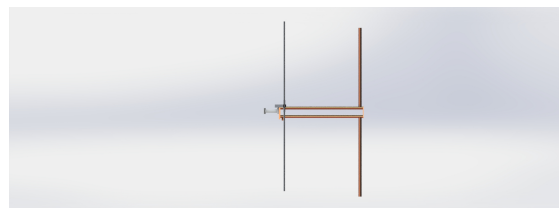


Sistema omnidirecional FM em polarização vertical com oito elementos, alimentação interna por linha rígida e capacidade opcional de tilt e null-fill.



Características elétricas

Item	Valor
Ganho cadastrado (referência)	9.01 dBd
HPBW horizontal	198.70°
HPBW vertical	6.33°
Faixa de frequência	76.00 – 108.00 MHz
Polarização	Vertical
Fabricante	EFTX Broadcast & Telecom
Categoria	FM
Número de elementos	8
Ganho nominal sem tilt/null-fill	9,01 dBd
Impedância de entrada	50 Ω
VSWR máximo	1,2:1 em topo / 1,5:1 em lateral
Conector de entrada	EIA 1 5/8" ou EIA 3 1/8"
Potência máxima por elemento	5 kW
Pressurização	plena
Velocidade máxima do vento	180 km/h
HPBW horizontal declarado na referência	198,97°
HPBW vertical declarado na referência	7,17°

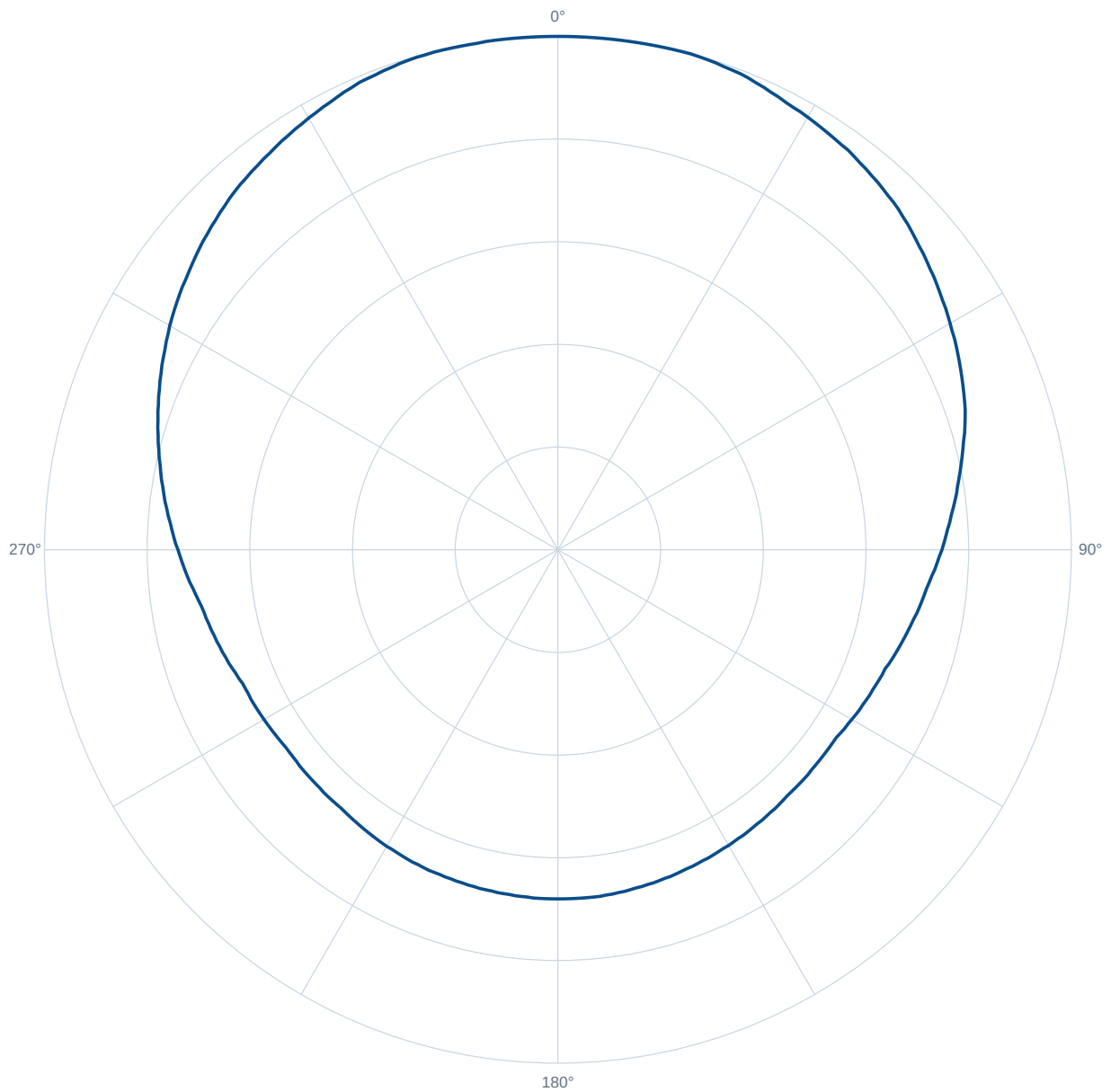


Validar autenticidade · 1.1

Página 1 · Código 54F18E85

Características mecânicas	
Item	Valor
Altura da antena (AA)	1,70 m
Largura da antena (L)	0,81 m
Área de exposição (CaAc)	1,28 m ²
Peso com interconexão em linha rígida	34 kg
Montagem	topo ou lateral
Alimentação	inferior ou central

Curva nominal da família ADVBN extraída da tabela da página 4.



Parâmetros da configuração

HPBW HORIZONTAL

198.70°

GANHO

9.01 dBd

FRENTE/COSTAS

3.35 dB

RIPPLE

3.69 dB

Tabela completa - Azimute

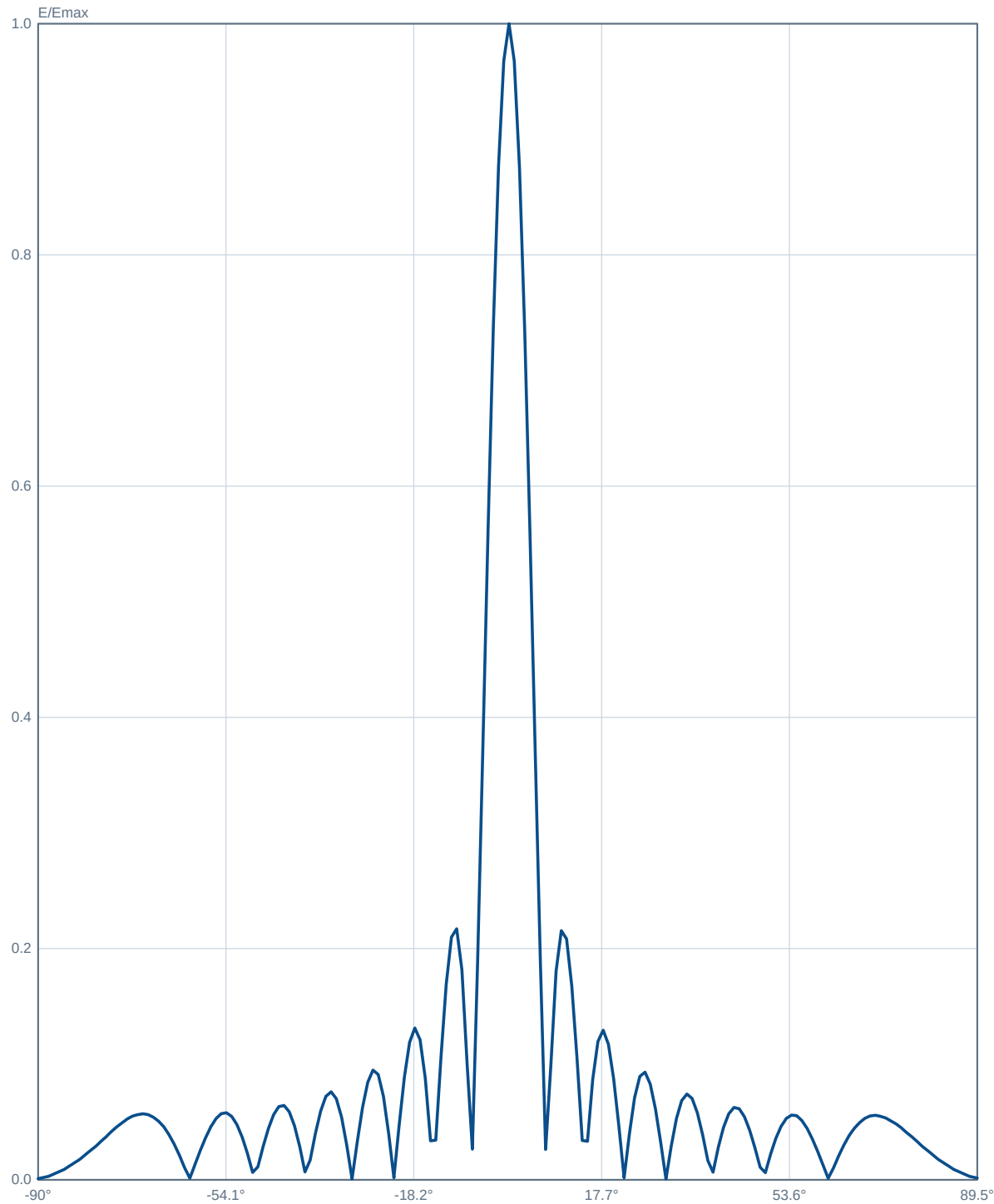


ADVBN-8 · Azimute nominal

Ângulo	E/E _{max}	Aten. dB	Ângulo	E/E _{max}	Aten. dB	Ângulo	E/E _{max}	Aten. dB	Ângulo	E/E _{max}	Aten. dB	Ângulo	E/E _{max}	Aten. dB
0°	1.0000	-0.00	73°	0.8290	1.63	146°	0.6620	3.58	219°	0.6580	3.64	292°	0.8370	1.55
1°	1.0000	-0.00	74°	0.8240	1.68	147°	0.6630	3.57	220°	0.6570	3.65	293°	0.8420	1.49
2°	1.0000	-0.00	75°	0.8180	1.74	148°	0.6630	3.57	221°	0.6570	3.65	294°	0.8460	1.45
3°	1.0000	-0.00	76°	0.8130	1.80	149°	0.6640	3.56	222°	0.6570	3.65	295°	0.8510	1.40
4°	1.0000	-0.00	77°	0.8080	1.85	150°	0.6650	3.54	223°	0.6570	3.65	296°	0.8550	1.36
5°	1.0000	-0.00	78°	0.8030	1.91	151°	0.6650	3.54	224°	0.6570	3.65	297°	0.8590	1.32
6°	1.0000	-0.00	79°	0.7980	1.96	152°	0.6660	3.53	225°	0.6560	3.66	298°	0.8640	1.27
7°	1.0000	-0.00	80°	0.7930	2.01	153°	0.6670	3.52	226°	0.6560	3.66	299°	0.8680	1.23
8°	1.0000	-0.00	81°	0.7880	2.07	154°	0.6680	3.50	227°	0.6560	3.66	300°	0.8730	1.18
9°	1.0000	-0.00	82°	0.7840	2.11	155°	0.6680	3.50	228°	0.6560	3.66	301°	0.8770	1.14
10°	1.0000	-0.00	83°	0.7790	2.17	156°	0.6690	3.49	229°	0.6560	3.66	302°	0.8810	1.10
11°	1.0000	-0.00	84°	0.7740	2.23	157°	0.6700	3.48	230°	0.6560	3.66	303°	0.8850	1.06
12°	1.0000	-0.00	85°	0.7690	2.28	158°	0.6700	3.48	231°	0.6550	3.68	304°	0.8890	1.02
13°	1.0000	-0.00	86°	0.7650	2.33	159°	0.6710	3.47	232°	0.6550	3.68	305°	0.8930	0.98
14°	1.0000	-0.00	87°	0.7600	2.38	160°	0.6720	3.45	233°	0.6550	3.68	306°	0.8960	0.95
15°	1.0000	-0.00	88°	0.7560	2.43	161°	0.6730	3.44	234°	0.6550	3.68	307°	0.9000	0.92
16°	0.9990	0.01	89°	0.7520	2.48	162°	0.6730	3.44	235°	0.6560	3.66	308°	0.9040	0.88
17°	0.9980	0.02	90°	0.7480	2.52	163°	0.6740	3.43	236°	0.6570	3.65	309°	0.9080	0.84
18°	0.9970	0.03	91°	0.7430	2.58	164°	0.6750	3.41	237°	0.6580	3.64	310°	0.9120	0.80
19°	0.9950	0.04	92°	0.7390	2.63	165°	0.6750	3.41	238°	0.6590	3.62	311°	0.9160	0.76
20°	0.9940	0.05	93°	0.7350	2.67	166°	0.6760	3.40	239°	0.6600	3.61	312°	0.9190	0.73
21°	0.9930	0.06	94°	0.7300	2.73	167°	0.6760	3.40	240°	0.6610	3.60	313°	0.9230	0.70
22°	0.9910	0.08	95°	0.7260	2.78	168°	0.6770	3.39	241°	0.6620	3.58	314°	0.9260	0.67
23°	0.9880	0.10	96°	0.7220	2.83	169°	0.6780	3.38	242°	0.6630	3.57	315°	0.9300	0.63
24°	0.9860	0.12	97°	0.7190	2.87	170°	0.6780	3.38	243°	0.6640	3.56	316°	0.9330	0.60
25°	0.9830	0.15	98°	0.7160	2.90	171°	0.6790	3.36	244°	0.6650	3.54	317°	0.9370	0.57
26°	0.9810	0.17	99°	0.7130	2.94	172°	0.6790	3.36	245°	0.6650	3.54	318°	0.9400	0.54
27°	0.9780	0.19	100°	0.7100	2.97	173°	0.6800	3.35	246°	0.6660	3.53	319°	0.9430	0.51
28°	0.9760	0.21	101°	0.7060	3.02	174°	0.6800	3.35	247°	0.6670	3.52	320°	0.9450	0.49
29°	0.9750	0.22	102°	0.7030	3.06	175°	0.6800	3.35	248°	0.6700	3.48	321°	0.9480	0.46
30°	0.9730	0.24	103°	0.7000	3.10	176°	0.6800	3.35	249°	0.6720	3.45	322°	0.9500	0.45
31°	0.9710	0.26	104°	0.6970	3.14	177°	0.6800	3.35	250°	0.6750	3.41	323°	0.9530	0.42
32°	0.9690	0.27	105°	0.6940	3.17	178°	0.6800	3.35	251°	0.6780	3.38	324°	0.9550	0.40
33°	0.9670	0.29	106°	0.6910	3.21	179°	0.6800	3.35	252°	0.6800	3.35	325°	0.9580	0.37
34°	0.9650	0.31	107°	0.6880	3.25	180°	0.6800	3.35	253°	0.6830	3.31	326°	0.9610	0.35
35°	0.9630	0.33	108°	0.6850	3.29	181°	0.6800	3.35	254°	0.6850	3.29	327°	0.9630	0.33
36°	0.9620	0.34	109°	0.6820	3.32	182°	0.6800	3.35	255°	0.6880	3.25	328°	0.9660	0.30
37°	0.9590	0.36	110°	0.6780	3.38	183°	0.6800	3.35	256°	0.6900	3.22	329°	0.9680	0.28
38°	0.9560	0.39	111°	0.6770	3.39	184°	0.6800	3.35	257°	0.6930	3.19	330°	0.9710	0.26
39°	0.9540	0.41	112°	0.6750	3.41	185°	0.6790	3.36	258°	0.6950	3.16	331°	0.9730	0.24
40°	0.9510	0.44	113°	0.6730	3.44	186°	0.6790	3.36	259°	0.6980	3.12	332°	0.9760	0.21
41°	0.9490	0.45	114°	0.6710	3.47	187°	0.6790	3.36	260°	0.7000	3.10	333°	0.9780	0.19
42°	0.9460	0.48	115°	0.6700	3.48	188°	0.6780	3.38	261°	0.7030	3.06	334°	0.9810	0.17
43°	0.9430	0.51	116°	0.6680	3.50	189°	0.6780	3.38	262°	0.7070	3.01	335°	0.9840	0.14
44°	0.9410	0.53	117°	0.6660	3.53	190°	0.6780	3.38	263°	0.7110	2.96	336°	0.9860	0.12
45°	0.9380	0.56	118°	0.6650	3.54	191°	0.6770	3.39	264°	0.7150	2.91	337°	0.9890	0.10
46°	0.9340	0.59	119°	0.6630	3.57	192°	0.6770	3.39	265°	0.7200	2.85	338°	0.9900	0.09
47°	0.9310	0.62	120°	0.6610	3.60	193°	0.6770	3.39	266°	0.7240	2.81	339°	0.9910	0.08
48°	0.9270	0.66	121°	0.6590	3.62	194°	0.6760	3.40	267°	0.7280	2.76	340°	0.9930	0.06
49°	0.9230	0.70	122°	0.6580	3.64	195°	0.6760	3.40	268°	0.7320	2.71	341°	0.9940	0.05
50°	0.9190	0.73	123°	0.6560	3.66	196°	0.6750	3.41	269°	0.7360	2.66	342°	0.9960	0.03
51°	0.9160	0.76	124°	0.6540	3.69	197°	0.6750	3.41	270°	0.7400	2.62	343°	0.9970	0.03
52°	0.9120	0.80	125°	0.6540	3.69	198°	0.6740	3.43	271°	0.7450	2.56	344°	0.9980	0.02
53°	0.9080	0.84	126°	0.6540	3.69	199°	0.6740	3.43	272°	0.7490	2.51	345°	0.9980	0.02
54°	0.9050	0.87	127°	0.6540	3.69	200°	0.6730	3.44	273°	0.7530	2.46	346°	0.9990	0.01
55°	0.9010	0.91	128°	0.6540	3.69	201°	0.6730	3.44	274°	0.7570	2.42	347°	0.9990	0.01
56°	0.8970	0.94	129°	0.6540	3.69	202°	0.6730	3.44	275°	0.7620	2.36	348°	0.9990	0.01
57°	0.8930	0.98	130°	0.6540	3.69	203°	0.6720	3.45	276°	0.7660	2.32	349°	0.9990	0.01
58°	0.8900	1.01	131°	0.6540	3.69	204°	0.6710	3.47	277°	0.7710	2.26	350°	0.9990	0.01
59°	0.8860	1.05	132°	0.6550	3.68	205°	0.6710	3.47	278°	0.7750	2.21	351°	0.9990	0.01
60°	0.8820	1.09	133°	0.6550	3.68	206°	0.6700	3.48	279°	0.7790	2.17	352°	1.0000	-0.00
61°	0.8780	1.13	134°	0.6550	3.68	207°	0.6690	3.49	280°	0.7840	2.11	353°	1.0000	-0.00
62°	0.8750	1.16	135°	0.6550	3.68	208°	0.6680	3.50	281°	0.7880	2.07	354°	1.0000	-0.00
63°	0.8710	1.20	136°	0.6550	3.68	209°	0.6670	3.52	282°	0.7920	2.03	355°	1.0000	-0.00
64°	0.8670	1.24	137°	0.6550	3.68	210°	0.6670	3.52	283°	0.7970	1.97	356°	1.0000	-0.00
65°	0.8630	1.28	138°	0.6560	3.66	211°	0.6660	3.53	284°	0.8010	1.93	357°	1.0000	-0.00
66°	0.8590	1.32	139°	0.6570	3.65	212°	0.6650	3.54	285°	0.8060	1.87	358°	1.0000	-0.00
67°	0.8550	1.36	140°	0.6580	3.64	213°	0.6640	3.56	286°	0.8100	1.83	359°	1.0000	-0.00
68°	0.8510	1.40	141°	0.6580	3.64	214°	0.6630	3.57	287°	0.8150	1.78	360°	1.0000	-0.00
69°	0.8470	1.44	142°	0.6590	3.62	215°	0.6620	3.58	288°	0.8190	1.73			
70°	0.8430	1.48	143°	0.6600	3.61	216°	0.6610	3.60	289°	0.8240	1.68			
71°	0.8390	1.52	144°	0.6600	3.61	217°	0.6600	3.61	290°	0.8280	1.64			
72°	0.8340	1.58	145°	0.6610	3.60	218°	0.6590	3.62	291°	0.8330	1.59			

E/E_{max} de campo normalizado · atenuação positiva em dB

Curva ADVBN-8 sem tilt e null-fill extraída da tabela da página 20.



Parâmetros da configuração			
ELEMENTOS	HPBW VERTICAL	GANHO	PRIMEIRO NULO
8	6.33°	9.01 dBd	7.00°

Tabela completa - Elevação



ADVBN-8 · Elevação nominal — 8 elementos

Ângulo	E/E _{max}	Aten. dB	Ângulo	E/E _{max}	Aten. dB	Ângulo	E/E _{max}	Aten. dB	Ângulo	E/E _{max}	Aten. dB	Ângulo	E/E _{max}	Aten. dB
-90°	0.0010	60.00	-54°	0.0580	24.73	-18°	0.1313	17.63	18°	0.1294	17.76	54°	0.0560	25.04
-89.5°	0.0015	56.48	-53.5°	0.0564	24.97	-17.5°	0.1262	17.98	18.5°	0.1233	18.18	54.5°	0.0557	25.08
-89°	0.0020	53.98	-53°	0.0548	25.22	-17°	0.1212	18.33	19°	0.1173	18.61	55°	0.0554	25.13
-88.5°	0.0025	52.04	-52.5°	0.0513	25.80	-16.5°	0.1045	19.62	19.5°	0.1023	19.80	55.5°	0.0533	25.47
-88°	0.0030	50.46	-52°	0.0477	26.43	-16°	0.0878	21.13	20°	0.0874	21.17	56°	0.0511	25.83
-87.5°	0.0040	47.96	-51.5°	0.0423	27.47	-15.5°	0.0608	24.32	20.5°	0.0669	23.49	56.5°	0.0477	26.43
-87°	0.0050	46.02	-51°	0.0369	28.66	-15°	0.0337	29.45	21°	0.0464	26.67	57°	0.0443	27.07
-86.5°	0.0060	44.44	-50.5°	0.0299	30.49	-14.5°	0.0340	29.37	21.5°	0.0241	32.36	57.5°	0.0397	28.02
-86°	0.0070	43.10	-50°	0.0229	32.80	-14°	0.0343	29.29	22°	0.0017	55.39	58°	0.0351	29.09
-85.5°	0.0080	41.94	-49.5°	0.0146	36.71	-13.5°	0.0702	23.07	22.5°	0.0205	33.76	58.5°	0.0298	30.52
-85°	0.0090	40.92	-49°	0.0064	43.88	-13°	0.1061	19.49	23°	0.0393	28.11	59°	0.0245	32.22
-84.5°	0.0105	39.58	-48.5°	0.0088	41.11	-12.5°	0.1376	17.23	23.5°	0.0552	25.16	59.5°	0.0187	34.56
-84°	0.0120	38.42	-48°	0.0112	39.02	-12°	0.1691	15.44	24°	0.0710	22.97	60°	0.0130	37.72
-83.5°	0.0134	37.46	-47.5°	0.0199	34.02	-11.5°	0.1895	14.45	24.5°	0.0802	21.92	60.5°	0.0072	42.85
-83°	0.0149	36.54	-47°	0.0287	30.84	-11°	0.2099	13.56	25°	0.0894	20.97	61°	0.0013	57.72
-82.5°	0.0163	35.76	-46.5°	0.0364	28.78	-10.5°	0.2135	13.41	25.5°	0.0913	20.79	61.5°	0.0057	44.88
-82°	0.0178	34.99	-46°	0.0441	27.11	-10°	0.2171	13.27	26°	0.0931	20.62	62°	0.0101	39.91
-81.5°	0.0197	34.11	-45.5°	0.0502	25.99	-9.5°	0.1993	14.01	26.5°	0.0879	21.12	62.5°	0.0153	36.31
-81°	0.0216	33.31	-45°	0.0562	25.01	-9°	0.1816	14.82	27°	0.0827	21.65	63°	0.0206	33.72
-80.5°	0.0235	32.58	-44.5°	0.0598	24.47	-8.5°	0.1407	17.03	27.5°	0.0719	22.87	63.5°	0.0253	31.94
-80°	0.0253	31.94	-44°	0.0633	23.97	-8°	0.0997	20.03	28°	0.0611	24.28	64°	0.0300	30.46
-79.5°	0.0271	31.34	-43.5°	0.0638	23.90	-7.5°	0.0631	24.00	28.5°	0.0466	26.63	64.5°	0.0341	29.34
-79°	0.0289	30.78	-43°	0.0643	23.84	-7°	0.0265	31.54	29°	0.0322	29.84	65°	0.0382	28.36
-78.5°	0.0310	30.17	-42.5°	0.0616	24.21	-6.5°	0.1076	19.36	29.5°	0.0164	35.70	65.5°	0.0414	27.66
-78°	0.0332	29.58	-42°	0.0588	24.61	-6°	0.1888	14.48	30°	0.0007	63.10	66°	0.0445	27.03
-77.5°	0.0352	29.07	-41.5°	0.0528	25.55	-5.5°	0.2810	11.03	30.5°	0.0148	36.59	66.5°	0.0470	26.56
-77°	0.0372	28.59	-41°	0.0467	26.61	-5°	0.3732	8.56	31°	0.0290	30.75	67°	0.0494	26.13
-76.5°	0.0395	28.07	-40.5°	0.0377	28.47	-4.5°	0.4679	6.60	31.5°	0.0409	27.77	67.5°	0.0513	25.80
-76°	0.0417	27.60	-40°	0.0288	30.81	-4°	0.5625	5.00	32°	0.0529	25.53	68°	0.0531	25.50
-75.5°	0.0437	27.19	-39.5°	0.0178	34.99	-3.5°	0.6498	3.74	32.5°	0.0607	24.34	68.5°	0.0542	25.32
-75°	0.0457	26.80	-39°	0.0068	43.35	-3°	0.7370	2.65	33°	0.0685	23.29	69°	0.0552	25.16
-74.5°	0.0474	26.48	-38.5°	0.0119	38.49	-2.5°	0.8069	1.86	33.5°	0.0713	22.94	69.5°	0.0555	25.11
-74°	0.0491	26.18	-38°	0.0171	35.34	-2°	0.8768	1.14	34°	0.0742	22.59	70°	0.0558	25.07
-73.5°	0.0508	25.88	-37.5°	0.0286	30.87	-1.5°	0.9223	0.70	34.5°	0.0723	22.82	70.5°	0.0554	25.13
-73°	0.0525	25.60	-37°	0.0401	27.94	-1°	0.9678	0.28	35°	0.0703	23.06	71°	0.0549	25.21
-72.5°	0.0538	25.38	-36.5°	0.0498	26.06	0°	0.9839	0.14	35.5°	0.0641	23.86	71.5°	0.0542	25.32
-72°	0.0550	25.19	-36°	0.0594	24.52	0°	1.0000	-0.00	36°	0.0579	24.75	72°	0.0535	25.43
-71.5°	0.0557	25.08	-35.5°	0.0658	23.64	0.5°	0.9839	0.14	36.5°	0.0485	26.29	72.5°	0.0522	25.65
-71°	0.0563	24.99	-35°	0.0722	22.83	1°	0.9678	0.28	37°	0.0391	28.16	73°	0.0509	25.87
-70.5°	0.0567	24.93	-34.5°	0.0741	22.60	1.5°	0.9218	0.71	37.5°	0.0279	31.09	73.5°	0.0496	26.09
-70°	0.0571	24.87	-34°	0.0761	22.37	2°	0.8759	1.15	38°	0.0167	35.55	74°	0.0483	26.32
-69.5°	0.0568	24.91	-33.5°	0.0731	22.72	2.5°	0.8053	1.88	38.5°	0.0116	38.71	74.5°	0.0466	26.63
-69°	0.0564	24.97	-33°	0.0701	23.09	3°	0.7348	2.68	39°	0.0066	43.61	75°	0.0449	26.96
-68.5°	0.0553	25.15	-32.5°	0.0621	24.14	3.5°	0.6478	3.77	39.5°	0.0173	35.24	75.5°	0.0428	27.37
-68°	0.0542	25.32	-32°	0.0542	25.32	4°	0.5608	5.02	40°	0.0280	31.06	76°	0.0408	27.79
-67.5°	0.0525	25.60	-31.5°	0.0419	27.56	4.5°	0.4665	6.62	40.5°	0.0367	28.71	76.5°	0.0390	28.18
-67°	0.0508	25.88	-31°	0.0296	30.57	5°	0.3721	8.59	41°	0.0453	26.88	77°	0.0372	28.59
-66.5°	0.0484	26.30	-30.5°	0.0152	36.36	5.5°	0.2799	11.06	41.5°	0.0512	25.81	77.5°	0.0352	29.07
-66°	0.0460	26.74	-30°	0.0007	63.10	6°	0.1878	14.53	42°	0.0571	24.87	78°	0.0332	29.58
-65.5°	0.0426	27.41	-29.5°	0.0168	35.49	6.5°	0.1071	19.40	42.5°	0.0598	24.47	78.5°	0.0310	30.17
-65°	0.0391	28.16	-29°	0.0329	29.66	7°	0.0263	31.60	43°	0.0626	24.07	79°	0.0289	30.78
-64.5°	0.0350	29.12	-28.5°	0.0477	26.43	7.5°	0.0627	24.05	43.5°	0.0620	24.15	79.5°	0.0271	31.34
-64°	0.0309	30.20	-28°	0.0624	24.10	8°	0.0991	20.08	44°	0.0615	24.22	80°	0.0253	31.94
-63.5°	0.0261	31.67	-27.5°	0.0734	22.69	8.5°	0.1398	17.09	44.5°	0.0580	24.73	80.5°	0.0235	32.58
-63°	0.0213	33.43	-27°	0.0843	21.48	9°	0.1805	14.87	45°	0.0545	25.27	81°	0.0216	33.31
-62.5°	0.0158	36.03	-26.5°	0.0896	20.95	9.5°	0.1980	14.07	45.5°	0.0487	26.25	81.5°	0.0197	34.11
-62°	0.0104	39.66	-26°	0.0949	20.45	10°	0.2155	13.33	46°	0.0428	27.37	82°	0.0178	34.99
-61.5°	0.0059	44.58	-25.5°	0.0930	20.63	10.5°	0.2119	13.48	46.5°	0.0353	29.04	82.5°	0.0163	35.76
-61°	0.0014	57.08	-25°	0.0911	20.81	11°	0.2084	13.62	47°	0.0277	31.15	83°	0.0149	36.54
-60.5°	0.0074	42.62	-24.5°	0.0817	21.76	11.5°	0.1880	14.52	47.5°	0.0193	34.29	83.5°	0.0134	37.46
-60°	0.0135	37.39	-24°	0.0722	22.83	12°	0.1676	15.51	48°	0.0109	39.25	84°	0.0120	38.42
-59.5°	0.0194	34.24	-23.5°	0.0561	25.02	12.5°	0.1364	17.30	48.5°	0.0085	41.41	84.5°	0.0105	39.58
-59°	0.0254	31.90	-23°	0.0400	27.96	13°	0.1051	19.57	49°	0.0062	44.15	85°	0.0090	40.92
-58.5°	0.0308	30.23	-22.5°	0.0209	33.60	13.5°	0.0695	23.16	49.5°	0.0142	36.95	85.5°	0.0080	41.94
-58°	0.0363	28.80	-22°	0.0018	54.89	14°	0.0340	29.37	50°	0.0222	33.07	86°	0.0070	43.10
-57.5°	0.0410	27.74	-21.5°	0.0244	32.25	14.5°	0.0337	29.45	50.5°	0.0290	30.75	86.5°	0.0060	44.44
-57°	0.0458	26.78	-21°	0.0471	26.54	15°	0.0333	29.55	51°	0.0358	28.92	87°	0.0050	46.02
-56.5°	0.0493	26.14	-20.5°	0.0678	23.38	15.5°	0.0601	24.42	51.5°	0.0410	27.74	87.5°	0.0040	47.96
-56°	0.0529	25.53	-20°	0.0886	21.05	16°	0.0868	21.23	52°	0.0462	26.71	88°	0.0030	50.46
-55.5°	0.0551	25.18	-19.5°	0.1038	19.68	16.5°	0.1033	19.72	52.5°	0.0496	26.09	88.5°	0.0025	52.04
-55°	0.0572	24.85	-19°	0.1189	18.50	17°	0.1197	18.44	53°	0.0531	25.50	89°	0.0020	53.98
-54.5°	0.0576	24.79	-18.5°	0.1251	18.05	17.5°	0.1246	18.09	53.5°	0.0545	25.27	89.5°	0.0015	56.48

E/E_{max} de campo normalizado · atenuação positiva em dB