## DASY/EASY - Parameters of Probe: EX3DV4 SN:3697

#### Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz] <sup>C</sup>	Permittivity	Conductivity	ConvF X Co	nvF Y	ConvF Z	Alpha	Depth Unc (k=2)
750	± 50 / ± 100	41.9 ± 5%	$0.89 \pm 5\%$	9.16	9.16	9.16	0.76	0.62 ± 11.0%
1450	± 50 / ± 100	$40.5 \pm 5\%$	1.20 ± 5%	9.40	9.40	9.40	0.75	0.79 ± 11.0%
2000	± 50 / ± 100	$40.0 \pm 5\%$	1.40 ± 5%	7.69	7.69	7.69	0.58	0.77 ± 11.0%
3500	± 50 / ± 100	$37.9 \pm 5\%$	2.91 ± 5%	6.75	6.75	6.75	0.22	1.78 ± 13.1%
5200	± 50 / ± 100	$36.0 \pm 5\%$	$4.66 \pm 5\%$	4.80	4.80	4.80	0.42	1.80 ± 13.1%
5500	± 50 / ± 100	$35.6 \pm 5\%$	$4.96 \pm 5\%$	4.35	4.35	4.35	0.45	1.80 ± 13.1%
5600	± 50 / ± 100	$35.5 \pm 5\%$	$5.07 \pm 5\%$	3.97	3.97	3.97	0.50	1.80 ± 13.1%
5800	± 50 / ± 100	$35.3 \pm 5\%$	$5.27 \pm 5\%$	4.07	4.07	4.07	0.50	1.80 ± 13.1%

<sup>&</sup>lt;sup>c</sup> The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

2011.4.19

#### Calibration Laboratory of Schmid & Partner

Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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Client

Sporton CN (Auden)

Certificate No: EX3-3697\_Apr11

Accreditation No.: SCS 108

#### CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:3697

Calibration procedure(s)

QA CAL-01.v7, QA CAL-14.v3, QA CAL-23.v4 and QA CAL-25.v3

Calibration procedure for dosimetric E-field probes

Calibration date:

April 19, 2011 (Additional Conversion Factors)

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).

The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	31-Mar-11 (No. 217-01372)	Apr-12
Power sensor E4412A	MY41495277	31-Mar-11 (No. 217-01372)	Apr-12
Power sensor E4412A	MY41498087	31-Mar-11 (No. 217-01372)	Apr-12
Reference 3 dB Attenuator	SN: S5054 (3c)	29-Mar-11 (No. 217-01369)	Apr-12
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Reference 30 dB Attenuator	SN: S5129 (30b)	29-Mar-11 (No. 217-01370)	Apr-12
Reference Probe ES3DV2	SN: 3013	29-Dec-10 (No. ES3-3013_Dec10)	Dec-11
DAE4	SN: 654	23-Apr-10 (No. DAE4-654_Apr10)	Apr-11
Secondary Standards	ID#	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11
	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	El Kol
Approved by:	Fin Bomholt	R&D Director	

Issued: April 19, 2011

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Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL NORMx,y,z tissue simulating liquid sensitivity in free space

ConvF DCP sensitivity in TSL / NORMx,y,z diode compression point

CF A, B, C crest factor (1/duty\_cycle) of the RF signal modulation dependent linearization parameters

Polarization φ

φ rotation around probe axis

Polarization 9

9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., 9 = 0 is normal to probe axis

#### Calibration is Performed According to the Following Standards:

 a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003

 b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

#### Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization θ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide).
   NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z \* frequency\_response (see Frequency Response Chart). This linearization is
  implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included
  in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z: A, B, C are numerical linearization parameters assessed based on the data of
  power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the
  maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

# Probe EX3DV4

SN:3697
Additional Conversion Factors

Manufactured:

April 22, 2009

Last calibrated:

November 23, 2010

Recalibrated:

April 19, 2011

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

## DASY/EASY - Parameters of Probe: EX3DV4 SN:3697

**Basic Calibration Parameters** 

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (μV/(V/m)²) <sup>A</sup>	0.42	0.45	0.47	± 10.1%
DCP (mV) <sup>B</sup>	92.3	94.5	94.0	

**Modulation Calibration Parameters** 

UID	Communication System Name	PAR		A dB	B dBuV	С	VR mV	Unc <sup>E</sup> (k=2)
10000	cw	0.00	X	0.00	0.00	1.00	120.0	± 3.4 %
			Y	0.00	0.00	1.00	140.0	
			Z	0.00	0.00	1.00	110.0	

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 NormX,Y,Z do not affect the E2-field uncertainty inside TSL (see Pages 5 and 6).

<sup>&</sup>lt;sup>B</sup> Numerical linearization parameter: uncertainty not required.

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

## DASY/EASY - Parameters of Probe: EX3DV4 SN:3697

#### Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz] <sup>C</sup>	Permittivity	Conductivity	ConvF X Co	nvF Y	ConvF Z	Alpha	Depth Unc (k=2)
750	±50/±100	41.9 ± 5%	$0.89 \pm 5\%$	9.16	9.16	9.16	0.76	0.62 ± 11.0%
1450	±50/±100	40.5 ± 5%	1.20 ± 5%	9.40	9.40	9.40	0.75	0.79 ± 11.0%
2000	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	7.69	7.69	7.69	0.58	0.77 ± 11.0%
3500	± 50 / ± 100	$37.9 \pm 5\%$	2.91 ± 5%	6.75	6.75	6.75	0.22	1.78 ± 13.1%
5200	± 50 / ± 100	$36.0 \pm 5\%$	4.66 ± 5%	4.80	4.80	4.80	0.42	1.80 ± 13.1%
5500	± 50 / ± 100	$35.6 \pm 5\%$	$4.96 \pm 5\%$	4.35	4.35	4.35	0.45	1.80 ± 13.1%
5600	± 50 / ± 100	$35.5 \pm 5\%$	5.07 ± 5%	3.97	3.97	3.97	0.50	1.80 ± 13.1%
5800	± 50 / ± 100	$35.3 \pm 5\%$	$5.27 \pm 5\%$	4.07	4.07	4.07	0.50	1.80 ± 13.1%

<sup>&</sup>lt;sup>C</sup> The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

April 19, 2011

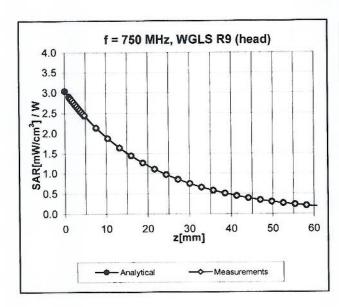
## DASY/EASY - Parameters of Probe: EX3DV4 SN:3697

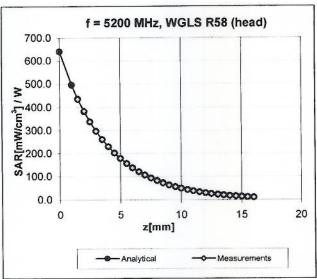
## Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz] <sup>C</sup>	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
750	± 50 / ± 100	55.5 ± 5%	0.96 ± 5%	8.81	8.81	8.81	0.57	0.71 ± 11.0%
1450	± 50 / ± 100	54.0 ± 5%	1.30 ± 5%	8.41	8.41	8.41	0.80	0.68 ± 11.0%
2000	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	7.48	7.48	7.48	0.50	0.84 ± 11.0%
3500	± 50 / ± 100	51.3 ± 5%	3.31 ± 5%	5.85	5.85	5.85	0.20	1.95 ± 13.1%
5200	±50/±100	$49.0 \pm 5\%$	$5.30 \pm 5\%$	3.97	3.97	3.97	0.53	1.90 ± 13.1%
5500	±50/±100	48.6 ± 5%	5.65 ± 5%	3.44	3.44	3.44	0.60	1.90 ± 13.1%
5600	± 50 / ± 100	48.5 ± 5%	5.77 ± 5%	3.25	3.25	3.25	0.65	1.90 ± 13.1%
5800	± 50 / ± 100	48.2 ± 5%	6.00 ± 5%	3.66	3.66	3.66	0.60	1.90 ± 13.1%

<sup>&</sup>lt;sup>c</sup> The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

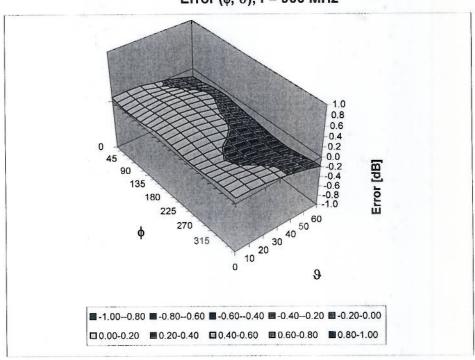
### **Conversion Factor Assessment**





## **Deviation from Isotropy in HSL**





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

April 19, 2011

## **Other Probe Parameters**

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	2 mm

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Client

Sporton (Auden)

Accreditation No.: SCS 108

C

Certificate No: EX3-3792\_Jun11

#### CALIBRATION CERTIFICATE

Object

EX3DV4 - SN:3792

Calibration procedure(s)

QA CAL-01.v8, QA CAL-14.v3, QA CAL-23.v4, QA CAL-25.v4

Calibration procedure for dosimetric E-field probes

Calibration date:

June 20, 2011

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
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Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Reference 30 dB Attenuator	SN: S5129 (30b)	29-Mar-11 (No. 217-01370)	Apr-12
Reference Probe ES3DV2	SN: 3013	29-Dec-10 (No. ES3-3013_Dec10)	Dec-11
DAE4	SN: 654	3-May-11 (No. DAE4-654_May11)	May-12
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	U\$37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Calibrated by:

Name
Function
Signature
Technical Manager

Approved by:

Niels Kuster
Quality Manager

Issued: June 21, 2011

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Glossary:

TSL NORMx,y,z tissue simulating liquid sensitivity in free space

ConvF DCP sensitivity in TSL / NORMx,y,z diode compression point

CF A B C crest factor (1/duty\_cycle) of the RF signal modulation dependent linearization parameters

A, B, C Polarization φ

φ rotation around probe axis

Polarization 9

9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e.,  $\vartheta = 0$  is normal to probe axis

Calibration is Performed According to the Following Standards:

 a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003

b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization θ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z \* frequency\_response (see Frequency Response Chart). This linearization is
  implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included
  in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z: A, B, C are numerical linearization parameters assessed based on the data of
  power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the
  maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

# Probe EX3DV4

SN:3792

Manufactured: Calibrated: April 5, 2011 June 20, 2011

Calibrated for DASY/EASY Systems (Note: non-compatible with DASY2 system!)

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3792

**Basic Calibration Parameters** 

Basic Campration Fara	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (µV/(V/m) <sup>2</sup> ) <sup>A</sup>	0.64	0.54	0.54	± 10.1 %
DCP (mV) <sup>B</sup>	97.9	98.9	99.8	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dB	C dB	VR mV	Unc <sup>E</sup> (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	134.2	±2.7 %
10000	CW		Y	0.00	0.00	1.00	123.8	
			Z	0.00	0.00	1.00	122.9	- 4.1

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%.

<sup>B</sup> Numerical linearization parameter: uncertainty not required.

<sup>&</sup>lt;sup>A</sup> The uncertainties of NormX,Y,Z do not affect the E<sup>2</sup>-field uncertainty inside TSL (see Pages 5 and 6).

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

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:3792

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) <sup>C</sup>	Parameter De Relative Permittivity F	Conductivity (S/m) F	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
835	41.5	0.90	8.93	8.93	8.93	0.80	0.67	± 12.0 %
900	41.5	0.97	8.69	8.69	8.69	0.75	0.71	± 12.0 %
1750	40.1	1.37	8.06	8.06	8.06	0.75	0.62	± 12.0 %
1900	40.0	1.40	7.76	7.76	7.76	0.76	0.60	± 12.0 %
2000	40.0	1.40	7.68	7.68	7.68	0.80	0.57	± 12.0 %
2300	39.5	1.67	7.27	7.27	7.27	0.73	0.61	± 12.0 %
2450	39.2	1.80	6.92	6.92	6.92	0.70	0.62	± 12.0 %
2600	39.0	1.96	6.85	6.85	6.85	0.62	0.68	± 12.0 %
3500	37.9	2.91	6.74	6.74	6.74	0.34	1.03	± 13.1 %
5200	36.0	4.66	4.95	4.95	4.95	0.35	1.80	± 13.1 %
5300	35.9	4.76	4.71	4.71	4.71	0.35	1.80	± 13.1 %
5500	35.6	4.96	4.66	4.66	4.66	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.23	4.23	4.23	0.45	1.80	± 13.1 %
5800	35.3	5.27	4.42	4.42	4.42	0.43	1.80	± 13.1 %

<sup>&</sup>lt;sup>c</sup> Frequency validity 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.

Fat 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 ( $\epsilon$  and  $\sigma$ ) is restricted to  $\pm$  5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

## DASY/EASY - Parameters of Probe: EX3DV4- SN:3792

Calibration Parameter Determined in Body Tissue Simulating Media

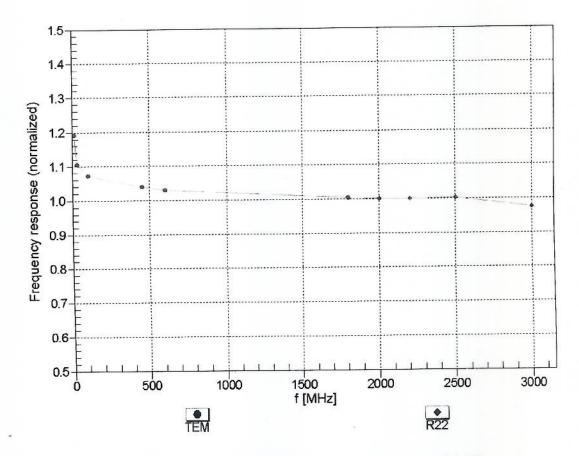
f (MHz) <sup>c</sup>	Parameter De Relative Permittivity F	Conductivity (S/m) <sup>F</sup>	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
835	55.2	0.97	9.02	9.02	9.02	0.80	0.72	± 12.0 %
900	55.0	1.05	8.91	8.91	8.91	0.80	0.71	± 12.0 %
1750	53.4	1.49	7.62	7.62	7.62	0.80	0.69	± 12.0 %
1900	53.3	1.52	7.17	7.17	7.17	0.80	0.64	± 12.0 %
2000	53.3	1.52	7.15	7.15	7.15	0.80	0.63	± 12.0 %
2300	52.9	1.81	6.90	6.90	6.90	0.80	0.61	± 12.0 %
2450	52.7	1.95	6.67	6.67	6.67	0.80	0.59	± 12.0 %
2600	52.5	2.16	6.53	6.53	6.53	0.80	0.60	± 12.0 %
3500	51.3	3.31	6.08	6.08	6.08	0.29	1.48	± 13.1 %
5200	49.0	5.30	4.22	4.22	4.22	0.50	1.90	± 13.1 %
5300	48.9	5.42	3.93	3.93	3.93	0.55	1.90	± 13.1 %
5500	48.6	5.65	3.76	3.76	3.76	0.55	1.90	± 13.1 %
5600	48.5	5.77	3.53	3.53	3.53	0.60	1.90	± 13.1 %
5800	48.2	6.00	3.78	3.78	3.78	0.60	1.90	± 13.1 %

<sup>&</sup>lt;sup>C</sup> Frequency validity 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.

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 ( $\epsilon$  and  $\sigma$ ) is restricted to  $\pm$  5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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

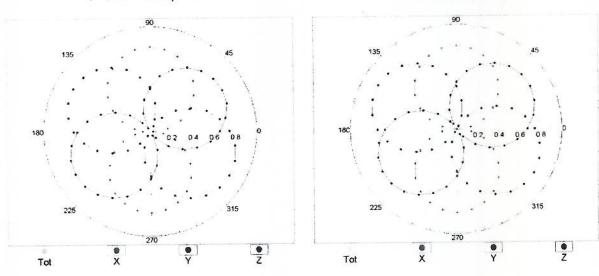


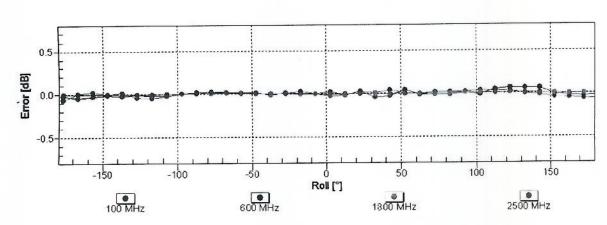
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

## Receiving Pattern ( $\phi$ ), $\vartheta = 0^{\circ}$

f=600 MHz,TEM

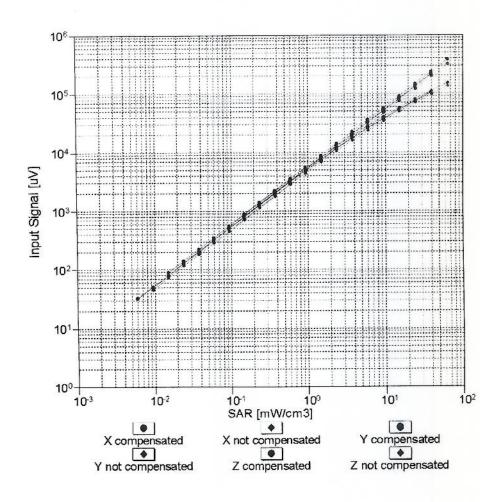
f=1800 MHz,R22

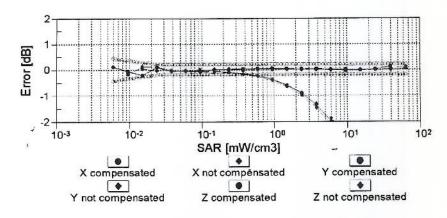




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

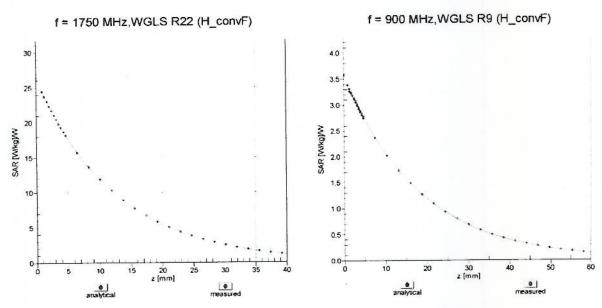
### Dynamic Range f(SAR<sub>head</sub>) (TEM cell , f = 900 MHz)



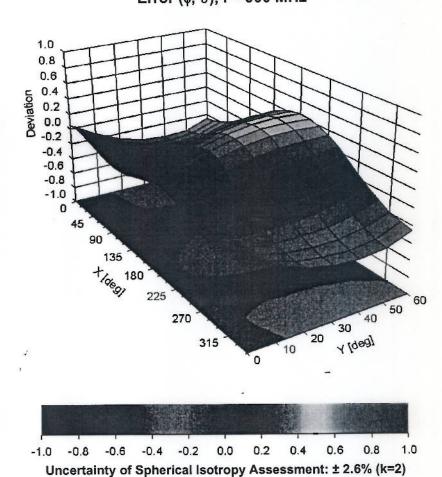


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

## **Conversion Factor Assessment**



Deviation from Isotropy in Liquid Error (φ, θ), f = 900 MHz



## DASY/EASY - Parameters of Probe: EX3DV4 - SN:3792

#### **Other Probe Parameters**

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	2 mm