MAGPy-8H3D+E3D SN:3080
MAGPy-DAS SN:3076

November 15, 2023

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	1.49	1.49	1.49	1.49	1.49	1.49	0.00	0.00	0.00	±0.3
3200	1.49	1.49	1.49	1.49	1.48	1.51	0.00	−0.06	0.12	±0.3
4000	1.48	1.48	1.48	1.48	1.48	1.48	0.00	0.00	0.00	±0.3
5200	1.47	1.47	1.47	1.46	1.46	1.45	−0.06	−0.06	−0.12	±0.3
6600	1.46	1.46	1.46	1.45	1.46	1.46	−0.06	0.00	0.00	±0.3
8200	1.45	1.45	1.45	1.45	1.44	1.44	0.00	−0.06	−0.06	±0.3
9000	1.44	1.44	1.44	1.44	1.44	1.44	0.00	0.00	0.00	±0.3
10600	4.36	4.32	4.31	4.39	4.30	4.32	0.06	−0.04	0.02	±0.3
13400	4.38	4.33	4.32	4.37	4.33	4.30	−0.02	0.00	−0.04	±0.3
17000	4.37	4.32	4.31	4.38	4.33	4.30	0.02	0.02	−0.02	±0.3
21400	4.39	4.34	4.34	4.41	4.34	4.33	0.04	0.00	−0.02	±0.3
27200	4.39	4.34	4.33	4.38	4.34	4.33	−0.02	0.00	0.00	±0.3
34400	4.39	4.35	4.34	4.39	4.36	4.34	0.00	0.02	0.00	±0.3
40000	4.38	4.35	4.34	4.37	4.35	4.34	−0.02	0.00	0.00	±0.3
43600	4.37	4.34	4.33	4.37	4.34	4.34	0.00	0.00	0.02	±0.3
55400	4.36	4.33	4.32	4.36	4.33	4.32	0.00	0.00	0.00	±0.3
70000	4.35	4.32	4.31	4.35	4.32	4.31	0.00	0.00	0.00	±0.3
88800	4.33	4.30	4.29	4.34	4.30	4.29	0.02	0.00	0.00	±0.3
112400	4.32	4.29	4.28	4.33	4.30	4.28	0.02	0.02	0.00	±0.3
142400	4.30	4.27	4.26	4.30	4.28	4.26	0.00	0.02	0.00	±0.3
161750	4.28	4.25	4.25	4.28	4.26	4.24	0.00	0.02	−0.02	±0.3
180400	4.27	4.24	4.23	4.27	4.25	4.24	0.00	0.02	0.02	±0.3
228400	4.24	4.21	4.20	4.24	4.21	4.20	0.00	0.00	0.00	±0.3
289400	4.19	4.17	4.16	4.20	4.17	4.16	0.02	0.00	0.00	±0.3
366400	4.15	4.13	4.12	4.15	4.13	4.12	0.00	0.00	0.00	±0.3
400000	4.13	4.11	4.10	4.14	4.12	4.11	0.02	0.02	0.02	±0.3
464000	4.11	4.08	4.07	4.10	4.09	4.07	−0.02	0.02	0.00	±0.3
587800	4.06	4.04	4.03	4.06	4.04	4.03	0.00	0.00	0.00	±0.3
744200	4.00	3.99	3.98	4.01	3.99	3.98	0.02	0.00	0.00	±0.3
942600	3.99	3.98	3.97	3.99	3.98	3.97	0.00	0.00	0.00	±0.3
1193600	3.96	3.95	3.94	3.97	3.95	3.94	0.02	0.00	0.00	±0.3
1511600	3.95	3.94	3.93	3.96	3.94	3.93	0.02	0.00	0.00	±0.3
1914400	3.94	3.92	3.91	3.94	3.92	3.91	0.00	0.00	0.00	±0.3
2424400	3.92	3.90	3.89	3.92	3.90	3.90	0.00	0.00	0.02	±0.3
3070200	3.90	3.88	3.87	3.90	3.88	3.88	0.00	0.00	0.02	±0.3
3888000	3.85	3.83	3.82	3.85	3.83	3.82	0.00	0.00	0.00	±0.3
4000000	3.84	3.82	3.81	3.85	3.83	3.81	0.02	0.02	0.00	±0.3
4923800	3.77	3.75	3.75	3.77	3.76	3.75	0.00	0.02	0.00	±0.3
6235400	3.65	3.63	3.62	3.65	3.63	3.62	0.00	0.00	0.00	±0.3
7896400	3.52	3.51	3.50	3.53	3.51	3.50	0.02	0.00	0.00	±0.3
10000000	3.38	3.37	3.37	3.38	3.37	3.35	0.00	0.00	−0.05	±0.3

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

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

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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	165	165	167	166	166	167	0.05	0.05	0.00	±0.3
3200	164	164	171	165	164	174	0.05	0.00	0.15	±0.3
4000	169	169	163	169	169	163	0.00	0.00	0.00	±0.3
5200	165	165	165	164	166	165	−0.05	0.05	0.00	±0.3
6600	171	171	167	171	171	167	0.00	0.00	0.00	±0.3
8200	159	159	163	158	159	163	−0.05	0.00	0.00	±0.3
9000	167	167	167	168	168	168	0.05	0.05	0.05	±0.3
10600	168	168	164	168	169	164	0.00	0.05	0.00	±0.3
13400	165	165	165	164	164	165	−0.05	−0.05	0.00	±0.3
17000	163	163	166	164	164	166	0.05	0.05	0.00	±0.3
21400	166	166	166	167	167	166	0.05	0.05	0.00	±0.3
27200	164	164	165	165	164	165	0.05	0.00	0.00	±0.3
34400	167	167	164	167	167	165	0.00	0.00	0.05	±0.3
40000	168	168	166	168	168	166	0.00	0.00	0.00	±0.3
43600	167	167	166	167	167	166	0.00	0.00	0.00	±0.3
55400	167	167	167	167	168	167	0.00	0.05	0.00	±0.3
70000	166	166	166	166	166	166	0.00	0.00	0.00	±0.3
88800	167	167	167	167	168	167	0.00	0.05	0.00	±0.3
112400	168	168	168	168	168	168	0.00	0.00	0.00	±0.3
142400	168	168	168	169	169	168	0.05	0.05	0.00	±0.3
161750	168	168	169	169	169	169	0.05	0.05	0.00	±0.3
180400	170	170	169	170	170	169	0.00	0.00	0.00	±0.3
228400	170	170	170	170	170	170	0.00	0.00	0.00	±0.3
289400	171	171	171	172	172	171	0.05	0.05	0.00	±0.3
366400	173	173	172	173	173	172	0.00	0.00	0.00	±0.3
400000	173	173	173	173	173	173	0.00	0.00	0.00	±0.3
464000	174	174	174	174	174	174	0.00	0.00	0.00	±0.3
587800	175	175	175	175	175	175	0.00	0.00	0.00	±0.3
744200	175	175	175	175	175	175	0.00	0.00	0.00	±0.3
942600	176	176	175	176	176	175	0.00	0.00	0.00	±0.3
1193600	176	176	175	176	176	175	0.00	0.00	0.00	±0.3
1511600	175	175	174	175	175	174	0.00	0.00	0.00	±0.3
1914400	174	174	174	175	175	174	0.05	0.05	0.00	±0.3
2424400	174	174	173	174	174	173	0.00	0.00	0.00	±0.3
3070200	174	174	173	174	174	173	0.00	0.00	0.00	±0.3
3888000	174	174	173	174	174	173	0.00	0.00	0.00	±0.3
4000000	174	174	173	174	174	173	0.00	0.00	0.00	±0.3
4923800	175	175	174	175	175	174	0.00	0.00	0.00	±0.3
6235400	177	177	176	177	177	176	0.00	0.00	0.00	±0.3
7896400	182	182	181	182	182	181	0.00	0.00	0.00	±0.3
10000000	191	191	190	191	191	190	0.00	0.00	0.00	±0.3

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

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

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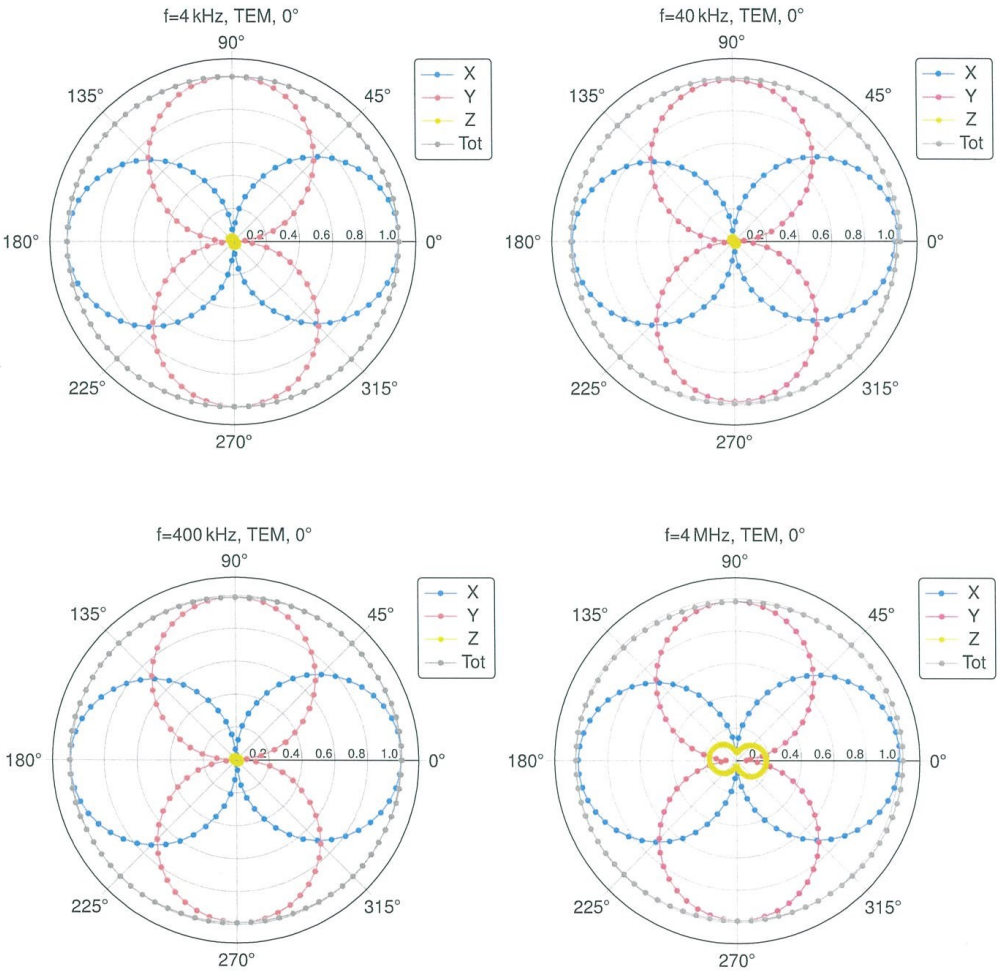
Isotropy H-Field

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



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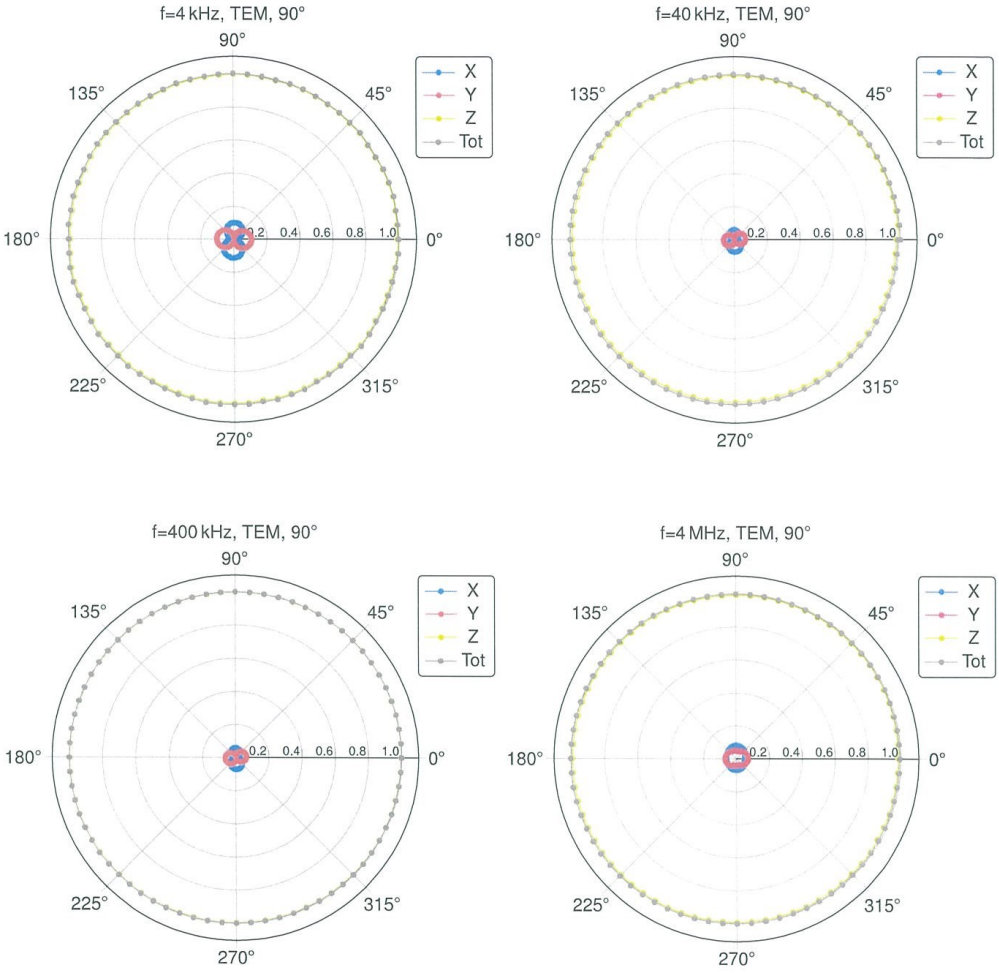
H-Field Receiving Pattern (ϕ), $\vartheta = 90°$



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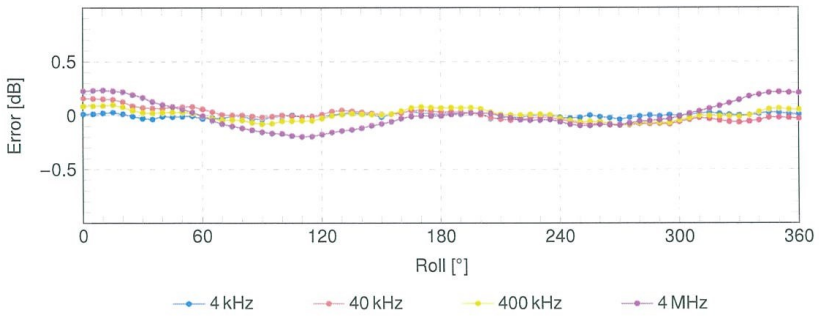
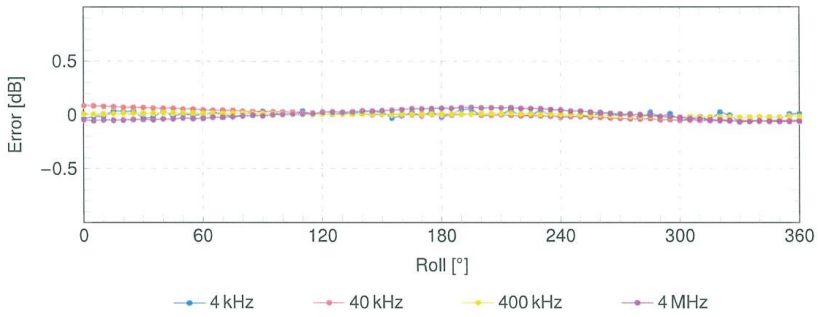
H-Field Receiving Pattern (ϕ), $\vartheta = 0°$



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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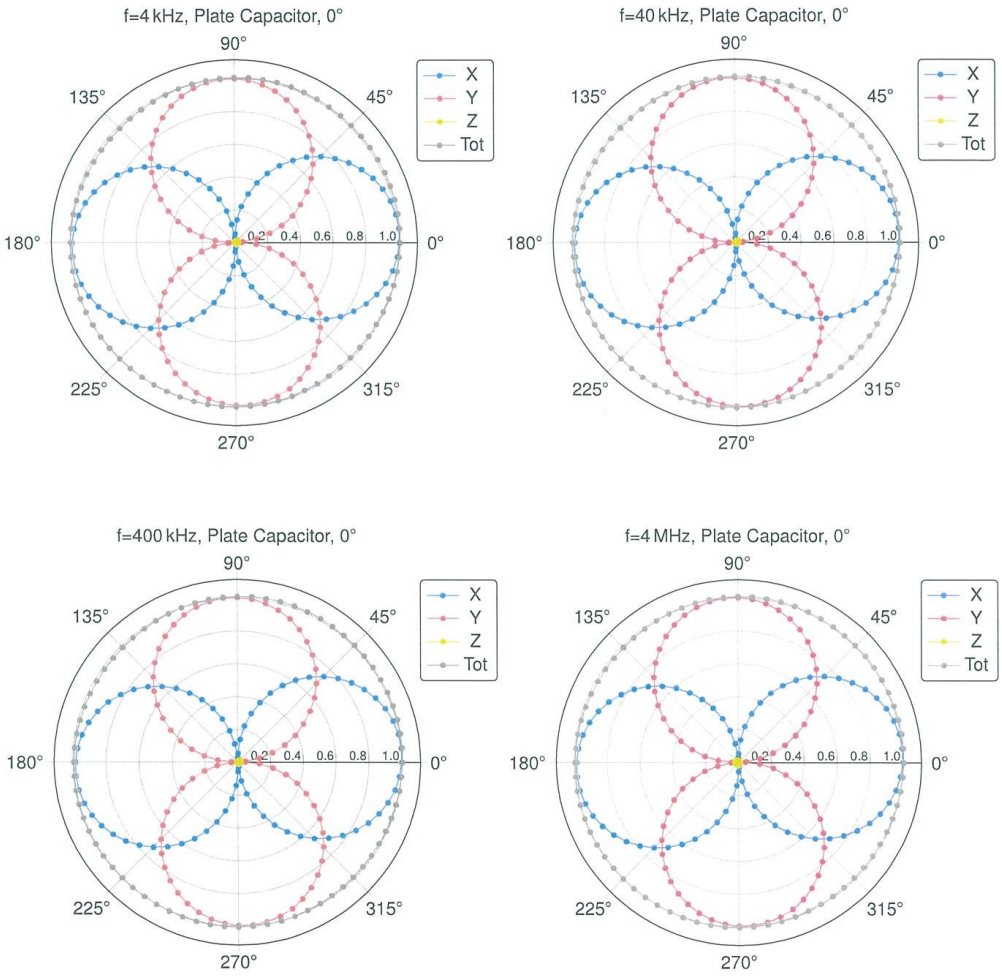
Isotropy E-Field

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



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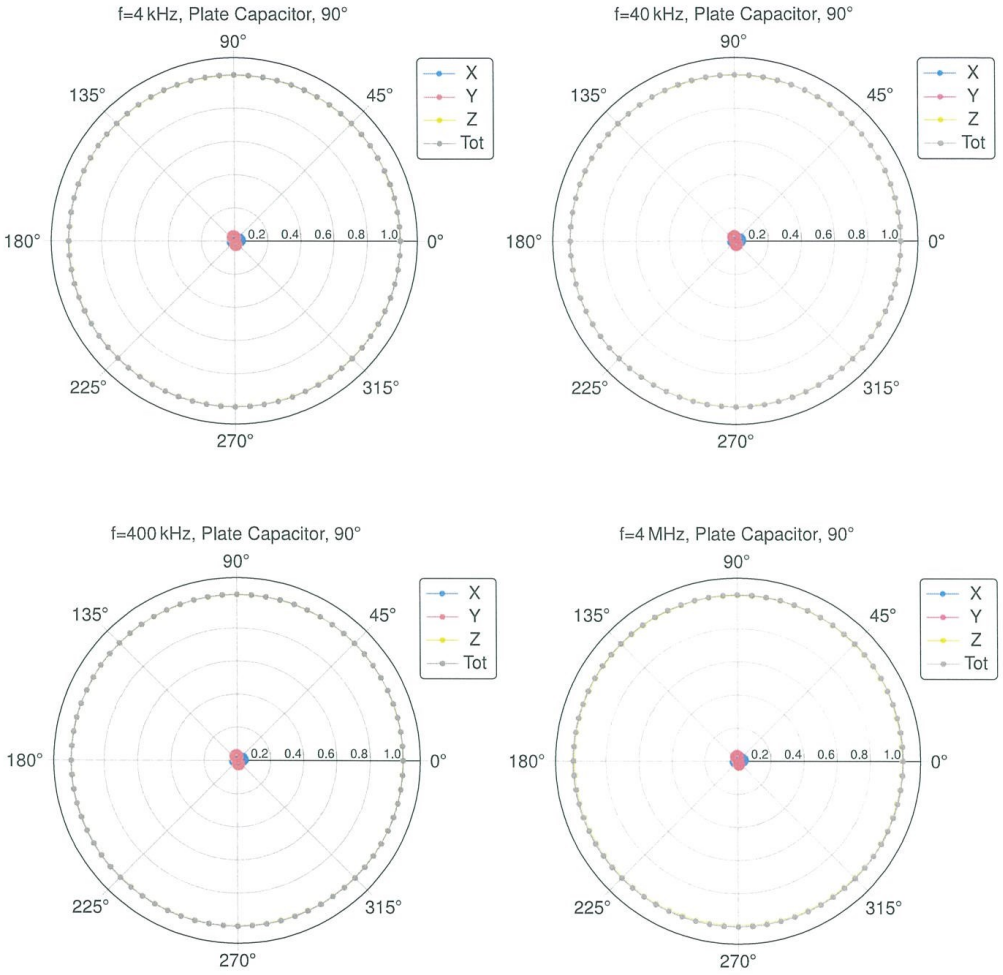
E-Field Receiving Pattern (ϕ), $\vartheta = 90°$



MAGPy-8H3D+E3D SN:3080
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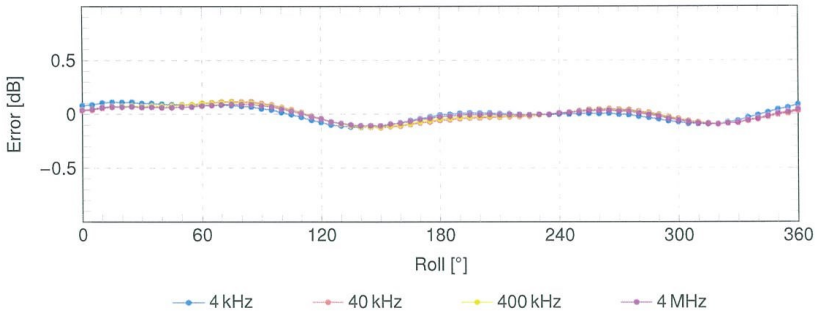
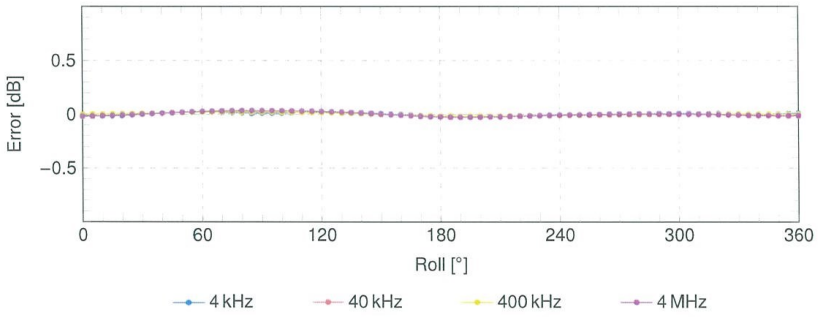
E-Field Receiving Pattern (ϕ), $\vartheta = 0°$



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



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

Annex D: Accreditation Certificate

Accredited Laboratory

A2LA has accredited

TELECOMMUNICATION TECHNOLOGY LABS, CAICT

Beijing, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 26th day of June 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 7049.01
Valid to July 31, 2024

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.