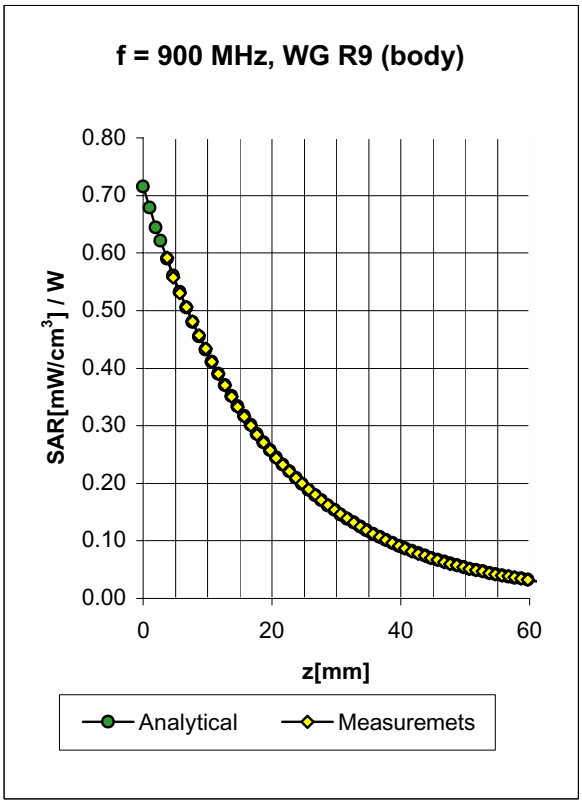


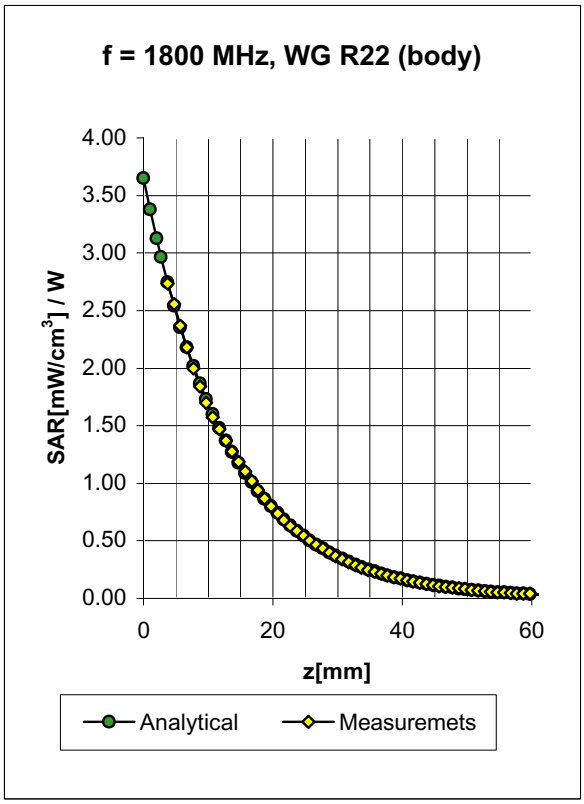
Head	**900 MHz**		**ε_r = 41.5 ± 5%**	**σ = 0.97 ± 5% mho/m**
Head	**835 MHz**		**ε_r = 41.5 ± 5%**	**σ = 0.90 ± 5% mho/m**
	ConvF X	**6.6** ± 9.5% (k=2)		Boundary effect:
	ConvF Y	**6.6** ± 9.5% (k=2)		Alpha **0.40**
	ConvF Z	**6.6** ± 9.5% (k=2)		Depth **2.38**

Head	**1800 MHz**		**ε_r = 40.0 ± 5%**	**σ = 1.40 ± 5% mho/m**
Head	**1900 MHz**		**ε_r = 40.0 ± 5%**	**σ = 1.40 ± 5% mho/m**
	ConvF X	**5.4** ± 9.5% (k=2)		Boundary effect:
	ConvF Y	**5.4** ± 9.5% (k=2)		Alpha **0.57**
	ConvF Z	**5.4** ± 9.5% (k=2)		Depth **2.18**

ET3DV6 SN:1387 **February 22, 2002**

Conversion Factor Assessment





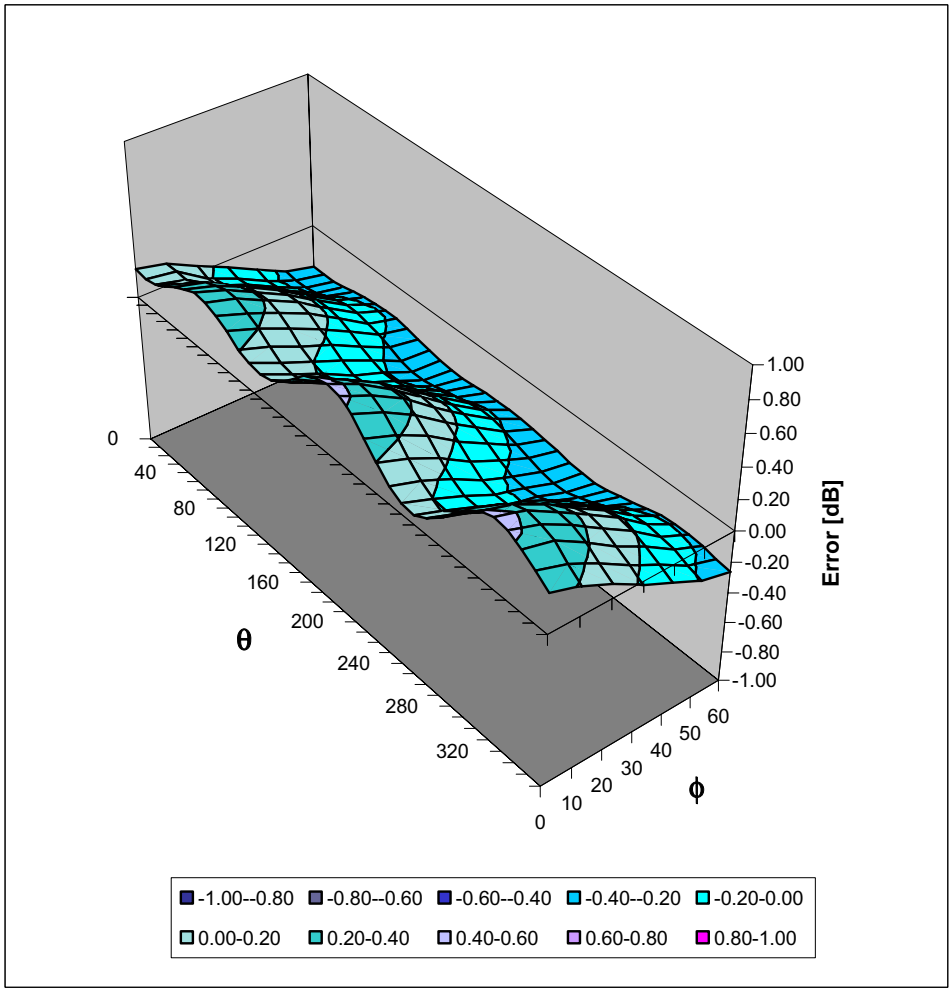
Body	**900 MHz**	ε_r **= 55.0 ± 5%**	**σ = 1.05 ± 5% mho/m**	
Body	**835 MHz**	ε_r **= 55.2 ± 5%**	**σ = 0.97 ± 5% mho/m**	
	ConvF X	**6.3** ± 9.5% (k=2)	Boundary effect:	
	ConvF Y	**6.3** ± 9.5% (k=2)	Alpha	**0.42**
	ConvF Z	**6.3** ± 9.5% (k=2)	Depth	**2.44**

Body	**1800 MHz**	ε_r **= 53.3 ± 5%**	**σ = 1.52 ± 5% mho/m**	
Body	**1900 MHz**	ε_r **= 53.3 ± 5%**	**σ = 1.52 ± 5% mho/m**	
	ConvF X	**5.0** ± 9.5% (k=2)	Boundary effect:	
	ConvF Y	**5.0** ± 9.5% (k=2)	Alpha	**0.76**
	ConvF Z	**5.0** ± 9.5% (k=2)	Depth	**2.01**

ET3DV6 SN:1387 **February 22, 2002**

Deviation from Isotropy in HSL

Error ($\theta\phi$), f = 900 MHz



Schmid & Partner
Engineering AG

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Additional Conversion Factors

for Dosimetric E-Field Probe

Type:	**ET3DV6**
Serial Number:	**1387**
Place of Assessment:	**Zurich**
Date of Assessment:	**February 25, 2002**
Probe Calibration Date:	**February 22, 2002**

Schmid & Partner Engineering AG hereby certifies that conversion factor(s) of this probe have been evaluated on the date indicated above. The assessment was performed using the FDTD numerical code SEMCAD of Schmid & Partner Engineering AG. Since the evaluation is coupled with measured conversion factors, it has to be recalculated yearly, i.e., following the re-calibration schedule of the probe. The uncertainty of the numerical assessment is based on the extrapolation from measured value at 900 MHz or at 1800 MHz.

Assessed by:

Dosimetric E-Field Probe ET3DV6 SN:1387

Conversion Factor (± standard deviation)

150 MHz	ConvF	**9.2 ± 8%**	**ε_r = 52.3** **σ = 0.76 mho/m** (head tissue)
300 MHz	ConvF	**8.0 ± 8%**	**ε_r = 45.3** **σ = 0.87 mho/m** (head tissue)
450 MHz	ConvF	**7.3 ± 8%**	**ε_r = 43.5** **σ = 0.87 mho/m** (head tissue)
2450 MHz	ConvF	**4.7 ± 8%**	**ε_r = 39.2** **σ = 1.80 mho/m** (head tissue)
150 MHz	ConvF	**8.8 ± 8%**	**ε_r = 61.9** **σ = 0.80 mho/m** (body tissue)
450 MHz	ConvF	**7.7 ± 8%**	**ε_r = 56.7** **σ = 0.94 mho/m** (body tissue)
2450 MHz	ConvF	**4.3 ± 8%**	**ε_r = 52.7** **σ = 1.95 mho/m** (body tissue)

APPENDIX E - MEASURED FLUID DIELECTRIC PARAMETERS

300MHz System Validation

Measured Fluid Dielectric Parameters (Brain)

July 22, 2002

Frequency	e'	e''
200.000000 MHz	49.7575	70.7722
204.000000 MHz	49.7956	69.6671
208.000000 MHz	49.3764	68.6008
212.000000 MHz	49.3961	67.5005
216.000000 MHz	49.0517	66.6616
220.000000 MHz	49.0503	65.7495
224.000000 MHz	48.7102	64.7875
228.000000 MHz	48.5001	63.9575
232.000000 MHz	48.3916	63.0043
236.000000 MHz	48.1794	62.2504
240.000000 MHz	47.9906	61.5024
244.000000 MHz	47.7334	60.7003
248.000000 MHz	47.6032	60.1136
252.000000 MHz	47.4727	59.3145
256.000000 MHz	47.2395	58.7775
260.000000 MHz	47.0782	58.0905
264.000000 MHz	46.9254	57.4550
268.000000 MHz	46.7222	56.9057
272.000000 MHz	46.6533	56.2673
276.000000 MHz	46.4820	55.6575
280.000000 MHz	46.4138	55.1441
284.000000 MHz	46.2678	54.5793
288.000000 MHz	46.0501	53.9943
292.000000 MHz	45.9767	53.5106
296.000000 MHz	45.9269	52.8390
300.000000 MHz	45.6728	52.3467
304.000000 MHz	45.6314	51.9825
308.000000 MHz	45.4395	51.4808
312.000000 MHz	45.2233	50.9679
316.000000 MHz	45.1500	50.5055
320.000000 MHz	45.0560	50.0830
324.000000 MHz	44.8692	49.6296
328.000000 MHz	44.8272	49.2863
332.000000 MHz	44.6220	48.8432
336.000000 MHz	44.5253	48.4359

150MHz EUT Evaluation (Face)

Measured Fluid Dielectric Parameters (Brain)

July 22, 2002

Frequency	e'	e"
50.000000 MHz	63.3077	273.1406
55.000000 MHz	61.2165	247.7922
60.000000 MHz	61.4566	226.3996
65.000000 MHz	60.8532	208.7544
70.000000 MHz	60.8290	194.1933
75.000000 MHz	60.1270	180.8203
80.000000 MHz	59.2825	169.7912
85.000000 MHz	58.5818	159.8592
90.000000 MHz	58.0191	151.2988
95.000000 MHz	57.8628	143.5329
100.000000 MHz	57.2736	136.6002
105.000000 MHz	57.1928	129.8297
110.000000 MHz	56.5502	124.2998
115.000000 MHz	55.9647	119.2122
120.000000 MHz	55.7915	114.1810
125.000000 MHz	55.5053	109.6217
130.000000 MHz	54.7336	105.4388
135.000000 MHz	54.7007	101.6163
140.000000 MHz	54.3209	98.1439
145.000000 MHz	54.1569	94.6958
150.000000 MHz	53.8502	91.6511
155.000000 MHz	53.5918	88.7986
160.000000 MHz	53.2530	86.2069
165.000000 MHz	52.8271	83.6517
170.000000 MHz	52.7541	81.3445
175.000000 MHz	52.4287	78.8990
180.000000 MHz	52.4703	76.5843
185.000000 MHz	52.1580	74.5096
190.000000 MHz	51.8097	72.7009
195.000000 MHz	51.7796	70.9594
200.000000 MHz	51.4559	69.2645
205.000000 MHz	51.1916	67.6678
210.000000 MHz	51.0155	66.0794
215.000000 MHz	50.8555	64.6408
220.000000 MHz	50.6973	63.1902

150MHz EUT Evaluation (Body)

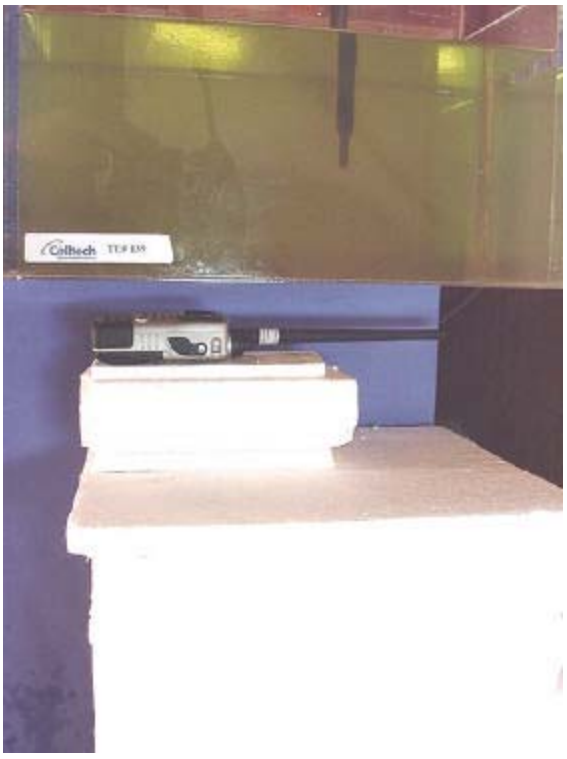
Measured Fluid Dielectric Parameters (Muscle)

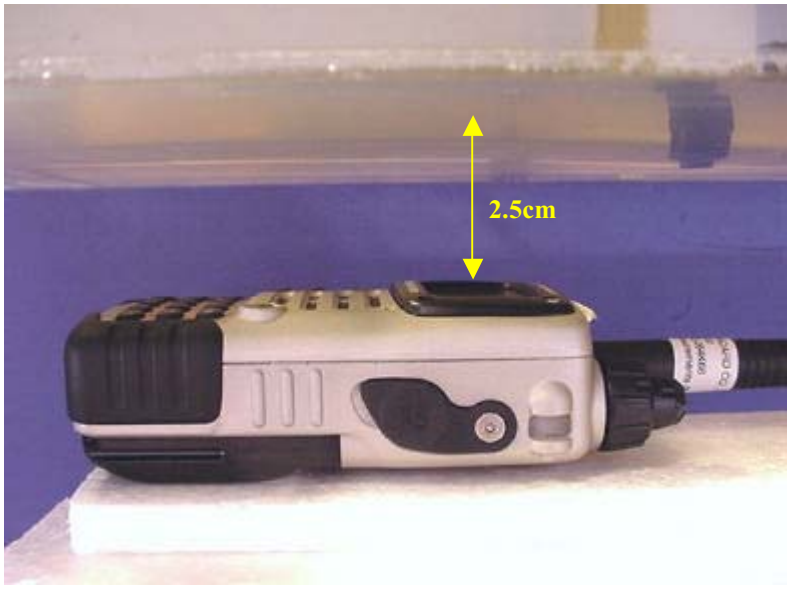
July 22, 2002

Frequency	e'	e''
50.000000 MHz	69.2137	279.1066
55.000000 MHz	68.4843	254.3150
60.000000 MHz	67.9611	231.8585
65.000000 MHz	68.6894	213.8794
70.000000 MHz	66.7289	198.4318
75.000000 MHz	66.2677	185.8141
80.000000 MHz	65.9754	174.8639
85.000000 MHz	66.1675	164.3012
90.000000 MHz	65.2759	155.6842
95.000000 MHz	65.4884	148.1373
100.000000 MHz	64.9588	140.8783
105.000000 MHz	64.6602	135.4368
110.000000 MHz	63.9618	129.4565
115.000000 MHz	63.3208	124.5324
120.000000 MHz	63.3431	119.1851
125.000000 MHz	63.2319	114.7978
130.000000 MHz	62.9393	110.7233
135.000000 MHz	61.9300	106.9034
140.000000 MHz	62.1405	103.6327
145.000000 MHz	61.8104	100.3902
150.000000 MHz	61.5436	97.1359
155.000000 MHz	61.6277	99.2240
160.000000 MHz	61.5831	96.5511
165.000000 MHz	61.5392	93.9859
170.000000 MHz	61.5241	91.5656
175.000000 MHz	61.4682	89.3310
180.000000 MHz	61.4652	86.7021
185.000000 MHz	61.4612	84.7082
190.000000 MHz	61.3718	82.8235
195.000000 MHz	61.0705	81.2246
200.000000 MHz	61.0236	79.5552
205.000000 MHz	60.7781	77.9840
210.000000 MHz	60.4587	76.4143
215.000000 MHz	60.3407	74.8185
220.000000 MHz	59.9580	73.6266

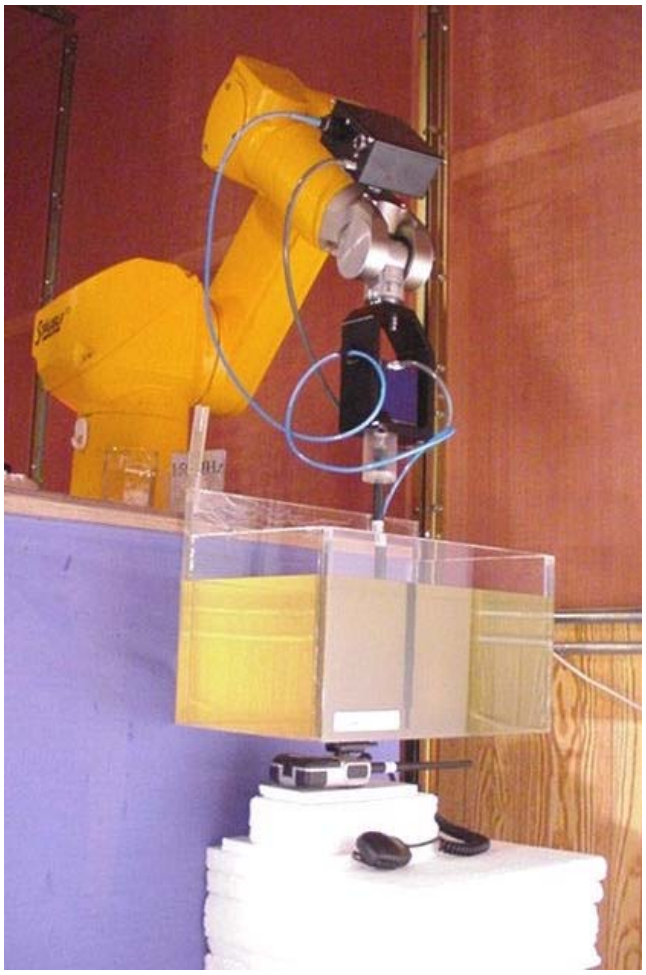
APPENDIX F - SAR TEST SETUP & EUT PHOTOGRAPHS

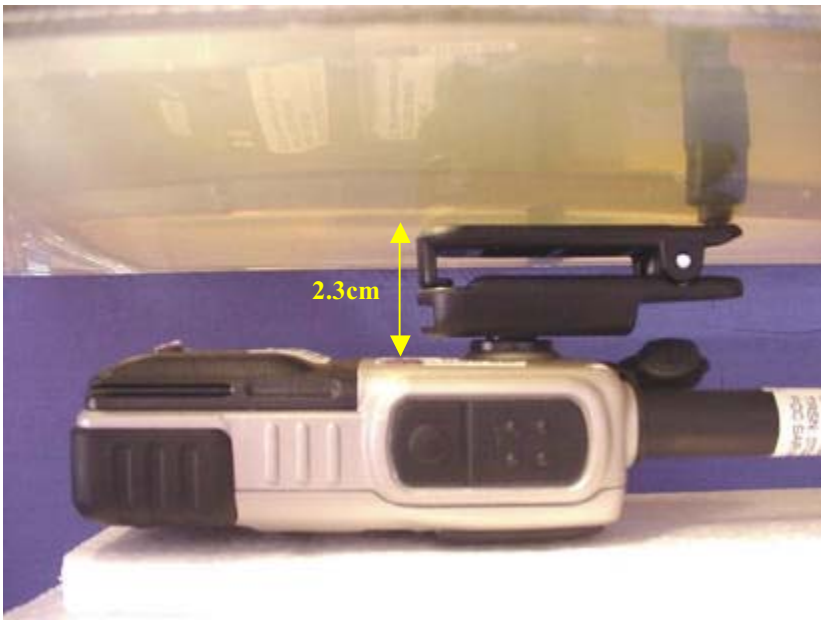
FACE-HELD SAR TEST SETUP PHOTOGRAPHS
(2.5cm Separation Distance)





BODY-WORN SAR TEST SETUP PHOTOGRAPHS
With Belt-Clip & Speaker-Microphone Accessories Attached
(2.3cm Separation Distance between EUT & Planar Phantom)





EUT PHOTOGRAPHS
Profile

EUT PHOTOGRAPHS
Profile

EUT with Belt-Clip & Speaker-Mic

Whip Antenna

Lithium-Ion Battery