Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

ilac-MRA

S	Schweizerischer Kalibrierdienst
C	Service suisse d'étalonnage
S	Servizio svizzero di taratura
S	Swiss Calibration Service

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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client	**HCT** Gyeonggi-do, Republic of Korea	Certificate No.	**MAGPy-8H3D-3054**

CALIBRATION CERTIFICATE

Object	MAGPy-8H3D+E3DV2 SN:3054 MAGPy-DASV2 SN:3054
Calibration procedure(s)	QA CAL-46.v1 Calibration Procedure for MAGPy–8H3D+E3D Near-field Electric and Magnetic Field Sensor System
Calibration date	July 03, 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 $(22 \pm 3)°C$ 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 03, 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 $\phi = 0° ... 360°$; $\vartheta = 90°$, and $\phi = 0° ... 360°$; for the XYZ sensors (in TEM-Cell at 4 kHz, 40 kHz, 400 kHz and 4 MHz).

- Receiving Pattern: Assessed for E-field polarizations ϑ, and $\phi = 0° ... 360°$; $\vartheta = 90°$, and $\phi = 0° ... 360°$; for the XYZ sensor (in parallel plate capacitor at 4 kHz, 40 kHz, 400 kHz and 4 MHz).

Calibration Uncertainty

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

July 03, 2024

Measurement Conditions

Unit Type	MAGPy–8H3D+E3DV2 (SP MGY 303 AA)	3054
	MAGPy–DASV2 (SE UMS 303 AD)	3054
	MAGPy FPGA Board	WP000201
Adjustment Date	Last MAGPy Adjustment	July 03, 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	
0.410	0.370	0.360	0.430	0.370	0.370	0.41	0.00	0.24	±1.00
0.550	0.500	0.480	0.550	0.500	0.500	0.00	0.00	0.35	±1.00
0.750	0.680	0.660	0.740	0.680	0.690	−0.12	0.00	0.39	±1.00
0.980	0.890	0.860	0.970	0.890	0.890	−0.09	0.00	0.30	±1.00
1.32	1.20	1.17	1.34	1.22	1.17	0.13	0.14	0.00	±1.00
1.80	1.65	1.60	1.83	1.68	1.61	0.14	0.16	0.05	±1.00
2.39	2.20	2.14	2.42	2.23	2.15	0.11	0.12	0.04	±0.20
3.18	2.94	2.86	3.20	2.97	2.86	0.05	0.09	0.00	±0.20
4.31	3.99	3.89	4.32	4.02	3.90	0.02	0.07	0.02	±0.20
5.81	5.40	5.25	5.83	5.43	5.28	0.03	0.05	0.05	±0.20
7.80	7.27	7.07	7.80	7.29	7.09	0.00	0.02	0.02	±0.20
10.4	9.69	9.44	10.4	9.70	9.47	0.00	0.01	0.03	±0.20
14.0	13.1	12.8	14.0	13.1	12.8	0.00	0.00	0.00	±0.20
18.8	17.6	17.2	18.8	17.7	17.2	0.00	0.05	0.00	±0.20
25.4	23.8	23.2	25.4	23.8	23.3	0.00	0.00	0.04	±0.20
33.8	31.8	31.0	34.0	32.0	31.2	0.05	0.05	0.06	±0.20
45.6	42.9	41.9	45.8	43.2	42.1	0.04	0.06	0.04	±0.20
61.7	58.1	56.7	62.1	58.5	57.1	0.06	0.06	0.06	±0.20
84.8	80.0	78.1	84.4	79.7	77.7	−0.04	−0.03	−0.04	±0.20
111	105	102	110	104	102	−0.08	−0.08	0.00	±0.20
152	144	141	152	143	140	0.00	−0.06	−0.06	±0.20
211	200	195	210	199	194	−0.04	−0.04	−0.04	±0.20
291	277	270	293	272	271	0.06	−0.16	0.03	±0.20
431	410	400	423	404	393	−0.16	−0.13	−0.15	±0.20
594	567	554	588	563	547	−0.09	−0.06	−0.11	±0.20
888	849	829	888	851	828	0.00	0.02	−0.01	±0.20
1350	1290	1260	1360	1310	1270	0.06	0.13	0.07	±0.30
1840	1760	1720	1880	1810	1760	0.19	0.24	0.20	±0.30
3010	2890	2830	3110	3000	2920	0.28	0.32	0.27	±0.50
3640	3510	3440	3770	3650	3560	0.30	0.34	0.30	±0.50

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

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

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MAGPy-DASV2 SN:3054

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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	
0.420	0.370	0.360	0.440	0.390	0.380	0.40	0.46	0.47	±1.00
0.560	0.510	0.500	0.580	0.520	0.520	0.30	0.17	0.34	±1.00
0.770	0.700	0.680	0.760	0.710	0.710	−0.11	0.12	0.37	±1.00
1.00	0.910	0.890	0.980	0.930	0.900	−0.18	0.19	0.10	±1.00
1.34	1.23	1.20	1.34	1.25	1.19	0.00	0.14	−0.07	±1.00
1.83	1.69	1.65	1.84	1.70	1.64	0.05	0.05	−0.05	±1.00
2.43	2.25	2.19	2.43	2.24	2.21	0.00	−0.04	0.08	±0.20
3.25	3.01	2.93	3.25	3.00	2.94	0.00	−0.03	0.03	±0.20
4.40	4.08	3.99	4.41	4.07	4.00	0.02	−0.02	0.02	±0.20
5.93	5.52	5.38	5.94	5.50	5.42	0.01	−0.03	0.06	±0.20
7.95	7.43	7.25	7.96	7.43	7.29	0.01	0.00	0.05	±0.20
10.6	9.91	9.68	10.6	9.93	9.71	0.00	0.02	0.03	±0.20
14.3	13.4	13.1	14.3	13.4	13.1	0.00	0.00	0.00	±0.20
19.2	18.0	17.7	19.2	18.1	17.7	0.00	0.05	0.00	±0.20
25.9	24.4	23.8	26.0	24.4	23.9	0.03	0.00	0.04	±0.20
34.5	32.5	31.8	34.7	32.7	32.0	0.05	0.05	0.05	±0.20
46.5	43.9	43.0	46.8	44.2	43.1	0.06	0.06	0.02	±0.20
62.9	59.4	58.1	63.3	59.8	58.5	0.06	0.06	0.06	±0.20
86.5	81.8	80.1	86.1	81.5	79.7	−0.04	−0.03	−0.04	±0.20
113	107	105	112	106	104	−0.08	−0.08	−0.08	±0.20
155	147	144	155	146	143	0.00	−0.06	−0.06	±0.20
215	204	200	214	203	199	−0.04	−0.04	−0.04	±0.20
297	283	277	298	278	278	0.03	−0.15	0.03	±0.20
439	419	411	432	413	403	−0.14	−0.13	−0.17	±0.20
606	580	568	600	575	561	−0.09	−0.08	−0.11	±0.20
906	868	850	906	870	851	0.00	0.02	0.01	±0.20
1370	1320	1290	1390	1340	1310	0.13	0.13	0.13	±0.30
1880	1800	1770	1920	1850	1810	0.18	0.24	0.19	±0.30
3070	2960	2900	3170	3070	3000	0.28	0.32	0.29	±0.50
3710	3590	3520	3850	3730	3660	0.32	0.33	0.34	±0.50

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

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

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MAGPy-DASV2 SN:3054

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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	
0.410	0.370	0.370	0.440	0.390	0.370	0.61	0.46	0.00	±1.00
0.550	0.510	0.500	0.590	0.530	0.510	0.61	0.33	0.17	±1.00
0.750	0.700	0.680	0.760	0.720	0.700	0.12	0.24	0.25	±1.00
0.980	0.910	0.890	0.980	0.920	0.910	0.00	0.09	0.19	±1.00
1.32	1.23	1.21	1.33	1.22	1.22	0.07	−0.07	0.07	±1.00
1.80	1.69	1.65	1.83	1.68	1.65	0.14	−0.05	0.00	±1.00
2.39	2.25	2.20	2.42	2.25	2.21	0.11	0.00	0.04	±0.20
3.19	3.01	2.95	3.21	3.01	2.97	0.05	0.00	0.06	±0.20
4.32	4.09	4.01	4.32	4.09	4.01	0.00	0.00	0.00	±0.20
5.82	5.52	5.41	5.83	5.53	5.42	0.01	0.02	0.02	±0.20
7.82	7.44	7.29	7.85	7.44	7.30	0.03	0.00	0.01	±0.20
10.4	9.92	9.74	10.4	9.91	9.73	0.00	−0.01	−0.01	±0.20
14.0	13.4	13.2	14.1	13.4	13.2	0.06	0.00	0.00	±0.20
18.9	18.1	17.8	18.9	18.1	17.7	0.00	0.00	−0.05	±0.20
25.4	24.4	23.9	25.5	24.4	24.0	0.03	0.00	0.04	±0.20
33.9	32.5	31.9	34.1	32.8	32.2	0.05	0.08	0.08	±0.20
45.7	43.9	43.2	46.0	44.2	43.4	0.06	0.06	0.04	±0.20
61.8	59.5	58.4	62.2	59.9	58.9	0.06	0.06	0.07	±0.20
85.0	81.9	80.5	84.6	81.5	80.1	−0.04	−0.04	−0.04	±0.20
111	107	105	111	107	105	0.00	0.00	0.00	±0.20
152	147	145	152	147	144	0.00	0.00	−0.06	±0.20
211	204	201	210	204	200	−0.04	0.00	−0.04	±0.20
292	284	279	293	278	280	0.03	−0.19	0.03	±0.20
432	420	413	424	414	406	−0.16	−0.12	−0.15	±0.20
596	581	571	589	576	564	−0.10	−0.08	−0.11	±0.20
890	869	855	890	871	854	0.00	0.02	−0.01	±0.20
1350	1320	1300	1370	1340	1310	0.13	0.13	0.07	±0.30
1840	1800	1780	1880	1850	1810	0.19	0.24	0.15	±0.30
3020	2960	2920	3120	3070	3010	0.28	0.32	0.26	±0.50
3640	3590	3540	3780	3730	3670	0.33	0.33	0.31	±0.50

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

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

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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	
0.410	0.370	0.360	0.430	0.380	0.380	0.41	0.23	0.47	±1.00
0.550	0.510	0.490	0.540	0.520	0.510	−0.16	0.17	0.35	±1.00
0.750	0.700	0.670	0.730	0.720	0.700	−0.23	0.24	0.38	±1.00
0.980	0.910	0.880	0.960	0.930	0.890	−0.18	0.19	0.10	±1.00
1.32	1.23	1.19	1.32	1.23	1.18	0.00	0.00	−0.07	±1.00
1.80	1.69	1.63	1.81	1.67	1.63	0.05	−0.10	0.00	±1.00
2.39	2.25	2.17	2.39	2.23	2.18	0.00	−0.08	0.04	±0.20
3.19	3.01	2.91	3.18	3.01	2.90	−0.03	0.00	−0.03	±0.20
4.32	4.08	3.95	4.31	4.07	3.94	−0.02	−0.02	−0.02	±0.20
5.82	5.52	5.33	5.83	5.52	5.34	0.01	0.00	0.02	±0.20
7.82	7.43	7.18	7.82	7.42	7.18	0.00	−0.01	0.00	±0.20
10.4	9.91	9.59	10.4	9.88	9.59	0.00	−0.03	0.00	±0.20
14.0	13.4	12.9	14.1	13.4	12.9	0.06	0.00	0.00	±0.20
18.9	18.0	17.5	18.9	18.1	17.5	0.00	0.05	0.00	±0.20
25.4	24.4	23.6	25.6	24.4	23.6	0.07	0.00	0.00	±0.20
33.9	32.5	31.5	34.1	32.7	31.7	0.05	0.05	0.05	±0.20
45.7	43.9	42.5	46.0	44.1	42.8	0.06	0.04	0.06	±0.20
61.8	59.4	57.6	62.3	59.8	58.0	0.07	0.06	0.06	±0.20
85.0	81.8	79.3	84.6	81.5	78.9	−0.04	−0.03	−0.04	±0.20
111	107	104	111	106	103	0.00	−0.08	−0.08	±0.20
152	147	143	152	146	142	0.00	−0.06	−0.06	±0.20
211	204	198	210	203	197	−0.04	−0.04	−0.04	±0.20
292	283	275	293	278	275	0.03	−0.15	0.00	±0.20
432	419	407	424	414	400	−0.16	−0.10	−0.15	±0.20
596	580	562	589	575	556	−0.10	−0.08	−0.09	±0.20
890	868	842	890	870	842	0.00	0.02	0.00	±0.20
1350	1320	1280	1370	1340	1290	0.13	0.13	0.07	±0.30
1840	1800	1750	1880	1840	1790	0.19	0.19	0.20	±0.30
3020	2960	2870	3120	3050	2970	0.28	0.26	0.30	±0.50
3640	3590	3490	3780	3690	3620	0.33	0.24	0.32	±0.50

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

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

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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	
0.410	0.380	0.370	0.440	0.400	0.370	0.61	0.45	0.00	±1.00
0.560	0.510	0.510	0.570	0.540	0.500	0.15	0.50	−0.17	±1.00
0.760	0.710	0.690	0.760	0.730	0.690	0.00	0.24	0.00	±1.00
0.990	0.920	0.900	0.990	0.930	0.910	0.00	0.09	0.10	±1.00
1.33	1.24	1.22	1.33	1.26	1.22	0.00	0.14	0.00	±1.00
1.81	1.71	1.68	1.82	1.73	1.69	0.05	0.10	0.05	±1.00
2.41	2.28	2.24	2.41	2.29	2.25	0.00	0.04	0.04	±0.20
3.21	3.04	2.99	3.20	3.06	3.01	−0.03	0.06	0.06	±0.20
4.35	4.13	4.06	4.35	4.14	4.07	0.00	0.02	0.02	±0.20
5.86	5.58	5.49	5.88	5.60	5.51	0.03	0.03	0.03	±0.20
7.87	7.51	7.39	7.88	7.52	7.41	0.01	0.01	0.02	±0.20
10.5	10.0	9.87	10.5	10.0	9.90	0.00	0.00	0.03	±0.20
14.1	13.5	13.3	14.2	13.5	13.4	0.06	0.00	0.07	±0.20
19.0	18.2	18.0	19.1	18.3	18.0	0.05	0.05	0.00	±0.20
25.6	24.6	24.3	25.7	24.7	24.3	0.03	0.04	0.00	±0.20
34.1	32.9	32.4	34.3	33.1	32.6	0.05	0.05	0.05	±0.20
46.0	44.4	43.8	46.3	44.7	44.0	0.06	0.06	0.04	±0.20
62.2	60.1	59.3	62.6	60.5	59.8	0.06	0.06	0.07	±0.20
85.6	82.7	81.6	85.2	82.4	81.2	−0.04	−0.03	−0.04	±0.20
112	108	107	111	108	106	−0.08	0.00	−0.08	±0.20
153	149	147	153	148	146	0.00	−0.06	−0.06	±0.20
213	207	204	212	206	203	−0.04	−0.04	−0.04	±0.20
294	286	283	295	281	284	0.03	−0.15	0.03	±0.20
434	424	419	427	418	411	−0.14	−0.12	−0.17	±0.20
600	586	579	594	581	572	−0.09	−0.07	−0.11	±0.20
896	877	867	896	880	866	0.00	0.03	−0.01	±0.20
1360	1330	1320	1380	1350	1330	0.13	0.13	0.07	±0.30
1860	1820	1800	1900	1870	1840	0.18	0.24	0.19	±0.30
3040	2990	2960	3140	3100	3060	0.28	0.31	0.29	±0.50
3670	3630	3590	3810	3770	3730	0.33	0.33	0.33	±0.50

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

July 03, 2024

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	
0.410	0.380	0.380	0.430	0.390	0.400	0.41	0.23	0.45	±1.00
0.550	0.520	0.520	0.560	0.530	0.530	0.16	0.17	0.17	±1.00
0.750	0.710	0.710	0.750	0.730	0.730	0.00	0.24	0.24	±1.00
0.980	0.930	0.920	0.990	0.940	0.950	0.09	0.09	0.28	±1.00
1.32	1.26	1.25	1.34	1.25	1.27	0.13	−0.07	0.14	±1.00
1.80	1.73	1.72	1.83	1.72	1.74	0.14	−0.05	0.10	±1.00
2.39	2.30	2.29	2.43	2.31	2.31	0.14	0.04	0.08	±0.20
3.19	3.07	3.06	3.22	3.07	3.07	0.08	0.00	0.03	±0.20
4.32	4.17	4.16	4.34	4.19	4.16	0.04	0.04	0.00	±0.20
5.82	5.64	5.62	5.86	5.70	5.63	0.06	0.09	0.02	±0.20
7.81	7.60	7.56	7.84	7.68	7.58	0.03	0.09	0.02	±0.20
10.4	10.1	10.1	10.4	10.2	10.1	0.00	0.09	0.00	±0.20
14.0	13.7	13.6	14.0	13.8	13.7	0.00	0.06	0.06	±0.20
18.9	18.4	18.4	18.9	18.5	18.4	0.00	0.05	0.00	±0.20
25.4	24.9	24.8	25.4	24.9	24.9	0.00	0.00	0.03	±0.20
33.9	33.2	33.1	34.0	33.5	33.4	0.03	0.08	0.08	±0.20
45.7	44.9	44.8	45.9	45.1	45.0	0.04	0.04	0.04	±0.20
61.7	60.7	60.6	62.2	61.1	61.1	0.07	0.06	0.07	±0.20
84.9	83.7	83.5	84.5	83.3	83.2	−0.04	−0.04	−0.03	±0.20
111	109	109	110	109	109	−0.08	0.00	0.00	±0.20
152	151	150	152	150	150	0.00	−0.06	0.00	±0.20
211	209	209	210	208	208	−0.04	−0.04	−0.04	±0.20
292	290	289	293	284	290	0.03	−0.18	0.03	±0.20
431	429	428	424	423	421	−0.14	−0.12	−0.14	±0.20
595	593	592	588	588	585	−0.10	−0.07	−0.10	±0.20
889	887	887	889	890	887	0.00	0.03	0.00	±0.20
1350	1350	1350	1370	1370	1360	0.13	0.13	0.06	±0.30
1840	1840	1840	1880	1890	1880	0.19	0.23	0.19	±0.30
3010	3030	3030	3120	3140	3130	0.31	0.31	0.28	±0.50
3640	3670	3670	3780	3810	3810	0.33	0.33	0.33	±0.50

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

July 03, 2024

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	
0.420	0.380	0.370	0.430	0.400	0.380	0.20	0.45	0.23	±1.00
0.560	0.520	0.510	0.560	0.550	0.510	0.00	0.49	0.00	±1.00
0.770	0.710	0.700	0.760	0.750	0.710	−0.11	0.48	0.12	±1.00
1.00	0.930	0.910	1.02	0.940	0.920	0.17	0.09	0.09	±1.00
1.34	1.26	1.23	1.37	1.26	1.25	0.19	0.00	0.14	±1.00
1.84	1.73	1.69	1.86	1.75	1.71	0.09	0.10	0.10	±1.00
2.44	2.30	2.25	2.45	2.30	2.27	0.04	0.00	0.08	±0.20
3.25	3.07	3.01	3.27	3.09	3.03	0.05	0.06	0.06	±0.20
4.40	4.17	4.09	4.40	4.19	4.11	0.00	0.04	0.04	±0.20
5.93	5.64	5.53	5.95	5.67	5.57	0.03	0.05	0.06	±0.20
7.96	7.60	7.45	7.98	7.61	7.47	0.02	0.01	0.02	±0.20
10.6	10.1	9.94	10.6	10.2	9.97	0.00	0.09	0.03	±0.20
14.3	13.7	13.4	14.3	13.7	13.4	0.00	0.00	0.00	±0.20
19.2	18.4	18.1	19.3	18.4	18.1	0.05	0.00	0.00	±0.20
25.9	24.9	24.4	26.0	24.9	24.5	0.03	0.00	0.04	±0.20
34.5	33.2	32.6	34.7	33.5	32.9	0.05	0.08	0.08	±0.20
46.6	44.9	44.1	46.8	45.1	44.3	0.04	0.04	0.04	±0.20
63.0	60.8	59.7	63.4	61.2	60.1	0.05	0.06	0.06	±0.20
86.6	83.7	82.2	86.2	83.3	81.8	−0.04	−0.04	−0.04	±0.20
113	109	108	113	109	107	0.00	0.00	−0.08	±0.20
155	151	148	155	150	147	0.00	−0.06	−0.06	±0.20
215	209	205	214	208	204	−0.04	−0.04	−0.04	±0.20
298	290	285	299	285	286	0.03	−0.15	0.03	±0.20
440	429	421	432	423	414	−0.16	−0.12	−0.15	±0.20
607	593	583	600	589	576	−0.10	−0.06	−0.10	±0.20
907	887	873	907	891	873	0.00	0.04	0.00	±0.20
1370	1350	1330	1390	1370	1340	0.13	0.13	0.07	±0.30
1880	1840	1810	1920	1890	1850	0.18	0.23	0.19	±0.30
3070	3030	2980	3180	3140	3080	0.31	0.31	0.29	±0.50
3710	3670	3620	3850	3820	3750	0.32	0.35	0.31	±0.50

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

July 03, 2024

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	
0.410	0.380	0.360	0.440	0.410	0.360	0.61	0.66	0.00	±1.00
0.560	0.520	0.500	0.590	0.540	0.490	0.45	0.33	−0.18	±1.00
0.760	0.710	0.680	0.780	0.710	0.680	0.23	0.00	0.00	±1.00
0.990	0.920	0.890	0.980	0.940	0.890	−0.09	0.19	0.00	±1.00
1.34	1.25	1.20	1.33	1.25	1.20	−0.07	0.00	0.00	±1.00
1.83	1.71	1.64	1.83	1.73	1.65	0.00	0.10	0.05	±1.00
2.42	2.29	2.19	2.43	2.29	2.20	0.04	0.00	0.04	±0.20
3.23	3.05	2.93	3.24	3.07	2.94	0.03	0.06	0.03	±0.20
4.38	4.15	3.98	4.37	4.16	4.00	−0.02	0.02	0.04	±0.20
5.90	5.61	5.38	5.91	5.63	5.41	0.01	0.03	0.05	±0.20
7.92	7.55	7.25	7.94	7.59	7.27	0.02	0.05	0.02	±0.20
10.6	10.1	9.68	10.5	10.1	9.70	−0.08	0.00	0.02	±0.20
14.2	13.6	13.1	14.2	13.6	13.1	0.00	0.00	0.00	±0.20
19.1	18.3	17.6	19.1	18.4	17.6	0.00	0.05	0.00	±0.20
25.8	24.8	23.8	25.9	24.8	23.8	0.03	0.00	0.00	±0.20
34.4	33.0	31.8	34.5	33.2	32.0	0.03	0.05	0.05	±0.20
46.3	44.6	42.9	46.6	44.9	43.2	0.06	0.06	0.06	±0.20
62.6	60.4	58.1	63.1	60.8	58.6	0.07	0.06	0.07	±0.20
86.2	83.2	80.0	85.8	82.8	79.6	−0.04	−0.04	−0.04	±0.20
113	109	105	112	108	104	−0.08	−0.08	−0.08	±0.20
155	150	144	154	149	143	−0.06	−0.06	−0.06	±0.20
214	208	200	213	207	199	−0.04	−0.04	−0.04	±0.20
296	288	277	297	283	278	0.03	−0.15	0.03	±0.20
437	426	410	430	420	403	−0.14	−0.12	−0.15	±0.20
604	589	567	597	585	560	−0.10	−0.06	−0.11	±0.20
902	882	850	902	885	848	0.00	0.03	−0.02	±0.20
1370	1340	1290	1390	1360	1310	0.13	0.13	0.13	±0.30
1870	1830	1770	1910	1880	1800	0.18	0.23	0.15	±0.30
3060	3010	2900	3160	3120	3000	0.28	0.31	0.29	±0.50
3690	3650	3520	3840	3800	3650	0.35	0.35	0.32	±0.50

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

July 03, 2024

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	0.200	0.090	0.350	0.200	0.080	0.00	0.00	−1.02	±5.00	±5.00	±5.00
0.480	0.280	0.130	0.490	0.290	0.130	0.18	0.30	0.00	±5.00	±5.00	±5.00
0.660	0.380	0.170	0.680	0.400	0.190	0.26	0.45	0.97	±5.00	±5.00	±5.00
0.860	0.490	0.220	0.870	0.500	0.220	0.10	0.18	0.00	±5.00	±5.00	±5.00
1.16	0.670	0.300	1.18	0.670	0.290	0.15	0.00	−0.29	±5.00	±5.00	±5.00
1.60	0.920	0.410	1.60	0.920	0.390	0.00	0.00	−0.43	±5.00	±5.00	±5.00
2.13	1.22	0.540	2.14	1.23	0.540	0.04	0.07	0.00	±1.00	±5.00	±5.00
2.85	1.63	0.720	2.87	1.64	0.710	0.06	0.05	−0.12	±1.00	±5.00	±5.00
3.86	2.21	0.980	3.89	2.20	0.960	0.07	−0.04	−0.18	±1.00	±1.00	±5.00
5.22	2.99	1.32	5.28	2.99	1.32	0.10	0.00	0.00	±1.00	±1.00	±5.00
7.03	4.03	1.77	7.09	4.02	1.74	0.07	−0.02	−0.15	±1.00	±1.00	±5.00
9.38	5.37	2.37	9.47	5.37	2.33	0.08	0.00	−0.15	±1.00	±1.00	±1.00
12.7	7.26	3.19	12.8	7.24	3.12	0.07	−0.02	−0.19	±1.00	±1.00	±1.00
17.1	9.79	4.29	17.2	9.80	4.20	0.05	0.01	−0.18	±1.00	±1.00	±1.00
23.1	13.2	5.78	23.2	13.2	5.68	0.04	0.00	−0.15	±1.00	±1.00	±1.00
30.8	17.6	7.70	31.1	17.7	7.58	0.08	0.05	−0.14	±1.00	±1.00	±1.00
41.5	23.8	10.4	42.0	23.9	10.2	0.10	0.04	−0.17	±1.00	±1.00	±1.00
56.2	32.2	14.0	56.9	32.4	13.9	0.11	0.05	−0.06	±1.00	±1.00	±1.00
77.5	44.4	19.3	77.6	44.2	18.9	0.01	−0.04	−0.18	±1.00	±1.00	±1.00
101	58.1	25.2	101	57.7	24.8	0.00	−0.06	−0.14	±1.00	±1.00	±1.00
139	79.8	34.6	139	79.3	34.0	0.00	−0.05	−0.15	±1.00	±1.00	±1.00
193	111	48.0	194	110	47.1	0.04	−0.08	−0.16	±1.00	±1.00	±1.00
268	154	66.3	270	154	65.7	0.06	0.00	−0.08	±1.00	±1.00	±1.00
397	228	98.0	381	216	97.4	−0.36	−0.47	−0.05	±1.00	±1.00	±1.00
549	315	135	531	300	135	−0.29	−0.42	0.00	±1.00	±1.00	±1.00
821	471	202	804	455	204	−0.18	−0.30	0.09	±1.00	±1.00	±1.00
1250	716	306	1240	700	314	−0.07	−0.20	0.22	±1.00	±1.00	±1.00
1710	978	418	1710	966	433	0.00	−0.11	0.31	±1.00	±1.00	±1.00
2800	1610	685	2840	1600	683	0.12	−0.05	−0.03	±1.00	±1.00	±1.00
3400	1950	827	3450	1950	829	0.13	0.00	0.02	±1.00	±1.00	±1.00

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

July 03, 2024

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	1.55	0.06	0.06	0.06	±0.3
3200	1.54	1.54	1.54	1.58	1.56	1.54	0.22	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	1.54	1.54	1.52	0.11	0.11	0.00	±0.3
6600	1.51	1.51	1.51	1.53	1.52	1.52	0.11	0.06	0.06	±0.3
8200	1.50	1.50	1.50	1.51	1.51	1.50	0.06	0.06	0.00	±0.3
9000	1.50	1.50	1.49	1.51	1.50	1.50	0.06	0.00	0.06	±0.3
10600	4.36	4.32	4.31	4.37	4.34	4.32	0.02	0.04	0.02	±0.3
13400	4.38	4.33	4.32	4.41	4.37	4.32	0.06	0.08	0.00	±0.3
17000	4.37	4.33	4.32	4.40	4.35	4.33	0.06	0.04	0.02	±0.3
21400	4.39	4.35	4.34	4.40	4.36	4.36	0.02	0.02	0.04	±0.3
27200	4.39	4.34	4.33	4.41	4.37	4.35	0.04	0.06	0.04	±0.3
34400	4.39	4.35	4.34	4.42	4.38	4.35	0.06	0.06	0.02	±0.3
40000	4.38	4.35	4.34	4.41	4.37	4.35	0.06	0.04	0.02	±0.3
43600	4.38	4.34	4.33	4.40	4.36	4.34	0.04	0.04	0.02	±0.3
55400	4.36	4.33	4.32	4.38	4.35	4.33	0.04	0.04	0.02	±0.3
70000	4.35	4.32	4.31	4.37	4.34	4.32	0.04	0.04	0.02	±0.3
88800	4.33	4.31	4.30	4.36	4.32	4.31	0.06	0.02	0.02	±0.3
112400	4.32	4.30	4.29	4.34	4.31	4.29	0.04	0.02	0.00	±0.3
142400	4.30	4.28	4.27	4.32	4.29	4.28	0.04	0.02	0.02	±0.3
161750	4.28	4.26	4.25	4.30	4.28	4.26	0.04	0.04	0.02	±0.3
180400	4.27	4.25	4.24	4.30	4.27	4.25	0.06	0.04	0.02	±0.3
228400	4.25	4.21	4.21	4.27	4.23	4.22	0.04	0.04	0.02	±0.3
289400	4.20	4.18	4.17	4.22	4.20	4.18	0.04	0.04	0.02	±0.3
366400	4.17	4.15	4.14	4.18	4.16	4.14	0.02	0.02	0.00	±0.3
400000	4.15	4.13	4.12	4.17	4.14	4.13	0.04	0.02	0.02	±0.3
464000	4.12	4.10	4.09	4.14	4.11	4.10	0.04	0.02	0.02	±0.3
587800	4.07	4.05	4.05	4.09	4.07	4.05	0.04	0.04	0.00	±0.3
744200	4.02	4.01	4.00	4.04	4.01	4.01	0.04	0.00	0.02	±0.3
942600	4.01	4.00	3.99	4.03	4.01	3.99	0.04	0.02	0.00	±0.3
1193600	3.98	3.97	3.96	4.01	3.96	3.97	0.07	−0.02	0.02	±0.3
1511600	3.98	3.96	3.96	4.00	3.98	3.96	0.04	0.04	0.00	±0.3
1914400	3.96	3.95	3.94	3.98	4.00	3.95	0.04	0.11	0.02	±0.3
2424400	3.96	3.94	3.93	3.96	3.91	3.93	0.00	−0.07	0.00	±0.3
3070200	3.93	3.91	3.90	3.94	3.99	3.90	0.02	0.18	0.00	±0.3
3888000	3.87	3.85	3.84	3.89	3.84	3.85	0.04	−0.02	0.02	±0.3
4000000	3.87	3.85	3.84	3.88	3.73	3.84	0.02	−0.28	0.00	±0.3
4923800	3.80	3.78	3.77	3.81	3.77	3.78	0.02	−0.02	0.02	±0.3
6235400	3.69	3.68	3.67	3.71	3.63	3.67	0.05	−0.12	0.00	±0.3
7896400	3.55	3.53	3.53	3.57	3.54	3.55	0.05	0.02	0.05	±0.3
10000000	3.41	3.39	3.39	3.34	3.37	3.43	−0.18	−0.05	0.10	±0.3

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

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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	1.54	0.06	0.06	0.00	±0.3
3200	1.54	1.54	1.54	1.58	1.57	1.53	0.22	0.17	−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	1.54	1.54	1.51	0.11	0.11	−0.06	±0.3
6600	1.51	1.51	1.51	1.53	1.52	1.51	0.11	0.06	0.00	±0.3
8200	1.50	1.50	1.50	1.51	1.50	1.50	0.06	0.00	0.00	±0.3
9000	1.50	1.50	1.49	1.51	1.50	1.49	0.06	0.00	0.00	±0.3
10600	4.36	4.32	4.31	4.43	4.32	4.32	0.14	0.00	0.02	±0.3
13400	4.38	4.33	4.32	4.40	4.35	4.31	0.04	0.04	−0.02	±0.3
17000	4.37	4.33	4.32	4.41	4.36	4.32	0.08	0.06	0.00	±0.3
21400	4.39	4.35	4.34	4.43	4.37	4.33	0.08	0.04	−0.02	±0.3
27200	4.39	4.34	4.33	4.44	4.37	4.33	0.10	0.06	0.00	±0.3
34400	4.39	4.35	4.34	4.43	4.37	4.34	0.08	0.04	0.00	±0.3
40000	4.38	4.35	4.34	4.41	4.37	4.34	0.06	0.04	0.00	±0.3
43600	4.38	4.34	4.33	4.42	4.36	4.34	0.08	0.04	0.02	±0.3
55400	4.36	4.33	4.32	4.39	4.35	4.33	0.06	0.04	0.02	±0.3
70000	4.35	4.32	4.31	4.38	4.34	4.31	0.06	0.04	0.00	±0.3
88800	4.33	4.31	4.30	4.36	4.33	4.30	0.06	0.04	0.00	±0.3
112400	4.32	4.30	4.29	4.34	4.32	4.29	0.04	0.04	0.00	±0.3
142400	4.30	4.28	4.27	4.33	4.30	4.27	0.06	0.04	0.00	±0.3
161750	4.28	4.26	4.25	4.31	4.28	4.25	0.06	0.04	0.00	±0.3
180400	4.27	4.25	4.24	4.30	4.27	4.25	0.06	0.04	0.02	±0.3
228400	4.25	4.21	4.21	4.27	4.24	4.21	0.04	0.06	0.00	±0.3
289400	4.20	4.18	4.17	4.23	4.20	4.18	0.06	0.04	0.02	±0.3
366400	4.17	4.15	4.14	4.19	4.17	4.14	0.04	0.04	0.00	±0.3
400000	4.15	4.13	4.12	4.17	4.15	4.12	0.04	0.04	0.00	±0.3
464000	4.12	4.10	4.09	4.14	4.12	4.09	0.04	0.04	0.00	±0.3
587800	4.07	4.05	4.05	4.10	4.08	4.05	0.06	0.06	0.00	±0.3
744200	4.02	4.01	4.00	4.05	4.03	4.01	0.06	0.04	0.02	±0.3
942600	4.01	4.00	3.99	4.03	4.02	4.00	0.04	0.04	0.02	±0.3
1193600	3.98	3.97	3.96	4.01	4.00	3.97	0.07	0.07	0.02	±0.3
1511600	3.98	3.96	3.96	4.00	3.98	3.97	0.04	0.04	0.02	±0.3
1914400	3.96	3.95	3.94	3.98	3.97	3.95	0.04	0.04	0.02	±0.3
2424400	3.96	3.94	3.93	3.98	3.96	3.95	0.04	0.04	0.04	±0.3
3070200	3.93	3.91	3.90	3.94	3.94	3.91	0.02	0.07	0.02	±0.3
3888000	3.87	3.85	3.84	3.89	3.88	3.86	0.04	0.07	0.05	±0.3
4000000	3.87	3.85	3.84	3.89	3.87	3.86	0.04	0.05	0.05	±0.3
4923800	3.80	3.78	3.77	3.82	3.80	3.77	0.05	0.05	0.00	±0.3
6235400	3.69	3.68	3.67	3.71	3.69	3.72	0.05	0.02	0.12	±0.3
7896400	3.55	3.53	3.53	3.56	3.55	3.53	0.02	0.05	0.00	±0.3
10000000	3.41	3.39	3.39	3.43	3.47	3.40	0.05	0.20	0.03	±0.3

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

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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	1.55	1.55	1.55	0.06	0.06	0.06	±0.3
3200	1.54	1.54	1.54	1.56	1.56	1.54	0.11	0.11	0.00	±0.3
4000	1.53	1.53	1.53	1.54	1.54	1.54	0.06	0.06	0.06	±0.3
5200	1.52	1.52	1.52	1.54	1.55	1.53	0.11	0.17	0.06	±0.3
6600	1.51	1.51	1.51	1.51	1.53	1.52	0.00	0.11	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	1.49	1.51	1.50	1.50	0.06	0.00	0.06	±0.3
10600	4.36	4.32	4.31	4.38	4.34	4.30	0.04	0.04	−0.02	±0.3
13400	4.38	4.33	4.32	4.40	4.36	4.33	0.04	0.06	0.02	±0.3
17000	4.37	4.33	4.32	4.40	4.35	4.32	0.06	0.04	0.00	±0.3
21400	4.39	4.35	4.34	4.42	4.37	4.34	0.06	0.04	0.00	±0.3
27200	4.39	4.34	4.33	4.41	4.38	4.35	0.04	0.08	0.04	±0.3
34400	4.39	4.35	4.34	4.41	4.37	4.35	0.04	0.04	0.02	±0.3
40000	4.38	4.35	4.34	4.40	4.37	4.34	0.04	0.04	0.00	±0.3
43600	4.38	4.34	4.33	4.39	4.37	4.33	0.02	0.06	0.00	±0.3
55400	4.36	4.33	4.32	4.38	4.35	4.32	0.04	0.04	0.00	±0.3
70000	4.35	4.32	4.31	4.36	4.34	4.32	0.02	0.04	0.02	±0.3
88800	4.33	4.31	4.30	4.35	4.33	4.30	0.04	0.04	0.00	±0.3
112400	4.32	4.30	4.29	4.34	4.31	4.29	0.04	0.02	0.00	±0.3
142400	4.30	4.28	4.27	4.32	4.30	4.27	0.04	0.04	0.00	±0.3
161750	4.28	4.26	4.25	4.30	4.27	4.25	0.04	0.02	0.00	±0.3
180400	4.27	4.25	4.24	4.29	4.26	4.24	0.04	0.02	0.00	±0.3
228400	4.25	4.21	4.21	4.26	4.23	4.21	0.02	0.04	0.00	±0.3
289400	4.20	4.18	4.17	4.22	4.19	4.17	0.04	0.02	0.00	±0.3
366400	4.17	4.15	4.14	4.18	4.16	4.14	0.02	0.02	0.00	±0.3
400000	4.15	4.13	4.12	4.16	4.14	4.12	0.02	0.02	0.00	±0.3
464000	4.12	4.10	4.09	4.14	4.11	4.09	0.04	0.02	0.00	±0.3
587800	4.07	4.05	4.05	4.09	4.07	4.05	0.04	0.04	0.00	±0.3
744200	4.02	4.01	4.00	4.04	4.02	4.01	0.04	0.02	0.02	±0.3
942600	4.01	4.00	3.99	4.03	4.02	3.99	0.04	0.04	0.00	±0.3
1193600	3.98	3.97	3.96	4.01	3.99	3.97	0.07	0.04	0.02	±0.3
1511600	3.98	3.96	3.96	4.00	3.98	3.96	0.04	0.04	0.00	±0.3
1914400	3.96	3.95	3.94	3.98	3.98	3.95	0.04	0.07	0.02	±0.3
2424400	3.96	3.94	3.93	3.98	3.96	3.94	0.04	0.04	0.02	±0.3
3070200	3.93	3.91	3.90	3.94	3.93	3.91	0.02	0.04	0.02	±0.3
3888000	3.87	3.85	3.84	3.89	3.88	3.86	0.04	0.07	0.05	±0.3
4000000	3.87	3.85	3.84	3.88	3.87	3.85	0.02	0.05	0.02	±0.3
4923800	3.80	3.78	3.77	3.82	3.81	3.77	0.05	0.07	0.00	±0.3
6235400	3.69	3.68	3.67	3.71	3.68	3.70	0.05	0.00	0.07	±0.3
7896400	3.55	3.53	3.53	3.57	3.54	3.53	0.05	0.02	0.00	±0.3
10000000	3.41	3.39	3.39	3.44	3.40	3.40	0.08	0.03	0.03	±0.3

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

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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	1.56	1.55	1.55	0.11	0.06	0.06	±0.3
3200	1.54	1.54	1.54	1.57	1.57	1.53	0.17	0.17	−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	1.55	1.52	0.06	0.17	0.00	±0.3
6600	1.51	1.51	1.51	1.52	1.52	1.51	0.06	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	1.50	1.50	1.49	1.50	1.50	1.49	0.00	0.00	0.00	±0.3
10600	4.36	4.32	4.31	4.38	4.32	4.32	0.04	0.00	0.02	±0.3
13400	4.38	4.33	4.32	4.39	4.37	4.31	0.02	0.08	−0.02	±0.3
17000	4.37	4.33	4.32	4.39	4.35	4.32	0.04	0.04	0.00	±0.3
21400	4.39	4.35	4.34	4.43	4.38	4.33	0.08	0.06	−0.02	±0.3
27200	4.39	4.34	4.33	4.41	4.37	4.33	0.04	0.06	0.00	±0.3
34400	4.39	4.35	4.34	4.41	4.38	4.35	0.04	0.06	0.02	±0.3
40000	4.38	4.35	4.34	4.41	4.38	4.34	0.06	0.06	0.00	±0.3
43600	4.38	4.34	4.33	4.40	4.36	4.34	0.04	0.04	0.02	±0.3
55400	4.36	4.33	4.32	4.39	4.36	4.32	0.06	0.06	0.00	±0.3
70000	4.35	4.32	4.31	4.37	4.34	4.31	0.04	0.04	0.00	±0.3
88800	4.33	4.31	4.30	4.37	4.33	4.30	0.08	0.04	0.00	±0.3
112400	4.32	4.30	4.29	4.35	4.32	4.29	0.06	0.04	0.00	±0.3
142400	4.30	4.28	4.27	4.33	4.30	4.27	0.06	0.04	0.00	±0.3
161750	4.28	4.26	4.25	4.31	4.28	4.26	0.06	0.04	0.02	±0.3
180400	4.27	4.25	4.24	4.30	4.27	4.24	0.06	0.04	0.00	±0.3
228400	4.25	4.21	4.21	4.27	4.24	4.21	0.04	0.06	0.00	±0.3
289400	4.20	4.18	4.17	4.23	4.20	4.17	0.06	0.04	0.02	±0.3
366400	4.17	4.15	4.14	4.20	4.16	4.15	0.06	0.02	0.02	±0.3
400000	4.15	4.13	4.12	4.17	4.15	4.13	0.04	0.04	0.02	±0.3
464000	4.12	4.10	4.09	4.14	4.12	4.09	0.04	0.04	0.00	±0.3
587800	4.07	4.05	4.05	4.10	4.07	4.05	0.06	0.04	0.00	±0.3
744200	4.02	4.01	4.00	4.05	4.02	4.01	0.06	0.02	0.02	±0.3
942600	4.01	4.00	3.99	4.04	4.01	4.00	0.06	0.02	0.02	±0.3
1193600	3.98	3.97	3.96	4.02	3.99	3.97	0.09	0.04	0.02	±0.3
1511600	3.98	3.96	3.96	4.01	3.98	3.97	0.07	0.04	0.02	±0.3
1914400	3.96	3.95	3.94	3.99	3.97	3.95	0.07	0.04	0.02	±0.3
2424400	3.96	3.94	3.93	3.98	3.95	3.94	0.04	0.02	0.02	±0.3
3070200	3.93	3.91	3.90	3.95	3.92	3.91	0.04	0.02	0.02	±0.3
3888000	3.87	3.85	3.84	3.90	3.86	3.87	0.07	0.02	0.07	±0.3
4000000	3.87	3.85	3.84	3.89	3.85	3.87	0.04	0.00	0.07	±0.3
4923800	3.80	3.78	3.77	3.82	3.78	3.79	0.05	0.00	0.05	±0.3
6235400	3.69	3.68	3.67	3.71	3.69	3.70	0.05	0.02	0.07	±0.3
7896400	3.55	3.53	3.53	3.56	3.54	3.53	0.02	0.02	0.00	±0.3
10000000	3.41	3.39	3.39	3.44	3.36	3.44	0.08	−0.08	0.13	±0.3

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

July 03, 2024

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	1.55	1.55	1.55	0.06	0.06	0.06	±0.3
3200	1.54	1.54	1.54	1.57	1.56	1.53	0.17	0.11	−0.06	±0.3
4000	1.53	1.53	1.53	1.55	1.54	1.53	0.11	0.06	0.00	±0.3
5200	1.52	1.52	1.52	1.53	1.54	1.53	0.06	0.11	0.06	±0.3
6600	1.51	1.51	1.51	1.52	1.52	1.52	0.06	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	1.50	1.50	1.49	1.49	1.50	1.49	−0.06	0.00	0.00	±0.3
10600	4.36	4.32	4.31	4.42	4.35	4.31	0.12	0.06	0.00	±0.3
13400	4.38	4.33	4.32	4.39	4.36	4.32	0.02	0.06	0.00	±0.3
17000	4.37	4.33	4.32	4.39	4.35	4.33	0.04	0.04	0.02	±0.3
21400	4.39	4.35	4.34	4.42	4.37	4.34	0.06	0.04	0.00	±0.3
27200	4.39	4.34	4.33	4.43	4.36	4.34	0.08	0.04	0.02	±0.3
34400	4.39	4.35	4.34	4.41	4.38	4.34	0.04	0.06	0.00	±0.3
40000	4.38	4.35	4.34	4.41	4.37	4.34	0.06	0.04	0.00	±0.3
43600	4.38	4.34	4.33	4.39	4.36	4.33	0.02	0.04	0.00	±0.3
55400	4.36	4.33	4.32	4.39	4.35	4.32	0.06	0.04	0.00	±0.3
70000	4.35	4.32	4.31	4.37	4.34	4.31	0.04	0.04	0.00	±0.3
88800	4.33	4.31	4.30	4.36	4.32	4.29	0.06	0.02	−0.02	±0.3
112400	4.32	4.30	4.29	4.35	4.32	4.29	0.06	0.04	0.00	±0.3
142400	4.30	4.28	4.27	4.33	4.29	4.27	0.06	0.02	0.00	±0.3
161750	4.28	4.26	4.25	4.31	4.28	4.25	0.06	0.04	0.00	±0.3
180400	4.27	4.25	4.24	4.29	4.27	4.24	0.04	0.04	0.00	±0.3
228400	4.25	4.21	4.21	4.27	4.23	4.21	0.04	0.04	0.00	±0.3
289400	4.20	4.18	4.17	4.23	4.20	4.17	0.06	0.04	0.00	±0.3
366400	4.17	4.15	4.14	4.18	4.16	4.14	0.02	0.02	0.00	±0.3
400000	4.15	4.13	4.12	4.17	4.14	4.12	0.04	0.02	0.00	±0.3
464000	4.12	4.10	4.09	4.15	4.12	4.09	0.06	0.04	0.00	±0.3
587800	4.07	4.05	4.05	4.10	4.07	4.05	0.06	0.04	0.00	±0.3
744200	4.02	4.01	4.00	4.06	4.02	4.00	0.09	0.02	0.00	±0.3
942600	4.01	4.00	3.99	4.04	4.02	4.00	0.06	0.04	0.02	±0.3
1193600	3.98	3.97	3.96	4.01	3.99	3.97	0.07	0.04	0.02	±0.3
1511600	3.98	3.96	3.96	4.00	3.98	3.97	0.04	0.04	0.02	±0.3
1914400	3.96	3.95	3.94	3.98	3.97	3.95	0.04	0.04	0.02	±0.3
2424400	3.96	3.94	3.93	3.98	3.96	3.94	0.04	0.04	0.02	±0.3
3070200	3.93	3.91	3.90	3.94	3.93	3.91	0.02	0.04	0.02	±0.3
3888000	3.87	3.85	3.84	3.89	3.88	3.86	0.04	0.07	0.05	±0.3
4000000	3.87	3.85	3.84	3.89	3.86	3.85	0.04	0.02	0.02	±0.3
4923800	3.80	3.78	3.77	3.82	3.80	3.77	0.05	0.05	0.00	±0.3
6235400	3.69	3.68	3.67	3.70	3.68	3.69	0.02	0.00	0.05	±0.3
7896400	3.55	3.53	3.53	3.57	3.55	3.51	0.05	0.05	−0.05	±0.3
10000000	3.41	3.39	3.39	3.47	3.39	3.41	0.15	0.00	0.05	±0.3

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

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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	1.56	1.55	1.53	0.11	0.06	−0.06	±0.3
3200	1.54	1.54	1.54	1.57	1.56	1.52	0.17	0.11	−0.11	±0.3
4000	1.53	1.53	1.53	1.54	1.53	1.52	0.06	0.00	−0.06	±0.3
5200	1.52	1.52	1.52	1.54	1.54	1.52	0.11	0.11	0.00	±0.3
6600	1.51	1.51	1.51	1.52	1.52	1.51	0.06	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	1.50	1.50	1.49	1.50	1.51	1.49	0.00	0.06	0.00	±0.3
10600	4.36	4.32	4.31	4.38	4.34	4.33	0.04	0.04	0.04	±0.3
13400	4.38	4.33	4.32	4.40	4.35	4.33	0.04	0.04	0.02	±0.3
17000	4.37	4.33	4.32	4.39	4.34	4.33	0.04	0.02	0.02	±0.3
21400	4.39	4.35	4.34	4.42	4.38	4.34	0.06	0.06	0.00	±0.3
27200	4.39	4.34	4.33	4.40	4.37	4.34	0.02	0.06	0.02	±0.3
34400	4.39	4.35	4.34	4.41	4.38	4.35	0.04	0.06	0.02	±0.3
40000	4.38	4.35	4.34	4.40	4.37	4.34	0.04	0.04	0.00	±0.3
43600	4.38	4.34	4.33	4.39	4.36	4.35	0.02	0.04	0.04	±0.3
55400	4.36	4.33	4.32	4.39	4.35	4.33	0.06	0.04	0.02	±0.3
70000	4.35	4.32	4.31	4.36	4.34	4.32	0.02	0.04	0.02	±0.3
88800	4.33	4.31	4.30	4.36	4.32	4.30	0.06	0.02	0.00	±0.3
112400	4.32	4.30	4.29	4.34	4.31	4.29	0.04	0.02	0.00	±0.3
142400	4.30	4.28	4.27	4.32	4.30	4.27	0.04	0.04	0.00	±0.3
161750	4.28	4.26	4.25	4.30	4.28	4.25	0.04	0.04	0.02	±0.3
180400	4.27	4.25	4.24	4.29	4.26	4.25	0.04	0.02	0.02	±0.3
228400	4.25	4.21	4.21	4.26	4.24	4.21	0.02	0.06	0.00	±0.3
289400	4.20	4.18	4.17	4.22	4.20	4.18	0.04	0.04	0.02	±0.3
366400	4.17	4.15	4.14	4.18	4.16	4.14	0.02	0.02	0.00	±0.3
400000	4.15	4.13	4.12	4.17	4.14	4.13	0.04	0.02	0.02	±0.3
464000	4.12	4.10	4.09	4.14	4.11	4.09	0.04	0.02	0.00	±0.3
587800	4.07	4.05	4.05	4.09	4.08	4.05	0.04	0.06	0.00	±0.3
744200	4.02	4.01	4.00	4.04	4.03	4.01	0.04	0.04	0.02	±0.3
942600	4.01	4.00	3.99	4.03	4.02	4.00	0.04	0.04	0.02	±0.3
1193600	3.98	3.97	3.96	4.00	4.00	3.97	0.04	0.07	0.02	±0.3
1511600	3.98	3.96	3.96	4.00	3.99	3.96	0.04	0.07	0.00	±0.3
1914400	3.96	3.95	3.94	3.98	3.98	3.95	0.04	0.07	0.02	±0.3
2424400	3.96	3.94	3.93	3.98	3.96	3.94	0.04	0.04	0.02	±0.3
3070200	3.93	3.91	3.90	3.94	3.93	3.91	0.02	0.04	0.02	±0.3
3888000	3.87	3.85	3.84	3.89	3.88	3.86	0.04	0.07	0.05	±0.3
4000000	3.87	3.85	3.84	3.88	3.87	3.85	0.02	0.05	0.02	±0.3
4923800	3.80	3.78	3.77	3.81	3.81	3.78	0.02	0.07	0.02	±0.3
6235400	3.69	3.68	3.67	3.71	3.69	3.72	0.05	0.02	0.12	±0.3
7896400	3.55	3.53	3.53	3.57	3.54	3.53	0.05	0.02	0.00	±0.3
10000000	3.41	3.39	3.39	3.40	3.37	3.46	−0.03	−0.05	0.18	±0.3

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

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

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MAGPy-8H3D+E3DV2 SN:3054
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July 03, 2024

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	1.56	1.55	1.55	0.11	0.06	0.06	±0.3
3200	1.54	1.54	1.54	1.57	1.57	1.54	0.17	0.17	0.00	±0.3
4000	1.53	1.53	1.53	1.53	1.54	1.54	0.00	0.06	0.06	±0.3
5200	1.52	1.52	1.52	1.54	1.54	1.53	0.11	0.11	0.06	±0.3
6600	1.51	1.51	1.51	1.51	1.53	1.52	0.00	0.11	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	1.49	1.50	1.50	1.50	0.00	0.00	0.06	±0.3
10600	4.36	4.32	4.31	4.36	4.32	4.34	0.00	0.00	0.06	±0.3
13400	4.38	4.33	4.32	4.41	4.38	4.34	0.06	0.10	0.04	±0.3
17000	4.37	4.33	4.32	4.41	4.35	4.32	0.08	0.04	0.00	±0.3
21400	4.39	4.35	4.34	4.41	4.38	4.34	0.04	0.06	0.00	±0.3
27200	4.39	4.34	4.33	4.42	4.38	4.34	0.06	0.08	0.02	±0.3
34400	4.39	4.35	4.34	4.41	4.38	4.35	0.04	0.06	0.02	±0.3
40000	4.38	4.35	4.34	4.39	4.37	4.34	0.02	0.04	0.00	±0.3
43600	4.38	4.34	4.33	4.40	4.36	4.34	0.04	0.04	0.02	±0.3
55400	4.36	4.33	4.32	4.39	4.35	4.33	0.06	0.04	0.02	±0.3
70000	4.35	4.32	4.31	4.37	4.35	4.33	0.04	0.06	0.04	±0.3
88800	4.33	4.31	4.30	4.36	4.33	4.31	0.06	0.04	0.02	±0.3
112400	4.32	4.30	4.29	4.35	4.32	4.30	0.06	0.04	0.02	±0.3
142400	4.30	4.28	4.27	4.33	4.30	4.28	0.06	0.04	0.02	±0.3
161750	4.28	4.26	4.25	4.32	4.28	4.26	0.08	0.04	0.02	±0.3
180400	4.27	4.25	4.24	4.30	4.27	4.25	0.06	0.04	0.02	±0.3
228400	4.25	4.21	4.21	4.27	4.24	4.22	0.04	0.06	0.02	±0.3
289400	4.20	4.18	4.17	4.23	4.20	4.17	0.06	0.04	0.00	±0.3
366400	4.17	4.15	4.14	4.19	4.16	4.14	0.04	0.02	0.00	±0.3
400000	4.15	4.13	4.12	4.16	4.14	4.12	0.02	0.02	0.00	±0.3
464000	4.12	4.10	4.09	4.14	4.12	4.10	0.04	0.04	0.02	±0.3
587800	4.07	4.05	4.05	4.10	4.07	4.06	0.06	0.04	0.02	±0.3
744200	4.02	4.01	4.00	4.05	4.02	4.01	0.06	0.02	0.02	±0.3
942600	4.01	4.00	3.99	4.03	4.01	3.99	0.04	0.02	0.00	±0.3
1193600	3.98	3.97	3.96	4.01	3.99	3.96	0.07	0.04	0.00	±0.3
1511600	3.98	3.96	3.96	4.01	3.98	3.96	0.07	0.04	0.00	±0.3
1914400	3.96	3.95	3.94	3.99	3.97	3.95	0.07	0.04	0.02	±0.3
2424400	3.96	3.94	3.93	3.98	3.95	3.94	0.04	0.02	0.02	±0.3
3070200	3.93	3.91	3.90	3.95	3.92	3.90	0.04	0.02	0.00	±0.3
3888000	3.87	3.85	3.84	3.89	3.87	3.85	0.04	0.05	0.02	±0.3
4000000	3.87	3.85	3.84	3.89	3.87	3.85	0.04	0.05	0.02	±0.3
4923800	3.80	3.78	3.77	3.82	3.79	3.77	0.05	0.02	0.00	±0.3
6235400	3.69	3.68	3.67	3.71	3.69	3.69	0.05	0.02	0.05	±0.3
7896400	3.55	3.53	3.53	3.58	3.54	3.53	0.07	0.02	0.00	±0.3
10000000	3.41	3.39	3.39	3.43	3.40	3.36	0.05	0.03	−0.08	±0.3

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

July 03, 2024

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	1.55	1.56	1.55	0.06	0.11	0.06	±0.3
3200	1.54	1.54	1.54	1.56	1.57	1.54	0.11	0.17	0.00	±0.3
4000	1.53	1.53	1.53	1.54	1.55	1.53	0.06	0.11	0.00	±0.3
5200	1.52	1.52	1.52	1.53	1.55	1.53	0.06	0.17	0.06	±0.3
6600	1.51	1.51	1.51	1.51	1.53	1.51	0.00	0.11	0.00	±0.3
8200	1.50	1.50	1.50	1.50	1.51	1.51	0.00	0.06	0.06	±0.3
9000	1.50	1.50	1.49	1.50	1.51	1.50	0.00	0.06	0.06	±0.3
10600	4.36	4.32	4.31	4.40	4.36	4.35	0.08	0.08	0.08	±0.3
13400	4.38	4.33	4.32	4.39	4.35	4.36	0.02	0.04	0.08	±0.3
17000	4.37	4.33	4.32	4.40	4.37	4.34	0.06	0.08	0.04	±0.3
21400	4.39	4.35	4.34	4.43	4.38	4.35	0.08	0.06	0.02	±0.3
27200	4.39	4.34	4.33	4.42	4.38	4.35	0.06	0.08	0.04	±0.3
34400	4.39	4.35	4.34	4.41	4.39	4.36	0.04	0.08	0.04	±0.3
40000	4.38	4.35	4.34	4.41	4.37	4.36	0.06	0.04	0.04	±0.3
43600	4.38	4.34	4.33	4.40	4.37	4.34	0.04	0.06	0.02	±0.3
55400	4.36	4.33	4.32	4.39	4.36	4.34	0.06	0.06	0.04	±0.3
70000	4.35	4.32	4.31	4.37	4.35	4.32	0.04	0.06	0.02	±0.3
88800	4.33	4.31	4.30	4.35	4.34	4.32	0.04	0.06	0.04	±0.3
112400	4.32	4.30	4.29	4.34	4.32	4.30	0.04	0.04	0.02	±0.3
142400	4.30	4.28	4.27	4.33	4.32	4.28	0.06	0.08	0.02	±0.3
161750	4.28	4.26	4.25	4.31	4.28	4.26	0.06	0.04	0.02	±0.3
180400	4.27	4.25	4.24	4.29	4.28	4.26	0.04	0.06	0.04	±0.3
228400	4.25	4.21	4.21	4.26	4.24	4.22	0.02	0.06	0.02	±0.3
289400	4.20	4.18	4.17	4.23	4.21	4.18	0.06	0.06	0.02	±0.3
366400	4.17	4.15	4.14	4.19	4.17	4.15	0.04	0.04	0.02	±0.3
400000	4.15	4.13	4.12	4.17	4.14	4.12	0.04	0.02	0.00	±0.3
464000	4.12	4.10	4.09	4.14	4.12	4.10	0.04	0.04	0.02	±0.3
587800	4.07	4.05	4.05	4.09	4.08	4.05	0.04	0.06	0.00	±0.3
744200	4.02	4.01	4.00	4.04	4.04	4.01	0.04	0.06	0.02	±0.3
942600	4.01	4.00	3.99	4.04	4.03	3.99	0.06	0.06	0.00	±0.3
1193600	3.98	3.97	3.96	4.02	3.99	3.96	0.09	0.04	0.00	±0.3
1511600	3.98	3.96	3.96	4.01	3.99	3.96	0.07	0.07	0.00	±0.3
1914400	3.96	3.95	3.94	3.98	3.98	3.95	0.04	0.07	0.02	±0.3
2424400	3.96	3.94	3.93	3.98	3.96	3.94	0.04	0.04	0.02	±0.3
3070200	3.93	3.91	3.90	3.95	3.94	3.90	0.04	0.07	0.00	±0.3
3888000	3.87	3.85	3.84	3.89	3.89	3.85	0.04	0.09	0.02	±0.3
4000000	3.87	3.85	3.84	3.90	3.87	3.83	0.07	0.05	−0.02	±0.3
4923800	3.80	3.78	3.77	3.83	3.80	3.76	0.07	0.05	−0.02	±0.3
6235400	3.69	3.68	3.67	3.72	3.69	3.67	0.07	0.02	0.00	±0.3
7896400	3.55	3.53	3.53	3.57	3.55	3.49	0.05	0.05	−0.10	±0.3
10000000	3.41	3.39	3.39	3.41	3.38	3.44	0.00	−0.03	0.13	±0.3

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

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

July 03, 2024

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	170	169	171	0.05	0.00	−0.05	±0.3
3200	167	167	162	169	166	163	0.10	−0.05	0.05	±0.3
4000	175	175	170	176	175	169	0.05	0.00	−0.05	±0.3
5200	165	165	163	165	165	162	0.00	0.00	−0.05	±0.3
6600	163	163	160	164	162	160	0.05	−0.05	0.00	±0.3
8200	162	162	159	163	161	158	0.05	−0.05	−0.05	±0.3
9000	163	163	164	165	163	163	0.11	0.00	−0.05	±0.3
10600	166	166	159	168	166	158	0.10	0.00	−0.05	±0.3
13400	163	163	162	165	164	162	0.11	0.05	0.00	±0.3
17000	161	161	163	163	161	162	0.11	0.00	−0.05	±0.3
21400	157	157	158	159	157	158	0.11	0.00	0.00	±0.3
27200	158	158	157	160	158	157	0.11	0.00	0.00	±0.3
34400	162	162	159	164	162	159	0.11	0.00	0.00	±0.3
40000	161	161	161	163	161	160	0.11	0.00	−0.05	±0.3
43600	162	162	160	164	162	160	0.11	0.00	0.00	±0.3
55400	161	161	159	163	161	158	0.11	0.00	−0.05	±0.3
70000	162	162	160	164	162	159	0.11	0.00	−0.05	±0.3
88800	161	161	160	163	162	160	0.11	0.05	0.00	±0.3
112400	161	161	160	163	161	160	0.11	0.00	0.00	±0.3
142400	162	162	160	164	162	160	0.11	0.00	0.00	±0.3
161750	163	163	162	165	163	161	0.11	0.00	−0.05	±0.3
180400	164	164	162	166	164	162	0.11	0.00	0.00	±0.3
228400	165	165	163	167	166	163	0.10	0.05	0.00	±0.3
289400	166	166	164	168	166	164	0.10	0.00	0.00	±0.3
366400	166	166	165	168	166	164	0.10	0.00	−0.05	±0.3
400000	167	167	165	169	167	165	0.10	0.00	0.00	±0.3
464000	168	168	166	170	169	166	0.10	0.05	0.00	±0.3
587800	169	169	167	171	169	167	0.10	0.00	0.00	±0.3
744200	169	169	167	172	170	167	0.15	0.05	0.00	±0.3
942600	170	170	168	172	170	168	0.10	0.00	0.00	±0.3
1193600	171	171	169	173	171	169	0.10	0.00	0.00	±0.3
1511600	170	170	169	173	171	168	0.15	0.05	−0.05	±0.3
1914400	170	170	168	172	170	168	0.10	0.00	0.00	±0.3
2424400	170	170	168	172	170	168	0.10	0.00	0.00	±0.3
3070200	171	171	169	172	171	169	0.05	0.00	0.00	±0.3
3888000	171	171	169	172	171	169	0.05	0.00	0.00	±0.3
4000000	171	171	169	172	171	169	0.05	0.00	0.00	±0.3
4923800	172	172	170	173	172	170	0.05	0.00	0.00	±0.3
6235400	174	174	172	175	174	172	0.05	0.00	0.00	±0.3
7896400	180	180	179	181	181	178	0.05	0.05	−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 criteria[1]:
±0.3 dB for applied E-fields at calibration points from 3 kHz to 10 MHz

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

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

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Isotropy H-Field

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

f=4 kHz, TEM, 0°

f=40 kHz, TEM, 0°

f=400 kHz, TEM, 0°

f=4 MHz, TEM, 0°
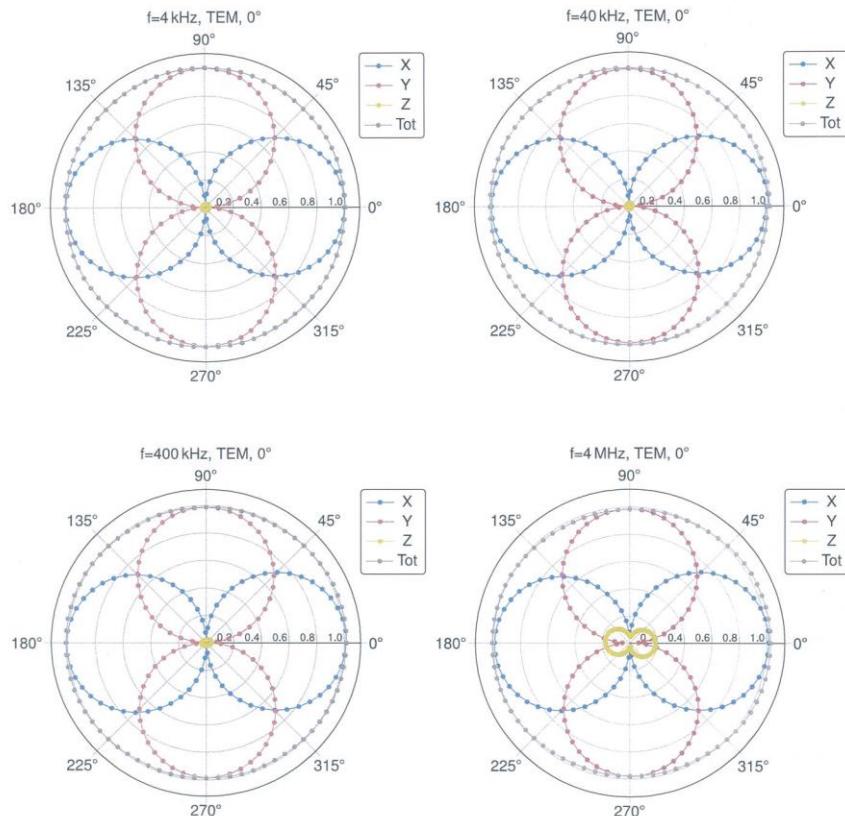
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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054
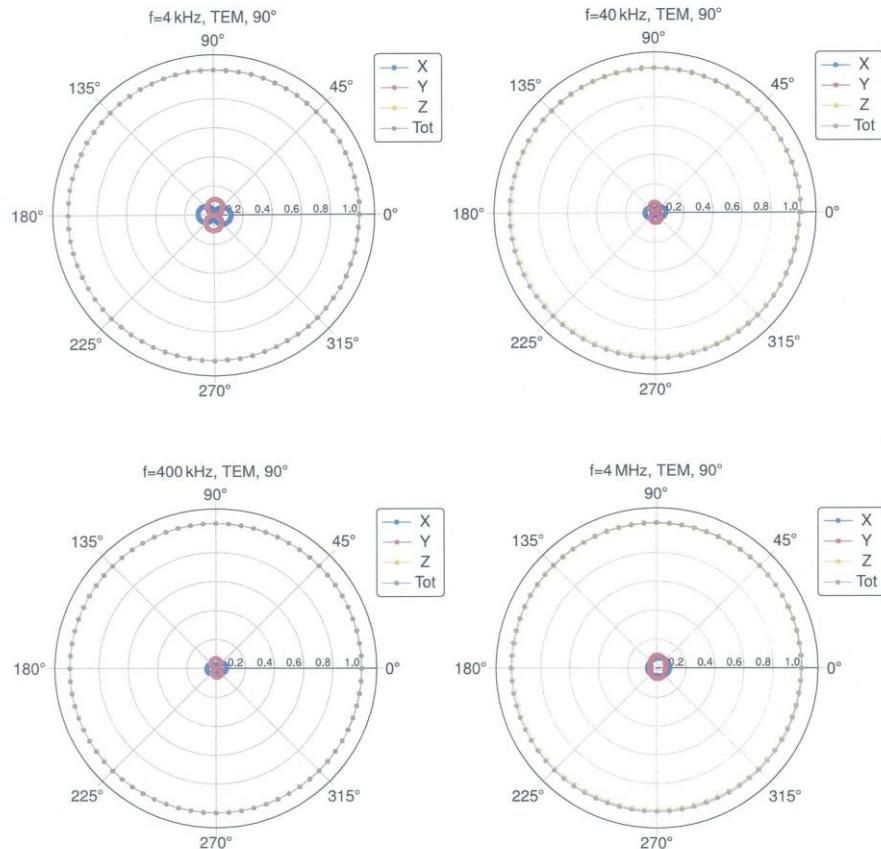
July 03, 2024

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

f=4 kHz, TEM, 90°

f=40 kHz, TEM, 90°

f=400 kHz, TEM, 90°

f=4 MHz, TEM, 90°

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MAGPy-8H3D+E3DV2 SN:3054
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H-Field Receiving Pattern (ϕ), $\vartheta = 0°$
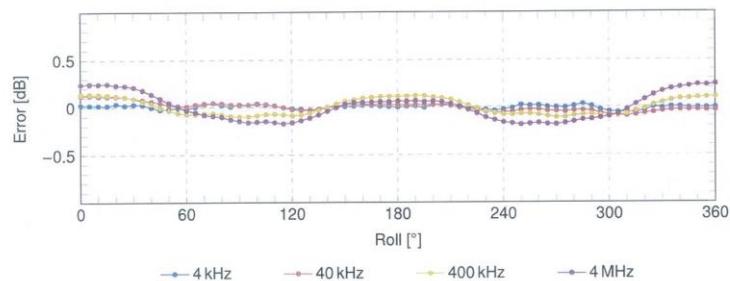

H-Field Receiving Pattern (ϕ), $\vartheta = 90°$
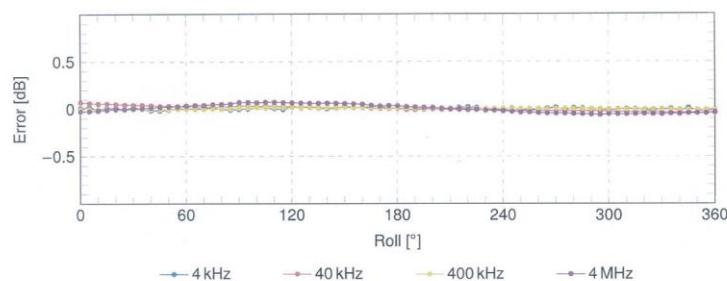
SPEAG axial deviation from the ideal response tolerance for H-field: ±0.6 dB

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

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Isotropy E-Field

E-Field Receiving Pattern (ϕ), $\vartheta = 0°$
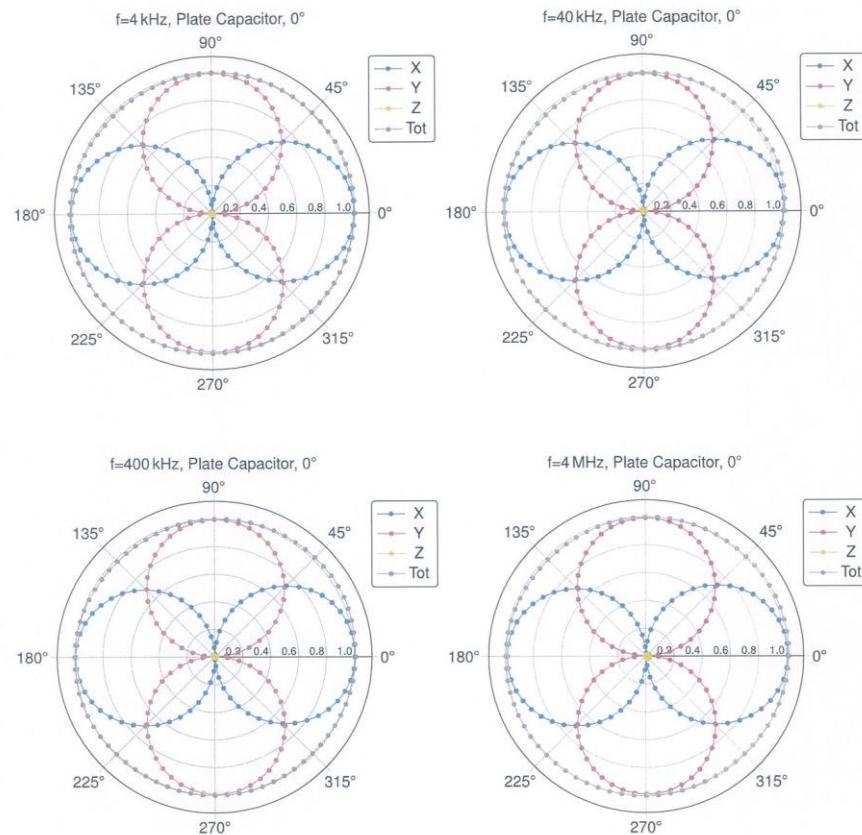
f=4 kHz, Plate Capacitor, 0°

f=40 kHz, Plate Capacitor, 0°

f=400 kHz, Plate Capacitor, 0°

f=4 MHz, Plate Capacitor, 0°

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MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

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

f=4 kHz, Plate Capacitor, 90°

f=40 kHz, Plate Capacitor, 90°

f=400 kHz, Plate Capacitor, 90°

f=4 MHz, Plate Capacitor, 90°

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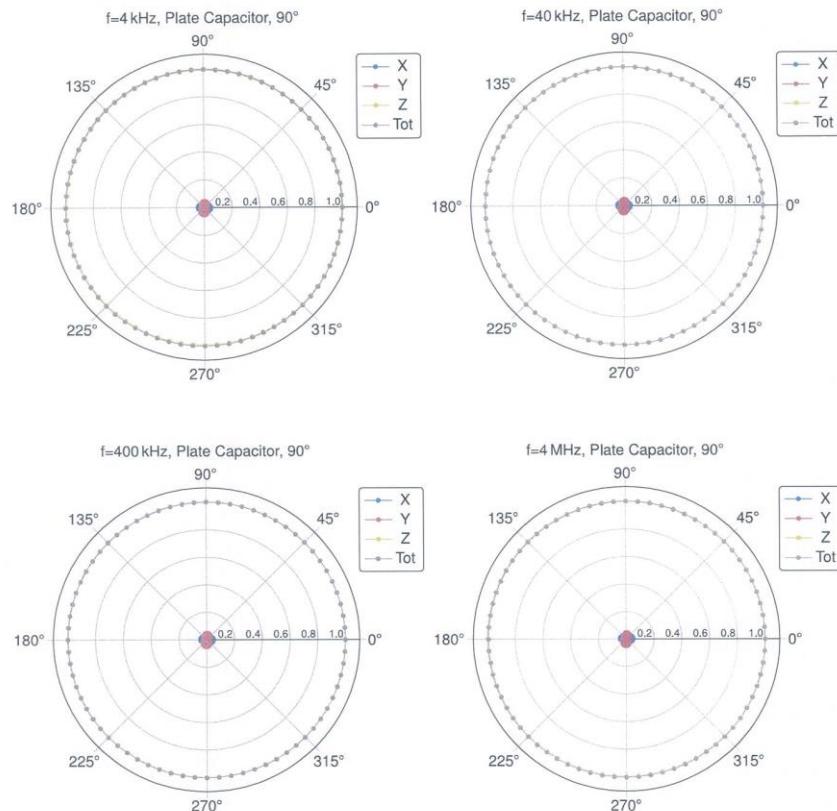
MAGPy-8H3D+E3DV2 SN:3054
MAGPy-DASV2 SN:3054

July 03, 2024

E-Field Receiving Pattern (ϕ), $\vartheta = 0°$
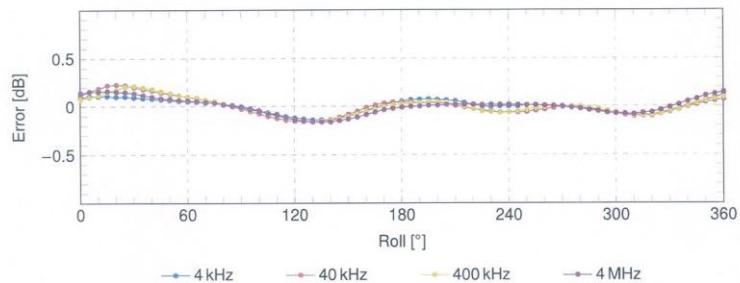
E-Field Receiving Pattern (ϕ), $\vartheta = 90°$
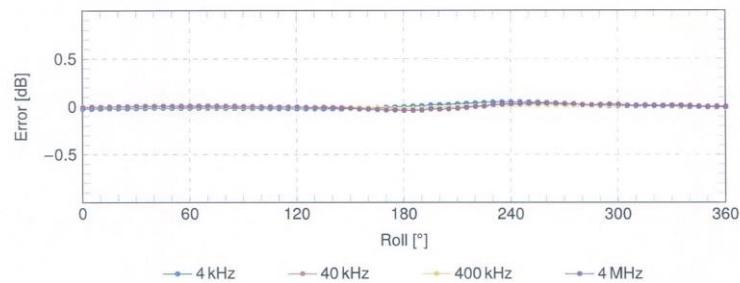
SPEAG axial deviation from the ideal response tolerance for E-field: ±0.8 dB

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Appendix D. Test Setup Photo

Please refer to test DUT Ant. Information &setup photo file no. as follows:

Report No.
HCT-SR-2504-FI001-P