

EX3DV4 - SN:7346 March 30, 2022

### DASY/EASY - Parameters of Probe: EX3DV4 - SN:7346

**Basic Calibration Parameters**

Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (μV/V/m) <sup>2</sup>	0.48	0.47	0.61 ± 10.1 %
DCP (mV) <sup>2</sup>	101.4	106.0	106.9

**Calibration Results for Modulation Response**

UID	Communication System Name	A	B	C	D	VR	Max dev.	Max Used (k=2)
dB	dB/μV	dB	dB	dB	dB	mV		
0	CV	X 0.00	0.00	1.00	0.00	143.5	± 3.0 %	4.4 %
		Y 0.00	0.00	1.00	0.00	139.3		
		Z 0.00	0.00	1.00	0.00	139.0		
10303-AAA	Pulse Waveform (200Hz, 10%)	X 3.33	68.90	11.66	10.00	60.0	± 3.5 %	± 9.6 %
		Y 4.03	70.70	12.35	10.00	60.0		
		Z 1.63	61.25	6.76	10.00	60.0		
10303-AAA	Pulse Waveform (200Hz, 20%)	X 3.00	70.65	11.31	6.99	60.0	± 2.4 %	± 9.6 %
		Y 11.51	81.32	14.72	10.00	60.0		
		Z 9.83	69.60	5.11	10.00	60.0		
10304-AAA	Pulse Waveform (200Hz, 40%)	X 7.41	79.85	12.51	3.98	60.0	± 2.7 %	± 9.6 %
		Y 26.03	81.62	15.51	10.00	60.0		
		Z 0.19	136.38	0.01	10.00	60.0		
10305-AAA	Pulse Waveform (200Hz, 60%)	X 2.27	75.13	9.52	2.22	120.0	± 1.7 %	± 9.6 %
		Y 20.00	91.58	16.29	10.00	120.0		
		Z 1.54	156.51	16.87	10.00	120.0		
10307-AAA	QPSK Waveform, 1 MHz	X 1.47	64.88	13.82	1.00	150.0	± 4.2 %	± 9.6 %
		Y 1.56	66.27	14.65	0.00	150.0		
		Z 0.45	61.88	11.05	10.00	150.0		
10308-AAA	QPSK Waveform, 10 MHz	X 1.56	66.27	14.65	0.00	150.0	± 1.1 %	± 9.6 %
		Y 2.06	67.33	15.38	10.00	150.0		
		Z 2.41	64.75	15.38	10.00	150.0		
10306-AAA	64-QAM Waveform, 100 MHz	X 2.63	69.51	18.25	3.01	150.0	± 1.0 %	± 9.6 %
		Y 2.74	70.81	19.04	10.00	150.0		
		Z 1.70	64.72	15.99	10.00	150.0		
10309-AAA	64-QAM Waveform, 40 MHz	X 3.38	66.97	15.25	0.00	150.0	± 2.0 %	± 9.6 %
		Y 4.11	69.35	15.27	0.00	150.0		
		Z 2.70	65.72	14.74	10.00	150.0		
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	X 3.83	66.16	15.28	10.00	150.0	± 3.6 %	± 9.6 %
		Y 4.70	65.54	15.41	10.00	150.0		
		Z 3.83	66.16	15.28	10.00	150.0		

Note: For details on UID parameters see Appendix.

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%.

\* The uncertainties of Norm, X, Y, Z do not affect the E<sub>1</sub> field uncertainty inside TSI, see Pages 5 and 6.  
 \* Numerical truncation parameter, uncertainty not required.  
 \* 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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### DASY/EASY - Parameters of Probe: EX3DV4 - SN:7346

**Sensor Model Parameters**

CT	C2	α	T1	T2	T3	T4	T5	T6
IP	V <sup>2</sup>	ms.V <sup>2</sup>	ms.V <sup>2</sup>	ms	ms	ms	ms	ms
X	39.3	291.80	25.10	5.63	0.03	5.02	1.42	0.12
Y	37.1	270.84	34.12	6.29	0.00	5.01	1.82	0.05
Z	9.7	69.74	33.37	4.96	0.00	4.94	0.61	0.00

**Other Probe Parameters**

Sensor Arrangement	Triangular
Connector Angle (°)	-166.1
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	1.4 mm

Note: Measurement distance from surface can be increased to 3-4 mm for an Area Scan job.

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### DASY/EASY - Parameters of Probe: EX3DV4 - SN:7346

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

f (MHz)	Relative Permittivity <sup>1</sup>	Conductivity (S/m) <sup>2</sup>	ConvF X	ConvF Y	ConvF Z	Alpha <sup>3</sup>	Depth <sup>4</sup> (mm)	Unc (k=2)
750	41.9	0.89	10.56	10.56	10.56	0.55	0.85	± 12.0 %
835	41.5	0.90	10.12	10.12	10.12	0.42	0.96	± 12.0 %
900	41.5	0.97	10.10	10.10	10.10	0.53	0.80	± 12.0 %
1450	40.5	1.20	9.26	9.26	9.26	0.50	0.80	± 12.0 %
1750	40.1	1.37	8.83	8.83	8.83	0.34	0.86	± 12.0 %
1900	40.0	1.40	8.48	8.48	8.48	0.35	0.86	± 12.0 %
2000	40.0	1.40	8.35	8.35	8.35	0.34	0.86	± 12.0 %
2300	39.5	1.67	7.86	7.86	7.86	0.39	0.90	± 12.0 %
2450	39.2	1.80	7.63	7.63	7.63	0.41	0.90	± 12.0 %
2800	39.0	1.96	7.33	7.33	7.33	0.44	0.90	± 12.0 %
3300	38.2	2.71	7.15	7.15	7.15	0.30	1.35	± 13.1 %
3500	37.9	2.91	7.14	7.14	7.14	0.30	1.35	± 13.1 %
3700	37.7	3.12	6.85	6.85	6.85	0.30	1.35	± 13.1 %
3900	37.5	3.32	6.71	6.71	6.71	0.40	1.60	± 13.1 %
4100	37.2	3.53	6.58	6.58	6.58	0.40	1.60	± 13.1 %
4200	37.1	3.63	6.30	6.30	6.30	0.40	1.70	± 13.1 %
4400	36.9	3.84	6.24	6.24	6.24	0.40	1.70	± 13.1 %
4600	36.7	4.04	6.11	6.11	6.11	0.40	1.70	± 13.1 %
4800	36.4	4.25	6.08	6.08	6.08	0.40	1.80	± 13.1 %
4950	36.3	4.40	5.84	5.84	5.84	0.40	1.80	± 13.1 %
5200	36.0	4.66	5.25	5.25	5.25	0.40	1.80	± 13.1 %
5300	35.9	4.76	5.12	5.12	5.12	0.40	1.80	± 13.1 %
5500	35.6	4.98	4.85	4.85	4.85	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.70	4.70	4.70	0.40	1.80	± 13.1 %
5800	35.3	5.27	4.75	4.75	4.75	0.40	1.80	± 13.1 %

<sup>1</sup> 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 range. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 20, 64, 128, 160 and 200 MHz respectively. Validity of ConvF assessed at 6 MHz is ± 6 MHz and ConvF assessed at 10 MHz is ± 10 MHz. Frequency validity can be extended to ± 110 MHz.  
<sup>2</sup> All frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be related to ± 10% if liquid compensation formula is applied to measured field values. All 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.  
<sup>3</sup> AlphaDepth are determined during calibration. SFEAD warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz, below ± 2% for frequencies between 3-6 GHz, and below ± 4% for frequencies between 6-10 GHz at any distance larger than half the probe tip diameter from the boundary.  
<sup>4</sup> AlphaDepth are determined during calibration. SFEAD 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.

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### DASY/EASY - Parameters of Probe: EX3DV4 - SN:7346

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

f (MHz)	Relative Permittivity <sup>1</sup>	Conductivity (S/m) <sup>2</sup>	ConvF X	ConvF Y	ConvF Z	Alpha <sup>3</sup>	Depth <sup>4</sup> (mm)	Unc (k=2)
6500	34.5	6.07	5.30	5.30	5.30	0.20	2.50	± 18.6 %

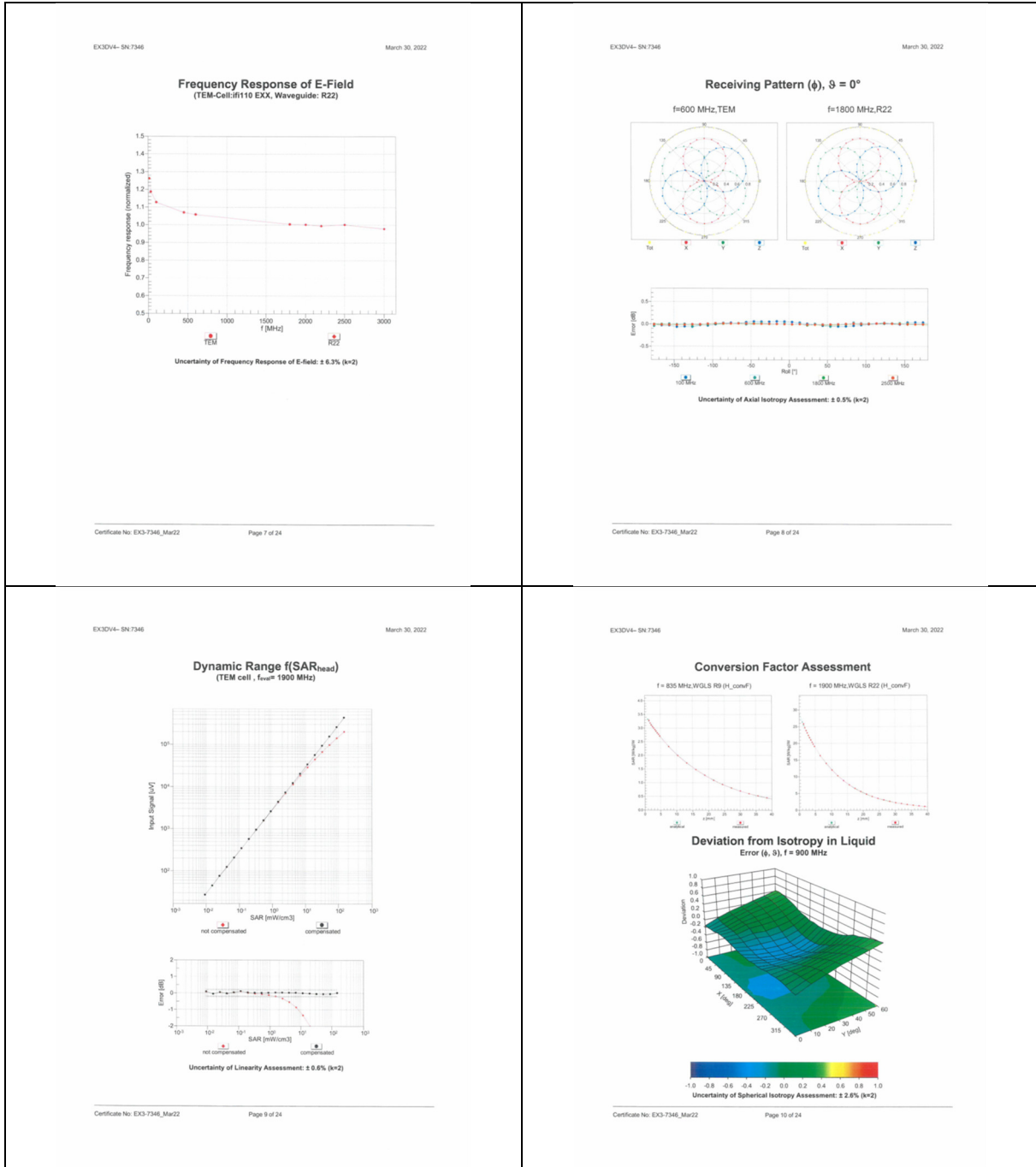
<sup>1</sup> Frequency validity above 6GHz is ± 700 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency range.  
<sup>2</sup> All frequencies 6-10 GHz, the validity of tissue parameters (ε and σ) can be related to ± 10% if liquid compensation formula is applied to measured field values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.  
<sup>3</sup> AlphaDepth are determined during calibration. SFEAD warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz, below ± 2% for frequencies between 3-6 GHz, and below ± 4% for frequencies between 6-10 GHz at any distance larger than half the probe tip diameter from the boundary.  
<sup>4</sup> AlphaDepth are determined during calibration. SFEAD 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.

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Table with columns: UID, Rev, Communication System Name, Group, FAK, UHF, and test results for EX3V4-SN 7346. Includes sub-header 'Appendix: Modulation Calibration Parameters'.

Table with columns: UID, Rev, Communication System Name, Group, FAK, UHF, and test results for EX3V4-SN 7346. Continuation of the test data.

Table with columns: UID, Rev, Communication System Name, Group, FAK, UHF, and test results for EX3V4-SN 7346. Continuation of the test data.

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Table with columns: Part No., Description, Test Method, Result, and Pass/Fail. Includes test results for EX3746-Mar22, March 30, 2022.

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Table with columns: Part No., Description, Test Method, Result, and Pass/Fail. Includes test results for EX3746-Mar22, March 30, 2022.

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Table with columns: Part No., Description, Test Method, Result, and Pass/Fail. Includes test results for EX3746-Mar22, March 30, 2022.

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Table with columns: Part No., Description, Test Method, Result, and Pass/Fail. Includes test results for EX3746-Mar22, March 30, 2022.

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<p>EX3DV4-SN 7346</p> <p>March 30, 2022</p> <p>15985 AAA SG NR DL (CP-QPDM, TM 3.1, 40 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.54 ± 9.6 %</p> <p>15986 AAA SG NR DL (CP-QPDM, TM 3.1, 50 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.50 ± 9.6 %</p> <p>15987 AAA SG NR DL (CP-QPDM, TM 3.1, 60 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.53 ± 9.6 %</p> <p>15988 AAA SG NR DL (CP-QPDM, TM 3.1, 70 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.38 ± 9.6 %</p> <p>15989 AAA SG NR DL (CP-QPDM, TM 3.1, 80 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.33 ± 9.6 %</p> <p>15990 AAA SG NR DL (CP-QPDM, TM 3.1, 90 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.52 ± 9.6 %</p> <p><small>* Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the test value.</small></p>	<p>EX3DV4-SN 7346</p> <p>March 30, 2022</p> <p>15985 AAA SG NR DL (CP-QPDM, TM 3.1, 40 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.54 ± 9.6 %</p> <p>15986 AAA SG NR DL (CP-QPDM, TM 3.1, 50 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.50 ± 9.6 %</p> <p>15987 AAA SG NR DL (CP-QPDM, TM 3.1, 60 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.53 ± 9.6 %</p> <p>15988 AAA SG NR DL (CP-QPDM, TM 3.1, 70 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.38 ± 9.6 %</p> <p>15989 AAA SG NR DL (CP-QPDM, TM 3.1, 80 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.33 ± 9.6 %</p> <p>15990 AAA SG NR DL (CP-QPDM, TM 3.1, 90 MHz, 64-QAM, 30 MHz) SG NR FR1 TOD 9.52 ± 9.6 %</p> <p><small>* Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the test value.</small></p>
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#### 4 Impedance and return loss

Dipole CLA150 SN 4025				
Head Liquid				
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	ΔΩ
2021/4/26	-31.4	/	47.8	/
Dipole D450V3 SN 1103				
Head Liquid				
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	ΔΩ
2021/4/21	-23	/	57.1	/



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