

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3931

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	41.9	0.89	9.99	9.99	9.99	0.68	0.80	± 12.0 %
835	41.5	0.90	9.80	9.80	9.80	0.58	0.85	± 12.0 %
900	41.5	0.97	9.49	9.49	9.49	0.57	0.91	± 12.0 %
1450	40.5	1.20	8.75	8.75	8.75	0.45	0.80	± 12.0 %
1750	40.1	1.37	8.66	8.66	8.66	0.39	0.86	± 12.0 %
1900	40.0	1.40	8.32	8.32	8.32	0.36	0.86	± 12.0 %
2000	40.0	1.40	8.30	8.30	8.30	0.32	0.86	± 12.0 %
2300	39.5	1.67	7.83	7.83	7.83	0.33	0.90	± 12.0 %
2450	39.2	1.80	7.61	7.61	7.61	0.39	0.90	± 12.0 %
2600	39.0	1.96	7.43	7.43	7.43	0.43	0.90	± 12.0 %
3300	38.2	2.71	7.07	7.07	7.07	0.30	1.35	± 14.0 %
3500	37.9	2.91	7.05	7.05	7.05	0.35	1.35	± 14.0 %
3700	37.7	3.12	6.97	6.97	6.97	0.30	1.35	± 14.0 %
5250	35.9	4.71	5.08	5.08	5.08	0.40	1.80	± 14.0 %
5600	35.5	5.07	4.49	4.49	4.49	0.40	1.80	± 14.0 %
5750	35.4	5.22	4.75	4.75	4.75	0.40	1.80	± 14.0 %

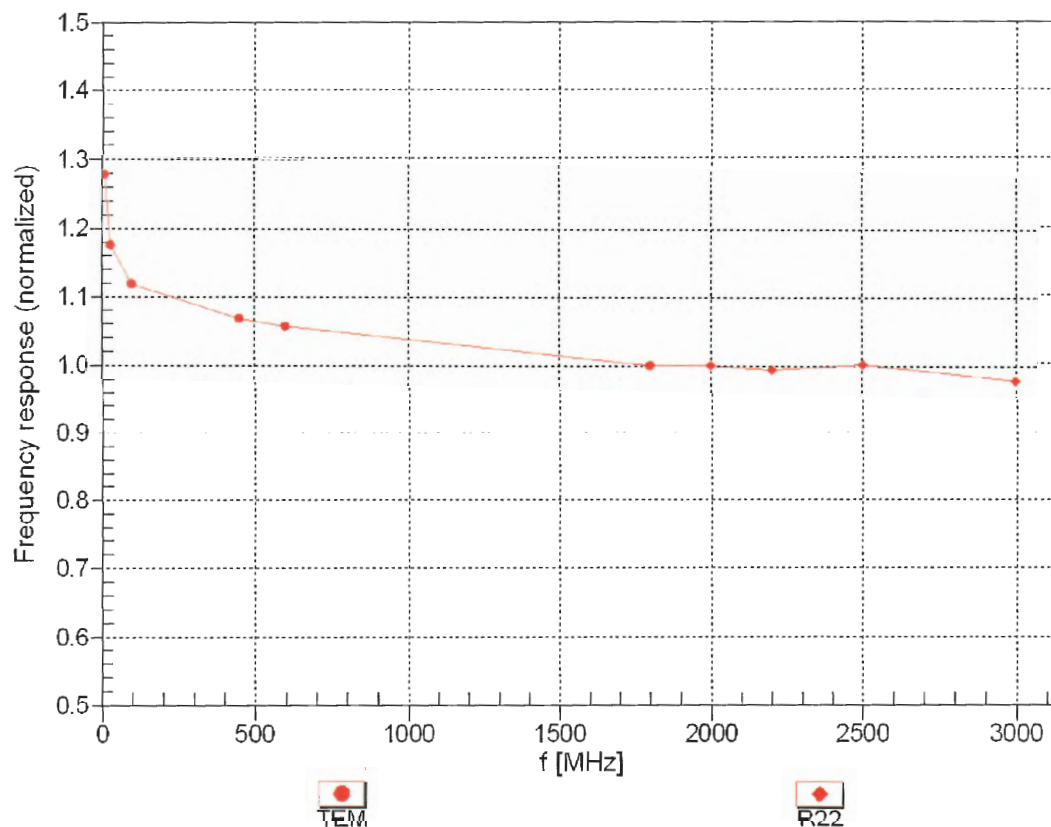
^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) 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 (ϵ and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G 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 frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

Frequency Response of E-Field

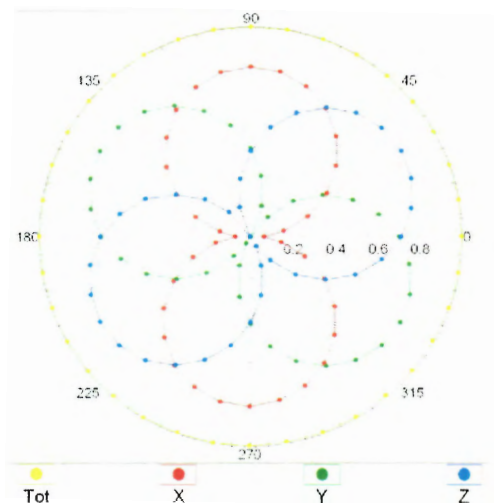
(TEM-Cell:ifi110 EXX, Waveguide: R22)



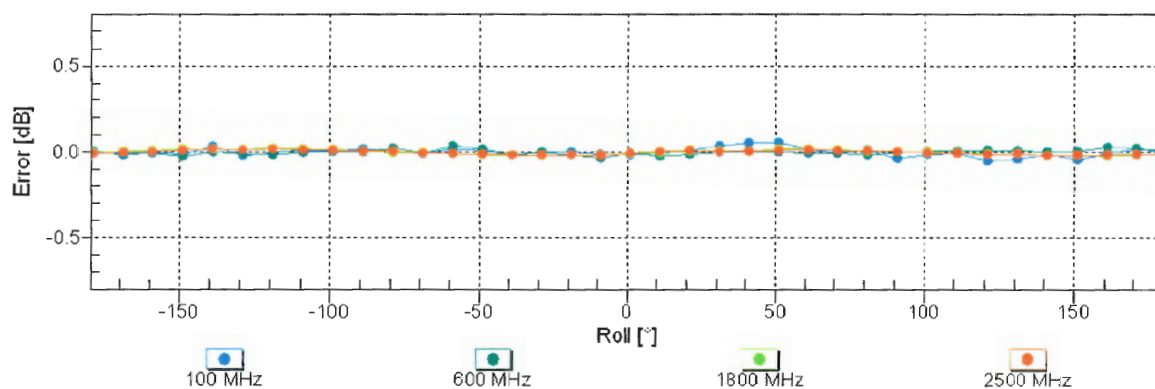
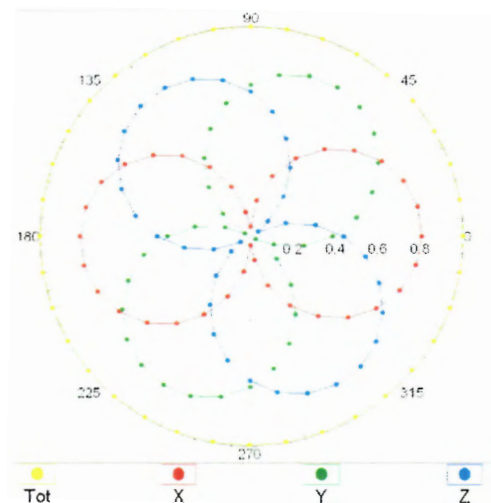
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

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

f=600 MHz, TEM

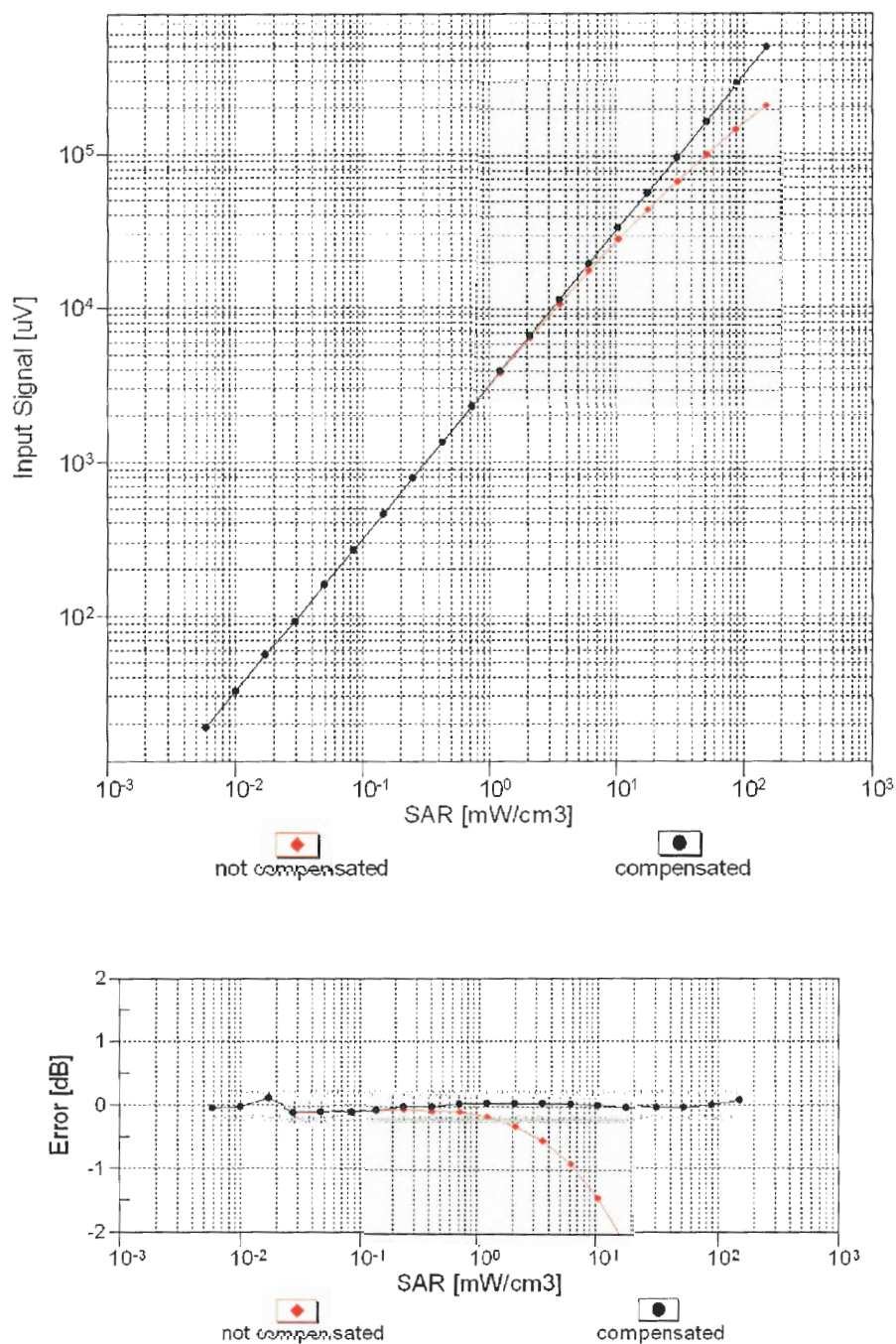


f=1800 MHz, R22



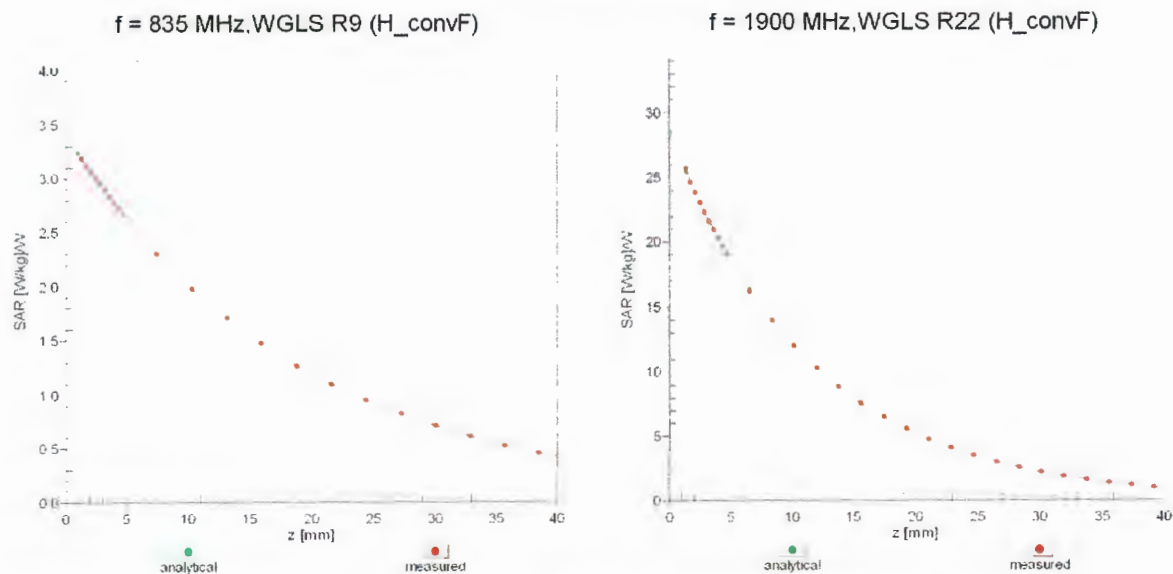
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell , $f_{\text{eval}} = 1900 \text{ MHz}$)



Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), $f = 900 \text{ MHz}$

