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Accreditation No.: **SCS 0108**

Client **UL Korea**
Gyeonggi-do, Republic of Korea

Certificate No. **MAGPy-8H3D-3071**

CALIBRATION CERTIFICATE

Object **MAGPy-8H3D+E3DV2 SN:3071**
MAGPy-DASV2 SN:2050

Calibration procedure(s) **QA CAL-46.v1**
Calibration Procedure for MAGPy-8H3D+E3D
Near-field Electric and Magnetic Field Sensor System

Calibration date **July 04, 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 $(22 \pm 3)^{\circ}\text{C}$ 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: July 04, 2024

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



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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 $\phi = 0^\circ \dots 360^\circ$; $\vartheta = 90^\circ$, and $\phi = 0^\circ \dots 360^\circ$; 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 $\phi = 0^\circ \dots 360^\circ$; $\vartheta = 90^\circ$, and $\phi = 0^\circ \dots 360^\circ$; 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)	3071
	MAGPy-DASV2 (SE UMS 303 AD)	2050
	MAGPy FPGA Board	WP000107
Adjustment Date	Last MAGPy Adjustment	July 04, 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)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.380	0.360	0.350	0.390	0.370	0.390	0.23	0.24	0.94	±1.00
0.510	0.490	0.480	0.530	0.510	0.500	0.33	0.35	0.35	±1.00
0.700	0.670	0.650	0.700	0.690	0.660	0.00	0.26	0.13	±1.00
0.910	0.880	0.850	0.900	0.880	0.870	-0.10	0.00	0.20	±1.00
1.24	1.19	1.16	1.22	1.18	1.19	-0.14	-0.07	0.22	±1.00
1.70	1.63	1.59	1.69	1.63	1.62	-0.05	0.00	0.16	±1.00
2.26	2.17	2.11	2.28	2.17	2.14	0.08	0.00	0.12	±0.20
3.02	2.90	2.83	3.03	2.91	2.84	0.03	0.03	0.03	±0.20
4.10	3.94	3.84	4.11	3.94	3.85	0.02	0.00	0.02	±0.20
5.54	5.34	5.19	5.54	5.36	5.20	0.00	0.03	0.02	±0.20
7.47	7.19	6.98	7.49	7.23	7.00	0.02	0.05	0.02	±0.20
9.97	9.60	9.33	9.97	9.68	9.32	0.00	0.07	-0.01	±0.20
13.5	13.0	12.6	13.5	13.1	12.6	0.00	0.07	0.00	±0.20
18.1	17.5	17.0	18.2	17.6	17.0	0.05	0.05	0.00	±0.20
24.5	23.6	22.9	24.6	23.7	23.0	0.04	0.04	0.04	±0.20
32.7	31.5	30.6	32.9	31.7	30.8	0.05	0.05	0.06	±0.20
44.1	42.6	41.3	44.4	42.8	41.5	0.06	0.04	0.04	±0.20
59.9	57.7	55.9	60.2	58.1	56.3	0.04	0.06	0.06	±0.20
82.4	79.4	77.0	82.0	79.1	76.7	-0.04	-0.03	-0.03	±0.20
108	104	101	107	104	100	-0.08	0.00	-0.09	±0.20
148	143	139	148	142	138	0.00	-0.06	-0.06	±0.20
206	199	193	205	198	192	-0.04	-0.04	-0.05	±0.20
285	275	267	286	271	268	0.03	-0.13	0.03	±0.20
423	408	396	416	403	389	-0.14	-0.11	-0.15	±0.20
586	565	548	579	561	542	-0.10	-0.06	-0.10	±0.20
878	847	822	878	850	821	0.00	0.03	-0.01	±0.20
1340	1290	1250	1350	1310	1270	0.06	0.13	0.14	±0.30
1830	1760	1710	1870	1810	1750	0.19	0.24	0.20	±0.30
3010	2900	2820	3110	3010	2910	0.28	0.32	0.27	±0.50
3670	3530	3440	3800	3680	3560	0.30	0.36	0.30	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB 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	
0.380	0.370	0.360	0.410	0.380	0.390	0.66	0.23	0.70	±1.00
0.510	0.500	0.490	0.540	0.520	0.520	0.50	0.34	0.52	±1.00
0.700	0.680	0.670	0.720	0.690	0.680	0.24	0.13	0.13	±1.00
0.920	0.890	0.880	0.910	0.880	0.890	-0.09	-0.10	0.10	±1.00
1.24	1.21	1.18	1.25	1.20	1.21	0.07	-0.07	0.22	±1.00
1.70	1.65	1.63	1.71	1.66	1.64	0.05	0.05	0.05	±1.00
2.26	2.20	2.17	2.28	2.22	2.20	0.08	0.08	0.12	±0.20
3.03	2.95	2.90	3.06	2.97	2.91	0.09	0.06	0.03	±0.20
4.11	4.00	3.93	4.14	4.02	3.95	0.06	0.04	0.04	±0.20
5.56	5.42	5.32	5.59	5.46	5.33	0.05	0.06	0.02	±0.20
7.48	7.30	7.16	7.52	7.34	7.19	0.05	0.05	0.04	±0.20
9.99	9.74	9.56	10.0	9.79	9.61	0.01	0.04	0.05	±0.20
13.5	13.2	12.9	13.5	13.2	12.9	0.00	0.00	0.00	±0.20
18.2	17.8	17.4	18.2	17.8	17.5	0.00	0.00	0.05	±0.20
24.6	24.0	23.5	24.6	24.0	23.6	0.00	0.00	0.04	±0.20
32.8	32.0	31.3	33.0	32.2	31.5	0.05	0.05	0.06	±0.20
44.3	43.2	42.4	44.5	43.4	42.6	0.04	0.04	0.04	±0.20
60.0	58.5	57.3	60.4	58.9	57.7	0.06	0.06	0.06	±0.20
82.6	80.6	79.0	82.2	80.3	78.6	-0.04	-0.03	-0.04	±0.20
108	106	103	108	105	103	0.00	-0.08	0.00	±0.20
149	145	142	148	144	142	-0.06	-0.06	0.00	±0.20
206	202	198	206	201	197	0.00	-0.04	-0.04	±0.20
286	280	274	287	275	275	0.03	-0.16	0.03	±0.20
424	414	406	417	409	399	-0.14	-0.11	-0.15	±0.20
587	574	562	581	570	556	-0.09	-0.06	-0.09	±0.20
881	860	843	880	863	843	-0.01	0.03	0.00	±0.20
1340	1310	1280	1360	1330	1300	0.13	0.13	0.13	±0.30
1830	1790	1750	1870	1840	1790	0.19	0.24	0.20	±0.30
3020	2950	2890	3120	3060	2990	0.28	0.32	0.30	±0.50
3670	3580	3520	3810	3740	3660	0.33	0.38	0.34	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB 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	
0.370	0.370	0.360	0.400	0.390	0.380	0.68	0.46	0.47	±1.00
0.500	0.500	0.490	0.530	0.510	0.520	0.51	0.17	0.52	±1.00
0.690	0.690	0.680	0.690	0.670	0.710	0.00	-0.26	0.37	±1.00
0.900	0.900	0.890	0.890	0.890	0.880	-0.10	-0.10	-0.10	±1.00
1.22	1.21	1.20	1.22	1.22	1.19	0.00	0.07	-0.07	±1.00
1.67	1.67	1.64	1.70	1.66	1.65	0.15	-0.05	0.05	±1.00
2.22	2.22	2.19	2.27	2.22	2.21	0.19	0.00	0.08	±0.20
2.97	2.97	2.93	3.01	2.97	2.94	0.12	0.00	0.03	±0.20
4.04	4.03	3.98	4.09	4.03	3.98	0.11	0.00	0.00	±0.20
5.46	5.45	5.39	5.49	5.46	5.37	0.05	0.02	-0.03	±0.20
7.35	7.34	7.24	7.38	7.37	7.24	0.04	0.04	0.00	±0.20
9.81	9.80	9.68	9.85	9.87	9.68	0.04	0.06	0.00	±0.20
13.2	13.2	13.1	13.3	13.3	13.1	0.07	0.07	0.00	±0.20
17.9	17.9	17.6	17.9	17.9	17.7	0.00	0.00	0.05	±0.20
24.1	24.1	23.8	24.2	24.2	23.9	0.04	0.04	0.04	±0.20
32.2	32.2	31.7	32.4	32.4	31.9	0.05	0.05	0.05	±0.20
43.5	43.5	42.9	43.8	43.8	43.1	0.06	0.06	0.04	±0.20
58.9	58.9	58.0	59.2	59.3	58.4	0.04	0.06	0.06	±0.20
81.1	81.1	79.9	80.7	80.7	79.5	-0.04	-0.04	-0.04	±0.20
106	106	105	106	106	104	0.00	0.00	-0.08	±0.20
146	146	144	145	145	143	-0.06	-0.06	-0.06	±0.20
203	203	200	202	202	199	-0.04	-0.04	-0.04	±0.20
281	281	277	282	276	278	0.03	-0.16	0.03	±0.20
416	417	411	409	411	404	-0.15	-0.13	-0.15	±0.20
576	577	569	570	573	563	-0.09	-0.06	-0.09	±0.20
865	865	853	864	868	852	-0.01	0.03	-0.01	±0.20
1310	1320	1300	1330	1340	1310	0.13	0.13	0.07	±0.30
1800	1800	1780	1840	1850	1820	0.19	0.24	0.19	±0.30
2960	2960	2920	3060	3070	3020	0.29	0.32	0.29	±0.40
3610	3610	3560	3740	3760	3700	0.31	0.35	0.34	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0A/m
- ±0.2dB for applied H-fields ≥ 2.0A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000A/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)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.370	0.360	0.360	0.400	0.380	0.380	0.68	0.47	0.47	±1.00
0.500	0.490	0.490	0.530	0.520	0.500	0.51	0.52	0.18	±1.00
0.690	0.680	0.670	0.680	0.690	0.670	-0.13	0.13	0.00	±1.00
0.900	0.880	0.870	0.890	0.870	0.880	-0.10	-0.10	0.10	±1.00
1.22	1.20	1.18	1.23	1.19	1.20	0.07	-0.07	0.15	±1.00
1.67	1.64	1.62	1.68	1.66	1.63	0.05	0.11	0.05	±1.00
2.23	2.19	2.16	2.25	2.22	2.17	0.08	0.12	0.04	±0.20
2.98	2.92	2.89	2.99	2.94	2.90	0.03	0.06	0.03	±0.20
4.05	3.97	3.93	4.06	3.98	3.92	0.02	0.02	-0.02	±0.20
5.47	5.37	5.31	5.49	5.39	5.30	0.03	0.03	-0.02	±0.20
7.37	7.24	7.15	7.38	7.25	7.13	0.01	0.01	-0.02	±0.20
9.84	9.67	9.54	9.85	9.68	9.53	0.01	0.01	-0.01	±0.20
13.3	13.1	12.9	13.3	13.1	12.9	0.00	0.00	0.00	±0.20
17.9	17.6	17.4	18.0	17.6	17.4	0.05	0.00	0.00	±0.20
24.2	23.8	23.4	24.3	23.8	23.5	0.04	0.00	0.04	±0.20
32.2	31.7	31.3	32.5	31.9	31.5	0.08	0.05	0.06	±0.20
43.6	42.9	42.3	43.8	43.1	42.5	0.04	0.04	0.04	±0.20
59.0	58.0	57.2	59.4	58.5	57.7	0.06	0.07	0.08	±0.20
81.3	80.0	78.8	80.9	79.6	78.4	-0.04	-0.04	-0.04	±0.20
106	105	103	106	104	103	0.00	-0.08	0.00	±0.20
146	144	142	146	143	141	0.00	-0.06	-0.06	±0.20
203	200	197	203	199	196	0.00	-0.04	-0.04	±0.20
282	277	273	283	273	274	0.03	-0.13	0.03	±0.20
417	411	405	410	405	398	-0.15	-0.13	-0.15	±0.20
578	569	561	571	564	555	-0.11	-0.08	-0.09	±0.20
867	853	841	866	854	840	-0.01	0.01	-0.01	±0.20
1320	1300	1280	1330	1320	1290	0.07	0.13	0.07	±0.30
1800	1770	1750	1840	1820	1790	0.19	0.24	0.20	±0.30
2970	2920	2880	3070	3010	2980	0.29	0.26	0.30	±0.40
3620	3560	3520	3750	3670	3650	0.31	0.26	0.32	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB 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)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.370	0.370	0.360	0.400	0.390	0.380	0.68	0.46	0.47	±1.00
0.510	0.510	0.490	0.530	0.530	0.510	0.33	0.33	0.35	±1.00
0.690	0.690	0.680	0.700	0.680	0.680	0.12	-0.13	0.00	±1.00
0.900	0.900	0.880	0.910	0.900	0.890	0.10	0.00	0.10	±1.00
1.22	1.22	1.19	1.24	1.24	1.20	0.14	0.14	0.07	±1.00
1.68	1.68	1.64	1.69	1.69	1.64	0.05	0.05	0.00	±1.00
2.23	2.24	2.18	2.24	2.24	2.20	0.04	0.00	0.08	±0.20
2.99	2.99	2.92	3.00	2.99	2.94	0.03	0.00	0.06	±0.20
4.05	4.06	3.96	4.07	4.06	3.99	0.04	0.00	0.07	±0.20
5.48	5.50	5.36	5.51	5.51	5.37	0.05	0.02	0.02	±0.20
7.38	7.40	7.21	7.41	7.41	7.24	0.04	0.01	0.04	±0.20
9.86	9.89	9.63	9.88	9.89	9.64	0.02	0.00	0.01	±0.20
13.3	13.3	13.0	13.3	13.4	13.0	0.00	0.07	0.00	±0.20
17.9	18.0	17.5	18.0	18.0	17.6	0.05	0.00	0.05	±0.20
24.2	24.3	23.7	24.3	24.4	23.7	0.04	0.04	0.00	±0.20
32.3	32.5	31.6	32.5	32.6	31.8	0.05	0.03	0.05	±0.20
43.7	43.9	42.7	44.0	44.1	42.9	0.06	0.04	0.04	±0.20
59.2	59.4	57.7	59.5	59.8	58.2	0.04	0.06	0.07	±0.20
81.5	81.8	79.6	81.0	81.4	79.2	-0.05	-0.04	-0.04	±0.20
107	107	104	106	107	104	-0.08	0.00	0.00	±0.20
147	147	143	146	147	143	-0.06	0.00	0.00	±0.20
204	205	199	203	204	198	-0.04	-0.04	-0.04	±0.20
282	284	276	283	279	277	0.03	-0.15	0.03	±0.20
418	420	409	411	415	402	-0.15	-0.10	-0.15	±0.20
579	582	566	572	578	560	-0.11	-0.06	-0.09	±0.20
869	873	849	867	876	849	-0.02	0.03	0.00	±0.20
1320	1330	1290	1340	1350	1310	0.13	0.13	0.13	±0.30
1810	1820	1770	1850	1860	1810	0.19	0.19	0.19	±0.30
2980	2990	2910	3080	3100	3010	0.29	0.31	0.29	±0.40
3620	3640	3550	3760	3790	3680	0.33	0.35	0.31	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/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	
0.370	0.370	0.370	0.380	0.400	0.380	0.23	0.68	0.23	±1.00
0.510	0.510	0.510	0.520	0.520	0.520	0.17	0.17	0.17	±1.00
0.700	0.700	0.700	0.680	0.710	0.710	-0.25	0.12	0.12	±1.00
0.910	0.910	0.910	0.900	0.910	0.920	-0.10	0.00	0.09	±1.00
1.23	1.23	1.23	1.23	1.24	1.24	0.00	0.07	0.07	±1.00
1.68	1.69	1.69	1.68	1.70	1.69	0.00	0.05	0.00	±1.00
2.24	2.25	2.25	2.25	2.28	2.26	0.04	0.12	0.04	±0.20
3.00	3.01	3.01	3.01	3.04	3.01	0.03	0.09	0.00	±0.20
4.07	4.09	4.08	4.10	4.13	4.08	0.06	0.08	0.00	±0.20
5.51	5.53	5.52	5.54	5.58	5.53	0.05	0.08	0.02	±0.20
7.41	7.45	7.43	7.45	7.48	7.48	0.05	0.03	0.06	±0.20
9.90	9.95	9.92	9.94	9.98	9.98	0.04	0.03	0.05	±0.20
13.4	13.4	13.4	13.4	13.5	13.5	0.00	0.06	0.06	±0.20
18.0	18.1	18.1	18.1	18.2	18.1	0.05	0.05	0.00	±0.20
24.4	24.5	24.4	24.4	24.6	24.5	0.00	0.04	0.04	±0.20
32.5	32.7	32.5	32.7	32.9	32.8	0.05	0.05	0.08	±0.20
43.8	44.1	44.0	44.1	44.4	44.2	0.06	0.06	0.04	±0.20
59.4	59.8	59.5	59.8	60.2	59.9	0.06	0.06	0.06	±0.20
81.8	82.3	81.9	81.4	81.9	81.5	-0.04	-0.04	-0.04	±0.20
107	108	107	107	107	107	0.00	-0.08	0.00	±0.20
147	148	148	147	148	147	0.00	0.00	-0.06	±0.20
205	206	205	204	205	204	-0.04	-0.04	-0.04	±0.20
283	286	284	285	281	285	0.06	-0.15	0.03	±0.20
420	423	421	413	418	414	-0.15	-0.10	-0.15	±0.20
582	586	583	575	581	577	-0.11	-0.07	-0.09	±0.20
872	878	874	872	881	874	0.00	0.03	0.00	±0.20
1330	1340	1330	1340	1360	1350	0.07	0.13	0.13	±0.30
1810	1830	1820	1860	1880	1860	0.24	0.23	0.19	±0.30
2990	3010	3000	3090	3120	3100	0.29	0.31	0.28	±0.50
3640	3660	3650	3780	3810	3790	0.33	0.35	0.33	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB 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	
0.380	0.370	0.370	0.390	0.390	0.380	0.23	0.46	0.23	±1.00
0.520	0.510	0.500	0.530	0.530	0.510	0.17	0.33	0.17	±1.00
0.710	0.700	0.680	0.710	0.720	0.680	0.00	0.24	0.00	±1.00
0.920	0.910	0.890	0.900	0.930	0.890	-0.19	0.19	0.00	±1.00
1.25	1.23	1.21	1.24	1.25	1.21	-0.07	0.14	0.00	±1.00
1.72	1.69	1.66	1.72	1.73	1.66	0.00	0.20	0.00	±1.00
2.29	2.25	2.21	2.29	2.28	2.23	0.00	0.12	0.08	±0.20
3.06	3.01	2.96	3.06	3.05	2.97	0.00	0.11	0.03	±0.20
4.15	4.08	4.01	4.14	4.11	4.03	-0.02	0.06	0.04	±0.20
5.61	5.53	5.43	5.61	5.57	5.45	0.00	0.06	0.03	±0.20
7.56	7.44	7.30	7.55	7.47	7.33	-0.01	0.03	0.04	±0.20
10.1	9.94	9.76	10.1	9.99	9.76	0.00	0.04	0.00	±0.20
13.6	13.4	13.2	13.6	13.5	13.2	0.00	0.06	0.00	±0.20
18.4	18.1	17.8	18.4	18.1	17.8	0.00	0.00	0.00	±0.20
24.8	24.4	24.0	24.9	24.5	24.1	0.03	0.04	0.04	±0.20
33.1	32.6	32.0	33.3	32.8	32.2	0.05	0.05	0.05	±0.20
44.7	44.1	43.2	45.0	44.4	43.5	0.06	0.06	0.06	±0.20
60.6	59.7	58.5	61.0	60.1	58.9	0.06	0.06	0.06	±0.20
83.4	82.2	80.6	83.0	81.8	80.2	-0.04	-0.04	-0.04	±0.20
109	108	105	109	107	105	0.00	-0.08	0.00	±0.20
150	148	145	150	147	144	0.00	-0.06	-0.06	±0.20
209	206	202	208	205	201	-0.04	-0.04	-0.04	±0.20
289	285	279	290	280	280	0.03	-0.15	0.03	±0.20
428	423	414	421	417	407	-0.14	-0.12	-0.15	±0.20
593	585	574	586	581	567	-0.10	-0.06	-0.11	±0.20
890	877	860	888	880	859	-0.02	0.03	-0.01	±0.20
1350	1330	1310	1370	1360	1320	0.13	0.19	0.07	±0.30
1850	1830	1790	1890	1870	1830	0.19	0.19	0.19	±0.30
3050	3010	2950	3150	3120	3050	0.28	0.31	0.29	±0.50
3710	3660	3590	3850	3810	3730	0.32	0.35	0.33	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB 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)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.380	0.370	0.360	0.380	0.380	0.370	0.00	0.23	0.24	±1.00
0.510	0.500	0.480	0.520	0.490	0.510	0.17	-0.18	0.53	±1.00
0.700	0.690	0.660	0.720	0.660	0.670	0.24	-0.39	0.13	±1.00
0.910	0.900	0.870	0.940	0.890	0.870	0.28	-0.10	0.00	±1.00
1.24	1.22	1.17	1.25	1.23	1.17	0.07	0.07	0.00	±1.00
1.70	1.67	1.61	1.69	1.70	1.61	-0.05	0.15	0.00	±1.00
2.26	2.23	2.14	2.26	2.25	2.15	0.00	0.08	0.04	±0.20
3.02	2.98	2.87	3.04	2.99	2.86	0.06	0.03	-0.03	±0.20
4.10	4.04	3.89	4.11	4.06	3.88	0.02	0.04	-0.02	±0.20
5.54	5.47	5.26	5.58	5.50	5.26	0.06	0.05	0.00	±0.20
7.46	7.37	7.08	7.49	7.38	7.09	0.03	0.01	0.01	±0.20
9.97	9.85	9.46	9.98	9.86	9.46	0.01	0.01	0.00	±0.20
13.5	13.3	12.8	13.5	13.3	12.8	0.00	0.00	0.00	±0.20
18.1	17.9	17.2	18.2	17.9	17.2	0.05	0.00	0.00	±0.20
24.5	24.2	23.2	24.6	24.2	23.3	0.04	0.00	0.04	±0.20
32.7	32.3	31.0	32.9	32.5	31.2	0.05	0.05	0.06	±0.20
44.1	43.7	41.9	44.4	43.9	42.1	0.06	0.04	0.04	±0.20
59.9	59.1	56.7	60.2	59.5	57.1	0.04	0.06	0.06	±0.20
82.4	81.5	78.1	82.0	81.1	77.8	-0.04	-0.04	-0.03	±0.20
108	107	102	107	106	102	-0.08	-0.08	0.00	±0.20
148	147	141	148	146	140	0.00	-0.06	-0.06	±0.20
206	204	195	205	203	194	-0.04	-0.04	-0.04	±0.20
285	282	271	286	278	272	0.03	-0.12	0.03	±0.20
423	419	402	416	414	395	-0.14	-0.10	-0.15	±0.20
586	580	556	579	576	550	-0.10	-0.06	-0.09	±0.20
878	869	834	877	874	833	-0.01	0.05	-0.01	±0.20
1340	1320	1270	1350	1350	1280	0.06	0.20	0.07	±0.30
1830	1810	1740	1870	1860	1770	0.19	0.24	0.15	±0.30
3010	2980	2860	3110	3100	2950	0.28	0.34	0.27	±0.50
3660	3620	3480	3800	3780	3620	0.33	0.38	0.34	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±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, 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
0.320	0.200	0.070	0.330	0.210	0.060	0.27	0.42	-1.34	±5.00	±5.00	±5.00
0.440	0.270	0.090	0.460	0.260	0.110	0.39	-0.33	1.74	±5.00	±5.00	±5.00
0.600	0.380	0.130	0.620	0.380	0.140	0.28	0.00	0.64	±5.00	±5.00	±5.00
0.790	0.490	0.170	0.800	0.500	0.180	0.11	0.18	0.50	±5.00	±5.00	±5.00
1.07	0.660	0.220	1.10	0.660	0.240	0.24	0.00	0.76	±5.00	±5.00	±5.00
1.46	0.910	0.310	1.48	0.910	0.290	0.12	0.00	-0.58	±5.00	±5.00	±5.00
1.95	1.21	0.410	1.98	1.22	0.380	0.13	0.07	-0.66	±5.00	±5.00	±5.00
2.61	1.62	0.550	2.63	1.62	0.550	0.07	0.00	0.00	±1.00	±5.00	±5.00
3.54	2.20	0.740	3.57	2.19	0.760	0.07	-0.04	0.23	±1.00	±1.00	±5.00
4.79	2.98	1.00	4.82	2.99	0.990	0.05	0.03	-0.09	±1.00	±1.00	±5.00
6.45	4.01	1.35	6.50	4.01	1.32	0.07	0.00	-0.20	±1.00	±1.00	±5.00
8.62	5.36	1.81	8.69	5.36	1.75	0.07	0.00	-0.29	±1.00	±1.00	±5.00
11.6	7.23	2.44	11.7	7.22	2.37	0.07	-0.01	-0.25	±1.00	±1.00	±1.00
15.7	9.76	3.29	15.8	9.74	3.19	0.06	-0.02	-0.27	±1.00	±1.00	±1.00
21.2	13.2	4.44	21.3	13.1	4.32	0.04	-0.07	-0.24	±1.00	±1.00	±1.00
28.3	17.6	5.92	28.6	17.6	5.80	0.09	0.00	-0.18	±1.00	±1.00	±1.00
38.2	23.8	8.00	38.5	23.8	7.83	0.07	0.00	-0.19	±1.00	±1.00	±1.00
51.7	32.2	10.8	52.3	32.3	10.6	0.10	0.03	-0.16	±1.00	±1.00	±1.00
71.3	44.3	14.9	71.3	44.0	14.5	0.00	-0.06	-0.24	±1.00	±1.00	±1.00
93.3	58.0	19.5	93.3	57.6	18.9	0.00	-0.06	-0.27	±1.00	±1.00	±1.00
128	79.8	26.9	128	79.2	26.1	0.00	-0.07	-0.26	±1.00	±1.00	±1.00
178	111	37.3	178	110	36.3	0.00	-0.08	-0.24	±1.00	±1.00	±1.00
247	154	51.7	249	154	50.6	0.07	0.00	-0.19	±1.00	±1.00	±1.00
366	228	76.7	353	217	75.4	-0.31	-0.43	-0.15	±1.00	±1.00	±1.00
507	315	106	492	303	105	-0.26	-0.34	-0.08	±1.00	±1.00	±1.00
760	473	159	746	460	159	-0.16	-0.24	0.00	±1.00	±1.00	±1.00
1160	719	242	1150	709	246	-0.08	-0.12	0.14	±1.00	±1.00	±1.00
1580	983	331	1590	979	340	0.05	-0.04	0.23	±1.00	±1.00	±1.00
2600	1620	545	2650	1630	538	0.17	0.05	-0.11	±1.00	±1.00	±1.00
3170	1970	664	3240	1990	660	0.19	0.09	-0.05	±1.00	±1.00	±1.00

SPEAG E-field linearity tolerance criteria¹:

±5.0dB for applied E-field < 2V/m

±1.0dB for applied E-field ≥ 2V/m

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

Frequency Response

Frequency Response, H-field, Channel 0

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	1.54	1.54	1.54	1.55	1.55	1.54	0.06	0.06	0.00	±0.3
3200	1.54	1.54	1.54	1.55	1.55	1.54	0.06	0.06	0.00	±0.3
4000	1.53	1.53	1.53	1.54	1.54	1.53	0.06	0.06	0.00	±0.3
5200	1.52	1.52	1.52	1.53	1.53	1.51	0.06	0.06	-0.06	±0.3
6600	1.51	1.51	1.51	1.51	1.51	1.51	0.00	0.00	0.00	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.49	0.00	0.00	-0.06	±0.3
9000	1.50	1.50	1.50	1.50	1.50	1.49	0.00	0.00	-0.06	±0.3
10600	4.34	4.32	4.31	4.33	4.30	4.29	-0.02	-0.04	-0.04	±0.3
13400	4.36	4.33	4.32	4.36	4.33	4.31	0.00	0.00	-0.02	±0.3
17000	4.36	4.32	4.31	4.37	4.34	4.31	0.02	0.04	0.00	±0.3
21400	4.38	4.34	4.33	4.38	4.37	4.34	0.00	0.06	0.02	±0.3
27200	4.38	4.34	4.33	4.38	4.34	4.33	0.00	0.00	0.00	±0.3
34400	4.38	4.35	4.34	4.39	4.36	4.34	0.02	0.02	0.00	±0.3
40000	4.37	4.34	4.33	4.38	4.35	4.33	0.02	0.02	0.00	±0.3
43600	4.36	4.33	4.33	4.37	4.34	4.34	0.02	0.02	0.02	±0.3
55400	4.35	4.32	4.32	4.36	4.33	4.33	0.02	0.02	0.02	±0.3
70000	4.34	4.31	4.31	4.36	4.32	4.30	0.04	0.02	-0.02	±0.3
88800	4.33	4.30	4.29	4.33	4.31	4.30	0.00	0.02	0.02	±0.3
112400	4.31	4.29	4.28	4.32	4.29	4.29	0.02	0.00	0.02	±0.3
142400	4.30	4.27	4.27	4.31	4.27	4.28	0.02	0.00	0.02	±0.3
161750	4.28	4.25	4.25	4.29	4.25	4.25	0.02	0.00	0.00	±0.3
180400	4.27	4.24	4.24	4.28	4.26	4.24	0.02	0.04	0.00	±0.3
228400	4.24	4.21	4.20	4.25	4.21	4.21	0.02	0.00	0.02	±0.3
289400	4.20	4.17	4.17	4.21	4.18	4.17	0.02	0.02	0.00	±0.3
366400	4.16	4.14	4.13	4.17	4.15	4.14	0.02	0.02	0.02	±0.3
400000	4.14	4.12	4.12	4.15	4.13	4.12	0.02	0.02	0.00	±0.3
464000	4.11	4.09	4.09	4.13	4.10	4.09	0.04	0.02	0.00	±0.3
587800	4.07	4.05	4.04	4.08	4.06	4.05	0.02	0.02	0.02	±0.3
744200	4.02	4.00	4.00	4.03	4.01	4.00	0.02	0.02	0.00	±0.3
942600	4.00	3.99	3.99	4.01	4.00	3.99	0.02	0.02	0.00	±0.3
1193600	3.98	3.97	3.96	4.00	3.98	3.97	0.04	0.02	0.02	±0.3
1511600	3.98	3.96	3.96	3.99	3.96	3.96	0.02	0.00	0.00	±0.3
1914400	3.96	3.95	3.94	3.97	3.96	3.94	0.02	0.02	0.00	±0.3
2424400	3.95	3.93	3.93	3.95	3.93	3.93	0.00	0.00	0.00	±0.3
3070200	3.92	3.90	3.90	3.92	3.91	3.90	0.00	0.02	0.00	±0.3
3888000	3.86	3.85	3.84	3.87	3.85	3.84	0.02	0.00	0.00	±0.3
4000000	3.86	3.84	3.83	3.87	3.85	3.84	0.02	0.02	0.02	±0.3
4923800	3.79	3.78	3.77	3.80	3.78	3.77	0.02	0.00	0.00	±0.3
6235400	3.69	3.67	3.67	3.69	3.67	3.68	0.00	0.00	0.02	±0.3
7896400	3.54	3.53	3.52	3.55	3.53	3.53	0.02	0.00	0.02	±0.3
10000000	3.40	3.38	3.38	3.41	3.40	3.38	0.03	0.05	0.00	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±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

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	1.54	1.54	1.54	1.55	1.55	1.55	0.06	0.06	0.06	±0.3
3200	1.54	1.54	1.54	1.56	1.55	1.54	0.11	0.06	0.00	±0.3
4000	1.53	1.53	1.53	1.53	1.53	1.54	0.00	0.00	0.06	±0.3
5200	1.52	1.52	1.52	1.53	1.53	1.52	0.06	0.06	0.00	±0.3
6600	1.51	1.51	1.51	1.51	1.51	1.51	0.00	0.00	0.00	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
9000	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
10600	4.34	4.32	4.31	4.32	4.33	4.30	-0.04	0.02	-0.02	±0.3
13400	4.36	4.33	4.32	4.37	4.33	4.31	0.02	0.00	-0.02	±0.3
17000	4.36	4.32	4.31	4.37	4.33	4.32	0.02	0.02	0.02	±0.3
21400	4.38	4.34	4.33	4.40	4.35	4.36	0.04	0.02	0.06	±0.3
27200	4.38	4.34	4.33	4.39	4.34	4.33	0.02	0.00	0.00	±0.3
34400	4.38	4.35	4.34	4.38	4.36	4.34	0.00	0.02	0.00	±0.3
40000	4.37	4.34	4.33	4.38	4.35	4.34	0.02	0.02	0.02	±0.3
43600	4.36	4.33	4.33	4.36	4.35	4.33	0.00	0.04	0.00	±0.3
55400	4.35	4.32	4.32	4.36	4.33	4.33	0.02	0.02	0.02	±0.3
70000	4.34	4.31	4.31	4.35	4.32	4.31	0.02	0.02	0.00	±0.3
88800	4.33	4.30	4.29	4.33	4.30	4.30	0.00	0.00	0.02	±0.3
112400	4.31	4.29	4.28	4.34	4.29	4.29	0.06	0.00	0.02	±0.3
142400	4.30	4.27	4.27	4.30	4.28	4.27	0.00	0.02	0.00	±0.3
161750	4.28	4.25	4.25	4.29	4.27	4.25	0.02	0.04	0.00	±0.3
180400	4.27	4.24	4.24	4.27	4.25	4.24	0.00	0.02	0.00	±0.3
228400	4.24	4.21	4.20	4.25	4.21	4.21	0.02	0.00	0.02	±0.3
289400	4.20	4.17	4.17	4.20	4.18	4.18	0.00	0.02	0.02	±0.3
366400	4.16	4.14	4.13	4.17	4.15	4.14	0.02	0.02	0.02	±0.3
400000	4.14	4.12	4.12	4.15	4.13	4.12	0.02	0.02	0.00	±0.3
464000	4.11	4.09	4.09	4.13	4.10	4.09	0.04	0.02	0.00	±0.3
587800	4.07	4.05	4.04	4.08	4.05	4.05	0.02	0.00	0.02	±0.3
744200	4.02	4.00	4.00	4.03	4.01	4.00	0.02	0.02	0.00	±0.3
942600	4.00	3.99	3.99	4.01	4.00	3.99	0.02	0.02	0.00	±0.3
1193600	3.98	3.97	3.96	3.99	3.98	3.97	0.02	0.02	0.02	±0.3
1511600	3.98	3.96	3.96	3.98	3.96	3.96	0.00	0.00	0.00	±0.3
1914400	3.96	3.95	3.94	3.97	3.94	3.95	0.02	-0.02	0.02	±0.3
2424400	3.95	3.93	3.93	3.95	3.94	3.93	0.00	0.02	0.00	±0.3
3070200	3.92	3.90	3.90	3.92	3.91	3.90	0.00	0.02	0.00	±0.3
3888000	3.86	3.85	3.84	3.87	3.85	3.84	0.02	0.00	0.00	±0.3
4000000	3.86	3.84	3.83	3.87	3.85	3.84	0.02	0.02	0.02	±0.3
4923800	3.79	3.78	3.77	3.80	3.78	3.78	0.02	0.00	0.02	±0.3
6235400	3.69	3.67	3.67	3.69	3.67	3.67	0.00	0.00	0.00	±0.3
7896400	3.54	3.53	3.52	3.55	3.53	3.54	0.02	0.00	0.05	±0.3
10000000	3.40	3.38	3.38	3.40	3.38	3.39	0.00	0.00	0.03	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±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

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	1.54	1.54	1.54	1.54	1.55	1.55	0.00	0.06	0.06	±0.3
3200	1.54	1.54	1.54	1.56	1.55	1.55	0.11	0.06	0.06	±0.3
4000	1.53	1.53	1.53	1.54	1.54	1.53	0.06	0.06	0.00	±0.3
5200	1.52	1.52	1.52	1.53	1.53	1.52	0.06	0.06	0.00	±0.3
6600	1.51	1.51	1.51	1.51	1.51	1.51	0.00	0.00	0.00	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
9000	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
10600	4.34	4.32	4.31	4.34	4.30	4.31	0.00	-0.04	0.00	±0.3
13400	4.36	4.33	4.32	4.38	4.34	4.30	0.04	0.02	-0.04	±0.3
17000	4.36	4.32	4.31	4.37	4.32	4.32	0.02	0.00	0.02	±0.3
21400	4.38	4.34	4.33	4.38	4.35	4.33	0.00	0.02	0.00	±0.3
27200	4.38	4.34	4.33	4.39	4.35	4.32	0.02	0.02	-0.02	±0.3
34400	4.38	4.35	4.34	4.38	4.36	4.34	0.00	0.02	0.00	±0.3
40000	4.37	4.34	4.33	4.38	4.35	4.33	0.02	0.02	0.00	±0.3
43600	4.36	4.33	4.33	4.38	4.35	4.33	0.04	0.04	0.00	±0.3
55400	4.35	4.32	4.32	4.36	4.33	4.32	0.02	0.02	0.00	±0.3
70000	4.34	4.31	4.31	4.34	4.31	4.32	0.00	0.00	0.02	±0.3
88800	4.33	4.30	4.29	4.34	4.31	4.30	0.02	0.02	0.02	±0.3
112400	4.31	4.29	4.28	4.32	4.30	4.29	0.02	0.02	0.02	±0.3
142400	4.30	4.27	4.27	4.30	4.29	4.27	0.00	0.04	0.00	±0.3
161750	4.28	4.25	4.25	4.29	4.27	4.25	0.02	0.04	0.00	±0.3
180400	4.27	4.24	4.24	4.27	4.24	4.24	0.00	0.00	0.00	±0.3
228400	4.24	4.21	4.20	4.26	4.22	4.21	0.04	0.02	0.02	±0.3
289400	4.20	4.17	4.17	4.21	4.18	4.17	0.02	0.02	0.00	±0.3
366400	4.16	4.14	4.13	4.17	4.15	4.14	0.02	0.02	0.02	±0.3
400000	4.14	4.12	4.12	4.15	4.13	4.12	0.02	0.02	0.00	±0.3
464000	4.11	4.09	4.09	4.12	4.10	4.09	0.02	0.02	0.00	±0.3
587800	4.07	4.05	4.04	4.08	4.06	4.05	0.02	0.02	0.02	±0.3
744200	4.02	4.00	4.00	4.03	4.01	4.00	0.02	0.02	0.00	±0.3
942600	4.00	3.99	3.99	4.02	4.00	3.99	0.04	0.02	0.00	±0.3
1193600	3.98	3.97	3.96	3.99	3.98	3.97	0.02	0.02	0.02	±0.3
1511600	3.98	3.96	3.96	3.99	3.97	3.96	0.02	0.02	0.00	±0.3
1914400	3.96	3.95	3.94	3.97	3.95	3.94	0.02	0.00	0.00	±0.3
2424400	3.95	3.93	3.93	3.96	3.94	3.94	0.02	0.02	0.02	±0.3
3070200	3.92	3.90	3.90	3.93	3.91	3.90	0.02	0.02	0.00	±0.3
3888000	3.86	3.85	3.84	3.87	3.86	3.85	0.02	0.02	0.02	±0.3
4000000	3.86	3.84	3.83	3.85	3.84	3.84	-0.02	0.00	0.02	±0.3
4923800	3.79	3.78	3.77	3.80	3.78	3.77	0.02	0.00	0.00	±0.3
6235400	3.69	3.67	3.67	3.69	3.68	3.67	0.00	0.02	0.00	±0.3
7896400	3.54	3.53	3.52	3.55	3.53	3.52	0.02	0.00	0.00	±0.3
10000000	3.40	3.38	3.38	3.40	3.37	3.39	0.00	-0.03	0.03	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±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

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	1.54	1.54	1.54	1.55	1.55	1.55	0.06	0.06	0.06	±0.3
3200	1.54	1.54	1.54	1.55	1.56	1.54	0.06	0.11	0.00	±0.3
4000	1.53	1.53	1.53	1.54	1.54	1.53	0.06	0.06	0.00	±0.3
5200	1.52	1.52	1.52	1.53	1.53	1.52	0.06	0.06	0.00	±0.3
6600	1.51	1.51	1.51	1.51	1.51	1.52	0.00	0.00	0.06	±0.3
8200	1.50	1.50	1.50	1.50	1.49	1.50	0.00	-0.06	0.00	±0.3
9000	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
10600	4.34	4.32	4.31	4.36	4.30	4.31	0.04	-0.04	0.00	±0.3
13400	4.36	4.33	4.32	4.37	4.32	4.34	0.02	-0.02	0.04	±0.3
17000	4.36	4.32	4.31	4.36	4.33	4.33	0.00	0.02	0.04	±0.3
21400	4.38	4.34	4.33	4.40	4.35	4.34	0.04	0.02	0.02	±0.3
27200	4.38	4.34	4.33	4.38	4.34	4.33	0.00	0.00	0.00	±0.3
34400	4.38	4.35	4.34	4.39	4.35	4.34	0.02	0.00	0.00	±0.3
40000	4.37	4.34	4.33	4.38	4.35	4.34	0.02	0.02	0.02	±0.3
43600	4.36	4.33	4.33	4.37	4.35	4.32	0.02	0.04	-0.02	±0.3
55400	4.35	4.32	4.32	4.36	4.33	4.32	0.02	0.02	0.00	±0.3
70000	4.34	4.31	4.31	4.35	4.32	4.32	0.02	0.02	0.02	±0.3
88800	4.33	4.30	4.29	4.34	4.32	4.30	0.02	0.04	0.02	±0.3
112400	4.31	4.29	4.28	4.33	4.33	4.29	0.04	0.08	0.02	±0.3
142400	4.30	4.27	4.27	4.31	4.27	4.27	0.02	0.00	0.00	±0.3
161750	4.28	4.25	4.25	4.29	4.25	4.25	0.02	0.00	0.00	±0.3
180400	4.27	4.24	4.24	4.28	4.23	4.24	0.02	-0.02	0.00	±0.3
228400	4.24	4.21	4.20	4.25	4.22	4.21	0.02	0.02	0.02	±0.3
289400	4.20	4.17	4.17	4.20	4.18	4.17	0.00	0.02	0.00	±0.3
366400	4.16	4.14	4.13	4.17	4.15	4.14	0.02	0.02	0.02	±0.3
400000	4.14	4.12	4.12	4.15	4.13	4.12	0.02	0.02	0.00	±0.3
464000	4.11	4.09	4.09	4.13	4.10	4.09	0.04	0.02	0.00	±0.3
587800	4.07	4.05	4.04	4.08	4.06	4.06	0.02	0.02	0.04	±0.3
744200	4.02	4.00	4.00	4.03	4.01	4.01	0.02	0.02	0.02	±0.3
942600	4.00	3.99	3.99	4.01	4.00	3.99	0.02	0.02	0.00	±0.3
1193600	3.98	3.97	3.96	3.99	3.98	3.97	0.02	0.02	0.02	±0.3
1511600	3.98	3.96	3.96	3.98	3.97	3.96	0.00	0.02	0.00	±0.3
1914400	3.96	3.95	3.94	3.97	3.95	3.95	0.02	0.00	0.02	±0.3
2424400	3.95	3.93	3.93	3.96	3.94	3.94	0.02	0.02	0.02	±0.3
3070200	3.92	3.90	3.90	3.93	3.91	3.90	0.02	0.02	0.00	±0.3
3888000	3.86	3.85	3.84	3.87	3.85	3.84	0.02	0.00	0.00	±0.3
4000000	3.86	3.84	3.83	3.87	3.85	3.84	0.02	0.02	0.02	±0.3
4923800	3.79	3.78	3.77	3.80	3.78	3.78	0.02	0.00	0.02	±0.3
6235400	3.69	3.67	3.67	3.69	3.67	3.67	0.00	0.00	0.00	±0.3
7896400	3.54	3.53	3.52	3.55	3.53	3.53	0.02	0.00	0.02	±0.3
10000000	3.40	3.38	3.38	3.40	3.40	3.38	0.00	0.05	0.00	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±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

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	1.54	1.54	1.54	1.54	1.55	1.53	0.00	0.06	-0.06	±0.3
3200	1.54	1.54	1.54	1.56	1.55	1.53	0.11	0.06	-0.06	±0.3
4000	1.53	1.53	1.53	1.53	1.54	1.52	0.00	0.06	-0.06	±0.3
5200	1.52	1.52	1.52	1.53	1.53	1.53	0.06	0.06	0.06	±0.3
6600	1.51	1.51	1.51	1.51	1.52	1.50	0.00	0.06	-0.06	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
9000	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
10600	4.34	4.32	4.31	4.33	4.31	4.34	-0.02	-0.02	0.06	±0.3
13400	4.36	4.33	4.32	4.37	4.34	4.33	0.02	0.02	0.02	±0.3
17000	4.36	4.32	4.31	4.36	4.33	4.32	0.00	0.02	0.02	±0.3
21400	4.38	4.34	4.33	4.38	4.34	4.34	0.00	0.00	0.02	±0.3
27200	4.38	4.34	4.33	4.40	4.34	4.34	0.04	0.00	0.02	±0.3
34400	4.38	4.35	4.34	4.39	4.36	4.34	0.02	0.02	0.00	±0.3
40000	4.37	4.34	4.33	4.38	4.36	4.33	0.02	0.04	0.00	±0.3
43600	4.36	4.33	4.33	4.38	4.33	4.34	0.04	0.00	0.02	±0.3
55400	4.35	4.32	4.32	4.36	4.34	4.32	0.02	0.04	0.00	±0.3
70000	4.34	4.31	4.31	4.35	4.32	4.32	0.02	0.02	0.02	±0.3
88800	4.33	4.30	4.29	4.34	4.30	4.30	0.02	0.00	0.02	±0.3
112400	4.31	4.29	4.28	4.32	4.28	4.29	0.02	-0.02	0.02	±0.3
142400	4.30	4.27	4.27	4.31	4.28	4.28	0.02	0.02	0.02	±0.3
161750	4.28	4.25	4.25	4.29	4.26	4.25	0.02	0.02	0.00	±0.3
180400	4.27	4.24	4.24	4.28	4.29	4.24	0.02	0.10	0.00	±0.3
228400	4.24	4.21	4.20	4.25	4.21	4.21	0.02	0.00	0.02	±0.3
289400	4.20	4.17	4.17	4.21	4.18	4.17	0.02	0.02	0.00	±0.3
366400	4.16	4.14	4.13	4.17	4.15	4.13	0.02	0.02	0.00	±0.3
400000	4.14	4.12	4.12	4.15	4.13	4.12	0.02	0.02	0.00	±0.3
464000	4.11	4.09	4.09	4.12	4.10	4.09	0.02	0.02	0.00	±0.3
587800	4.07	4.05	4.04	4.09	4.06	4.05	0.04	0.02	0.02	±0.3
744200	4.02	4.00	4.00	4.03	4.01	4.00	0.02	0.02	0.00	±0.3
942600	4.00	3.99	3.99	4.02	4.00	3.99	0.04	0.02	0.00	±0.3
1193600	3.98	3.97	3.96	3.99	3.97	3.97	0.02	0.00	0.02	±0.3
1511600	3.98	3.96	3.96	3.98	3.96	3.96	0.00	0.00	0.00	±0.3
1914400	3.96	3.95	3.94	3.97	3.95	3.95	0.02	0.00	0.02	±0.3
2424400	3.95	3.93	3.93	3.96	3.94	3.93	0.02	0.02	0.00	±0.3
3070200	3.92	3.90	3.90	3.92	3.91	3.91	0.00	0.02	0.02	±0.3
3888000	3.86	3.85	3.84	3.87	3.85	3.84	0.02	0.00	0.00	±0.3
4000000	3.86	3.84	3.83	3.86	3.84	3.84	0.00	0.00	0.02	±0.3
4923800	3.79	3.78	3.77	3.79	3.78	3.77	0.00	0.00	0.00	±0.3
6235400	3.69	3.67	3.67	3.69	3.67	3.67	0.00	0.00	0.00	±0.3
7896400	3.54	3.53	3.52	3.55	3.53	3.52	0.02	0.00	0.00	±0.3
10000000	3.40	3.38	3.38	3.39	3.39	3.39	-0.03	0.03	0.03	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±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	1.54	1.54	1.54	1.54	1.54	1.55	0.00	0.00	0.06	±0.3
3200	1.54	1.54	1.54	1.55	1.56	1.54	0.06	0.11	0.00	±0.3
4000	1.53	1.53	1.53	1.54	1.53	1.53	0.06	0.00	0.00	±0.3
5200	1.52	1.52	1.52	1.53	1.52	1.52	0.06	0.00	0.00	±0.3
6600	1.51	1.51	1.51	1.51	1.51	1.51	0.00	0.00	0.00	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
9000	1.50	1.50	1.50	1.50	1.49	1.50	0.00	-0.06	0.00	±0.3
10600	4.34	4.32	4.31	4.33	4.35	4.33	-0.02	0.06	0.04	±0.3
13400	4.36	4.33	4.32	4.39	4.34	4.31	0.06	0.02	-0.02	±0.3
17000	4.36	4.32	4.31	4.37	4.33	4.31	0.02	0.02	0.00	±0.3
21400	4.38	4.34	4.33	4.40	4.35	4.35	0.04	0.02	0.04	±0.3
27200	4.38	4.34	4.33	4.39	4.34	4.34	0.02	0.00	0.02	±0.3
34400	4.38	4.35	4.34	4.39	4.36	4.34	0.02	0.02	0.00	±0.3
40000	4.37	4.34	4.33	4.38	4.35	4.34	0.02	0.02	0.02	±0.3
43600	4.36	4.33	4.33	4.37	4.34	4.34	0.02	0.02	0.02	±0.3
55400	4.35	4.32	4.32	4.36	4.33	4.32	0.02	0.02	0.00	±0.3
70000	4.34	4.31	4.31	4.35	4.33	4.32	0.02	0.04	0.02	±0.3
88800	4.33	4.30	4.29	4.34	4.31	4.30	0.02	0.02	0.02	±0.3
112400	4.31	4.29	4.28	4.33	4.29	4.29	0.04	0.00	0.02	±0.3
142400	4.30	4.27	4.27	4.31	4.27	4.27	0.02	0.00	0.00	±0.3
161750	4.28	4.25	4.25	4.29	4.26	4.25	0.02	0.02	0.00	±0.3
180400	4.27	4.24	4.24	4.27	4.27	4.24	0.00	0.06	0.00	±0.3
228400	4.24	4.21	4.20	4.25	4.21	4.21	0.02	0.00	0.02	±0.3
289400	4.20	4.17	4.17	4.21	4.18	4.17	0.02	0.02	0.00	±0.3
366400	4.16	4.14	4.13	4.17	4.15	4.14	0.02	0.02	0.02	±0.3
400000	4.14	4.12	4.12	4.15	4.13	4.12	0.02	0.02	0.00	±0.3
464000	4.11	4.09	4.09	4.13	4.10	4.09	0.04	0.02	0.00	±0.3
587800	4.07	4.05	4.04	4.08	4.05	4.05	0.02	0.00	0.02	±0.3
744200	4.02	4.00	4.00	4.02	4.01	4.00	0.00	0.02	0.00	±0.3
942600	4.00	3.99	3.99	4.02	4.00	3.99	0.04	0.02	0.00	±0.3
1193600	3.98	3.97	3.96	3.99	3.98	3.97	0.02	0.02	0.02	±0.3
1511600	3.98	3.96	3.96	3.99	3.97	3.96	0.02	0.02	0.00	±0.3
1914400	3.96	3.95	3.94	3.97	3.95	3.94	0.02	0.00	0.00	±0.3
2424400	3.95	3.93	3.93	3.96	3.94	3.93	0.02	0.02	0.00	±0.3
3070200	3.92	3.90	3.90	3.92	3.91	3.90	0.00	0.02	0.00	±0.3
3888000	3.86	3.85	3.84	3.87	3.85	3.84	0.02	0.00	0.00	±0.3
4000000	3.86	3.84	3.83	3.87	3.84	3.84	0.02	0.00	0.02	±0.3
4923800	3.79	3.78	3.77	3.80	3.78	3.77	0.02	0.00	0.00	±0.3
6235400	3.69	3.67	3.67	3.69	3.67	3.66	0.00	0.00	-0.02	±0.3
7896400	3.54	3.53	3.52	3.54	3.53	3.53	0.00	0.00	0.02	±0.3
10000000	3.40	3.38	3.38	3.40	3.39	3.40	0.00	0.03	0.05	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±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	1.54	1.54	1.54	1.54	1.55	1.53	0.00	0.06	-0.06	±0.3
3200	1.54	1.54	1.54	1.56	1.55	1.55	0.11	0.06	0.06	±0.3
4000	1.53	1.53	1.53	1.54	1.53	1.53	0.06	0.00	0.00	±0.3
5200	1.52	1.52	1.52	1.53	1.53	1.51	0.06	0.06	-0.06	±0.3
6600	1.51	1.51	1.51	1.50	1.51	1.51	-0.06	0.00	0.00	±0.3
8200	1.50	1.50	1.50	1.49	1.50	1.50	-0.06	0.00	0.00	±0.3
9000	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
10600	4.34	4.32	4.31	4.37	4.34	4.28	0.06	0.04	-0.06	±0.3
13400	4.36	4.33	4.32	4.35	4.33	4.31	-0.02	0.00	-0.02	±0.3
17000	4.36	4.32	4.31	4.36	4.33	4.31	0.00	0.02	0.00	±0.3
21400	4.38	4.34	4.33	4.39	4.34	4.33	0.02	0.00	0.00	±0.3
27200	4.38	4.34	4.33	4.39	4.33	4.34	0.02	-0.02	0.02	±0.3
34400	4.38	4.35	4.34	4.39	4.36	4.35	0.02	0.02	0.02	±0.3
40000	4.37	4.34	4.33	4.39	4.34	4.34	0.04	0.00	0.02	±0.3
43600	4.36	4.33	4.33	4.37	4.35	4.33	0.02	0.04	0.00	±0.3
55400	4.35	4.32	4.32	4.36	4.33	4.32	0.02	0.02	0.00	±0.3
70000	4.34	4.31	4.31	4.36	4.30	4.30	0.04	-0.02	-0.02	±0.3
88800	4.33	4.30	4.29	4.33	4.29	4.30	0.00	-0.02	0.02	±0.3
112400	4.31	4.29	4.28	4.33	4.30	4.29	0.04	0.02	0.02	±0.3
142400	4.30	4.27	4.27	4.31	4.30	4.28	0.02	0.06	0.02	±0.3
161750	4.28	4.25	4.25	4.29	4.29	4.25	0.02	0.08	0.00	±0.3
180400	4.27	4.24	4.24	4.27	4.21	4.24	0.00	-0.06	0.00	±0.3
228400	4.24	4.21	4.20	4.25	4.21	4.21	0.02	0.00	0.02	±0.3
289400	4.20	4.17	4.17	4.21	4.18	4.17	0.02	0.02	0.00	±0.3
366400	4.16	4.14	4.13	4.17	4.14	4.14	0.02	0.00	0.02	±0.3
400000	4.14	4.12	4.12	4.15	4.13	4.12	0.02	0.02	0.00	±0.3
464000	4.11	4.09	4.09	4.12	4.09	4.09	0.02	0.00	0.00	±0.3
587800	4.07	4.05	4.04	4.08	4.05	4.05	0.02	0.00	0.02	±0.3
744200	4.02	4.00	4.00	4.03	4.00	4.00	0.02	0.00	0.00	±0.3
942600	4.00	3.99	3.99	4.01	4.00	3.99	0.02	0.02	0.00	±0.3
1193600	3.98	3.97	3.96	3.99	3.98	3.97	0.02	0.02	0.02	±0.3
1511600	3.98	3.96	3.96	3.98	3.96	3.96	0.00	0.00	0.00	±0.3
1914400	3.96	3.95	3.94	3.97	3.95	3.94	0.02	0.00	0.00	±0.3
2424400	3.95	3.93	3.93	3.95	3.94	3.93	0.00	0.02	0.00	±0.3
3070200	3.92	3.90	3.90	3.92	3.91	3.91	0.00	0.02	0.02	±0.3
3888000	3.86	3.85	3.84	3.87	3.85	3.84	0.02	0.00	0.00	±0.3
4000000	3.86	3.84	3.83	3.86	3.84	3.84	0.00	0.00	0.02	±0.3
4923800	3.79	3.78	3.77	3.79	3.78	3.77	0.00	0.00	0.00	±0.3
6235400	3.69	3.67	3.67	3.69	3.68	3.67	0.00	0.02	0.00	±0.3
7896400	3.54	3.53	3.52	3.55	3.53	3.52	0.02	0.00	0.00	±0.3
10000000	3.40	3.38	3.38	3.39	3.38	3.38	-0.03	0.00	0.00	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±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	1.54	1.54	1.54	1.54	1.54	1.54	0.00	0.00	0.00	±0.3
3200	1.54	1.54	1.54	1.55	1.55	1.54	0.06	0.06	0.00	±0.3
4000	1.53	1.53	1.53	1.54	1.52	1.54	0.06	-0.06	0.06	±0.3
5200	1.52	1.52	1.52	1.52	1.53	1.51	0.00	0.06	-0.06	±0.3
6600	1.51	1.51	1.51	1.51	1.51	1.51	0.00	0.00	0.00	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
9000	1.50	1.50	1.50	1.49	1.49	1.49	-0.06	-0.06	-0.06	±0.3
10600	4.34	4.32	4.31	4.32	4.32	4.32	-0.04	0.00	0.02	±0.3
13400	4.36	4.33	4.32	4.37	4.34	4.33	0.02	0.02	0.02	±0.3
17000	4.36	4.32	4.31	4.36	4.33	4.32	0.00	0.02	0.02	±0.3
21400	4.38	4.34	4.33	4.39	4.35	4.34	0.02	0.02	0.02	±0.3
27200	4.38	4.34	4.33	4.39	4.34	4.33	0.02	0.00	0.00	±0.3
34400	4.38	4.35	4.34	4.39	4.36	4.34	0.02	0.02	0.00	±0.3
40000	4.37	4.34	4.33	4.37	4.35	4.34	0.00	0.02	0.02	±0.3
43600	4.36	4.33	4.33	4.37	4.34	4.34	0.02	0.02	0.02	±0.3
55400	4.35	4.32	4.32	4.36	4.33	4.32	0.02	0.02	0.00	±0.3
70000	4.34	4.31	4.31	4.35	4.32	4.31	0.02	0.02	0.00	±0.3
88800	4.33	4.30	4.29	4.33	4.30	4.30	0.00	0.00	0.02	±0.3
112400	4.31	4.29	4.28	4.33	4.30	4.29	0.04	0.02	0.02	±0.3
142400	4.30	4.27	4.27	4.30	4.28	4.27	0.00	0.02	0.00	±0.3
161750	4.28	4.25	4.25	4.29	4.27	4.25	0.02	0.04	0.00	±0.3
180400	4.27	4.24	4.24	4.27	4.24	4.24	0.00	0.00	0.00	±0.3
228400	4.24	4.21	4.20	4.25	4.21	4.21	0.02	0.00	0.02	±0.3
289400	4.20	4.17	4.17	4.20	4.18	4.17	0.00	0.02	0.00	±0.3
366400	4.16	4.14	4.13	4.17	4.15	4.14	0.02	0.02	0.02	±0.3
400000	4.14	4.12	4.12	4.15	4.13	4.12	0.02	0.02	0.00	±0.3
464000	4.11	4.09	4.09	4.13	4.09	4.09	0.04	0.00	0.00	±0.3
587800	4.07	4.05	4.04	4.08	4.06	4.05	0.02	0.02	0.02	±0.3
744200	4.02	4.00	4.00	4.02	4.01	4.00	0.00	0.02	0.00	±0.3
942600	4.00	3.99	3.99	4.01	4.00	3.99	0.02	0.02	0.00	±0.3
1193600	3.98	3.97	3.96	3.99	3.98	3.97	0.02	0.02	0.02	±0.3
1511600	3.98	3.96	3.96	3.98	3.96	3.96	0.00	0.00	0.00	±0.3
1914400	3.96	3.95	3.94	3.97	3.95	3.94	0.02	0.00	0.00	±0.3
2424400	3.95	3.93	3.93	3.96	3.94	3.93	0.02	0.02	0.00	±0.3
3070200	3.92	3.90	3.90	3.93	3.91	3.91	0.02	0.02	0.02	±0.3
3888000	3.86	3.85	3.84	3.87	3.85	3.84	0.02	0.00	0.00	±0.3
4000000	3.86	3.84	3.83	3.87	3.85	3.83	0.02	0.02	0.00	±0.3
4923800	3.79	3.78	3.77	3.79	3.78	3.77	0.00	0.00	0.00	±0.3
6235400	3.69	3.67	3.67	3.69	3.67	3.66	0.00	0.00	-0.02	±0.3
7896400	3.54	3.53	3.52	3.54	3.53	3.53	0.00	0.00	0.02	±0.3
10000000	3.40	3.38	3.38	3.40	3.39	3.39	0.00	0.03	0.03	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

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

Frequency Response, E-field, Channel 0

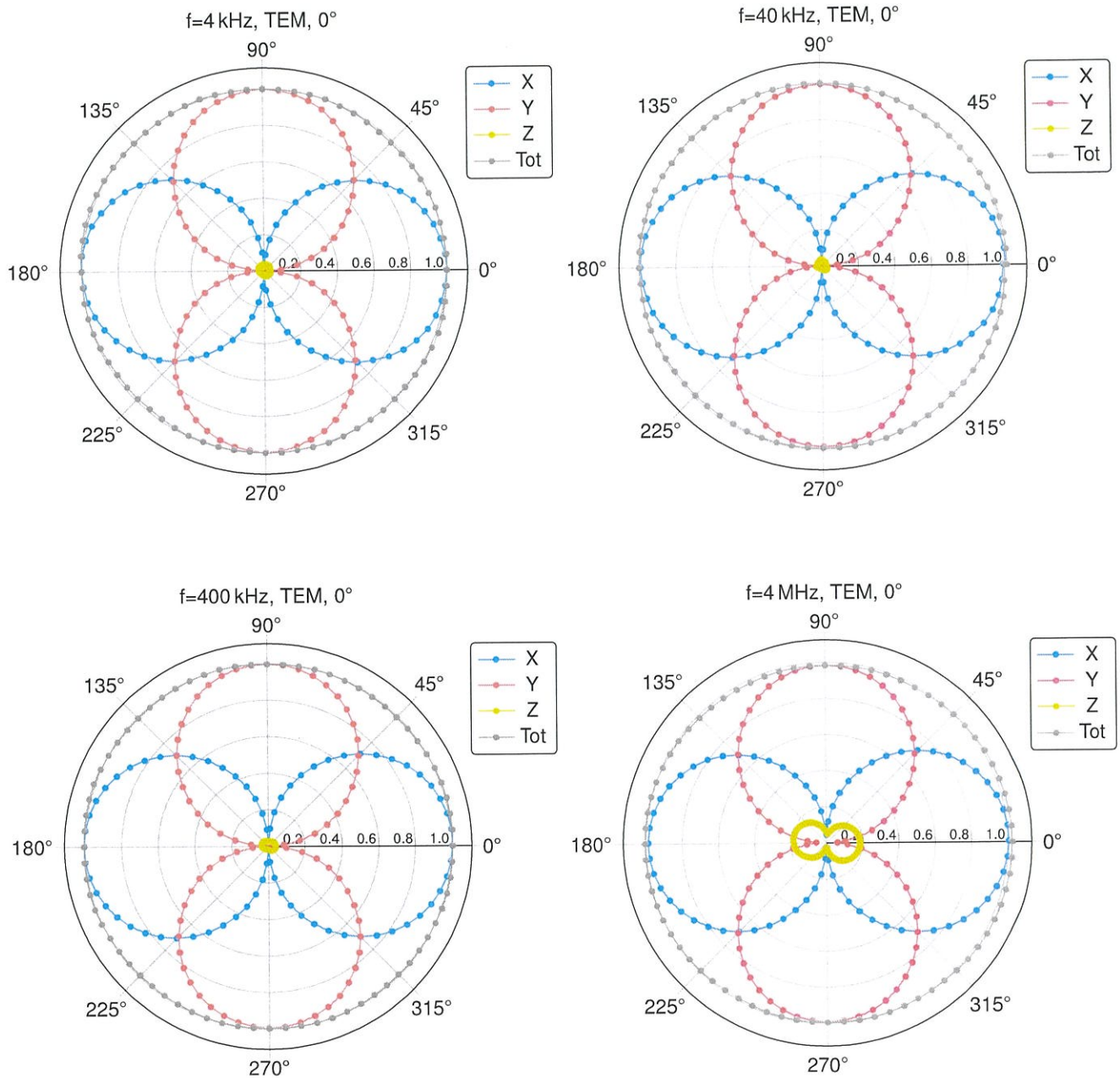
f/(Hz)	E-field/(V/m) Applied			E-field/(V/m) Reading			Difference/(dB)			Tolerance/(dB)
	x	y	z	x	y	z	x	y	z	
3000	169	169	172	169	169	172	0.00	0.00	0.00	±0.3
3200	167	167	162	169	170	161	0.10	0.15	-0.05	±0.3
4000	175	175	170	175	175	170	0.00	0.00	0.00	±0.3
5200	165	165	163	165	165	164	0.00	0.00	0.05	±0.3
6600	163	163	160	162	162	160	-0.05	-0.05	0.00	±0.3
8200	162	162	159	162	162	158	0.00	0.00	-0.05	±0.3
9000	163	163	164	163	163	163	0.00	0.00	-0.05	±0.3
10600	166	166	159	166	166	159	0.00	0.00	0.00	±0.3
13400	163	163	162	163	163	162	0.00	0.00	0.00	±0.3
17000	161	161	163	161	161	163	0.00	0.00	0.00	±0.3
21400	157	157	158	157	157	158	0.00	0.00	0.00	±0.3
27200	158	158	157	158	158	157	0.00	0.00	0.00	±0.3
34400	162	162	159	162	162	159	0.00	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	158	0.00	0.00	-0.05	±0.3
70000	162	162	160	162	162	160	0.00	0.00	0.00	±0.3
88800	161	161	160	161	161	160	0.00	0.00	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	165	163	0.00	0.00	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	164	0.00	0.00	-0.05	±0.3
400000	167	167	165	167	167	165	0.00	0.00	0.00	±0.3
464000	168	168	166	168	168	166	0.00	0.00	0.00	±0.3
587800	169	169	167	169	169	167	0.00	0.00	0.00	±0.3
744200	169	169	167	169	169	167	0.00	0.00	0.00	±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	170	170	169	0.00	0.00	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	170	169	0.00	-0.05	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	169	0.00	0.00	0.00	±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	180	180	178	0.00	0.00	-0.05	±0.3
10000000	201	201	199	201	201	199	0.00	0.00	0.00	±0.3

SPEAG E-field frequency response tolerance criteria¹:
±0.3dB for applied E-fields at calibration points from 3kHz to 10MHz

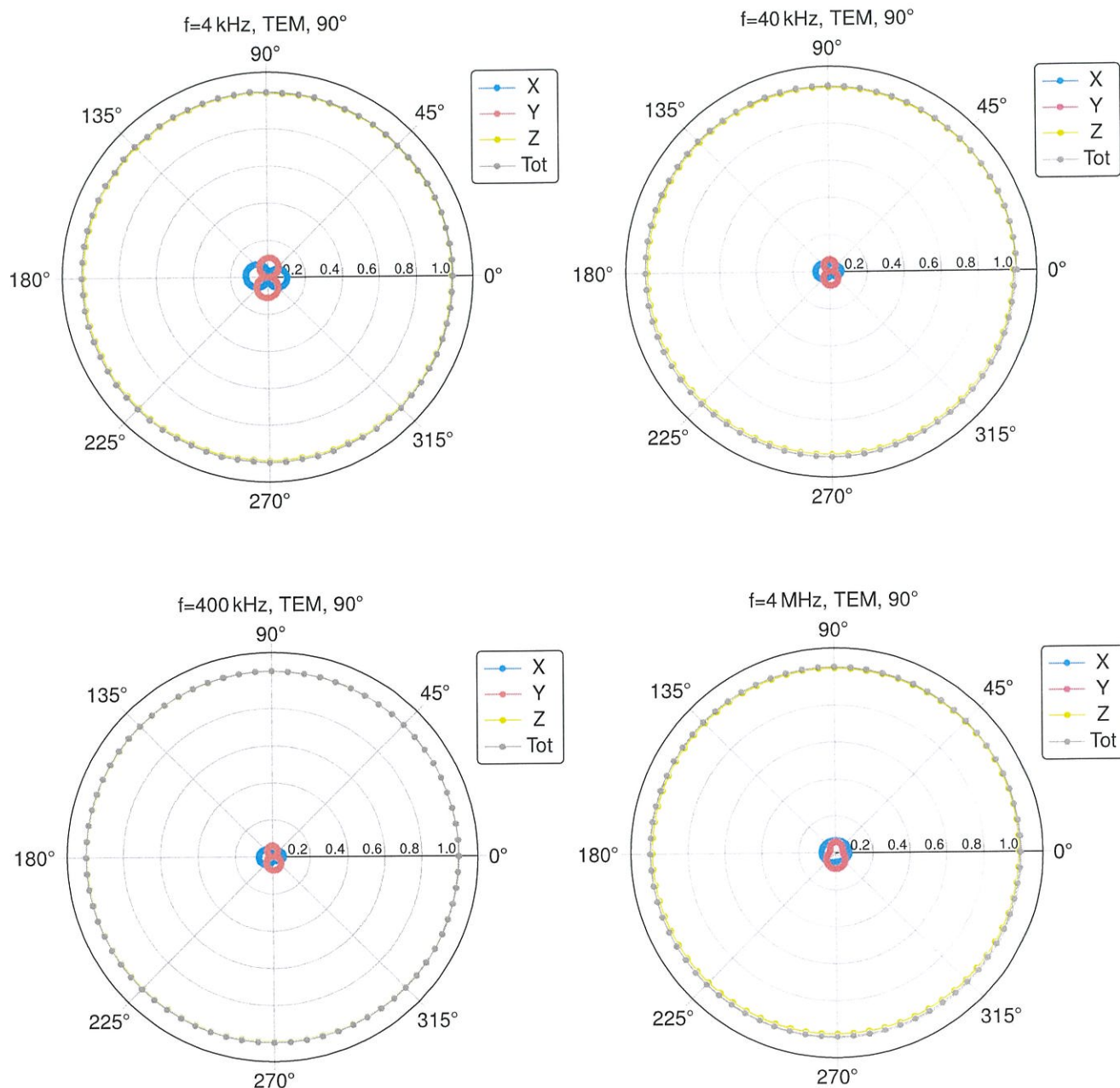
¹ Calibration uncertainty not taken into account (shared risk 50%).

Isotropy H-Field

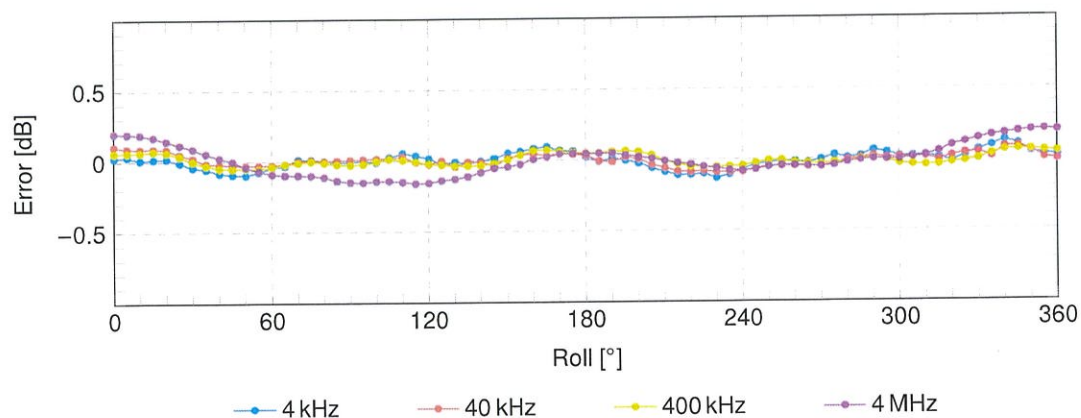
H-Field Receiving Pattern (ϕ), $\vartheta = 0^\circ$



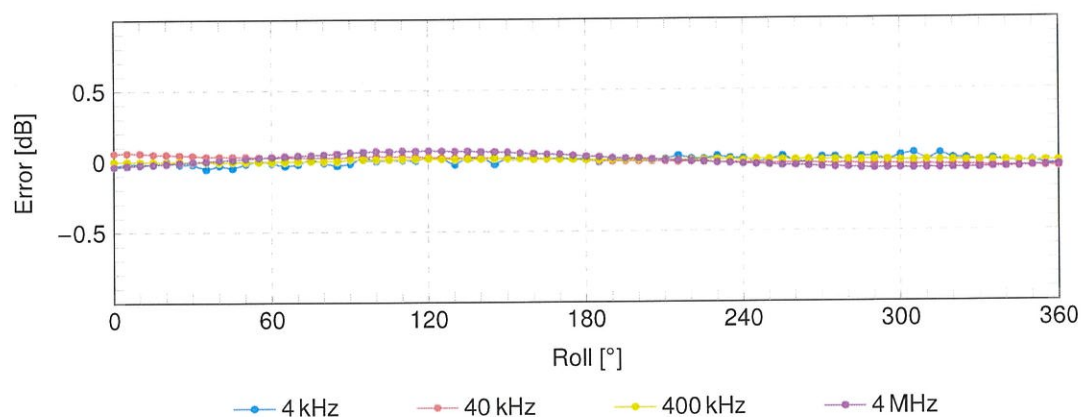
H-Field Receiving Pattern (ϕ), $\vartheta = 90^\circ$



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



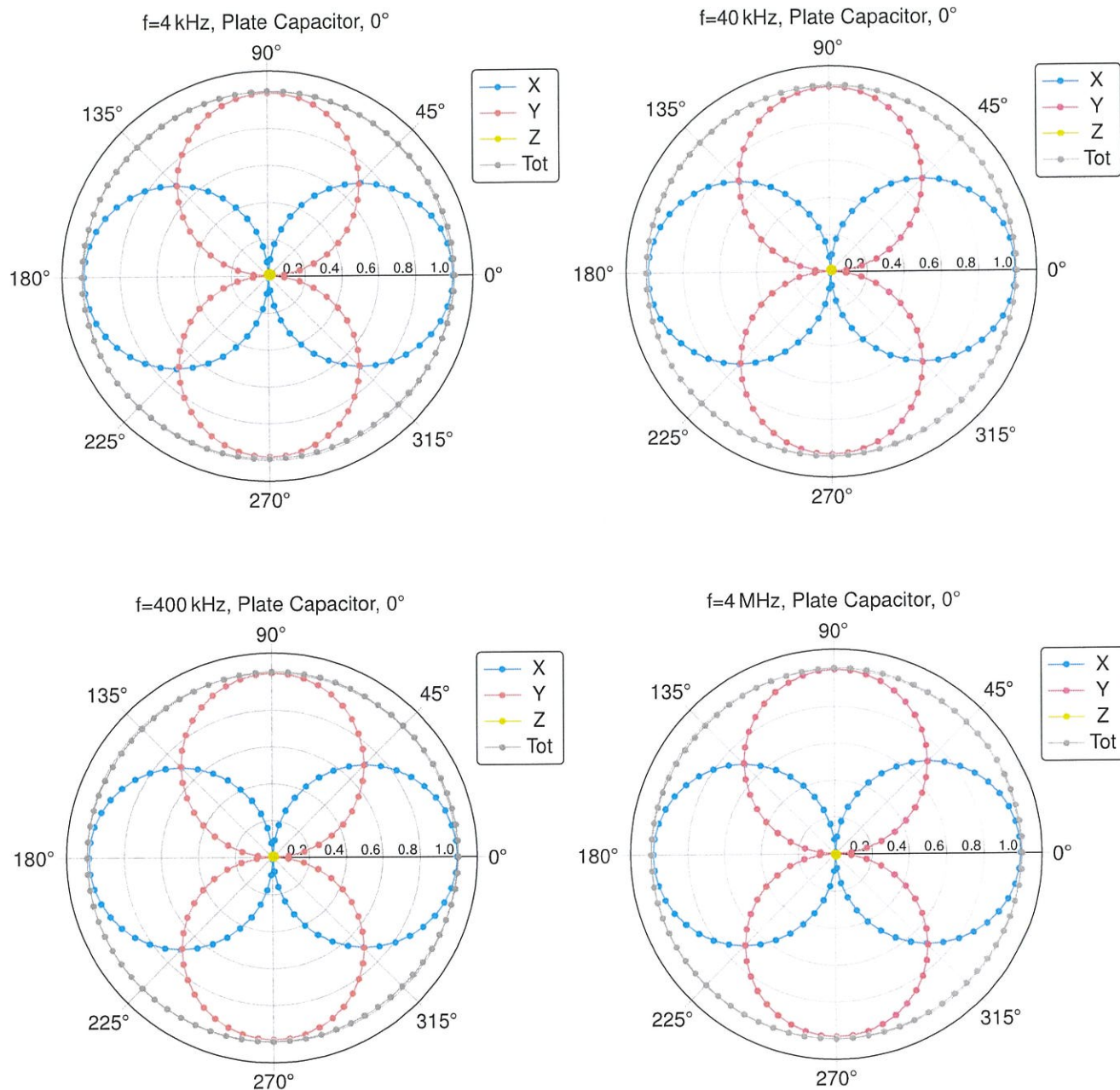
H-Field Receiving Pattern (ϕ), $\vartheta = 90^\circ$



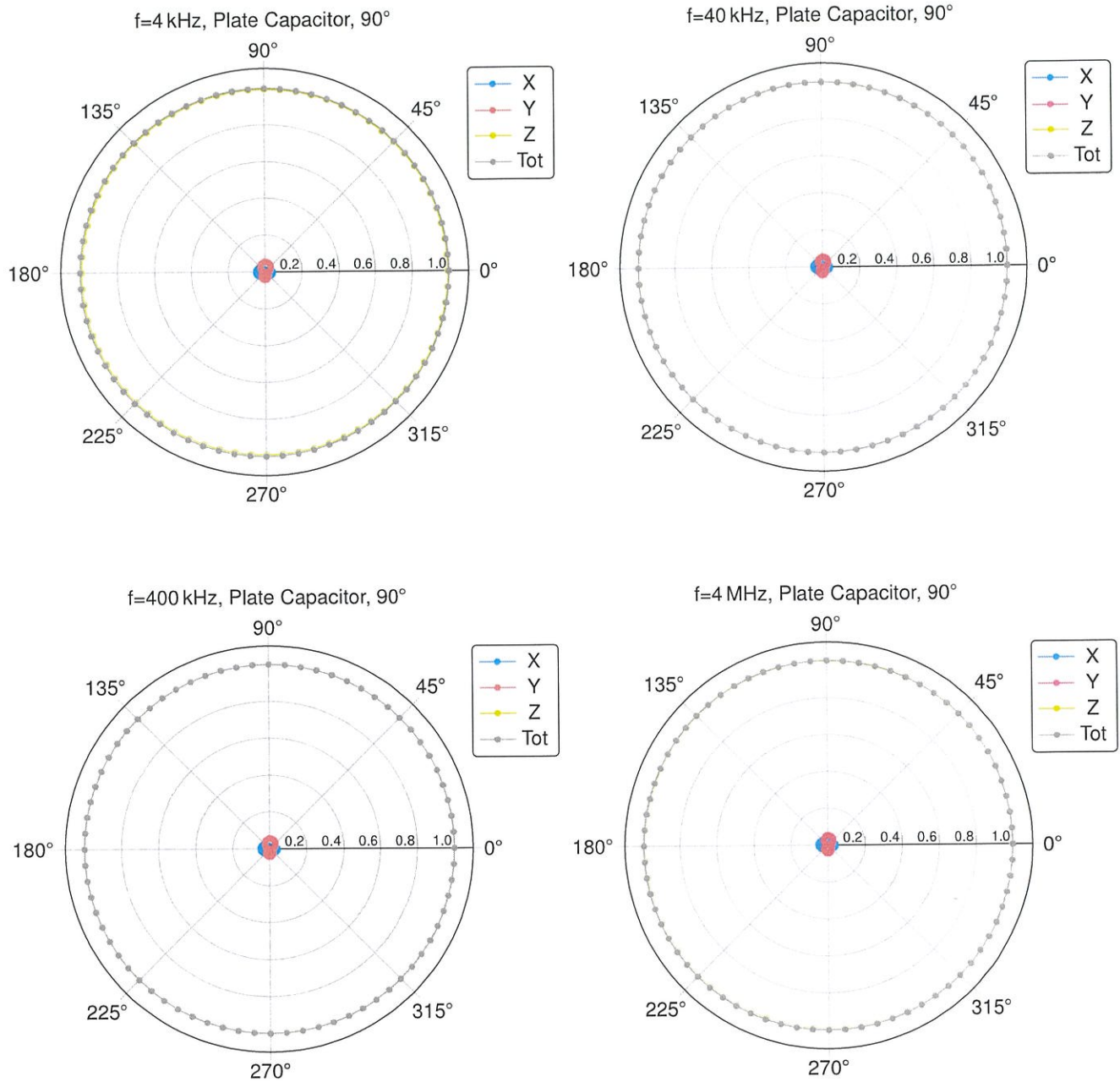
SPEAG axial deviation from the ideal response tolerance for H-field: ± 0.6 dB

Isotropy E-Field

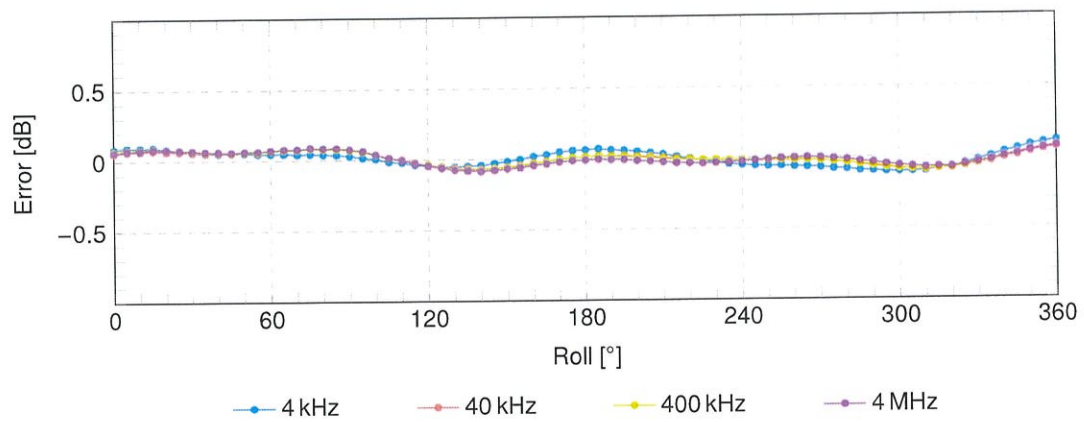
E-Field Receiving Pattern (ϕ), $\vartheta = 0^\circ$



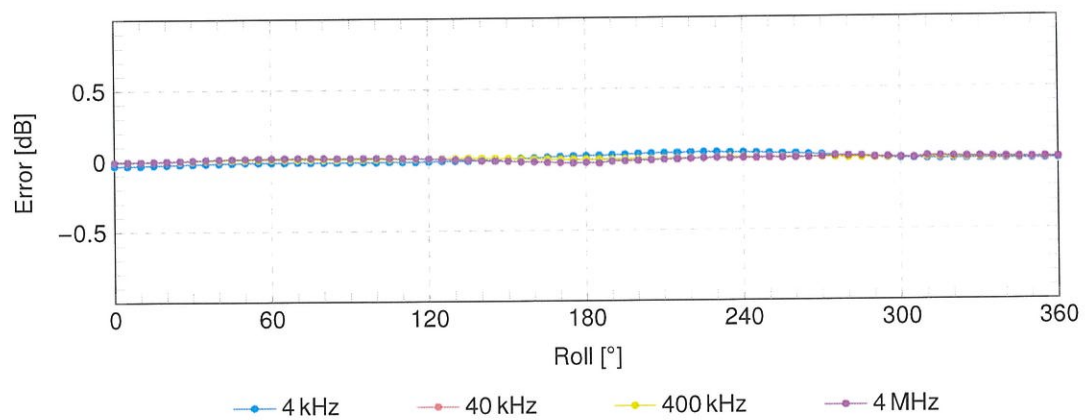
E-Field Receiving Pattern (ϕ), $\vartheta = 90^\circ$



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



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



SPEAG axial deviation from the ideal response tolerance for E-field: $\pm 0.8\text{dB}$



Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **UL**
Gyeonggi-do, Republic of Korea

Certificate No. **MAGPy-8H3D-3071_Aug25**

CALIBRATION CERTIFICATE

Object **MAGPy-8H3D+E3DV2 SN:3071**
MAGPy-DASV2 SN:2050

Calibration procedure(s) **QA CAL-46.v1**
Calibration Procedure for MAGPy-8H3D+E3D
Near-field Electric and Magnetic Field Sensor System

Calibration date **August 12, 2025**

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 $(22 \pm 3)^\circ\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Oscilloscope	SN: 110918	03-Sep-24 (No. 4030A315008835)	Sep-25
Reference 20 dB Attenuator	SN: CC2552 (20x)	26-Mar-25 (No. 217-04284)	Mar-26
Type-N mismatch	SN: L1119	26-Mar-25 (No. 217-04292)	Mar-26

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Network Analyzer E5061B	SN: MY49810822	In house check: Nov-24	In house check: Nov-25
TEM Cell	SN: S6029i	In house check: Nov-24	In house check: Nov-25
Plate Capacitor	SN: 6028i	In house check: Nov-24	In house check: Nov-25
Resonator (160kHz)	SN: 6030i	In house check: Nov-24	In house check: Nov-25

	Name	Function
Calibrated by	Krešimir Franjić	Laboratory Technician
Approved by	Sven Kühn	Technical Manager

Signature

Issued: August 13, 2025

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



Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

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 $\phi = 0^\circ \dots 360^\circ$; $\vartheta = 90^\circ$, and $\phi = 0^\circ \dots 360^\circ$; 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 $\phi = 0^\circ \dots 360^\circ$; $\vartheta = 90^\circ$, and $\phi = 0^\circ \dots 360^\circ$; 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)	3071
	MAGPy-DASV2 (SE UMS 303 AE)	2050
	MAGPy FPGA Board	WP000107
Adjustment Date	Last MAGPy Adjustment	August 12, 2025
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)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.390	0.370	0.360	0.400	0.380	0.400	0.22	0.23	0.92	±1.00
0.530	0.500	0.490	0.540	0.520	0.520	0.16	0.34	0.52	±1.00
0.720	0.690	0.680	0.700	0.710	0.690	-0.24	0.25	0.13	±1.00
0.940	0.910	0.890	0.920	0.900	0.900	-0.19	-0.10	0.10	±1.00
1.28	1.23	1.20	1.26	1.21	1.23	-0.14	-0.14	0.21	±1.00
1.76	1.69	1.64	1.76	1.68	1.66	0.00	-0.05	0.11	±1.00
2.33	2.25	2.19	2.33	2.25	2.21	0.00	0.00	0.08	±0.20
3.11	3.00	2.91	3.12	2.99	2.91	0.03	-0.03	0.00	±0.20
4.22	4.07	3.95	4.23	4.07	3.95	0.02	0.00	0.00	±0.20
5.71	5.52	5.34	5.69	5.53	5.35	-0.03	0.02	0.02	±0.20
7.67	7.41	7.18	7.68	7.46	7.18	0.01	0.06	0.00	±0.20
10.2	9.90	9.57	10.2	10.0	9.58	0.00	0.09	0.01	±0.20
13.8	13.4	12.9	13.8	13.5	12.9	0.00	0.06	0.00	±0.20
18.6	18.1	17.4	18.7	18.2	17.4	0.05	0.05	0.00	±0.20
25.1	24.4	23.5	25.2	24.5	23.6	0.03	0.04	0.04	±0.20
33.5	32.6	31.4	33.7	32.8	31.6	0.05	0.05	0.06	±0.20
45.2	44.1	42.4	45.4	44.3	42.7	0.04	0.04	0.06	±0.20
61.3	59.9	57.6	61.6	60.1	58.0	0.04	0.03	0.06	±0.20
84.2	82.2	79.2	83.8	81.9	78.9	-0.04	-0.03	-0.03	±0.20
110	108	104	110	107	103	0.00	-0.08	-0.08	±0.20
151	148	143	151	148	142	0.00	0.00	-0.06	±0.20
209	205	198	209	205	198	0.00	0.00	0.00	±0.20
290	285	275	292	280	276	0.06	-0.15	0.03	±0.20
428	421	407	421	415	399	-0.14	-0.12	-0.17	±0.20
591	581	562	585	577	556	-0.09	-0.06	-0.09	±0.20
885	868	842	884	872	841	-0.01	0.04	-0.01	±0.20
1340	1320	1280	1360	1340	1290	0.13	0.13	0.07	±0.30
1830	1800	1740	1880	1850	1790	0.23	0.24	0.25	±0.30
2990	2930	2840	3090	3040	2940	0.29	0.32	0.30	±0.40
3550	3460	3370	3690	3610	3500	0.34	0.37	0.33	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±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

¹Calibration 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	
0.390	0.380	0.370	0.410	0.390	0.390	0.43	0.23	0.46	±1.00
0.530	0.510	0.510	0.550	0.540	0.520	0.32	0.50	0.17	±1.00
0.730	0.710	0.700	0.730	0.710	0.690	0.00	0.00	-0.12	±1.00
0.960	0.920	0.910	0.950	0.910	0.910	-0.09	-0.09	0.00	±1.00
1.30	1.25	1.23	1.30	1.24	1.25	0.00	-0.07	0.14	±1.00
1.78	1.71	1.68	1.77	1.71	1.70	-0.05	0.00	0.10	±1.00
2.37	2.28	2.25	2.38	2.28	2.26	0.04	0.00	0.04	±0.20
3.16	3.05	2.99	3.17	3.06	3.00	0.03	0.03	0.03	±0.20
4.28	4.14	4.05	4.30	4.15	4.06	0.04	0.02	0.02	±0.20
5.79	5.60	5.48	5.80	5.63	5.49	0.01	0.05	0.02	±0.20
7.78	7.53	7.36	7.79	7.58	7.40	0.01	0.06	0.05	±0.20
10.4	10.1	9.82	10.4	10.1	9.88	0.00	0.00	0.05	±0.20
14.0	13.6	13.3	14.0	13.7	13.3	0.00	0.06	0.00	±0.20
18.9	18.3	17.9	18.9	18.4	17.9	0.00	0.05	0.00	±0.20
25.5	24.8	24.1	25.5	24.9	24.2	0.00	0.03	0.04	±0.20
34.0	33.1	32.2	34.2	33.3	32.4	0.05	0.05	0.05	±0.20
45.8	44.8	43.5	46.0	45.0	43.8	0.04	0.04	0.06	±0.20
62.1	60.8	59.1	62.5	61.1	59.4	0.06	0.04	0.04	±0.20
85.4	83.5	81.3	85.0	83.2	81.0	-0.04	-0.03	-0.03	±0.20
112	109	106	111	109	106	-0.08	0.00	0.00	±0.20
153	150	146	153	150	146	0.00	0.00	0.00	±0.20
212	209	203	212	208	203	0.00	-0.04	0.00	±0.20
294	289	282	296	284	283	0.06	-0.15	0.03	±0.20
434	427	417	427	422	410	-0.14	-0.10	-0.15	±0.20
600	590	577	593	586	570	-0.10	-0.06	-0.11	±0.20
897	882	864	896	886	863	-0.01	0.04	-0.01	±0.20
1360	1340	1310	1380	1360	1330	0.13	0.13	0.13	±0.30
1860	1820	1790	1900	1880	1830	0.18	0.28	0.19	±0.30
3030	2970	2920	3130	3090	3020	0.28	0.34	0.29	±0.50
3590	3520	3460	3730	3670	3590	0.33	0.36	0.32	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

¹Calibration 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	
0.380	0.380	0.380	0.410	0.400	0.400	0.66	0.45	0.45	±1.00
0.520	0.510	0.520	0.540	0.540	0.540	0.33	0.50	0.33	±1.00
0.720	0.710	0.710	0.710	0.690	0.730	-0.12	-0.25	0.24	±1.00
0.940	0.930	0.920	0.930	0.910	0.920	-0.09	-0.19	0.00	±1.00
1.27	1.25	1.25	1.29	1.26	1.24	0.14	0.07	-0.07	±1.00
1.75	1.72	1.71	1.75	1.70	1.71	0.00	-0.10	0.00	±1.00
2.32	2.30	2.28	2.36	2.29	2.28	0.15	-0.04	0.00	±0.20
3.10	3.07	3.04	3.13	3.06	3.04	0.08	-0.03	0.00	±0.20
4.20	4.16	4.12	4.24	4.15	4.11	0.08	-0.02	-0.02	±0.20
5.68	5.63	5.57	5.71	5.63	5.56	0.05	0.00	-0.02	±0.20
7.63	7.57	7.49	7.66	7.61	7.49	0.03	0.05	0.00	±0.20
10.2	10.1	9.99	10.2	10.2	10.0	0.00	0.09	0.01	±0.20
13.7	13.7	13.5	13.8	13.8	13.6	0.06	0.06	0.06	±0.20
18.5	18.4	18.2	18.6	18.5	18.3	0.05	0.05	0.05	±0.20
25.0	24.9	24.6	25.0	25.0	24.6	0.00	0.03	0.00	±0.20
33.3	33.3	32.8	33.5	33.5	33.0	0.05	0.05	0.05	±0.20
44.9	45.0	44.3	45.2	45.3	44.6	0.06	0.06	0.06	±0.20
60.9	61.1	60.1	61.3	61.4	60.5	0.06	0.04	0.06	±0.20
83.8	84.0	82.7	83.4	83.6	82.3	-0.04	-0.04	-0.04	±0.20
109	110	108	109	110	108	0.00	0.00	0.00	±0.20
150	151	149	150	151	148	0.00	0.00	-0.06	±0.20
208	210	207	208	209	206	0.00	-0.04	-0.04	±0.20
289	291	287	290	285	288	0.03	-0.18	0.03	±0.20
426	430	424	419	424	417	-0.14	-0.12	-0.14	±0.20
588	593	586	582	589	580	-0.09	-0.06	-0.09	±0.20
880	887	878	879	890	877	-0.01	0.03	-0.01	±0.20
1330	1340	1330	1350	1370	1350	0.13	0.19	0.13	±0.30
1820	1830	1820	1860	1890	1860	0.19	0.28	0.19	±0.30
2980	2990	2970	3070	3100	3070	0.26	0.31	0.29	±0.40
3530	3540	3520	3660	3690	3650	0.31	0.36	0.32	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB 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)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.380	0.370	0.370	0.400	0.390	0.380	0.45	0.46	0.23	±1.00
0.520	0.510	0.500	0.520	0.530	0.510	0.00	0.33	0.17	±1.00
0.720	0.700	0.690	0.700	0.720	0.690	-0.24	0.24	0.00	±1.00
0.940	0.910	0.900	0.920	0.910	0.900	-0.19	0.00	0.00	±1.00
1.27	1.23	1.22	1.27	1.23	1.24	0.00	0.00	0.14	±1.00
1.74	1.69	1.68	1.73	1.70	1.68	-0.05	0.05	0.00	±1.00
2.31	2.26	2.24	2.32	2.27	2.23	0.04	0.04	-0.04	±0.20
3.09	3.01	2.98	3.09	3.01	2.97	0.00	0.00	-0.03	±0.20
4.19	4.09	4.04	4.20	4.10	4.03	0.02	0.02	-0.02	±0.20
5.66	5.53	5.46	5.66	5.53	5.44	0.00	0.00	-0.03	±0.20
7.61	7.44	7.33	7.60	7.46	7.31	-0.01	0.02	-0.02	±0.20
10.2	9.93	9.78	10.2	9.97	9.77	0.00	0.03	-0.01	±0.20
13.7	13.4	13.2	13.8	13.5	13.2	0.06	0.06	0.00	±0.20
18.5	18.1	17.8	18.5	18.2	17.8	0.00	0.05	0.00	±0.20
24.9	24.5	24.0	25.0	24.5	24.1	0.03	0.00	0.04	±0.20
33.2	32.7	32.1	33.4	32.9	32.3	0.05	0.05	0.05	±0.20
44.8	44.2	43.4	45.0	44.5	43.6	0.04	0.06	0.04	±0.20
60.7	60.0	58.9	61.1	60.4	59.2	0.06	0.06	0.04	±0.20
83.5	82.5	80.9	83.1	82.1	80.6	-0.04	-0.04	-0.03	±0.20
109	108	106	109	108	106	0.00	0.00	0.00	±0.20
150	149	146	149	148	145	-0.06	-0.06	-0.06	±0.20
208	206	202	207	206	202	-0.04	0.00	0.00	±0.20
288	286	281	289	281	282	0.03	-0.15	0.03	±0.20
424	422	415	417	416	408	-0.14	-0.12	-0.15	±0.20
586	583	574	580	578	567	-0.09	-0.07	-0.11	±0.20
877	871	860	876	874	859	-0.01	0.03	-0.01	±0.20
1330	1320	1310	1350	1340	1320	0.13	0.13	0.07	±0.30
1820	1800	1780	1860	1850	1820	0.19	0.24	0.19	±0.30
2970	2930	2910	3070	3020	3000	0.29	0.26	0.26	±0.40
3520	3470	3440	3660	3590	3570	0.34	0.30	0.32	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0A/m
- ±0.2dB for applied H-fields ≥ 2.0A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB 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)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.380	0.380	0.380	0.400	0.380	0.390	0.45	0.00	0.23	±1.00
0.520	0.520	0.510	0.540	0.510	0.520	0.33	-0.17	0.17	±1.00
0.720	0.710	0.700	0.720	0.700	0.700	0.00	-0.12	0.00	±1.00
0.940	0.930	0.920	0.930	0.920	0.920	-0.09	-0.09	0.00	±1.00
1.27	1.26	1.24	1.28	1.27	1.24	0.07	0.07	0.00	±1.00
1.74	1.73	1.70	1.74	1.73	1.69	0.00	0.00	-0.05	±1.00
2.32	2.31	2.26	2.32	2.30	2.27	0.00	-0.04	0.04	±0.20
3.10	3.08	3.01	3.10	3.07	3.03	0.00	-0.03	0.06	±0.20
4.20	4.18	4.08	4.21	4.17	4.10	0.02	-0.02	0.04	±0.20
5.68	5.66	5.52	5.68	5.67	5.53	0.00	0.02	0.02	±0.20
7.63	7.61	7.42	7.65	7.63	7.44	0.02	0.02	0.02	±0.20
10.2	10.2	9.89	10.2	10.2	9.92	0.00	0.00	0.03	±0.20
13.7	13.8	13.4	13.8	13.8	13.4	0.06	0.00	0.00	±0.20
18.5	18.5	18.0	18.6	18.6	18.0	0.05	0.05	0.00	±0.20
25.0	25.1	24.3	25.1	25.1	24.4	0.03	0.00	0.04	±0.20
33.3	33.5	32.5	33.5	33.7	32.7	0.05	0.05	0.05	±0.20
44.9	45.3	43.9	45.2	45.5	44.1	0.06	0.04	0.04	±0.20
60.9	61.5	59.6	61.3	61.7	59.9	0.06	0.03	0.04	±0.20
83.7	84.4	81.9	83.3	84.1	81.5	-0.04	-0.03	-0.04	±0.20
109	111	107	109	110	107	0.00	-0.08	0.00	±0.20
150	152	148	150	152	147	0.00	0.00	-0.06	±0.20
208	211	205	208	210	204	0.00	-0.04	-0.04	±0.20
289	292	284	290	287	285	0.03	-0.15	0.03	±0.20
426	432	420	418	426	413	-0.16	-0.12	-0.15	±0.20
588	597	581	582	593	574	-0.09	-0.06	-0.11	±0.20
880	892	870	879	897	869	-0.01	0.05	-0.01	±0.20
1330	1350	1320	1350	1380	1340	0.13	0.19	0.13	±0.30
1820	1840	1800	1860	1900	1840	0.19	0.28	0.19	±0.30
2970	3000	2940	3070	3120	3030	0.29	0.34	0.26	±0.50
3530	3560	3480	3660	3710	3620	0.31	0.36	0.34	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±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	
0.390	0.380	0.390	0.380	0.400	0.390	-0.23	0.45	0.00	±1.00
0.530	0.520	0.530	0.520	0.530	0.530	-0.17	0.17	0.00	±1.00
0.730	0.720	0.730	0.710	0.710	0.730	-0.24	-0.12	0.00	±1.00
0.950	0.940	0.950	0.940	0.930	0.950	-0.09	-0.09	0.00	±1.00
1.28	1.27	1.28	1.28	1.27	1.29	0.00	0.00	0.07	±1.00
1.76	1.75	1.76	1.75	1.76	1.75	-0.05	0.05	-0.05	±1.00
2.34	2.33	2.34	2.33	2.35	2.33	-0.04	0.07	-0.04	±0.20
3.12	3.11	3.12	3.13	3.13	3.11	0.03	0.06	-0.03	±0.20
4.24	4.22	4.23	4.25	4.25	4.22	0.02	0.06	-0.02	±0.20
5.73	5.71	5.71	5.74	5.74	5.73	0.02	0.05	0.03	±0.20
7.70	7.68	7.68	7.72	7.71	7.74	0.02	0.03	0.07	±0.20
10.3	10.2	10.2	10.3	10.3	10.3	0.00	0.08	0.08	±0.20
13.9	13.9	13.8	13.9	13.9	13.9	0.00	0.00	0.06	±0.20
18.7	18.7	18.6	18.7	18.8	18.7	0.00	0.05	0.05	±0.20
25.2	25.3	25.2	25.2	25.3	25.3	0.00	0.00	0.03	±0.20
33.6	33.8	33.6	33.8	34.0	33.8	0.05	0.05	0.05	±0.20
45.3	45.6	45.4	45.5	45.9	45.7	0.04	0.06	0.06	±0.20
61.5	62.0	61.6	61.8	62.3	62.0	0.04	0.04	0.06	±0.20
84.5	85.1	84.7	84.1	84.8	84.4	-0.04	-0.03	-0.03	±0.20
110	111	111	110	111	110	0.00	0.00	-0.08	±0.20
152	153	153	151	153	152	-0.06	0.00	-0.06	±0.20
210	213	212	210	212	211	0.00	-0.04	-0.04	±0.20
291	295	294	293	290	295	0.06	-0.15	0.03	±0.20
429	436	435	422	430	427	-0.14	-0.12	-0.16	±0.20
593	601	601	587	597	594	-0.09	-0.06	-0.10	±0.20
887	899	900	887	903	900	0.00	0.04	0.00	±0.20
1350	1360	1370	1360	1390	1380	0.06	0.19	0.06	±0.30
1840	1860	1870	1880	1910	1910	0.19	0.23	0.18	±0.30
3000	3030	3040	3100	3140	3140	0.28	0.31	0.28	±0.50
3560	3590	3610	3700	3740	3750	0.34	0.36	0.33	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±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

¹Calibration 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	
0.390	0.380	0.380	0.400	0.400	0.400	0.22	0.45	0.45	±1.00
0.530	0.520	0.520	0.540	0.520	0.530	0.16	0.00	0.17	±1.00
0.740	0.720	0.710	0.730	0.710	0.720	-0.12	-0.12	0.12	±1.00
0.960	0.940	0.930	0.940	0.940	0.940	-0.18	0.00	0.09	±1.00
1.30	1.27	1.26	1.28	1.29	1.26	-0.13	0.14	0.00	±1.00
1.78	1.74	1.72	1.78	1.77	1.72	0.00	0.15	0.00	±1.00
2.37	2.32	2.30	2.35	2.34	2.30	-0.07	0.07	0.00	±0.20
3.17	3.10	3.06	3.16	3.11	3.06	-0.03	0.03	0.00	±0.20
4.30	4.21	4.15	4.28	4.23	4.15	-0.04	0.04	0.00	±0.20
5.81	5.69	5.60	5.79	5.72	5.63	-0.03	0.05	0.05	±0.20
7.80	7.65	7.53	7.78	7.68	7.55	-0.02	0.03	0.02	±0.20
10.4	10.2	10.0	10.4	10.3	10.1	0.00	0.08	0.09	±0.20
14.1	13.8	13.6	14.1	13.9	13.6	0.00	0.06	0.00	±0.20
18.9	18.6	18.3	18.9	18.7	18.3	0.00	0.05	0.00	±0.20
25.5	25.2	24.7	25.6	25.3	24.8	0.03	0.03	0.04	±0.20
34.1	33.7	33.0	34.3	33.9	33.2	0.05	0.05	0.05	±0.20
46.0	45.5	44.5	46.2	45.8	44.8	0.04	0.06	0.06	±0.20
62.3	61.8	60.5	62.7	62.1	60.8	0.06	0.04	0.04	±0.20
85.6	84.9	83.1	85.3	84.5	82.8	-0.03	-0.04	-0.03	±0.20
112	111	109	112	111	108	0.00	0.00	-0.08	±0.20
154	153	150	153	152	149	-0.06	-0.06	-0.06	±0.20
213	212	208	213	212	207	0.00	0.00	-0.04	±0.20
295	294	288	297	289	290	0.06	-0.15	0.06	±0.20
435	434	427	428	428	419	-0.14	-0.12	-0.16	±0.20
601	600	590	595	596	583	-0.09	-0.06	-0.10	±0.20
900	896	883	899	900	882	-0.01	0.04	-0.01	±0.20
1360	1360	1340	1380	1380	1360	0.13	0.13	0.13	±0.30
1860	1850	1830	1910	1910	1870	0.23	0.28	0.19	±0.30
3040	3020	2980	3140	3130	3080	0.28	0.31	0.29	±0.50
3610	3570	3540	3750	3730	3670	0.33	0.38	0.31	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB for applied H-fields ≥ 3000 A/m

¹Calibration 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)			Tolerance/(dB)
x	y	z	x	y	z	x	y	z	
0.390	0.380	0.370	0.400	0.400	0.390	0.22	0.45	0.46	±1.00
0.530	0.510	0.500	0.540	0.530	0.520	0.16	0.33	0.34	±1.00
0.730	0.710	0.690	0.740	0.690	0.700	0.12	-0.25	0.12	±1.00
0.950	0.930	0.900	0.950	0.920	0.890	0.00	-0.09	-0.10	±1.00
1.28	1.25	1.21	1.26	1.26	1.20	-0.14	0.07	-0.07	±1.00
1.76	1.72	1.66	1.74	1.72	1.66	-0.10	0.00	0.00	±1.00
2.34	2.30	2.22	2.34	2.30	2.22	0.00	0.00	0.00	±0.20
3.12	3.07	2.95	3.12	3.07	2.94	0.00	0.00	-0.03	±0.20
4.23	4.16	4.00	4.25	4.17	4.00	0.04	0.02	0.00	±0.20
5.73	5.63	5.41	5.73	5.64	5.42	0.00	0.02	0.02	±0.20
7.69	7.57	7.27	7.70	7.59	7.27	0.01	0.02	0.00	±0.20
10.3	10.1	9.69	10.2	10.1	9.71	-0.08	0.00	0.02	±0.20
13.8	13.7	13.1	13.9	13.7	13.1	0.06	0.00	0.00	±0.20
18.7	18.4	17.6	18.7	18.5	17.6	0.00	0.05	0.00	±0.20
25.2	24.9	23.8	25.2	24.9	23.8	0.00	0.00	0.00	±0.20
33.6	33.3	31.8	33.8	33.5	32.0	0.05	0.05	0.05	±0.20
45.3	45.0	43.0	45.5	45.2	43.2	0.04	0.04	0.04	±0.20
61.4	61.1	58.4	61.8	61.4	58.7	0.06	0.04	0.04	±0.20
84.4	84.0	80.2	84.0	83.7	79.9	-0.04	-0.03	-0.03	±0.20
110	110	105	110	110	105	0.00	0.00	0.00	±0.20
151	151	145	151	151	144	0.00	0.00	-0.06	±0.20
210	210	201	210	210	200	0.00	0.00	-0.04	±0.20
291	291	278	292	286	279	0.03	-0.15	0.03	±0.20
429	430	412	422	424	404	-0.14	-0.12	-0.17	±0.20
593	593	569	586	590	563	-0.10	-0.04	-0.09	±0.20
887	887	852	885	892	851	-0.02	0.05	-0.01	±0.20
1340	1350	1290	1360	1370	1310	0.13	0.13	0.13	±0.30
1840	1830	1770	1880	1890	1810	0.19	0.28	0.19	±0.30
3000	2990	2880	3100	3110	2980	0.28	0.34	0.30	±0.40
3550	3540	3410	3690	3700	3550	0.34	0.38	0.35	±0.50

SPEAG H-field linearity tolerance criteria¹:

- ±1.0dB for applied H-fields < 2.0 A/m
- ±0.2dB for applied H-fields ≥ 2.0 A/m and < 1000 A/m
- ±0.3dB for applied H-fields ≥ 1000 A/m and < 2000 A/m
- ±0.4dB for applied H-fields ≥ 2000 A/m and < 3000 A/m
- ±0.5dB 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
0.350	0.210	0.070	0.360	0.210	0.080	0.24	0.00	1.16	±5.00	±5.00	±5.00
0.470	0.290	0.100	0.470	0.280	0.120	0.00	-0.30	1.58	±5.00	±5.00	±5.00
0.650	0.400	0.140	0.650	0.390	0.130	0.00	-0.22	-0.64	±5.00	±5.00	±5.00
0.840	0.520	0.180	0.840	0.530	0.200	0.00	0.17	0.92	±5.00	±5.00	±5.00
1.14	0.700	0.240	1.16	0.710	0.220	0.15	0.12	-0.76	±5.00	±5.00	±5.00
1.57	0.970	0.340	1.59	0.960	0.350	0.11	-0.09	0.25	±5.00	±5.00	±5.00
2.09	1.29	0.450	2.11	1.28	0.400	0.08	-0.07	-1.02	±1.00	±5.00	±5.00
2.80	1.72	0.600	2.81	1.72	0.560	0.03	0.00	-0.60	±1.00	±5.00	±5.00
3.79	2.34	0.810	3.82	2.32	0.770	0.07	-0.07	-0.44	±1.00	±1.00	±5.00
5.13	3.16	1.09	5.16	3.14	1.06	0.05	-0.06	-0.24	±1.00	±1.00	±5.00
6.90	4.25	1.47	6.96	4.25	1.41	0.08	0.00	-0.36	±1.00	±1.00	±5.00
9.22	5.67	1.96	9.29	5.66	1.88	0.07	-0.02	-0.36	±1.00	±1.00	±5.00
12.5	7.67	2.64	12.6	7.67	2.54	0.07	0.00	-0.34	±1.00	±1.00	±1.00
16.8	10.3	3.56	16.9	10.3	3.47	0.05	0.00	-0.22	±1.00	±1.00	±1.00
22.7	14.0	4.80	22.9	13.9	4.66	0.08	-0.06	-0.26	±1.00	±1.00	±1.00
30.4	18.7	6.41	30.6	18.7	6.26	0.06	0.00	-0.21	±1.00	±1.00	±1.00
41.0	25.3	8.64	41.3	25.2	8.44	0.06	-0.03	-0.20	±1.00	±1.00	±1.00
55.7	34.3	11.7	56.1	34.2	11.4	0.06	-0.03	-0.23	±1.00	±1.00	±1.00
76.5	47.1	16.1	76.5	46.7	15.6	0.00	-0.07	-0.27	±1.00	±1.00	±1.00
100	61.7	21.1	100	61.2	20.4	0.00	-0.07	-0.29	±1.00	±1.00	±1.00
138	84.9	28.9	138	84.2	28.0	0.00	-0.07	-0.27	±1.00	±1.00	±1.00
191	118	40.0	191	117	38.9	0.00	-0.07	-0.24	±1.00	±1.00	±1.00
265	163	55.5	267	163	54.2	0.07	0.00	-0.21	±1.00	±1.00	±1.00
392	241	81.9	377	231	80.5	-0.34	-0.37	-0.15	±1.00	±1.00	±1.00
541	333	113	525	321	112	-0.26	-0.32	-0.08	±1.00	±1.00	±1.00
808	498	169	794	485	169	-0.15	-0.23	0.00	±1.00	±1.00	±1.00
1230	755	257	1220	746	260	-0.07	-0.10	0.10	±1.00	±1.00	±1.00
1670	1030	350	1680	1030	360	0.05	0.00	0.24	±1.00	±1.00	±1.00
2720	1680	572	2770	1690	565	0.16	0.05	-0.11	±1.00	±1.00	±1.00
3220	1980	678	3300	2010	674	0.21	0.13	-0.05	±1.00	±1.00	±1.00

SPEAG E-field linearity tolerance criteria¹:

±5.0dB for applied E-field < 2V/m

±1.0dB for applied E-field ≥ 2V/m

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

Frequency Response

Frequency Response, H-field, Channel 0

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	1.53	1.52	1.53	1.51	1.52	1.52	-0.11	0.00	-0.06	±0.3
3200	1.52	1.52	1.52	1.53	1.52	1.51	0.06	0.00	-0.06	±0.3
4000	1.52	1.52	1.52	1.52	1.52	1.52	0.00	0.00	0.00	±0.3
5200	1.51	1.51	1.51	1.51	1.51	1.53	0.00	0.00	0.11	±0.3
6600	1.51	1.51	1.51	1.51	1.50	1.51	0.00	-0.06	0.00	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
9000	1.49	1.49	1.49	1.49	1.50	1.49	0.00	0.06	0.00	±0.3
10600	4.33	4.26	4.26	4.28	4.28	4.28	-0.10	0.04	0.04	±0.3
13400	4.37	4.29	4.29	4.35	4.28	4.30	-0.04	-0.02	0.02	±0.3
17000	4.37	4.32	4.32	4.35	4.32	4.33	-0.04	0.00	0.02	±0.3
21400	4.40	4.33	4.33	4.41	4.34	4.33	0.02	0.02	0.00	±0.3
27200	4.39	4.35	4.34	4.38	4.35	4.36	-0.02	0.00	0.04	±0.3
34400	4.40	4.36	4.36	4.39	4.37	4.37	-0.02	0.02	0.02	±0.3
40000	4.39	4.36	4.36	4.38	4.35	4.36	-0.02	-0.02	0.00	±0.3
43600	4.38	4.35	4.36	4.38	4.35	4.36	0.00	0.00	0.00	±0.3
55400	4.37	4.34	4.34	4.37	4.34	4.34	0.00	0.00	0.00	±0.3
70000	4.36	4.33	4.33	4.36	4.32	4.34	0.00	-0.02	0.02	±0.3
88800	4.35	4.32	4.32	4.35	4.31	4.32	0.00	-0.02	0.00	±0.3
112400	4.33	4.31	4.31	4.33	4.30	4.31	0.00	-0.02	0.00	±0.3
142400	4.32	4.29	4.29	4.31	4.30	4.29	-0.02	0.02	0.00	±0.3
161750	4.30	4.27	4.27	4.29	4.26	4.27	-0.02	-0.02	0.00	±0.3
180400	4.28	4.26	4.26	4.28	4.27	4.26	0.00	0.02	0.00	±0.3
228400	4.25	4.22	4.22	4.25	4.22	4.23	0.00	0.00	0.02	±0.3
289400	4.21	4.19	4.19	4.21	4.20	4.19	0.00	0.02	0.00	±0.3
366400	4.16	4.14	4.14	4.16	4.15	4.14	0.00	0.02	0.00	±0.3
400000	4.14	4.13	4.13	4.14	4.13	4.13	0.00	0.00	0.00	±0.3
464000	4.12	4.11	4.10	4.12	4.11	4.11	0.00	0.00	0.02	±0.3
587800	4.06	4.05	4.05	4.07	4.05	4.05	0.02	0.00	0.00	±0.3
744200	4.01	4.00	4.00	4.02	4.00	4.01	0.02	0.00	0.02	±0.3
942600	4.00	3.99	3.99	4.00	4.00	3.99	0.00	0.02	0.00	±0.3
1193600	3.97	3.96	3.96	3.97	3.96	3.96	0.00	0.00	0.00	±0.3
1511600	3.96	3.96	3.95	3.96	3.96	3.95	0.00	0.00	0.00	±0.3
1914400	3.94	3.94	3.93	3.95	3.94	3.94	0.02	0.00	0.02	±0.3
2424400	3.92	3.92	3.91	3.93	3.92	3.92	0.02	0.00	0.02	±0.3
3070200	3.89	3.89	3.88	3.89	3.89	3.88	0.00	0.00	0.00	±0.3
3888000	3.83	3.83	3.82	3.83	3.83	3.82	0.00	0.00	0.00	±0.3
4000000	3.82	3.82	3.81	3.83	3.82	3.81	0.02	0.00	0.00	±0.3
4923800	3.75	3.75	3.74	3.75	3.75	3.74	0.00	0.00	0.00	±0.3
6235400	3.64	3.64	3.63	3.64	3.64	3.63	0.00	0.00	0.00	±0.3
7896400	3.50	3.51	3.49	3.51	3.50	3.49	0.02	-0.02	0.00	±0.3
10000000	3.34	3.34	3.33	3.35	3.34	3.33	0.03	0.00	0.00	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

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

Frequency Response, H-field, Channel 1

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	1.53	1.52	1.53	1.52	1.52	1.53	-0.06	0.00	0.00	±0.3
3200	1.52	1.52	1.52	1.54	1.52	1.51	0.11	0.00	-0.06	±0.3
4000	1.52	1.52	1.52	1.52	1.52	1.52	0.00	0.00	0.00	±0.3
5200	1.51	1.51	1.51	1.52	1.51	1.52	0.06	0.00	0.06	±0.3
6600	1.51	1.51	1.51	1.51	1.50	1.51	0.00	-0.06	0.00	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.51	0.00	0.00	0.06	±0.3
9000	1.49	1.49	1.49	1.49	1.49	1.50	0.00	0.00	0.06	±0.3
10600	4.33	4.26	4.26	4.34	4.25	4.26	0.02	-0.02	0.00	±0.3
13400	4.37	4.29	4.29	4.37	4.29	4.30	0.00	0.00	0.02	±0.3
17000	4.37	4.32	4.32	4.37	4.32	4.32	0.00	0.00	0.00	±0.3
21400	4.40	4.33	4.33	4.41	4.32	4.35	0.02	-0.02	0.04	±0.3
27200	4.39	4.35	4.34	4.38	4.36	4.36	-0.02	0.02	0.04	±0.3
34400	4.40	4.36	4.36	4.38	4.36	4.37	-0.04	0.00	0.02	±0.3
40000	4.39	4.36	4.36	4.38	4.37	4.36	-0.02	0.02	0.00	±0.3
43600	4.38	4.35	4.36	4.37	4.37	4.35	-0.02	0.04	-0.02	±0.3
55400	4.37	4.34	4.34	4.37	4.34	4.35	0.00	0.00	0.02	±0.3
70000	4.36	4.33	4.33	4.36	4.33	4.34	0.00	0.00	0.02	±0.3
88800	4.35	4.32	4.32	4.35	4.32	4.32	0.00	0.00	0.00	±0.3
112400	4.33	4.31	4.31	4.33	4.31	4.31	0.00	0.00	0.00	±0.3
142400	4.32	4.29	4.29	4.31	4.29	4.29	-0.02	0.00	0.00	±0.3
161750	4.30	4.27	4.27	4.29	4.30	4.28	-0.02	0.06	0.02	±0.3
180400	4.28	4.26	4.26	4.28	4.26	4.26	0.00	0.00	0.00	±0.3
228400	4.25	4.22	4.22	4.25	4.22	4.23	0.00	0.00	0.02	±0.3
289400	4.21	4.19	4.19	4.21	4.19	4.19	0.00	0.00	0.00	±0.3
366400	4.16	4.14	4.14	4.16	4.14	4.14	0.00	0.00	0.00	±0.3
400000	4.14	4.13	4.13	4.15	4.13	4.13	0.02	0.00	0.00	±0.3
464000	4.12	4.11	4.10	4.12	4.11	4.11	0.00	0.00	0.02	±0.3
587800	4.06	4.05	4.05	4.06	4.05	4.05	0.00	0.00	0.00	±0.3
744200	4.01	4.00	4.00	4.02	4.01	4.01	0.02	0.02	0.02	±0.3
942600	4.00	3.99	3.99	4.00	3.99	4.00	0.00	0.00	0.02	±0.3
1193600	3.97	3.96	3.96	3.97	3.96	3.96	0.00	0.00	0.00	±0.3
1511600	3.96	3.96	3.95	3.96	3.95	3.95	0.00	-0.02	0.00	±0.3
1914400	3.94	3.94	3.93	3.95	3.95	3.94	0.02	0.02	0.02	±0.3
2424400	3.92	3.92	3.91	3.93	3.92	3.92	0.02	0.00	0.02	±0.3
3070200	3.89	3.89	3.88	3.90	3.88	3.88	0.02	-0.02	0.00	±0.3
3888000	3.83	3.83	3.82	3.83	3.83	3.83	0.00	0.00	0.02	±0.3
4000000	3.82	3.82	3.81	3.82	3.82	3.81	0.00	0.00	0.00	±0.3
4923800	3.75	3.75	3.74	3.75	3.75	3.74	0.00	0.00	0.00	±0.3
6235400	3.64	3.64	3.63	3.64	3.64	3.63	0.00	0.00	0.00	±0.3
7896400	3.50	3.51	3.49	3.50	3.50	3.49	0.00	-0.02	0.00	±0.3
10000000	3.34	3.34	3.33	3.34	3.33	3.33	0.00	-0.03	0.00	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

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

Frequency Response, H-field, Channel 2

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	1.53	1.52	1.53	1.52	1.52	1.53	-0.06	0.00	0.00	±0.3
3200	1.52	1.52	1.52	1.54	1.52	1.51	0.11	0.00	-0.06	±0.3
4000	1.52	1.52	1.52	1.51	1.52	1.51	-0.06	0.00	-0.06	±0.3
5200	1.51	1.51	1.51	1.52	1.50	1.53	0.06	-0.06	0.11	±0.3
6600	1.51	1.51	1.51	1.51	1.50	1.50	0.00	-0.06	-0.06	±0.3
8200	1.50	1.50	1.50	1.50	1.51	1.51	0.00	0.06	0.06	±0.3
9000	1.49	1.49	1.49	1.49	1.49	1.49	0.00	0.00	0.00	±0.3
10600	4.33	4.26	4.26	4.32	4.28	4.25	-0.02	0.04	-0.02	±0.3
13400	4.37	4.29	4.29	4.37	4.28	4.29	0.00	-0.02	0.00	±0.3
17000	4.37	4.32	4.32	4.36	4.32	4.32	-0.02	0.00	0.00	±0.3
21400	4.40	4.33	4.33	4.41	4.35	4.33	0.02	0.04	0.00	±0.3
27200	4.39	4.35	4.34	4.37	4.36	4.36	-0.04	0.02	0.04	±0.3
34400	4.40	4.36	4.36	4.39	4.37	4.37	-0.02	0.02	0.02	±0.3
40000	4.39	4.36	4.36	4.37	4.37	4.36	-0.04	0.02	0.00	±0.3
43600	4.38	4.35	4.36	4.38	4.36	4.35	0.00	0.02	-0.02	±0.3
55400	4.37	4.34	4.34	4.37	4.34	4.34	0.00	0.00	0.00	±0.3
70000	4.36	4.33	4.33	4.36	4.34	4.33	0.00	0.02	0.00	±0.3
88800	4.35	4.32	4.32	4.35	4.32	4.33	0.00	0.00	0.02	±0.3
112400	4.33	4.31	4.31	4.33	4.32	4.31	0.00	0.02	0.00	±0.3
142400	4.32	4.29	4.29	4.32	4.29	4.29	0.00	0.00	0.00	±0.3
161750	4.30	4.27	4.27	4.29	4.30	4.27	-0.02	0.06	0.00	±0.3
180400	4.28	4.26	4.26	4.28	4.26	4.27	0.00	0.00	0.02	±0.3
228400	4.25	4.22	4.22	4.25	4.22	4.22	0.00	0.00	0.00	±0.3
289400	4.21	4.19	4.19	4.21	4.20	4.19	0.00	0.02	0.00	±0.3
366400	4.16	4.14	4.14	4.16	4.15	4.14	0.00	0.02	0.00	±0.3
400000	4.14	4.13	4.13	4.14	4.13	4.13	0.00	0.00	0.00	±0.3
464000	4.12	4.11	4.10	4.12	4.11	4.11	0.00	0.00	0.02	±0.3
587800	4.06	4.05	4.05	4.07	4.05	4.05	0.02	0.00	0.00	±0.3
744200	4.01	4.00	4.00	4.02	4.01	4.01	0.02	0.02	0.02	±0.3
942600	4.00	3.99	3.99	4.00	4.00	4.00	0.00	0.02	0.02	±0.3
1193600	3.97	3.96	3.96	3.97	3.96	3.96	0.00	0.00	0.00	±0.3
1511600	3.96	3.96	3.95	3.96	3.95	3.95	0.00	-0.02	0.00	±0.3
1914400	3.94	3.94	3.93	3.95	3.94	3.94	0.02	0.00	0.02	±0.3
2424400	3.92	3.92	3.91	3.93	3.92	3.92	0.02	0.00	0.02	±0.3
3070200	3.89	3.89	3.88	3.89	3.89	3.87	0.00	0.00	-0.02	±0.3
3888000	3.83	3.83	3.82	3.83	3.83	3.82	0.00	0.00	0.00	±0.3
4000000	3.82	3.82	3.81	3.82	3.82	3.81	0.00	0.00	0.00	±0.3
4923800	3.75	3.75	3.74	3.75	3.75	3.74	0.00	0.00	0.00	±0.3
6235400	3.64	3.64	3.63	3.64	3.64	3.62	0.00	0.00	-0.02	±0.3
7896400	3.50	3.51	3.49	3.50	3.50	3.49	0.00	-0.02	0.00	±0.3
10000000	3.34	3.34	3.33	3.34	3.33	3.33	0.00	-0.03	0.00	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

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

Frequency Response, H-field, Channel 3

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	1.53	1.52	1.53	1.50	1.52	1.53	-0.17	0.00	0.00	±0.3
3200	1.52	1.52	1.52	1.54	1.51	1.51	0.11	-0.06	-0.06	±0.3
4000	1.52	1.52	1.52	1.52	1.51	1.52	0.00	-0.06	0.00	±0.3
5200	1.51	1.51	1.51	1.51	1.50	1.53	0.00	-0.06	0.11	±0.3
6600	1.51	1.51	1.51	1.51	1.50	1.50	0.00	-0.06	-0.06	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.51	0.00	0.00	0.06	±0.3
9000	1.49	1.49	1.49	1.49	1.49	1.50	0.00	0.00	0.06	±0.3
10600	4.33	4.26	4.26	4.31	4.25	4.26	-0.04	-0.02	0.00	±0.3
13400	4.37	4.29	4.29	4.37	4.27	4.29	0.00	-0.04	0.00	±0.3
17000	4.37	4.32	4.32	4.36	4.31	4.32	-0.02	-0.02	0.00	±0.3
21400	4.40	4.33	4.33	4.40	4.33	4.33	0.00	0.00	0.00	±0.3
27200	4.39	4.35	4.34	4.38	4.34	4.36	-0.02	-0.02	0.04	±0.3
34400	4.40	4.36	4.36	4.39	4.37	4.37	-0.02	0.02	0.02	±0.3
40000	4.39	4.36	4.36	4.38	4.35	4.37	-0.02	-0.02	0.02	±0.3
43600	4.38	4.35	4.36	4.36	4.35	4.35	-0.04	0.00	-0.02	±0.3
55400	4.37	4.34	4.34	4.36	4.34	4.34	-0.02	0.00	0.00	±0.3
70000	4.36	4.33	4.33	4.36	4.35	4.33	0.00	0.04	0.00	±0.3
88800	4.35	4.32	4.32	4.34	4.32	4.32	-0.02	0.00	0.00	±0.3
112400	4.33	4.31	4.31	4.33	4.32	4.31	0.00	0.02	0.00	±0.3
142400	4.32	4.29	4.29	4.31	4.28	4.29	-0.02	-0.02	0.00	±0.3
161750	4.30	4.27	4.27	4.29	4.27	4.27	-0.02	0.00	0.00	±0.3
180400	4.28	4.26	4.26	4.28	4.26	4.26	0.00	0.00	0.00	±0.3
228400	4.25	4.22	4.22	4.25	4.22	4.23	0.00	0.00	0.02	±0.3
289400	4.21	4.19	4.19	4.21	4.19	4.19	0.00	0.00	0.00	±0.3
366400	4.16	4.14	4.14	4.16	4.15	4.14	0.00	0.02	0.00	±0.3
400000	4.14	4.13	4.13	4.15	4.13	4.13	0.02	0.00	0.00	±0.3
464000	4.12	4.11	4.10	4.12	4.11	4.11	0.00	0.00	0.02	±0.3
587800	4.06	4.05	4.05	4.06	4.05	4.05	0.00	0.00	0.00	±0.3
744200	4.01	4.00	4.00	4.02	4.00	4.00	0.02	0.00	0.00	±0.3
942600	4.00	3.99	3.99	4.01	3.99	4.00	0.02	0.00	0.02	±0.3
1193600	3.97	3.96	3.96	3.98	3.96	3.96	0.02	0.00	0.00	±0.3
1511600	3.96	3.96	3.95	3.96	3.95	3.95	0.00	-0.02	0.00	±0.3
1914400	3.94	3.94	3.93	3.94	3.94	3.94	0.00	0.00	0.02	±0.3
2424400	3.92	3.92	3.91	3.93	3.92	3.92	0.02	0.00	0.02	±0.3
3070200	3.89	3.89	3.88	3.90	3.88	3.88	0.02	-0.02	0.00	±0.3
3888000	3.83	3.83	3.82	3.83	3.83	3.82	0.00	0.00	0.00	±0.3
4000000	3.82	3.82	3.81	3.82	3.82	3.81	0.00	0.00	0.00	±0.3
4923800	3.75	3.75	3.74	3.75	3.75	3.74	0.00	0.00	0.00	±0.3
6235400	3.64	3.64	3.63	3.64	3.64	3.63	0.00	0.00	0.00	±0.3
7896400	3.50	3.51	3.49	3.51	3.51	3.50	0.02	0.00	0.02	±0.3
10000000	3.34	3.34	3.33	3.34	3.34	3.32	0.00	0.00	-0.03	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

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

Frequency Response, H-field, Channel 4

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	1.53	1.52	1.53	1.55	1.53	1.53	0.11	0.06	0.00	±0.3
3200	1.52	1.52	1.52	1.53	1.52	1.51	0.06	0.00	-0.06	±0.3
4000	1.52	1.52	1.52	1.52	1.52	1.52	0.00	0.00	0.00	±0.3
5200	1.51	1.51	1.51	1.51	1.51	1.52	0.00	0.00	0.06	±0.3
6600	1.51	1.51	1.51	1.51	1.51	1.50	0.00	0.00	-0.06	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.51	0.00	0.00	0.06	±0.3
9000	1.49	1.49	1.49	1.49	1.49	1.49	0.00	0.00	0.00	±0.3
10600	4.33	4.26	4.26	4.29	4.26	4.27	-0.08	0.00	0.02	±0.3
13400	4.37	4.29	4.29	4.34	4.30	4.29	-0.06	0.02	0.00	±0.3
17000	4.37	4.32	4.32	4.37	4.31	4.32	0.00	-0.02	0.00	±0.3
21400	4.40	4.33	4.33	4.41	4.33	4.35	0.02	0.00	0.04	±0.3
27200	4.39	4.35	4.34	4.38	4.37	4.36	-0.02	0.04	0.04	±0.3
34400	4.40	4.36	4.36	4.39	4.34	4.37	-0.02	-0.04	0.02	±0.3
40000	4.39	4.36	4.36	4.39	4.35	4.35	0.00	-0.02	-0.02	±0.3
43600	4.38	4.35	4.36	4.41	4.33	4.35	0.06	-0.04	-0.02	±0.3
55400	4.37	4.34	4.34	4.37	4.34	4.34	0.00	0.00	0.00	±0.3
70000	4.36	4.33	4.33	4.37	4.34	4.33	0.02	0.02	0.00	±0.3
88800	4.35	4.32	4.32	4.35	4.32	4.32	0.00	0.00	0.00	±0.3
112400	4.33	4.31	4.31	4.34	4.29	4.31	0.02	-0.04	0.00	±0.3
142400	4.32	4.29	4.29	4.32	4.32	4.29	0.00	0.06	0.00	±0.3
161750	4.30	4.27	4.27	4.30	4.27	4.28	0.00	0.00	0.02	±0.3
180400	4.28	4.26	4.26	4.29	4.26	4.26	0.02	0.00	0.00	±0.3
228400	4.25	4.22	4.22	4.25	4.23	4.22	0.00	0.02	0.00	±0.3
289400	4.21	4.19	4.19	4.21	4.19	4.19	0.00	0.00	0.00	±0.3
366400	4.16	4.14	4.14	4.16	4.15	4.14	0.00	0.02	0.00	±0.3
400000	4.14	4.13	4.13	4.14	4.13	4.13	0.00	0.00	0.00	±0.3
464000	4.12	4.11	4.10	4.12	4.11	4.10	0.00	0.00	0.00	±0.3
587800	4.06	4.05	4.05	4.06	4.05	4.05	0.00	0.00	0.00	±0.3
744200	4.01	4.00	4.00	4.01	4.00	4.00	0.00	0.00	0.00	±0.3
942600	4.00	3.99	3.99	4.00	4.00	4.00	0.00	0.02	0.02	±0.3
1193600	3.97	3.96	3.96	3.97	3.96	3.96	0.00	0.00	0.00	±0.3
1511600	3.96	3.96	3.95	3.96	3.96	3.95	0.00	0.00	0.00	±0.3
1914400	3.94	3.94	3.93	3.95	3.94	3.94	0.02	0.00	0.02	±0.3
2424400	3.92	3.92	3.91	3.93	3.92	3.92	0.02	0.00	0.02	±0.3
3070200	3.89	3.89	3.88	3.90	3.89	3.87	0.02	0.00	-0.02	±0.3
3888000	3.83	3.83	3.82	3.84	3.83	3.82	0.02	0.00	0.00	±0.3
4000000	3.82	3.82	3.81	3.83	3.82	3.81	0.02	0.00	0.00	±0.3
4923800	3.75	3.75	3.74	3.75	3.75	3.74	0.00	0.00	0.00	±0.3
6235400	3.64	3.64	3.63	3.64	3.64	3.63	0.00	0.00	0.00	±0.3
7896400	3.50	3.51	3.49	3.50	3.50	3.50	0.00	-0.02	0.02	±0.3
10000000	3.34	3.34	3.33	3.33	3.34	3.32	-0.03	0.00	-0.03	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

¹Calibration 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	1.53	1.52	1.53	1.51	1.53	1.52	-0.11	0.06	-0.06	±0.3
3200	1.52	1.52	1.52	1.54	1.52	1.51	0.11	0.00	-0.06	±0.3
4000	1.52	1.52	1.52	1.52	1.51	1.52	0.00	-0.06	0.00	±0.3
5200	1.51	1.51	1.51	1.51	1.51	1.52	0.00	0.00	0.06	±0.3
6600	1.51	1.51	1.51	1.51	1.51	1.50	0.00	0.00	-0.06	±0.3
8200	1.50	1.50	1.50	1.49	1.50	1.51	-0.06	0.00	0.06	±0.3
9000	1.49	1.49	1.49	1.49	1.50	1.49	0.00	0.06	0.00	±0.3
10600	4.33	4.26	4.26	4.31	4.26	4.26	-0.04	0.00	0.00	±0.3
13400	4.37	4.29	4.29	4.34	4.29	4.29	-0.06	0.00	0.00	±0.3
17000	4.37	4.32	4.32	4.37	4.32	4.32	0.00	0.00	0.00	±0.3
21400	4.40	4.33	4.33	4.39	4.34	4.33	-0.02	0.02	0.00	±0.3
27200	4.39	4.35	4.34	4.40	4.35	4.35	0.02	0.00	0.02	±0.3
34400	4.40	4.36	4.36	4.39	4.35	4.36	-0.02	-0.02	0.00	±0.3
40000	4.39	4.36	4.36	4.37	4.35	4.35	-0.04	-0.02	-0.02	±0.3
43600	4.38	4.35	4.36	4.39	4.34	4.35	0.02	-0.02	-0.02	±0.3
55400	4.37	4.34	4.34	4.37	4.35	4.34	0.00	0.02	0.00	±0.3
70000	4.36	4.33	4.33	4.36	4.32	4.33	0.00	-0.02	0.00	±0.3
88800	4.35	4.32	4.32	4.34	4.32	4.32	-0.02	0.00	0.00	±0.3
112400	4.33	4.31	4.31	4.33	4.30	4.31	0.00	-0.02	0.00	±0.3
142400	4.32	4.29	4.29	4.32	4.31	4.29	0.00	0.04	0.00	±0.3
161750	4.30	4.27	4.27	4.29	4.26	4.27	-0.02	-0.02	0.00	±0.3
180400	4.28	4.26	4.26	4.29	4.27	4.26	0.02	0.02	0.00	±0.3
228400	4.25	4.22	4.22	4.25	4.23	4.22	0.00	0.02	0.00	±0.3
289400	4.21	4.19	4.19	4.21	4.20	4.19	0.00	0.02	0.00	±0.3
366400	4.16	4.14	4.14	4.16	4.15	4.14	0.00	0.02	0.00	±0.3
400000	4.14	4.13	4.13	4.14	4.13	4.13	0.00	0.00	0.00	±0.3
464000	4.12	4.11	4.10	4.12	4.11	4.10	0.00	0.00	0.00	±0.3
587800	4.06	4.05	4.05	4.06	4.05	4.05	0.00	0.00	0.00	±0.3
744200	4.01	4.00	4.00	4.02	4.01	4.00	0.02	0.02	0.00	±0.3
942600	4.00	3.99	3.99	4.00	4.00	4.00	0.00	0.02	0.02	±0.3
1193600	3.97	3.96	3.96	3.97	3.97	3.96	0.00	0.02	0.00	±0.3
1511600	3.96	3.96	3.95	3.96	3.96	3.96	0.00	0.00	0.02	±0.3
1914400	3.94	3.94	3.93	3.95	3.94	3.94	0.02	0.00	0.02	±0.3
2424400	3.92	3.92	3.91	3.93	3.92	3.92	0.02	0.00	0.02	±0.3
3070200	3.89	3.89	3.88	3.90	3.89	3.88	0.02	0.00	0.00	±0.3
3888000	3.83	3.83	3.82	3.83	3.83	3.82	0.00	0.00	0.00	±0.3
4000000	3.82	3.82	3.81	3.82	3.82	3.81	0.00	0.00	0.00	±0.3
4923800	3.75	3.75	3.74	3.75	3.75	3.74	0.00	0.00	0.00	±0.3
6235400	3.64	3.64	3.63	3.64	3.65	3.63	0.00	0.02	0.00	±0.3
7896400	3.50	3.51	3.49	3.50	3.50	3.50	0.00	-0.02	0.02	±0.3
10000000	3.34	3.34	3.33	3.35	3.34	3.32	0.03	0.00	-0.03	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

¹Calibration 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	1.53	1.52	1.53	1.49	1.52	1.53	-0.23	0.00	0.00	±0.3
3200	1.52	1.52	1.52	1.53	1.52	1.51	0.06	0.00	-0.06	±0.3
4000	1.52	1.52	1.52	1.52	1.51	1.52	0.00	-0.06	0.00	±0.3
5200	1.51	1.51	1.51	1.51	1.51	1.53	0.00	0.00	0.11	±0.3
6600	1.51	1.51	1.51	1.50	1.51	1.49	-0.06	0.00	-0.12	±0.3
8200	1.50	1.50	1.50	1.50	1.50	1.51	0.00	0.00	0.06	±0.3
9000	1.49	1.49	1.49	1.49	1.49	1.49	0.00	0.00	0.00	±0.3
10600	4.33	4.26	4.26	4.32	4.25	4.24	-0.02	-0.02	-0.04	±0.3
13400	4.37	4.29	4.29	4.36	4.27	4.31	-0.02	-0.04	0.04	±0.3
17000	4.37	4.32	4.32	4.36	4.31	4.32	-0.02	-0.02	0.00	±0.3
21400	4.40	4.33	4.33	4.38	4.33	4.34	-0.04	0.00	0.02	±0.3
27200	4.39	4.35	4.34	4.40	4.35	4.36	0.02	0.00	0.04	±0.3
34400	4.40	4.36	4.36	4.38	4.37	4.37	-0.04	0.02	0.02	±0.3
40000	4.39	4.36	4.36	4.36	4.39	4.36	-0.06	0.06	0.00	±0.3
43600	4.38	4.35	4.36	4.37	4.38	4.36	-0.02	0.06	0.00	±0.3
55400	4.37	4.34	4.34	4.36	4.32	4.34	-0.02	-0.04	0.00	±0.3
70000	4.36	4.33	4.33	4.34	4.33	4.34	-0.04	0.00	0.02	±0.3
88800	4.35	4.32	4.32	4.35	4.33	4.32	0.00	0.02	0.00	±0.3
112400	4.33	4.31	4.31	4.33	4.32	4.31	0.00	0.02	0.00	±0.3
142400	4.32	4.29	4.29	4.31	4.26	4.29	-0.02	-0.06	0.00	±0.3
161750	4.30	4.27	4.27	4.29	4.36	4.28	-0.02	0.18	0.02	±0.3
180400	4.28	4.26	4.26	4.28	4.27	4.27	0.00	0.02	0.02	±0.3
228400	4.25	4.22	4.22	4.25	4.23	4.22	0.00	0.02	0.00	±0.3
289400	4.21	4.19	4.19	4.21	4.18	4.19	0.00	-0.02	0.00	±0.3
366400	4.16	4.14	4.14	4.16	4.14	4.14	0.00	0.00	0.00	±0.3
400000	4.14	4.13	4.13	4.14	4.12	4.12	0.00	-0.02	-0.02	±0.3
464000	4.12	4.11	4.10	4.12	4.11	4.10	0.00	0.00	0.00	±0.3
587800	4.06	4.05	4.05	4.06	4.05	4.05	0.00	0.00	0.00	±0.3
744200	4.01	4.00	4.00	4.01	4.01	4.00	0.00	0.02	0.00	±0.3
942600	4.00	3.99	3.99	4.00	3.99	3.99	0.00	0.00	0.00	±0.3
1193600	3.97	3.96	3.96	3.97	3.96	3.97	0.00	0.00	0.02	±0.3
1511600	3.96	3.96	3.95	3.96	3.95	3.95	0.00	-0.02	0.00	±0.3
1914400	3.94	3.94	3.93	3.95	3.94	3.93	0.02	0.00	0.00	±0.3
2424400	3.92	3.92	3.91	3.93	3.92	3.92	0.02	0.00	0.02	±0.3
3070200	3.89	3.89	3.88	3.89	3.88	3.88	0.00	-0.02	0.00	±0.3
3888000	3.83	3.83	3.82	3.83	3.83	3.82	0.00	0.00	0.00	±0.3
4000000	3.82	3.82	3.81	3.82	3.82	3.81	0.00	0.00	0.00	±0.3
4923800	3.75	3.75	3.74	3.75	3.75	3.74	0.00	0.00	0.00	±0.3
6235400	3.64	3.64	3.63	3.64	3.64	3.63	0.00	0.00	0.00	±0.3
7896400	3.50	3.51	3.49	3.50	3.50	3.49	0.00	-0.02	0.00	±0.3
10000000	3.34	3.34	3.33	3.33	3.33	3.32	-0.03	-0.03	-0.03	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±0.3dB for applied H-fields at calibration points from 3kHz to 10MHz

¹Calibration 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	1.53	1.52	1.53	1.51	1.52	1.53	-0.11	0.00	0.00	±0.3
3200	1.52	1.52	1.52	1.54	1.52	1.52	0.11	0.00	0.00	±0.3
4000	1.52	1.52	1.52	1.52	1.51	1.52	0.00	-0.06	0.00	±0.3
5200	1.51	1.51	1.51	1.52	1.50	1.53	0.06	-0.06	0.11	±0.3
6600	1.51	1.51	1.51	1.51	1.50	1.51	0.00	-0.06	0.00	±0.3
8200	1.50	1.50	1.50	1.49	1.50	1.51	-0.06	0.00	0.06	±0.3
9000	1.49	1.49	1.49	1.49	1.49	1.49	0.00	0.00	0.00	±0.3
10600	4.33	4.26	4.26	4.33	4.26	4.24	0.00	0.00	-0.04	±0.3
13400	4.37	4.29	4.29	4.36	4.30	4.29	-0.02	0.02	0.00	±0.3
17000	4.37	4.32	4.32	4.36	4.32	4.33	-0.02	0.00	0.02	±0.3
21400	4.40	4.33	4.33	4.39	4.35	4.31	-0.02	0.04	-0.04	±0.3
27200	4.39	4.35	4.34	4.40	4.35	4.36	0.02	0.00	0.04	±0.3
34400	4.40	4.36	4.36	4.38	4.37	4.37	-0.04	0.02	0.02	±0.3
40000	4.39	4.36	4.36	4.37	4.36	4.36	-0.04	0.00	0.00	±0.3
43600	4.38	4.35	4.36	4.38	4.37	4.35	0.00	0.04	-0.02	±0.3
55400	4.37	4.34	4.34	4.36	4.34	4.34	-0.02	0.00	0.00	±0.3
70000	4.36	4.33	4.33	4.36	4.33	4.33	0.00	0.00	0.00	±0.3
88800	4.35	4.32	4.32	4.34	4.32	4.33	-0.02	0.00	0.02	±0.3
112400	4.33	4.31	4.31	4.33	4.32	4.32	0.00	0.02	0.02	±0.3
142400	4.32	4.29	4.29	4.31	4.29	4.29	-0.02	0.00	0.00	±0.3
161750	4.30	4.27	4.27	4.29	4.29	4.28	-0.02	0.04	0.02	±0.3
180400	4.28	4.26	4.26	4.28	4.26	4.26	0.00	0.00	0.00	±0.3
228400	4.25	4.22	4.22	4.25	4.23	4.23	0.00	0.02	0.02	±0.3
289400	4.21	4.19	4.19	4.21	4.20	4.19	0.00	0.02	0.00	±0.3
366400	4.16	4.14	4.14	4.17	4.15	4.14	0.02	0.02	0.00	±0.3
400000	4.14	4.13	4.13	4.14	4.13	4.12	0.00	0.00	-0.02	±0.3
464000	4.12	4.11	4.10	4.12	4.11	4.11	0.00	0.00	0.02	±0.3
587800	4.06	4.05	4.05	4.06	4.05	4.06	0.00	0.00	0.02	±0.3
744200	4.01	4.00	4.00	4.02	4.01	4.00	0.02	0.02	0.00	±0.3
942600	4.00	3.99	3.99	4.00	4.00	4.00	0.00	0.02	0.02	±0.3
1193600	3.97	3.96	3.96	3.98	3.96	3.96	0.02	0.00	0.00	±0.3
1511600	3.96	3.96	3.95	3.96	3.96	3.95	0.00	0.00	0.00	±0.3
1914400	3.94	3.94	3.93	3.95	3.94	3.95	0.02	0.00	0.04	±0.3
2424400	3.92	3.92	3.91	3.93	3.92	3.92	0.02	0.00	0.02	±0.3
3070200	3.89	3.89	3.88	3.89	3.88	3.87	0.00	-0.02	-0.02	±0.3
3888000	3.83	3.83	3.82	3.83	3.83	3.82	0.00	0.00	0.00	±0.3
4000000	3.82	3.82	3.81	3.82	3.82	3.81	0.00	0.00	0.00	±0.3
4923800	3.75	3.75	3.74	3.75	3.75	3.74	0.00	0.00	0.00	±0.3
6235400	3.64	3.64	3.63	3.64	3.64	3.64	0.00	0.00	0.02	±0.3
7896400	3.50	3.51	3.49	3.50	3.50	3.51	0.00	-0.02	0.05	±0.3
10000000	3.34	3.34	3.33	3.34	3.33	3.33	0.00	-0.03	0.00	±0.3

SPEAG H-field frequency response tolerance criteria¹:
±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

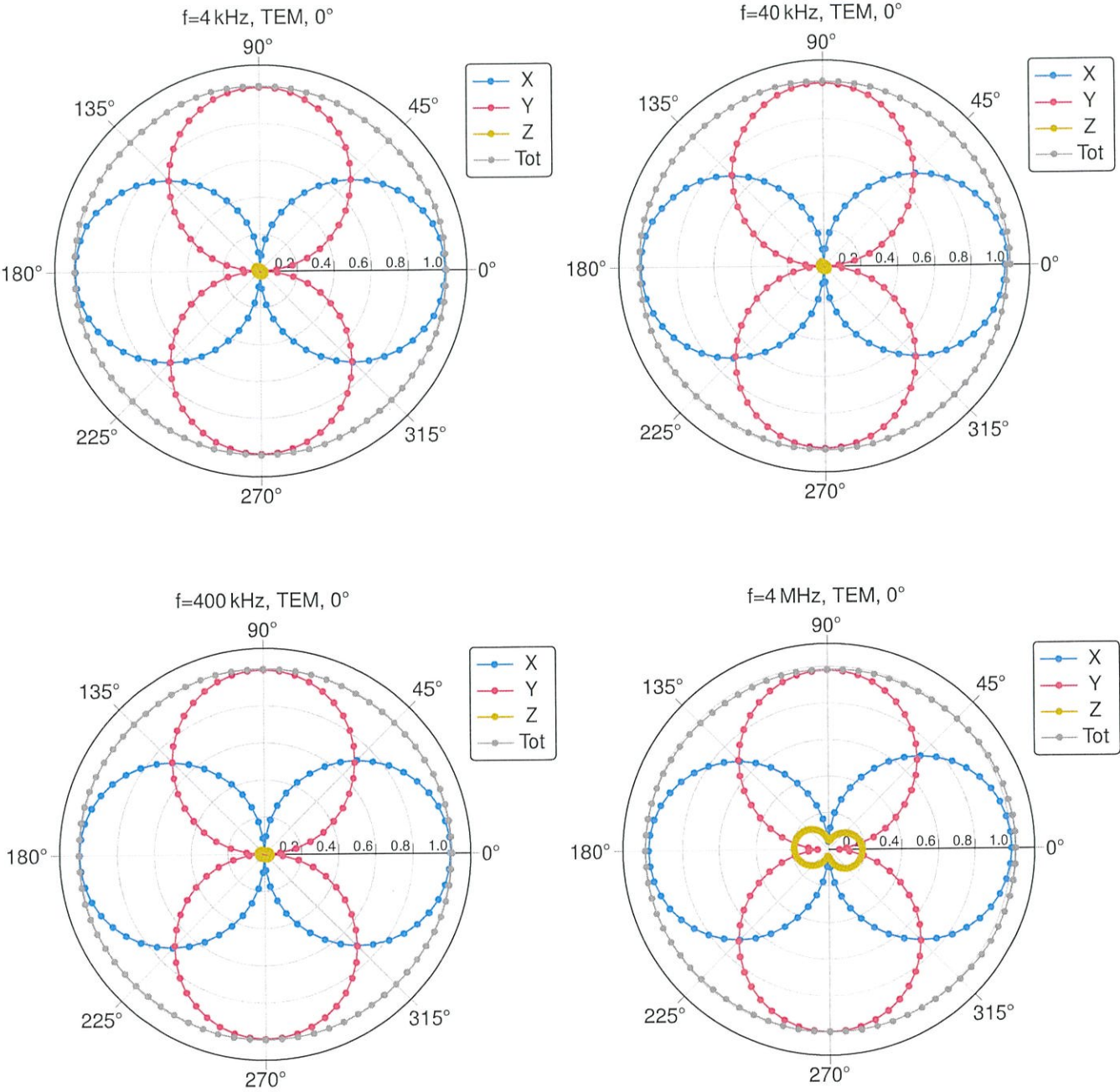
f/(Hz)	E-field/(V/m) Applied			E-field/(V/m) Reading			Difference/(dB)			Tolerance/(dB)
	x	y	z	x	y	z	x	y	z	
3000	84.6	84.6	88.0	84.6	84.6	88.0	0.00	0.00	0.00	±0.3
3200	86.2	86.2	80.3	85.8	87.1	80.5	-0.04	0.09	0.02	±0.3
4000	83.9	83.9	88.0	83.9	84.0	88.0	0.00	0.01	0.00	±0.3
5200	81.8	81.8	85.0	82.3	81.9	85.5	0.05	0.01	0.05	±0.3
6600	81.9	81.9	82.1	81.9	82.1	82.5	0.00	0.02	0.04	±0.3
8200	78.0	78.0	82.1	78.1	77.9	82.4	0.01	-0.01	0.03	±0.3
9000	83.4	83.4	83.5	83.5	83.5	83.6	0.01	0.01	0.01	±0.3
10600	82.6	82.6	81.7	82.9	82.5	81.6	0.03	-0.01	-0.01	±0.3
13400	85.7	85.7	79.6	85.7	85.7	79.7	0.00	0.00	0.01	±0.3
17000	84.9	84.9	78.2	84.9	84.9	78.3	0.00	0.00	0.01	±0.3
21400	83.1	83.1	82.6	83.2	83.1	82.6	0.01	0.00	0.00	±0.3
27200	83.9	83.9	80.4	84.1	84.0	80.4	0.02	0.01	0.00	±0.3
34400	82.5	82.5	79.4	82.6	82.6	79.4	0.01	0.01	0.00	±0.3
40000	83.2	83.2	82.1	83.2	83.3	82.2	0.00	0.01	0.01	±0.3
43600	82.5	82.5	81.3	82.6	82.6	81.3	0.01	0.01	0.00	±0.3
55400	82.3	82.3	81.3	82.4	82.4	81.3	0.01	0.01	0.00	±0.3
70000	83.1	83.1	81.4	83.2	83.2	81.4	0.01	0.01	0.00	±0.3
88800	82.2	82.2	82.1	82.2	82.3	82.2	0.00	0.01	0.01	±0.3
112400	82.6	82.6	81.7	82.7	82.7	81.7	0.01	0.01	0.00	±0.3
142400	82.6	82.6	82.1	82.7	82.7	82.1	0.01	0.01	0.00	±0.3
161750	82.7	82.7	82.1	82.7	82.7	82.1	0.00	0.00	0.00	±0.3
180400	83.0	83.0	82.1	83.1	83.1	82.1	0.01	0.01	0.00	±0.3
228400	83.1	83.1	82.2	83.2	83.2	82.2	0.01	0.01	0.00	±0.3
289400	83.3	83.3	82.6	83.4	83.4	82.7	0.01	0.01	0.01	±0.3
366400	83.5	83.5	82.7	83.6	83.6	82.8	0.01	0.01	0.01	±0.3
400000	83.8	83.8	82.7	83.9	83.8	82.8	0.01	0.00	0.01	±0.3
464000	84.0	84.0	83.0	84.1	84.1	83.0	0.01	0.01	0.00	±0.3
587800	84.0	84.0	83.0	84.1	84.1	83.1	0.01	0.01	0.01	±0.3
744200	84.1	84.1	83.0	84.2	84.2	83.0	0.01	0.01	0.00	±0.3
942600	84.1	84.1	83.1	84.2	84.2	83.2	0.01	0.01	0.01	±0.3
1193600	83.8	83.8	82.7	83.9	83.9	82.8	0.01	0.01	0.01	±0.3
1511600	83.3	83.3	82.3	83.4	83.4	82.3	0.01	0.01	0.00	±0.3
1914400	82.9	82.9	82.0	83.0	83.0	82.1	0.01	0.01	0.01	±0.3
2424400	82.6	82.6	81.8	82.7	82.7	81.8	0.01	0.01	0.00	±0.3
3070200	82.5	82.5	81.5	82.5	82.5	81.6	0.00	0.00	0.01	±0.3
3888000	82.6	82.6	81.8	82.7	82.7	81.9	0.01	0.01	0.01	±0.3
4000000	82.4	82.4	81.7	82.5	82.5	81.8	0.01	0.01	0.01	±0.3
4923800	83.0	83.0	82.5	83.1	83.1	82.5	0.01	0.01	0.00	±0.3
6235400	85.7	85.7	85.0	85.8	85.8	85.0	0.01	0.01	0.00	±0.3
7896400	88.5	88.5	88.0	88.5	88.6	87.9	0.00	0.01	-0.01	±0.3
10000000	96.8	96.8	96.2	96.8	96.8	96.3	0.00	0.00	0.01	±0.3

SPEAG E-field frequency response tolerance criteria¹:
±0.3dB for applied E-fields at calibration points from 3kHz to 10MHz

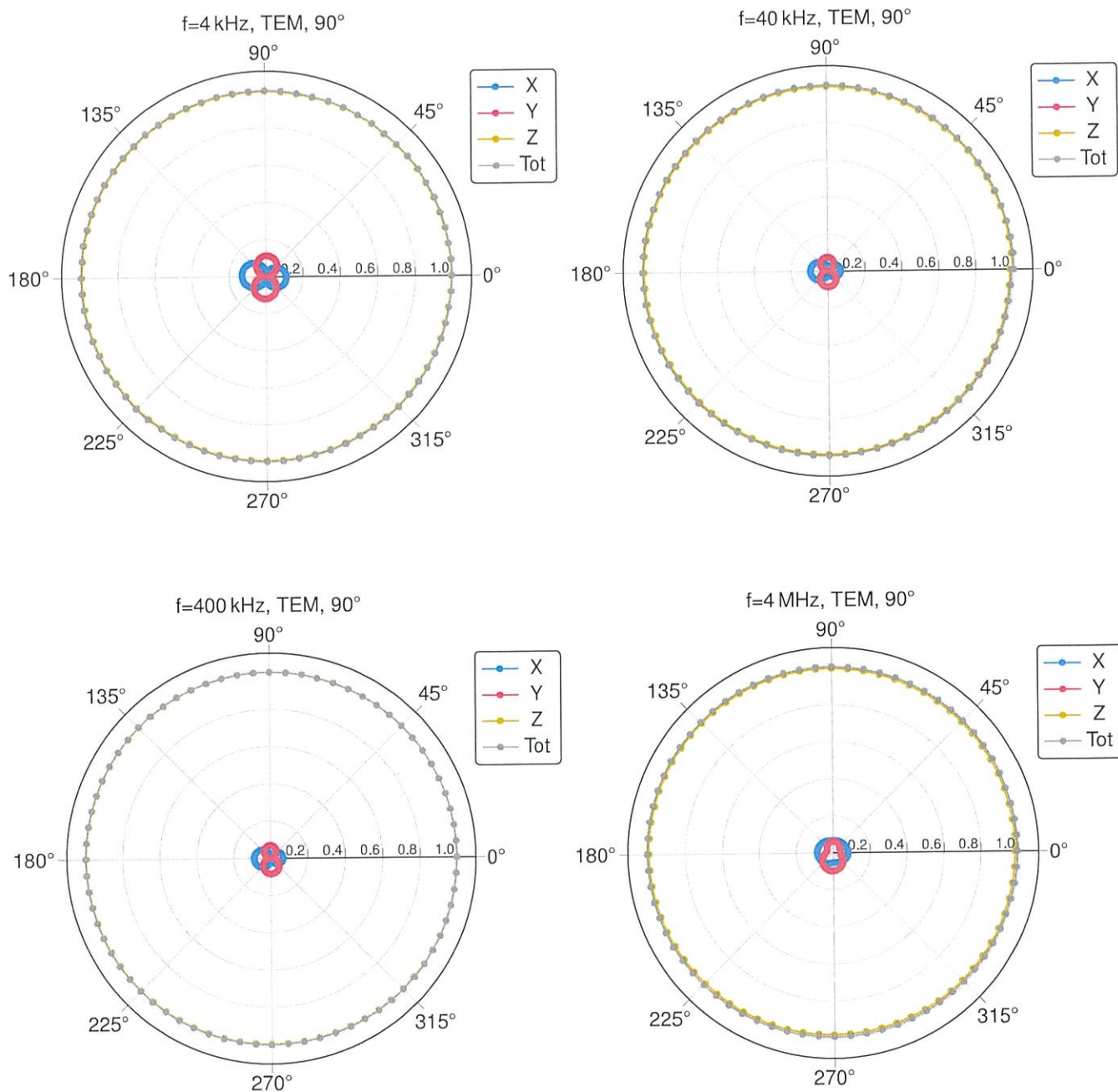
¹Calibration uncertainty not taken into account (shared risk 50%).

Isotropy H-Field

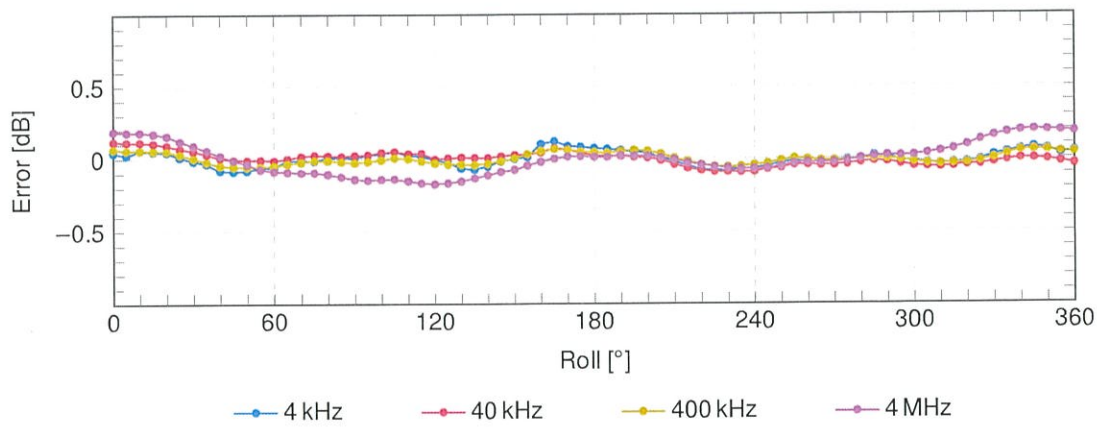
H-Field Receiving Pattern (ϕ), $\vartheta = 0^\circ$



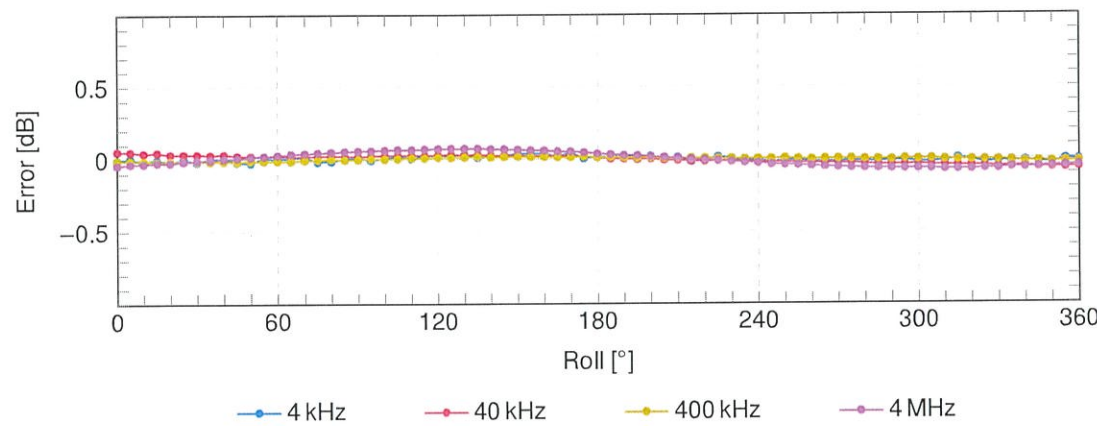
H-Field Receiving Pattern (ϕ), $\vartheta = 90^\circ$



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



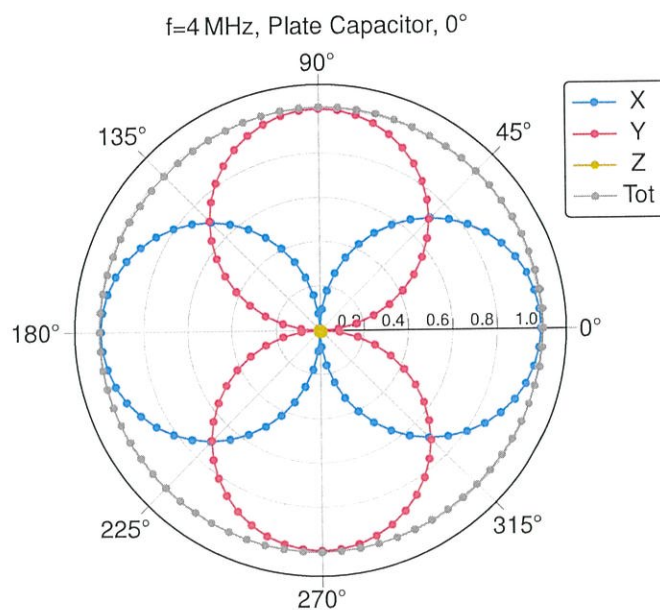
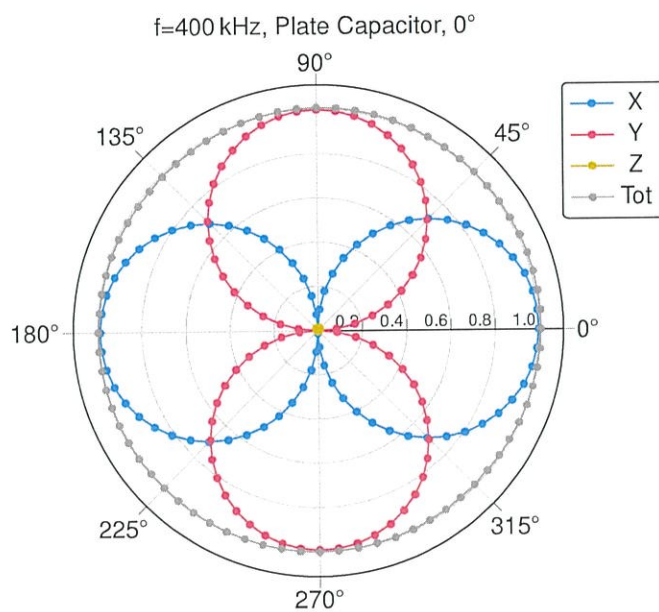
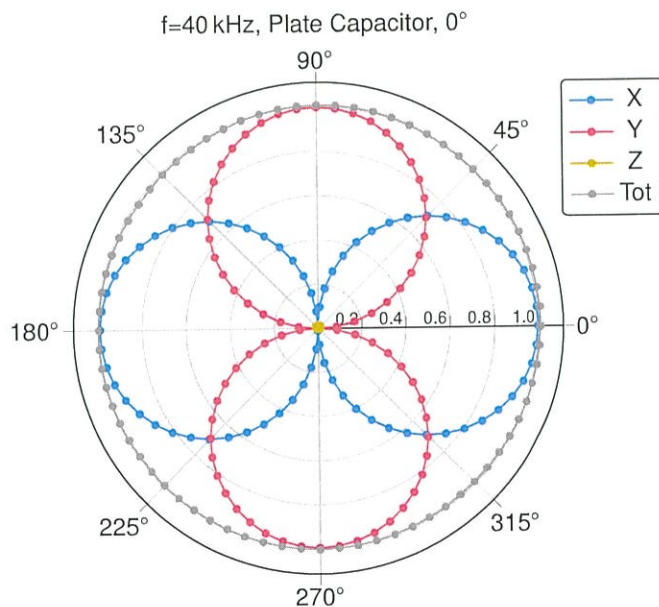
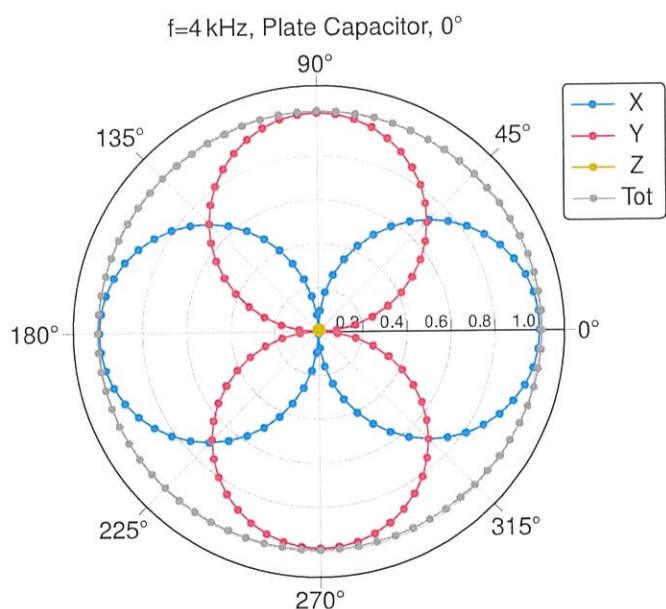
H-Field Receiving Pattern (ϕ), $\vartheta = 90^\circ$



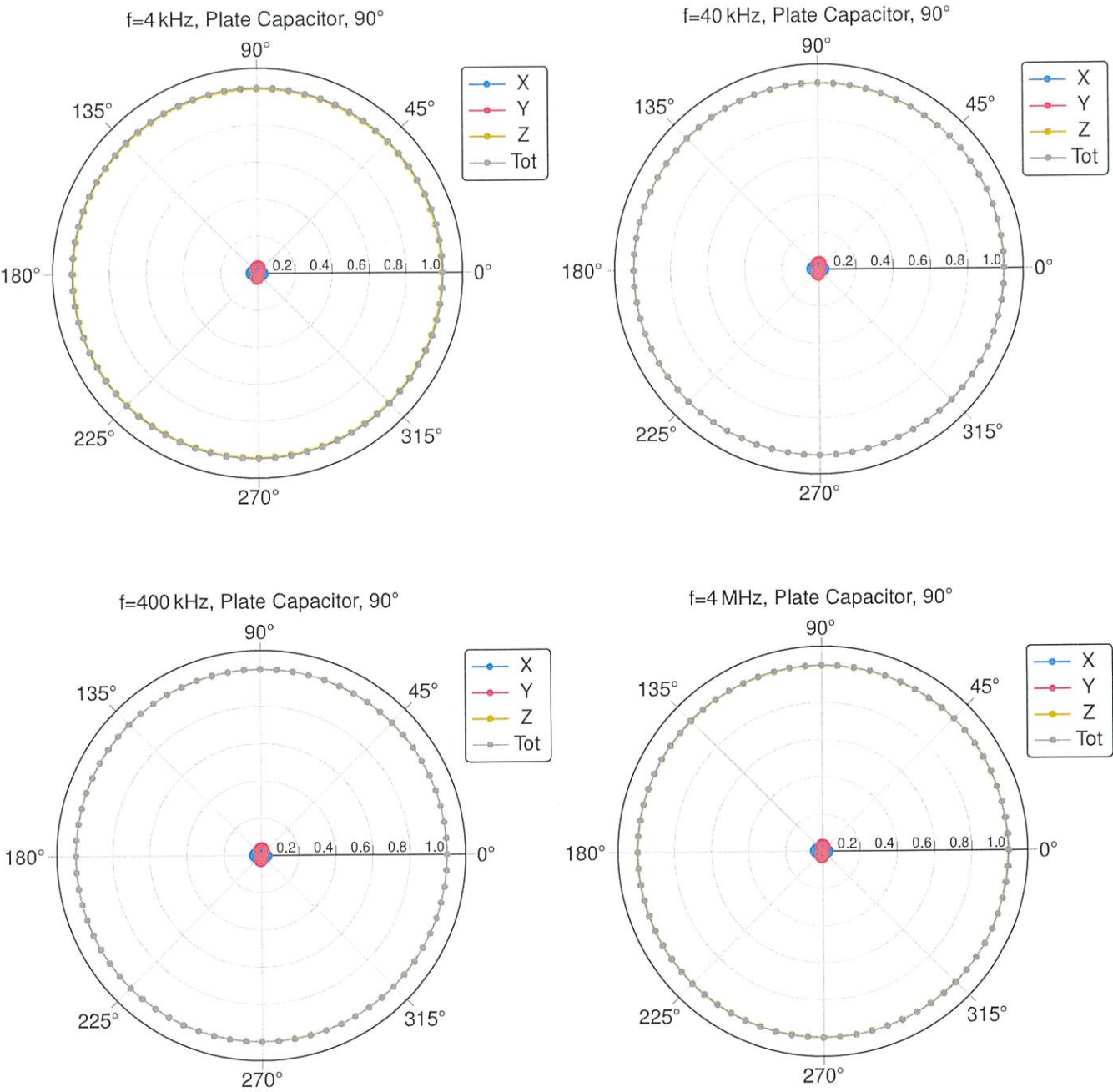
SPEAG axial deviation from the ideal response tolerance for H-field: $\pm 0.6\text{dB}$

Isotropy E-Field

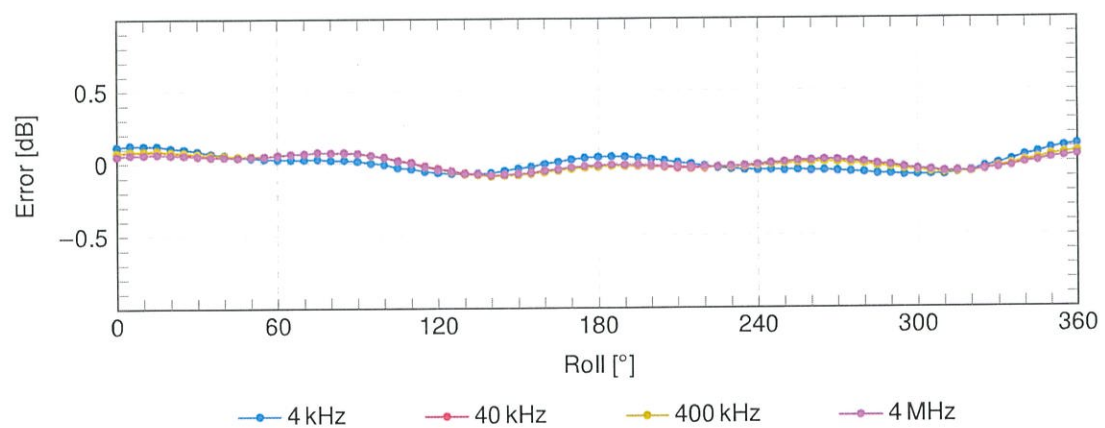
E-Field Receiving Pattern (ϕ), $\theta = 0^\circ$



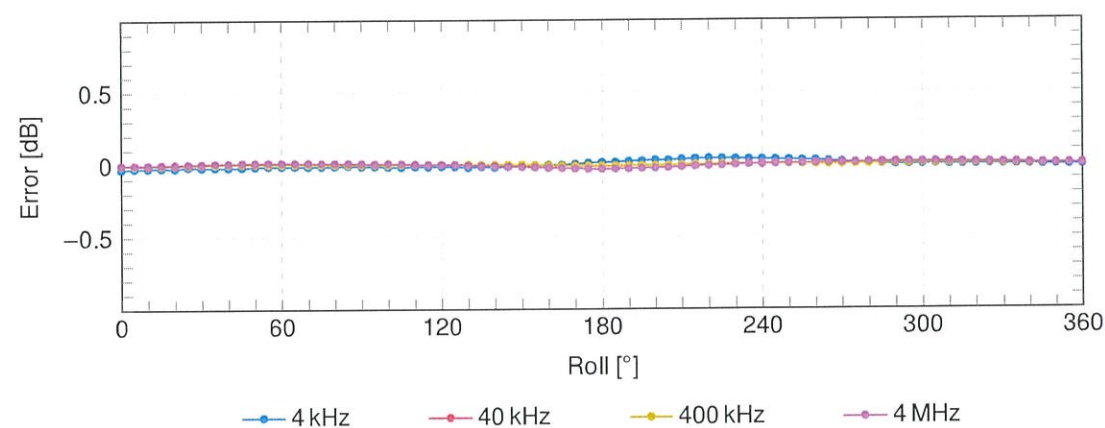
E-Field Receiving Pattern (ϕ), $\vartheta = 90^\circ$



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



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



SPEAG axial deviation from the ideal response tolerance for E-field: $\pm 0.8\text{dB}$