



## DASY/EASY – Parameters of Probe: EX3DV4 – SN:3975

### Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz] <sup>C</sup>	Relative Permittivity <sup>F</sup>	Conductivity (S/m) <sup>F</sup>	ConvF X	ConvF Y	ConvF Z	Alpha <sup>G</sup>	Depth <sup>G</sup> (mm)	Unct. (k=2)
750	41.9	0.89	9.90	9.90	9.90	0.40	0.75	±12.1%
835	41.5	0.90	9.56	9.56	9.56	0.14	1.41	±12.1%
900	41.5	0.97	9.52	9.52	9.52	0.14	1.39	±12.1%
1450	40.5	1.20	8.63	8.63	8.63	0.30	0.81	±12.1%
1750	40.1	1.37	8.36	8.36	8.36	0.27	0.97	±12.1%
1900	40.0	1.40	7.95	7.95	7.95	0.28	1.02	±12.1%
2000	40.0	1.40	7.93	7.93	7.93	0.24	1.09	±12.1%
2300	39.5	1.67	7.78	7.78	7.78	0.61	0.68	±12.1%
2450	39.2	1.80	7.56	7.56	7.56	0.61	0.70	±12.1%
2600	39.0	1.96	7.34	7.34	7.34	0.63	0.68	±12.1%
3300	38.2	2.71	6.84	6.84	6.84	0.42	0.94	±13.3%
3500	37.9	2.91	6.79	6.79	6.79	0.44	0.94	±13.3%
3700	37.7	3.12	6.53	6.53	6.53	0.44	0.93	±13.3%
3900	37.5	3.32	6.42	6.42	6.42	0.40	1.20	±13.3%
4100	37.2	3.53	6.40	6.40	6.40	0.40	1.20	±13.3%
4200	37.1	3.63	6.28	6.28	6.28	0.40	1.20	±13.3%
4400	36.9	3.84	6.15	6.15	6.15	0.40	1.20	±13.3%
4600	36.7	4.04	6.09	6.09	6.09	0.45	1.15	±13.3%
4800	36.4	4.25	6.04	6.04	6.04	0.45	1.25	±13.3%
4950	36.3	4.40	5.91	5.91	5.91	0.45	1.25	±13.3%
5200	36.0	4.66	5.34	5.34	5.34	0.40	1.60	±13.3%
5300	35.9	4.76	5.13	5.13	5.13	0.40	1.60	±13.3%
5500	35.6	4.96	4.95	4.95	4.95	0.40	1.55	±13.3%
5600	35.5	5.07	4.76	4.76	4.76	0.45	1.40	±13.3%
5800	35.3	5.27	4.79	4.79	4.79	0.45	1.60	±13.3%

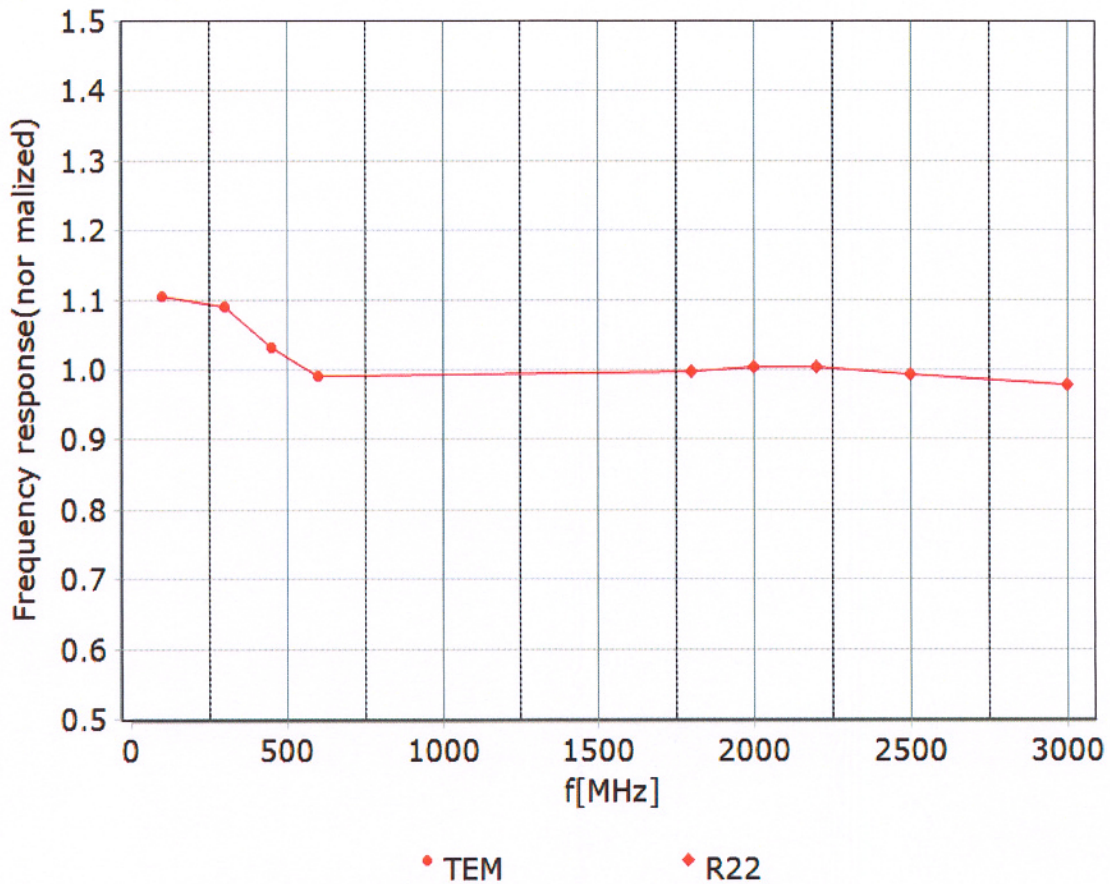
<sup>C</sup> Frequency validity above 300 MHz of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequency below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.



## Frequency Response of E-Field (TEM-Cell: ifi110 EXX, Waveguide: R22)



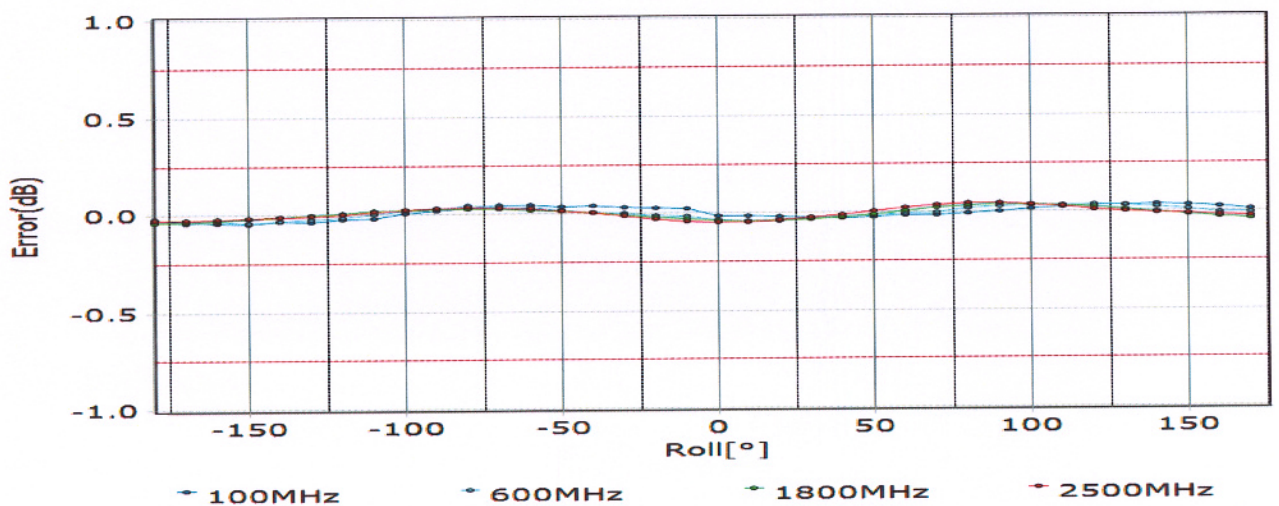
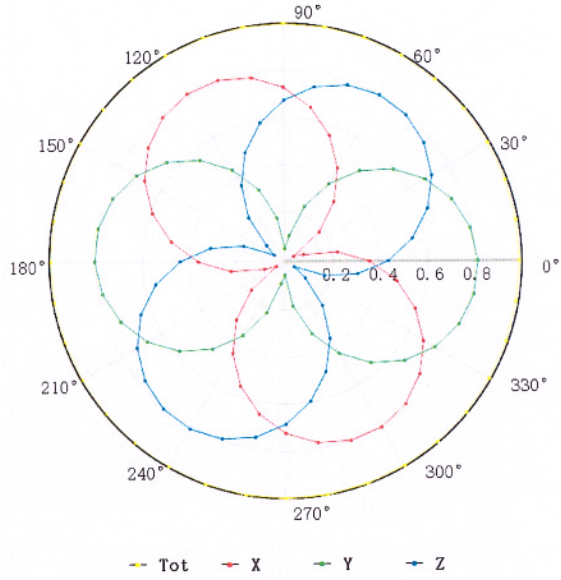
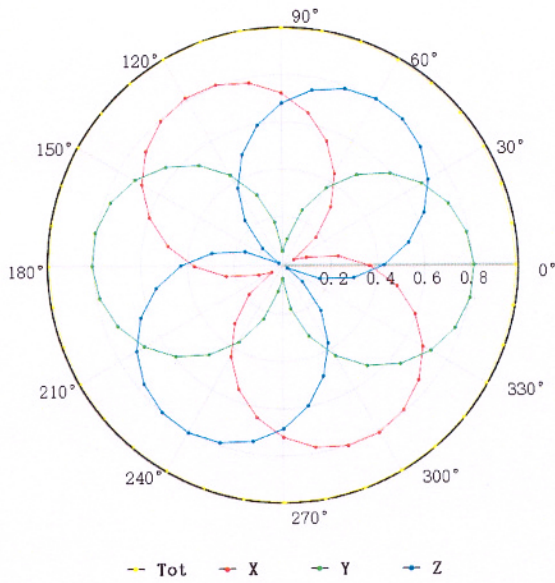
Uncertainty of Frequency Response of E-field:  $\pm 7.4\%$  ( $k=2$ )



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

**f=600 MHz, TEM**

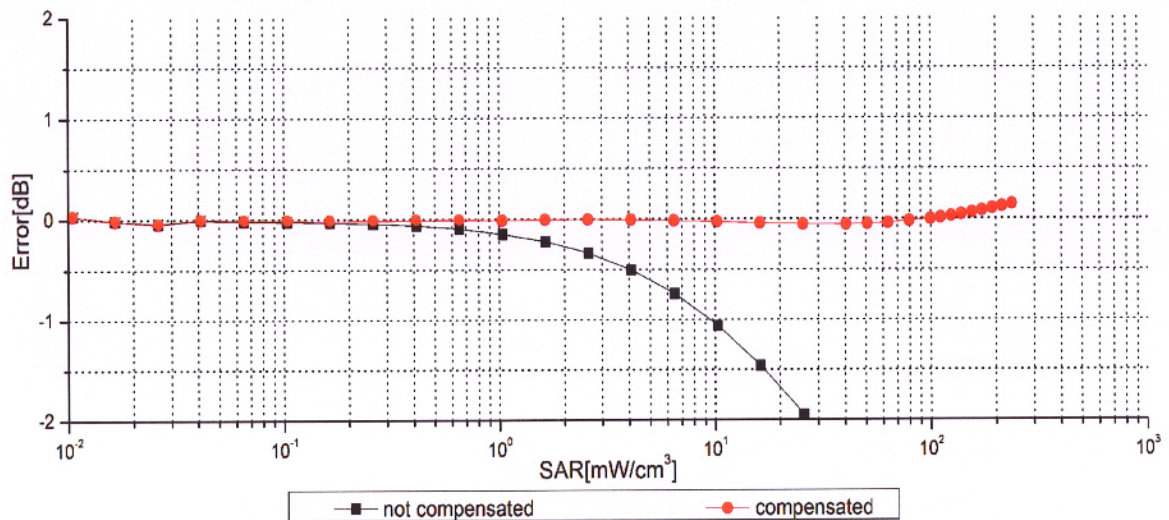
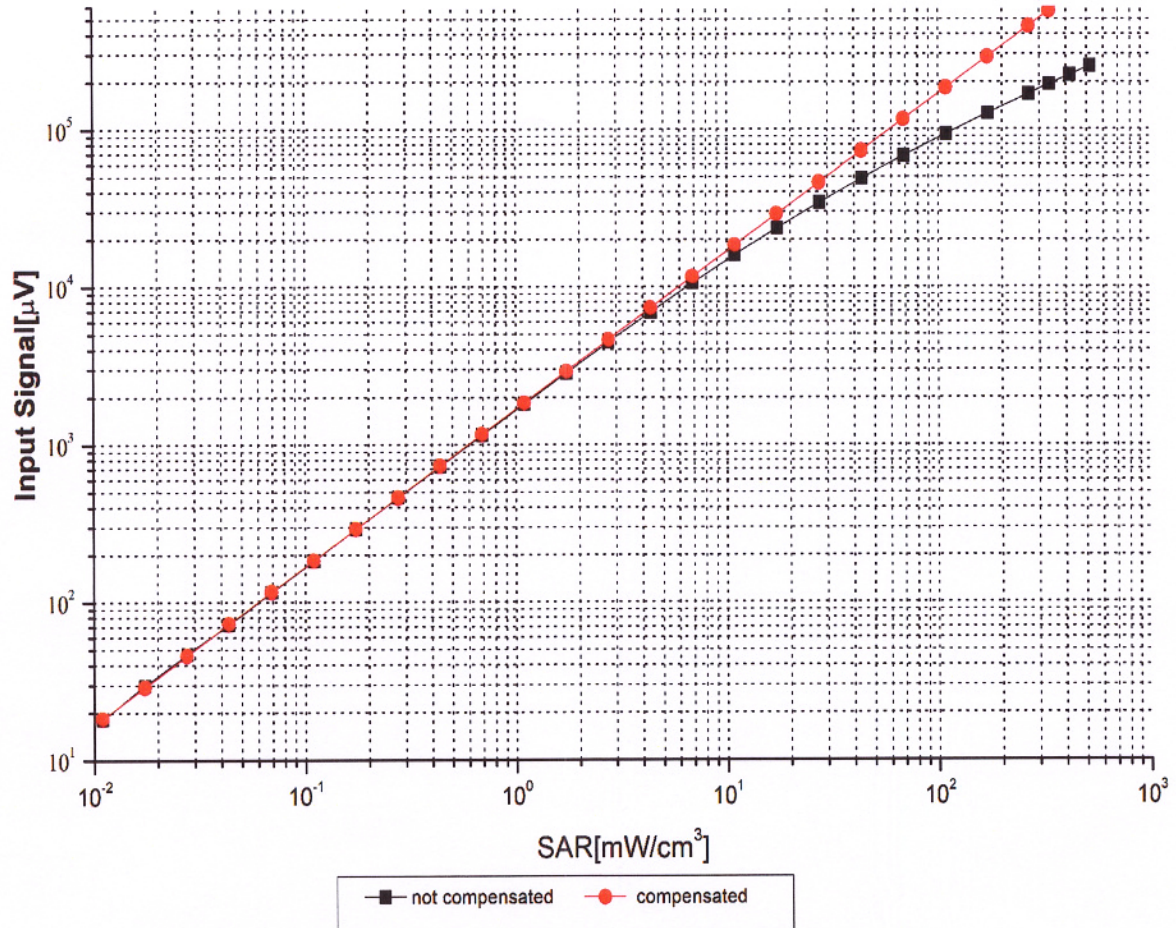
**f=1800 MHz, R22**



Uncertainty of Axial Isotropy Assessment:  $\pm 1.2\%$  ( $k=2$ )



## Dynamic Range f(SAR<sub>head</sub>) (TEM cell, f = 900 MHz)



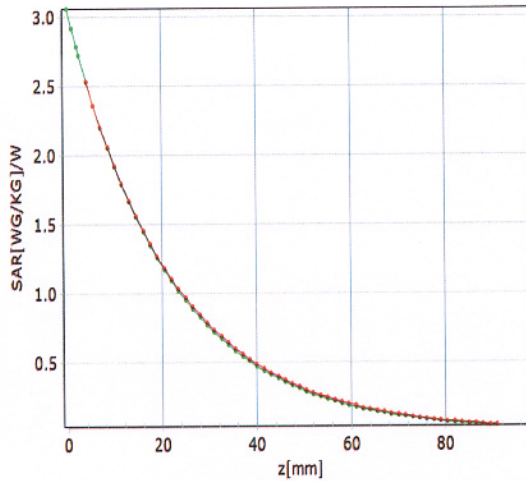
Uncertainty of Linearity Assessment: ±0.9% (k=2)



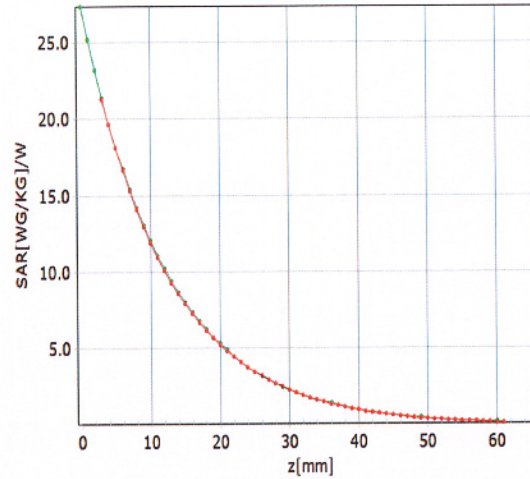
## Conversion Factor Assessment

f=750 MHz,WGLS R9(H\_convF)

f=1750 MHz,WGLS R22(H\_convF)

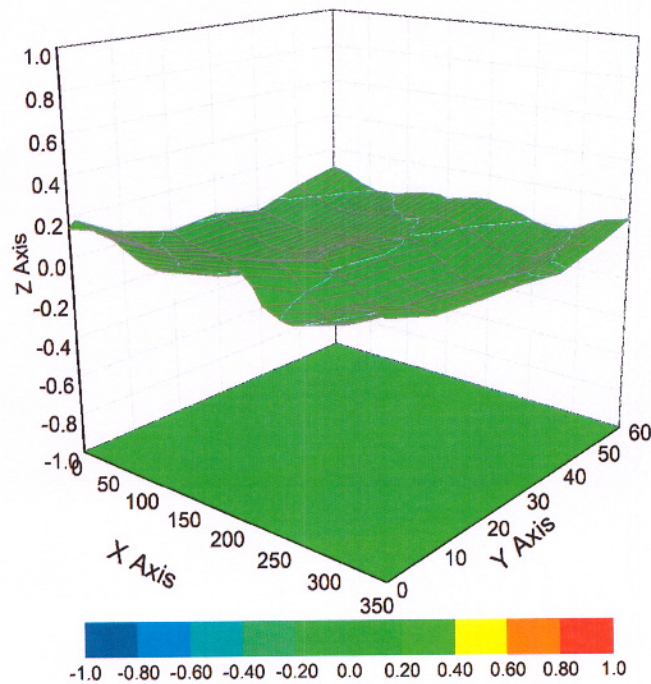


+ analytical + measured



+ analytical + measured

## Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment:  $\pm 3.2\%$  ( $k=2$ )