

MAGPy-8H3D+E3DV2 SN:3075
MAGPy-DASV2 SN:3111

November 19, 2024

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	1.55	1.55	1.55	1.55	1.55	1.55	0.00	0.00	0.00	±0.3
3200	1.55	1.55	1.55	1.52	1.56	1.56	-0.17	0.06	0.06	±0.3
4000	1.54	1.54	1.54	1.54	1.53	1.55	0.00	-0.06	0.06	±0.3
5200	1.53	1.53	1.53	1.53	1.53	1.54	0.00	0.00	0.06	±0.3
6600	1.52	1.52	1.52	1.52	1.52	1.53	0.00	0.00	0.06	±0.3
8200	1.51	1.51	1.51	1.51	1.50	1.52	0.00	-0.06	0.06	±0.3
9000	1.50	1.50	1.50	1.50	1.49	1.51	0.00	-0.06	0.06	±0.3
10600	4.31	4.29	4.29	4.30	4.23	4.27	-0.02	-0.12	-0.04	±0.3
13400	4.35	4.31	4.31	4.34	4.31	4.31	-0.02	0.00	0.00	±0.3
17000	4.34	4.30	4.31	4.33	4.30	4.30	-0.02	0.00	-0.02	±0.3
21400	4.37	4.33	4.33	4.36	4.33	4.35	-0.02	0.00	0.04	±0.3
27200	4.37	4.32	4.32	4.36	4.32	4.32	-0.02	0.00	0.00	±0.3
34400	4.37	4.33	4.34	4.36	4.33	4.34	-0.02	0.00	0.00	±0.3
40000	4.36	4.33	4.33	4.35	4.33	4.33	-0.02	0.00	0.00	±0.3
43600	4.36	4.32	4.33	4.34	4.32	4.32	-0.04	0.00	-0.02	±0.3
55400	4.34	4.31	4.32	4.33	4.31	4.32	-0.02	0.00	0.00	±0.3
70000	4.33	4.30	4.31	4.33	4.30	4.30	0.00	0.00	-0.02	±0.3
88800	4.32	4.29	4.29	4.30	4.29	4.29	-0.04	0.00	0.00	±0.3
112400	4.31	4.28	4.28	4.29	4.28	4.28	-0.04	0.00	0.00	±0.3
142400	4.29	4.26	4.27	4.28	4.26	4.26	-0.02	0.00	-0.02	±0.3
161750	4.27	4.25	4.25	4.26	4.25	4.24	-0.02	0.00	-0.02	±0.3
180400	4.26	4.23	4.24	4.26	4.23	4.24	0.00	0.00	0.00	±0.3
228400	4.23	4.20	4.21	4.23	4.20	4.20	0.00	0.00	-0.02	±0.3
289400	4.19	4.17	4.17	4.19	4.17	4.17	0.00	0.00	0.00	±0.3
366400	4.15	4.12	4.13	4.14	4.13	4.13	-0.02	0.02	0.00	±0.3
400000	4.13	4.11	4.11	4.12	4.11	4.11	-0.02	0.00	0.00	±0.3
464000	4.11	4.09	4.09	4.11	4.09	4.09	0.00	0.00	0.00	±0.3
587800	4.05	4.03	4.04	4.05	4.03	4.04	0.00	0.00	0.00	±0.3
744200	4.01	3.99	4.00	4.00	3.99	4.00	-0.02	0.00	0.00	±0.3
942600	3.99	3.98	3.98	3.99	3.97	3.99	0.00	-0.02	0.02	±0.3
1193600	3.96	3.95	3.96	3.96	3.95	3.95	0.00	0.00	-0.02	±0.3
1511600	3.95	3.94	3.94	3.95	3.94	3.95	0.00	0.00	0.02	±0.3
1914400	3.94	3.92	3.93	3.94	3.93	3.93	0.00	0.02	0.00	±0.3
2424400	3.92	3.91	3.91	3.92	3.91	3.91	0.00	0.00	0.00	±0.3
3070200	3.89	3.88	3.88	3.90	3.88	3.88	0.02	0.00	0.00	±0.3
3888000	3.84	3.82	3.82	3.84	3.82	3.83	0.00	0.00	0.02	±0.3
4000000	3.82	3.81	3.81	3.83	3.81	3.81	0.02	0.00	0.00	±0.3
4923800	3.76	3.75	3.75	3.77	3.75	3.75	0.02	0.00	0.00	±0.3
6235400	3.65	3.65	3.65	3.65	3.64	3.64	0.00	-0.02	-0.02	±0.3
7896400	3.52	3.51	3.50	3.52	3.50	3.50	0.00	-0.02	0.00	±0.3
10000000	3.36	3.36	3.36	3.36	3.36	3.35	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%).

MAGPy-8H3D+E3DV2 SN:3075
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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	1.55	1.55	1.55	1.55	1.53	1.54	0.00	-0.11	-0.06	±0.3
3200	1.55	1.55	1.55	1.52	1.57	1.56	-0.17	0.11	0.06	±0.3
4000	1.54	1.54	1.54	1.54	1.55	1.53	0.00	0.06	-0.06	±0.3
5200	1.53	1.53	1.53	1.53	1.54	1.52	0.00	0.06	-0.06	±0.3
6600	1.52	1.52	1.52	1.52	1.53	1.51	0.00	0.06	-0.06	±0.3
8200	1.51	1.51	1.51	1.51	1.51	1.52	0.00	0.00	0.06	±0.3
9000	1.50	1.50	1.50	1.50	1.52	1.50	0.00	0.12	0.00	±0.3
10600	4.31	4.29	4.29	4.34	4.23	4.31	0.06	-0.12	0.04	±0.3
13400	4.35	4.31	4.31	4.34	4.31	4.32	-0.02	0.00	0.02	±0.3
17000	4.34	4.30	4.31	4.34	4.31	4.31	0.00	0.02	0.00	±0.3
21400	4.37	4.33	4.33	4.36	4.32	4.32	-0.02	-0.02	-0.02	±0.3
27200	4.37	4.32	4.32	4.35	4.32	4.32	-0.04	0.00	0.00	±0.3
34400	4.37	4.33	4.34	4.36	4.33	4.34	-0.02	0.00	0.00	±0.3
40000	4.36	4.33	4.33	4.34	4.33	4.33	-0.04	0.00	0.00	±0.3
43600	4.36	4.32	4.33	4.35	4.32	4.32	-0.02	0.00	-0.02	±0.3
55400	4.34	4.31	4.32	4.33	4.31	4.32	-0.02	0.00	0.00	±0.3
70000	4.33	4.30	4.31	4.32	4.31	4.31	-0.02	0.02	0.00	±0.3
88800	4.32	4.29	4.29	4.32	4.29	4.29	0.00	0.00	0.00	±0.3
112400	4.31	4.28	4.28	4.30	4.29	4.28	-0.02	0.02	0.00	±0.3
142400	4.29	4.26	4.27	4.29	4.26	4.26	0.00	0.00	-0.02	±0.3
161750	4.27	4.25	4.25	4.27	4.25	4.26	0.00	0.00	0.02	±0.3
180400	4.26	4.23	4.24	4.25	4.24	4.24	-0.02	0.02	0.00	±0.3
228400	4.23	4.20	4.21	4.22	4.20	4.21	-0.02	0.00	0.00	±0.3
289400	4.19	4.17	4.17	4.19	4.17	4.17	0.00	0.00	0.00	±0.3
366400	4.15	4.12	4.13	4.15	4.13	4.13	0.00	0.02	0.00	±0.3
400000	4.13	4.11	4.11	4.13	4.11	4.11	0.00	0.00	0.00	±0.3
464000	4.11	4.09	4.09	4.11	4.09	4.09	0.00	0.00	0.00	±0.3
587800	4.05	4.03	4.04	4.05	4.04	4.04	0.00	0.02	0.00	±0.3
744200	4.01	3.99	4.00	4.00	3.99	4.00	-0.02	0.00	0.00	±0.3
942600	3.99	3.98	3.98	3.99	3.98	3.98	0.00	0.00	0.00	±0.3
1193600	3.96	3.95	3.96	3.96	3.95	3.96	0.00	0.00	0.00	±0.3
1511600	3.95	3.94	3.94	3.96	3.94	3.94	0.02	0.00	0.00	±0.3
1914400	3.94	3.92	3.93	3.94	3.93	3.93	0.00	0.02	0.00	±0.3
2424400	3.92	3.91	3.91	3.92	3.90	3.92	0.00	-0.02	0.02	±0.3
3070200	3.89	3.88	3.88	3.90	3.88	3.88	0.02	0.00	0.00	±0.3
3888000	3.84	3.82	3.82	3.84	3.82	3.82	0.00	0.00	0.00	±0.3
4000000	3.82	3.81	3.81	3.83	3.81	3.81	0.02	0.00	0.00	±0.3
4923800	3.76	3.75	3.75	3.77	3.75	3.75	0.02	0.00	0.00	±0.3
6235400	3.65	3.65	3.65	3.65	3.65	3.64	0.00	0.00	-0.02	±0.3
7896400	3.52	3.51	3.50	3.52	3.51	3.51	0.00	0.00	0.02	±0.3
10000000	3.36	3.36	3.36	3.36	3.36	3.35	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%).

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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	1.55	1.55	1.55	1.55	1.55	1.55	0.00	0.00	0.00	±0.3
3200	1.55	1.55	1.55	1.52	1.56	1.56	-0.17	0.06	0.06	±0.3
4000	1.54	1.54	1.54	1.54	1.54	1.54	0.00	0.00	0.00	±0.3
5200	1.53	1.53	1.53	1.54	1.53	1.53	0.06	0.00	0.00	±0.3
6600	1.52	1.52	1.52	1.53	1.52	1.52	0.06	0.00	0.00	±0.3
8200	1.51	1.51	1.51	1.51	1.50	1.51	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	4.31	4.29	4.29	4.29	4.25	4.30	-0.04	-0.08	0.02	±0.3
13400	4.35	4.31	4.31	4.34	4.30	4.31	-0.02	-0.02	0.00	±0.3
17000	4.34	4.30	4.31	4.34	4.30	4.30	0.00	0.00	-0.02	±0.3
21400	4.37	4.33	4.33	4.35	4.33	4.34	-0.04	0.00	0.02	±0.3
27200	4.37	4.32	4.32	4.37	4.32	4.31	0.00	0.00	-0.02	±0.3
34400	4.37	4.33	4.34	4.37	4.34	4.33	0.00	0.02	-0.02	±0.3
40000	4.36	4.33	4.33	4.35	4.33	4.33	-0.02	0.00	0.00	±0.3
43600	4.36	4.32	4.33	4.34	4.32	4.33	-0.04	0.00	0.00	±0.3
55400	4.34	4.31	4.32	4.34	4.31	4.32	0.00	0.00	0.00	±0.3
70000	4.33	4.30	4.31	4.32	4.30	4.31	-0.02	0.00	0.00	±0.3
88800	4.32	4.29	4.29	4.32	4.29	4.30	0.00	0.00	0.02	±0.3
112400	4.31	4.28	4.28	4.30	4.28	4.28	-0.02	0.00	0.00	±0.3
142400	4.29	4.26	4.27	4.28	4.26	4.27	-0.02	0.00	0.00	±0.3
161750	4.27	4.25	4.25	4.27	4.25	4.25	0.00	0.00	0.00	±0.3
180400	4.26	4.23	4.24	4.26	4.23	4.24	0.00	0.00	0.00	±0.3
228400	4.23	4.20	4.21	4.23	4.20	4.21	0.00	0.00	0.00	±0.3
289400	4.19	4.17	4.17	4.19	4.17	4.17	0.00	0.00	0.00	±0.3
366400	4.15	4.12	4.13	4.15	4.13	4.14	0.00	0.02	0.02	±0.3
400000	4.13	4.11	4.11	4.13	4.11	4.11	0.00	0.00	0.00	±0.3
464000	4.11	4.09	4.09	4.11	4.09	4.10	0.00	0.00	0.02	±0.3
587800	4.05	4.03	4.04	4.05	4.04	4.04	0.00	0.02	0.00	±0.3
744200	4.01	3.99	4.00	4.00	3.99	4.00	-0.02	0.00	0.00	±0.3
942600	3.99	3.98	3.98	3.99	3.98	3.98	0.00	0.00	0.00	±0.3
1193600	3.96	3.95	3.96	3.96	3.95	3.96	0.00	0.00	0.00	±0.3
1511600	3.95	3.94	3.94	3.96	3.94	3.95	0.02	0.00	0.02	±0.3
1914400	3.94	3.92	3.93	3.93	3.93	3.93	-0.02	0.02	0.00	±0.3
2424400	3.92	3.91	3.91	3.92	3.91	3.91	0.00	0.00	0.00	±0.3
3070200	3.89	3.88	3.88	3.89	3.88	3.88	0.00	0.00	0.00	±0.3
3888000	3.84	3.82	3.82	3.84	3.83	3.83	0.00	0.02	0.02	±0.3
4000000	3.82	3.81	3.81	3.83	3.81	3.81	0.02	0.00	0.00	±0.3
4923800	3.76	3.75	3.75	3.76	3.75	3.75	0.00	0.00	0.00	±0.3
6235400	3.65	3.65	3.65	3.65	3.65	3.65	0.00	0.00	0.00	±0.3
7896400	3.52	3.51	3.50	3.52	3.51	3.51	0.00	0.00	0.02	±0.3
10000000	3.36	3.36	3.36	3.36	3.33	3.35	0.00	-0.08	-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%).

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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	1.55	1.55	1.55	1.55	1.58	1.55	0.00	0.17	0.00	±0.3
3200	1.55	1.55	1.55	1.53	1.58	1.55	-0.11	0.17	0.00	±0.3
4000	1.54	1.54	1.54	1.54	1.55	1.53	0.00	0.06	-0.06	±0.3
5200	1.53	1.53	1.53	1.53	1.55	1.53	0.00	0.11	0.00	±0.3
6600	1.52	1.52	1.52	1.52	1.54	1.52	0.00	0.11	0.00	±0.3
8200	1.51	1.51	1.51	1.50	1.52	1.51	-0.06	0.06	0.00	±0.3
9000	1.50	1.50	1.50	1.50	1.51	1.50	0.00	0.06	0.00	±0.3
10600	4.31	4.29	4.29	4.32	4.26	4.30	0.02	-0.06	0.02	±0.3
13400	4.35	4.31	4.31	4.35	4.32	4.31	0.00	0.02	0.00	±0.3
17000	4.34	4.30	4.31	4.33	4.32	4.31	-0.02	0.04	0.00	±0.3
21400	4.37	4.33	4.33	4.37	4.33	4.34	0.00	0.00	0.02	±0.3
27200	4.37	4.32	4.32	4.35	4.31	4.33	-0.04	-0.02	0.02	±0.3
34400	4.37	4.33	4.34	4.36	4.33	4.34	-0.02	0.00	0.00	±0.3
40000	4.36	4.33	4.33	4.34	4.32	4.33	-0.04	-0.02	0.00	±0.3
43600	4.36	4.32	4.33	4.35	4.33	4.32	-0.02	0.02	-0.02	±0.3
55400	4.34	4.31	4.32	4.33	4.31	4.32	-0.02	0.00	0.00	±0.3
70000	4.33	4.30	4.31	4.32	4.30	4.30	-0.02	0.00	-0.02	±0.3
88800	4.32	4.29	4.29	4.31	4.30	4.29	-0.02	0.02	0.00	±0.3
112400	4.31	4.28	4.28	4.30	4.28	4.28	-0.02	0.00	0.00	±0.3
142400	4.29	4.26	4.27	4.28	4.27	4.27	-0.02	0.02	0.00	±0.3
161750	4.27	4.25	4.25	4.27	4.25	4.25	0.00	0.00	0.00	±0.3
180400	4.26	4.23	4.24	4.26	4.23	4.24	0.00	0.00	0.00	±0.3
228400	4.23	4.20	4.21	4.23	4.20	4.21	0.00	0.00	0.00	±0.3
289400	4.19	4.17	4.17	4.19	4.16	4.17	0.00	-0.02	0.00	±0.3
366400	4.15	4.12	4.13	4.15	4.13	4.14	0.00	0.02	0.02	±0.3
400000	4.13	4.11	4.11	4.13	4.11	4.12	0.00	0.00	0.02	±0.3
464000	4.11	4.09	4.09	4.11	4.09	4.10	0.00	0.00	0.02	±0.3
587800	4.05	4.03	4.04	4.05	4.04	4.04	0.00	0.02	0.00	±0.3
744200	4.01	3.99	4.00	4.00	3.99	4.00	-0.02	0.00	0.00	±0.3
942600	3.99	3.98	3.98	3.99	3.98	3.99	0.00	0.00	0.02	±0.3
1193600	3.96	3.95	3.96	3.96	3.95	3.96	0.00	0.00	0.00	±0.3
1511600	3.95	3.94	3.94	3.95	3.94	3.95	0.00	0.00	0.02	±0.3
1914400	3.94	3.92	3.93	3.94	3.93	3.93	0.00	0.02	0.00	±0.3
2424400	3.92	3.91	3.91	3.92	3.92	3.91	0.00	0.02	0.00	±0.3
3070200	3.89	3.88	3.88	3.89	3.88	3.88	0.00	0.00	0.00	±0.3
3888000	3.84	3.82	3.82	3.84	3.83	3.82	0.00	0.02	0.00	±0.3
4000000	3.82	3.81	3.81	3.83	3.81	3.81	0.02	0.00	0.00	±0.3
4923800	3.76	3.75	3.75	3.76	3.75	3.75	0.00	0.00	0.00	±0.3
6235400	3.65	3.65	3.65	3.65	3.64	3.65	0.00	-0.02	0.00	±0.3
7896400	3.52	3.51	3.50	3.52	3.51	3.51	0.00	0.00	0.02	±0.3
10000000	3.36	3.36	3.36	3.37	3.35	3.34	0.03	-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

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

MAGPy-8H3D+E3DV2 SN:3075
MAGPy-DASV2 SN:3111

November 19, 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	1.55	1.55	1.55	1.55	1.55	1.55	0.00	0.00	0.00	±0.3
3200	1.55	1.55	1.55	1.52	1.55	1.56	-0.17	0.00	0.06	±0.3
4000	1.54	1.54	1.54	1.54	1.54	1.54	0.00	0.00	0.00	±0.3
5200	1.53	1.53	1.53	1.54	1.53	1.54	0.06	0.00	0.06	±0.3
6600	1.52	1.52	1.52	1.52	1.52	1.52	0.00	0.00	0.00	±0.3
8200	1.51	1.51	1.51	1.50	1.50	1.52	-0.06	-0.06	0.06	±0.3
9000	1.50	1.50	1.50	1.50	1.50	1.50	0.00	0.00	0.00	±0.3
10600	4.31	4.29	4.29	4.30	4.22	4.31	-0.02	-0.14	0.04	±0.3
13400	4.35	4.31	4.31	4.34	4.31	4.31	-0.02	0.00	0.00	±0.3
17000	4.34	4.30	4.31	4.34	4.31	4.31	0.00	0.02	0.00	±0.3
21400	4.37	4.33	4.33	4.36	4.33	4.35	-0.02	0.00	0.04	±0.3
27200	4.37	4.32	4.32	4.35	4.32	4.33	-0.04	0.00	0.02	±0.3
34400	4.37	4.33	4.34	4.36	4.33	4.34	-0.02	0.00	0.00	±0.3
40000	4.36	4.33	4.33	4.34	4.33	4.34	-0.04	0.00	0.02	±0.3
43600	4.36	4.32	4.33	4.35	4.32	4.32	-0.02	0.00	-0.02	±0.3
55400	4.34	4.31	4.32	4.33	4.32	4.33	-0.02	0.02	0.02	±0.3
70000	4.33	4.30	4.31	4.33	4.30	4.31	0.00	0.00	0.00	±0.3
88800	4.32	4.29	4.29	4.31	4.29	4.30	-0.02	0.00	0.02	±0.3
112400	4.31	4.28	4.28	4.30	4.29	4.29	-0.02	0.02	0.02	±0.3
142400	4.29	4.26	4.27	4.29	4.26	4.27	0.00	0.00	0.00	±0.3
161750	4.27	4.25	4.25	4.27	4.25	4.26	0.00	0.00	0.02	±0.3
180400	4.26	4.23	4.24	4.25	4.24	4.24	-0.02	0.02	0.00	±0.3
228400	4.23	4.20	4.21	4.22	4.20	4.21	-0.02	0.00	0.00	±0.3
289400	4.19	4.17	4.17	4.19	4.17	4.18	0.00	0.00	0.02	±0.3
366400	4.15	4.12	4.13	4.14	4.13	4.14	-0.02	0.02	0.02	±0.3
400000	4.13	4.11	4.11	4.12	4.11	4.11	-0.02	0.00	0.00	±0.3
464000	4.11	4.09	4.09	4.11	4.09	4.10	0.00	0.00	0.02	±0.3
587800	4.05	4.03	4.04	4.05	4.03	4.04	0.00	0.00	0.00	±0.3
744200	4.01	3.99	4.00	4.00	4.00	4.00	-0.02	0.02	0.00	±0.3
942600	3.99	3.98	3.98	3.98	3.98	3.99	-0.02	0.00	0.02	±0.3
1193600	3.96	3.95	3.96	3.96	3.95	3.96	0.00	0.00	0.00	±0.3
1511600	3.95	3.94	3.94	3.95	3.94	3.95	0.00	0.00	0.02	±0.3
1914400	3.94	3.92	3.93	3.94	3.93	3.93	0.00	0.02	0.00	±0.3
2424400	3.92	3.91	3.91	3.92	3.91	3.91	0.00	0.00	0.00	±0.3
3070200	3.89	3.88	3.88	3.89	3.88	3.88	0.00	0.00	0.00	±0.3
3888000	3.84	3.82	3.82	3.83	3.83	3.83	-0.02	0.02	0.02	±0.3
4000000	3.82	3.81	3.81	3.83	3.81	3.81	0.02	0.00	0.00	±0.3
4923800	3.76	3.75	3.75	3.76	3.75	3.75	0.00	0.00	0.00	±0.3
6235400	3.65	3.65	3.65	3.65	3.65	3.65	0.00	0.00	0.00	±0.3
7896400	3.52	3.51	3.50	3.52	3.51	3.50	0.00	0.00	0.00	±0.3
10000000	3.36	3.36	3.36	3.37	3.35	3.32	0.03	-0.03	-0.10	±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%).

MAGPy-8H3D+E3DV2 SN:3075
MAGPy-DASV2 SN:3111

November 19, 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	84.6	84.6	88.0	84.7	84.7	88.1	0.01	0.01	0.01	±0.3
3200	86.2	86.2	80.3	86.2	86.1	81.4	0.00	-0.01	0.12	±0.3
4000	83.9	83.9	88.0	84.0	84.0	88.1	0.01	0.01	0.01	±0.3
5200	81.8	81.8	85.0	81.6	81.6	84.9	-0.02	-0.02	-0.01	±0.3
6600	81.9	81.9	82.1	81.9	82.3	82.1	0.00	0.04	0.00	±0.3
8200	78.0	78.0	82.1	77.9	77.7	82.6	-0.01	-0.03	0.05	±0.3
9000	83.4	83.4	83.5	83.5	83.5	83.5	0.01	0.01	0.00	±0.3
10600	82.6	82.6	81.7	82.6	82.7	81.8	0.00	0.01	0.01	±0.3
13400	85.7	85.7	79.6	85.8	85.6	79.8	0.01	-0.01	0.02	±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	83.2	82.5	0.01	0.01	-0.01	±0.3
27200	83.9	83.9	80.4	83.8	83.8	80.6	-0.01	-0.01	0.02	±0.3
34400	82.5	82.5	79.4	82.5	82.6	79.5	0.00	0.01	0.01	±0.3
40000	83.2	83.2	82.1	83.2	83.2	82.2	0.00	0.00	0.01	±0.3
43600	82.5	82.5	81.3	82.5	82.6	81.2	0.00	0.01	-0.01	±0.3
55400	82.3	82.3	81.3	82.3	82.3	81.3	0.00	0.00	0.00	±0.3
70000	83.1	83.1	81.4	83.1	83.2	81.4	0.00	0.01	0.00	±0.3
88800	82.2	82.2	82.1	82.1	82.2	82.2	-0.01	0.00	0.01	±0.3
112400	82.6	82.6	81.7	82.6	82.7	81.7	0.00	0.01	0.00	±0.3
142400	82.6	82.6	82.1	82.6	82.7	82.1	0.00	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	83.0	83.0	82.1	0.00	0.00	0.00	±0.3
228400	83.1	83.1	82.2	83.1	83.2	82.2	0.00	0.01	0.00	±0.3
289400	83.3	83.3	82.6	83.3	83.4	82.7	0.00	0.01	0.01	±0.3
366400	83.5	83.5	82.7	83.5	83.5	82.7	0.00	0.00	0.00	±0.3
400000	83.8	83.8	82.7	83.8	83.8	82.8	0.00	0.00	0.01	±0.3
464000	84.0	84.0	83.0	84.0	84.1	83.0	0.00	0.01	0.00	±0.3
587800	84.0	84.0	83.0	84.0	84.1	83.1	0.00	0.01	0.01	±0.3
744200	84.1	84.1	83.0	84.1	84.1	83.0	0.00	0.00	0.00	±0.3
942600	84.1	84.1	83.1	84.1	84.2	83.2	0.00	0.01	0.01	±0.3
1193600	83.8	83.8	82.7	83.8	83.9	82.7	0.00	0.01	0.00	±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	82.6	81.8	0.01	0.00	0.00	±0.3
3070200	82.5	82.5	81.5	82.6	82.5	81.6	0.01	0.00	0.01	±0.3
3888000	82.6	82.6	81.8	82.7	82.7	81.8	0.01	0.01	0.00	±0.3
4000000	82.4	82.4	81.7	82.5	82.5	81.7	0.01	0.01	0.00	±0.3
4923800	83.0	83.0	82.5	83.1	83.0	82.5	0.01	0.00	0.00	±0.3
6235400	85.7	85.7	85.0	85.7	85.7	85.0	0.00	0.00	0.00	±0.3
7896400	88.5	88.5	88.0	88.6	88.5	88.0	0.01	0.00	0.00	±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

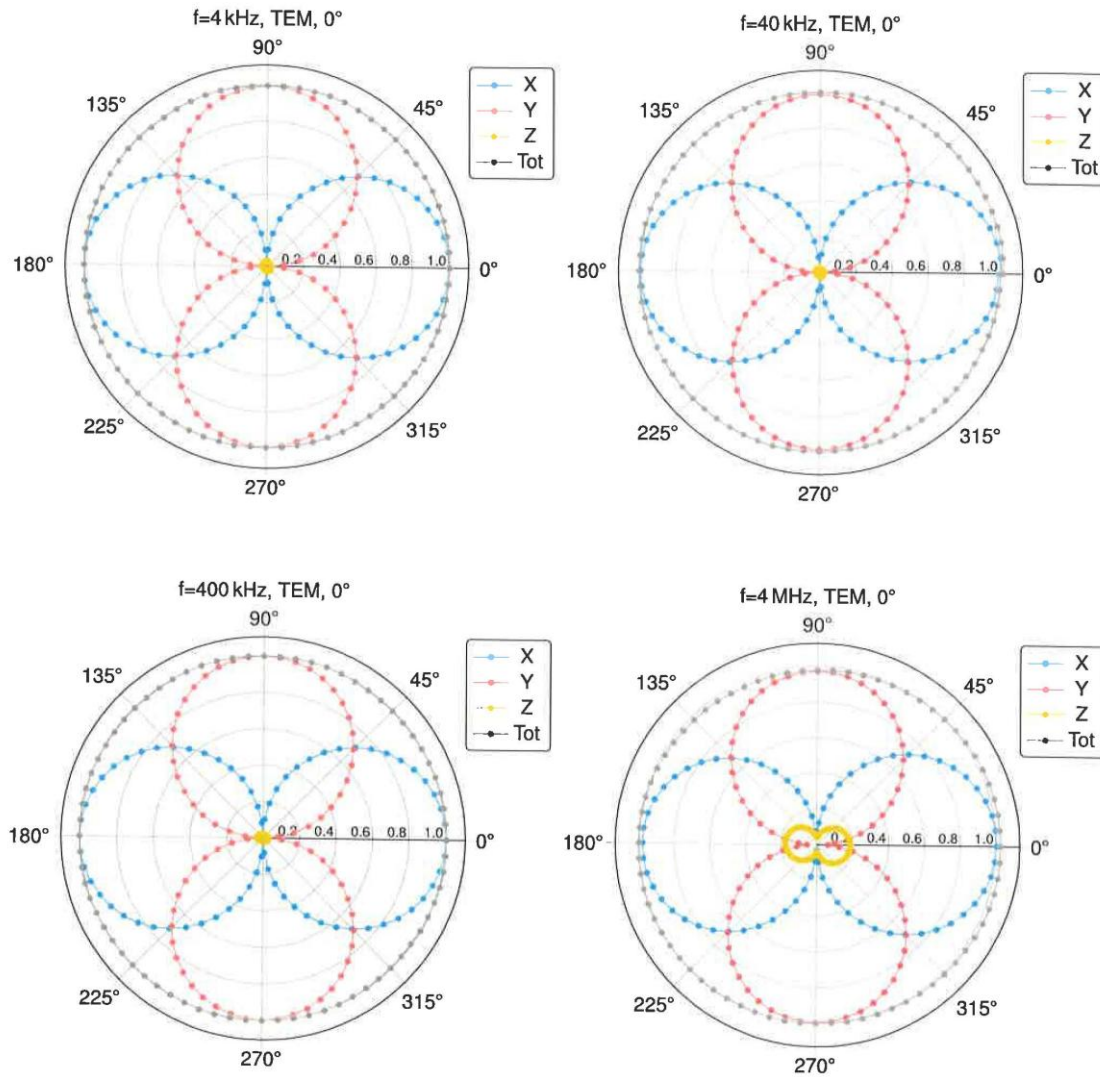
¹ Calibration uncertainty not taken into account (shared risk 50%).

MAGPy-8H3D+E3DV2 SN:3075
MAGPy-DASV2 SN:3111

November 19, 2024

Isotropy H-Field

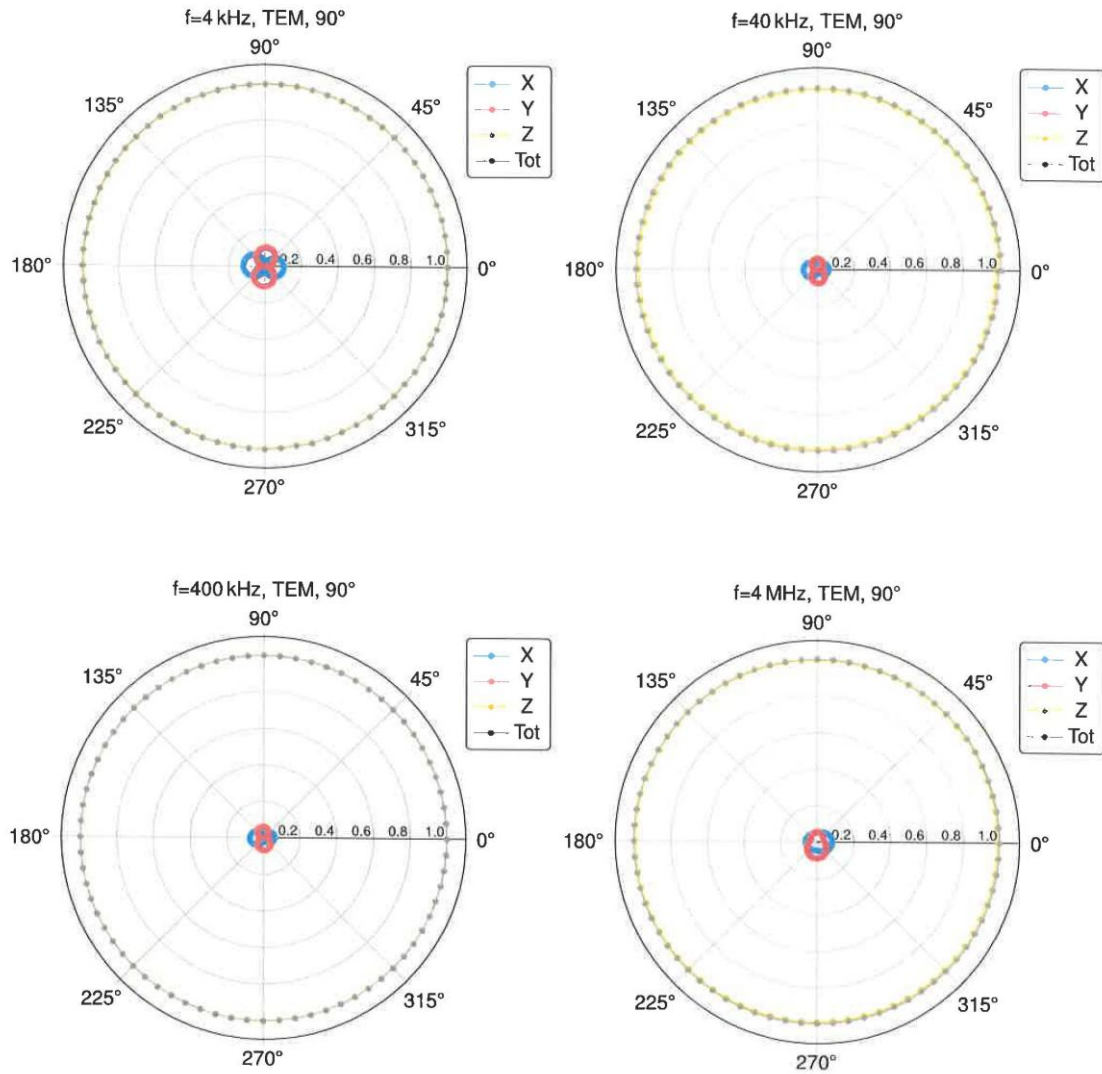
H-Field Receiving Pattern (ϕ), $\theta = 0^\circ$



MAGPy-8H3D+E3DV2 SN:3075
MAGPy-DASV2 SN:3111

November 19, 2024

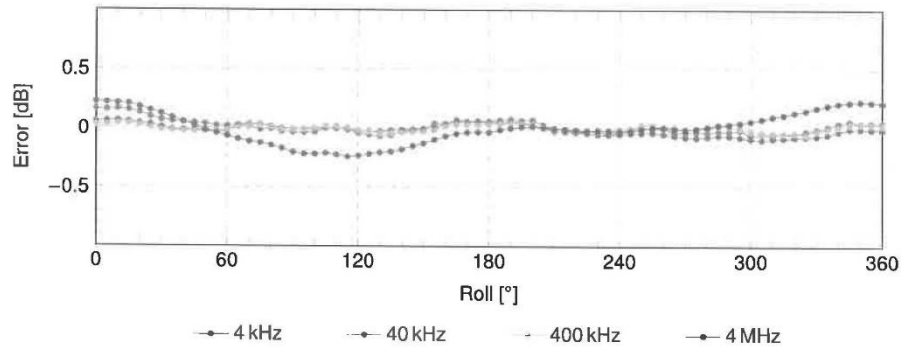
H-Field Receiving Pattern (ϕ), $\theta = 90^\circ$



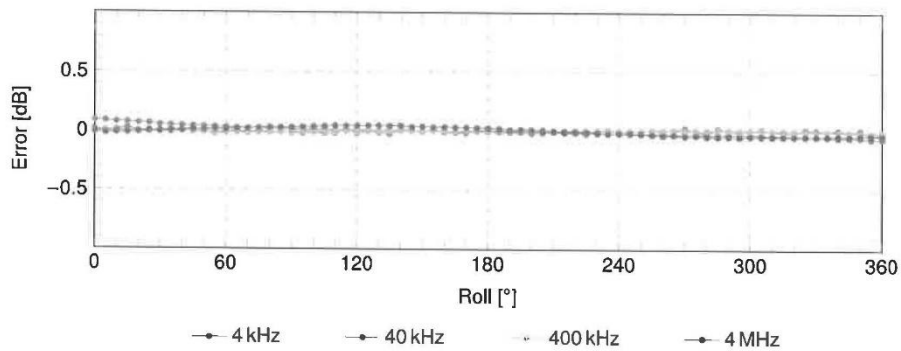
MAGPy-8H3D+E3DV2 SN:3075
MAGPy-DASV2 SN:3111

November 19, 2024

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



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



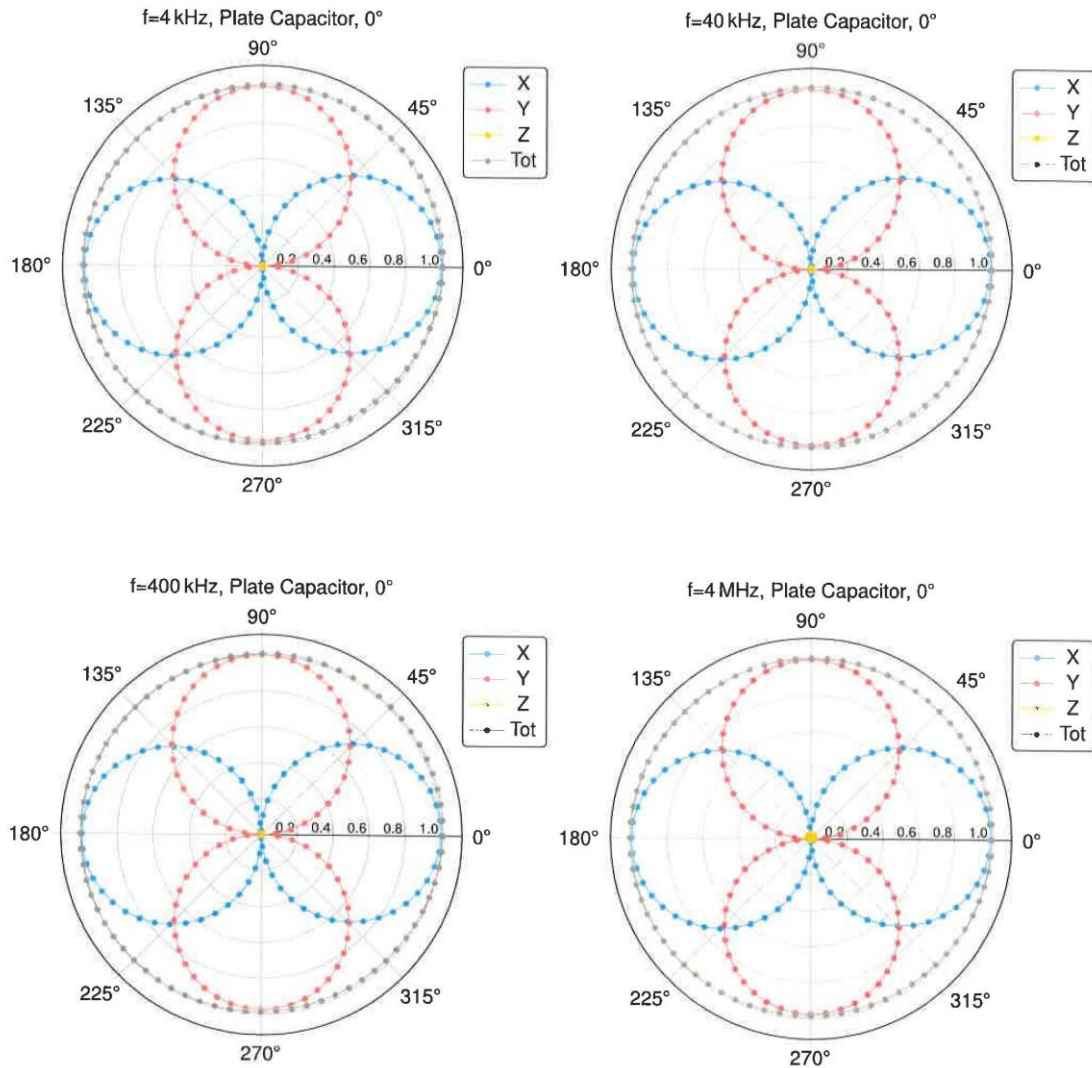
SPEAG axial deviation from the ideal response tolerance for H-field: ± 0.6 dB

MAGPy-8H3D+E3DV2 SN:3075
MAGPy-DASV2 SN:3111

November 19, 2024

Isotropy E-Field

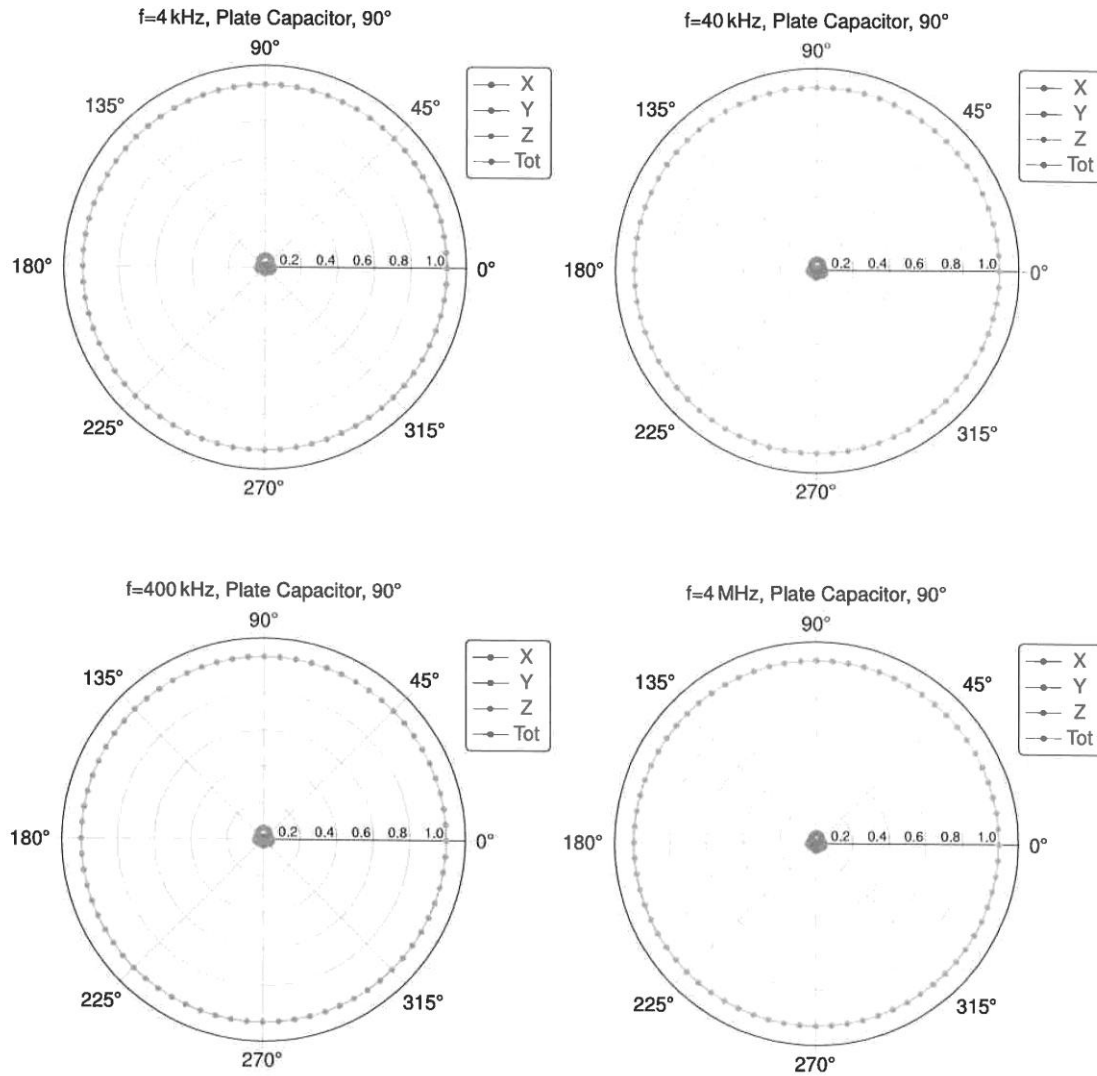
E-Field Receiving Pattern (ϕ), $\theta = 0^\circ$



MAGPy-8H3D+E3DV2 SN:3075
MAGPy-DASV2 SN:3111

November 19, 2024

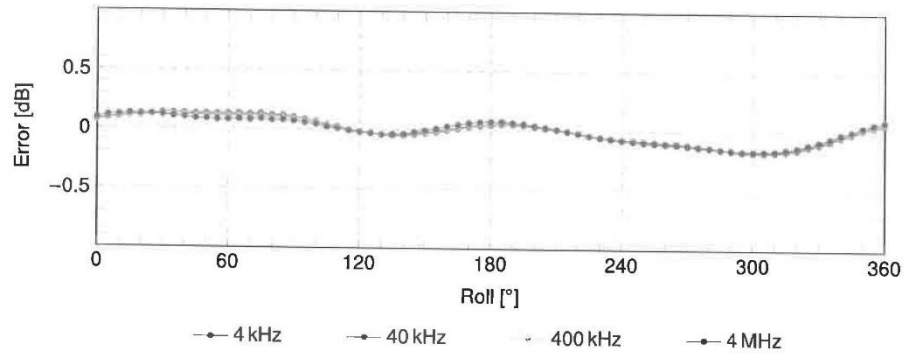
E-Field Receiving Pattern (ϕ), $\theta = 90^\circ$



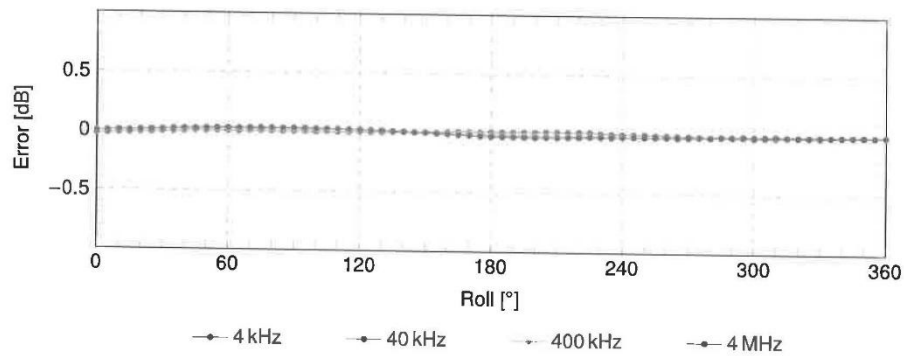
MAGPy-8H3D+E3DV2 SN:3075
MAGPy-DASV2 SN:3111

November 19, 2024

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



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



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

APPENDIX B. – Verification Source Calibration Data

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



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

Accreditation No.: **SCS 0108**

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

Client **Dt&C**
Gyeonggi-do, Republic of Korea

Certificate No. **V-Coil350/85-1036_Nov24**

CALIBRATION CERTIFICATE

Object **V-Coil350/85V2 - SN: 1036**

Calibration procedure(s) **QA CAL-47.v13
Calibration Procedure for WPT Verification & Validation Sources**

Calibration date: **November 13, 2024**

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

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
MAGPy-8H3D+E3D/DAS	SN: 3090/3078	22-Aug-24 (MAGPy-8H3D-3090_Aug24)	Aug-25

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
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	Name	Function	Signature
Calibrated by:	Jingtian Xi	Project Leader	

Approved by:	Sven Kühn	Technical Manager	
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Issued: November 28, 2024

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

Certificate No: V-Coil350/85-1036_Nov24

Page 1 of 5

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



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

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**

Glossary:

WPT wireless power transfer
V&V verification & validation

Calibration is Performed According to the Following Standards:

- Internal procedure QA CAL-47 Calibration procedure for WPT verification & validation sources from 3 kHz to 10 MHz
- IEC/IEEE 63164, "Assessment methods of the human exposure to electric and magnetic fields from wireless power transfer systems – Models, instrumentation, measurement and computational methods and procedures (Frequency range 3 kHz to 30 MHz)", draft standard, 2023

Additional Documentation:

- cDASY6/DASY8 Module WPT Manual

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:* The V&V source is switched on for at least 30 minutes.
- Source Positioning:* The V&V source is placed in the center of the UniPV1 phantom such that the source surface is parallel to phantom surface. The probe location used for DUT teaching is the top center of the coil (marked on the source casing). The probe distance is verified using mechanical gauges placed on the source surface.
- H-field distribution:* H-field is measured in the volume above the V&V source in a rectilinear grid with a uniform grid step of 7.33 mm.

Calibrated Quantity

- Spatial peak of H-field (RMS value) at d mm from the DUT surface (extrapolated from measurements)

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

Software version	cDASY6 Module WPT	2.6.0.5002
	Notebook GUI	2.6.0.9
	Sim4Life	8.0.1
Scan setup	Grid dimensions	x: 477 mm, y: 389 mm, z: 36.7 mm
	Grid resolutions	dx, dy, dz: 7.33 mm
Nominal frequency	85 kHz	

Calibrated Quantities

Distance (relative to source surface) (mm)	Peak H-field (A/m)	Uncertainty (k=2) (dB)
0	211	1.13
2	192	1.13

Appendix (Additional assessments outside the scope of SCS 0108)

Peak values of induced fields¹

Distance (relative to source surface) (mm)	Induced peak current density, 1cm ² area avg. (A/m ²)	Induced peak E-field (V/m)			peak spatial SAR (mW/kg)	
		2mm cube avg.	Local	5mm line avg.	1g avg.	10g avg.
0	2.40	3.41	3.44	3.45	6.70	4.96
2	2.25	3.21	3.24	3.25	5.98	4.50

Voltage measurement

Total voltage (V)	Voltages at harmonics (dBc)
0.418	Highest harmonic: -32.9 2 nd highest harmonic: -46.3

¹ determined for a virtual half-space phantom with tissue properties $\epsilon_r = 55$, $\sigma = 0.75$ S/m, $\rho = 1000$ kg/m³ and a 2 mm thick phantom shell

Measurement report

cDASY6 Module WPT Measurement Report

Device under test

Info:
V-Coil350/85

Serial number:
1036

Scenario:
source calibration

Tool info

DASY software version:
cDASY6 Module WPT 2.6.0.5002

Probe model, serial no. and configuration date:
MAGPy-8H3D+E3Dv2, WP000230, 2024/08/23

Software version:
2.0.63, backend: 2.2.22

Scan info

Center location:
x: -48.09 mm, y: -119.83 mm, z: 36.73 mm

Dimensions:
x: 477.0 mm, y: 388.8 mm, z: 36.7 mm

Resolution:
x: 7.33 mm, y: 7.33 mm, z: 7.33 mm

Completed on:
2024/11/13 21:30:08

Measurement results

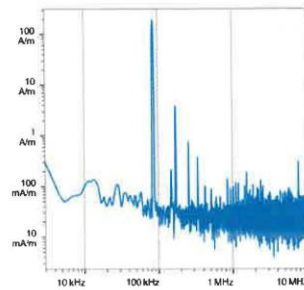
Maximum H-field [rms]:
MAGNITUDE: 137.30 A/m
x: 120.19 A/m, y: 31.81 A/m, z: 58.25 A/m

Maximum H-field location relative to DUT:
x: 157.67 mm, y: 25.67 mm, z: 8.50 mm

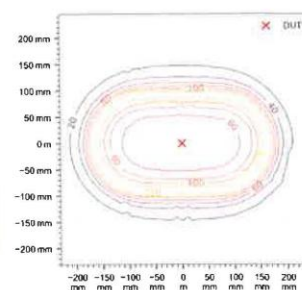
Distance to -20.0 dB boundary:
62.66 mm

Offset relative to DUT:
x: 0.00 m, y: 0.00 m, z: 1.00 mm

H-field magnitude [rms] at maximum location



H-field magnitude [rms] at lowest plane

Incident fields and induced fields in the homogeneous phantom at the peak frequency ($f = 85.00 \text{ kHz}$, $\sigma = 0.750 \text{ S/m}$, tissue density = 1.000 kg/m^3)

Distance [mm]	Peak incident fields [rms]	Peak E_{ind} [V/m, rms]			Peak J_{ind} [A/m ² , rms]	psSAR [mW/kg]		H-field extent	Warnings		
	H_{inc} [A/m]	Cube avg.	Local	Line avg.	Surface avg.	1g avg.	10g avg.	-20 dB radius [mm]	Sign	Vector potential	Boundary effect
0.00	211	3.41	3.44	3.45	2.40	6.70	4.96	181	1%	86%	36%
2.00	192	3.21	3.24	3.25	2.25	5.98	4.50	183	1%	86%	38%

Compliance evaluation (Field values at the peak frequency) ($f = 85.00 \text{ kHz}$)

Distance [mm]	ICNIRP 2010/2020			ICNIRP 1998			IEEE 2019			FCC			HC Code 6		
	RL [rms]	BR [rms]	psSAR	RL [rms]	BR [rms]	psSAR	ERL [rms]	DRL [rms]	psSAR	MPE [rms]	BR [rms]	psSAR	RL [rms]	BR [rms]	psSAR
	pH_{inc}	pE_{ind}		pH_{inc}	pE_{ind}		pH_{inc}	pE_{ind}		pH_{inc}	pE_{ind}		pH_{inc}	pE_{ind}	
	[A/m]	[V/m]	[mW/kg]	[A/m]	[A/m ²]	[mW/kg]	[A/m]	[V/m]	[mW/kg]	[A/m]	[V/m]	[mW/kg]	[A/m]	[V/m]	[mW/kg]
0.00	211	3.41	4.96	211	2.40	4.96	211	3.45	4.96	211	N/A	6.70	211	3.44	6.70
2.00	192	3.21	4.50	192	2.25	4.50	192	3.25	4.50	192	N/A	5.98	192	3.24	5.98

Compliance evaluation (Exposure ratios) (ratios in dB)

Distance [mm]	ICNIRP 2010/2020						ICNIRP 1998						IEEE 2019						FCC			HC Code 6								
	RL			BR			RL			BR			ERL			DRL			MPE			BR			RL			BR		
	pH_{inc}			pE_{ind}			pH_{inc}			pE_{ind}			pH_{inc}			pE_{ind}			pH_{inc}			pE_{ind}			pH_{inc}			pE_{ind}		
	NS	TH		NS	TH		N/A	NS	TH		NS	TH		NS	TH		N/A	N/A	TH		NS	TH		NS	TH		NS	TH		
0.00	20.0	N/A		-10.5	N/A		32.5	23.0	N/A		2.23	N/A		-14.2	N/A		7.39	N/A	N/A		7.39	N/A		-10.5	N/A		-10.5	N/A		
2.00	19.2	N/A		-11.1	N/A		31.7	22.5	N/A		1.43	N/A		-14.8	N/A		6.59	N/A	N/A		6.59	N/A		-11.0	N/A		-11.0	N/A		

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