

Parameters of Probe: EX3DV4 - SN:7620

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity ^F (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc ^H (k = 2)
750	41.9	0.89	10.10	10.82	10.65	0.38	1.27	±11.0%
835	41.5	0.90	9.87	10.58	10.42	0.38	1.27	±11.0%
2450	39.2	1.80	7.32	7.85	7.73	0.36	1.27	±11.0%
2600	39.0	1.96	7.26	7.78	7.66	0.36	1.27	±11.0%

^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.

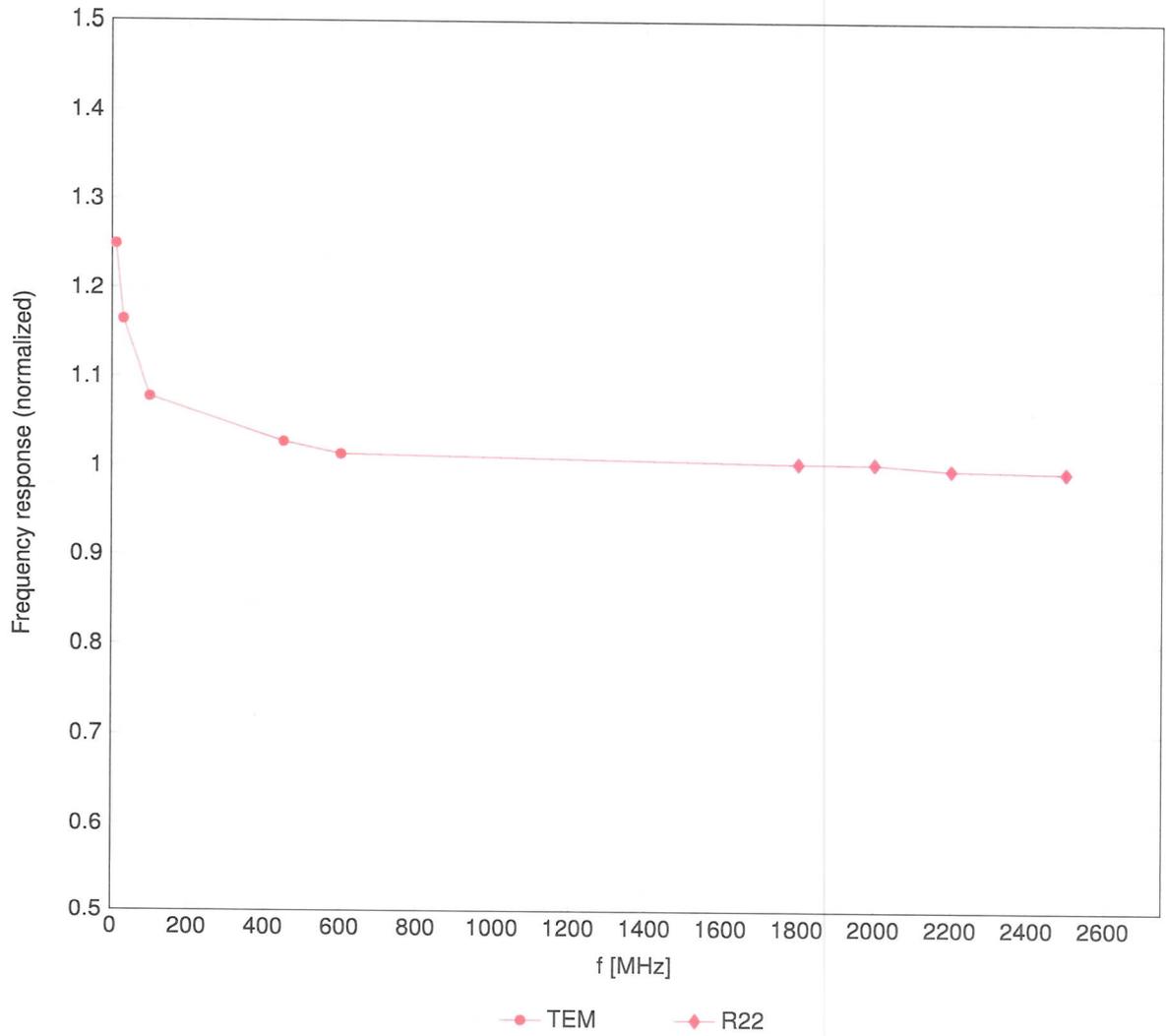
^F The probes are calibrated using tissue simulating liquids (TSL) that deviate for ϵ and σ by less than $\pm 5\%$ from the target values (typically better than $\pm 3\%$) and are valid for TSL with deviations of up to $\pm 10\%$ if SAR correction is applied.

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

^H The stated uncertainty is the total calibration uncertainty ($k = 2$) of Norm-ConvF. This is equivalent to the uncertainty component with the symbol CF in Table 9 of IEC/IEEE 62209-1528:2020.

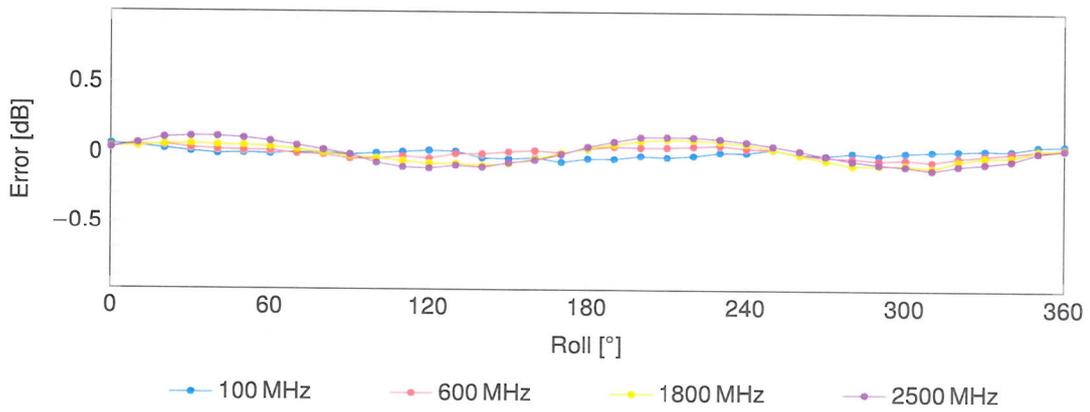
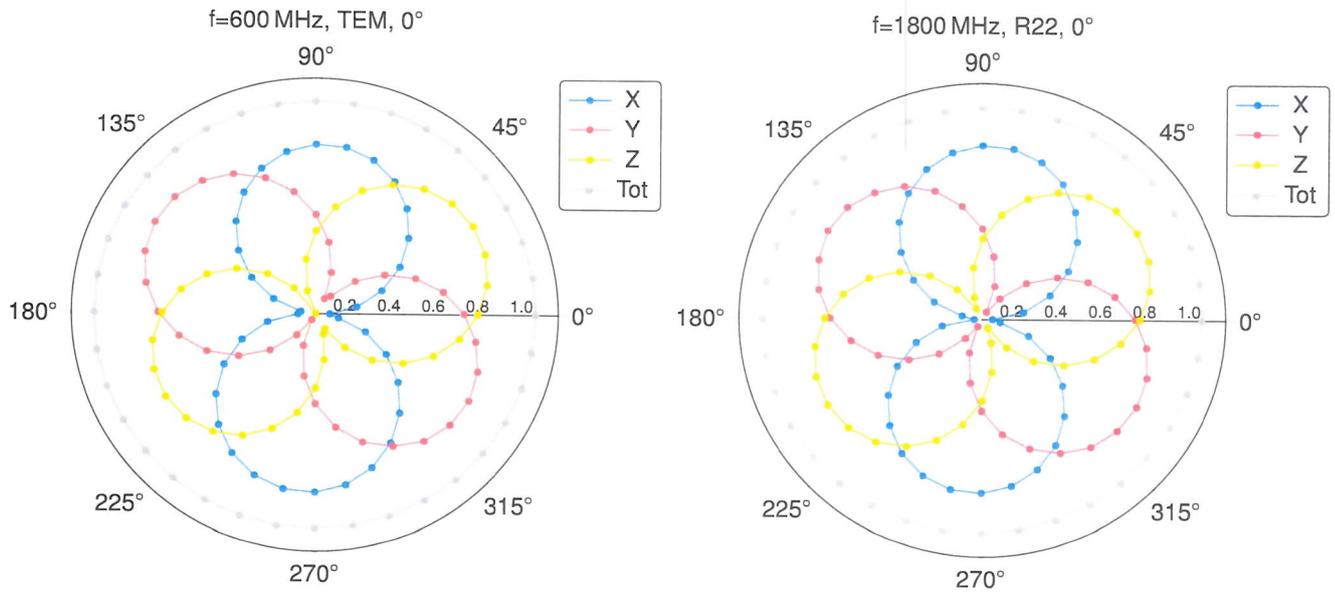
Frequency Response of E-Field

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



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

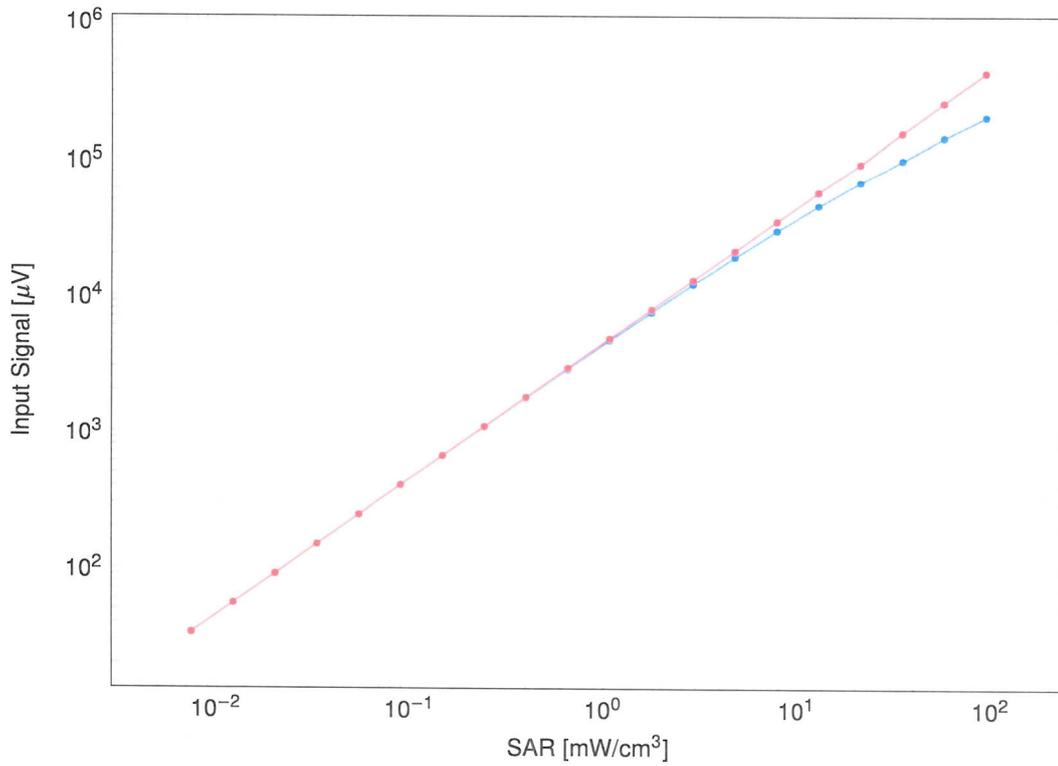
Receiving Pattern (ϕ), $\vartheta = 0^\circ$



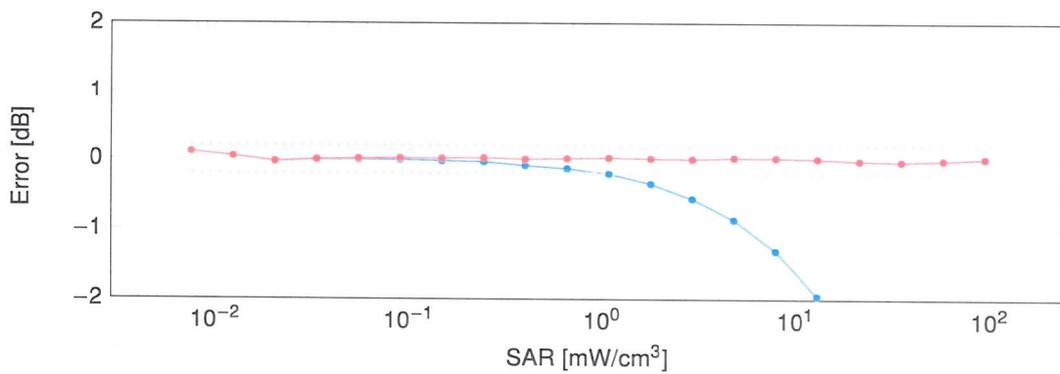
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Dynamic Range $f(\text{SAR}_{\text{head}})$

(TEM cell, $f_{\text{eval}} = 1900 \text{ MHz}$)



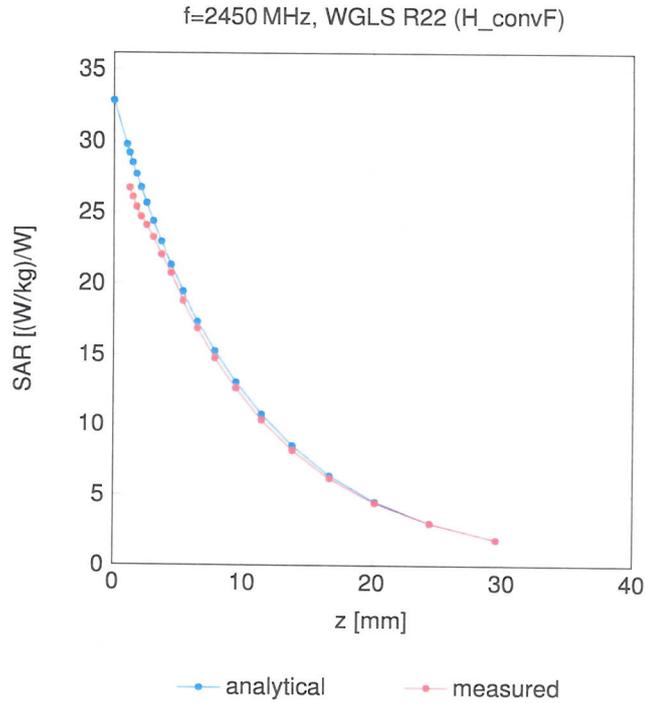
—•— not compensated —•— compensated



—•— not compensated —•— compensated

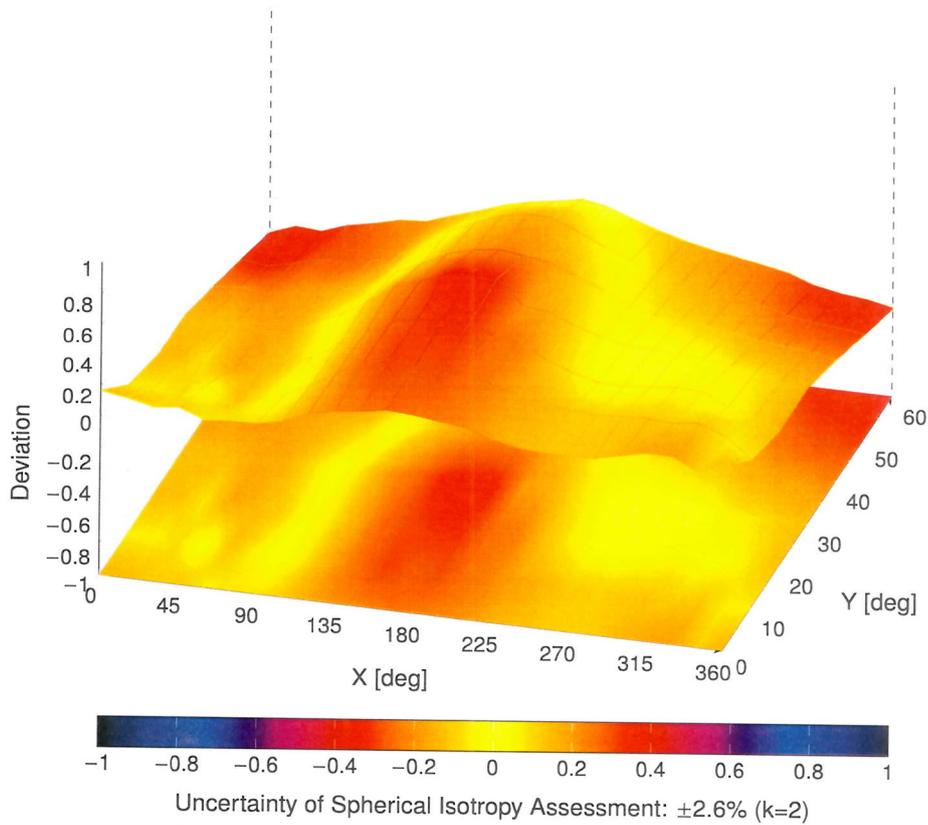
Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), f = 900 MHz



Dipole D2450V2 SN 733				
Head Liquid				
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega()$
2022/11/2	-28.7	/	50.2	/
2024/10/31	-28.1	2.14%	50.7	0.5 Ω

- End of Appendix -