



Author Data Daoud S. Attayi	Dates of Test May 16-18, 2002	Test Report No RIM-0205-04
Approved	Rev	FCC ID : L6AR6510IN

APPENDIX D: PROBE CALIBRATION

Document APPENDIX D:		Page 2(11)
Date May 16-18, 2002	Rev	FCC ID: L6AR6510IN

**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:

1642

Place of Calibration:

Zurich

Date of Calibration:

November 26, 2001

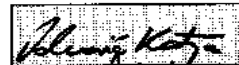
Calibration Interval:

12 months

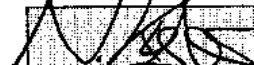
Schmid & Partner Engineering AG hereby certifies, that this device has been calibrated on the date indicated above. The calibration was performed in accordance with specifications and procedures of Schmid & Partner Engineering AG.

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:





Document APPENDIX D:		Page 3(11)
Date May 16-18, 2002	Rev	FCC ID: L6AR6510IN

**Schmid & Partner
Engineering AG**

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

Probe ET3DV6

SN:1642

Manufactured: November 7, 2001
Calibrated: November 26, 2001

Calibrated for System DASY3

Document APPENDIX D:		Page 4(11)
Date May 16-18, 2002	Rev	FCC ID: L6AR6510IN

ET3DV6 SN:1642

DASY3 - Parameters of Probe: ET3DV6 SN:1642

Sensitivity in Free Space

Diode Compression

NormX	1.63 $\mu\text{V}/(\text{V}/\text{m})^2$	DCP X	100 mV
NormY	1.86 $\mu\text{V}/(\text{V}/\text{m})^2$	DCP Y	100 mV
NormZ	1.61 $\mu\text{V}/(\text{V}/\text{m})^2$	DCP Z	100 mV

Sensitivity in Tissue Simulating Liquid

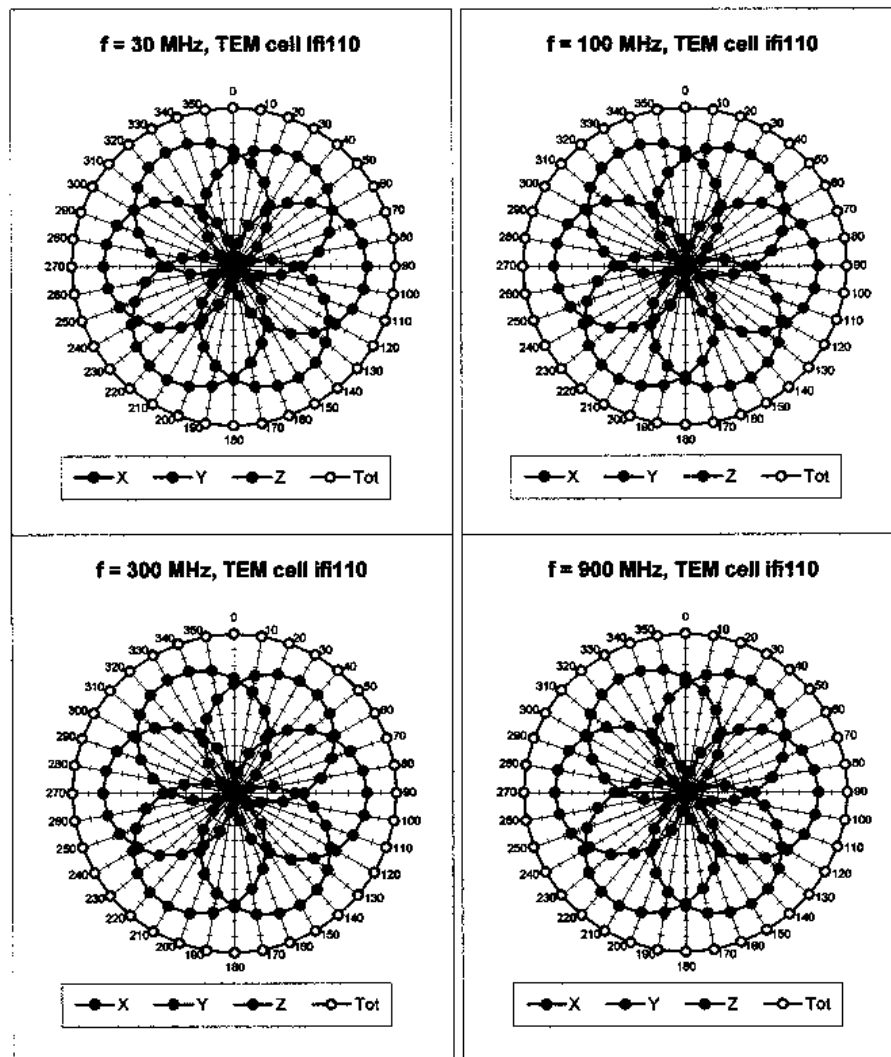
Head	450 MHz	$\epsilon_r = 43.5 \pm 5\%$	$\sigma = 0.87 \pm 10\%$ mho/m
ConvF X	7.18 extrapolated	Boundary effect:	
ConvF Y	7.18 extrapolated	Alpha	0.48
ConvF Z	7.18 extrapolated	Depth	1.90
Head	800 - 1000 MHz	$\epsilon_r = 39.0 - 43.5$	$\sigma = 0.80 - 1.10$ mho/m
ConvF X	6.59 $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	6.59 $\pm 9.5\%$ (k=2)	Alpha	0.50
ConvF Z	6.59 $\pm 9.5\%$ (k=2)	Depth	2.00
Head	1500 MHz	$\epsilon_r = 40.4 \pm 5\%$	$\sigma = 1.23 \pm 10\%$ mho/m
ConvF X	5.80 interpolated	Boundary effect:	
ConvF Y	5.80 interpolated	Alpha	0.53
ConvF Z	5.80 interpolated	Depth	2.13
Head	1700 - 1910 MHz	$\epsilon_r = 39.5 - 41.0$	$\sigma = 1.20 - 1.65$ mho/m
ConvF X	5.41 $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	5.41 $\pm 9.5\%$ (k=2)	Alpha	0.54
ConvF Z	5.41 $\pm 9.5\%$ (k=2)	Depth	2.19

Sensor Offset

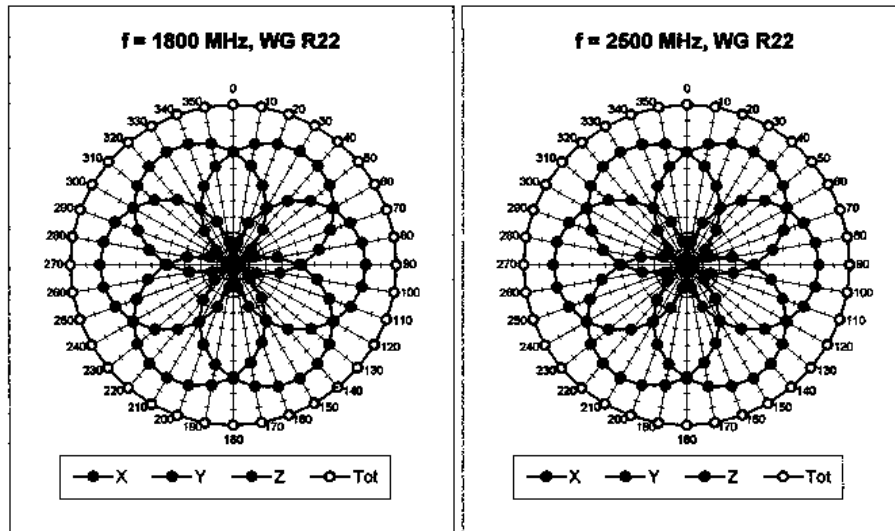
Probe Tip to Sensor Center	2.7	mm
Optical Surface Detection	1.0 \pm 0.2	mm

ET3DV6 SN:1642

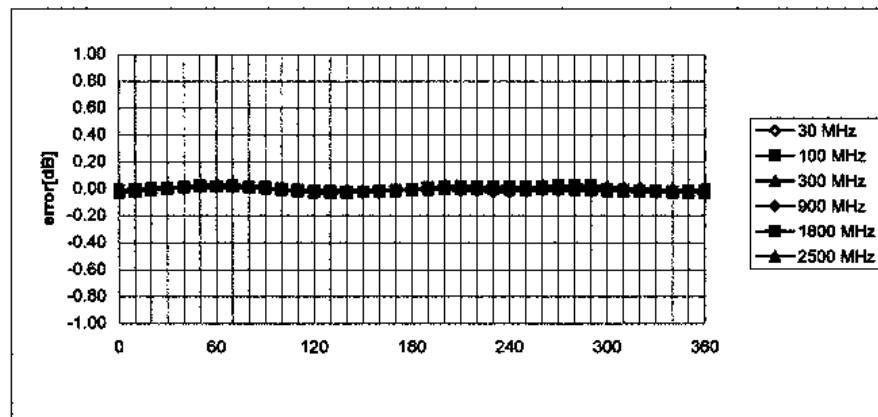
Receiving Pattern (ϕ), $\theta = 0^\circ$



ET3DV6 SN:1642



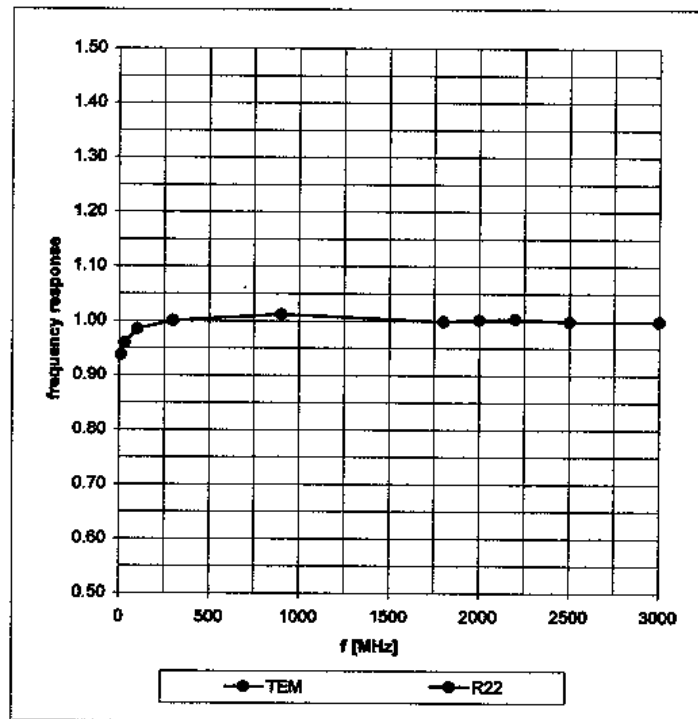
Isotropy Error (ϕ), $\theta = 0^\circ$



ET3DV6 SN:1642

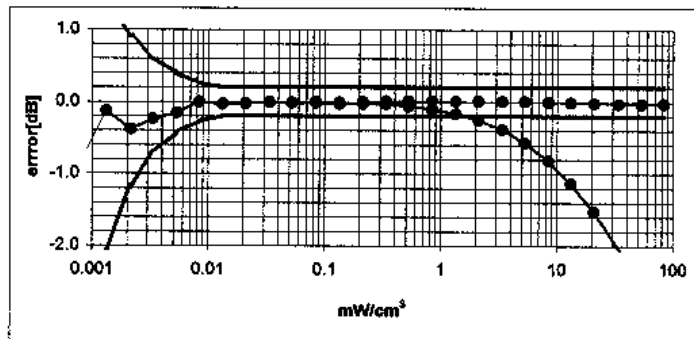
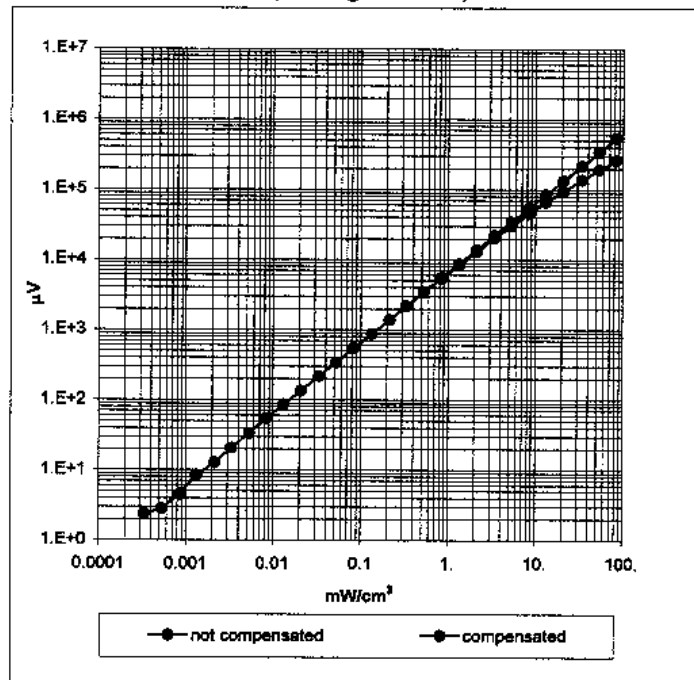
Frequency Response of E-Field

(TEM-Cell:ifi110, Waveguide R22)



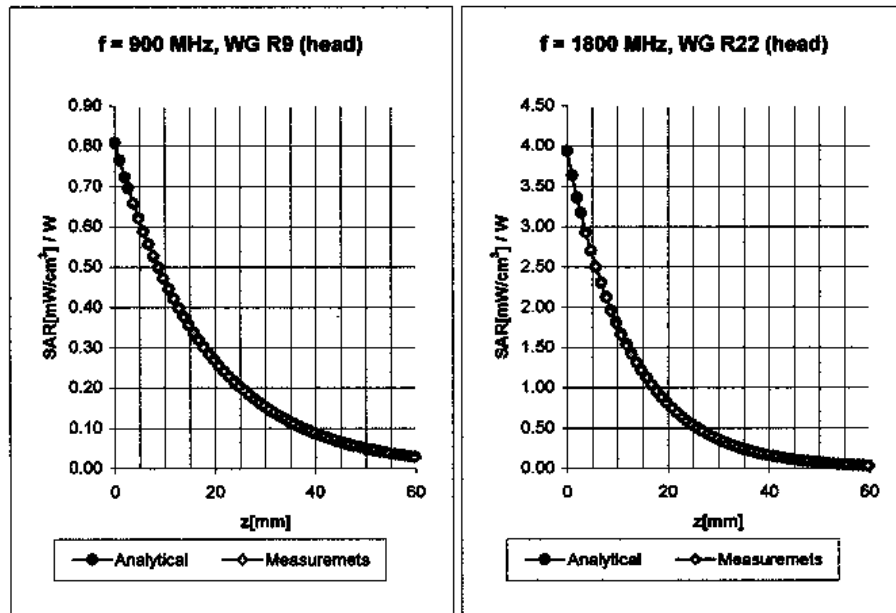
ET3DV6 SN:1642

Dynamic Range $f(\text{SAR}_{\text{brain}})$ (Waveguide R22)



ET3DV6 SN:1642

Conversion Factor Assessment



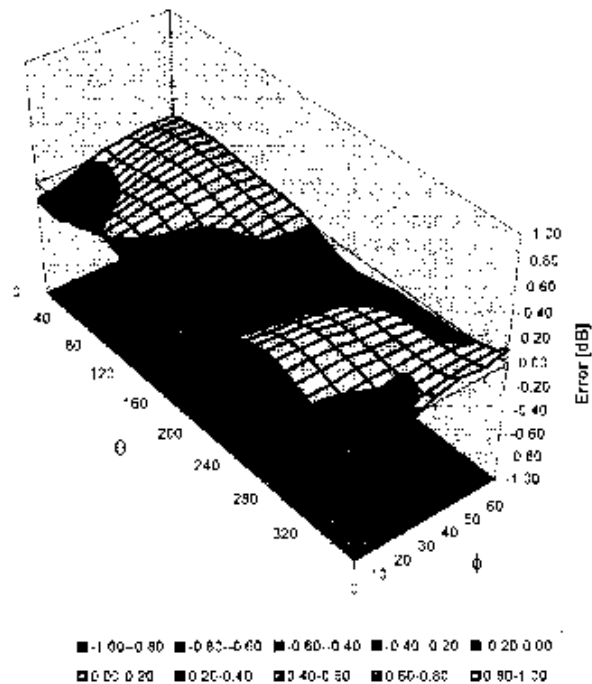
Head	800 - 1000 MHz	$\epsilon_r = 39.0 - 43.5$	$\sigma = 0.80 - 1.10$ mho/m
ConvF X	6.59 $\pm 9.5\%$ (k=2)		Boundary effect:
ConvF Y	6.59 $\pm 9.5\%$ (k=2)		Alpha 0.50
ConvF Z	6.59 $\pm 9.5\%$ (k=2)		Depth 2.00
Head	1700 - 1910 MHz	$\epsilon_r = 39.5 - 41.0$	$\sigma = 1.20 - 1.55$ mho/m
ConvF X	5.41 $\pm 9.5\%$ (k=2)		Boundary effect:
ConvF Y	5.41 $\pm 9.5\%$ (k=2)		Alpha 0.54
ConvF Z	5.41 $\pm 9.5\%$ (k=2)		Depth 2.19

Document APPENDIX D:		Page 10(11)
Date May 16-18, 2002	Rev	FCC ID: L6AR6510IN

ET3DV6 SN:1642

Deviation from Isotropy in HSL

Error (θ, ϕ) , $f = 900 \text{ MHz}$





Document		Page
APPENDIX D:		11(11)
Date	Rev	FCC ID:
May 16-18, 2002		L6AR6510IN