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Accreditation No.: SCS 0108

Client UL US
Fremont, USA

Certificate No. MAGPy-8H3D-3113_Aug24

CALIBRATION CERTIFICATE

Object	MAGPy-8H3D+E3DV2 SN:3113 MAGPy-DASV2 SN:3095
Calibration procedure(s)	QA CAL-46.v1 Calibration Procedure for MAGPy–8H3D+E3D Near-field Electric and Magnetic Field Sensor System
Calibration date	August 15, 2024

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
Oscilloscope	SN: 112135	25-Sep-23 (No. 17A1162175)	Sep-24
Reference 20 dB Attenuator	SN: CC2552 (20x)	26-Mar-24 (No. 217-04046)	Mar-25
Type-N mismatch	SN: 310982 / 06327	26-Mar-24 (No. 217-04047)	Mar-25

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Network Analyzer E5061B	SN: MY49810822	In house check: Nov-23	In house check: Nov-24
TEM Cell	SN: S6029i	In house check: Nov-23	In house check: Nov-24
Plate Capacitor	SN: 6028i	In house check: Nov-23	In house check: Nov-24
Resonator (160kHz)	SN: 6030i	In house check: Nov-23	In house check: Nov-24

	Name	Function	Signature
Calibrated by	Aidonia Georgiadou	Laboratory Engineer	
Approved by	Sven Kühn	Technical Manager	

Issued: August 15, 2024

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Glossary

MAGPy-8H3D-E3D	Magnetic Amplitude and Gradient Probe – Eight H-field Sensors, Single E-field sensor
MAGPy-DAS	Magnetic Amplitude and Gradient Data Acquisition System

Calibration is Performed According to the Following Standards:

a) IEEE Std 1309-2013, "IEEE Standard for calibration of electromagnetic field sensors and probes, excluding antennas, from 9 kHz to 40 GHz", November 2013

Methods Applied and Interpretation of Parameters

- Calibration has been performed after the adjustment of the device.
- *Linearity*: Calibration of the linearity of the field reading over the specified dynamic range at 161.75 kHz. Influence of offset voltage is included in this measurement.
- *Frequency response*: Calibration of the field reading over the specified frequency range from 3.0 kHz to 10.0 MHz.
- Receiving Pattern: Assessed for H-field polarizations ϑ, and $\phi = 0° ... 360°$; $\vartheta = 90°$, and $\phi = 0° ... 360°$; for the XYZ sensors (in TEM-Cell at 4 kHz, 40 kHz, 400 kHz and 4 MHz).
- Receiving Pattern: Assessed for E-field polarizations ϑ, and $\phi = 0° ... 360°$; $\vartheta = 90°$, and $\phi = 0° ... 360°$; for the XYZ sensor (in parallel plate capacitor at 4 kHz, 40 kHz, 400 kHz and 4 MHz).

Calibration Uncertainty

The calibration uncertainty is 0.7 dB for the H-field readings and 1.06 dB for the E-field readings. The calibration uncertainty is specified over the frequency range from 3.0 kHz to 10.0 MHz and a dynamic range from 0.1 A/m to 3200 A/m and from 0.08 V/m to 2000 V/m respectively.

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%.

Measurement Conditions

Unit Type	MAGPy–8H3D+E3DV2 (SP MGY 303 AA)	3113
	MAGPy–DASV2 (SE UMS 303 AE)	3095
	MAGPy FPGA Board	WP000248
Adjustment Date	Last MAGPy Adjustment	August 15, 2024
Firmware SW Version	MAGPy Firmware	Ver. 1.00
Backend SW Version	MAGPy Backend	Ver. 1.0.2
Calibration SW Version	MAGACAP	Ver. 1.0

Dynamic Range

Dynamic Range, H-field, Channel 0

H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			
x	y	z	x	y	z	x	y	z	Tolerance/(dB)
0.390	0.390	0.370	0.420	0.390	0.390	0.64	0.00	0.46	±1.00
0.540	0.530	0.510	0.560	0.530	0.530	0.32	0.00	0.33	±1.00
0.740	0.720	0.700	0.740	0.720	0.700	0.00	0.00	0.00	±1.00
0.960	0.940	0.910	0.950	0.960	0.910	−0.09	0.18	0.00	±1.00
1.30	1.28	1.23	1.30	1.28	1.26	0.00	0.00	0.21	±1.00
1.78	1.75	1.69	1.78	1.76	1.71	0.00	0.05	0.10	±1.00
2.37	2.34	2.25	2.38	2.35	2.27	0.04	0.04	0.08	±0.20
3.17	3.13	3.01	3.18	3.12	3.03	0.03	−0.03	0.06	±0.20
4.31	4.25	4.09	4.32	4.24	4.10	0.02	−0.02	0.02	±0.20
5.82	5.74	5.54	5.86	5.75	5.55	0.06	0.02	0.02	±0.20
7.84	7.73	7.45	7.86	7.74	7.46	0.02	0.01	0.01	±0.20
10.5	10.3	9.95	10.5	10.3	9.95	0.00	0.00	0.00	±0.20
14.1	14.0	13.4	14.2	14.0	13.4	0.06	0.00	0.00	±0.20
19.1	18.8	18.1	19.1	18.8	18.2	0.00	0.00	0.05	±0.20
25.7	25.4	24.4	25.8	25.4	24.5	0.03	0.00	0.04	±0.20
34.3	33.9	32.6	34.5	34.1	32.8	0.05	0.05	0.05	±0.20
46.3	45.8	44.1	46.5	46.0	44.2	0.04	0.04	0.02	±0.20
62.7	62.0	59.6	63.1	62.4	60.1	0.06	0.06	0.07	±0.20
86.3	85.3	82.1	85.9	85.0	81.7	−0.04	−0.03	−0.04	±0.20
113	112	107	112	111	107	−0.08	−0.08	0.00	±0.20
155	153	148	154	153	147	−0.06	0.00	−0.06	±0.20
215	213	204	214	212	204	−0.04	−0.04	0.00	±0.20
297	294	282	298	289	277	0.03	−0.15	−0.16	±0.20
437	433	416	432	428	411	−0.10	−0.10	−0.11	±0.20
602	597	571	599	594	569	−0.04	−0.04	−0.03	±0.20
895	887	849	901	893	855	0.06	0.06	0.06	±0.20
1350	1340	1280	1380	1360	1310	0.19	0.13	0.20	±0.30
1840	1820	1740	1900	1880	1790	0.28	0.28	0.25	±0.30
2990	2960	2830	3120	3080	2960	0.37	0.35	0.39	±0.40
3590	3550	3430	3750	3720	3590	0.38	0.41	0.40	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0 dB for applied H-fields < 2.0 A/m
- ±0.2 dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3 dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4 dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5 dB for applied H-fields ≥ 3000 A/m

[1] Calibration uncertainty not taken into account (shared risk 50%).

Dynamic Range, H-field, Channel 1

H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.400	0.390	0.390	0.430	0.400	0.410	0.63	0.22	0.43	±1.00
0.550	0.530	0.520	0.550	0.520	0.550	0.00	−0.17	0.49	±1.00
0.750	0.730	0.720	0.740	0.710	0.730	−0.12	−0.24	0.12	±1.00
0.970	0.950	0.940	0.970	0.960	0.940	0.00	0.09	0.00	±1.00
1.32	1.28	1.27	1.33	1.31	1.29	0.07	0.20	0.14	±1.00
1.81	1.76	1.74	1.81	1.78	1.75	0.00	0.10	0.05	±1.00
2.41	2.34	2.31	2.43	2.37	2.33	0.07	0.11	0.07	±0.20
3.23	3.14	3.10	3.23	3.15	3.10	0.00	0.03	0.00	±0.20
4.38	4.26	4.20	4.39	4.27	4.21	0.02	0.02	0.02	±0.20
5.92	5.76	5.69	5.93	5.78	5.70	0.01	0.03	0.02	±0.20
7.97	7.76	7.65	7.97	7.80	7.67	0.00	0.04	0.02	±0.20
10.6	10.3	10.2	10.6	10.4	10.2	0.00	0.08	0.00	±0.20
14.4	14.0	13.8	14.4	14.0	13.8	0.00	0.00	0.00	±0.20
19.4	18.9	18.6	19.4	18.9	18.7	0.00	0.00	0.05	±0.20
26.1	25.5	25.1	26.2	25.5	25.2	0.03	0.00	0.03	±0.20
34.9	34.0	33.5	35.0	34.2	33.7	0.02	0.05	0.05	±0.20
47.1	46.0	45.3	47.3	46.1	45.5	0.04	0.02	0.04	±0.20
63.7	62.2	61.3	64.1	62.6	61.7	0.05	0.06	0.06	±0.20
87.7	85.6	84.3	87.4	85.3	83.9	−0.03	−0.03	−0.04	±0.20
115	112	110	114	112	110	−0.08	0.00	0.00	±0.20
158	154	152	157	153	151	−0.06	−0.06	−0.06	±0.20
218	214	210	218	213	209	0.00	−0.04	−0.04	±0.20
302	295	290	303	290	285	0.03	−0.15	−0.15	±0.20
445	435	427	440	430	422	−0.10	−0.10	−0.10	±0.20
612	599	587	609	596	584	−0.04	−0.04	−0.04	±0.20
910	890	872	917	896	878	0.07	0.06	0.06	±0.20
1370	1340	1310	1400	1370	1340	0.19	0.19	0.20	±0.30
1870	1830	1790	1930	1880	1840	0.27	0.23	0.24	±0.30
3040	2970	2910	3170	3090	3030	0.36	0.34	0.35	±0.50
3650	3570	3520	3820	3730	3690	0.40	0.38	0.41	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0 dB for applied H-fields < 2.0 A/m
- ±0.2 dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3 dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4 dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5 dB for applied H-fields ≥ 3000 A/m

[1] Calibration uncertainty not taken into account (shared risk 50%).

Dynamic Range, H-field, Channel 2

H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.400	0.390	0.390	0.440	0.390	0.410	0.83	0.00	0.43	±1.00
0.540	0.530	0.530	0.580	0.530	0.560	0.62	0.00	0.48	±1.00
0.740	0.730	0.720	0.760	0.710	0.740	0.23	−0.24	0.24	±1.00
0.960	0.950	0.940	0.990	0.940	0.940	0.27	−0.09	0.00	±1.00
1.30	1.28	1.27	1.33	1.29	1.28	0.20	0.07	0.07	±1.00
1.78	1.76	1.75	1.80	1.76	1.77	0.10	0.00	0.10	±1.00
2.37	2.34	2.33	2.41	2.35	2.33	0.15	0.04	0.00	±0.20
3.18	3.13	3.12	3.20	3.15	3.12	0.05	0.06	0.00	±0.20
4.31	4.26	4.23	4.33	4.25	4.24	0.04	−0.02	0.02	±0.20
5.83	5.76	5.73	5.83	5.76	5.76	0.00	0.00	0.05	±0.20
7.85	7.75	7.71	7.86	7.75	7.77	0.01	0.00	0.07	±0.20
10.5	10.3	10.3	10.5	10.3	10.3	0.00	0.00	0.00	±0.20
14.1	14.0	13.9	14.2	14.0	14.0	0.06	0.00	0.06	±0.20
19.1	18.9	18.8	19.1	18.9	18.8	0.00	0.00	0.00	±0.20
25.8	25.4	25.3	25.8	25.5	25.4	0.00	0.03	0.03	±0.20
34.3	34.0	33.8	34.5	34.2	34.0	0.05	0.05	0.05	±0.20
46.4	45.9	45.6	46.6	46.1	45.8	0.04	0.04	0.04	±0.20
62.8	62.2	61.7	63.1	62.6	62.2	0.04	0.06	0.07	±0.20
86.4	85.5	85.0	86.1	85.2	84.6	−0.03	−0.03	−0.04	±0.20
113	112	111	113	112	111	0.00	0.00	0.00	±0.20
155	154	153	155	153	152	0.00	−0.06	−0.06	±0.20
215	213	212	214	213	211	−0.04	0.00	−0.04	±0.20
297	295	292	299	290	287	0.06	−0.15	−0.15	±0.20
438	435	430	433	429	425	−0.10	−0.12	−0.10	±0.20
603	598	592	600	595	588	−0.04	−0.04	−0.06	±0.20
896	889	879	902	894	885	0.06	0.05	0.06	±0.20
1350	1340	1320	1380	1370	1350	0.19	0.19	0.20	±0.30
1840	1830	1800	1900	1880	1860	0.28	0.23	0.28	±0.30
2990	2970	2930	3120	3090	3060	0.37	0.34	0.38	±0.40
3590	3560	3550	3760	3720	3720	0.40	0.38	0.41	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0 dB for applied H-fields < 2.0 A/m
- ±0.2 dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3 dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4 dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5 dB for applied H-fields ≥ 3000 A/m

[1] Calibration uncertainty not taken into account (shared risk 50%).

Dynamic Range, H-field, Channel 3

H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			
x	y	z	x	y	z	x	y	z	Tolerance/(dB)
0.400	0.390	0.390	0.420	0.410	0.380	0.42	0.43	−0.23	±1.00
0.540	0.530	0.520	0.530	0.540	0.520	−0.16	0.16	0.00	±1.00
0.740	0.720	0.720	0.730	0.720	0.720	−0.12	0.00	0.00	±1.00
0.960	0.940	0.940	0.970	0.940	0.950	0.09	0.00	0.09	±1.00
1.30	1.27	1.27	1.30	1.29	1.27	0.00	0.14	0.00	±1.00
1.79	1.75	1.74	1.79	1.74	1.74	0.00	−0.05	0.00	±1.00
2.39	2.33	2.32	2.38	2.34	2.32	−0.04	0.04	0.00	±0.20
3.19	3.12	3.10	3.18	3.12	3.10	−0.03	0.00	0.00	±0.20
4.33	4.24	4.21	4.34	4.24	4.21	0.02	0.00	0.00	±0.20
5.86	5.73	5.69	5.87	5.73	5.70	0.01	0.00	0.02	±0.20
7.89	7.72	7.66	7.88	7.72	7.67	−0.01	0.00	0.01	±0.20
10.5	10.3	10.2	10.5	10.3	10.3	0.00	0.00	0.08	±0.20
14.2	13.9	13.8	14.2	13.9	13.9	0.00	0.00	0.06	±0.20
19.2	18.8	18.6	19.2	18.8	18.7	0.00	0.00	0.05	±0.20
25.9	25.3	25.1	25.9	25.4	25.2	0.00	0.03	0.03	±0.20
34.5	33.8	33.6	34.7	34.0	33.8	0.05	0.05	0.05	±0.20
46.6	45.7	45.3	46.8	45.9	45.5	0.04	0.04	0.04	±0.20
63.0	61.9	61.3	63.4	62.3	61.8	0.05	0.06	0.07	±0.20
86.8	85.1	84.4	86.5	84.8	84.0	−0.03	−0.03	−0.04	±0.20
114	112	110	113	111	110	−0.08	−0.08	0.00	±0.20
156	153	152	155	153	151	−0.06	0.00	−0.06	±0.20
216	212	210	216	212	210	0.00	0.00	0.00	±0.20
299	294	290	300	288	286	0.03	−0.18	−0.12	±0.20
440	433	427	435	427	423	−0.10	−0.12	−0.08	±0.20
606	596	588	603	592	585	−0.04	−0.06	−0.04	±0.20
900	885	873	908	890	880	0.08	0.05	0.07	±0.20
1360	1340	1320	1390	1360	1340	0.19	0.13	0.13	±0.30
1850	1820	1790	1910	1870	1850	0.28	0.24	0.29	±0.30
3010	2950	2910	3140	3050	3040	0.37	0.29	0.38	±0.50
3610	3550	3520	3780	3670	3690	0.40	0.29	0.41	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0 dB for applied H-fields < 2.0 A/m
- ±0.2 dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3 dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4 dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5 dB for applied H-fields ≥ 3000 A/m

[1] Calibration uncertainty not taken into account (shared risk 50%).

Dynamic Range, H-field, Channel 4

H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			
x	y	z	x	y	z	x	y	z	Tolerance/(dB)
0.390	0.400	0.390	0.400	0.400	0.400	0.22	0.00	0.22	±1.00
0.530	0.540	0.530	0.520	0.540	0.540	−0.17	0.00	0.16	±1.00
0.730	0.740	0.730	0.720	0.740	0.720	−0.12	0.00	−0.12	±1.00
0.950	0.960	0.950	0.950	0.970	0.950	0.00	0.09	0.00	±1.00
1.29	1.30	1.29	1.31	1.31	1.29	0.13	0.07	0.00	±1.00
1.77	1.79	1.77	1.78	1.80	1.77	0.05	0.05	0.00	±1.00
2.36	2.38	2.36	2.38	2.40	2.36	0.07	0.07	0.00	±0.20
3.16	3.18	3.15	3.18	3.19	3.15	0.05	0.03	0.00	±0.20
4.29	4.32	4.28	4.30	4.32	4.27	0.02	0.00	−0.02	±0.20
5.80	5.85	5.79	5.81	5.85	5.79	0.01	0.00	0.00	±0.20
7.81	7.88	7.79	7.81	7.89	7.80	0.00	0.01	0.01	±0.20
10.4	10.5	10.4	10.4	10.5	10.4	0.00	0.00	0.00	±0.20
14.1	14.2	14.0	14.1	14.2	14.1	0.00	0.00	0.06	±0.20
19.0	19.2	18.9	18.9	19.2	19.0	−0.05	0.00	0.05	±0.20
25.6	25.9	25.6	25.6	25.9	25.6	0.00	0.00	0.00	±0.20
34.2	34.5	34.1	34.3	34.7	34.4	0.03	0.05	0.08	±0.20
46.1	46.6	46.1	46.4	46.9	46.3	0.06	0.06	0.04	±0.20
62.4	63.2	62.4	62.8	63.6	62.8	0.06	0.05	0.06	±0.20
85.9	86.9	85.8	85.6	86.6	85.4	−0.03	−0.03	−0.04	±0.20
112	114	112	112	113	112	0.00	−0.08	0.00	±0.20
154	156	154	154	156	154	0.00	0.00	0.00	±0.20
214	217	214	213	216	213	−0.04	−0.04	−0.04	±0.20
296	300	295	297	294	290	0.03	−0.18	−0.15	±0.20
436	441	435	431	436	430	−0.10	−0.10	−0.10	±0.20
600	608	597	597	604	594	−0.04	−0.06	−0.04	±0.20
892	904	888	898	909	894	0.06	0.05	0.06	±0.20
1350	1360	1340	1370	1390	1370	0.13	0.19	0.19	±0.30
1830	1860	1820	1890	1910	1880	0.28	0.23	0.28	±0.30
2980	3010	2960	3100	3140	3090	0.34	0.37	0.37	±0.50
3570	3620	3580	3740	3780	3750	0.40	0.38	0.40	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0dB for applied H-fields < 2.0A/m
- ±0.2dB for applied H-fields ≥ 2.0A/m and < 1000A/m
- ±0.3dB for applied H-fields ≥ 1000A/m and < 2000A/m
- ±0.4dB for applied H-fields ≥ 2000A/m and < 3000A/m
- ±0.5dB for applied H-fields ≥ 3000A/m

[1] Calibration uncertainty not taken into account (shared risk 50%).

Dynamic Range, H-field, Channel 5

H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.400	0.400	0.400	0.410	0.400	0.420	0.21	0.00	0.42	±1.00
0.540	0.540	0.540	0.550	0.540	0.550	0.16	0.00	0.16	±1.00
0.740	0.750	0.750	0.750	0.760	0.740	0.12	0.12	−0.12	±1.00
0.960	0.970	0.970	0.960	0.990	0.970	0.00	0.18	0.00	±1.00
1.30	1.31	1.31	1.30	1.34	1.32	0.00	0.20	0.07	±1.00
1.78	1.80	1.80	1.78	1.82	1.80	0.00	0.10	0.00	±1.00
2.37	2.40	2.40	2.38	2.42	2.42	0.04	0.07	0.07	±0.20
3.18	3.22	3.21	3.16	3.23	3.23	−0.05	0.03	0.05	±0.20
4.31	4.37	4.36	4.32	4.38	4.37	0.02	0.02	0.02	±0.20
5.82	5.91	5.90	5.84	5.94	5.91	0.03	0.04	0.01	±0.20
7.84	7.96	7.95	7.84	7.98	7.95	0.00	0.02	0.00	±0.20
10.5	10.6	10.6	10.4	10.6	10.6	−0.08	0.00	0.00	±0.20
14.1	14.3	14.3	14.1	14.3	14.3	0.00	0.00	0.00	±0.20
19.1	19.4	19.3	19.0	19.4	19.4	−0.05	0.00	0.04	±0.20
25.7	26.1	26.1	25.7	26.2	26.1	0.00	0.03	0.00	±0.20
34.3	34.8	34.8	34.5	35.1	35.1	0.05	0.07	0.07	±0.20
46.4	47.1	47.0	46.5	47.3	47.2	0.02	0.04	0.04	±0.20
62.7	63.8	63.6	63.1	64.2	64.1	0.06	0.05	0.07	±0.20
86.3	87.7	87.5	86.0	87.4	87.1	−0.03	−0.03	−0.04	±0.20
113	115	114	112	114	114	−0.08	−0.08	0.00	±0.20
155	158	157	154	157	157	−0.06	−0.06	0.00	±0.20
215	219	218	214	218	217	−0.04	−0.04	−0.04	±0.20
297	303	301	298	297	296	0.03	−0.17	−0.15	±0.20
438	446	443	433	440	438	−0.10	−0.12	−0.10	±0.20
602	614	609	600	610	606	−0.03	−0.06	−0.04	±0.20
895	912	905	902	917	911	0.07	0.05	0.06	±0.20
1350	1380	1360	1380	1400	1390	0.19	0.12	0.19	±0.30
1840	1870	1860	1900	1930	1910	0.28	0.27	0.23	±0.30
2990	3040	3020	3120	3170	3150	0.37	0.36	0.37	±0.50
3590	3650	3650	3760	3820	3820	0.40	0.40	0.40	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0 dB for applied H-fields < 2.0 A/m
- ±0.2 dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3 dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4 dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5 dB for applied H-fields ≥ 3000 A/m

[1] Calibration uncertainty not taken into account (shared risk 50%).

Dynamic Range, H-field, Channel 6

H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.400	0.400	0.400	0.410	0.420	0.420	0.21	0.42	0.42	±1.00
0.550	0.540	0.540	0.550	0.550	0.550	0.00	0.16	0.16	±1.00
0.750	0.740	0.740	0.740	0.730	0.730	−0.12	−0.12	−0.12	±1.00
0.980	0.970	0.960	0.980	0.970	0.960	0.00	0.00	0.00	±1.00
1.33	1.31	1.30	1.33	1.33	1.32	0.00	0.13	0.13	±1.00
1.82	1.80	1.78	1.82	1.80	1.80	0.00	0.00	0.10	±1.00
2.42	2.40	2.37	2.43	2.41	2.40	0.04	0.04	0.11	±0.20
3.24	3.21	3.17	3.25	3.22	3.20	0.03	0.03	0.08	±0.20
4.40	4.35	4.31	4.40	4.36	4.34	0.00	0.02	0.06	±0.20
5.95	5.89	5.83	5.96	5.91	5.86	0.01	0.03	0.04	±0.20
8.01	7.93	7.85	8.00	7.95	7.87	−0.01	0.02	0.02	±0.20
10.7	10.6	10.5	10.7	10.6	10.5	0.00	0.00	0.00	±0.20
14.4	14.3	14.2	14.4	14.3	14.2	0.00	0.00	0.00	±0.20
19.5	19.3	19.1	19.4	19.3	19.2	−0.04	0.00	0.05	±0.20
26.3	26.0	25.7	26.3	26.1	25.8	0.00	0.03	0.03	±0.20
35.0	34.7	34.4	35.2	34.9	34.6	0.05	0.05	0.05	±0.20
47.3	47.0	46.4	47.6	47.2	46.6	0.05	0.04	0.04	±0.20
64.0	63.6	62.8	64.4	64.0	63.3	0.05	0.05	0.07	±0.20
88.1	87.4	86.5	87.8	87.2	86.1	−0.03	−0.02	−0.04	±0.20
115	115	113	115	114	113	0.00	−0.08	0.00	±0.20
158	157	155	158	157	155	0.00	0.00	0.00	±0.20
219	218	215	219	217	215	0.00	−0.04	0.00	±0.20
303	302	297	305	296	292	0.06	−0.17	−0.15	±0.20
447	444	438	442	438	433	−0.10	−0.12	−0.10	±0.20
615	612	602	612	608	600	−0.04	−0.06	−0.03	±0.20
915	909	894	921	914	901	0.06	0.05	0.07	±0.20
1380	1370	1350	1410	1400	1380	0.19	0.19	0.19	±0.30
1880	1870	1830	1940	1920	1890	0.27	0.23	0.28	±0.30
3050	3030	2990	3180	3160	3110	0.36	0.36	0.34	±0.50
3670	3640	3610	3830	3800	3780	0.37	0.37	0.40	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0 dB for applied H-fields < 2.0 A/m
- ±0.2 dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3 dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4 dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5 dB for applied H-fields ≥ 3000 A/m

[1] Calibration uncertainty not taken into account (shared risk 50%).

Dynamic Range, H-field, Channel 7

H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			
x	y	z	x	y	z	x	y	z	Tolerance/(dB)
0.400	0.390	0.380	0.400	0.410	0.420	0.00	0.43	0.87	±1.00
0.540	0.520	0.520	0.530	0.550	0.540	−0.16	0.49	0.33	±1.00
0.740	0.720	0.710	0.730	0.750	0.730	−0.12	0.35	0.24	±1.00
0.970	0.940	0.930	0.960	0.980	0.960	−0.09	0.36	0.28	±1.00
1.31	1.27	1.25	1.33	1.32	1.27	0.13	0.34	0.14	±1.00
1.80	1.74	1.72	1.82	1.77	1.75	0.10	0.15	0.15	±1.00
2.40	2.32	2.29	2.41	2.36	2.32	0.04	0.15	0.11	±0.20
3.21	3.10	3.07	3.23	3.13	3.09	0.05	0.08	0.06	±0.20
4.36	4.21	4.16	4.36	4.28	4.18	0.00	0.14	0.04	±0.20
5.89	5.70	5.64	5.90	5.79	5.65	0.01	0.14	0.02	±0.20
7.93	7.68	7.59	7.93	7.77	7.60	0.00	0.10	0.01	±0.20
10.6	10.2	10.1	10.6	10.3	10.1	0.00	0.08	0.00	±0.20
14.3	13.8	13.7	14.3	13.9	13.7	0.00	0.06	0.00	±0.20
19.3	18.7	18.4	19.3	18.7	18.5	0.00	0.00	0.05	±0.20
26.0	25.2	24.9	26.1	25.3	24.9	0.03	0.03	0.00	±0.20
34.7	33.6	33.2	34.9	33.9	33.4	0.05	0.08	0.05	±0.20
46.9	45.5	44.9	47.1	45.6	45.0	0.04	0.02	0.02	±0.20
63.4	61.5	60.7	63.8	62.0	61.2	0.05	0.07	0.07	±0.20
87.3	84.7	83.6	86.9	84.4	83.2	−0.04	−0.03	−0.04	±0.20
114	111	109	114	110	109	0.00	−0.08	0.00	±0.20
157	152	150	156	152	150	−0.06	0.00	0.00	±0.20
217	211	208	217	210	207	0.00	−0.04	−0.04	±0.20
300	292	287	302	287	283	0.06	−0.15	−0.12	±0.20
443	430	423	437	425	419	−0.12	−0.10	−0.08	±0.20
609	592	582	606	589	579	−0.04	−0.04	−0.04	±0.20
905	880	864	912	886	871	0.07	0.06	0.07	±0.20
1370	1330	1300	1390	1350	1330	0.13	0.13	0.20	±0.30
1860	1810	1770	1920	1860	1830	0.28	0.24	0.29	±0.30
3020	2940	2890	3150	3060	3010	0.37	0.35	0.35	±0.50
3630	3530	3490	3800	3690	3660	0.40	0.39	0.41	±0.50

SPEAG H-field linearity tolerance criteria[1]:
- ±1.0 dB for applied H-fields < 2.0 A/m
- ±0.2 dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3 dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4 dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5 dB for applied H-fields ≥ 3000 A/m

[1] Calibration uncertainty not taken into account (shared risk 50%).

Dynamic Range, E-field, Channel 0

E-field/(V/m) Applied			E-field/(V/m) Reading			Difference/(dB)			Tolerance/(dB)		
x	y	z	x	y	z	x	y	z	x	y	z
0.340	0.210	0.100	0.340	0.220	0.110	0.00	0.40	0.83	±5.00	±5.00	±5.00
0.460	0.290	0.140	0.470	0.300	0.130	0.19	0.29	−0.64	±5.00	±5.00	±5.00
0.640	0.400	0.190	0.640	0.400	0.170	0.00	0.00	−0.97	±5.00	±5.00	±5.00
0.830	0.520	0.240	0.840	0.520	0.210	0.10	0.00	−1.16	±5.00	±5.00	±5.00
1.12	0.710	0.330	1.14	0.710	0.320	0.15	0.00	−0.27	±5.00	±5.00	±5.00
1.54	0.970	0.450	1.56	0.980	0.440	0.11	0.09	−0.20	±5.00	±5.00	±5.00
2.06	1.29	0.600	2.07	1.30	0.600	0.04	0.07	0.00	±1.00	±5.00	±5.00
2.75	1.73	0.800	2.77	1.72	0.800	0.06	−0.05	0.00	±1.00	±5.00	±5.00
3.74	2.35	1.09	3.77	2.33	1.08	0.07	−0.07	−0.08	±1.00	±1.00	±5.00
5.06	3.17	1.47	5.10	3.16	1.47	0.07	−0.03	0.00	±1.00	±1.00	±5.00
6.81	4.27	1.98	6.85	4.24	1.97	0.05	−0.06	−0.04	±1.00	±1.00	±5.00
9.09	5.70	2.64	9.14	5.66	2.61	0.05	−0.06	−0.10	±1.00	±1.00	±1.00
12.3	7.71	3.57	12.3	7.65	3.51	0.00	−0.07	−0.15	±1.00	±1.00	±1.00
16.6	10.4	4.82	16.6	10.3	4.72	0.00	−0.08	−0.18	±1.00	±1.00	±1.00
22.4	14.0	6.50	22.4	13.9	6.39	0.00	−0.06	−0.15	±1.00	±1.00	±1.00
29.8	18.7	8.67	30.1	18.7	8.55	0.09	0.00	−0.12	±1.00	±1.00	±1.00
40.3	25.3	11.7	40.7	25.2	11.5	0.09	−0.03	−0.15	±1.00	±1.00	±1.00
54.6	34.3	15.8	55.2	34.2	15.6	0.09	−0.03	−0.11	±1.00	±1.00	±1.00
75.1	47.1	21.8	75.2	46.6	21.3	0.01	−0.09	−0.20	±1.00	±1.00	±1.00
98.4	61.7	28.5	98.3	60.9	27.9	−0.01	−0.11	−0.18	±1.00	±1.00	±1.00
135	84.8	39.2	135	83.8	38.3	0.00	−0.10	−0.20	±1.00	±1.00	±1.00
187	118	54.3	188	116	53.1	0.05	−0.15	−0.19	±1.00	±1.00	±1.00
259	162	75.0	262	162	74.0	0.10	0.00	−0.12	±1.00	±1.00	±1.00
382	239	111	369	229	110	−0.30	−0.37	−0.08	±1.00	±1.00	±1.00
525	330	152	511	317	152	−0.23	−0.35	0.00	±1.00	±1.00	±1.00
781	490	226	770	477	229	−0.12	−0.23	0.11	±1.00	±1.00	±1.00
1180	739	342	1180	730	351	0.00	−0.11	0.23	±1.00	±1.00	±1.00
1600	1010	465	1620	1000	459	0.11	−0.09	−0.11	±1.00	±1.00	±1.00
2610	1640	755	2660	1650	760	0.16	0.05	0.06	±1.00	±1.00	±1.00
3130	1960	907	3210	1990	919	0.22	0.13	0.11	±1.00	±1.00	±1.00

SPEAG E-field linearity tolerance criteria[1]:
±5.0 dB for applied E-field < 2 V/m
±1.0 dB for applied E-field ≥ 2 V/m

[1] Calibration uncertainty not taken into account (shared risk 50%).

Frequency Response

Frequency Response, H-field, Channel 0

	H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			
f/(Hz)	x	y	z	x	y	z	x	y	z	Tolerance/(dB)
3000	1.52	1.53	1.53	1.52	1.52	1.52	0.00	−0.06	−0.06	±0.3
3200	1.52	1.52	1.52	1.54	1.54	1.53	0.11	0.11	0.06	±0.3
4000	1.51	1.51	1.51	1.50	1.51	1.51	−0.06	0.00	0.00	±0.3
5200	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
6600	1.49	1.49	1.49	1.49	1.49	1.49	0.00	0.00	0.00	±0.3
8200	1.48	1.48	1.48	1.48	1.47	1.49	0.00	−0.06	0.06	±0.3
9000	1.47	1.48	1.47	1.47	1.47	1.47	0.00	−0.06	0.00	±0.3
10600	4.17	4.24	4.23	4.27	4.22	4.24	0.21	−0.04	0.02	±0.3
13400	4.29	4.25	4.25	4.27	4.24	4.24	−0.04	−0.02	−0.02	±0.3
17000	4.29	4.25	4.25	4.27	4.24	4.24	−0.04	−0.02	−0.02	±0.3
21400	4.32	4.27	4.27	4.30	4.26	4.26	−0.04	−0.02	−0.02	±0.3
27200	4.31	4.27	4.27	4.30	4.26	4.26	−0.02	−0.02	−0.02	±0.3
34400	4.31	4.28	4.28	4.28	4.26	4.26	−0.06	−0.04	−0.04	±0.3
40000	4.30	4.27	4.27	4.28	4.25	4.26	−0.04	−0.04	−0.02	±0.3
43600	4.29	4.26	4.27	4.27	4.25	4.25	−0.04	−0.02	−0.04	±0.3
55400	4.28	4.25	4.26	4.26	4.24	4.24	−0.04	−0.02	−0.04	±0.3
70000	4.26	4.24	4.25	4.26	4.22	4.22	0.00	−0.04	−0.06	±0.3
88800	4.25	4.23	4.23	4.24	4.21	4.22	−0.02	−0.04	−0.02	±0.3
112400	4.24	4.21	4.22	4.23	4.20	4.22	−0.02	−0.02	0.00	±0.3
142400	4.22	4.20	4.21	4.21	4.20	4.20	−0.02	0.00	−0.02	±0.3
161750	4.20	4.18	4.19	4.19	4.17	4.18	−0.02	−0.02	−0.02	±0.3
180400	4.19	4.17	4.18	4.17	4.16	4.17	−0.04	−0.02	−0.02	±0.3
228400	4.16	4.14	4.15	4.16	4.14	4.14	0.00	0.00	−0.02	±0.3
289400	4.12	4.10	4.12	4.11	4.10	4.11	−0.02	0.00	−0.02	±0.3
366400	4.09	4.07	4.08	4.08	4.06	4.07	−0.02	−0.02	−0.02	±0.3
400000	4.07	4.05	4.06	4.06	4.04	4.05	−0.02	−0.02	−0.02	±0.3
464000	4.04	4.02	4.04	4.02	4.02	4.03	−0.04	0.00	−0.02	±0.3
587800	4.00	3.98	4.00	3.99	3.97	3.99	−0.02	−0.02	−0.02	±0.3
744200	3.95	3.94	3.96	3.95	3.93	3.95	0.00	−0.02	−0.02	±0.3
942600	3.94	3.93	3.94	3.93	3.93	3.93	−0.02	0.00	−0.02	±0.3
1193600	3.91	3.90	3.92	3.92	3.90	3.91	0.02	0.00	−0.02	±0.3
1511600	3.90	3.89	3.91	3.89	3.89	3.90	−0.02	0.00	−0.02	±0.3
1914400	3.88	3.87	3.89	3.88	3.86	3.89	0.00	−0.02	0.00	±0.3
2424400	3.87	3.86	3.88	3.86	3.86	3.87	−0.02	0.00	−0.02	±0.3
3070200	3.84	3.83	3.85	3.84	3.81	3.84	0.00	−0.05	−0.02	±0.3
3888000	3.78	3.77	3.79	3.78	3.75	3.78	0.00	−0.05	−0.02	±0.3
4000000	3.77	3.76	3.78	3.77	3.76	3.78	0.00	0.00	0.00	±0.3
4923800	3.70	3.69	3.72	3.69	3.71	3.71	−0.02	0.05	−0.02	±0.3
6235400	3.60	3.59	3.62	3.59	3.58	3.62	−0.02	−0.02	0.00	±0.3
7896400	3.45	3.44	3.47	3.45	3.43	3.47	0.00	−0.03	0.00	±0.3
10000000	3.31	3.31	3.33	3.31	3.30	3.35	0.00	−0.03	0.05	±0.3

SPEAG H-field frequency response tolerance criteria[1]:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

[1] Calibration uncertainty not taken into account (shared risk 50%).

Frequency Response, H-field, Channel 1

	H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			
f/(Hz)	x	y	z	x	y	z	x	y	z	Tolerance/(dB)
3000	1.52	1.53	1.53	1.52	1.53	1.53	0.00	0.00	0.00	±0.3
3200	1.52	1.52	1.52	1.53	1.53	1.53	0.06	0.06	0.06	±0.3
4000	1.51	1.51	1.51	1.50	1.51	1.51	−0.06	0.00	0.00	±0.3
5200	1.50	1.50	1.50	1.50	1.51	1.50	0.00	0.06	0.00	±0.3
6600	1.49	1.49	1.49	1.49	1.49	1.49	0.00	0.00	0.00	±0.3
8200	1.48	1.48	1.48	1.48	1.47	1.48	0.00	−0.06	0.00	±0.3
9000	1.47	1.48	1.47	1.47	1.47	1.47	0.00	−0.06	0.00	±0.3
10600	4.17	4.24	4.23	4.24	4.21	4.26	0.14	−0.06	0.06	±0.3
13400	4.29	4.25	4.25	4.27	4.23	4.25	−0.04	−0.04	0.00	±0.3
17000	4.29	4.25	4.25	4.26	4.23	4.23	−0.06	−0.04	−0.04	±0.3
21400	4.32	4.27	4.27	4.28	4.27	4.26	−0.08	0.00	−0.02	±0.3
27200	4.31	4.27	4.27	4.28	4.24	4.25	−0.06	−0.06	−0.04	±0.3
34400	4.31	4.28	4.28	4.28	4.26	4.27	−0.06	−0.04	−0.02	±0.3
40000	4.30	4.27	4.27	4.28	4.26	4.26	−0.04	−0.02	−0.02	±0.3
43600	4.29	4.26	4.27	4.26	4.25	4.26	−0.06	−0.02	−0.02	±0.3
55400	4.28	4.25	4.26	4.25	4.24	4.24	−0.06	−0.02	−0.04	±0.3
70000	4.26	4.24	4.25	4.25	4.22	4.24	−0.02	−0.04	−0.02	±0.3
88800	4.25	4.23	4.23	4.23	4.21	4.21	−0.04	−0.04	−0.04	±0.3
112400	4.24	4.21	4.22	4.22	4.20	4.21	−0.04	−0.02	−0.02	±0.3
142400	4.22	4.20	4.21	4.21	4.19	4.19	−0.02	−0.02	−0.04	±0.3
161750	4.20	4.18	4.19	4.18	4.17	4.18	−0.04	−0.02	−0.02	±0.3
180400	4.19	4.17	4.18	4.17	4.16	4.17	−0.04	−0.02	−0.02	±0.3
228400	4.16	4.14	4.15	4.15	4.13	4.14	−0.02	−0.02	−0.02	±0.3
289400	4.12	4.10	4.12	4.12	4.10	4.11	0.00	0.00	−0.02	±0.3
366400	4.09	4.07	4.08	4.08	4.06	4.07	−0.02	−0.02	−0.02	±0.3
400000	4.07	4.05	4.06	4.06	4.03	4.05	−0.02	−0.04	−0.02	±0.3
464000	4.04	4.02	4.04	4.03	4.01	4.02	−0.02	−0.02	−0.04	±0.3
587800	4.00	3.98	4.00	3.98	3.97	3.99	−0.04	−0.02	−0.02	±0.3
744200	3.95	3.94	3.96	3.95	3.93	3.95	0.00	−0.02	−0.02	±0.3
942600	3.94	3.93	3.94	3.94	3.92	3.93	0.00	−0.02	−0.02	±0.3
1193600	3.91	3.90	3.92	3.91	3.90	3.91	0.00	0.00	−0.02	±0.3
1511600	3.90	3.89	3.91	3.90	3.88	3.90	0.00	−0.02	−0.02	±0.3
1914400	3.88	3.87	3.89	3.88	3.86	3.88	0.00	−0.02	−0.02	±0.3
2424400	3.87	3.86	3.88	3.86	3.85	3.88	−0.02	−0.02	0.00	±0.3
3070200	3.84	3.83	3.85	3.83	3.81	3.84	−0.02	−0.05	−0.02	±0.3
3888000	3.78	3.77	3.79	3.77	3.76	3.79	−0.02	−0.02	0.00	±0.3
4000000	3.77	3.76	3.78	3.77	3.75	3.78	0.00	−0.02	0.00	±0.3
4923800	3.70	3.69	3.72	3.71	3.68	3.72	0.02	−0.02	0.00	±0.3
6235400	3.60	3.59	3.62	3.59	3.58	3.62	−0.02	−0.02	0.00	±0.3
7896400	3.45	3.44	3.47	3.45	3.45	3.48	0.00	0.03	0.02	±0.3
10000000	3.31	3.31	3.33	3.29	3.30	3.36	−0.05	−0.03	0.08	±0.3

SPEAG H-field frequency response tolerance criteria[1]:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

[1] Calibration uncertainty not taken into account (shared risk 50%).

Frequency Response, H-field, Channel 2

	H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			
f/(Hz)	x	y	z	x	y	z	x	y	z	Tolerance/(dB)
3000	1.52	1.53	1.53	1.53	1.52	1.52	0.06	−0.06	−0.06	±0.3
3200	1.52	1.52	1.52	1.53	1.54	1.53	0.06	0.11	0.06	±0.3
4000	1.51	1.51	1.51	1.51	1.51	1.51	0.00	0.00	0.00	±0.3
5200	1.50	1.50	1.50	1.51	1.50	1.50	0.06	0.00	0.00	±0.3
6600	1.49	1.49	1.49	1.49	1.49	1.49	0.00	0.00	0.00	±0.3
8200	1.48	1.48	1.48	1.48	1.47	1.49	0.00	−0.06	0.06	±0.3
9000	1.47	1.48	1.47	1.47	1.47	1.47	0.00	−0.06	0.00	±0.3
10600	4.17	4.24	4.23	4.22	4.21	4.19	0.10	−0.06	−0.08	±0.3
13400	4.29	4.25	4.25	4.28	4.24	4.23	−0.02	−0.02	−0.04	±0.3
17000	4.29	4.25	4.25	4.29	4.23	4.23	0.00	−0.04	−0.04	±0.3
21400	4.32	4.27	4.27	4.27	4.27	4.26	−0.10	0.00	−0.02	±0.3
27200	4.31	4.27	4.27	4.28	4.26	4.26	−0.06	−0.02	−0.02	±0.3
34400	4.31	4.28	4.28	4.28	4.25	4.27	−0.06	−0.06	−0.02	±0.3
40000	4.30	4.27	4.27	4.28	4.25	4.26	−0.04	−0.04	−0.02	±0.3
43600	4.29	4.26	4.27	4.26	4.25	4.27	−0.06	−0.02	0.00	±0.3
55400	4.28	4.25	4.26	4.25	4.24	4.25	−0.06	−0.02	−0.02	±0.3
70000	4.26	4.24	4.25	4.24	4.23	4.23	−0.04	−0.02	−0.04	±0.3
88800	4.25	4.23	4.23	4.24	4.22	4.23	−0.02	−0.02	0.00	±0.3
112400	4.24	4.21	4.22	4.22	4.20	4.21	−0.04	−0.02	−0.02	±0.3
142400	4.22	4.20	4.21	4.21	4.18	4.20	−0.02	−0.04	−0.02	±0.3
161750	4.20	4.18	4.19	4.19	4.17	4.18	−0.02	−0.02	−0.02	±0.3
180400	4.19	4.17	4.18	4.18	4.16	4.17	−0.02	−0.02	−0.02	±0.3
228400	4.16	4.14	4.15	4.15	4.13	4.14	−0.02	−0.02	−0.02	±0.3
289400	4.12	4.10	4.12	4.11	4.09	4.11	−0.02	−0.02	−0.02	±0.3
366400	4.09	4.07	4.08	4.08	4.05	4.07	−0.02	−0.04	−0.02	±0.3
400000	4.07	4.05	4.06	4.06	4.04	4.06	−0.02	−0.02	0.00	±0.3
464000	4.04	4.02	4.04	4.03	4.01	4.03	−0.02	−0.02	−0.02	±0.3
587800	4.00	3.98	4.00	3.99	3.97	4.00	−0.02	−0.02	0.00	±0.3
744200	3.95	3.94	3.96	3.94	3.93	3.95	−0.02	−0.02	−0.02	±0.3
942600	3.94	3.93	3.94	3.93	3.92	3.94	−0.02	−0.02	0.00	±0.3
1193600	3.91	3.90	3.92	3.91	3.89	3.92	0.00	−0.02	0.00	±0.3
1511600	3.90	3.89	3.91	3.89	3.89	3.91	−0.02	0.00	0.00	±0.3
1914400	3.88	3.87	3.89	3.88	3.87	3.89	0.00	0.00	0.00	±0.3
2424400	3.87	3.86	3.88	3.86	3.86	3.87	−0.02	0.00	−0.02	±0.3
3070200	3.84	3.83	3.85	3.83	3.81	3.85	−0.02	−0.05	0.00	±0.3
3888000	3.78	3.77	3.79	3.77	3.75	3.79	−0.02	−0.05	0.00	±0.3
4000000	3.77	3.76	3.78	3.77	3.75	3.78	0.00	−0.02	0.00	±0.3
4923800	3.70	3.69	3.72	3.71	3.70	3.72	0.02	0.02	0.00	±0.3
6235400	3.60	3.59	3.62	3.59	3.59	3.61	−0.02	0.00	−0.02	±0.3
7896400	3.45	3.44	3.47	3.45	3.44	3.47	0.00	0.00	0.00	±0.3
10000000	3.31	3.31	3.33	3.27	3.27	3.35	−0.11	−0.11	0.05	±0.3

SPEAG H-field frequency response tolerance criteria[1]:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

[1] Calibration uncertainty not taken into account (shared risk 50%).

Frequency Response, H-field, Channel 3

	H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			
f/(Hz)	x	y	z	x	y	z	x	y	z	Tolerance/(dB)
3000	1.52	1.53	1.53	1.52	1.52	1.52	0.00	−0.06	−0.06	±0.3
3200	1.52	1.52	1.52	1.54	1.54	1.52	0.11	0.11	0.00	±0.3
4000	1.51	1.51	1.51	1.50	1.51	1.51	−0.06	0.00	0.00	±0.3
5200	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
6600	1.49	1.49	1.49	1.48	1.49	1.49	−0.06	0.00	0.00	±0.3
8200	1.48	1.48	1.48	1.48	1.47	1.48	0.00	−0.06	0.00	±0.3
9000	1.47	1.48	1.47	1.46	1.47	1.47	−0.06	−0.06	0.00	±0.3
10600	4.17	4.24	4.23	4.29	4.23	4.25	0.25	−0.02	0.04	±0.3
13400	4.29	4.25	4.25	4.28	4.23	4.25	−0.02	−0.04	0.00	±0.3
17000	4.29	4.25	4.25	4.28	4.24	4.24	−0.02	−0.02	−0.02	±0.3
21400	4.32	4.27	4.27	4.28	4.26	4.28	−0.08	−0.02	0.02	±0.3
27200	4.31	4.27	4.27	4.29	4.26	4.26	−0.04	−0.02	−0.02	±0.3
34400	4.31	4.28	4.28	4.29	4.26	4.27	−0.04	−0.04	−0.02	±0.3
40000	4.30	4.27	4.27	4.29	4.26	4.27	−0.02	−0.02	0.00	±0.3
43600	4.29	4.26	4.27	4.27	4.25	4.26	−0.04	−0.02	−0.02	±0.3
55400	4.28	4.25	4.26	4.26	4.24	4.25	−0.04	−0.02	−0.02	±0.3
70000	4.26	4.24	4.25	4.25	4.23	4.24	−0.02	−0.02	−0.02	±0.3
88800	4.25	4.23	4.23	4.24	4.22	4.23	−0.02	−0.02	0.00	±0.3
112400	4.24	4.21	4.22	4.23	4.21	4.22	−0.02	0.00	0.00	±0.3
142400	4.22	4.20	4.21	4.21	4.19	4.20	−0.02	−0.02	−0.02	±0.3
161750	4.20	4.18	4.19	4.19	4.17	4.18	−0.02	−0.02	−0.02	±0.3
180400	4.19	4.17	4.18	4.18	4.16	4.17	−0.02	−0.02	−0.02	±0.3
228400	4.16	4.14	4.15	4.16	4.13	4.14	0.00	−0.02	−0.02	±0.3
289400	4.12	4.10	4.12	4.12	4.10	4.12	0.00	0.00	0.00	±0.3
366400	4.09	4.07	4.08	4.08	4.06	4.08	−0.02	−0.02	0.00	±0.3
400000	4.07	4.05	4.06	4.07	4.04	4.06	0.00	−0.02	0.00	±0.3
464000	4.04	4.02	4.04	4.03	4.01	4.04	−0.02	−0.02	0.00	±0.3
587800	4.00	3.98	4.00	4.00	3.98	3.99	0.00	0.00	−0.02	±0.3
744200	3.95	3.94	3.96	3.95	3.93	3.95	0.00	−0.02	−0.02	±0.3
942600	3.94	3.93	3.94	3.94	3.92	3.94	0.00	−0.02	0.00	±0.3
1193600	3.91	3.90	3.92	3.91	3.90	3.91	0.00	0.00	−0.02	±0.3
1511600	3.90	3.89	3.91	3.90	3.89	3.91	0.00	0.00	0.00	±0.3
1914400	3.88	3.87	3.89	3.88	3.87	3.89	0.00	0.00	0.00	±0.3
2424400	3.87	3.86	3.88	3.87	3.85	3.88	0.00	−0.02	0.00	±0.3
3070200	3.84	3.83	3.85	3.83	3.81	3.85	−0.02	−0.05	0.00	±0.3
3888000	3.78	3.77	3.79	3.78	3.76	3.79	0.00	−0.02	0.00	±0.3
4000000	3.77	3.76	3.78	3.78	3.76	3.78	0.02	0.00	0.00	±0.3
4923800	3.70	3.69	3.72	3.71	3.67	3.73	0.02	−0.05	0.02	±0.3
6235400	3.60	3.59	3.62	3.59	3.58	3.62	−0.02	−0.02	0.00	±0.3
7896400	3.45	3.44	3.47	3.46	3.44	3.48	0.03	0.00	0.02	±0.3
10000000	3.31	3.31	3.33	3.30	3.31	3.37	−0.03	0.00	0.10	±0.3

SPEAG H-field frequency response tolerance criteria[1]:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

[1] Calibration uncertainty not taken into account (shared risk 50%).

Frequency Response, H-field, Channel 4

	H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			
f/(Hz)	x	y	z	x	y	z	x	y	z	Tolerance/(dB)
3000	1.52	1.53	1.53	1.51	1.52	1.53	−0.06	−0.06	0.00	±0.3
3200	1.52	1.52	1.52	1.55	1.54	1.53	0.17	0.11	0.06	±0.3
4000	1.51	1.51	1.51	1.50	1.51	1.51	−0.06	0.00	0.00	±0.3
5200	1.50	1.50	1.50	1.51	1.51	1.50	0.06	0.06	0.00	±0.3
6600	1.49	1.49	1.49	1.50	1.49	1.49	0.06	0.00	0.00	±0.3
8200	1.48	1.48	1.48	1.48	1.47	1.49	0.00	−0.06	0.06	±0.3
9000	1.47	1.48	1.47	1.48	1.47	1.47	0.06	−0.06	0.00	±0.3
10600	4.17	4.24	4.23	4.24	4.21	4.24	0.14	−0.06	0.02	±0.3
13400	4.29	4.25	4.25	4.28	4.25	4.25	−0.02	0.00	0.00	±0.3
17000	4.29	4.25	4.25	4.27	4.24	4.24	−0.04	−0.02	−0.02	±0.3
21400	4.32	4.27	4.27	4.30	4.26	4.25	−0.04	−0.02	−0.04	±0.3
27200	4.31	4.27	4.27	4.29	4.26	4.26	−0.04	−0.02	−0.02	±0.3
34400	4.31	4.28	4.28	4.29	4.26	4.27	−0.04	−0.04	−0.02	±0.3
40000	4.30	4.27	4.27	4.27	4.25	4.27	−0.06	−0.04	0.00	±0.3
43600	4.29	4.26	4.27	4.27	4.25	4.27	−0.04	−0.02	0.00	±0.3
55400	4.28	4.25	4.26	4.25	4.24	4.25	−0.06	−0.02	−0.02	±0.3
70000	4.26	4.24	4.25	4.24	4.23	4.24	−0.04	−0.02	−0.02	±0.3
88800	4.25	4.23	4.23	4.23	4.21	4.23	−0.04	−0.04	0.00	±0.3
112400	4.24	4.21	4.22	4.22	4.20	4.21	−0.04	−0.02	−0.02	±0.3
142400	4.22	4.20	4.21	4.21	4.19	4.20	−0.02	−0.02	−0.02	±0.3
161750	4.20	4.18	4.19	4.19	4.17	4.18	−0.02	−0.02	−0.02	±0.3
180400	4.19	4.17	4.18	4.18	4.16	4.17	−0.02	−0.02	−0.02	±0.3
228400	4.16	4.14	4.15	4.15	4.13	4.15	−0.02	−0.02	0.00	±0.3
289400	4.12	4.10	4.12	4.12	4.10	4.11	0.00	0.00	−0.02	±0.3
366400	4.09	4.07	4.08	4.08	4.06	4.08	−0.02	−0.02	0.00	±0.3
400000	4.07	4.05	4.06	4.06	4.04	4.06	−0.02	−0.02	0.00	±0.3
464000	4.04	4.02	4.04	4.03	4.02	4.04	−0.02	0.00	0.00	±0.3
587800	4.00	3.98	4.00	3.99	3.98	3.99	−0.02	0.00	−0.02	±0.3
744200	3.95	3.94	3.96	3.94	3.93	3.95	−0.02	−0.02	−0.02	±0.3
942600	3.94	3.93	3.94	3.94	3.92	3.93	0.00	−0.02	−0.02	±0.3
1193600	3.91	3.90	3.92	3.91	3.90	3.92	0.00	0.00	0.00	±0.3
1511600	3.90	3.89	3.91	3.89	3.89	3.91	−0.02	0.00	0.00	±0.3
1914400	3.88	3.87	3.89	3.88	3.87	3.88	0.00	0.00	−0.02	±0.3
2424400	3.87	3.86	3.88	3.87	3.86	3.88	0.00	0.00	0.00	±0.3
3070200	3.84	3.83	3.85	3.84	3.81	3.85	0.00	−0.05	0.00	±0.3
3888000	3.78	3.77	3.79	3.79	3.75	3.79	0.02	−0.05	0.00	±0.3
4000000	3.77	3.76	3.78	3.77	3.76	3.79	0.00	0.00	0.02	±0.3
4923800	3.70	3.69	3.72	3.70	3.69	3.73	0.00	0.00	0.02	±0.3
6235400	3.60	3.59	3.62	3.59	3.59	3.62	−0.02	0.00	0.00	±0.3
7896400	3.45	3.44	3.47	3.46	3.44	3.47	0.03	0.00	0.00	±0.3
10000000	3.31	3.31	3.33	3.28	3.23	3.36	−0.08	−0.21	0.08	±0.3

SPEAG H-field frequency response tolerance criteria[1]:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

[1] Calibration uncertainty not taken into account (shared risk 50%).

Frequency Response, H-field, Channel 5

f/(Hz)	H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			Tolerance/(dB)
	x	y	z	x	y	z	x	y	z	
3000	1.52	1.53	1.53	1.52	1.52	1.52	0.00	−0.06	−0.06	±0.3
3200	1.52	1.52	1.52	1.53	1.53	1.52	0.06	0.06	0.00	±0.3
4000	1.51	1.51	1.51	1.50	1.51	1.51	−0.06	0.00	0.00	±0.3
5200	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
6600	1.49	1.49	1.49	1.48	1.49	1.50	−0.06	0.00	0.06	±0.3
8200	1.48	1.48	1.48	1.47	1.47	1.48	−0.06	−0.06	0.00	±0.3
9000	1.47	1.48	1.47	1.47	1.47	1.47	0.00	−0.06	0.00	±0.3
10600	4.17	4.24	4.23	4.28	4.22	4.20	0.23	−0.04	−0.06	±0.3
13400	4.29	4.25	4.25	4.28	4.22	4.25	−0.02	−0.06	0.00	±0.3
17000	4.29	4.25	4.25	4.27	4.25	4.24	−0.04	0.00	−0.02	±0.3
21400	4.32	4.27	4.27	4.29	4.26	4.27	−0.06	−0.02	0.00	±0.3
27200	4.31	4.27	4.27	4.29	4.25	4.26	−0.04	−0.04	−0.02	±0.3
34400	4.31	4.28	4.28	4.28	4.26	4.27	−0.06	−0.04	−0.02	±0.3
40000	4.30	4.27	4.27	4.27	4.25	4.26	−0.06	−0.04	−0.02	±0.3
43600	4.29	4.26	4.27	4.26	4.25	4.26	−0.06	−0.02	−0.02	±0.3
55400	4.28	4.25	4.26	4.25	4.24	4.25	−0.06	−0.02	−0.02	±0.3
70000	4.26	4.24	4.25	4.25	4.23	4.24	−0.02	−0.02	−0.02	±0.3
88800	4.25	4.23	4.23	4.23	4.22	4.22	−0.04	−0.02	−0.02	±0.3
112400	4.24	4.21	4.22	4.22	4.20	4.22	−0.04	−0.02	0.00	±0.3
142400	4.22	4.20	4.21	4.20	4.19	4.20	−0.04	−0.02	−0.02	±0.3
161750	4.20	4.18	4.19	4.18	4.17	4.18	−0.04	−0.02	−0.02	±0.3
180400	4.19	4.17	4.18	4.18	4.16	4.17	−0.02	−0.02	−0.02	±0.3
228400	4.16	4.14	4.15	4.15	4.14	4.14	−0.02	0.00	−0.02	±0.3
289400	4.12	4.10	4.12	4.11	4.10	4.11	−0.02	0.00	−0.02	±0.3
366400	4.09	4.07	4.08	4.08	4.06	4.07	−0.02	−0.02	−0.02	±0.3
400000	4.07	4.05	4.06	4.06	4.04	4.06	−0.02	−0.02	0.00	±0.3
464000	4.04	4.02	4.04	4.02	4.02	4.04	−0.04	0.00	0.00	±0.3
587800	4.00	3.98	4.00	3.99	3.98	4.00	−0.02	0.00	0.00	±0.3
744200	3.95	3.94	3.96	3.94	3.93	3.95	−0.02	−0.02	−0.02	±0.3
942600	3.94	3.93	3.94	3.93	3.92	3.94	−0.02	−0.02	0.00	±0.3
1193600	3.91	3.90	3.92	3.90	3.90	3.92	−0.02	0.00	0.00	±0.3
1511600	3.90	3.89	3.91	3.90	3.88	3.91	0.00	−0.02	0.00	±0.3
1914400	3.88	3.87	3.89	3.87	3.87	3.89	−0.02	0.00	0.00	±0.3
2424400	3.87	3.86	3.88	3.87	3.84	3.88	0.00	−0.05	0.00	±0.3
3070200	3.84	3.83	3.85	3.82	3.82	3.85	−0.05	−0.02	0.00	±0.3
3888000	3.78	3.77	3.79	3.75	3.76	3.79	−0.07	−0.02	0.00	±0.3
4000000	3.77	3.76	3.78	3.77	3.75	3.79	0.00	−0.02	0.02	±0.3
4923800	3.70	3.69	3.72	3.72	3.69	3.71	0.05	0.00	−0.02	±0.3
6235400	3.60	3.59	3.62	3.60	3.58	3.62	0.00	−0.02	0.00	±0.3
7896400	3.45	3.44	3.47	3.44	3.42	3.47	−0.03	−0.05	0.00	±0.3
10000000	3.31	3.31	3.33	3.37	3.34	3.34	0.16	0.08	0.03	±0.3

SPEAG H-field frequency response tolerance criteria[1]:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

[1] Calibration uncertainty not taken into account (shared risk 50%).

Frequency Response, H-field, Channel 6

f/(Hz)	H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			Tolerance/(dB)
	x	y	z	x	y	z	x	y	z	
3000	1.52	1.53	1.53	1.51	1.51	1.52	−0.06	−0.11	−0.06	±0.3
3200	1.52	1.52	1.52	1.53	1.53	1.53	0.06	0.06	0.06	±0.3
4000	1.51	1.51	1.51	1.50	1.51	1.52	−0.06	0.00	0.06	±0.3
5200	1.50	1.50	1.50	1.51	1.50	1.51	0.06	0.00	0.06	±0.3
6600	1.49	1.49	1.49	1.49	1.49	1.49	0.00	0.00	0.00	±0.3
8200	1.48	1.48	1.48	1.48	1.47	1.49	0.00	−0.06	0.06	±0.3
9000	1.47	1.48	1.47	1.47	1.47	1.47	0.00	−0.06	0.00	±0.3
10600	4.17	4.24	4.23	4.25	4.21	4.25	0.17	−0.06	0.04	±0.3
13400	4.29	4.25	4.25	4.28	4.24	4.26	−0.02	−0.02	0.02	±0.3
17000	4.29	4.25	4.25	4.29	4.23	4.24	0.00	−0.04	−0.02	±0.3
21400	4.32	4.27	4.27	4.29	4.25	4.26	−0.06	−0.04	−0.02	±0.3
27200	4.31	4.27	4.27	4.29	4.25	4.25	−0.04	−0.04	−0.04	±0.3
34400	4.31	4.28	4.28	4.28	4.26	4.27	−0.06	−0.04	−0.02	±0.3
40000	4.30	4.27	4.27	4.27	4.25	4.26	−0.06	−0.04	−0.02	±0.3
43600	4.29	4.26	4.27	4.27	4.25	4.26	−0.04	−0.02	−0.02	±0.3
55400	4.28	4.25	4.26	4.25	4.24	4.25	−0.06	−0.02	−0.02	±0.3
70000	4.26	4.24	4.25	4.24	4.23	4.24	−0.04	−0.02	−0.02	±0.3
88800	4.25	4.23	4.23	4.24	4.21	4.23	−0.02	−0.04	0.00	±0.3
112400	4.24	4.21	4.22	4.22	4.20	4.22	−0.04	−0.02	0.00	±0.3
142400	4.22	4.20	4.21	4.21	4.19	4.21	−0.02	−0.02	0.00	±0.3
161750	4.20	4.18	4.19	4.19	4.17	4.18	−0.02	−0.02	−0.02	±0.3
180400	4.19	4.17	4.18	4.18	4.16	4.18	−0.02	−0.02	0.00	±0.3
228400	4.16	4.14	4.15	4.15	4.13	4.14	−0.02	−0.02	−0.02	±0.3
289400	4.12	4.10	4.12	4.12	4.10	4.12	0.00	0.00	0.00	±0.3
366400	4.09	4.07	4.08	4.08	4.06	4.07	−0.02	−0.02	−0.02	±0.3
400000	4.07	4.05	4.06	4.06	4.04	4.06	−0.02	−0.02	0.00	±0.3
464000	4.04	4.02	4.04	4.03	4.02	4.04	−0.02	0.00	0.00	±0.3
587800	4.00	3.98	4.00	3.99	3.97	4.00	−0.02	−0.02	0.00	±0.3
744200	3.95	3.94	3.96	3.95	3.93	3.96	0.00	−0.02	0.00	±0.3
942600	3.94	3.93	3.94	3.94	3.92	3.94	0.00	−0.02	0.00	±0.3
1193600	3.91	3.90	3.92	3.91	3.89	3.91	0.00	−0.02	−0.02	±0.3
1511600	3.90	3.89	3.91	3.90	3.88	3.91	0.00	−0.02	0.00	±0.3
1914400	3.88	3.87	3.89	3.88	3.87	3.88	0.00	0.00	−0.02	±0.3
2424400	3.87	3.86	3.88	3.87	3.84	3.88	0.00	−0.05	0.00	±0.3
3070200	3.84	3.83	3.85	3.83	3.82	3.83	−0.02	−0.02	−0.05	±0.3
3888000	3.78	3.77	3.79	3.74	3.76	3.79	−0.09	−0.02	0.00	±0.3
4000000	3.77	3.76	3.78	3.77	3.75	3.79	0.00	−0.02	0.02	±0.3
4923800	3.70	3.69	3.72	3.73	3.69	3.72	0.07	0.00	0.00	±0.3
6235400	3.60	3.59	3.62	3.60	3.57	3.62	0.00	−0.05	0.00	±0.3
7896400	3.45	3.44	3.47	3.44	3.43	3.47	−0.03	−0.03	0.00	±0.3
10000000	3.31	3.31	3.33	3.34	3.31	3.36	0.08	0.00	0.08	±0.3

SPEAG H-field frequency response tolerance criteria[1]:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

[1] Calibration uncertainty not taken into account (shared risk 50%).

Frequency Response, H-field, Channel 7

f/(Hz)	H-field/(A/m) Applied			H-field/(A/m) Reading			Difference/(dB)			Tolerance/(dB)
	x	y	z	x	y	z	x	y	z	
3000	1.52	1.53	1.53	1.52	1.52	1.53	0.00	−0.06	0.00	±0.3
3200	1.52	1.52	1.52	1.54	1.53	1.53	0.11	0.06	0.06	±0.3
4000	1.51	1.51	1.51	1.50	1.50	1.51	−0.06	−0.06	0.00	±0.3
5200	1.50	1.50	1.50	1.52	1.50	1.50	0.12	0.00	0.00	±0.3
6600	1.49	1.49	1.49	1.49	1.49	1.50	0.00	0.00	0.06	±0.3
8200	1.48	1.48	1.48	1.48	1.48	1.49	0.00	0.00	0.06	±0.3
9000	1.47	1.48	1.47	1.47	1.47	1.47	0.00	−0.06	0.00	±0.3
10600	4.17	4.24	4.23	4.25	4.22	4.23	0.17	−0.04	0.00	±0.3
13400	4.29	4.25	4.25	4.29	4.25	4.27	0.00	0.00	0.04	±0.3
17000	4.29	4.25	4.25	4.27	4.23	4.23	−0.04	−0.04	−0.04	±0.3
21400	4.32	4.27	4.27	4.30	4.28	4.28	−0.04	0.02	0.02	±0.3
27200	4.31	4.27	4.27	4.28	4.25	4.24	−0.06	−0.04	−0.06	±0.3
34400	4.31	4.28	4.28	4.28	4.26	4.26	−0.06	−0.04	−0.04	±0.3
40000	4.30	4.27	4.27	4.28	4.25	4.26	−0.04	−0.04	−0.02	±0.3
43600	4.29	4.26	4.27	4.27	4.23	4.26	−0.04	−0.06	−0.02	±0.3
55400	4.28	4.25	4.26	4.26	4.23	4.25	−0.04	−0.04	−0.02	±0.3
70000	4.26	4.24	4.25	4.25	4.22	4.24	−0.02	−0.04	−0.02	±0.3
88800	4.25	4.23	4.23	4.23	4.22	4.22	−0.04	−0.02	−0.02	±0.3
112400	4.24	4.21	4.22	4.23	4.20	4.22	−0.02	−0.02	0.00	±0.3
142400	4.22	4.20	4.21	4.21	4.19	4.20	−0.02	−0.02	−0.02	±0.3
161750	4.20	4.18	4.19	4.18	4.17	4.18	−0.04	−0.02	−0.02	±0.3
180400	4.19	4.17	4.18	4.18	4.17	4.17	−0.02	0.00	−0.02	±0.3
228400	4.16	4.14	4.15	4.16	4.14	4.14	0.00	0.00	−0.02	±0.3
289400	4.12	4.10	4.12	4.11	4.10	4.11	−0.02	0.00	−0.02	±0.3
366400	4.09	4.07	4.08	4.07	4.06	4.07	−0.04	−0.02	−0.02	±0.3
400000	4.07	4.05	4.06	4.06	4.04	4.06	−0.02	−0.02	0.00	±0.3
464000	4.04	4.02	4.04	4.03	4.01	4.04	−0.02	−0.02	0.00	±0.3
587800	4.00	3.98	4.00	3.99	3.98	4.00	−0.02	0.00	0.00	±0.3
744200	3.95	3.94	3.96	3.94	3.93	3.96	−0.02	−0.02	0.00	±0.3
942600	3.94	3.93	3.94	3.94	3.91	3.94	0.00	−0.04	0.00	±0.3
1193600	3.91	3.90	3.92	3.91	3.89	3.91	0.00	−0.02	−0.02	±0.3
1511600	3.90	3.89	3.91	3.90	3.88	3.92	0.00	−0.02	0.02	±0.3
1914400	3.88	3.87	3.89	3.88	3.86	3.88	0.00	−0.02	−0.02	±0.3
2424400	3.87	3.86	3.88	3.87	3.84	3.87	0.00	−0.05	−0.02	±0.3
3070200	3.84	3.83	3.85	3.83	3.81	3.85	−0.02	−0.05	0.00	±0.3
3888000	3.78	3.77	3.79	3.76	3.75	3.79	−0.05	−0.05	0.00	±0.3
4000000	3.77	3.76	3.78	3.77	3.75	3.78	0.00	−0.02	0.00	±0.3
4923800	3.70	3.69	3.72	3.71	3.68	3.72	0.02	−0.02	0.00	±0.3
6235400	3.60	3.59	3.62	3.60	3.58	3.62	0.00	−0.02	0.00	±0.3
7896400	3.45	3.44	3.47	3.45	3.43	3.47	0.00	−0.03	0.00	±0.3
10000000	3.31	3.31	3.33	3.28	3.33	3.38	−0.08	0.05	0.13	±0.3

SPEAG H-field frequency response tolerance criteria[1]:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

[1] Calibration uncertainty not taken into account (shared risk 50%).

Frequency Response, E-field, Channel 0

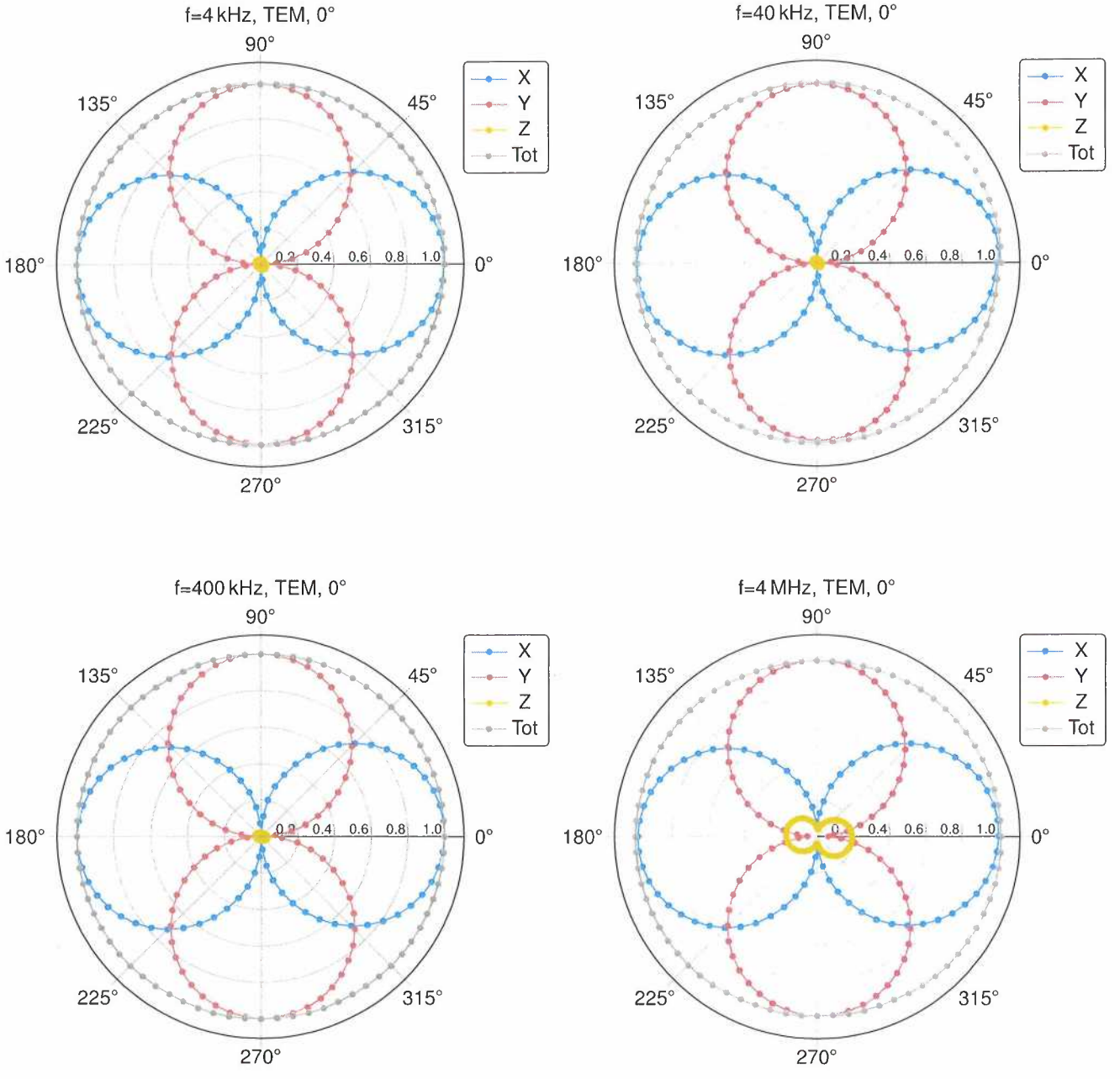
	E-field/(V/m) Applied			E-field/(V/m) Reading			Difference/(dB)			
f/(Hz)	x	y	z	x	y	z	x	y	z	Tolerance/(dB)
3000	169	169	172	170	169	172	0.05	0.00	0.00	±0.3
3200	167	167	162	169	169	162	0.10	0.10	0.00	±0.3
4000	175	175	170	175	175	170	0.00	0.00	0.00	±0.3
5200	165	165	163	165	166	163	0.00	0.05	0.00	±0.3
6600	163	163	160	163	163	161	0.00	0.00	0.05	±0.3
8200	162	162	159	161	162	159	−0.05	0.00	0.00	±0.3
9000	163	163	164	163	163	164	0.00	0.00	0.00	±0.3
10600	166	166	159	166	167	159	0.00	0.05	0.00	±0.3
13400	163	163	162	164	163	162	0.05	0.00	0.00	±0.3
17000	161	161	163	162	162	163	0.05	0.05	0.00	±0.3
21400	157	157	158	158	157	158	0.06	0.00	0.00	±0.3
27200	158	158	157	159	158	158	0.05	0.00	0.06	±0.3
34400	162	162	159	163	162	159	0.05	0.00	0.00	±0.3
40000	161	161	161	161	161	161	0.00	0.00	0.00	±0.3
43600	162	162	160	162	162	160	0.00	0.00	0.00	±0.3
55400	161	161	159	161	161	159	0.00	0.00	0.00	±0.3
70000	162	162	160	162	162	160	0.00	0.00	0.00	±0.3
88800	161	161	160	162	162	160	0.05	0.05	0.00	±0.3
112400	161	161	160	161	161	160	0.00	0.00	0.00	±0.3
142400	162	162	160	162	162	160	0.00	0.00	0.00	±0.3
161750	163	163	162	163	163	162	0.00	0.00	0.00	±0.3
180400	164	164	162	164	164	162	0.00	0.00	0.00	±0.3
228400	165	165	163	165	166	163	0.00	0.05	0.00	±0.3
289400	166	166	164	166	166	164	0.00	0.00	0.00	±0.3
366400	166	166	165	166	166	165	0.00	0.00	0.00	±0.3
400000	167	167	165	167	167	165	0.00	0.00	0.00	±0.3
464000	168	168	166	168	169	166	0.00	0.05	0.00	±0.3
587800	169	169	167	169	169	167	0.00	0.00	0.00	±0.3
744200	169	169	167	170	170	168	0.05	0.05	0.05	±0.3
942600	170	170	168	170	170	168	0.00	0.00	0.00	±0.3
1193600	171	171	169	171	171	169	0.00	0.00	0.00	±0.3
1511600	170	170	169	171	171	169	0.05	0.05	0.00	±0.3
1914400	170	170	168	170	170	168	0.00	0.00	0.00	±0.3
2424400	170	170	168	170	170	168	0.00	0.00	0.00	±0.3
3070200	171	171	169	171	171	169	0.00	0.00	0.00	±0.3
3888000	171	171	169	171	171	169	0.00	0.00	0.00	±0.3
4000000	171	171	169	171	171	170	0.00	0.00	0.05	±0.3
4923800	172	172	170	172	172	170	0.00	0.00	0.00	±0.3
6235400	174	174	172	174	174	172	0.00	0.00	0.00	±0.3
7896400	180	180	179	181	181	179	0.05	0.05	0.00	±0.3
10000000	201	201	199	201	201	199	0.00	0.00	0.00	±0.3

SPEAG E-field frequency response tolerance criteria[1]:
±0.3dB for applied E-fields at calibration points from 3kHz to 10MHz

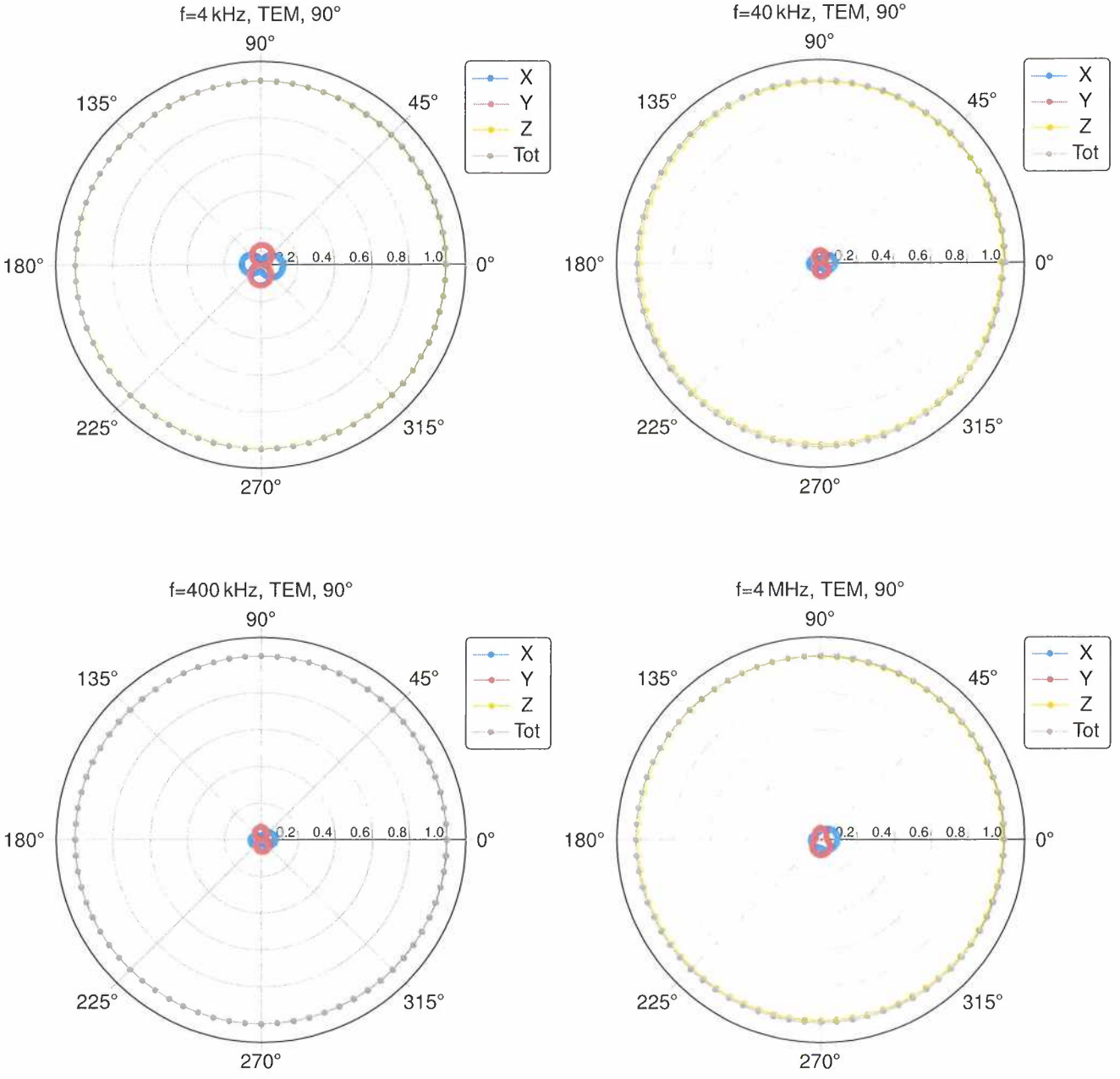
[1] Calibration uncertainty not taken into account (shared risk 50%).

Isotropy H-Field

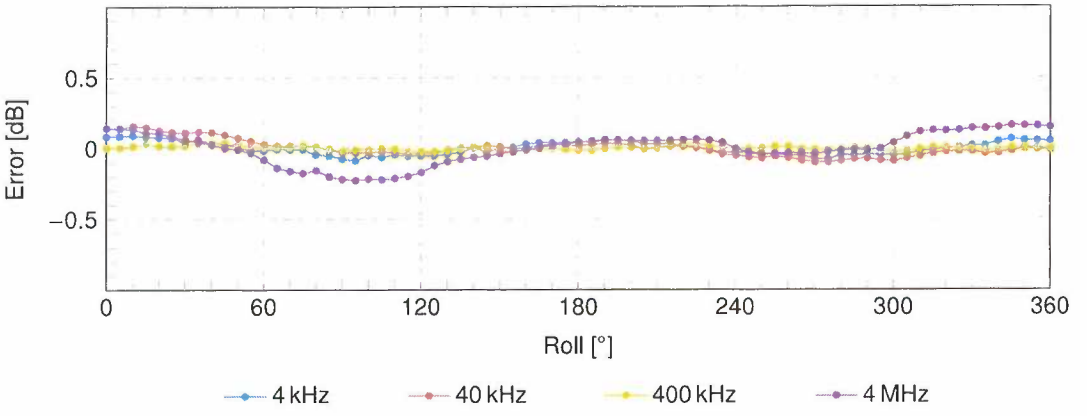
H-Field Receiving Pattern (ϕ), $\vartheta = 0°$



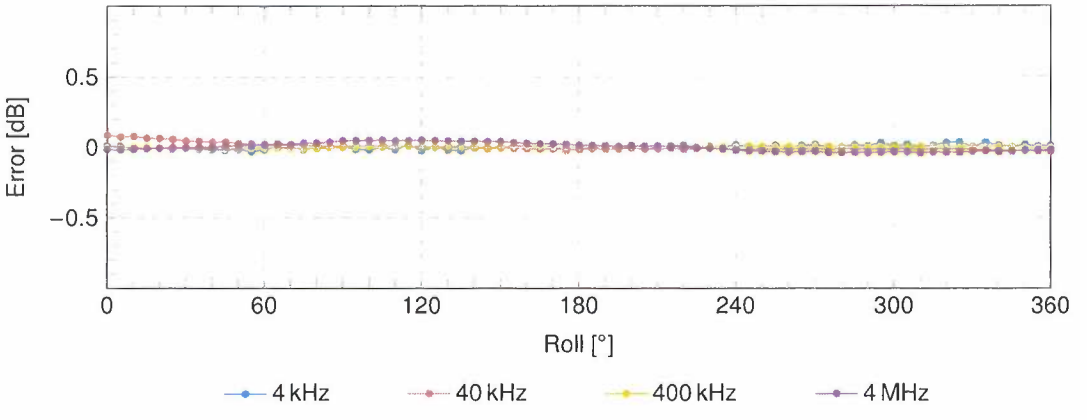
H-Field Receiving Pattern (ϕ), $\vartheta = 90°$



H-Field Receiving Pattern (ϕ), $\vartheta = 0°$



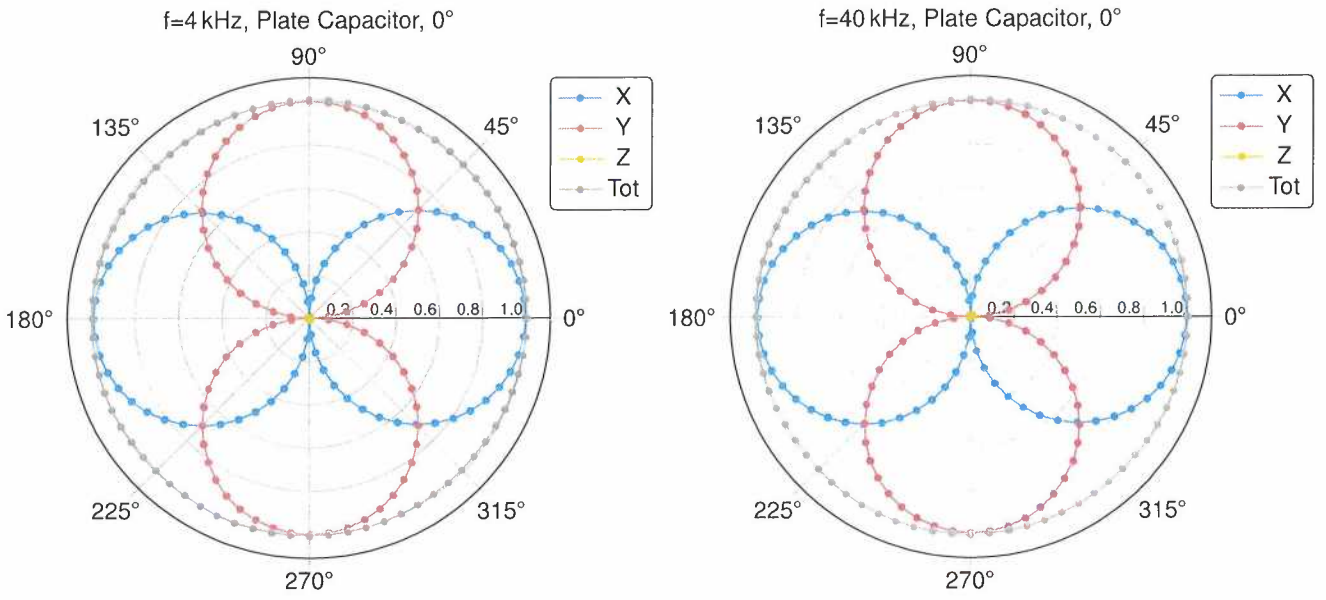
H-Field Receiving Pattern (ϕ), $\vartheta = 90°$

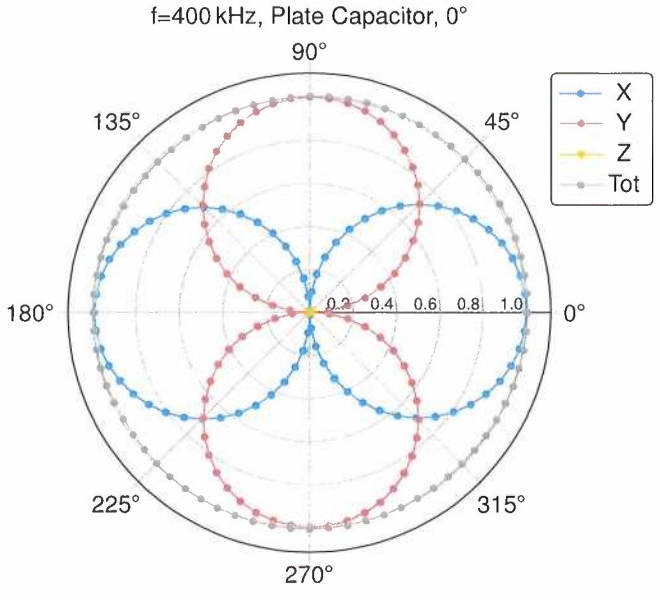


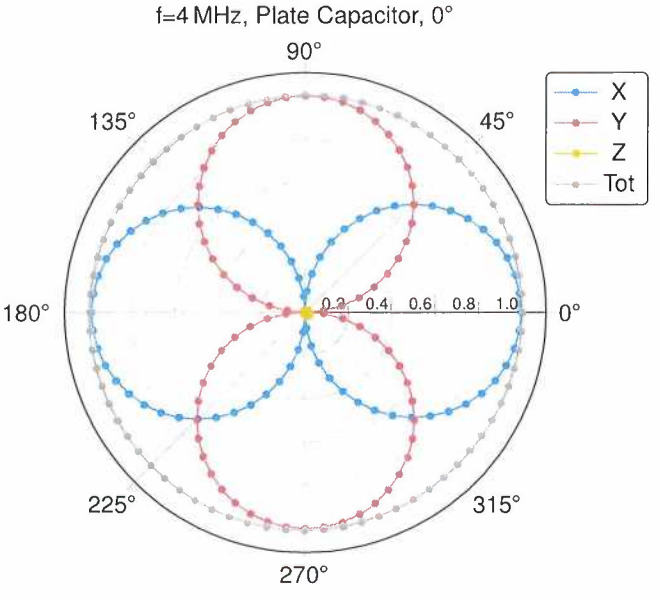
SPEAG axial deviation from the ideal response tolerance for H-field: ±0.6 dB

Isotropy E-Field

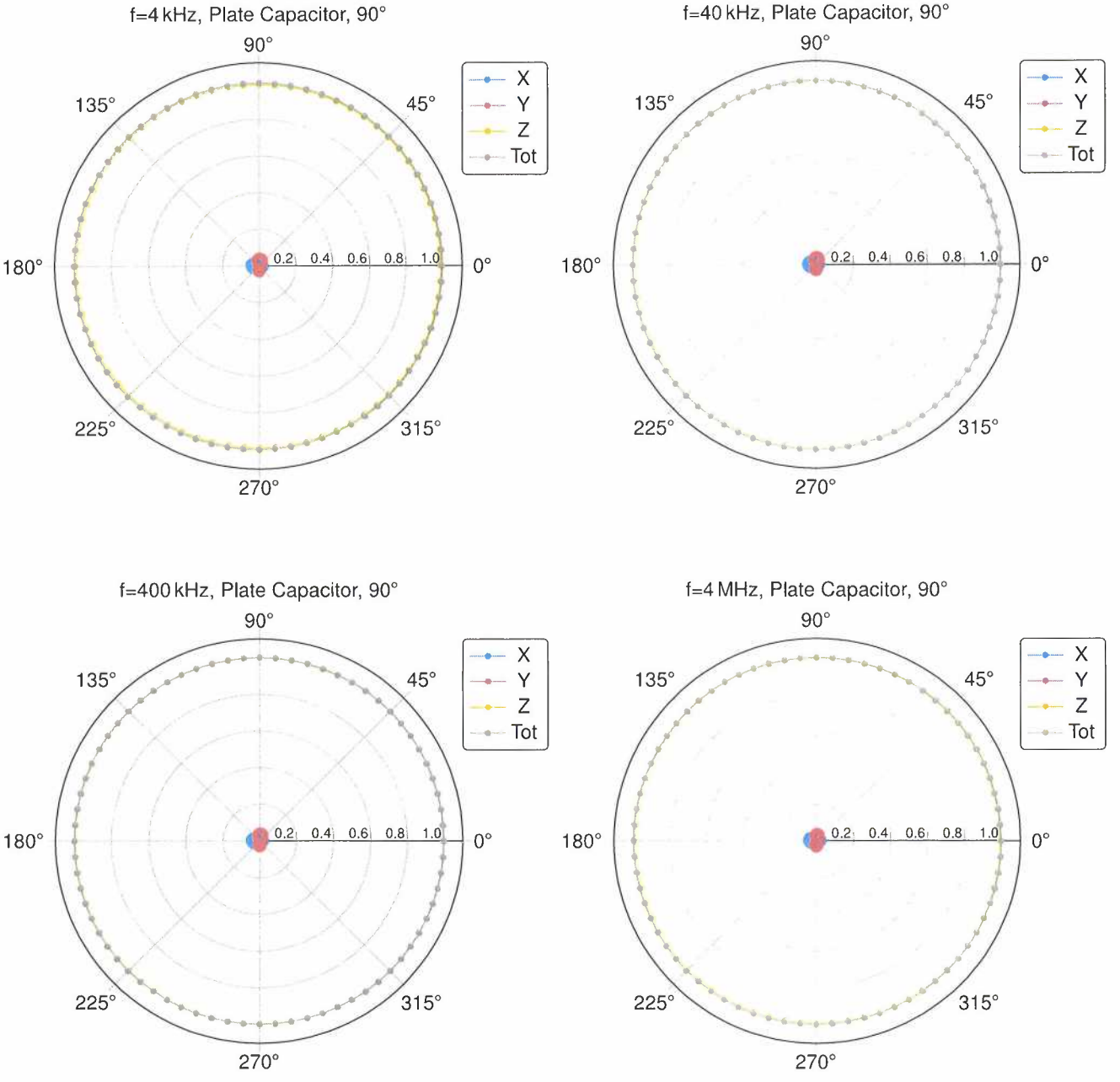
E-Field Receiving Pattern (ϕ), $\vartheta = 0°$



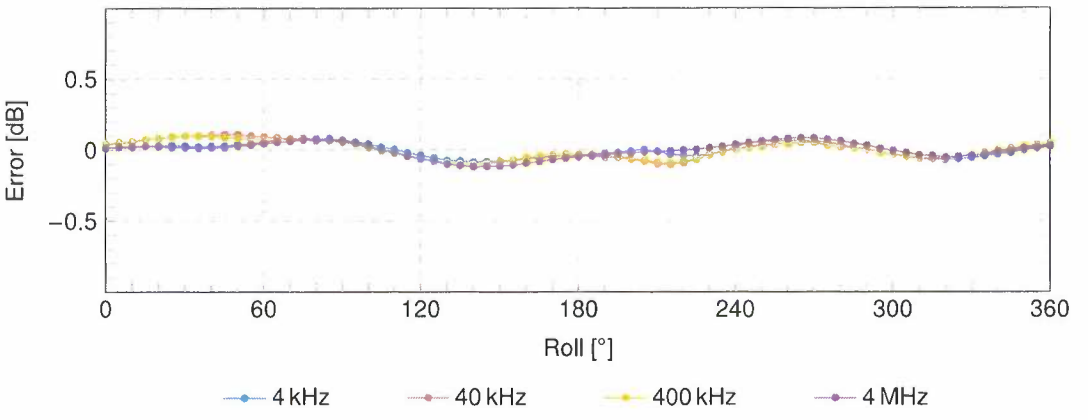




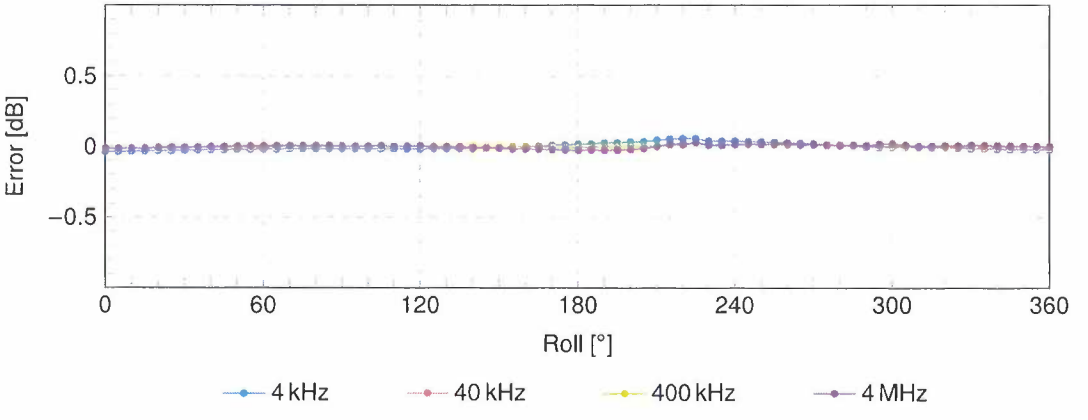
E-Field Receiving Pattern (ϕ), $\vartheta = 90°$



E-Field Receiving Pattern (ϕ), $\vartheta = 0°$



E-Field Receiving Pattern (ϕ), $\vartheta = 90°$



SPEAG axial deviation from the ideal response tolerance for E-field: ±0.8 dB