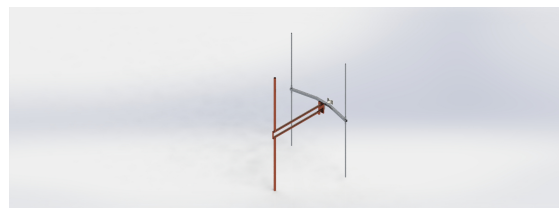


Antena para transmissão de FM, com polarização Vertical. Podendo ser confeccionada com cabos coaxiais e divisores, em linha EIA 1 5/8" ou EIA 3 1/8". Ideal para transmissão em média e alta potência. Podendo ser instalada em lateral de torre ou tubulão em topo de torre. Antena de fácil instalação e baixa carga de vento. Pode ser utilizado diagrama de elevação com tilt elétrico e/ou preenchimento de nulo. Possui confecção com alimentação inferior ou central. É produzida, sendo sua estrutura...

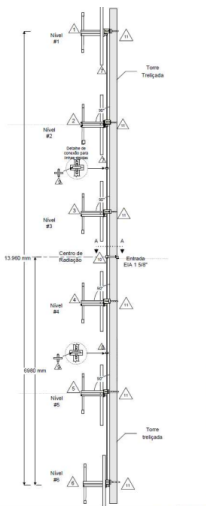


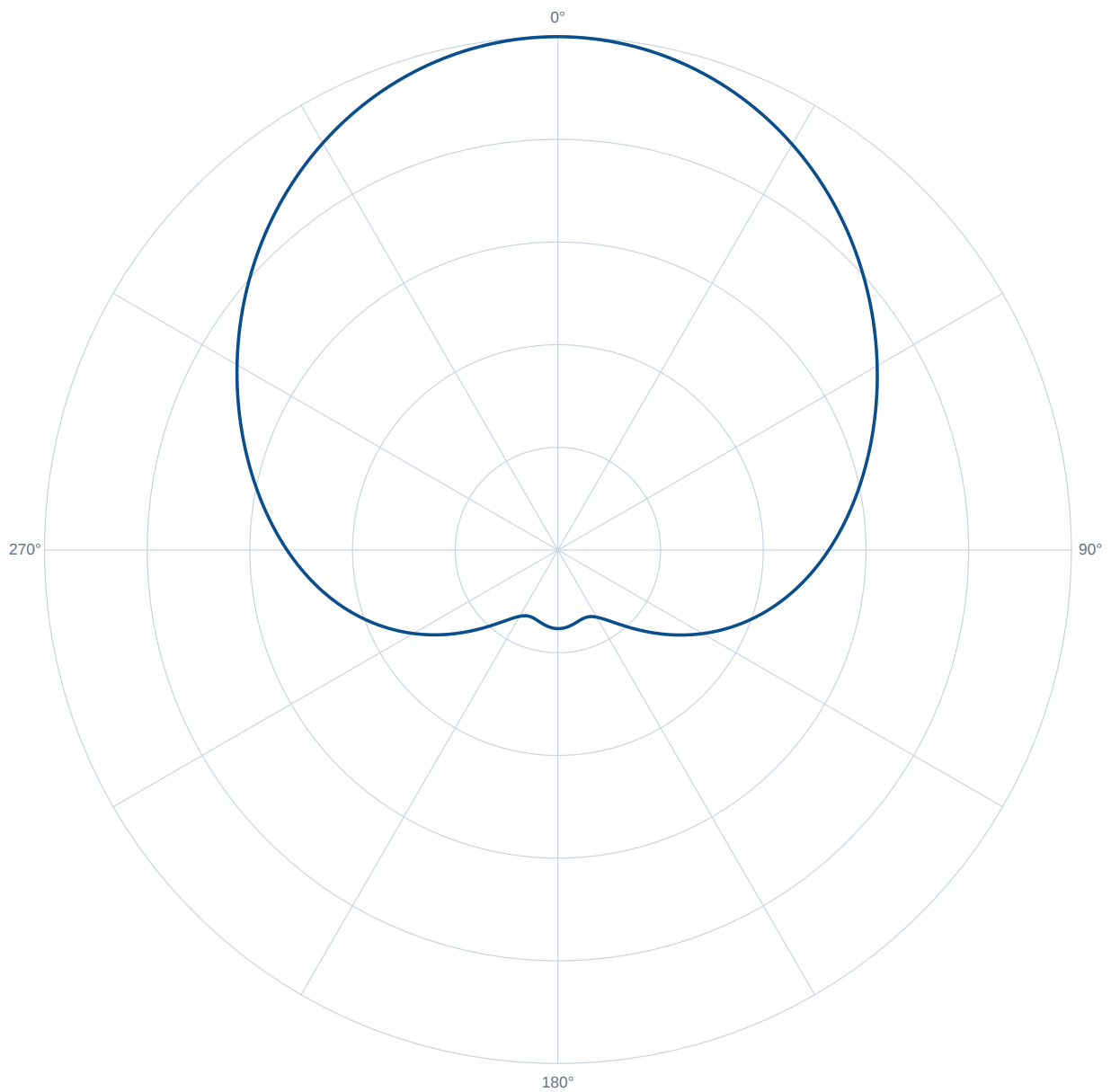
Características elétricas

Item	Valor
Ganho cadastrado (referência)	4.25 dBd
HPBW horizontal	123.71°
HPBW vertical	73.35°
Faixa de frequência	76.10 – 108.10 MHz
Polarização	Vertical
Fabricante	EFTX Broadcast & Telecom
Categoria	FM
Frequency range	76,1 a 108,1 MHz
Largura de Banda	500 kHz
Polarization	Vertical
Nominal impedance	50 ohms
Ganho	Vide tabela
Máxima potência por elemento	2500 Watts (EIA 7/8")
Ângulo de ½ pot. vertical	Vide tabela
VSWR	<1.05:1
Conexão de entrada do sistema	EIA 7/8", EIA 1 5/8", EIA 3 1/8", EIA 4 1/16"
Proteção elétrica	Por intermédio da estrutura da antena



Características mecânicas	
Item	Valor
Dimensions	Vide tabela
Área exposta	Vide tabela
Carga ao Vento	Vide tabela
Weight	Vide tabela
Resistência a ventos	180 km/h





Parâmetros da configuração

HPBW HORIZONTAL

123.71°

GANHO

4.25 dBd

FRENTE/COSTAS

16.31 dB

RIPPLE

5.97 dB

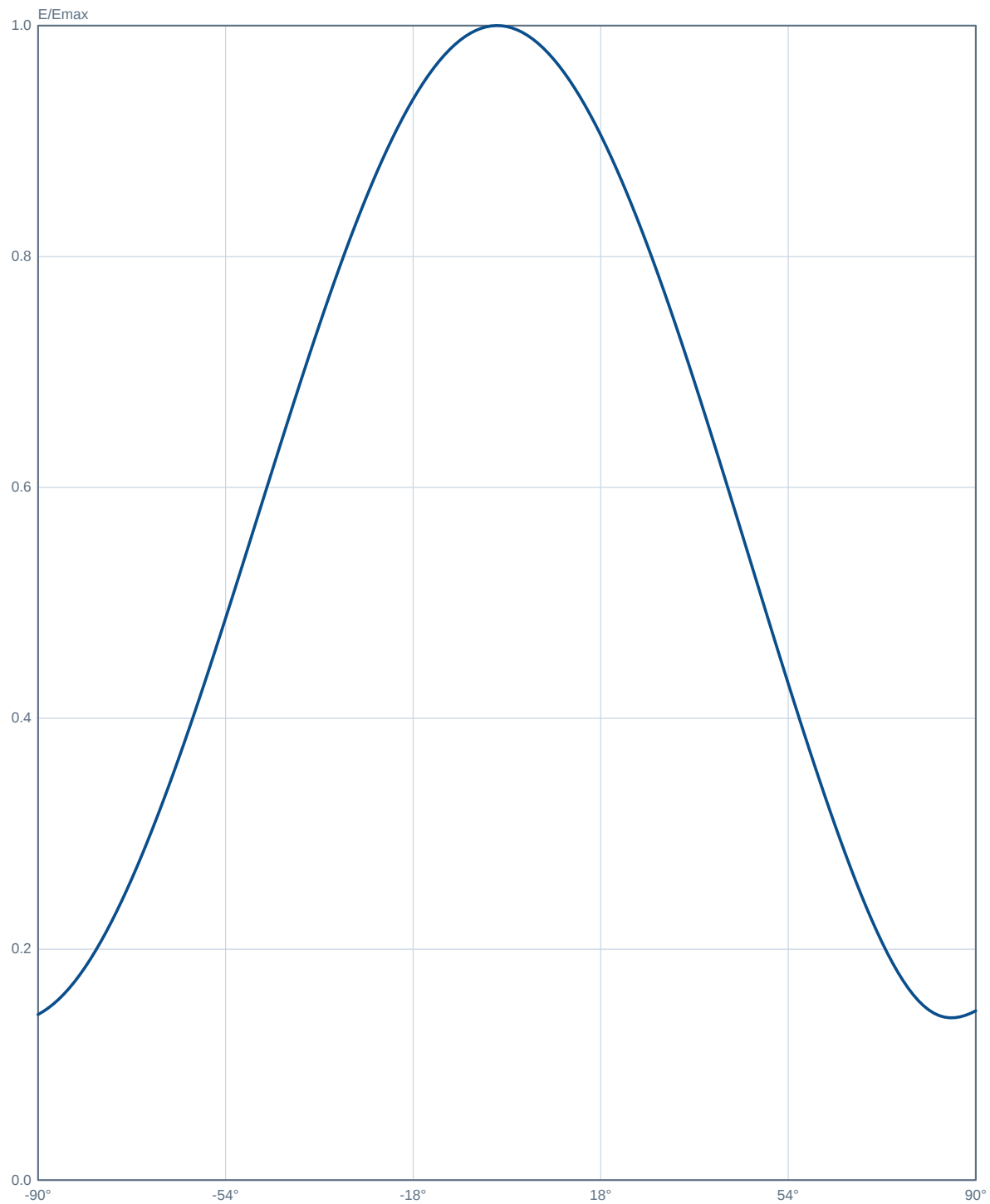
Tabela completa - Azimute



DRR · Diagrama de azimute

Ângulo	E/Emax	Aten. dB	Ângulo	E/Emax	Aten. dB	Ângulo	E/Emax	Aten. dB	Ângulo	E/Emax	Aten. dB	Ângulo	E/Emax	Aten. dB
0°	1.0000	-0.00	73°	0.6322	3.98	146°	0.1628	15.77	219°	0.1829	14.76	292°	0.6670	3.52
1°	0.9999	0.00	74°	0.6258	4.07	147°	0.1593	15.95	220°	0.1882	14.51	293°	0.6737	3.43
2°	0.9995	0.00	75°	0.6195	4.16	148°	0.1562	16.13	221°	0.1936	14.26	294°	0.6805	3.34
3°	0.9990	0.01	76°	0.6132	4.25	149°	0.1534	16.28	222°	0.1994	14.01	295°	0.6873	3.26
4°	0.9982	0.02	77°	0.6070	4.34	150°	0.1509	16.42	223°	0.2053	13.75	296°	0.6941	3.17
5°	0.9973	0.02	78°	0.6008	4.43	151°	0.1488	16.55	224°	0.2115	13.50	297°	0.7009	3.09
6°	0.9961	0.03	79°	0.5946	4.52	152°	0.1470	16.66	225°	0.2178	13.24	298°	0.7078	3.00
7°	0.9948	0.05	80°	0.5884	4.61	153°	0.1454	16.75	226°	0.2243	12.98	299°	0.7147	2.92
8°	0.9932	0.06	81°	0.5823	4.70	154°	0.1442	16.82	227°	0.2309	12.73	300°	0.7216	2.83
9°	0.9914	0.07	82°	0.5762	4.79	155°	0.1433	16.88	228°	0.2377	12.48	301°	0.7285	2.75
10°	0.9895	0.09	83°	0.5701	4.88	156°	0.1426	16.92	229°	0.2446	12.23	302°	0.7355	2.67
11°	0.9873	0.11	84°	0.5640	4.97	157°	0.1422	16.94	230°	0.2516	11.98	303°	0.7424	2.59
12°	0.9850	0.13	85°	0.5579	5.07	158°	0.1420	16.96	231°	0.2587	11.74	304°	0.7494	2.51
13°	0.9824	0.15	86°	0.5518	5.16	159°	0.1420	16.96	232°	0.2659	11.50	305°	0.7563	2.43
14°	0.9797	0.18	87°	0.5458	5.26	160°	0.1421	16.95	233°	0.2732	11.27	306°	0.7632	2.35
15°	0.9768	0.20	88°	0.5397	5.36	161°	0.1425	16.93	234°	0.2805	11.04	307°	0.7702	2.27
16°	0.9737	0.23	89°	0.5336	5.46	162°	0.1429	16.90	235°	0.2879	10.82	308°	0.7771	2.19
17°	0.9704	0.26	90°	0.5275	5.56	163°	0.1435	16.86	236°	0.2953	10.60	309°	0.7840	2.11
18°	0.9669	0.29	91°	0.5214	5.66	164°	0.1442	16.82	237°	0.3027	10.38	310°	0.7909	2.04
19°	0.9633	0.33	92°	0.5153	5.76	165°	0.1449	16.78	238°	0.3101	10.17	311°	0.7977	1.96
20°	0.9594	0.36	93°	0.5091	5.86	166°	0.1457	16.73	239°	0.3175	9.96	312°	0.8045	1.89
21°	0.9554	0.40	94°	0.5030	5.97	167°	0.1465	16.68	240°	0.3250	9.76	313°	0.8113	1.82
22°	0.9513	0.43	95°	0.4967	6.08	168°	0.1473	16.64	241°	0.3324	9.57	314°	0.8180	1.74
23°	0.9470	0.47	96°	0.4905	6.19	169°	0.1481	16.59	242°	0.3398	9.38	315°	0.8247	1.67
24°	0.9425	0.51	97°	0.4842	6.30	170°	0.1489	16.54	243°	0.3472	9.19	316°	0.8313	1.60
25°	0.9379	0.56	98°	0.4779	6.41	171°	0.1496	16.50	244°	0.3545	9.01	317°	0.8379	1.54
26°	0.9331	0.60	99°	0.4715	6.53	172°	0.1503	16.46	245°	0.3618	8.83	318°	0.8444	1.47
27°	0.9282	0.65	100°	0.4651	6.65	173°	0.1509	16.42	246°	0.3691	8.66	319°	0.8508	1.40
28°	0.9231	0.69	101°	0.4586	6.77	174°	0.1515	16.39	247°	0.3763	8.49	320°	0.8572	1.34
29°	0.9179	0.74	102°	0.4521	6.90	175°	0.1520	16.36	248°	0.3834	8.33	321°	0.8635	1.28
30°	0.9126	0.79	103°	0.4455	7.02	176°	0.1524	16.34	249°	0.3905	8.17	322°	0.8696	1.21
31°	0.9071	0.85	104°	0.4389	7.15	177°	0.1527	16.32	250°	0.3976	8.01	323°	0.8758	1.15
32°	0.9015	0.90	105°	0.4322	7.29	178°	0.1529	16.31	251°	0.4046	7.86	324°	0.8818	1.09
33°	0.8959	0.96	106°	0.4254	7.42	179°	0.1530	16.31	252°	0.4115	7.71	325°	0.8877	1.04
34°	0.8900	1.01	107°	0.4186	7.56	180°	0.1530	16.31	253°	0.4184	7.57	326°	0.8935	0.98
35°	0.8841	1.07	108°	0.4117	7.71	181°	0.1529	16.31	254°	0.4252	7.43	327°	0.8992	0.92
36°	0.8781	1.13	109°	0.4048	7.86	182°	0.1527	16.32	255°	0.4320	7.29	328°	0.9047	0.87
37°	0.8720	1.19	110°	0.3978	8.01	183°	0.1524	16.34	256°	0.4387	7.16	329°	0.9102	0.82
38°	0.8658	1.25	111°	0.3907	8.16	184°	0.1521	16.36	257°	0.4453	7.03	330°	0.9155	0.77
39°	0.8596	1.31	112°	0.3836	8.32	185°	0.1516	16.39	258°	0.4519	6.90	331°	0.9208	0.72
40°	0.8532	1.38	113°	0.3765	8.49	186°	0.1510	16.42	259°	0.4584	6.77	332°	0.9258	0.67
41°	0.8468	1.44	114°	0.3693	8.65	187°	0.1504	16.46	260°	0.4649	6.65	333°	0.9308	0.62
42°	0.8403	1.51	115°	0.3620	8.82	188°	0.1497	16.50	261°	0.4713	6.53	334°	0.9356	0.58
43°	0.8337	1.58	116°	0.3548	9.00	189°	0.1489	16.54	262°	0.4777	6.42	335°	0.9402	0.54
44°	0.8271	1.65	117°	0.3474	9.18	190°	0.1481	16.59	263°	0.4841	6.30	336°	0.9447	0.49
45°	0.8205	1.72	118°	0.3401	9.37	191°	0.1472	16.64	264°	0.4904	6.19	337°	0.9491	0.45
46°	0.8138	1.79	119°	0.3327	9.56	192°	0.1463	16.69	265°	0.4966	6.08	338°	0.9533	0.42
47°	0.8070	1.86	120°	0.3253	9.75	193°	0.1455	16.75	266°	0.5029	5.97	339°	0.9573	0.38
48°	0.8003	1.94	121°	0.3180	9.95	194°	0.1446	16.80	267°	0.5091	5.86	340°	0.9612	0.34
49°	0.7935	2.01	122°	0.3106	10.16	195°	0.1437	16.85	268°	0.5152	5.76	341°	0.9649	0.31
50°	0.7866	2.08	123°	0.3032	10.37	196°	0.1429	16.90	269°	0.5214	5.66	342°	0.9684	0.28
51°	0.7798	2.16	124°	0.2958	10.58	197°	0.1422	16.94	270°	0.5276	5.55	343°	0.9718	0.25
52°	0.7729	2.24	125°	0.2885	10.80	198°	0.1415	16.98	271°	0.5337	5.45	344°	0.9750	0.22
53°	0.7660	2.32	126°	0.2812	11.02	199°	0.1410	17.02	272°	0.5399	5.35	345°	0.9780	0.19
54°	0.7592	2.39	127°	0.2739	11.25	200°	0.1406	17.04	273°	0.5460	5.26	346°	0.9808	0.17
55°	0.7523	2.47	128°	0.2667	11.48	201°	0.1404	17.05	274°	0.5521	5.16	347°	0.9834	0.14
56°	0.7454	2.55	129°	0.2596	11.71	202°	0.1403	17.06	275°	0.5583	5.06	348°	0.9859	0.12
57°	0.7385	2.63	130°	0.2525	11.95	203°	0.1405	17.05	276°	0.5645	4.97	349°	0.9882	0.10
58°	0.7317	2.71	131°	0.2456	12.20	204°	0.1408	17.03	277°	0.5706	4.87	350°	0.9902	0.09
59°	0.7248	2.80	132°	0.2387	12.44	205°	0.1415	16.99	278°	0.5768	4.78	351°	0.9921	0.07
60°	0.7180	2.88	133°	0.2320	12.69	206°	0.1424	16.93	279°	0.5831	4.69	352°	0.9938	0.05
61°	0.7112	2.96	134°	0.2254	12.94	207°	0.1436	16.86	280°	0.5893	4.59	353°	0.9953	0.04
62°	0.7045	3.04	135°	0.2190	13.19	208°	0.1451	16.77	281°	0.5956	4.50	354°	0.9965	0.03
63°	0.6977	3.13	136°	0.2128	13.44	209°	0.1469	16.66	282°	0.6019	4.41	355°	0.9976	0.02
64°	0.6910	3.21	137°	0.2067	13.69	210°	0.1490	16.53	283°	0.6082	4.32	356°	0.9985	0.01
65°	0.6843	3.29	138°	0.2008	13.94	211°	0.1515	16.39	284°	0.6146	4.23	357°	0.9992	0.01
66°	0.6777	3.38	139°	0.1951	14.19	212°	0.1543	16.23	285°	0.6210	4.14	358°	0.9997	0.00
67°	0.6711	3.46	140°	0.1897	14.44	213°	0.1575	16.06	286°	0.6275	4.05	359°	0.9999	0.00
68°	0.6645	3.55	141°	0.1845	14.68	214°	0.1609	15.87	287°	0.6340	3.96	360°	1.0000	-0.00
69°	0.6579	3.64	142°	0.1796	14.91	215°	0.1647	15.67	288°	0.6405	3.87			
70°	0.6514	3.72	143°	0.1750	15.14	216°	0.1688	15.45	289°	0.6471	3.78			
71°	0.6450	3.81	144°	0.1706	15.36	217°	0.1732	15.23	290°	0.6537	3.69			
72°	0.6386	3.90	145°	0.1665	15.57	218°	0.1779	15.00	291°	0.6603	3.60			

E/Emax de campo normalizado · atenuação positiva em dB



Parâmetros da configuração

ELEMENTOS

N/D

HPBW VERTICAL

73.35°

GANHO

4.25 dBd

PRIMEIRO NULO

N/D

Tabela completa - Elevação



DRR · Diagrama de elevação

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°	0.1434	16.87	-53.5°	0.4938	6.13	-17°	0.9438	0.50	19.5°	0.8911	1.00	56°	0.4016	7.92
-89.5°	0.1448	16.79	-53°	0.5009	6.01	-16.5°	0.9473	0.47	20°	0.8863	1.05	56.5°	0.3946	8.08
-89°	0.1461	16.71	-52.5°	0.5080	5.88	-16°	0.9508	0.44	20.5°	0.8812	1.10	57°	0.3876	8.23
-88.5°	0.1476	16.62	-52°	0.5151	5.76	-15.5°	0.9541	0.41	21°	0.8762	1.15	57.5°	0.3806	8.39
-88°	0.1492	16.53	-51.5°	0.5222	5.64	-15°	0.9574	0.38	21.5°	0.8710	1.20	58°	0.3737	8.55
-87.5°	0.1510	16.42	-51°	0.5293	5.53	-14.5°	0.9605	0.35	22°	0.8658	1.25	58.5°	0.3668	8.71
-87°	0.1527	16.32	-50.5°	0.5365	5.41	-14°	0.9636	0.32	22.5°	0.8605	1.31	59°	0.3600	8.87
-86.5°	0.1548	16.21	-50°	0.5437	5.29	-13.5°	0.9664	0.30	23°	0.8551	1.36	59.5°	0.3532	9.04
-86°	0.1568	16.09	-49.5°	0.5508	5.18	-13°	0.9693	0.27	23.5°	0.8496	1.42	60°	0.3465	9.21
-85.5°	0.1590	15.97	-49°	0.5580	5.07	-12.5°	0.9719	0.25	24°	0.8441	1.47	60.5°	0.3398	9.38
-85°	0.1613	15.85	-48.5°	0.5652	4.96	-12°	0.9745	0.22	24.5°	0.8384	1.53	61°	0.3331	9.55
-84.5°	0.1638	15.71	-48°	0.5724	4.85	-11.5°	0.9769	0.20	25°	0.8328	1.59	61.5°	0.3266	9.72
-84°	0.1663	15.58	-47.5°	0.5796	4.74	-11°	0.9793	0.18	25.5°	0.8269	1.65	62°	0.3200	9.90
-83.5°	0.1691	15.44	-47°	0.5868	4.63	-10.5°	0.9814	0.16	26°	0.8211	1.71	62.5°	0.3136	10.07
-83°	0.1718	15.30	-46.5°	0.5939	4.53	-10°	0.9835	0.14	26.5°	0.8152	1.78	63°	0.3072	10.25
-82.5°	0.1748	15.15	-46°	0.6011	4.42	-9.5°	0.9854	0.13	27°	0.8092	1.84	63.5°	0.3009	10.43
-82°	0.1778	15.00	-45.5°	0.6083	4.32	-9°	0.9873	0.11	27.5°	0.8031	1.90	64°	0.2945	10.62
-81.5°	0.1810	14.85	-45°	0.6155	4.22	-8.5°	0.9890	0.10	28°	0.7970	1.97	64.5°	0.2884	10.80
-81°	0.1842	14.69	-44.5°	0.6226	4.12	-8°	0.9906	0.08	28.5°	0.7908	2.04	65°	0.2822	10.99
-80.5°	0.1876	14.53	-44°	0.6298	4.02	-7.5°	0.9920	0.07	29°	0.7846	2.11	65.5°	0.2762	11.18
-80°	0.1911	14.38	-43.5°	0.6369	3.92	-7°	0.9934	0.06	29.5°	0.7782	2.18	66°	0.2702	11.37
-79.5°	0.1947	14.21	-43°	0.6440	3.82	-6.5°	0.9946	0.05	30°	0.7719	2.25	66.5°	0.2644	11.56
-79°	0.1984	14.05	-42.5°	0.6511	3.73	-6°	0.9957	0.04	30.5°	0.7654	2.32	67°	0.2585	11.75
-78.5°	0.2023	13.88	-42°	0.6582	3.63	-5.5°	0.9967	0.03	31°	0.7589	2.40	67.5°	0.2528	11.94
-78°	0.2062	13.72	-41.5°	0.6652	3.54	-5°	0.9976	0.02	31.5°	0.7524	2.47	68°	0.2472	12.14
-77.5°	0.2103	13.54	-41°	0.6722	3.45	-4.5°	0.9982	0.02	32°	0.7458	2.55	68.5°	0.2417	12.34
-77°	0.2144	13.38	-40.5°	0.6792	3.36	-4°	0.9989	0.01	32.5°	0.7391	2.63	69°	0.2362	12.53
-76.5°	0.2187	13.20	-40°	0.6862	3.27	-3.5°	0.9993	0.01	33°	0.7325	2.70	69.5°	0.2309	12.73
-76°	0.2230	13.04	-39.5°	0.6931	3.18	-3°	0.9997	0.00	33.5°	0.7257	2.78	70°	0.2257	12.93
-75.5°	0.2275	12.86	-39°	0.7001	3.10	-2.5°	0.9998	0.00	34°	0.7189	2.87	70.5°	0.2206	13.13
-75°	0.2320	12.69	-38.5°	0.7069	3.01	-2°	1.0000	-0.00	34.5°	0.7121	2.95	71°	0.2156	13.33
-74.5°	0.2366	12.52	-38°	0.7138	2.93	-1.5°	0.9999	0.00	35°	0.7052	3.03	71.5°	0.2108	13.52
-74°	0.2413	12.35	-37.5°	0.7206	2.85	-1°	0.9998	0.00	35.5°	0.6983	3.12	72°	0.2059	13.72
-73.5°	0.2462	12.17	-37°	0.7273	2.77	-0.5°	0.9995	0.00	36°	0.6914	3.21	72.5°	0.2014	13.92
-73°	0.2511	12.00	-36.5°	0.7340	2.69	0°	0.9991	0.01	36.5°	0.6844	3.29	73°	0.1968	14.12
-72.5°	0.2561	11.83	-36°	0.7407	2.61	0.5°	0.9985	0.01	37°	0.6774	3.38	73.5°	0.1926	14.31
-72°	0.2611	11.66	-35.5°	0.7474	2.53	1°	0.9979	0.02	37.5°	0.6703	3.47	74°	0.1883	14.50
-71.5°	0.2663	11.49	-35°	0.7540	2.45	1.5°	0.9971	0.03	38°	0.6632	3.57	74.5°	0.1843	14.69
-71°	0.2716	11.32	-34.5°	0.7605	2.38	2°	0.9962	0.03	38.5°	0.6561	3.66	75°	0.1804	14.88
-70.5°	0.2769	11.15	-34°	0.7670	2.30	2.5°	0.9951	0.04	39°	0.6489	3.76	75.5°	0.1767	15.05
-70°	0.2823	10.99	-33.5°	0.7734	2.23	3°	0.9940	0.05	39.5°	0.6418	3.85	76°	0.1731	15.24
-69.5°	0.2878	10.82	-33°	0.7798	2.16	3.5°	0.9927	0.06	40°	0.6346	3.95	76.5°	0.1697	15.40
-69°	0.2933	10.65	-32.5°	0.7861	2.09	4°	0.9914	0.08	40.5°	0.6273	4.05	77°	0.1664	15.58
-68.5°	0.2990	10.49	-32°	0.7924	2.02	4.5°	0.9898	0.09	41°	0.6201	4.15	77.5°	0.1635	15.73
-68°	0.3047	10.32	-31.5°	0.7985	1.95	5°	0.9882	0.10	41.5°	0.6128	4.25	78°	0.1605	15.89
-67.5°	0.3105	10.16	-31°	0.8047	1.89	5.5°	0.9864	0.12	42°	0.6056	4.36	78.5°	0.1579	16.03
-67°	0.3163	10.00	-30.5°	0.8107	1.82	6°	0.9845	0.14	42.5°	0.5983	4.46	79°	0.1553	16.17
-66.5°	0.3222	9.84	-30°	0.8168	1.76	6.5°	0.9825	0.15	43°	0.5910	4.57	79.5°	0.1531	16.30
-66°	0.3282	9.68	-29.5°	0.8226	1.70	7°	0.9804	0.17	43.5°	0.5836	4.68	80°	0.1509	16.42
-65.5°	0.3342	9.52	-29°	0.8285	1.63	7.5°	0.9781	0.19	44°	0.5763	4.79	80.5°	0.1491	16.53
-65°	0.3403	9.36	-28.5°	0.8343	1.57	8°	0.9758	0.21	44.5°	0.5690	4.90	81°	0.1473	16.63
-64.5°	0.3465	9.21	-28°	0.8401	1.51	8.5°	0.9733	0.24	45°	0.5616	5.01	81.5°	0.1459	16.72
-64°	0.3527	9.05	-27.5°	0.8457	1.46	9°	0.9707	0.26	45.5°	0.5543	5.13	82°	0.1445	16.80
-63.5°	0.3590	8.90	-27°	0.8513	1.40	9.5°	0.9680	0.28	46°	0.5469	5.24	82.5°	0.1435	16.86
-63°	0.3653	8.75	-26.5°	0.8567	1.34	10°	0.9652	0.31	46.5°	0.5395	5.36	83°	0.1424	16.93
-62.5°	0.3717	8.60	-26°	0.8621	1.29	10.5°	0.9622	0.33	47°	0.5322	5.48	83.5°	0.1418	16.97
-62°	0.3781	8.45	-25.5°	0.8674	1.24	11°	0.9592	0.36	47.5°	0.5248	5.60	84°	0.1412	17.01
-61.5°	0.3846	8.30	-25°	0.8727	1.18	11.5°	0.9560	0.39	48°	0.5175	5.72	84.5°	0.1409	17.02
-61°	0.3911	8.15	-24.5°	0.8778	1.13	12°	0.9528	0.42	48.5°	0.5101	5.85	85°	0.1406	17.04
-60.5°	0.3977	8.01	-24°	0.8829	1.08	12.5°	0.9493	0.45	49°	0.5028	5.97	85.5°	0.1407	17.04
-60°	0.4043	7.87	-23.5°	0.8879	1.03	13°	0.9459	0.48	49.5°	0.4954	6.10	86°	0.1407	17.03
-59.5°	0.4110	7.72	-23°	0.8928	0.99	13.5°	0.9422	0.52	50°	0.4881	6.23	86.5°	0.1411	17.01
-59°	0.4177	7.58	-22.5°	0.8975	0.94	14°	0.9386	0.55	50.5°	0.4808	6.36	87°	0.1414	16.99
-58.5°	0.4245	7.44	-22°	0.9023	0.89	14.5°	0.9347	0.59	51°	0.4735	6.49	87.5°	0.1421	16.95
-58°	0.4313	7.31	-21.5°	0.9068	0.85	15°	0.9308	0.62	51.5°	0.4662	6.63	88°	0.1427	16.91
-57.5°	0.4381	7.17	-21°	0.9114	0.81	15.5°	0.9268	0.66	52°	0.4589	6.77	88.5°	0.1436	16.86
-57°	0.4449	7.03	-20.5°	0.9157	0.76	16°	0.9227	0.70	52.5°	0.4517	6.90	89°	0.1445	16.80
-56.5°	0.4518	6.90	-20°	0.9201	0.72	16.5°	0.9184	0.74	53°	0.4444	7.04	89.5°	0.1456	16.74
-56°	0.4588	6.77	-19.5°	0.9243	0.68	17°	0.9142	0.78	53.5°	0.4372	7.19	90°	0.1466	16.67
-55.5°	0.4657	6.64	-19°	0.9284	0.65	17.5°	0.9097	0.82	54°	0.4300	7.33			
-55°	0.4727	6.51	-18.5°	0.9324	0.61	18°	0.9052	0.86	54.5°	0.4229	7.48			
-54.5°	0.4797	6.38	-18°	0.9363	0.57	18.5°	0.9006	0.91	55°	0.4158	7.62			
-54°	0.4867	6.25	-17.5°	0.9401	0.54	19°	0.8959	0.95	55.5°	0.4087	7.77			

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