

Probe ET3DV6

SN:1714

Manufactured:	August 7, 2002
Last calibration:	September 12, 2002
Recalibrated:	October 10, 2003

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

DASY - Parameters of Probe: ET3DV6 SN:1714

Sensitivity in Free Space

Diode Compression

NormX	1.59 $\mu\text{V}/(\text{V}/\text{m})^2$	DCP X	94	mV
NormY	1.54 $\mu\text{V}/(\text{V}/\text{m})^2$	DCP Y	94	mV
NormZ	1.59 $\mu\text{V}/(\text{V}/\text{m})^2$	DCP Z	94	mV

Sensitivity in Tissue Simulating Liquid

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	6.6 $\pm 9.5\%$ (k=2)	Boundary effect:		
ConvF Y	6.6 $\pm 9.5\%$ (k=2)	Alpha	0.30	
ConvF Z	6.6 $\pm 9.5\%$ (k=2)	Depth	2.75	

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	5.4 $\pm 9.5\%$ (k=2)	Boundary effect:		
ConvF Y	5.4 $\pm 9.5\%$ (k=2)	Alpha	0.45	
ConvF Z	5.4 $\pm 9.5\%$ (k=2)	Depth	2.82	

Boundary Effect

Head 900 MHz Typical SAR gradient: 5 % per mm

Probe Tip to Boundary		1 mm	2 mm
SAR _{be} [%]	Without Correction Algorithm	8.9	5.3
SAR _{be} [%]	With Correction Algorithm	0.3	0.5

Head 1800 MHz Typical SAR gradient: 10 % per mm

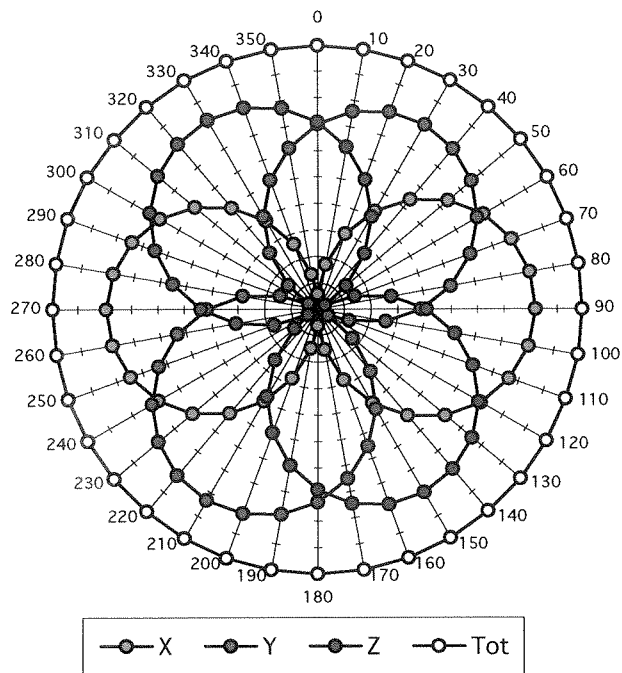
Probe Tip to Boundary		1 mm	2 mm
SAR _{be} [%]	Without Correction Algorithm	13.7	9.6
SAR _{be} [%]	With Correction Algorithm	0.2	0.2

Sensor Offset

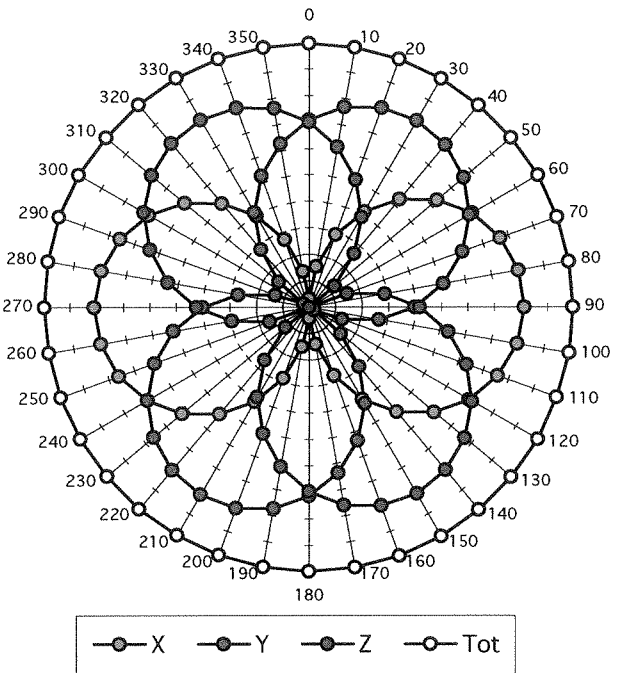
Probe Tip to Sensor Center	2.7	mm
Optical Surface Detection	1.5 $\pm$ 0.2	mm

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

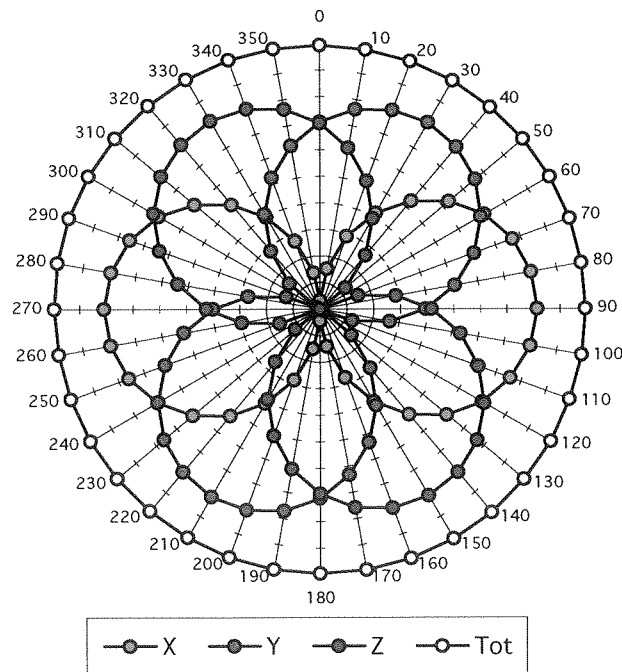
$f = 30 \text{ MHz}$, TEM cell ifi110



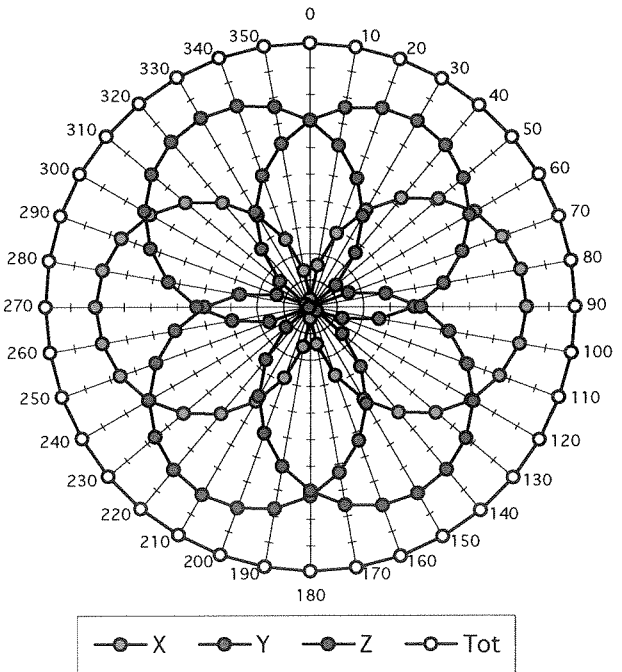
$f = 100 \text{ MHz}$, TEM cell ifi110

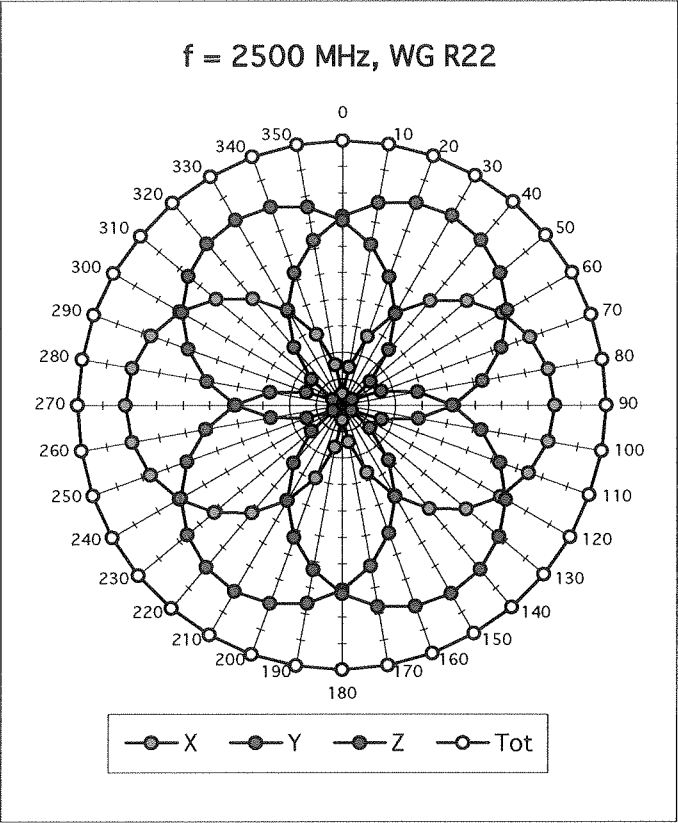
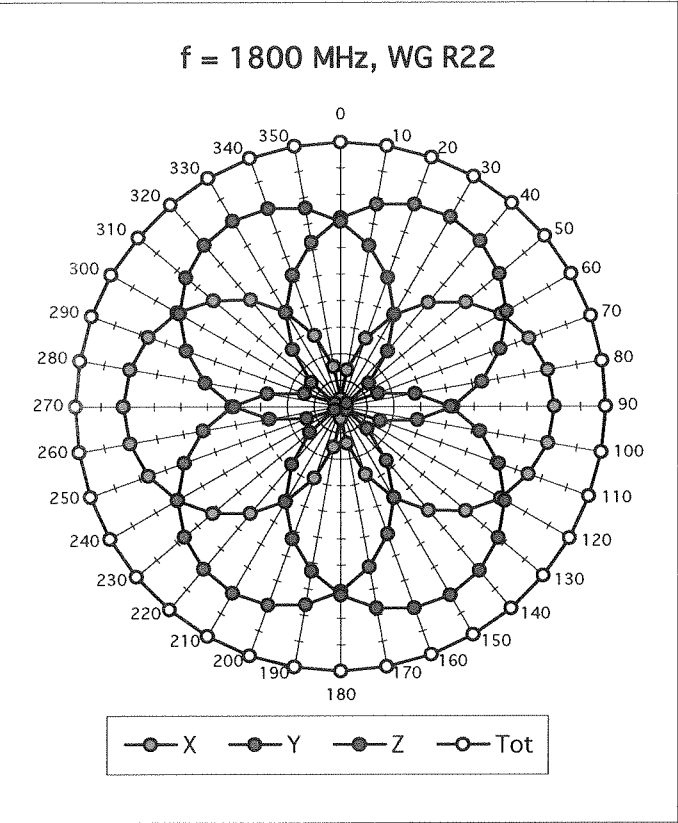


$f = 300 \text{ MHz}$, TEM cell ifi110

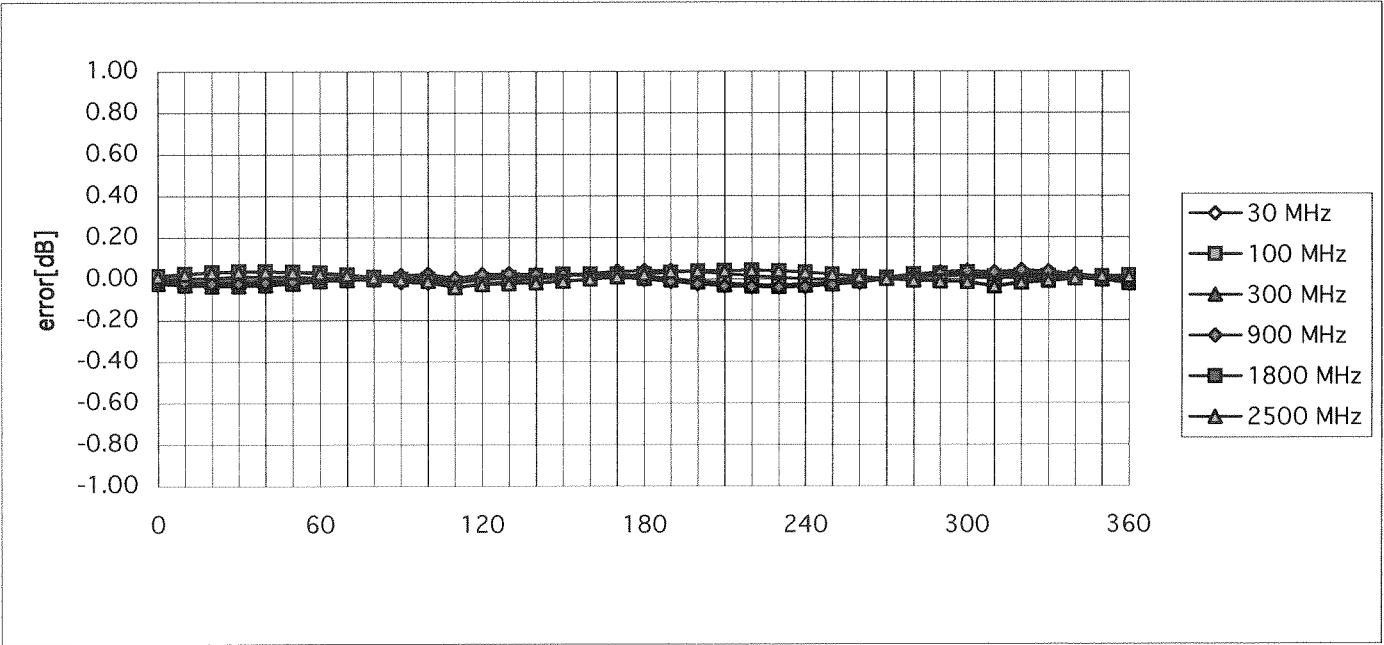


$f = 900 \text{ MHz}$, TEM cell ifi110



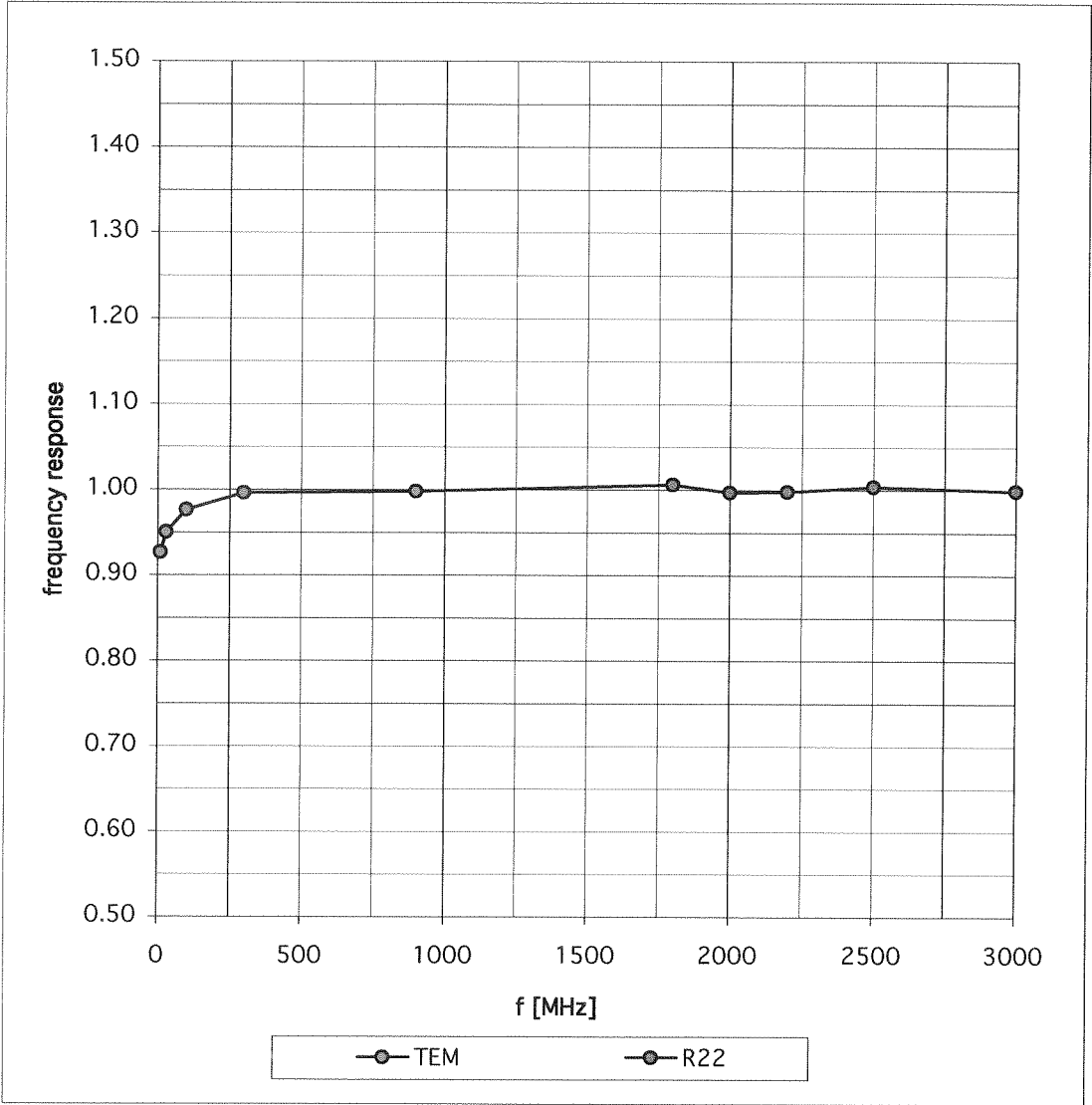


Isotropy Error (ϕ), $\theta = 0^\circ$



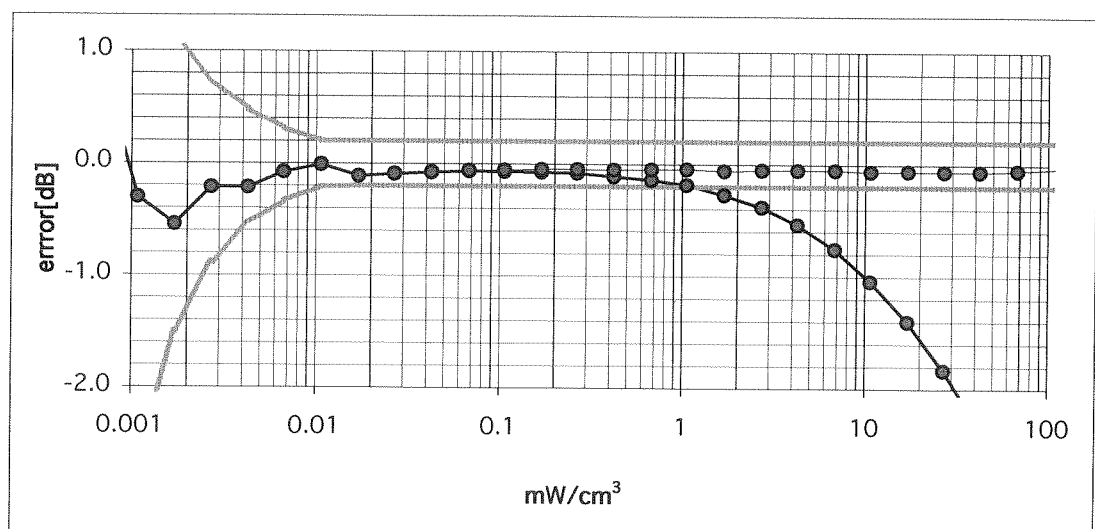
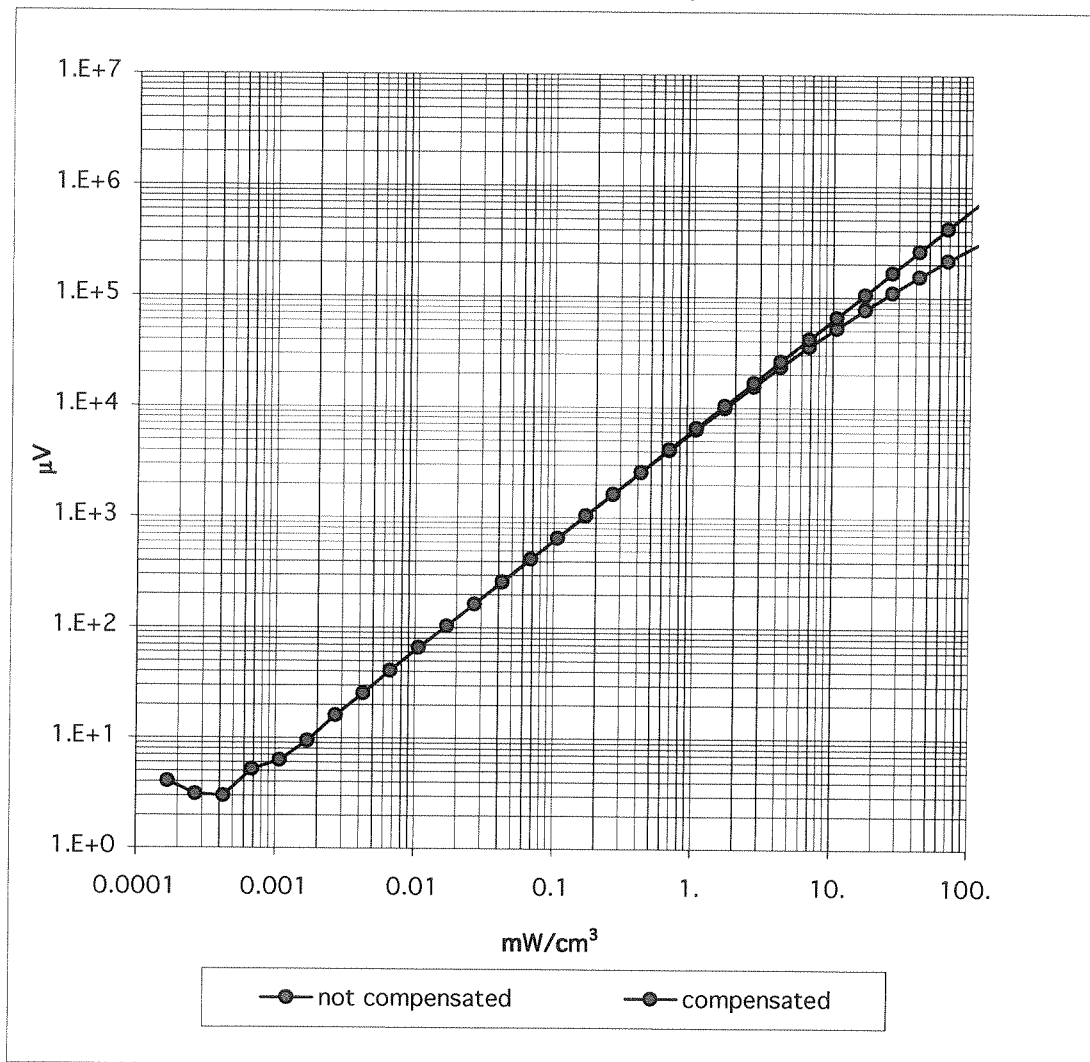
Frequency Response of E-Field

(TEM-Cell:ifi110, Waveguide R22)

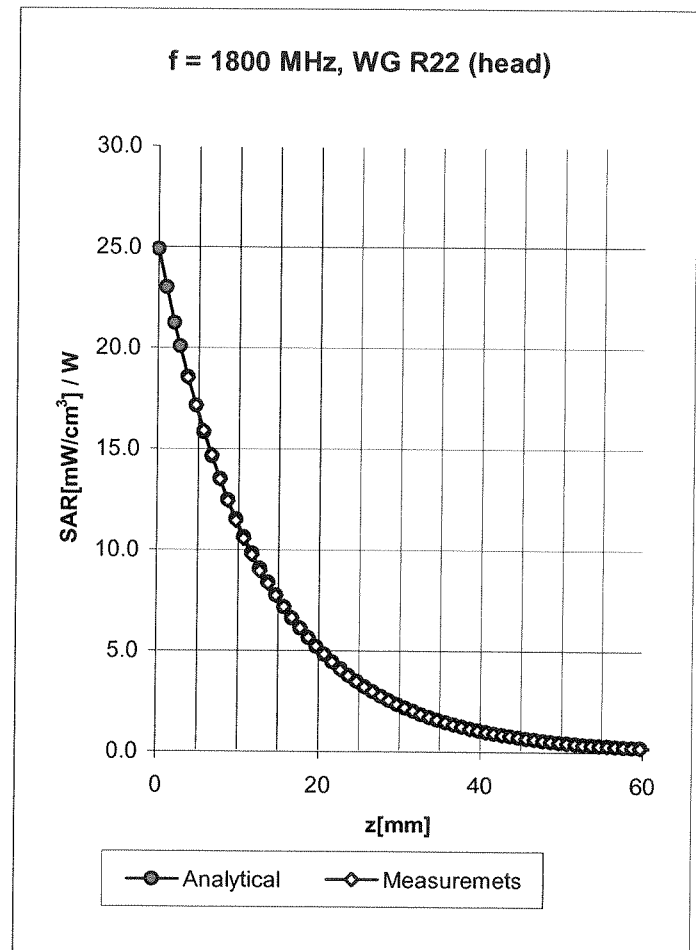
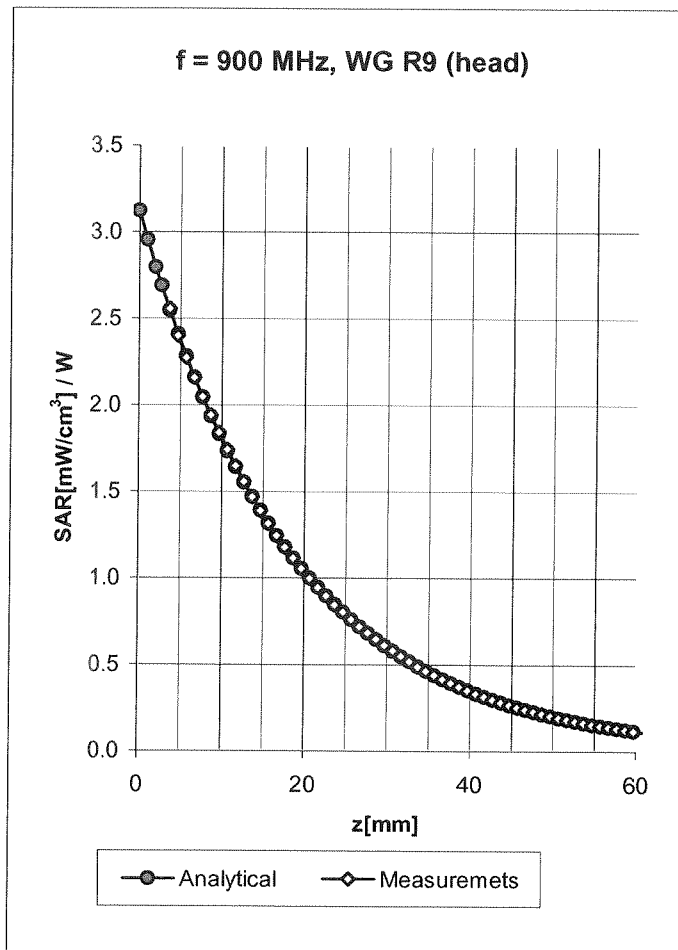


Dynamic Range f(SARhead)

(Waveguide R22)



Conversion Factor Assessment



Head 900 MHz $\epsilon_r = 41.5 \pm 5\%$ $\sigma = 0.97 \pm 5\% \text{ mho/m}$

Valid for f=800-1000 MHz with Head Tissue Simulating Liquid according to EN 50361, P1528-200X

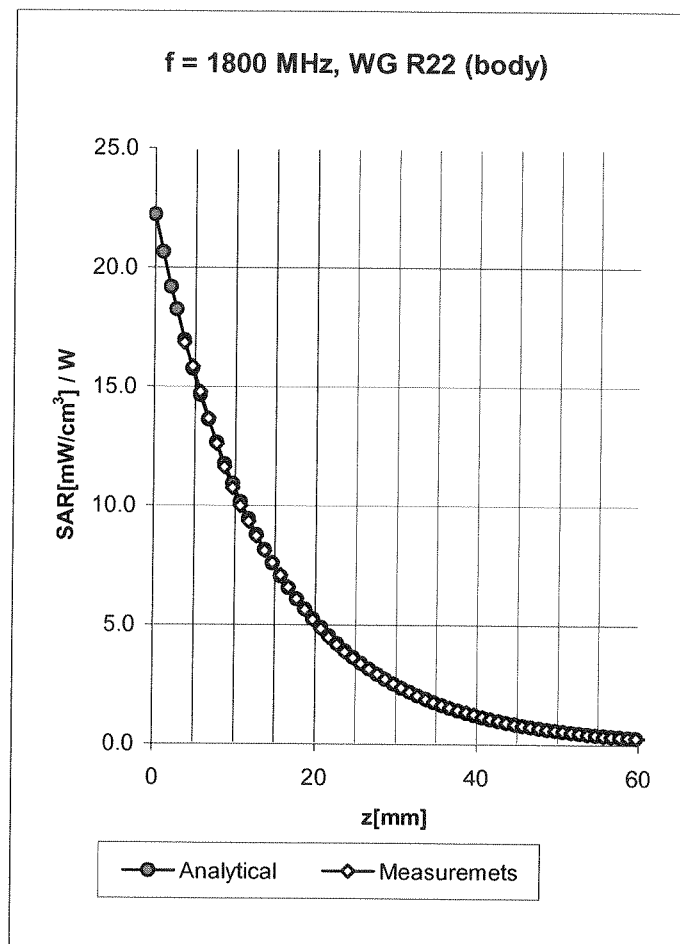
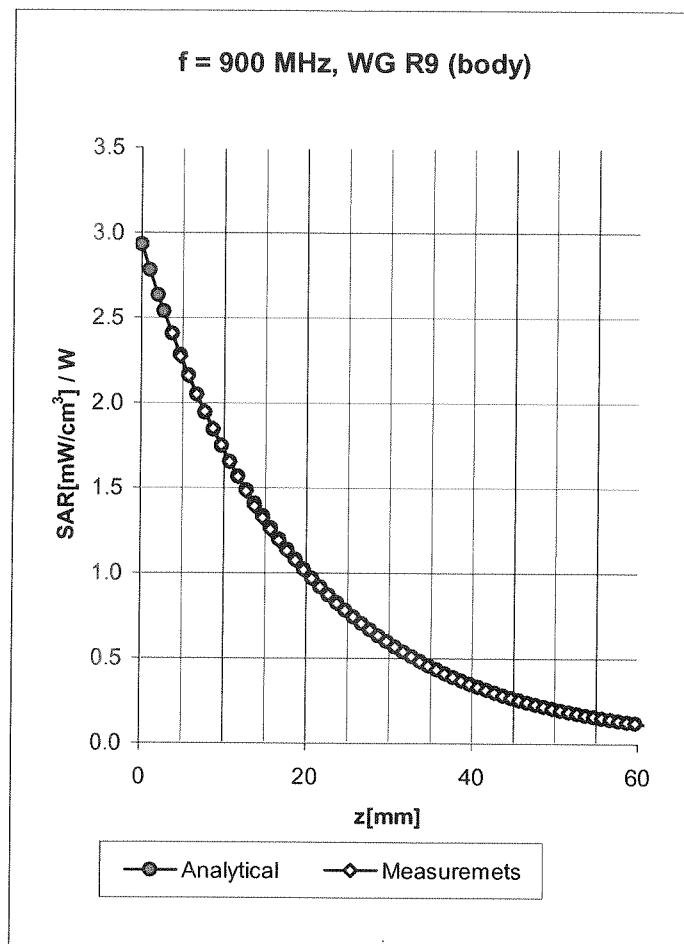
ConvF X	6.6 $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	6.6 $\pm 9.5\%$ (k=2)	Alpha	0.30
ConvF Z	6.6 $\pm 9.5\%$ (k=2)	Depth	2.75

Head 1800 MHz $\epsilon_r = 40.0 \pm 5\%$ $\sigma = 1.40 \pm 5\% \text{ mho/m}$

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ConvF Z	5.4 $\pm 9.5\%$ (k=2)	Depth	2.82

Conversion Factor Assessment



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

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

ConvF X	6.3 $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	6.3 $\pm 9.5\%$ (k=2)	Alpha	0.31
ConvF Z	6.3 $\pm 9.5\%$ (k=2)	Depth	2.91

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

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

ConvF X	4.8 $\pm 9.5\%$ (k=2)	Boundary effect:	
ConvF Y	4.8 $\pm 9.5\%$ (k=2)	Alpha	0.50
ConvF Z	4.8 $\pm 9.5\%$ (k=2)	Depth	2.84

Deviation from Isotropy in HSL

Error (θ, ϕ), $f = 900$ MHz

