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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7965

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc ($k=2$)
Norm($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.55	0.59	0.63	$\pm 10.0\%$
DCP(mV) ^B	105.4	108.7	107.7	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB/ μV	C	D dB	VR mV	Unc ^E ($k=2$)
0	CW	X	0.0	0.0	1.0	0.00	188.7	$\pm 2.2\%$
		Y	0.0	0.0	1.0		197.4	
		Z	0.0	0.0	1.0		207.9	

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor $k=2$, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X, Y, Z do not affect the E^2 -field uncertainty inside TSL (see Page 4).

^B Numerical linearization parameter: uncertainty not required.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



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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)	Unct. (k=2)
835	41.5	0.90	9.58	9.58	9.58	0.17	1.21	±13%
900	41.5	0.97	9.56	9.56	9.56	0.15	1.31	±13%
1750	40.1	1.37	8.43	8.43	8.43	0.31	0.84	±13%
1810	40.0	1.40	8.23	8.23	8.23	0.23	0.99	±13%
1900	40.0	1.40	8.07	8.07	8.07	0.22	1.08	±13%
2000	40.0	1.40	8.06	8.06	8.06	0.16	1.24	±13%
2100	39.8	1.49	8.05	8.05	8.05	0.19	1.18	±13%
2300	39.5	1.67	7.85	7.85	7.85	0.48	0.72	±13%
2450	39.2	1.80	7.60	7.60	7.60	0.50	0.73	±13%
2600	39.0	1.96	7.42	7.42	7.42	0.59	0.65	±13%
5200	36.0	4.66	5.53	5.53	5.53	0.45	1.30	±14%
5300	35.9	4.76	5.30	5.30	5.30	0.50	1.30	±14%
5500	35.6	4.96	4.96	4.96	4.96	0.50	1.30	±14%
5600	35.5	5.07	4.81	4.81	4.81	0.50	1.30	±14%

^C 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.

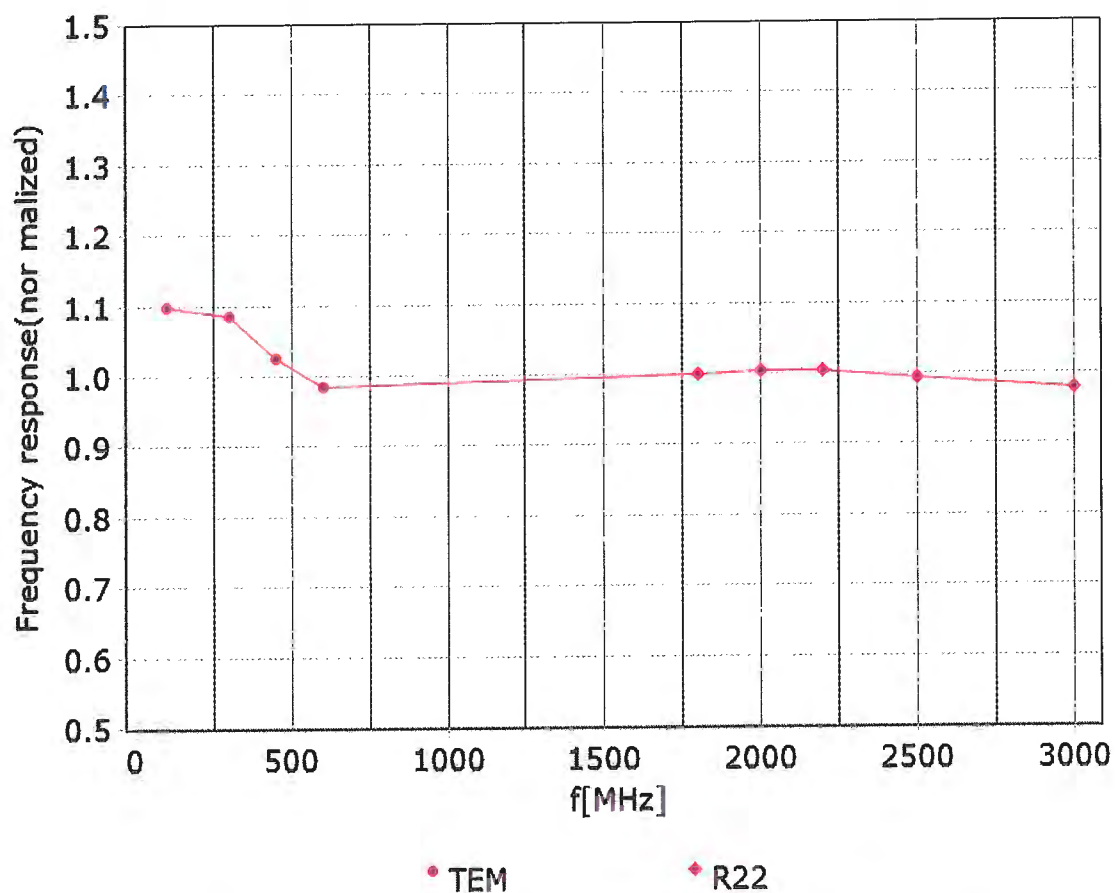
^F At frequency up to 6 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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



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



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



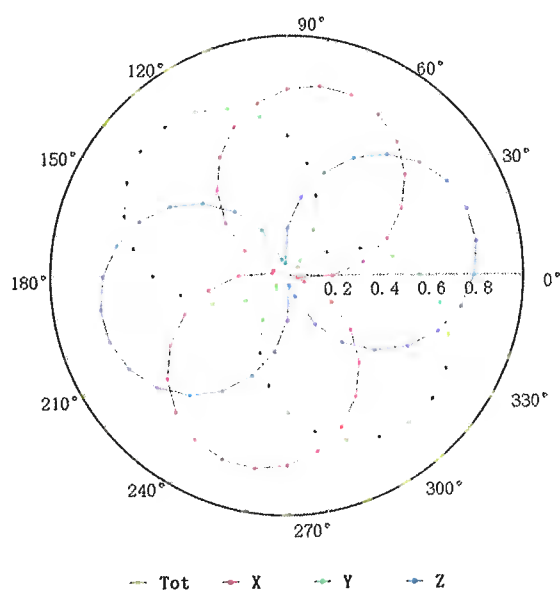
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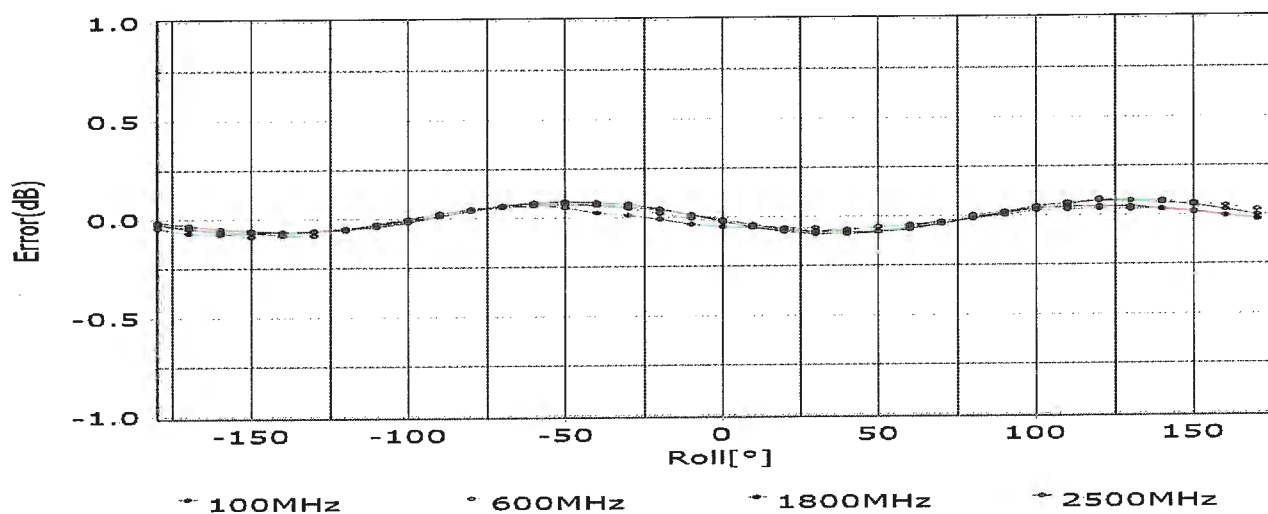
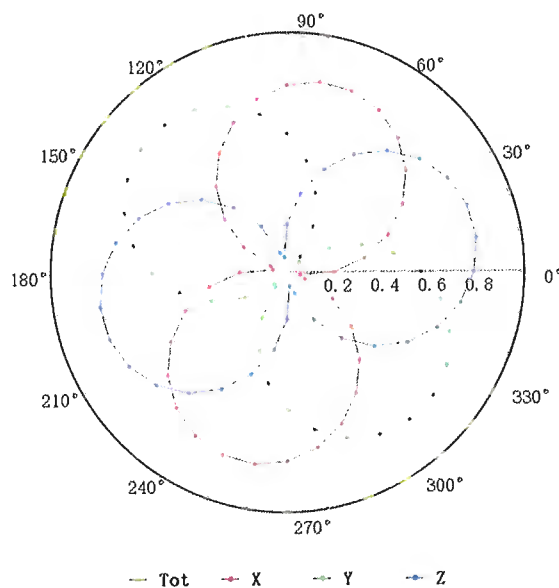
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Receiving Pattern (Φ), $\theta=0^\circ$

f=600 MHz, TEM



f=1800 MHz, R22



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

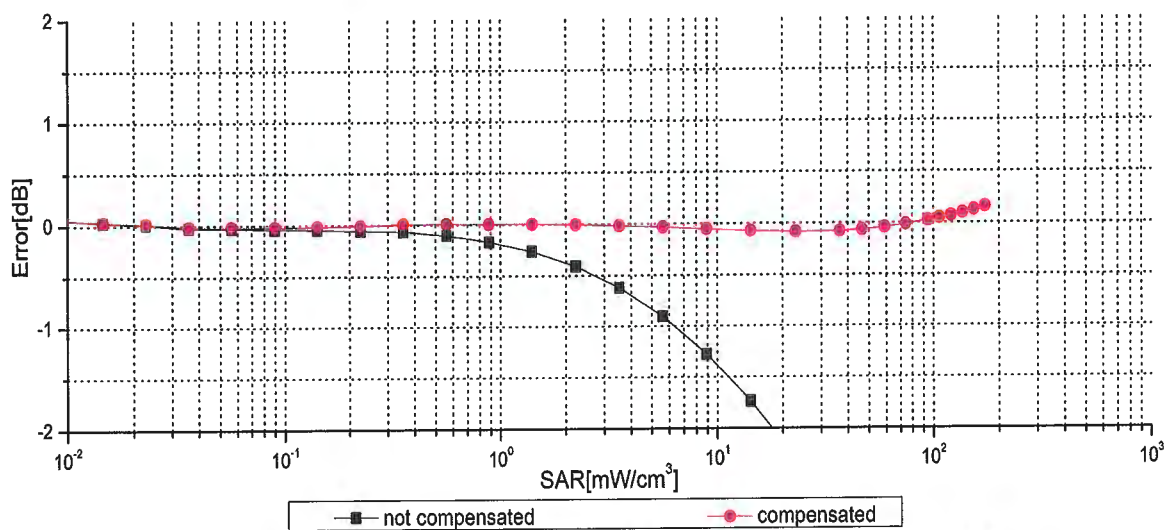
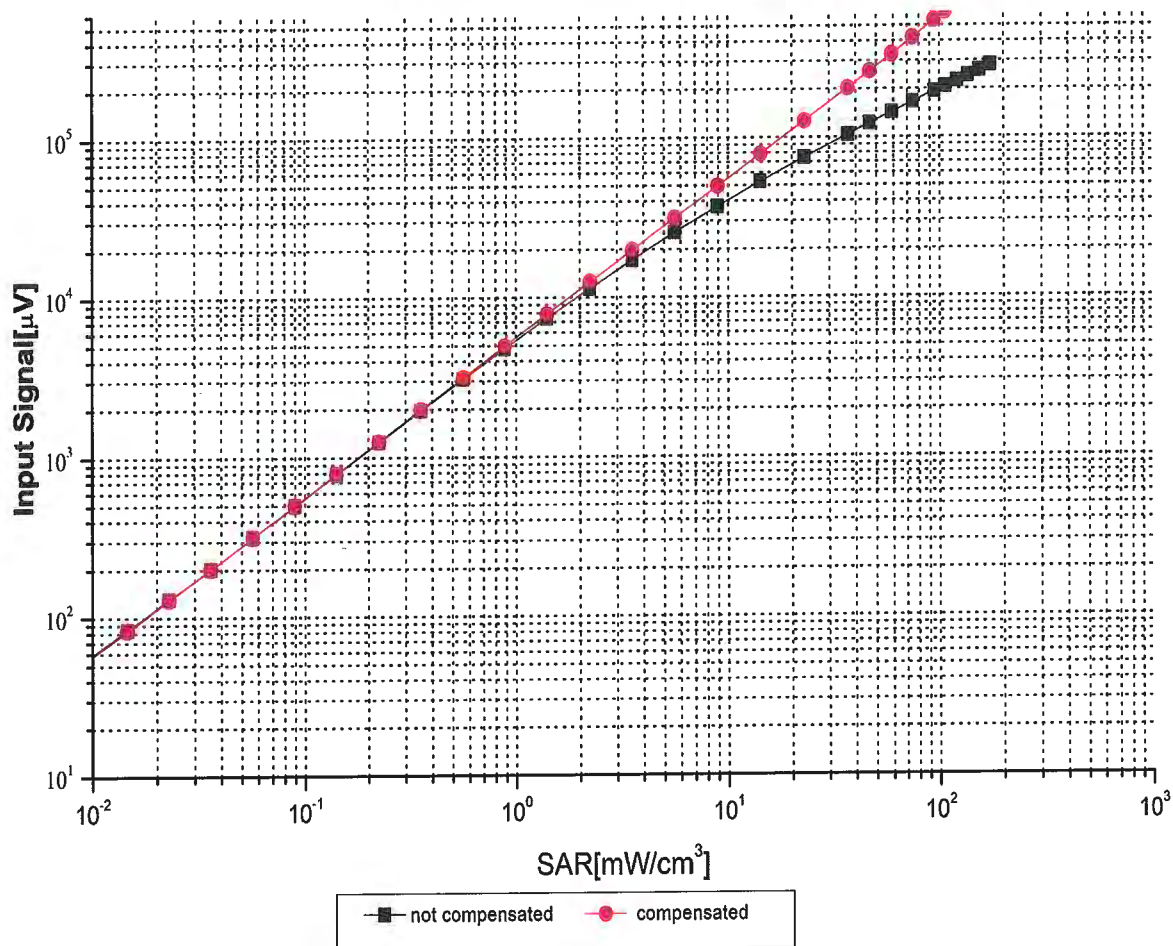


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Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f = 900 \text{ MHz}$)



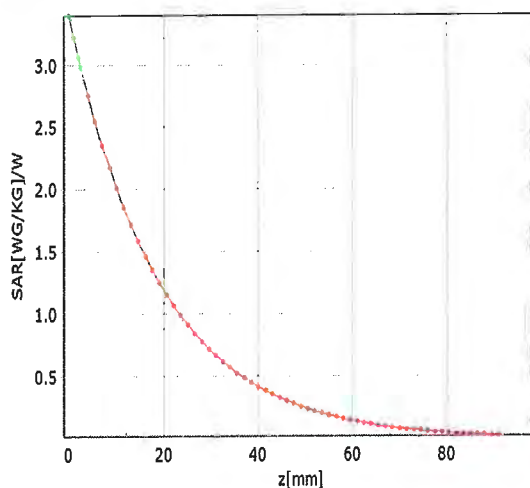
Uncertainty of Linearity Assessment: $\pm 0.9\%$ ($k=2$)

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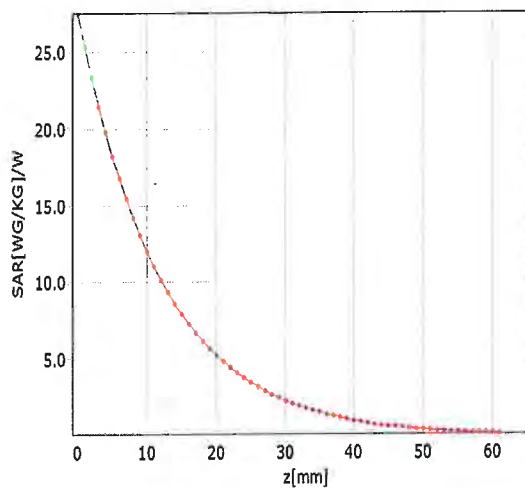
Conversion Factor Assessment

f=835 MHz,WGLS R9(H_convF)

f=1750 MHz,WGLS R22(H_convF)

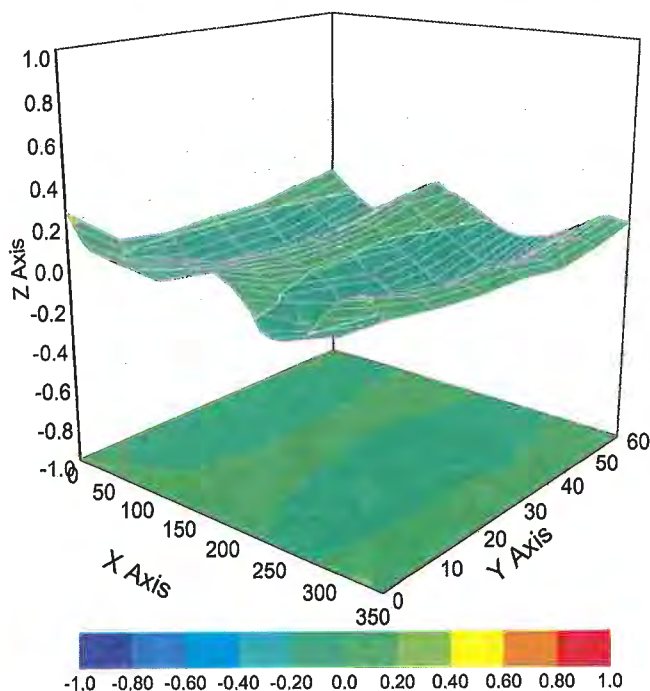


* analytical * measured



* analytical * measured

Deviation from Isotropy in Liquid



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

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Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	85.9
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	9mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm