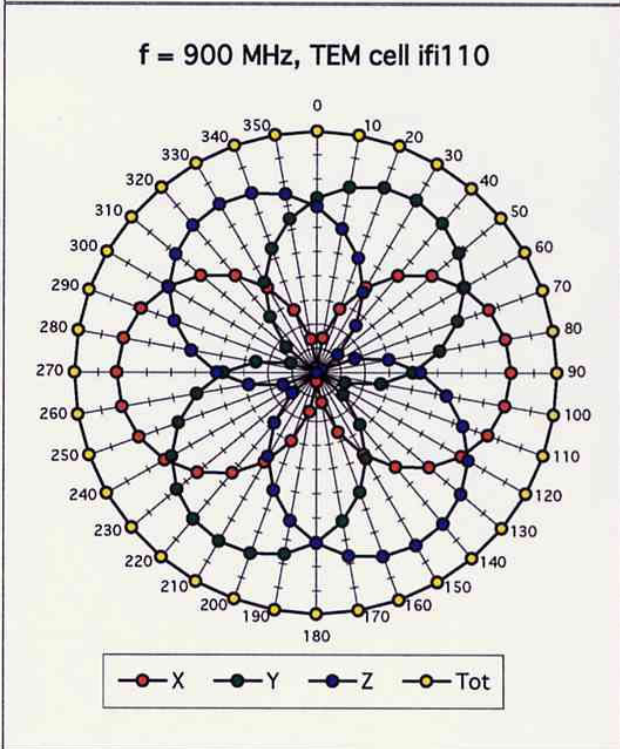
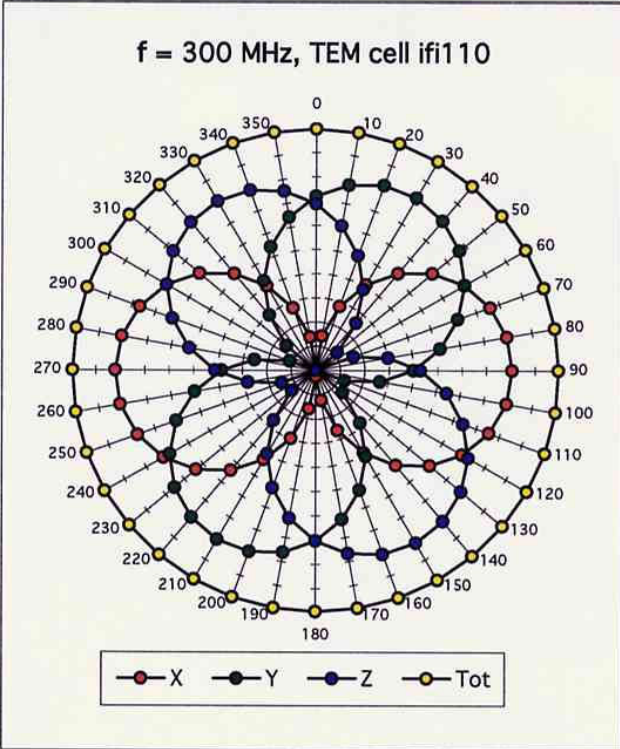
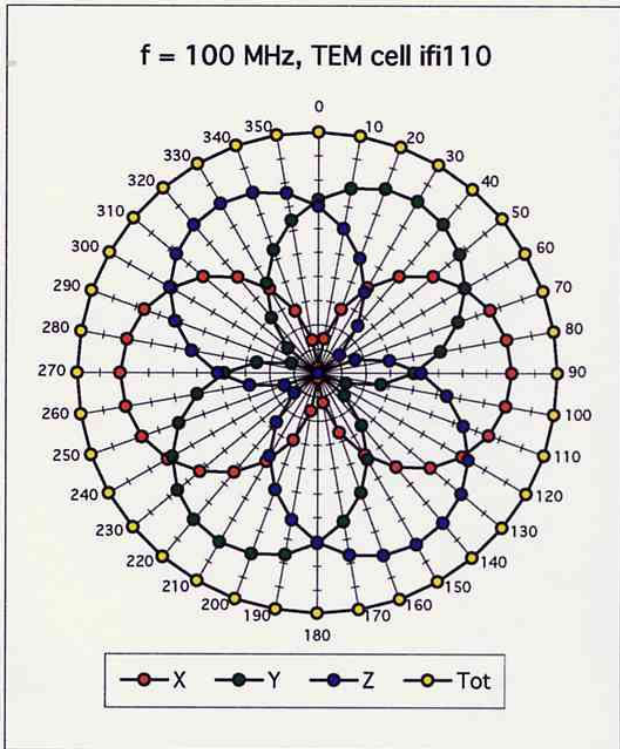
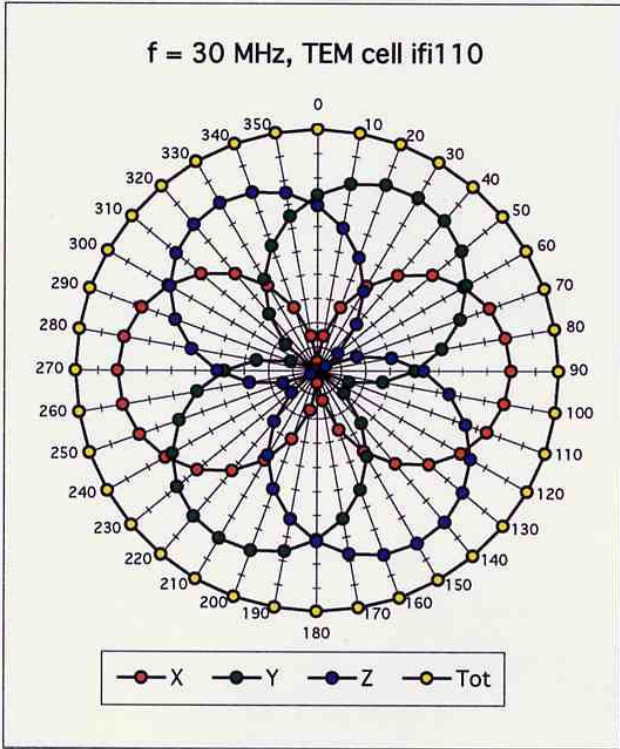
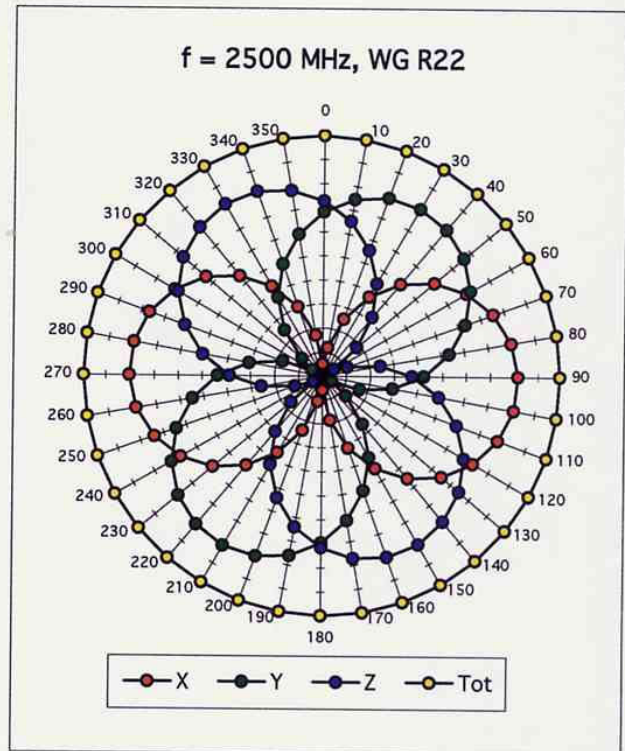
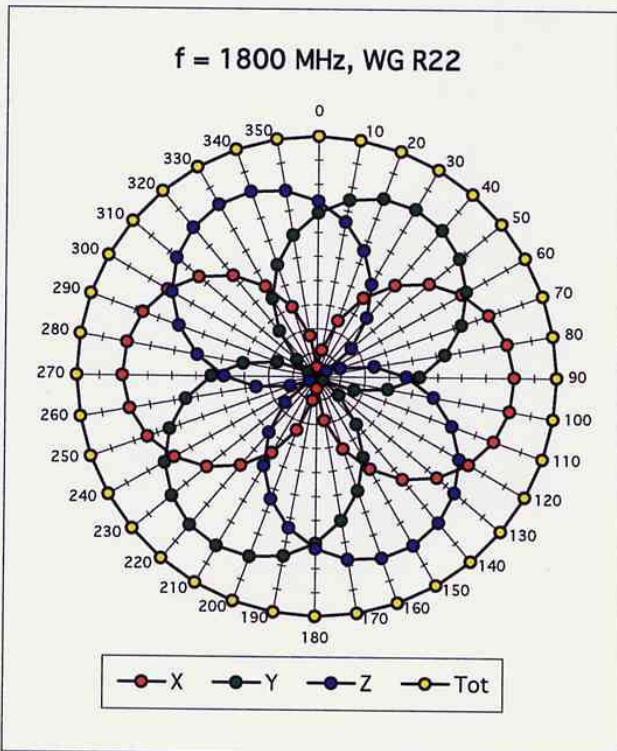
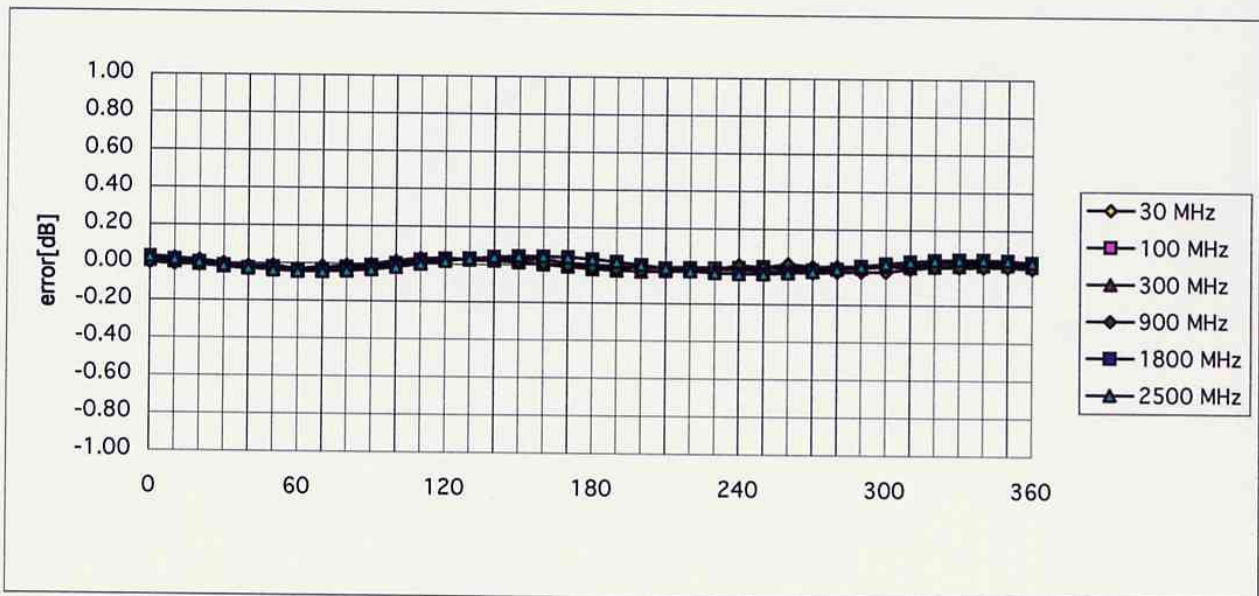


### Receiving Pattern ( $\phi$ ), $\theta = 0^\circ$



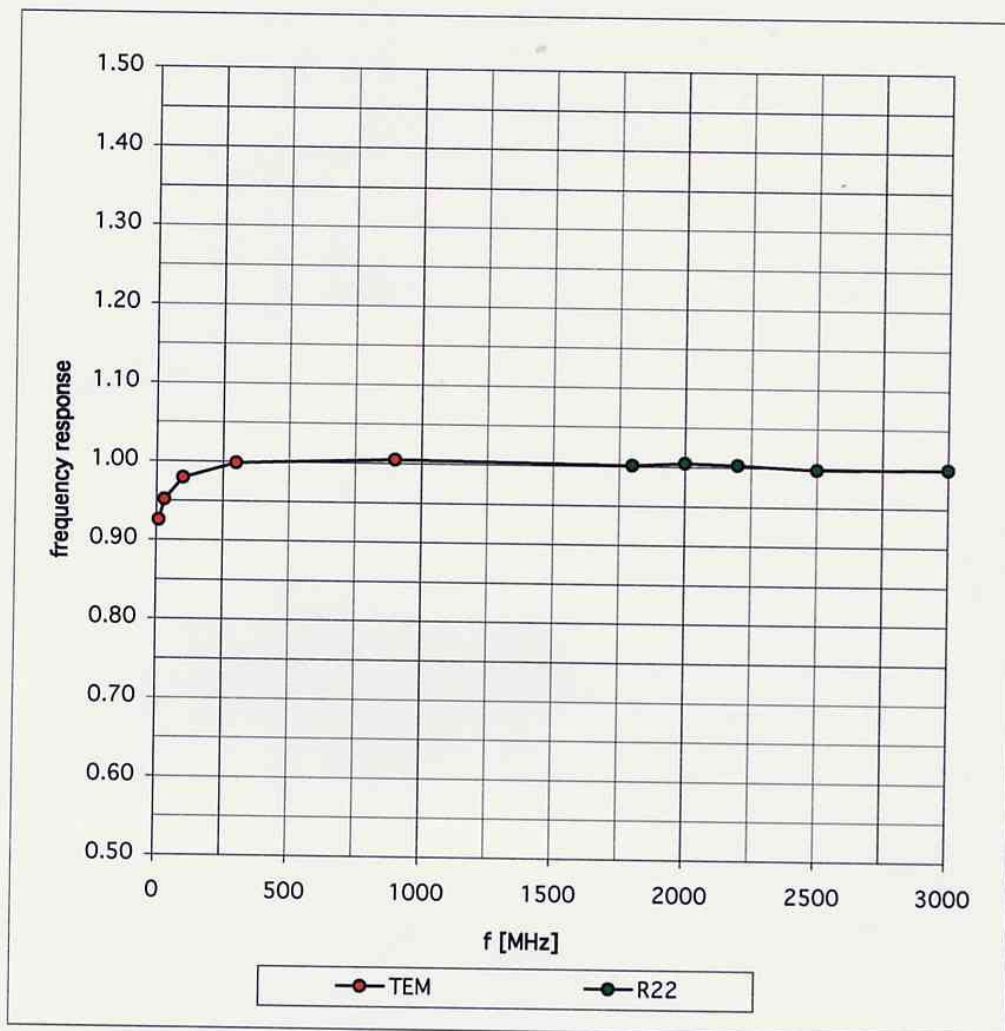


**Isotropy Error ( $\phi$ ),  $\theta = 0^\circ$**



# Frequency Response of E-Field

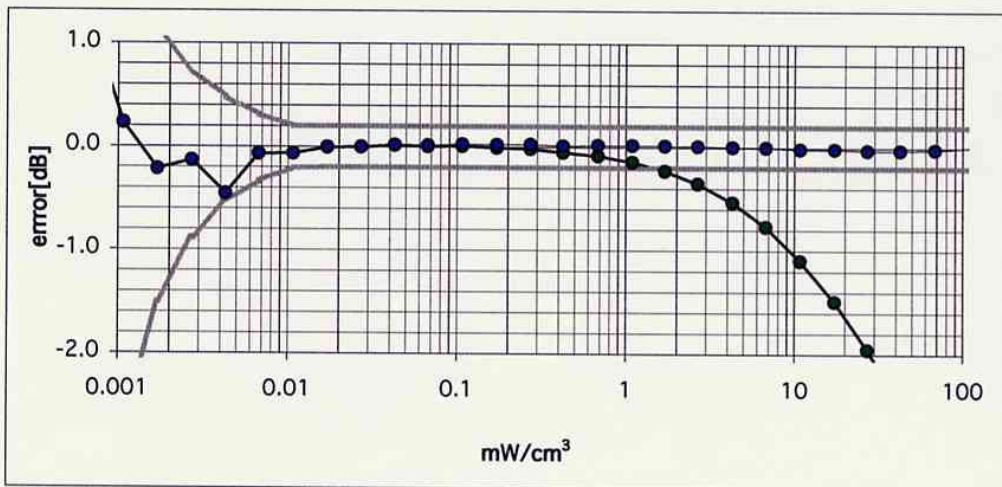
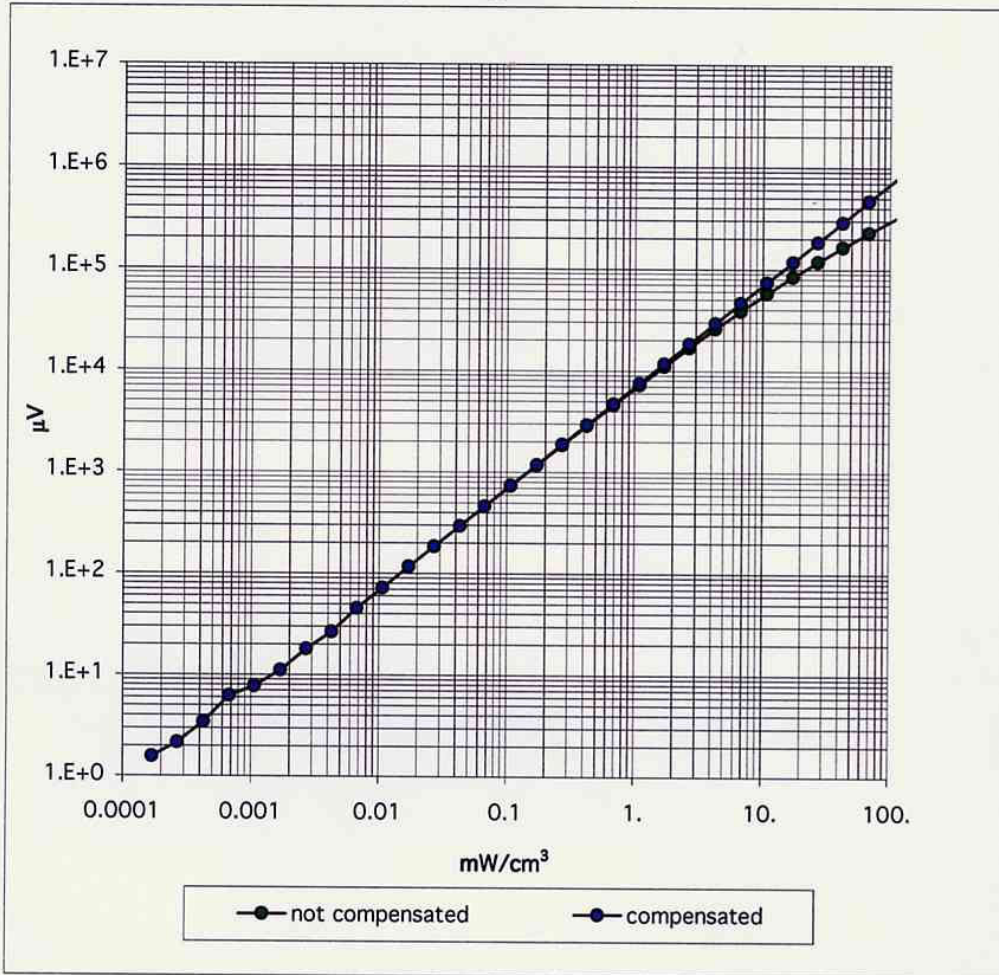
( TEM-Cell:ifi110, Waveguide R22)



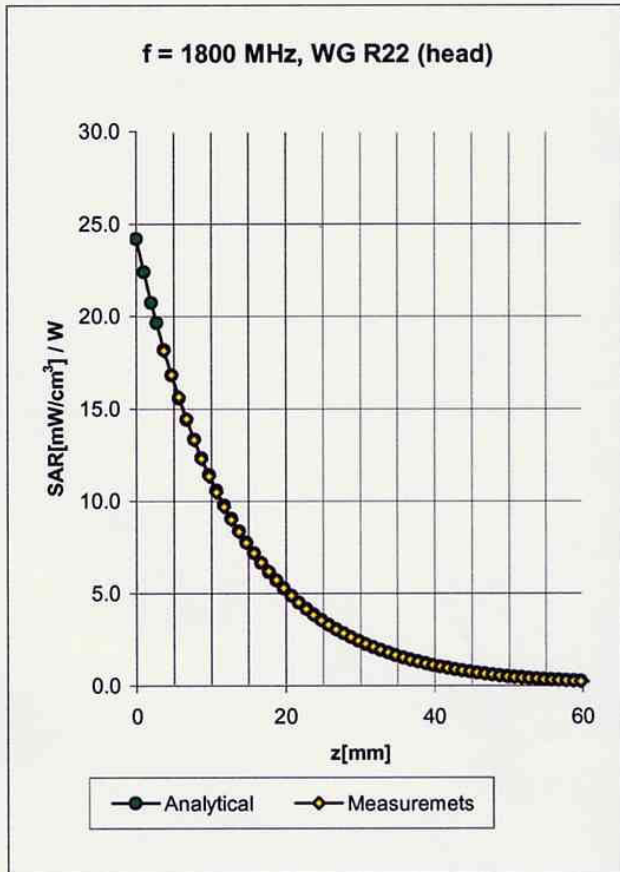
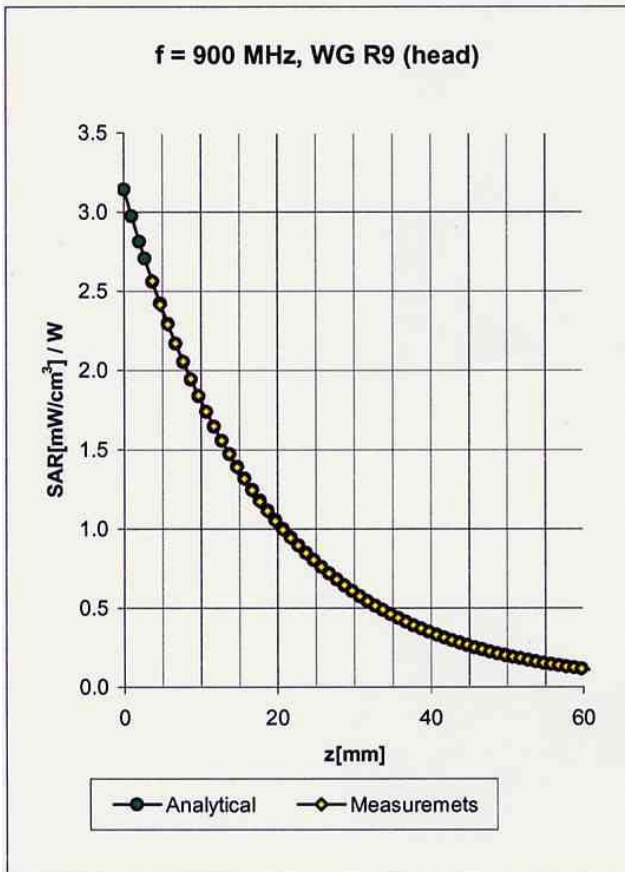


### Dynamic Range f(SAR<sub>brain</sub>)

( Waveguide R22 )



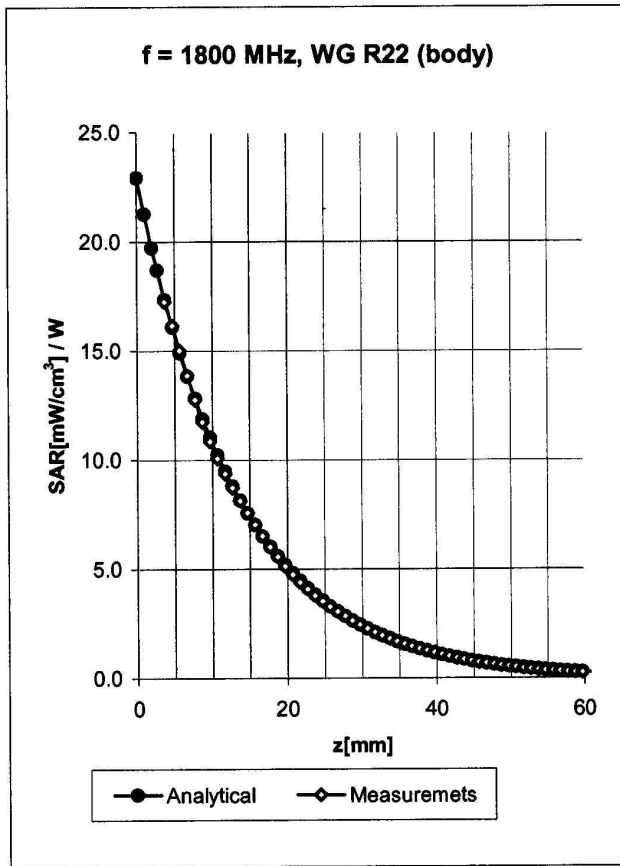
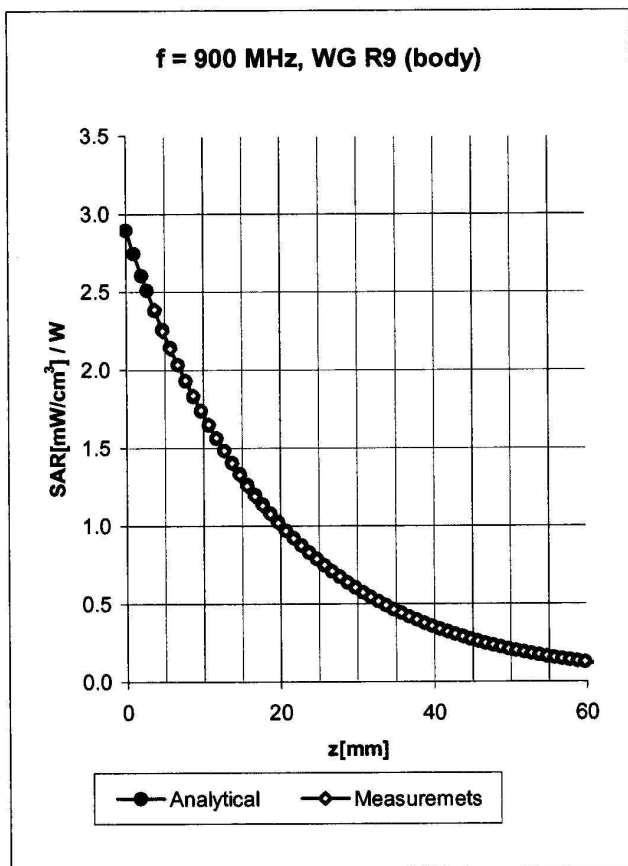
### Conversion Factor Assessment



Head	900 MHz	$\epsilon_r = 41.5 \pm 5\%$	$\sigma = 0.97 \pm 5\%$ mho/m
Valid for f=800-1000 MHz with Head Tissue Simulating Liquid according to EN 50361, P1528-200X			
ConvF X	<b>6.4</b> $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	<b>6.4</b> $\pm 9.5\%$ (k=2)	Alpha	<b>0.48</b>
ConvF Z	<b>6.4</b> $\pm 9.5\%$ (k=2)	Depth	<b>2.13</b>

Head	1800 MHz	$\epsilon_r = 40.0 \pm 5\%$	$\sigma = 1.40 \pm 5\%$ mho/m
Valid for f=1710-1910 MHz with Head Tissue Simulating Liquid according to EN 50361, P1528-200X			
ConvF X	<b>5.1</b> $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	<b>5.1</b> $\pm 9.5\%$ (k=2)	Alpha	<b>0.49</b>
ConvF Z	<b>5.1</b> $\pm 9.5\%$ (k=2)	Depth	<b>2.70</b>

### Conversion Factor Assessment



Body                      900 MHz                       $\epsilon_r = 55.0 \pm 5\%$                        $\sigma = 1.05 \pm 5\%$  mho/m

Valid for f=800-1000 MHz with Body Tissue Simulating Liquid according to OET 65 Suppl. C

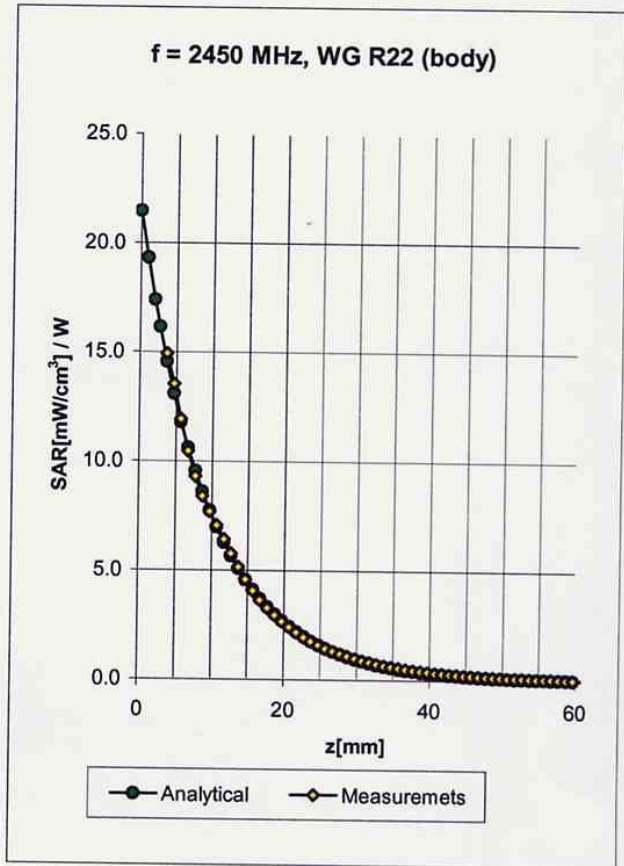
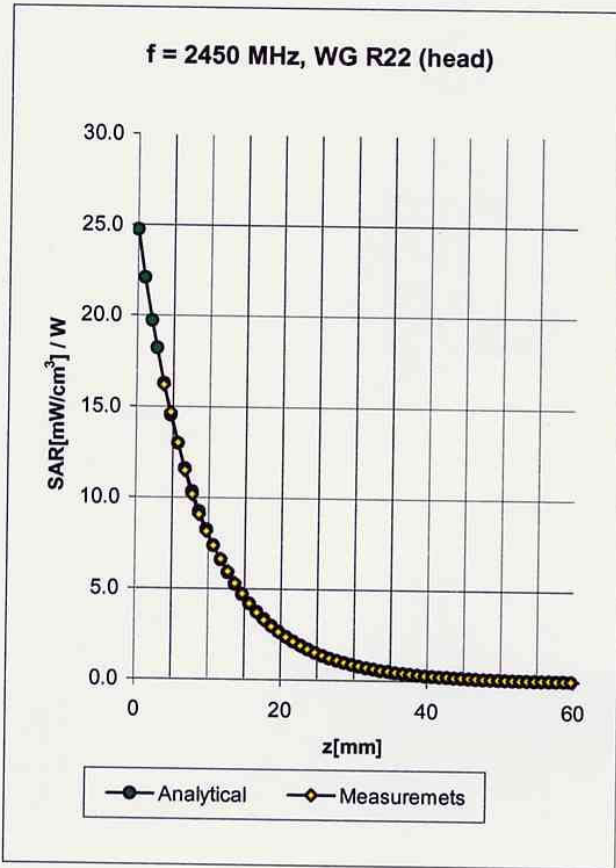
ConvF X	6.2 ± 9.5% (k=2)	Boundary effect:	
ConvF Y	6.2 ± 9.5% (k=2)	Alpha	<b>0.40</b>
ConvF Z	6.2 ± 9.5% (k=2)	Depth	<b>2.57</b>

Body                      1800 MHz                       $\epsilon_r = 53.3 \pm 5\%$                        $\sigma = 1.52 \pm 5\%$  mho/m

Valid for f=1710-1910 MHz with Body Tissue Simulating Liquid according to OET 65 Suppl. C

ConvF X	4.8 ± 9.5% (k=2)	Boundary effect:	
ConvF Y	4.8 ± 9.5% (k=2)	Alpha	<b>0.54</b>
ConvF Z	4.8 ± 9.5% (k=2)	Depth	<b>2.76</b>

### Conversion Factor Assessment



Head      2450      MHz       $\epsilon_r = 39.2 \pm 5\%$        $\sigma = 1.80 \pm 5\%$  mho/m

Valid for f=2400-2500 MHz with Head Tissue Simulating Liquid according to EN 50361, P1528-200X

ConvF X	4.7 ± 8.9% (k=2)	Boundary effect:	
ConvF Y	4.7 ± 8.9% (k=2)	Alpha	1.00
ConvF Z	4.7 ± 8.9% (k=2)	Depth	1.89

Body      2450      MHz       $\epsilon_r = 52.7 \pm 5\%$        $\sigma = 1.95 \pm 5\%$  mho/m

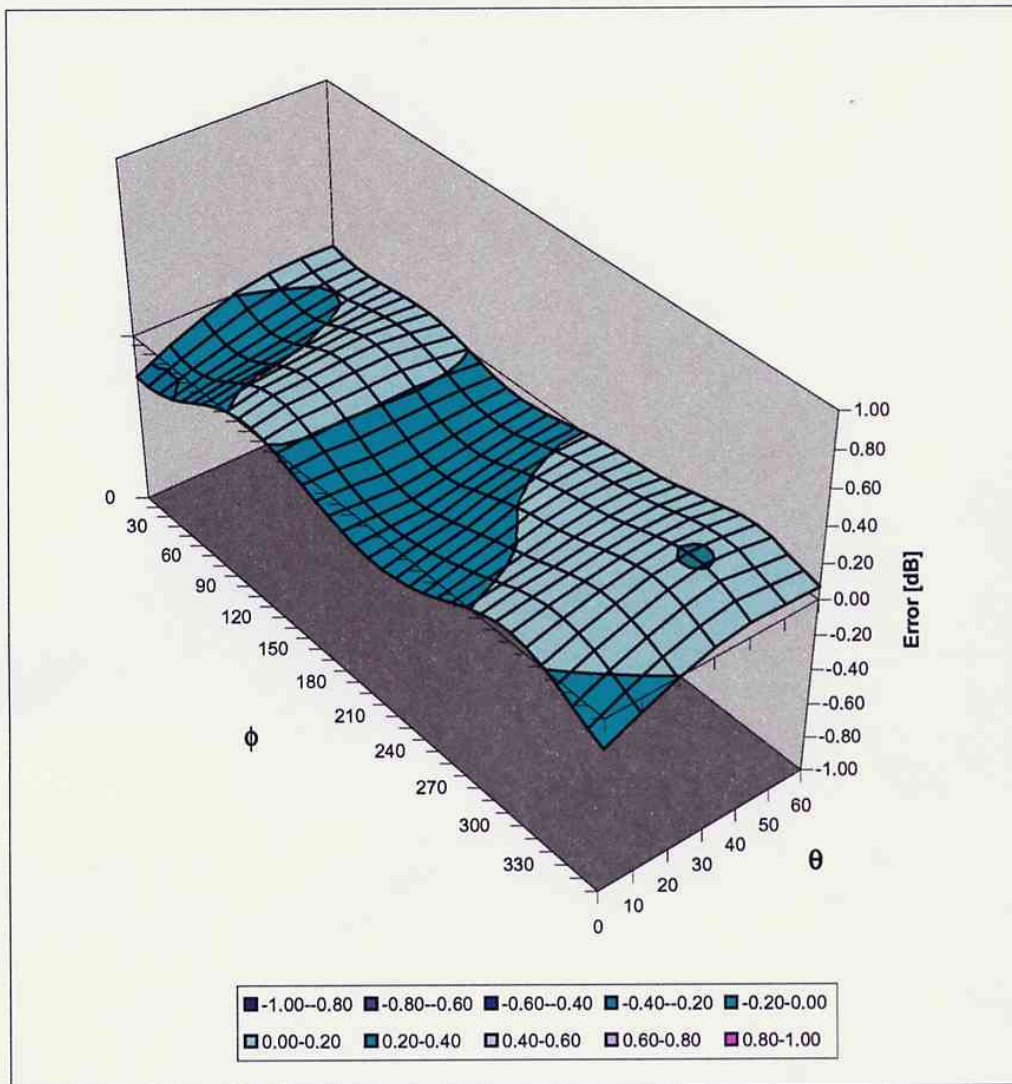
Valid for f=2400-2500 MHz with Body Tissue Simulating Liquid according to OET 65 Suppl. C

ConvF X	4.4 ± 8.9% (k=2)	Boundary effect:	
ConvF Y	4.4 ± 8.9% (k=2)	Alpha	1.21
ConvF Z	4.4 ± 8.9% (k=2)	Depth	1.59



### Deviation from Isotropy in HSL

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







**D3: DAE**

Client

**CALIBRATION CERTIFICATE**

Object(s) **DAE3 - SN:579**

Calibration procedure(s) **QA CAL-06.v3  
Calibration procedure for the data acquisition unit (DAE)**

Calibration date: **August 15, 2003**



Condition of the calibrated item **In Tolerance (according to the specific calibration document)**

This calibration statement documents traceability of M&TE used in the calibration procedures and conformity of the procedures with the ISO/IEC 17025 international standard.

All calibrations have been conducted in the closed laboratory facility: environment temperature 22 +/- 2 degrees Celsius and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Model Type	ID #	Cal Date	Scheduled Calibration
Fluke Process Calibrator Type 702	SN: 6295803	3-Sep-01	Sep-03

	Name	Function	Signature
Calibrated by:	Philipp Storchenegger	Technician	
Approved by:	Fin Bomholt	R&D Director	

Date issued: August 15, 2003

This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 International Standard) for Calibration Laboratory of Schmid & Partner Engineering AG is completed.