

Antena FM com polarização circular direita, disponível em configurações de 1 a 12 níveis. Construção robusta em latão, cobre e aço galvanizado, com fixadores em aço inox e isoladores PTFE. Inclui acessórios como divisores de potência. Os sistemas podem ser alimentados com linhas rígidas ou com divisor e cabos, com alimentação central para linhas rígidas.



Características elétricas

Item	Valor
Ganho cadastrado (referência)	-3.01 dBd
HPBW horizontal	359.00°
HPBW vertical	47.51°
Faixa de frequência	76.10 – 107.90 MHz
Polarização	Circular direita
Fabricante	EFTX Broadcast & Telecom
Categoria	FM
Potência Max por elemento	5 Kw em 1-5/8"
Ganho	Vide Tabela
Frequency range	76,1 a 107,9 MHz
Polarization	Circular direita
Circularidade	< 1,5 dB (espaço livre)
Diagrama vertical	Sob Demanda
Impedância de entrada	50 ohms
VSWR Max no canal	1,1:1
Conector de entrada	EIA1-5/8", 3 - 1/8", 4 - 1/16"
Quantidade de Níveis	1,2,3,4,6,8,12



Validar autenticidade · 1.3

Página 1 · Código 70129B13

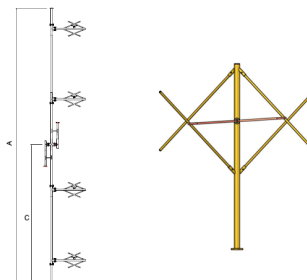
Características mecânicas

Item	Valor
Material Empregado	Estrutura em latão e cobre, Fixadores em aço inox e isoladores em PTFE, Estrutura de sustentação em aço galvanizado
Montagem	Fornecida com suportes compatíveis com tubos de 3,5" a 10" em aço
Acabamento	Pintura na cor laranja
Acessórios	Divisores de potência construídos em latão e cobre com contatos internos prateados
Embalagem	Caixa de madeira
Altura da antena (AFCD-1)	350 mm
Centro de radiação (AFCD-1)	175 mm
Peso médio da antena (AFCD-1 @ 90.1-91.9MHz)	15 Kg
Área de exposição (AFCD-1 @ 90.1-91.9MHz)	0,15 m²

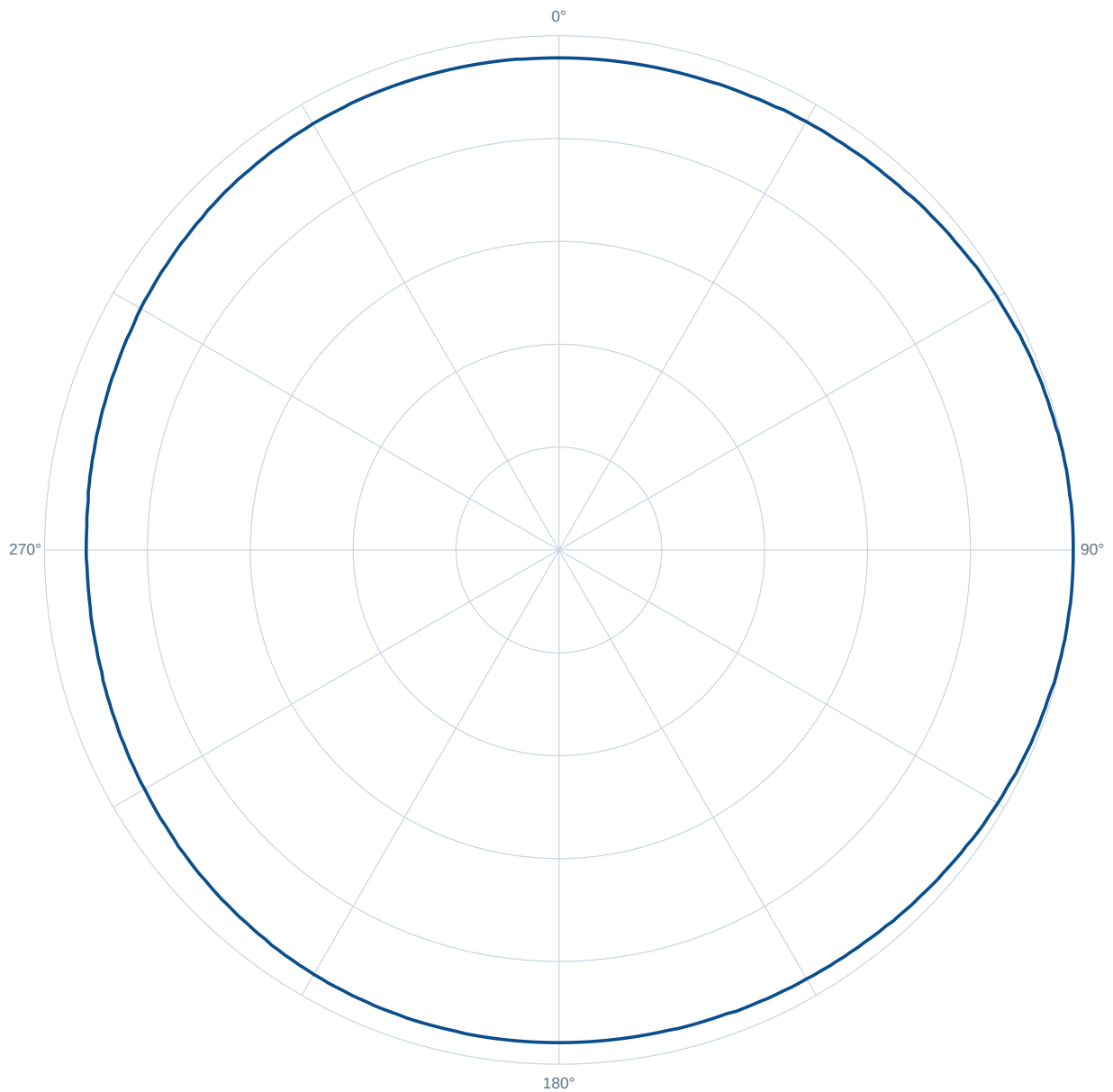
Características Mecânicas

A: Altura da antena em mm
C: Centro de radiação em mm
P: Peso médio da antena em Kg
AE: Área de exposição (CobK) da antena em m²

Modelo	AFCD-1	AFCD-2	AFCD-3	AFCD-4	AFCD-5	AFCD-6
Altura (A)	350	400	450	500	550	600
Centro de radiação (C)	175	200	225	250	275	300
Peso médio (P)	15	18	21	24	27	30
Área de exposição (AE)	0,15	0,18	0,21	0,24	0,27	0,30



HPBW (HORIZONTAL) - FREQUÊNCIA - POTÊNCIA Diagrama de azimute



Parâmetros da configuração

HPBW HORIZONTAL

359.00°

GANHO

-3.01 dBd

FRENTE/COSTAS

0.59 dB

RIPPLE

0.74 dB

Tabela completa - Azimute

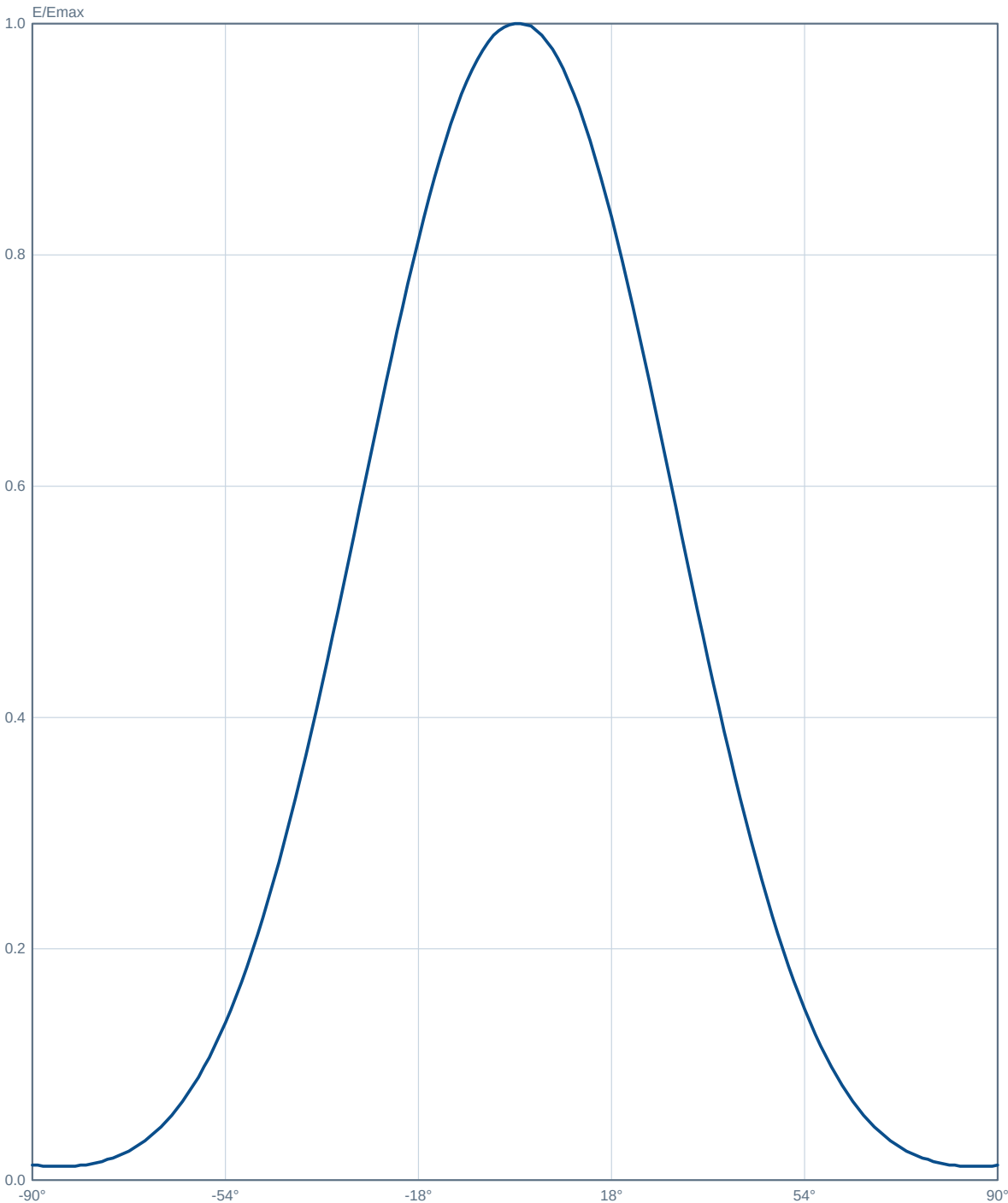


Atenuação (dB) - (E/Emax) - (dB) - Diagrama de Azimute

Angulo	E/Emax	Aten. dB	Angulo	E/Emax	Aten. dB	Angulo	E/Emax	Aten. dB	Angulo	E/Emax	Aten. dB	Angulo	E/Emax	Aten. dB
0°	0.9570	0.38	73°	0.9940	0.05	146°	0.9650	0.31	219°	0.9470	0.47	292°	0.9310	0.62
1°	0.9570	0.38	74°	0.9940	0.05	147°	0.9650	0.31	220°	0.9460	0.48	293°	0.9320	0.61
2°	0.9570	0.38	75°	0.9950	0.04	148°	0.9640	0.32	221°	0.9460	0.48	294°	0.9330	0.60
3°	0.9570	0.38	76°	0.9950	0.04	149°	0.9640	0.32	222°	0.9450	0.49	295°	0.9340	0.59
4°	0.9570	0.38	77°	0.9970	0.03	150°	0.9630	0.33	223°	0.9440	0.50	296°	0.9350	0.58
5°	0.9570	0.38	78°	0.9970	0.03	151°	0.9630	0.33	224°	0.9440	0.50	297°	0.9350	0.58
6°	0.9570	0.38	79°	0.9980	0.02	152°	0.9630	0.33	225°	0.9430	0.51	298°	0.9360	0.57
7°	0.9570	0.38	80°	0.9980	0.02	153°	0.9620	0.34	226°	0.9420	0.52	299°	0.9380	0.56
8°	0.9570	0.38	81°	0.9990	0.01	154°	0.9620	0.34	227°	0.9410	0.53	300°	0.9390	0.55
9°	0.9570	0.38	82°	0.9990	0.01	155°	0.9620	0.34	228°	0.9410	0.53	301°	0.9400	0.54
10°	0.9570	0.38	83°	0.9990	0.01	156°	0.9610	0.35	229°	0.9400	0.54	302°	0.9400	0.54
11°	0.9570	0.38	84°	0.9990	0.01	157°	0.9610	0.35	230°	0.9390	0.55	303°	0.9410	0.53
12°	0.9570	0.38	85°	1.0000	-0.00	158°	0.9610	0.35	231°	0.9380	0.56	304°	0.9420	0.52
13°	0.9570	0.38	86°	1.0000	-0.00	159°	0.9610	0.35	232°	0.9380	0.56	305°	0.9430	0.51
14°	0.9570	0.38	87°	1.0000	-0.00	160°	0.9590	0.36	233°	0.9360	0.57	306°	0.9430	0.51
15°	0.9570	0.38	88°	1.0000	-0.00	161°	0.9590	0.36	234°	0.9350	0.58	307°	0.9440	0.50
16°	0.9570	0.38	89°	1.0000	-0.00	162°	0.9590	0.36	235°	0.9340	0.59	308°	0.9450	0.49
17°	0.9570	0.38	90°	1.0000	-0.00	163°	0.9590	0.36	236°	0.9340	0.59	309°	0.9460	0.48
18°	0.9570	0.38	91°	1.0000	-0.00	164°	0.9590	0.36	237°	0.9330	0.60	310°	0.9460	0.48
19°	0.9580	0.37	92°	1.0000	-0.00	165°	0.9590	0.36	238°	0.9320	0.61	311°	0.9470	0.47
20°	0.9580	0.37	93°	1.0000	-0.00	166°	0.9590	0.36	239°	0.9310	0.62	312°	0.9480	0.46
21°	0.9580	0.37	94°	1.0000	-0.00	167°	0.9580	0.37	240°	0.9300	0.63	313°	0.9480	0.46
22°	0.9580	0.37	95°	1.0000	-0.00	168°	0.9580	0.37	241°	0.9300	0.63	314°	0.9500	0.45
23°	0.9580	0.37	96°	1.0000	-0.00	169°	0.9580	0.37	242°	0.9290	0.64	315°	0.9500	0.45
24°	0.9590	0.36	97°	0.9990	0.01	170°	0.9580	0.37	243°	0.9280	0.65	316°	0.9510	0.44
25°	0.9590	0.36	98°	0.9990	0.01	171°	0.9580	0.37	244°	0.9280	0.65	317°	0.9520	0.43
26°	0.9590	0.36	99°	0.9990	0.01	172°	0.9580	0.37	245°	0.9270	0.66	318°	0.9520	0.43
27°	0.9610	0.35	100°	0.9990	0.01	173°	0.9580	0.37	246°	0.9260	0.67	319°	0.9530	0.42
28°	0.9610	0.35	101°	0.9980	0.02	174°	0.9580	0.37	247°	0.9260	0.67	320°	0.9530	0.42
29°	0.9610	0.35	102°	0.9980	0.02	175°	0.9580	0.37	248°	0.9250	0.68	321°	0.9530	0.42
30°	0.9620	0.34	103°	0.9970	0.03	176°	0.9580	0.37	249°	0.9240	0.69	322°	0.9540	0.41
31°	0.9620	0.34	104°	0.9970	0.03	177°	0.9580	0.37	250°	0.9240	0.69	323°	0.9540	0.41
32°	0.9630	0.33	105°	0.9970	0.03	178°	0.9580	0.37	251°	0.9230	0.70	324°	0.9550	0.40
33°	0.9630	0.33	106°	0.9950	0.04	179°	0.9580	0.37	252°	0.9230	0.70	325°	0.9550	0.40
34°	0.9630	0.33	107°	0.9940	0.05	180°	0.9580	0.37	253°	0.9220	0.71	326°	0.9550	0.40
35°	0.9640	0.32	108°	0.9940	0.05	181°	0.9580	0.37	254°	0.9220	0.71	327°	0.9560	0.39
36°	0.9640	0.32	109°	0.9930	0.06	182°	0.9580	0.37	255°	0.9200	0.72	328°	0.9560	0.39
37°	0.9650	0.31	110°	0.9930	0.06	183°	0.9580	0.37	256°	0.9200	0.72	329°	0.9560	0.39
38°	0.9660	0.30	111°	0.9920	0.07	184°	0.9580	0.37	257°	0.9200	0.72	330°	0.9570	0.38
39°	0.9660	0.30	112°	0.9920	0.07	185°	0.9580	0.37	258°	0.9190	0.73	331°	0.9570	0.38
40°	0.9670	0.29	113°	0.9910	0.08	186°	0.9580	0.37	259°	0.9190	0.73	332°	0.9570	0.38
41°	0.9670	0.29	114°	0.9900	0.09	187°	0.9580	0.37	260°	0.9190	0.73	333°	0.9570	0.38
42°	0.9680	0.28	115°	0.9890	0.10	188°	0.9580	0.37	261°	0.9190	0.73	334°	0.9570	0.38
43°	0.9690	0.27	116°	0.9890	0.10	189°	0.9580	0.37	262°	0.9190	0.73	335°	0.9580	0.37
44°	0.9690	0.27	117°	0.9870	0.11	190°	0.9580	0.37	263°	0.9180	0.74	336°	0.9580	0.37
45°	0.9710	0.26	118°	0.9860	0.12	191°	0.9580	0.37	264°	0.9180	0.74	337°	0.9580	0.37
46°	0.9720	0.25	119°	0.9860	0.12	192°	0.9570	0.38	265°	0.9180	0.74	338°	0.9580	0.37
47°	0.9730	0.24	120°	0.9850	0.13	193°	0.9570	0.38	266°	0.9180	0.74	339°	0.9580	0.37
48°	0.9730	0.24	121°	0.9840	0.14	194°	0.9570	0.38	267°	0.9180	0.74	340°	0.9580	0.37
49°	0.9740	0.23	122°	0.9830	0.15	195°	0.9570	0.38	268°	0.9180	0.74	341°	0.9580	0.37
50°	0.9750	0.22	123°	0.9830	0.15	196°	0.9570	0.38	269°	0.9190	0.73	342°	0.9580	0.37
51°	0.9760	0.21	124°	0.9820	0.16	197°	0.9570	0.38	270°	0.9190	0.73	343°	0.9580	0.37
52°	0.9760	0.21	125°	0.9810	0.17	198°	0.9570	0.38	271°	0.9190	0.73	344°	0.9580	0.37
53°	0.9770	0.20	126°	0.9790	0.18	199°	0.9560	0.39	272°	0.9190	0.73	345°	0.9580	0.37
54°	0.9780	0.19	127°	0.9790	0.18	200°	0.9560	0.39	273°	0.9190	0.73	346°	0.9580	0.37
55°	0.9790	0.18	128°	0.9780	0.19	201°	0.9560	0.39	274°	0.9200	0.72	347°	0.9580	0.37
56°	0.9810	0.17	129°	0.9770	0.20	202°	0.9560	0.39	275°	0.9200	0.72	348°	0.9580	0.37
57°	0.9810	0.17	130°	0.9760	0.21	203°	0.9550	0.40	276°	0.9200	0.72	349°	0.9580	0.37
58°	0.9820	0.16	131°	0.9760	0.21	204°	0.9550	0.40	277°	0.9220	0.71	350°	0.9580	0.37
59°	0.9830	0.15	132°	0.9750	0.22	205°	0.9550	0.40	278°	0.9220	0.71	351°	0.9580	0.37
60°	0.9840	0.14	133°	0.9740	0.23	206°	0.9540	0.41	279°	0.9230	0.70	352°	0.9580	0.37
61°	0.9840	0.14	134°	0.9730	0.24	207°	0.9540	0.41	280°	0.9230	0.70	353°	0.9580	0.37
62°	0.9850	0.13	135°	0.9730	0.24	208°	0.9540	0.41	281°	0.9240	0.69	354°	0.9580	0.37
63°	0.9860	0.12	136°	0.9720	0.25	209°	0.9530	0.42	282°	0.9240	0.69	355°	0.9580	0.37
64°	0.9870	0.11	137°	0.9710	0.26	210°	0.9530	0.42	283°	0.9250	0.68	356°	0.9570	0.38
65°	0.9890	0.10	138°	0.9710	0.26	211°	0.9520	0.43	284°	0.9260	0.67	357°	0.9570	0.38
66°	0.9890	0.10	139°	0.9690	0.27	212°	0.9520	0.43	285°	0.9260	0.67	358°	0.9570	0.38
67°	0.9900	0.09	140°	0.9690	0.27	213°	0.9510	0.44	286°	0.9270	0.66	359°	0.9570	0.38
68°	0.9910	0.08	141°	0.9680	0.28	214°	0.9510	0.44	287°	0.9280	0.65	360°	0.9570	0.38
69°	0.9910	0.08	142°	0.9670	0.29	215°	0.9500	0.45	288°	0.9280	0.65			
70°	0.9920	0.07	143°	0.9670	0.29	216°	0.9500	0.45	289°	0.9290	0.64			
71°	0.9930	0.06	144°	0.9660	0.30	217°	0.9480	0.46	290°	0.9300	0.63			
72°	0.9930	0.06	145°	0.9660	0.30	218°	0.9480	0.46	291°	0.9310	0.62			

E/Emax de campo normalizado - atenuação positiva em dB

Antena (N° 111111) - Freqüência (F 123456) - Potência (P 12345) - Diagrama de Elevação



Parâmetros da configuração

ELEMENTOS

N/D

HPBW VERTICAL

47.51°

GANHO

-3.01 dBd

PRIMEIRO NULO

66.30°

Tabela completa - Elevação



Atenuação (dB) - E/Emax (dB) - Aten. (dB) - Diagrama de Elevação

Angulo	E/Emax	Aten. dB	Angulo	E/Emax	Aten. dB	Angulo	E/Emax	Aten. dB	Angulo	E/Emax	Aten. dB	Angulo	E/Emax	Aten. dB
-90°	0.0130	37.72	-53.5°	0.1415	16.98	-17°	0.8320	1.60	19.5°	0.8045	1.89	56°	0.1260	17.99
-89.5°	0.0130	37.72	-53°	0.1470	16.65	-16.5°	0.8410	1.50	20°	0.7950	1.99	56.5°	0.1210	18.34
-89°	0.0130	37.72	-52.5°	0.1530	16.31	-16°	0.8500	1.41	20.5°	0.7850	2.10	57°	0.1160	18.71
-88.5°	0.0125	38.06	-52°	0.1590	15.97	-15.5°	0.8585	1.33	21°	0.7750	2.21	57.5°	0.1115	19.05
-88°	0.0120	38.42	-51.5°	0.1650	15.65	-15°	0.8670	1.24	21.5°	0.7650	2.33	58°	0.1070	19.41
-87.5°	0.0120	38.42	-51°	0.1710	15.34	-14.5°	0.8750	1.16	22°	0.7550	2.44	58.5°	0.1025	19.79
-87°	0.0120	38.42	-50.5°	0.1775	15.02	-14°	0.8830	1.08	22.5°	0.7445	2.56	59°	0.0980	20.18
-86.5°	0.0120	38.42	-50°	0.1840	14.70	-13.5°	0.8905	1.01	23°	0.7340	2.69	59.5°	0.0940	20.54
-86°	0.0120	38.42	-49.5°	0.1910	14.38	-13°	0.8980	0.93	23.5°	0.7235	2.81	60°	0.0900	20.92
-85.5°	0.0120	38.42	-49°	0.1980	14.07	-12.5°	0.9055	0.86	24°	0.7130	2.94	60.5°	0.0860	21.31
-85°	0.0120	38.42	-48.5°	0.2050	13.76	-12°	0.9130	0.79	24.5°	0.7025	3.07	61°	0.0820	21.72
-84.5°	0.0120	38.42	-48°	0.2120	13.47	-11.5°	0.9195	0.73	25°	0.6920	3.20	61.5°	0.0785	22.10
-84°	0.0120	38.42	-47.5°	0.2195	13.17	-11°	0.9260	0.67	25.5°	0.6810	3.34	62°	0.0750	22.50
-83.5°	0.0120	38.42	-47°	0.2270	12.88	-10.5°	0.9325	0.61	26°	0.6700	3.48	62.5°	0.0715	22.91
-83°	0.0120	38.42	-46.5°	0.2350	12.58	-10°	0.9390	0.55	26.5°	0.6590	3.62	63°	0.0680	23.35
-82.5°	0.0120	38.42	-46°	0.2430	12.29	-9.5°	0.9445	0.50	27°	0.6480	3.77	63.5°	0.0650	23.74
-82°	0.0120	38.42	-45.5°	0.2510	12.01	-9°	0.9500	0.45	27.5°	0.6370	3.92	64°	0.0620	24.15
-81.5°	0.0125	38.06	-45°	0.2590	11.73	-8.5°	0.9550	0.40	28°	0.6260	4.07	64.5°	0.0590	24.58
-81°	0.0130	37.72	-44.5°	0.2670	11.47	-8°	0.9600	0.35	28.5°	0.6150	4.22	65°	0.0560	25.04
-80.5°	0.0130	37.72	-44°	0.2750	11.21	-7.5°	0.9645	0.31	29°	0.6040	4.38	65.5°	0.0535	25.43
-80°	0.0130	37.72	-43.5°	0.2840	10.93	-7°	0.9690	0.27	29.5°	0.5930	4.54	66°	0.0510	25.85
-79.5°	0.0135	37.39	-43°	0.2930	10.66	-6.5°	0.9730	0.24	30°	0.5820	4.70	66.5°	0.0485	26.29
-79°	0.0140	37.08	-42.5°	0.3020	10.40	-6°	0.9770	0.20	30.5°	0.5705	4.87	67°	0.0460	26.74
-78.5°	0.0145	36.77	-42°	0.3110	10.14	-5.5°	0.9805	0.17	31°	0.5590	5.05	67.5°	0.0440	27.13
-78°	0.0150	36.48	-41.5°	0.3200	9.90	-5°	0.9840	0.14	31.5°	0.5480	5.22	68°	0.0420	27.53
-77.5°	0.0155	36.19	-41°	0.3290	9.66	-4.5°	0.9870	0.11	32°	0.5370	5.40	68.5°	0.0400	27.96
-77°	0.0160	35.92	-40.5°	0.3385	9.41	-4°	0.9900	0.09	32.5°	0.5260	5.58	69°	0.0380	28.40
-76.5°	0.0170	35.39	-40°	0.3480	9.17	-3.5°	0.9920	0.07	33°	0.5150	5.76	69.5°	0.0360	28.87
-76°	0.0180	34.89	-39.5°	0.3575	8.93	-3°	0.9940	0.05	33.5°	0.5040	5.95	70°	0.0340	29.37
-75.5°	0.0185	34.66	-39°	0.3670	8.71	-2.5°	0.9955	0.04	34°	0.4930	6.14	70.5°	0.0325	29.76
-75°	0.0190	34.42	-38.5°	0.3770	8.47	-2°	0.9970	0.03	34.5°	0.4825	6.33	71°	0.0310	30.17
-74.5°	0.0200	33.98	-38°	0.3870	8.25	-1.5°	0.9980	0.02	35°	0.4720	6.52	71.5°	0.0295	30.60
-74°	0.0210	33.56	-37.5°	0.3970	8.02	-1°	0.9990	0.01	35.5°	0.4610	6.73	72°	0.0280	31.06
-73.5°	0.0220	33.15	-37°	0.4070	7.81	-0.5°	0.9995	0.00	36°	0.4500	6.94	72.5°	0.0265	31.54
-73°	0.0230	32.77	-36.5°	0.4175	7.59	0°	1.0000	-0.00	36.5°	0.4395	7.14	73°	0.0250	32.04
-72.5°	0.0240	32.40	-36°	0.4280	7.37	0.5°	1.0000	-0.00	37°	0.4290	7.35	73.5°	0.0240	32.40
-72°	0.0250	32.04	-35.5°	0.4385	7.16	1°	1.0000	-0.00	37.5°	0.4190	7.56	74°	0.0230	32.77
-71.5°	0.0265	31.54	-35°	0.4490	6.96	1.5°	0.9995	0.00	38°	0.4090	7.77	74.5°	0.0220	33.15
-71°	0.0280	31.06	-34.5°	0.4600	6.74	2°	0.9990	0.01	38.5°	0.3985	7.99	75°	0.0210	33.56
-70.5°	0.0295	30.60	-34°	0.4710	6.54	2.5°	0.9985	0.01	39°	0.3880	8.22	75.5°	0.0200	33.98
-70°	0.0310	30.17	-33.5°	0.4815	6.35	3°	0.9980	0.02	39.5°	0.3785	8.44	76°	0.0190	34.42
-69.5°	0.0325	29.76	-33°	0.4920	6.16	3.5°	0.9960	0.03	40°	0.3690	8.66	76.5°	0.0185	34.66
-69°	0.0340	29.37	-32.5°	0.5030	5.97	4°	0.9940	0.05	40.5°	0.3590	8.90	77°	0.0180	34.89
-68.5°	0.0360	28.87	-32°	0.5140	5.78	4.5°	0.9920	0.07	41°	0.3490	9.14	77.5°	0.0170	35.39
-68°	0.0380	28.40	-31.5°	0.5250	5.60	5°	0.9900	0.09	41.5°	0.3395	9.38	78°	0.0160	35.92
-67.5°	0.0400	27.96	-31°	0.5360	5.42	5.5°	0.9870	0.11	42°	0.3300	9.63	78.5°	0.0155	36.19
-67°	0.0420	27.53	-30.5°	0.5470	5.24	6°	0.9840	0.14	42.5°	0.3210	9.87	79°	0.0150	36.48
-66.5°	0.0440	27.13	-30°	0.5580	5.07	6.5°	0.9810	0.17	43°	0.3120	10.12	79.5°	0.0145	36.77
-66°	0.0460	26.74	-29.5°	0.5695	4.89	7°	0.9780	0.19	43.5°	0.3030	10.37	80°	0.0140	37.08
-65.5°	0.0485	26.29	-29°	0.5810	4.72	7.5°	0.9740	0.23	44°	0.2940	10.63	80.5°	0.0135	37.39
-65°	0.0510	25.85	-28.5°	0.5920	4.55	8°	0.9700	0.26	44.5°	0.2855	10.89	81°	0.0130	37.72
-64.5°	0.0535	25.43	-28°	0.6030	4.39	8.5°	0.9655	0.30	45°	0.2770	11.15	81.5°	0.0130	37.72
-64°	0.0560	25.04	-27.5°	0.6140	4.24	9°	0.9610	0.35	45.5°	0.2685	11.42	82°	0.0130	37.72
-63.5°	0.0590	24.58	-27°	0.6250	4.08	9.5°	0.9555	0.40	46°	0.2600	11.70	82.5°	0.0125	38.06
-63°	0.0620	24.15	-26.5°	0.6360	3.93	10°	0.9500	0.45	46.5°	0.2520	11.97	83°	0.0120	38.42
-62.5°	0.0650	23.74	-26°	0.6470	3.78	10.5°	0.9445	0.50	47°	0.2440	12.25	83.5°	0.0120	38.42
-62°	0.0680	23.35	-25.5°	0.6580	3.64	11°	0.9390	0.55	47.5°	0.2360	12.54	84°	0.0120	38.42
-61.5°	0.0715	22.91	-25°	0.6690	3.49	11.5°	0.9330	0.60	48°	0.2280	12.84	84.5°	0.0120	38.42
-61°	0.0750	22.50	-24.5°	0.6800	3.35	12°	0.9270	0.66	48.5°	0.2205	13.13	85°	0.0120	38.42
-60.5°	0.0785	22.10	-24°	0.6910	3.21	12.5°	0.9200	0.72	49°	0.2130	13.43	85.5°	0.0120	38.42
-60°	0.0820	21.72	-23.5°	0.7015	3.08	13°	0.9130	0.79	49.5°	0.2060	13.72	86°	0.0120	38.42
-59.5°	0.0855	21.36	-23°	0.7120	2.95	13.5°	0.9060	0.86	50°	0.1990	14.02	86.5°	0.0120	38.42
-59°	0.0890	21.01	-22.5°	0.7230	2.82	14°	0.8990	0.92	50.5°	0.1920	14.33	87°	0.0120	38.42
-58.5°	0.0935	20.58	-22°	0.7340	2.69	14.5°	0.8910	1.00	51°	0.1850	14.66	87.5°	0.0120	38.42
-58°	0.0980	20.18	-21.5°	0.7440	2.57	15°	0.8830	1.08	51.5°	0.1785	14.97	88°	0.0120	38.42
-57.5°	0.1020	19.83	-21°	0.7540	2.45	15.5°	0.8750	1.16	52°	0.1720	15.29	88.5°	0.0120	38.42
-57°	0.1060	19.49	-20.5°	0.7645	2.33	16°	0.8670	1.24	52.5°	0.1660	15.60	89°	0.0120	38.42
-56.5°	0.1110	19.09	-20°	0.7750	2.21	16.5°	0.8585	1.33	53°	0.1600	15.92	89.5°	0.0125	38.06
-56°	0.1160	18.71	-19.5°	0.7845	2.11	17°	0.8500	1.41	53.5°	0.1540	16.25	90°	0.0130	37.72
-55.5°	0.1210	18.34	-19°	0.7940	2.00	17.5°	0.8415	1.50	54°	0.1480	16.59			
-55°	0.1260	17.99	-18.5°	0.8035	1.90	18°	0.8330	1.59	54.5°	0.1425	16.92			
-54.5°	0.1310	17.65	-18°	0.8130	1.80	18.5°	0.8235	1.69	55°	0.1370	17.27			
-54°	0.1360	17.33	-17.5°	0.8225	1.70	19°	0.8140	1.79	55.5°	0.1315	17.62			

E/Emax de campo normalizado - atenuação positiva em dB