EFTX
Broadcast: Television & Radio

ENGENHARIA DE RADIOFREQUÊNCIA

Datasheet Técnico

Antena FM vertical ADVBN

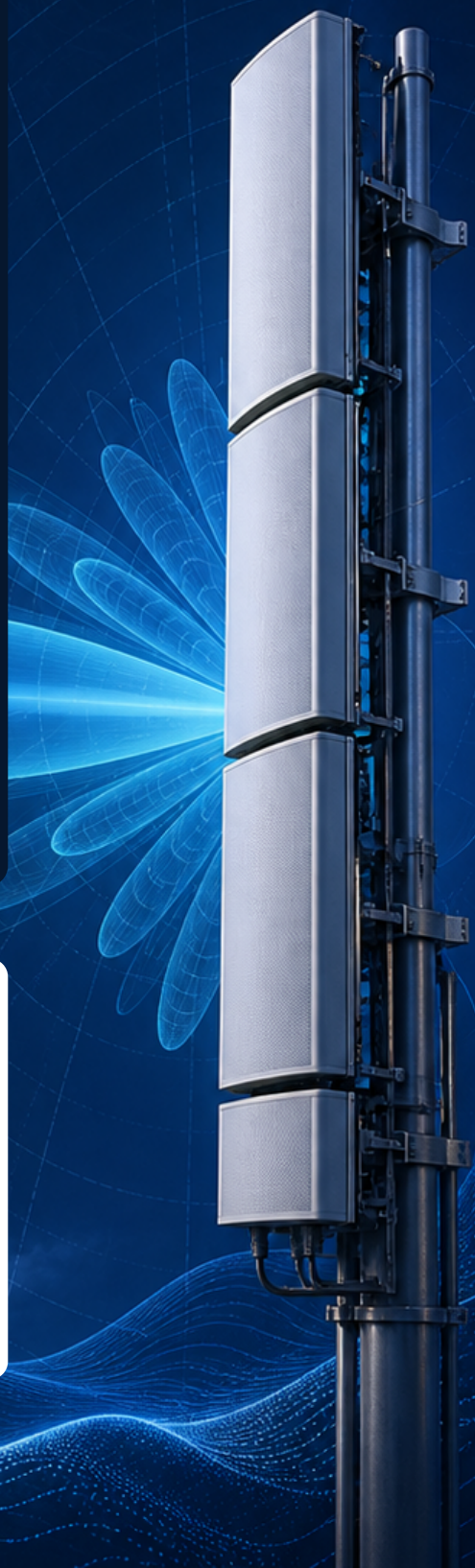
Modelo: ADVBN

Categoria: Broadcast FM

Fonte: Estado não informado

Revisão/Data: não declarada · não declarada

Publicação: versão 1.0



VALIDAÇÃO ON-LINE

EFTX-DS-BROADCAST-FM-ADVBN

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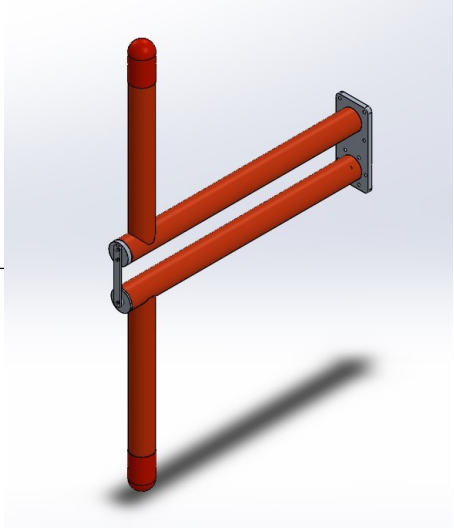
ADVBN FM VERTICAL MEDIA POTENCIA

Antena FM ominidirecional em polarização vertical
Antena de media potência até 5kW por elemento
Alimentação interna com pressurização plena
Capacidade de “tilt” e “null-fill”
Montagem topo / lateral, pré sintonizada em fábrica
Construção robusta em linha rígida coaxial
Opções de ganho e separação vertical de λ ou λ/2



Especificações	**ADVBN**
Faixa de Frequência	FM - 76 até 108 MHz
Polarização	vertical
Circularidade	< 3,69 dB @ espaço livre
Diagrama vertical	“tilt” e “null fill” opcional - CONSULTE
Ganho de potência	vide tabela “**Ganho vs. Modelo**”
Impedância de entrada	50 Ohms
VSWR máx @ +/- 200 kHz	1,2 : 1 @ montagem topo / 1,5 : 1 @ montagem lateral 1,07 : 1 @ montagem lateral ou topo com sintonizador
Conector de entrada do sistema	EIA 1 5/8” , 3 1/8” compatível com a potência máx especificada
Potência máx por elemento	5kW @ EIA 1 5/8”
Pressurização	plena
Dimensões e esforços	vide tabela “**Características Mecânicas**”
Velocidade vento máx	180 Km/h

Material da antena Elementos de cobre, latão e alumínio soldados em processo TIG/MIG
Fixadores de inox ,Isoladores de PTFE e de fibra de vidro
Compatibilidade galvânica entre os vários componentes da antena

Conexões Internas Linha rígida com conexões internas com tratamento de prata

Montagem Para cada elemento é fornecido a ferragem padrão para fixação traseira em tubos de diâmetro de 115 a 305 mm

Aterramento Por intermédio da própria estrutura da antena

Embalagem Todos os modelos são fornecidos com embalagem em separado para os elementos radiantes, linhas rígidas e ferragem de fixação

Variações Alimentação inferior (end-feed) ou central (center-feed) com linha rígida
Configurações acima de 8 níveis de empilhamento – CONSULTE
Diagramas dedicados ou direcionais – CONSULTE
Opção de separação λ/2 para redução de radiação não ionizante

ADVBN – {# níveis} – {freqüência} – {potência}

1,2,3,4,5,6,7,8 — 76 até 108 — em kW

Biblioteca com diagramas de radiação e composições especiais “tilt” e “null-fill” disponíveis para edicao e download Antenna Composer EFTX

Disponível para assinantes .

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ADVBN FM V MEDIA POTENCIA (76-108 MHZ)

Ganho vs. Modelo

Modelo	dBd
ADVBN-1	0,20
ADVBN-2	3.08
ADVBN-3	4,80
ADVBN-4	6,03
ADVBN-5	6,99
ADVBN-6	7,77
ADVBN-7	8,43
ADVBN-8	9,01

ganho para cada componente de polarização sem “tilt” e “null fill”

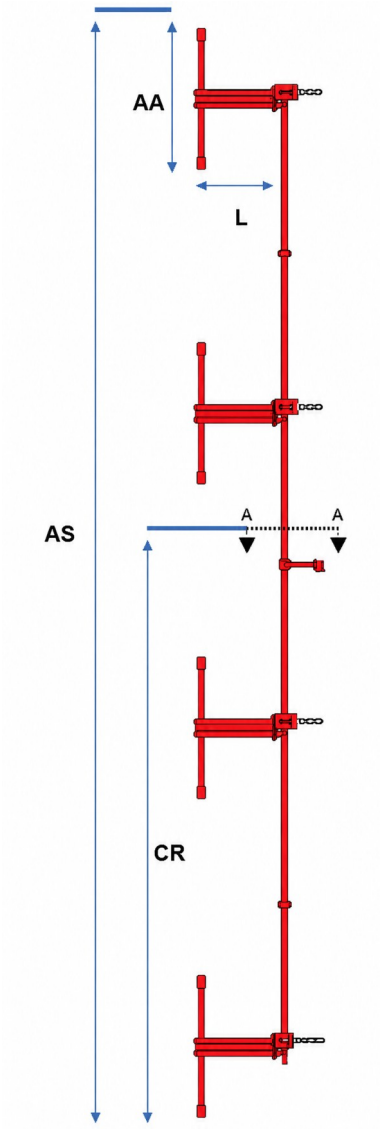
Características Mecânicas – *dimensões e esforços*

		Lateral		Topo	
Modelo	MHz	AS(*)	CR	AS	CR
ADVBN-1	76	0,52	0,26	2,52	2,26
	88	0,52	0,26	2,52	2,26
	98	0,52	0,26	2,52	2,26
	108	0,52	0,26	2,52	2,26
ADVBN-2	76	4,47	2,23	6,47	4,23
	88	3,93	1,96	5,93	3,96
	98	3,58	1,79	5,58	3,79
	108	3,30	1,65	5,30	3,65
ADVBN-3	76	8,41	4,21	10,41	6,21
	88	7,34	3,67	9,34	5,67
	98	6,64	3,32	8,64	5,32
	108	6,08	3,04	8,08	5,04
ADVBN-4	76	12,36	6,18	14,36	8,18
	88	10,7	5,37	12,7	7,37
	98	9,70	4,85	11,7	6,85
	108	8,85	4,43	10,9	6,43
ADVBN-5	76	16,31	8,15	18,31	10,15
	88	14,2	7,08	16,2	9,08
	98	12,8	6,38	14,8	8,38
	108	11,6	5,82	13,6	7,82
ADVBN-6	76	20,26	10,13	22,26	12,13
	88	17,6	8,78	19,6	10,8
	98	15,8	7,91	17,8	9,91
	108	14,4	7,20	16,4	9,20
ADVBN-7	76	24,20	12,10	26,20	14,10
	88	21,0	10,5	23,0	12,5
	98	18,9	9,44	20,9	11,4
	108	17,2	8,59	19,2	10,6
ADVBN-8	76	28,15	14,08	30,15	16,08
	88	24,4	12,2	26,4	14,2
	98	21,9	11,0	23,9	13,0
	108	20,0	9,98	22,0	12,0

AS válido somente para alimentação central (center fed), acrescentar aprox. 2,4 m para alimentação inferior (end feed)

Modelo	AA	L	AE	P
ADVBN-1			0,16	4
ADVBN-2			0,32	9
ADVBN-3			0,48	13
ADVBN-4	1,7	0,81	0,64	17
ADVBN-5			0,80	21
ADVBN-6			0,96	26
ADVBN-7			1,12	30
ADVBN-8			1,28	34

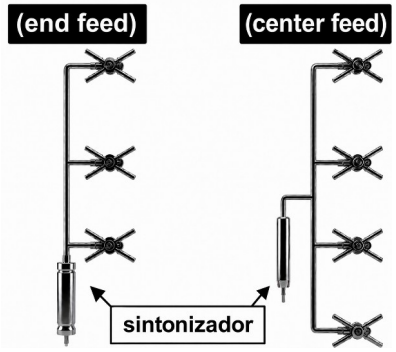
AE e **P** considerando interconexão dos elementos em linha rígida de 1 5/8”



AS	altura do sistema em m
CR	centro de radiação em m
AA	altura da antena em m
L	largura da antena em m
AE	área de exposição (*CaAc*) em m^ 2
P	peso da antena em Kg

Alimentação com LINHA RÍGIDA

Antenas especificadas com “tilt” e / ou “null -fill“ são fornecidas com alimentação central (“center feed”) e devem apresentar preferencialmente número par de níveis.



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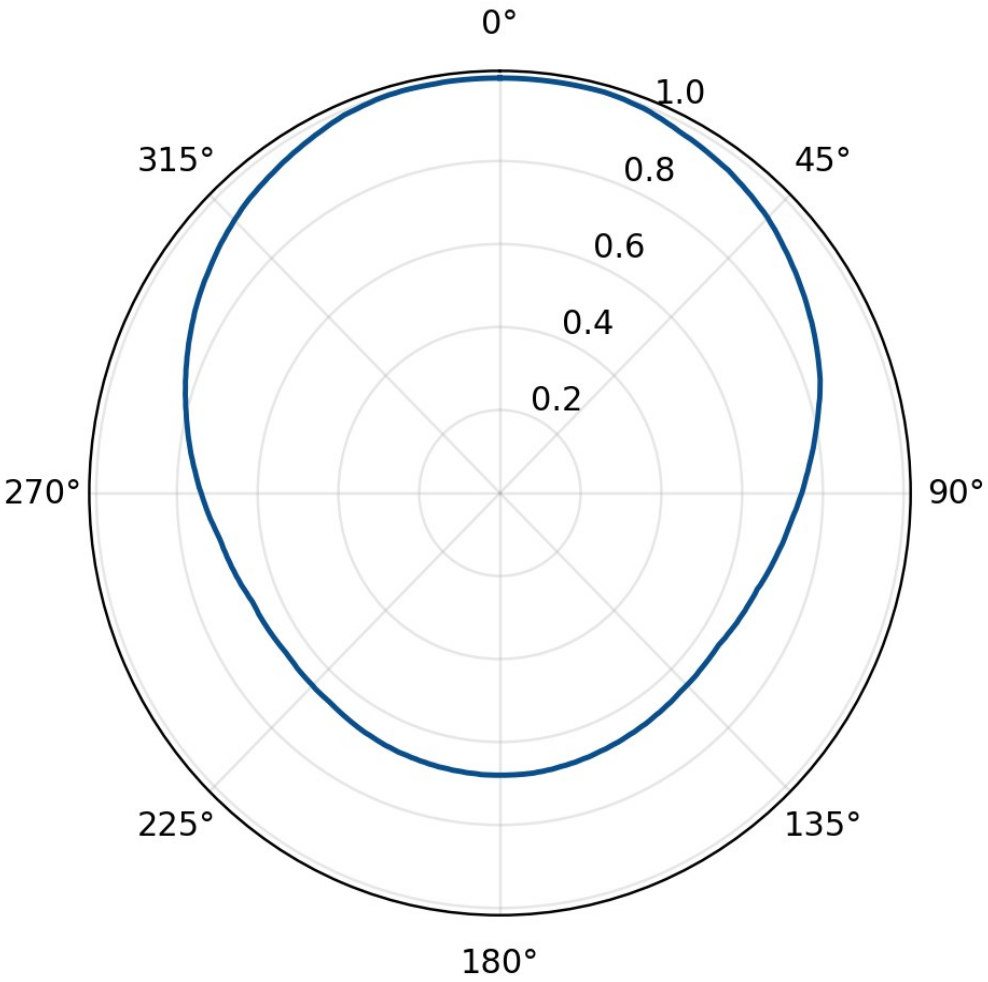
Azimute



Parâmetros da configuração

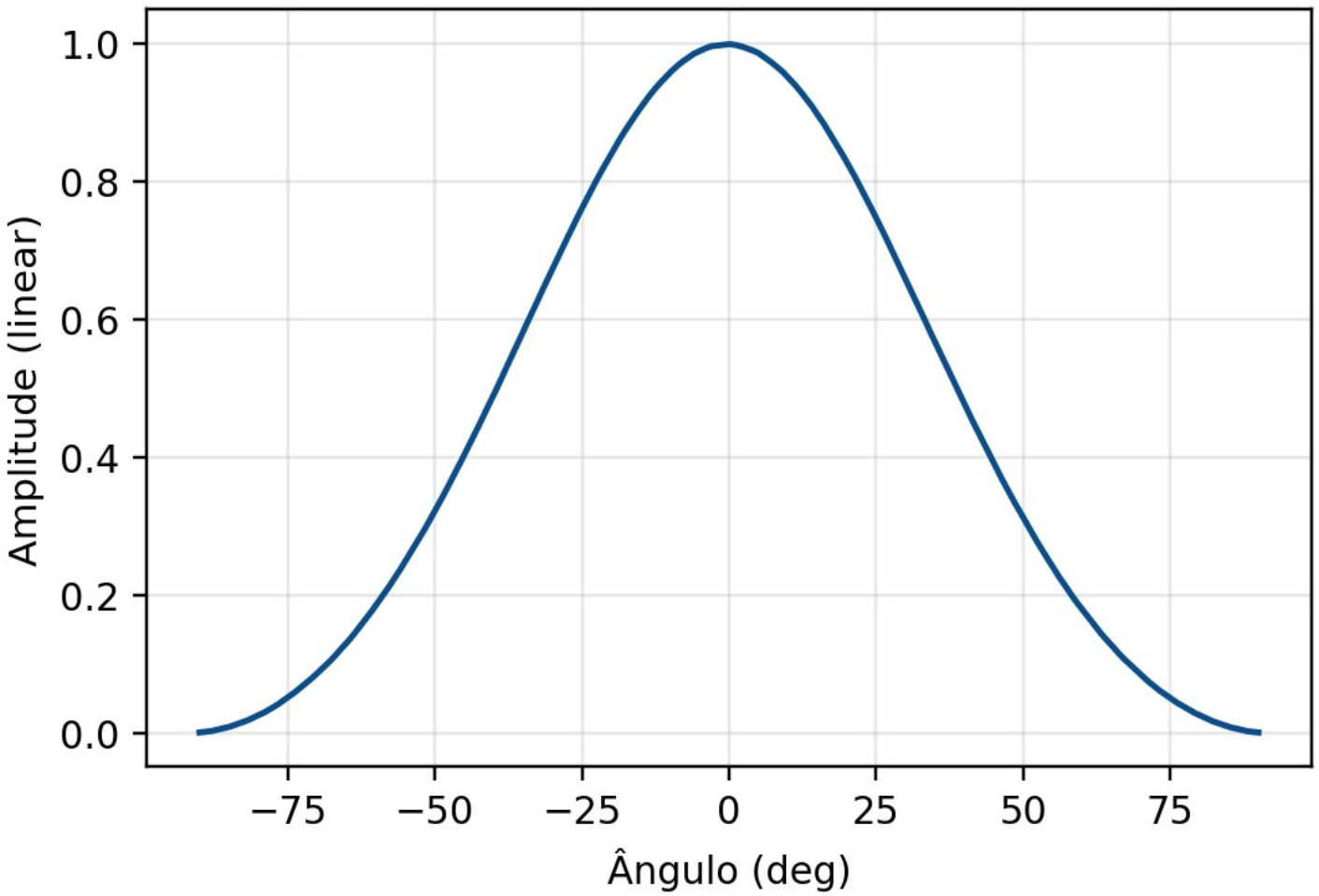
ÂNGULO DE MEIA POTÊNCIA HORIZONTAL	GANHO	FRENTE/COSTAS	RIPPLE
198.97°	0.20 dBd	3.35 dB	3.69 dB

Tabela completa - Azimute

EFtX Broadcast: Television & Radio

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°	0.8290	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			

Elevação



Parâmetros da configuração

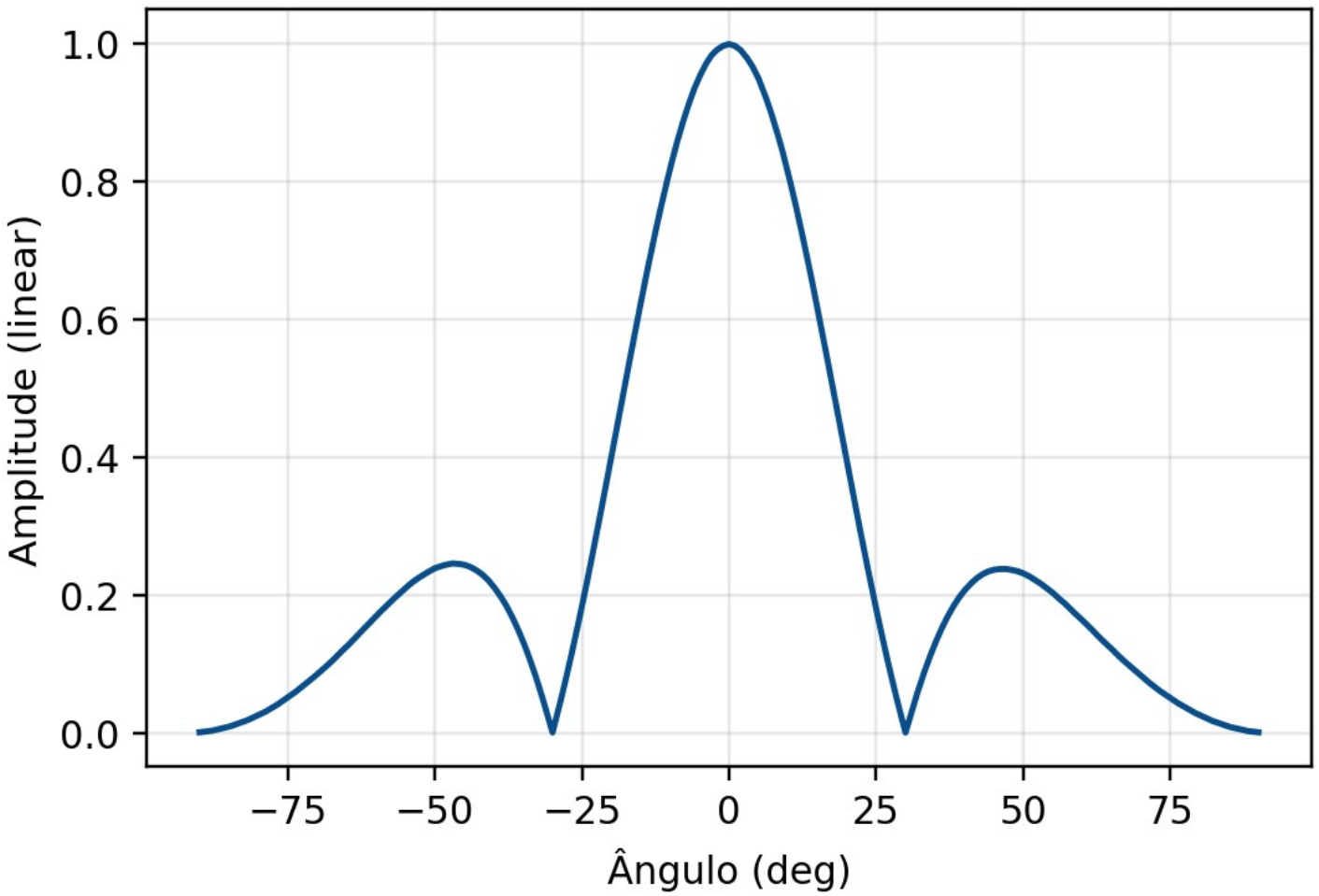
ELEMENTOS VERTICAIS	ÂNGULO DE MEIA POTÊNCIA VERTICAL	GANHO	PRIMEIRO NULO
1	56.16°	0.20 dBd	76.00°

Tabela completa - Elevação

EFtX Broadcast: Television & Radio

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
-90.0°	0.0010	60.00	-54.0°	0.2640	11.57	-18.0°	0.8700	1.21	18.0°	0.8580	1.33	54.0°	0.2550	11.87
-89.5°	0.0015	56.48	-53.5°	0.2710	11.34	-17.5°	0.8765	1.14	18.5°	0.8510	1.40	54.5°	0.2485	12.09
-89.0°	0.0020	53.98	-53.0°	0.2780	11.12	-17.0°	0.8830	1.08	19.0°	0.8440	1.47	55.0°	0.2420	12.32
-88.5°	0.0025	52.04	-52.5°	0.2850	10.90	-16.5°	0.8895	1.02	19.5°	0.8365	1.55	55.5°	0.2350	12.58
-88.0°	0.0030	50.46	-52.0°	0.2920	10.69	-16.0°	0.8960	0.95	20.0°	0.8290	1.63	56.0°	0.2280	12.84
-87.5°	0.0040	47.96	-51.5°	0.2995	10.47	-15.5°	0.9020	0.90	20.5°	0.8215	1.71	56.5°	0.2220	13.07
-87.0°	0.0050	46.02	-51.0°	0.3070	10.26	-15.0°	0.9080	0.84	21.0°	0.8140	1.79	57.0°	0.2160	13.31
-86.5°	0.0060	44.44	-50.5°	0.3150	10.03	-14.5°	0.9140	0.78	21.5°	0.8060	1.87	57.5°	0.2095	13.58
-86.0°	0.0070	43.10	-50.0°	0.3230	9.82	-14.0°	0.9200	0.72	22.0°	0.7980	1.96	58.0°	0.2030	13.85
-85.5°	0.0080	41.94	-49.5°	0.3305	9.62	-13.5°	0.9255	0.67	22.5°	0.7895	2.05	58.5°	0.1970	14.11
-85.0°	0.0090	40.92	-49.0°	0.3380	9.42	-13.0°	0.9310	0.62	23.0°	0.7810	2.15	59.0°	0.1910	14.38
-84.5°	0.0105	39.58	-48.5°	0.3460	9.22	-12.5°	0.9360	0.57	23.5°	0.7730	2.24	59.5°	0.1855	14.63
-84.0°	0.0120	38.42	-48.0°	0.3540	9.02	-12.0°	0.9410	0.53	24.0°	0.7650	2.33	60.0°	0.1800	14.89
-83.5°	0.0135	37.39	-47.5°	0.3625	8.81	-11.5°	0.9455	0.49	24.5°	0.7565	2.42	60.5°	0.1745	15.16
-83.0°	0.0150	36.48	-47.0°	0.3710	8.61	-11.0°	0.9500	0.45	25.0°	0.7480	2.52	61.0°	0.1690	15.44
-82.5°	0.0165	35.65	-46.5°	0.3790	8.43	-10.5°	0.9545	0.40	25.5°	0.7395	2.62	61.5°	0.1635	15.73
-82.0°	0.0180	34.89	-46.0°	0.3870	8.25	-10.0°	0.9590	0.36	26.0°	0.7310	2.72	62.0°	0.1580	16.03
-81.5°	0.0200	33.98	-45.5°	0.3955	8.06	-9.5°	0.9630	0.33	26.5°	0.7220	2.83	62.5°	0.1525	16.33
-81.0°	0.0220	33.15	-45.0°	0.4040	7.87	-9.0°	0.9670	0.29	27.0°	0.7130	2.94	63.0°	0.1470	16.65
-80.5°	0.0240	32.40	-44.5°	0.4125	7.69	-8.5°	0.9705	0.26	27.5°	0.7040	3.05	63.5°	0.1420	16.95
-80.0°	0.0260	31.70	-44.0°	0.4210	7.51	-8.0°	0.9740	0.23	28.0°	0.6950	3.16	64.0°	0.1370	17.27
-79.5°	0.0280	31.06	-43.5°	0.4295	7.34	-7.5°	0.9770	0.20	28.5°	0.6860	3.27	64.5°	0.1325	17.56
-79.0°	0.0300	30.46	-43.0°	0.4380	7.17	-7.0°	0.9800	0.18	29.0°	0.6770	3.39	65.0°	0.1280	17.86
-78.5°	0.0325	29.76	-42.5°	0.4470	6.99	-6.5°	0.9830	0.15	29.5°	0.6680	3.50	65.5°	0.1230	18.20
-78.0°	0.0350	29.12	-42.0°	0.4560	6.82	-6.0°	0.9860	0.12	30.0°	0.6590	3.62	66.0°	0.1180	18.56
-77.5°	0.0375	28.52	-41.5°	0.4650	6.65	-5.5°	0.9880	0.10	30.5°	0.6500	3.74	66.5°	0.1135	18.90
-77.0°	0.0400	27.96	-41.0°	0.4740	6.48	-5.0°	0.9900	0.09	31.0°	0.6410	3.86	67.0°	0.1090	19.25
-76.5°	0.0430	27.33	-40.5°	0.4825	6.33	-4.5°	0.9920	0.07	31.5°	0.6320	3.99	67.5°	0.1050	19.58
-76.0°	0.0460	26.74	-40.0°	0.4910	6.18	-4.0°	0.9940	0.05	32.0°	0.6230	4.11	68.0°	0.1010	19.91
-75.5°	0.0490	26.20	-39.5°	0.5000	6.02	-3.5°	0.9955	0.04	32.5°	0.6140	4.24	68.5°	0.0970	20.26
-75.0°	0.0520	25.68	-39.0°	0.5090	5.87	-3.0°	0.9970	0.03	33.0°	0.6050	4.36	69.0°	0.0930	20.63
-74.5°	0.0550	25.19	-38.5°	0.5185	5.70	-2.5°	0.9975	0.02	33.5°	0.5955	4.50	69.5°	0.0890	21.01
-74.0°	0.0580	24.73	-38.0°	0.5280	5.55	-2.0°	0.9980	0.02	34.0°	0.5860	4.64	70.0°	0.0850	21.41
-73.5°	0.0615	24.22	-37.5°	0.5370	5.40	-1.5°	0.9985	0.01	34.5°	0.5770	4.78	70.5°	0.0810	21.83
-73.0°	0.0650	23.74	-37.0°	0.5460	5.26	-1.0°	0.9990	0.01	35.0°	0.5680	4.91	71.0°	0.0770	22.27
-72.5°	0.0685	23.29	-36.5°	0.5550	5.11	-0.5°	0.9995	0.00	35.5°	0.5590	5.05	71.5°	0.0735	22.67
-72.0°	0.0720	22.85	-36.0°	0.5640	4.97	0.0°	1.0000	0.00	36.0°	0.5500	5.19	72.0°	0.0700	23.10
-71.5°	0.0755	22.44	-35.5°	0.5735	4.83	0.5°	0.9995	0.00	36.5°	0.5410	5.34	72.5°	0.0665	23.54
-71.0°	0.0790	22.05	-35.0°	0.5830	4.69	1.0°	0.9990	0.01	37.0°	0.5320	5.48	73.0°	0.0630	24.01
-70.5°	0.0830	21.62	-34.5°	0.5920	4.55	1.5°	0.9980	0.02	37.5°	0.5230	5.63	73.5°	0.0600	24.44
-70.0°	0.0870	21.21	-34.0°	0.6010	4.42	2.0°	0.9970	0.03	38.0°	0.5140	5.78	74.0°	0.0570	24.88
-69.5°	0.0910	20.82	-33.5°	0.6100	4.29	2.5°	0.9955	0.04	38.5°	0.5050	5.93	74.5°	0.0540	25.35
-69.0°	0.0950	20.45	-33.0°	0.6190	4.17	3.0°	0.9940	0.05	39.0°	0.4960	6.09	75.0°	0.0510	25.85
-68.5°	0.0990	20.09	-32.5°	0.6285	4.03	3.5°	0.9925	0.07	39.5°	0.4870	6.25	75.5°	0.0480	26.38
-68.0°	0.1030	19.74	-32.0°	0.6380	3.90	4.0°	0.9910	0.08	40.0°	0.4780	6.41	76.0°	0.0450	26.94
-67.5°	0.1075	19.37	-31.5°	0.6470	3.78	4.5°	0.9890	0.10	40.5°	0.4690	6.58	76.5°	0.0425	27.43
-67.0°	0.1120	19.02	-31.0°	0.6560	3.66	5.0°	0.9870	0.11	41.0°	0.4600	6.74	77.0°	0.0400	27.96
-66.5°	0.1170	18.64	-30.5°	0.6650	3.54	5.5°	0.9840	0.14	41.5°	0.4515	6.91	77.5°	0.0375	28.52
-66.0°	0.1220	18.27	-30.0°	0.6740	3.43	6.0°	0.9810	0.17	42.0°	0.4430	7.07	78.0°	0.0350	29.12
-65.5°	0.1265	17.96	-29.5°	0.6830	3.31	6.5°	0.9780	0.19	42.5°	0.4345	7.24	78.5°	0.0325	29.76
-65.0°	0.1310	17.65	-29.0°	0.6920	3.20	7.0°	0.9750	0.22	43.0°	0.4260	7.41	79.0°	0.0300	30.46
-64.5°	0.1360	17.33	-28.5°	0.7010	3.09	7.5°	0.9715	0.25	43.5°	0.4175	7.59	79.5°	0.0280	31.06
-64.0°	0.1410	17.02	-28.0°	0.7100	2.97	8.0°	0.9680	0.28	44.0°	0.4090	7.77	80.0°	0.0260	31.70
-63.5°	0.1465	16.68	-27.5°	0.7185	2.87	8.5°	0.9645	0.31	44.5°	0.4005	7.95	80.5°	0.0240	32.40
-63.0°	0.1520	16.36	-27.0°	0.7270	2.77	9.0°	0.9610	0.35	45.0°	0.3920	8.13	81.0°	0.0220	33.15
-62.5°	0.1575	16.05	-26.5°	0.7360	2.66	9.5°	0.9565	0.39	45.5°	0.3835	8.32	81.5°	0.0200	33.98
-62.0°	0.1630	15.76	-26.0°	0.7450	2.56	10.0°	0.9520	0.43	46.0°	0.3750	8.52	82.0°	0.0180	34.89
-61.5°	0.1685	15.47	-25.5°	0.7535	2.46	10.5°	0.9475	0.47	46.5°	0.3670	8.71	82.5°	0.0165	35.65
-61.0°	0.1740	15.19	-25.0°	0.7620	2.36	11.0°	0.9430	0.51	47.0°	0.3590	8.90	83.0°	0.0150	36.48
-60.5°	0.1800	14.89	-24.5°	0.7700	2.27	11.5°	0.9380	0.56	47.5°	0.3510	9.09	83.5°	0.0135	37.39
-60.0°	0.1860	14.61	-24.0°	0.7780	2.18	12.0°	0.9330	0.60	48.0°	0.3430	9.29	84.0°	0.0120	38.42
-59.5°	0.1920	14.33	-23.5°	0.7865	2.09	12.5°	0.9275	0.65	48.5°	0.3355	9.49	84.5°	0.0105	39.58
-59.0°	0.1980	14.07	-23.0°	0.7950	1.99	13.0°	0.9220	0.71	49.0°	0.3280	9.68	85.0°	0.0090	40.92
-58.5°	0.2040	13.81	-22.5°	0.8030	1.91	13.5°	0.9165	0.76	49.5°	0.3205	9.88	85.5°	0.0080	41.94
-58.0°	0.2100	13.56	-22.0°	0.8110	1.82	14.0°	0.9110	0.81	50.0°	0.3130	10.09	86.0°	0.0070	43.10
-57.5°	0.2165	13.29	-21.5°	0.8185	1.74	14.5°	0.9045	0.87	50.5°	0.3055	10.30	86.5°	0.0060	44.44
-57.0°	0.2230	13.03	-21.0°	0.8260	1.66	15.0°	0.8980	0.93	51.0°	0.2980	10.52	87.0°	0.0050	46.02
-56.5°	0.2295	12.78	-20.5°	0.8335	1.58	15.5°	0.8920	0.99	51.5°	0.2905	10.74	87.5°	0.0040	47.96
-56.0°	0.2360	12.54	-20.0°	0.8410	1.50	16.0°	0.8860	1.05	52.0°	0.2830	10.96	88.0°	0.0030	50.46
-55.5°	0.2430	12.29	-19.5°	0.8485	1.43	16.5°	0.8790	1.12	52.5°	0.2760	11.18	88.5°	0.0025	52.04
-55.0°	0.2500	12.04	-19.0°	0.8560	1.35	17.0°	0.8720	1.19	53.0°	0.2690	11.40	89.0°	0.0020	53.98
-54.5°	0.2570	11.80	-18.5°	0.8630	1.28	17.5°	0.8650	1.26	53.5°	0.2620	11.63	89.5°	0.0015	56.48

Elevação



Parâmetros da configuração

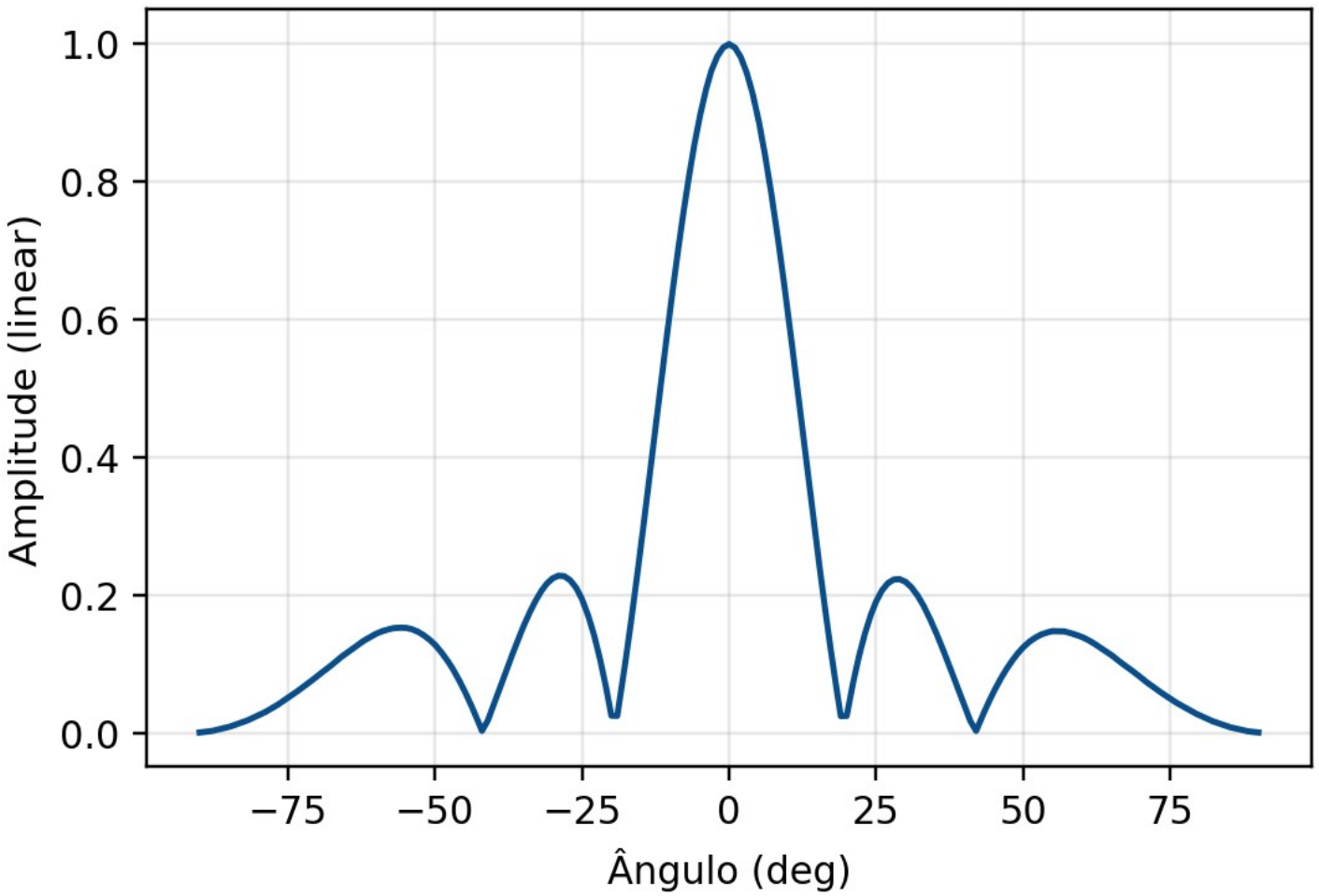
ELEMENTOS VERTICAIS	ÂNGULO DE MEIA POTÊNCIA VERTICAL	GANHO	PRIMEIRO NULO
2	26.03°	3.08 dBd	29.00°

Tabela completa - Elevação

EFtX Broadcast: Television & Radio

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
-90.0°	0.0010	60.00	-54.0°	0.2176	13.25	-18.0°	0.4917	6.17	18.0°	0.4849	6.29	54.0°	0.2102	13.55
-89.5°	0.0015	56.48	-53.5°	0.2208	13.12	-17.5°	0.5141	5.78	18.5°	0.4625	6.70	54.5°	0.2070	13.68
-89.0°	0.0020	53.98	-53.0°	0.2239	13.00	-17.0°	0.5364	5.41	19.0°	0.4402	7.13	55.0°	0.2038	13.82
-88.5°	0.0025	52.04	-52.5°	0.2266	12.89	-16.5°	0.5587	5.06	19.5°	0.4177	7.58	55.5°	0.1997	13.99
-88.0°	0.0030	50.46	-52.0°	0.2293	12.79	-16.0°	0.5809	4.72	20.0°	0.3953	8.06	56.0°	0.1957	14.17
-87.5°	0.0040	47.96	-51.5°	0.2319	12.69	-15.5°	0.6027	4.40	20.5°	0.3731	8.56	56.5°	0.1922	14.33
-87.0°	0.0050	46.02	-51.0°	0.2345	12.60	-15.0°	0.6244	4.09	21.0°	0.3509	9.10	57.0°	0.1887	14.49
-86.5°	0.0060	44.44	-50.5°	0.2369	12.51	-14.5°	0.6458	3.80	21.5°	0.3289	9.66	57.5°	0.1844	14.68
-86.0°	0.0070	43.10	-50.0°	0.2393	12.42	-14.0°	0.6672	3.52	22.0°	0.3069	10.26	58.0°	0.1801	14.89
-85.5°	0.0080	41.94	-49.5°	0.2407	12.37	-13.5°	0.6877	3.25	22.5°	0.2852	10.90	58.5°	0.1760	15.09
-85.0°	0.0090	40.92	-49.0°	0.2421	12.32	-13.0°	0.7083	3.00	23.0°	0.2635	11.59	59.0°	0.1719	15.29
-84.5°	0.0105	39.58	-48.5°	0.2433	12.28	-12.5°	0.7279	2.76	23.5°	0.2425	12.31	59.5°	0.1681	15.49
-84.0°	0.0120	38.42	-48.0°	0.2445	12.24	-12.0°	0.7476	2.53	24.0°	0.2216	13.09	60.0°	0.1642	15.69
-83.5°	0.0135	37.40	-47.5°	0.2453	12.21	-11.5°	0.7661	2.31	24.5°	0.2011	13.93	60.5°	0.1600	15.91
-83.0°	0.0150	36.48	-47.0°	0.2461	12.18	-11.0°	0.7846	2.11	25.0°	0.1807	14.86	61.0°	0.1559	16.14
-82.5°	0.0165	35.65	-46.5°	0.2459	12.19	-10.5°	0.8023	1.91	25.5°	0.1610	15.86	61.5°	0.1516	16.38
-82.0°	0.0180	34.90	-46.0°	0.2456	12.19	-10.0°	0.8200	1.72	26.0°	0.1413	17.00	62.0°	0.1473	16.63
-81.5°	0.0200	33.99	-45.5°	0.2449	12.22	-9.5°	0.8363	1.55	26.5°	0.1223	18.25	62.5°	0.1429	16.90
-81.0°	0.0220	33.16	-45.0°	0.2442	12.24	-9.0°	0.8527	1.38	27.0°	0.1034	19.71	63.0°	0.1384	17.18
-80.5°	0.0240	32.40	-44.5°	0.2427	12.30	-8.5°	0.8676	1.23	27.5°	0.0853	21.38	63.5°	0.1342	17.44
-80.0°	0.0260	31.71	-44.0°	0.2412	12.35	-8.0°	0.8825	1.09	28.0°	0.0672	23.45	64.0°	0.1301	17.72
-79.5°	0.0280	31.07	-43.5°	0.2388	12.44	-7.5°	0.8958	0.96	28.5°	0.0501	26.00	64.5°	0.1262	17.98
-79.0°	0.0299	30.47	-43.0°	0.2365	12.52	-7.0°	0.9091	0.83	29.0°	0.0330	29.64	65.0°	0.1224	18.24
-78.5°	0.0324	29.78	-42.5°	0.2335	12.63	-6.5°	0.9213	0.71	29.5°	0.0168	35.48	65.5°	0.1180	18.56
-78.0°	0.0349	29.14	-42.0°	0.2305	12.75	-6.0°	0.9334	0.60	30.0°	0.0007	63.28	66.0°	0.1136	18.89
-77.5°	0.0374	28.55	-41.5°	0.2266	12.90	-5.5°	0.9433	0.51	30.5°	0.0151	36.40	66.5°	0.1096	19.20
-77.0°	0.0399	27.99	-41.0°	0.2226	13.05	-5.0°	0.9532	0.42	31.0°	0.0296	30.58	67.0°	0.1056	19.53
-76.5°	0.0428	27.37	-40.5°	0.2175	13.25	-4.5°	0.9617	0.34	31.5°	0.0437	27.19	67.5°	0.1019	19.83
-76.0°	0.0458	26.78	-40.0°	0.2123	13.46	-4.0°	0.9703	0.26	32.0°	0.0578	24.76	68.0°	0.0983	20.15
-75.5°	0.0487	26.24	-39.5°	0.2064	13.70	-3.5°	0.9769	0.20	32.5°	0.0708	22.99	68.5°	0.0946	20.48
-75.0°	0.0517	25.73	-39.0°	0.2005	13.96	-3.0°	0.9836	0.14	33.0°	0.0839	21.53	69.0°	0.0909	20.82
-74.5°	0.0546	25.25	-38.5°	0.1938	14.25	-2.5°	0.9878	0.11	33.5°	0.0958	20.37	69.5°	0.0872	21.19
-74.0°	0.0576	24.80	-38.0°	0.1870	14.56	-2.0°	0.9920	0.07	34.0°	0.1077	19.36	70.0°	0.0834	21.57
-73.5°	0.0610	24.30	-37.5°	0.1790	14.94	-1.5°	0.9948	0.05	34.5°	0.1186	18.52	70.5°	0.0796	21.98
-73.0°	0.0644	23.83	-37.0°	0.1710	15.34	-1.0°	0.9975	0.02	35.0°	0.1295	17.76	71.0°	0.0758	22.40
-72.5°	0.0677	23.38	-36.5°	0.1620	15.81	-0.5°	0.9987	0.01	35.5°	0.1393	17.12	71.5°	0.0725	22.79
-72.0°	0.0711	22.96	-36.0°	0.1529	16.31	0.0°	1.0000	0.00	36.0°	0.1491	16.53	72.0°	0.0692	23.20
-71.5°	0.0745	22.56	-35.5°	0.1429	16.90	0.5°	0.9987	0.01	36.5°	0.1579	16.03	72.5°	0.0658	23.64
-71.0°	0.0778	22.18	-35.0°	0.1329	17.53	1.0°	0.9975	0.02	37.0°	0.1666	15.56	73.0°	0.0624	24.10
-70.5°	0.0816	21.76	-34.5°	0.1217	18.30	1.5°	0.9943	0.05	37.5°	0.1744	15.17	73.5°	0.0595	24.51
-70.0°	0.0854	21.37	-34.0°	0.1104	19.14	2.0°	0.9910	0.08	38.0°	0.1821	14.80	74.0°	0.0566	24.95
-69.5°	0.0892	21.00	-33.5°	0.0981	20.16	2.5°	0.9858	0.12	38.5°	0.1887	14.48	74.5°	0.0536	25.41
-69.0°	0.0929	20.64	-33.0°	0.0858	21.33	3.0°	0.9806	0.17	39.0°	0.1954	14.18	75.0°	0.0507	25.90
-68.5°	0.0966	20.30	-32.5°	0.0725	22.79	3.5°	0.9740	0.23	39.5°	0.2011	13.93	75.5°	0.0477	26.42
-68.0°	0.1003	19.98	-32.0°	0.0592	24.56	4.0°	0.9673	0.29	40.0°	0.2067	13.69	76.0°	0.0448	26.98
-67.5°	0.1044	19.63	-31.5°	0.0447	26.99	4.5°	0.9588	0.37	40.5°	0.2114	13.50	76.5°	0.0423	27.47
-67.0°	0.1085	19.29	-31.0°	0.0303	30.38	5.0°	0.9503	0.44	41.0°	0.2160	13.31	77.0°	0.0399	27.99
-66.5°	0.1130	18.94	-30.5°	0.0155	36.20	5.5°	0.9395	0.54	41.5°	0.2200	13.15	77.5°	0.0374	28.55
-66.0°	0.1175	18.60	-30.0°	0.0007	63.09	6.0°	0.9287	0.64	42.0°	0.2239	13.00	78.0°	0.0349	29.14
-65.5°	0.1214	18.32	-29.5°	0.0172	35.29	6.5°	0.9166	0.76	42.5°	0.2270	12.88	78.5°	0.0324	29.78
-65.0°	0.1253	18.04	-29.0°	0.0337	29.45	7.0°	0.9045	0.87	43.0°	0.2300	12.77	79.0°	0.0299	30.47
-64.5°	0.1296	17.75	-28.5°	0.0512	25.82	7.5°	0.8908	1.00	43.5°	0.2322	12.68	79.5°	0.0280	31.07
-64.0°	0.1339	17.47	-28.0°	0.0687	23.26	8.0°	0.8771	1.14	44.0°	0.2343	12.60	80.0°	0.0260	31.71
-63.5°	0.1385	17.17	-27.5°	0.0870	21.21	8.5°	0.8622	1.29	44.5°	0.2357	12.55	80.5°	0.0240	32.40
-63.0°	0.1431	16.89	-27.0°	0.1054	19.54	9.0°	0.8474	1.44	45.0°	0.2370	12.51	81.0°	0.0220	33.16
-62.5°	0.1475	16.62	-26.5°	0.1247	18.08	9.5°	0.8307	1.61	45.5°	0.2375	12.49	81.5°	0.0200	33.99
-62.0°	0.1520	16.36	-26.0°	0.1440	16.83	10.0°	0.8140	1.79	46.0°	0.2380	12.47	82.0°	0.0180	34.90
-61.5°	0.1563	16.12	-25.5°	0.1640	15.70	10.5°	0.7964	1.98	46.5°	0.2381	12.47	82.5°	0.0165	35.65
-61.0°	0.1606	15.89	-25.0°	0.1841	14.70	11.0°	0.7788	2.17	47.0°	0.2381	12.46	83.0°	0.0150	36.48
-60.5°	0.1651	15.65	-24.5°	0.2047	13.78	11.5°	0.7600	2.38	47.5°	0.2375	12.49	83.5°	0.0135	37.40
-60.0°	0.1696	15.41	-24.0°	0.2253	12.94	12.0°	0.7412	2.60	48.0°	0.2369	12.51	84.0°	0.0120	38.42
-59.5°	0.1739	15.19	-23.5°	0.2468	12.15	12.5°	0.7213	2.84	48.5°	0.2359	12.54	84.5°	0.0105	39.58
-59.0°	0.1782	14.98	-23.0°	0.2682	11.43	13.0°	0.7015	3.08	49.0°	0.2350	12.58	85.0°	0.0090	40.92
-58.5°	0.1823	14.78	-22.5°	0.2900	10.75	13.5°	0.6810	3.34	49.5°	0.2334	12.64	85.5°	0.0080	41.94
-58.0°	0.1864	14.59	-22.0°	0.3119	10.12	14.0°	0.6606	3.60	50.0°	0.2319	12.70	86.0°	0.0070	43.10
-57.5°	0.1906	14.40	-21.5°	0.3340	9.53	14.5°	0.6391	3.89	50.5°	0.2297	12.78	86.5°	0.0060	44.44
-57.0°	0.1948	14.21	-21.0°	0.3561	8.97	15.0°	0.6175	4.19	51.0°	0.2276	12.86	87.0°	0.0050	46.02
-56.5°	0.1987	14.04	-20.5°	0.3785	8.44	15.5°	0.5960	4.50	51.5°	0.2249	12.96	87.5°	0.0040	47.96
-56.0°	0.2026	13.87	-20.0°	0.4010	7.94	16.0°	0.5744	4.81	52.0°	0.2222	13.06	88.0°	0.0030	50.46
-55.5°	0.2065	13.70	-19.5°	0.4237	7.46	16.5°	0.5521	5.16	52.5°	0.2195	13.17	88.5°	0.0025	52.04
-55.0°	0.2105	13.54	-19.0°	0.4465	7.00	17.0°	0.5297	5.52	53.0°	0.2167	13.28	89.0°	0.0020	53.98
-54.5°	0.2141	13.39	-18.5°	0.4691	6.58	17.5°	0.5073	5.89	53.5°	0.2134	13.41	89.5°	0.0015	56.48

Elevação



Parâmetros da configuração

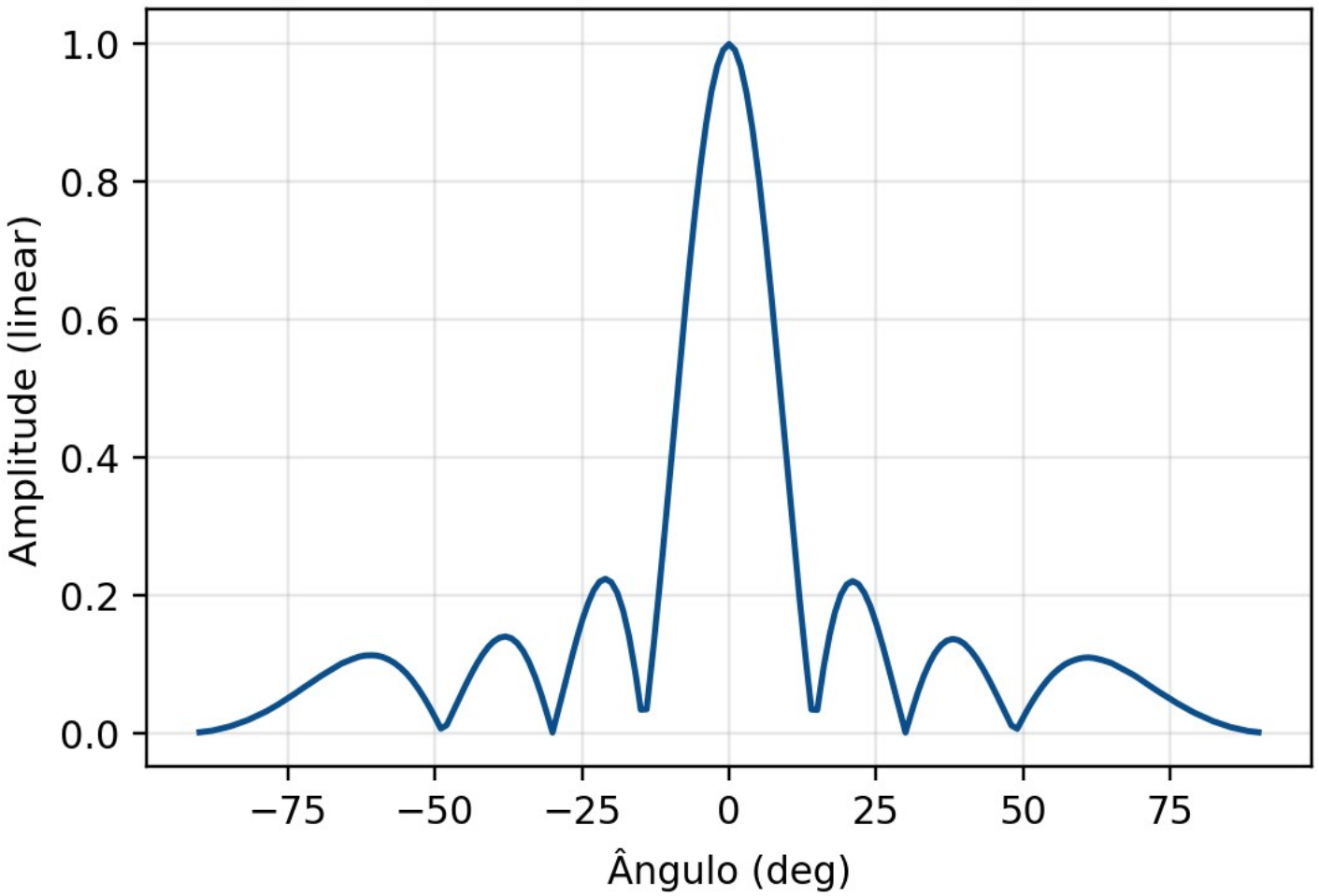
ELEMENTOS VERTICAIS	ÂNGULO DE MEIA POTÊNCIA VERTICAL	GANHO	PRIMEIRO NULO
3	17.56°	4.80 dBd	19.00°

Tabela completa - Elevação

EFtX Broadcast: Television & Radio

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
-90.0°	0.0010	60.00	-54.0°	0.1512	16.41	-18.0°	0.0805	21.88	18.0°	0.0794	22.00	54.0°	0.1461	16.71
-89.5°	0.0015	56.48	-53.5°	0.1495	16.51	-17.5°	0.1103	19.15	18.5°	0.0521	25.66	54.5°	0.1471	16.65
-89.0°	0.0020	53.98	-53.0°	0.1478	16.60	-17.0°	0.1401	17.07	19.0°	0.0248	32.12	55.0°	0.1481	16.59
-88.5°	0.0025	52.04	-52.5°	0.1453	16.75	-16.5°	0.1718	15.30	19.5°	0.0249	32.07	55.5°	0.1480	16.59
-88.0°	0.0030	50.46	-52.0°	0.1428	16.91	-16.0°	0.2035	13.83	20.0°	0.0250	32.03	56.0°	0.1480	16.60
-87.5°	0.0040	47.96	-51.5°	0.1396	17.10	-15.5°	0.2367	12.52	20.5°	0.0473	26.50	56.5°	0.1478	16.60
-87.0°	0.0050	46.02	-51.0°	0.1364	17.30	-15.0°	0.2698	11.38	21.0°	0.0696	23.14	57.0°	0.1477	16.61
-86.5°	0.0060	44.44	-50.5°	0.1325	17.55	-14.5°	0.3041	10.34	21.5°	0.0892	21.00	57.5°	0.1466	16.68
-86.0°	0.0070	43.10	-50.0°	0.1287	17.81	-14.0°	0.3384	9.41	22.0°	0.1087	19.28	58.0°	0.1455	16.74
-85.5°	0.0080	41.94	-49.5°	0.1236	18.16	-13.5°	0.3733	8.56	22.5°	0.1252	18.04	58.5°	0.1441	16.83
-85.0°	0.0090	40.92	-49.0°	0.1186	18.52	-13.0°	0.4082	7.78	23.0°	0.1418	16.96	59.0°	0.1427	16.91
-84.5°	0.0105	39.58	-48.5°	0.1129	18.95	-12.5°	0.4432	7.07	23.5°	0.1556	16.16	59.5°	0.1412	17.01
-84.0°	0.0120	38.42	-48.0°	0.1071	19.40	-12.0°	0.4782	6.41	24.0°	0.1694	15.42	60.0°	0.1396	17.10
-83.5°	0.0135	37.40	-47.5°	0.1006	19.95	-11.5°	0.5127	5.80	24.5°	0.1803	14.88	60.5°	0.1376	17.23
-83.0°	0.0150	36.49	-47.0°	0.0940	20.54	-11.0°	0.5473	5.24	25.0°	0.1911	14.37	61.0°	0.1355	17.36
-82.5°	0.0165	35.66	-46.5°	0.0864	21.27	-10.5°	0.5812	4.71	25.5°	0.1992	14.01	61.5°	0.1330	17.52
-82.0°	0.0180	34.91	-46.0°	0.0788	22.06	-10.0°	0.6152	4.22	26.0°	0.2072	13.67	62.0°	0.1305	17.69
-81.5°	0.0200	34.00	-45.5°	0.0705	23.03	-9.5°	0.6477	3.77	26.5°	0.2125	13.45	62.5°	0.1276	17.88
-81.0°	0.0220	33.17	-45.0°	0.0622	24.13	-9.0°	0.6802	3.35	27.0°	0.2177	13.24	63.0°	0.1247	18.08
-80.5°	0.0239	32.42	-44.5°	0.0531	25.50	-8.5°	0.7108	2.96	27.5°	0.2203	13.14	63.5°	0.1218	18.29
-80.0°	0.0259	31.73	-44.0°	0.0439	27.14	-8.0°	0.7415	2.60	28.0°	0.2230	13.03	64.0°	0.1189	18.49
-79.5°	0.0279	31.09	-43.5°	0.0341	29.35	-7.5°	0.7697	2.27	28.5°	0.2233	13.02	64.5°	0.1162	18.70
-79.0°	0.0299	30.50	-43.0°	0.0242	32.31	-7.0°	0.7979	1.96	29.0°	0.2235	13.01	65.0°	0.1135	18.90
-78.5°	0.0323	29.81	-42.5°	0.0138	37.20	-6.5°	0.8236	1.69	29.5°	0.2216	13.09	65.5°	0.1100	19.17
-78.0°	0.0348	29.18	-42.0°	0.0034	49.49	-6.0°	0.8494	1.42	30.0°	0.2197	13.16	66.0°	0.1065	19.45
-77.5°	0.0372	28.59	-41.5°	0.0110	39.19	-5.5°	0.8715	1.19	30.5°	0.2158	13.32	66.5°	0.1033	19.72
-77.0°	0.0396	28.04	-41.0°	0.0186	34.61	-5.0°	0.8936	0.98	31.0°	0.2118	13.48	67.0°	0.1000	20.00
-76.5°	0.0425	27.42	-40.5°	0.0299	30.49	-4.5°	0.9125	0.80	31.5°	0.2062	13.71	67.5°	0.0970	20.27
-76.0°	0.0454	26.85	-40.0°	0.0412	27.70	-4.0°	0.9314	0.62	32.0°	0.2005	13.96	68.0°	0.0940	20.54
-75.5°	0.0483	26.32	-39.5°	0.0528	25.55	-3.5°	0.9464	0.48	32.5°	0.1933	14.27	68.5°	0.0908	20.84
-75.0°	0.0512	25.82	-39.0°	0.0643	23.83	-3.0°	0.9614	0.34	33.0°	0.1862	14.60	69.0°	0.0876	21.15
-74.5°	0.0540	25.35	-38.5°	0.0760	22.38	-2.5°	0.9718	0.25	33.5°	0.1776	15.01	69.5°	0.0842	21.49
-74.0°	0.0568	24.91	-38.0°	0.0877	21.14	-2.0°	0.9821	0.16	34.0°	0.1690	15.44	70.0°	0.0809	21.84
-73.5°	0.0601	24.43	-37.5°	0.0991	20.08	-1.5°	0.9885	0.10	34.5°	0.1595	15.95	70.5°	0.0774	22.22
-73.0°	0.0633	23.97	-37.0°	0.1106	19.13	-1.0°	0.9950	0.04	35.0°	0.1500	16.48	71.0°	0.0740	22.62
-72.5°	0.0665	23.54	-36.5°	0.1216	18.30	-0.5°	0.9975	0.02	35.5°	0.1397	17.10	71.5°	0.0709	22.99
-72.0°	0.0697	23.14	-36.0°	0.1327	17.54	0.0°	1.0000	0.00	36.0°	0.1294	17.76	72.0°	0.0678	23.38
-71.5°	0.0728	22.76	-35.5°	0.1433	16.87	0.5°	0.9975	0.02	36.5°	0.1186	18.52	72.5°	0.0646	23.80
-71.0°	0.0759	22.40	-35.0°	0.1539	16.25	1.0°	0.9950	0.04	37.0°	0.1077	19.35	73.0°	0.0614	24.24
-70.5°	0.0793	22.01	-34.5°	0.1636	15.72	1.5°	0.9881	0.10	37.5°	0.0965	20.31	73.5°	0.0586	24.64
-70.0°	0.0828	21.64	-34.0°	0.1733	15.23	2.0°	0.9811	0.17	38.0°	0.0853	21.38	74.0°	0.0558	25.06
-69.5°	0.0861	21.30	-33.5°	0.1819	14.80	2.5°	0.9698	0.27	38.5°	0.0740	22.61	74.5°	0.0530	25.51
-69.0°	0.0895	20.97	-33.0°	0.1905	14.40	3.0°	0.9585	0.37	39.0°	0.0627	24.06	75.0°	0.0502	25.99
-68.5°	0.0926	20.66	-32.5°	0.1979	14.07	3.5°	0.9436	0.50	39.5°	0.0514	25.78	75.5°	0.0473	26.50
-68.0°	0.0958	20.37	-32.0°	0.2053	13.75	4.0°	0.9286	0.64	40.0°	0.0401	27.93	76.0°	0.0445	27.04
-67.5°	0.0993	20.06	-31.5°	0.2111	13.51	4.5°	0.9098	0.82	40.5°	0.0291	30.73	76.5°	0.0420	27.53
-67.0°	0.1027	19.77	-31.0°	0.2168	13.28	5.0°	0.8909	1.00	41.0°	0.0180	34.87	77.0°	0.0396	28.04
-66.5°	0.1064	19.46	-30.5°	0.2207	13.12	5.5°	0.8680	1.23	41.5°	0.0107	39.45	77.5°	0.0372	28.59
-66.0°	0.1101	19.16	-30.0°	0.2247	12.97	6.0°	0.8451	1.46	42.0°	0.0033	49.74	78.0°	0.0348	29.18
-65.5°	0.1131	18.93	-29.5°	0.2266	12.90	6.5°	0.8195	1.73	42.5°	0.0134	37.44	78.5°	0.0323	29.81
-65.0°	0.1161	18.70	-29.0°	0.2285	12.82	7.0°	0.7938	2.01	43.0°	0.0236	32.55	79.0°	0.0299	30.50
-64.5°	0.1193	18.47	-28.5°	0.2281	12.84	7.5°	0.7653	2.32	43.5°	0.0331	29.60	79.5°	0.0279	31.09
-64.0°	0.1224	18.24	-28.0°	0.2278	12.85	8.0°	0.7369	2.65	44.0°	0.0427	27.40	80.0°	0.0259	31.73
-63.5°	0.1257	18.02	-27.5°	0.2249	12.96	8.5°	0.7064	3.02	44.5°	0.0515	25.76	80.5°	0.0239	32.42
-63.0°	0.1289	17.79	-27.0°	0.2220	13.07	9.0°	0.6760	3.40	45.0°	0.0603	24.39	81.0°	0.0220	33.17
-62.5°	0.1318	17.60	-26.5°	0.2166	13.29	9.5°	0.6433	3.83	45.5°	0.0684	23.30	81.5°	0.0200	34.00
-62.0°	0.1346	17.42	-26.0°	0.2112	13.51	10.0°	0.6107	4.28	46.0°	0.0764	22.34	82.0°	0.0180	34.91
-61.5°	0.1371	17.26	-25.5°	0.2030	13.85	10.5°	0.5770	4.78	46.5°	0.0837	21.55	82.5°	0.0165	35.66
-61.0°	0.1395	17.11	-25.0°	0.1947	14.21	11.0°	0.5432	5.30	47.0°	0.0910	20.82	83.0°	0.0150	36.49
-60.5°	0.1419	16.96	-24.5°	0.1835	14.73	11.5°	0.5087	5.87	47.5°	0.0974	20.23	83.5°	0.0135	37.40
-60.0°	0.1443	16.82	-24.0°	0.1723	15.27	12.0°	0.4741	6.48	48.0°	0.1038	19.68	84.0°	0.0120	38.42
-59.5°	0.1461	16.71	-23.5°	0.1583	16.01	12.5°	0.4392	7.15	48.5°	0.1094	19.22	84.5°	0.0105	39.58
-59.0°	0.1479	16.60	-23.0°	0.1444	16.81	13.0°	0.4042	7.87	49.0°	0.1151	18.78	85.0°	0.0090	40.92
-58.5°	0.1492	16.52	-22.5°	0.1274	17.90	13.5°	0.3697	8.64	49.5°	0.1199	18.42	85.5°	0.0080	41.94
-58.0°	0.1505	16.45	-22.0°	0.1104	19.14	14.0°	0.3351	9.50	50.0°	0.1247	18.08	86.0°	0.0070	43.10
-57.5°	0.1515	16.39	-21.5°	0.0905	20.86	14.5°	0.3010	10.43	50.5°	0.1285	17.82	86.5°	0.0060	44.44
-57.0°	0.1525	16.33	-21.0°	0.0707	23.02	15.0°	0.2668	11.48	51.0°	0.1324	17.56	87.0°	0.0050	46.02
-56.5°	0.1528	16.32	-20.5°	0.0480	26.37	15.5°	0.2340	12.61	51.5°	0.1354	17.37	87.5°	0.0040	47.96
-56.0°	0.1531	16.30	-20.0°	0.0254	31.90	16.0°	0.2013	13.92	52.0°	0.1384	17.18	88.0°	0.0030	50.46
-55.5°	0.1531	16.30	-19.5°	0.0253	31.95	16.5°	0.1698	15.40	52.5°	0.1407	17.03	88.5°	0.0025	52.04
-55.0°	0.1530	16.31	-19.0°	0.0251	32.00	17.0°	0.1384	17.18	53.0°	0.1431	16.89	89.0°	0.0020	53.98
-54.5°	0.1521	16.36	-18.5°	0.0528	25.54	17.5°	0.1089	19.26	53.5°	0.1446	16.80	89.5°	0.0015	56.48

Elevação



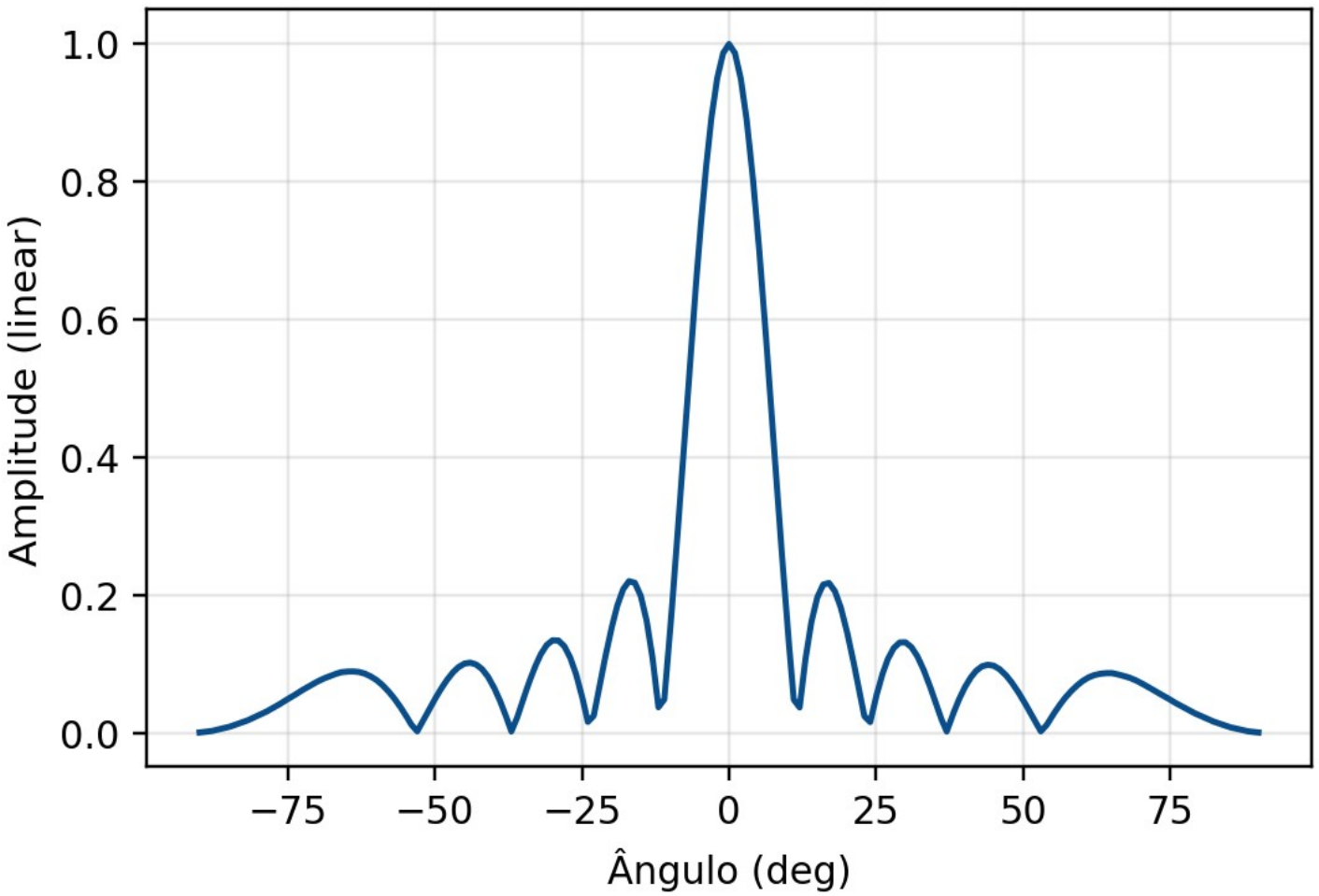
Parâmetros da configuração			
ELEMENTOS VERTICAIS	ÂNGULO DE MEIA POTÊNCIA VERTICAL	GANHO	PRIMEIRO NULO
4	13.39°	6.03 dBd	14.00°

Tabela completa - Elevação

EFtX Broadcast: Television & Radio

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
-90.0°	0.0010	60.00	-54.0°	0.0782	22.14	-18.0°	0.1776	15.01	18.0°	0.1751	15.13	54.0°	0.0755	22.44
-89.5°	0.0015	56.48	-53.5°	0.0724	22.80	-17.5°	0.1590	15.97	18.5°	0.1879	14.52	54.5°	0.0803	21.90
-89.0°	0.0020	53.98	-53.0°	0.0667	23.52	-17.0°	0.1405	17.05	19.0°	0.2007	13.95	55.0°	0.0851	21.40
-88.5°	0.0025	52.04	-52.5°	0.0601	24.42	-16.5°	0.1165	18.67	19.5°	0.2081	13.63	55.5°	0.0889	21.02
-88.0°	0.0030	50.46	-52.0°	0.0535	25.43	-16.0°	0.0925	20.68	20.0°	0.2155	13.33	56.0°	0.0926	20.66
-87.5°	0.0040	47.96	-51.5°	0.0463	26.69	-15.5°	0.0632	23.98	20.5°	0.2180	13.23	56.5°	0.0959	20.36
-87.0°	0.0050	46.02	-51.0°	0.0391	28.17	-15.0°	0.0339	29.39	21.0°	0.2205	13.13	57.0°	0.0992	20.07
-86.5°	0.0060	44.44	-50.5°	0.0312	30.12	-14.5°	0.0342	29.32	21.5°	0.2183	13.22	57.5°	0.1014	19.88
-86.0°	0.0070	43.10	-50.0°	0.0233	32.64	-14.0°	0.0345	29.24	22.0°	0.2161	13.31	58.0°	0.1036	19.70
-85.5°	0.0080	41.94	-49.5°	0.0149	36.56	-13.5°	0.0731	22.72	22.5°	0.2098	13.56	58.5°	0.1052	19.56
-85.0°	0.0090	40.92	-49.0°	0.0064	43.87	-13.0°	0.1117	19.04	23.0°	0.2035	13.83	59.0°	0.1067	19.43
-84.5°	0.0105	39.58	-48.5°	0.0088	41.07	-12.5°	0.1538	16.26	23.5°	0.1939	14.25	59.5°	0.1078	19.35
-84.0°	0.0120	38.42	-48.0°	0.0113	38.95	-12.0°	0.1960	14.15	24.0°	0.1844	14.69	60.0°	0.1089	19.26
-83.5°	0.0135	37.40	-47.5°	0.0204	33.81	-11.5°	0.2409	12.36	24.5°	0.1720	15.29	60.5°	0.1093	19.23
-83.0°	0.0150	36.49	-47.0°	0.0295	30.60	-11.0°	0.2857	10.88	25.0°	0.1596	15.94	61.0°	0.1096	19.20
-82.5°	0.0165	35.67	-46.5°	0.0386	28.26	-10.5°	0.3323	9.57	25.5°	0.1452	16.76	61.5°	0.1092	19.23
-82.0°	0.0180	34.92	-46.0°	0.0477	26.42	-10.0°	0.3790	8.43	26.0°	0.1307	17.67	62.0°	0.1089	19.26
-81.5°	0.0199	34.01	-45.5°	0.0567	24.92	-9.5°	0.4262	7.41	26.5°	0.1149	18.79	62.5°	0.1079	19.34
-81.0°	0.0219	33.19	-45.0°	0.0657	23.65	-9.0°	0.4734	6.50	27.0°	0.0990	20.09	63.0°	0.1068	19.42
-80.5°	0.0239	32.44	-44.5°	0.0743	22.58	-8.5°	0.5199	5.68	27.5°	0.0825	21.67	63.5°	0.1056	19.53
-80.0°	0.0258	31.75	-44.0°	0.0828	21.63	-8.0°	0.5664	4.94	28.0°	0.0660	23.61	64.0°	0.1043	19.63
-79.5°	0.0278	31.12	-43.5°	0.0907	20.85	-7.5°	0.6111	4.28	28.5°	0.0494	26.13	64.5°	0.1030	19.75
-79.0°	0.0297	30.54	-43.0°	0.0986	20.12	-7.0°	0.6557	3.67	29.0°	0.0328	29.68	65.0°	0.1016	19.87
-78.5°	0.0321	29.86	-42.5°	0.1057	19.52	-6.5°	0.6976	3.13	29.5°	0.0168	35.52	65.5°	0.0993	20.06
-78.0°	0.0346	29.23	-42.0°	0.1127	18.96	-6.0°	0.7395	2.62	30.0°	0.0007	63.28	66.0°	0.0970	20.26
-77.5°	0.0369	28.65	-41.5°	0.1186	18.52	-5.5°	0.7767	2.19	30.5°	0.0151	36.44	66.5°	0.0948	20.47
-77.0°	0.0393	28.11	-41.0°	0.1244	18.10	-5.0°	0.8140	1.79	31.0°	0.0295	30.62	67.0°	0.0925	20.68
-76.5°	0.0421	27.51	-40.5°	0.1287	17.81	-4.5°	0.8463	1.45	31.5°	0.0431	27.30	67.5°	0.0903	20.89
-76.0°	0.0450	26.94	-40.0°	0.1329	17.53	-4.0°	0.8787	1.12	32.0°	0.0568	24.91	68.0°	0.0880	21.11
-75.5°	0.0477	26.43	-39.5°	0.1356	17.35	-3.5°	0.9048	0.87	32.5°	0.0687	23.26	68.5°	0.0855	21.36
-75.0°	0.0505	25.94	-39.0°	0.1383	17.18	-3.0°	0.9309	0.62	33.0°	0.0807	21.87	69.0°	0.0830	21.62
-74.5°	0.0531	25.49	-38.5°	0.1392	17.13	-2.5°	0.9496	0.45	33.5°	0.0905	20.86	69.5°	0.0802	21.92
-74.0°	0.0558	25.07	-38.0°	0.1401	17.07	-2.0°	0.9683	0.28	34.0°	0.1004	19.96	70.0°	0.0774	22.22
-73.5°	0.0588	24.61	-37.5°	0.1388	17.15	-1.5°	0.9799	0.18	34.5°	0.1082	19.31	70.5°	0.0744	22.57
-73.0°	0.0619	24.17	-37.0°	0.1375	17.24	-1.0°	0.9915	0.07	35.0°	0.1160	18.71	71.0°	0.0713	22.93
-72.5°	0.0648	23.77	-36.5°	0.1340	17.46	-0.5°	0.9958	0.04	35.5°	0.1216	18.30	71.5°	0.0686	23.28
-72.0°	0.0677	23.39	-36.0°	0.1304	17.69	0.0°	1.0000	0.00	36.0°	0.1272	17.91	72.0°	0.0658	23.63
-71.5°	0.0705	23.04	-35.5°	0.1248	18.08	0.5°	0.9958	0.04	36.5°	0.1306	17.68	72.5°	0.0629	24.03
-71.0°	0.0732	22.71	-35.0°	0.1191	18.48	1.0°	0.9915	0.07	37.0°	0.1339	17.46	73.0°	0.0600	24.44
-70.5°	0.0762	22.36	-34.5°	0.1110	19.09	1.5°	0.9794	0.18	37.5°	0.1352	17.38	73.5°	0.0574	24.82
-70.0°	0.0792	22.02	-34.0°	0.1030	19.75	2.0°	0.9673	0.29	38.0°	0.1364	17.30	74.0°	0.0548	25.22
-69.5°	0.0820	21.72	-33.5°	0.0928	20.65	2.5°	0.9477	0.47	38.5°	0.1356	17.36	74.5°	0.0522	25.65
-69.0°	0.0848	21.43	-33.0°	0.0825	21.67	3.0°	0.9281	0.65	39.0°	0.1347	17.41	75.0°	0.0495	26.11
-68.5°	0.0873	21.18	-32.5°	0.0703	23.06	3.5°	0.9021	0.90	39.5°	0.1321	17.58	75.5°	0.0467	26.61
-68.0°	0.0898	20.94	-32.0°	0.0582	24.71	4.0°	0.8760	1.15	40.0°	0.1294	17.76	76.0°	0.0440	27.13
-67.5°	0.0924	20.69	-31.5°	0.0442	27.10	4.5°	0.8438	1.48	40.5°	0.1251	18.06	76.5°	0.0417	27.61
-67.0°	0.0950	20.44	-31.0°	0.0301	30.41	5.0°	0.8115	1.81	41.0°	0.1207	18.36	77.0°	0.0393	28.11
-66.5°	0.0977	20.20	-30.5°	0.0154	36.24	5.5°	0.7736	2.23	41.5°	0.1151	18.78	77.5°	0.0369	28.65
-66.0°	0.1003	19.97	-30.0°	0.0007	63.09	6.0°	0.7357	2.67	42.0°	0.1095	19.21	78.0°	0.0346	29.23
-65.5°	0.1021	19.82	-29.5°	0.0171	35.33	6.5°	0.6940	3.17	42.5°	0.1027	19.77	78.5°	0.0321	29.86
-65.0°	0.1039	19.66	-29.0°	0.0335	29.49	7.0°	0.6524	3.71	43.0°	0.0959	20.36	79.0°	0.0297	30.54
-64.5°	0.1057	19.52	-28.5°	0.0505	25.94	7.5°	0.6077	4.33	43.5°	0.0882	21.09	79.5°	0.0278	31.12
-64.0°	0.1074	19.38	-28.0°	0.0674	23.43	8.0°	0.5630	4.99	44.0°	0.0805	21.89	80.0°	0.0258	31.75
-63.5°	0.1089	19.26	-27.5°	0.0842	21.50	8.5°	0.5167	5.74	44.5°	0.0721	22.84	80.5°	0.0239	32.44
-63.0°	0.1105	19.13	-27.0°	0.1010	19.92	9.0°	0.4704	6.55	45.0°	0.0638	23.91	81.0°	0.0219	33.19
-62.5°	0.1114	19.06	-26.5°	0.1171	18.63	9.5°	0.4233	7.47	45.5°	0.0550	25.19	81.5°	0.0199	34.01
-62.0°	0.1123	18.99	-26.0°	0.1332	17.51	10.0°	0.3762	8.49	46.0°	0.0463	26.69	82.0°	0.0180	34.92
-61.5°	0.1126	18.97	-25.5°	0.1479	16.60	10.5°	0.3299	9.63	46.5°	0.0374	28.54	82.5°	0.0165	35.67
-61.0°	0.1128	18.95	-25.0°	0.1626	15.78	11.0°	0.2836	10.95	47.0°	0.0286	30.89	83.0°	0.0150	36.49
-60.5°	0.1127	18.96	-24.5°	0.1751	15.14	11.5°	0.2390	12.43	47.5°	0.0197	34.09	83.5°	0.0135	37.40
-60.0°	0.1125	18.97	-24.0°	0.1875	14.54	12.0°	0.1943	14.23	48.0°	0.0109	39.23	84.0°	0.0120	38.42
-59.5°	0.1116	19.05	-23.5°	0.1973	14.10	12.5°	0.1525	16.34	48.5°	0.0086	41.34	84.5°	0.0105	39.58
-59.0°	0.1107	19.12	-23.0°	0.2071	13.67	13.0°	0.1106	19.13	49.0°	0.0062	44.13	85.0°	0.0090	40.92
-58.5°	0.1089	19.26	-22.5°	0.2134	13.42	13.5°	0.0724	22.81	49.5°	0.0144	36.83	85.5°	0.0080	41.94
-58.0°	0.1071	19.40	-22.0°	0.2196	13.17	14.0°	0.0342	29.32	50.0°	0.0226	32.92	86.0°	0.0070	43.10
-57.5°	0.1048	19.59	-21.5°	0.2217	13.09	14.5°	0.0339	29.41	50.5°	0.0303	30.38	86.5°	0.0060	44.44
-57.0°	0.1024	19.79	-21.0°	0.2237	13.01	15.0°	0.0335	29.49	51.0°	0.0379	28.43	87.0°	0.0050	46.02
-56.5°	0.0992	20.07	-20.5°	0.2212	13.10	15.5°	0.0625	24.08	51.5°	0.0449	26.96	87.5°	0.0040	47.96
-56.0°	0.0959	20.36	-20.0°	0.2187	13.20	16.0°	0.0915	20.77	52.0°	0.0519	25.70	88.0°	0.0030	50.46
-55.5°	0.0919	20.73	-19.5°	0.2111	13.51	16.5°	0.1151	18.78	52.5°	0.0582	24.70	88.5°	0.0025	52.04
-55.0°	0.0880	21.11	-19.0°	0.2036	13.83	17.0°	0.1387	17.16	53.0°	0.0645	23.81	89.0°	0.0020	53.98
-54.5°	0.0831	21.61	-18.5°	0.1906	14.40	17.5°	0.1569	16.09	53.5°	0.0700	23.10	89.5°	0.0015	56.48

Elevação



Parâmetros da configuração

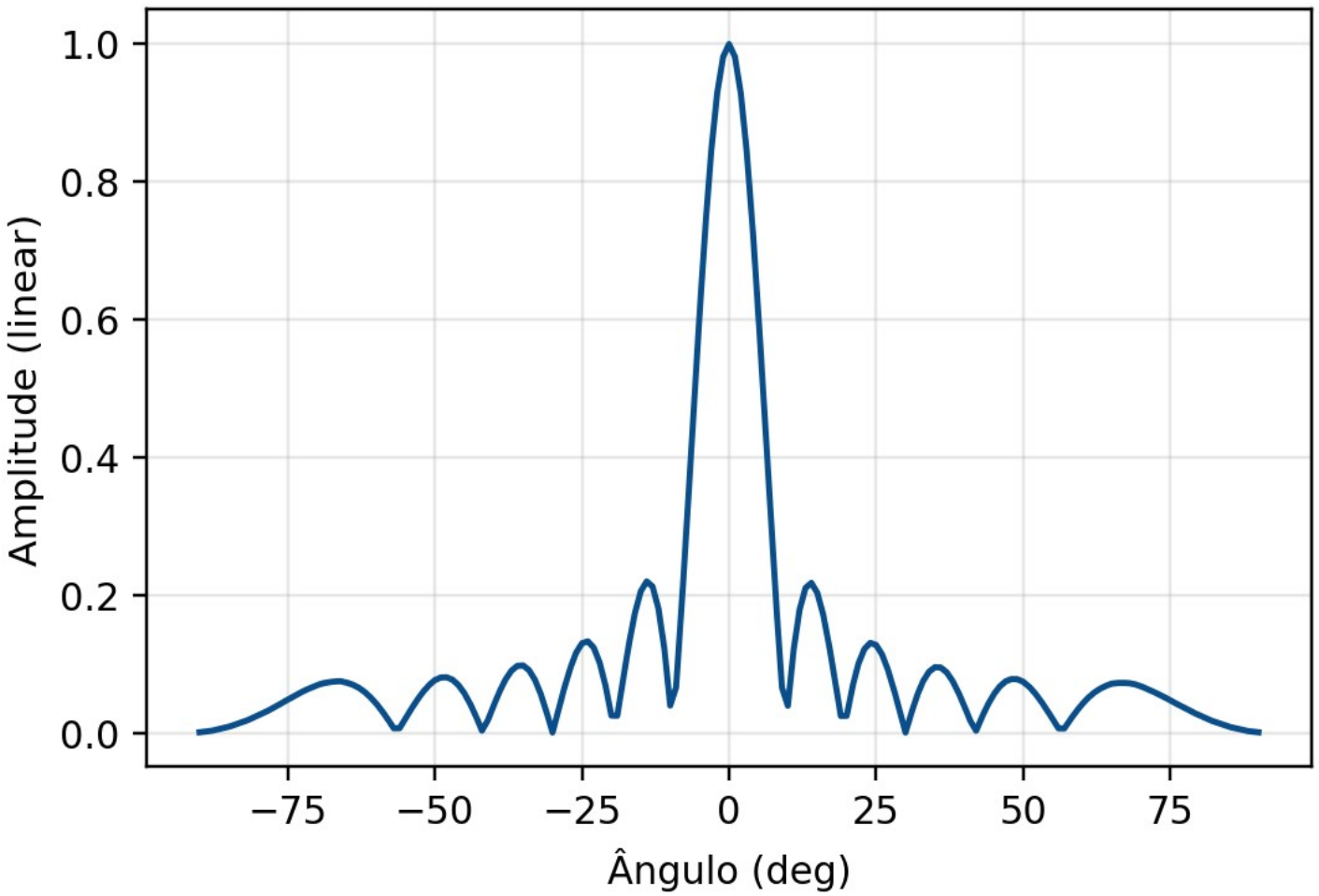
ELEMENTOS VERTICAIS	ÂNGULO DE MEIA POTÊNCIA VERTICAL	GANHO	PRIMEIRO NULO
5	11.10°	6.99 dBd	11.00°

Tabela completa - Elevação

EFtX Broadcast: Television & Radio

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
-90.0°	0.0010	60.00	-54.0°	0.0124	38.14	-18.0°	0.2089	13.60	18.0°	0.2060	13.72	54.0°	0.0120	38.44
-89.5°	0.0015	56.48	-53.5°	0.0076	42.39	-17.5°	0.2148	13.36	18.5°	0.1942	14.24	54.5°	0.0189	34.47
-89.0°	0.0020	53.98	-53.0°	0.0028	51.09	-17.0°	0.2206	13.13	19.0°	0.1824	14.78	55.0°	0.0259	31.75
-88.5°	0.0025	52.04	-52.5°	0.0106	39.49	-16.5°	0.2194	13.18	19.5°	0.1659	15.60	55.5°	0.0322	29.86
-88.0°	0.0030	50.46	-52.0°	0.0184	34.70	-16.0°	0.2181	13.23	20.0°	0.1494	16.51	56.0°	0.0385	28.30
-87.5°	0.0040	47.96	-51.5°	0.0263	31.61	-15.5°	0.2086	13.61	20.5°	0.1299	17.73	56.5°	0.0442	27.09
-87.0°	0.0050	46.02	-51.0°	0.0341	29.34	-15.0°	0.1992	14.01	21.0°	0.1103	19.15	57.0°	0.0500	26.02
-86.5°	0.0060	44.44	-50.5°	0.0418	27.57	-14.5°	0.1811	14.84	21.5°	0.0890	21.01	57.5°	0.0549	25.21
-86.0°	0.0070	43.10	-50.0°	0.0496	26.10	-14.0°	0.1630	15.76	22.0°	0.0678	23.38	58.0°	0.0598	24.47
-85.5°	0.0080	41.94	-49.5°	0.0567	24.93	-13.5°	0.1360	17.33	22.5°	0.0463	26.70	58.5°	0.0639	23.88
-85.0°	0.0090	40.92	-49.0°	0.0638	23.90	-13.0°	0.1090	19.25	23.0°	0.0247	32.13	59.0°	0.0681	23.33
-84.5°	0.0105	39.59	-48.5°	0.0703	23.06	-12.5°	0.0734	22.69	23.5°	0.0205	33.78	59.5°	0.0716	22.90
-84.0°	0.0120	38.43	-48.0°	0.0767	22.30	-12.0°	0.0377	28.46	24.0°	0.0162	35.80	60.0°	0.0752	22.48
-83.5°	0.0135	37.41	-47.5°	0.0822	21.70	-11.5°	0.0434	27.24	24.5°	0.0346	29.22	60.5°	0.0778	22.18
-83.0°	0.0150	36.50	-47.0°	0.0877	21.14	-11.0°	0.0491	26.17	25.0°	0.0530	25.52	61.0°	0.0805	21.88
-82.5°	0.0164	35.68	-46.5°	0.0918	20.75	-10.5°	0.0993	20.06	25.5°	0.0685	23.29	61.5°	0.0823	21.69
-82.0°	0.0179	34.93	-46.0°	0.0958	20.37	-10.0°	0.1494	16.51	26.0°	0.0839	21.52	62.0°	0.0841	21.50
-81.5°	0.0199	34.03	-45.5°	0.0983	20.15	-9.5°	0.2046	13.78	26.5°	0.0958	20.37	62.5°	0.0851	21.40
-81.0°	0.0219	33.21	-45.0°	0.1009	19.92	-9.0°	0.2597	11.71	27.0°	0.1076	19.36	63.0°	0.0861	21.30
-80.5°	0.0238	32.47	-44.5°	0.1016	19.86	-8.5°	0.3180	9.95	27.5°	0.1156	18.74	63.5°	0.0866	21.25
-80.0°	0.0257	31.79	-44.0°	0.1023	19.80	-8.0°	0.3763	8.49	28.0°	0.1236	18.16	64.0°	0.0871	21.20
-79.5°	0.0277	31.16	-43.5°	0.1010	19.91	-7.5°	0.4354	7.22	28.5°	0.1276	17.88	64.5°	0.0872	21.19
-79.0°	0.0296	30.58	-43.0°	0.0997	20.02	-7.0°	0.4945	6.12	29.0°	0.1316	17.62	65.0°	0.0873	21.18
-78.5°	0.0319	29.91	-42.5°	0.0965	20.31	-6.5°	0.5524	5.15	29.5°	0.1317	17.61	65.5°	0.0865	21.26
-78.0°	0.0343	29.29	-42.0°	0.0932	20.61	-6.0°	0.6103	4.29	30.0°	0.1318	17.60	66.0°	0.0856	21.35
-77.5°	0.0366	28.73	-41.5°	0.0878	21.13	-5.5°	0.6640	3.56	30.5°	0.1284	17.83	66.5°	0.0844	21.47
-77.0°	0.0389	28.20	-41.0°	0.0823	21.69	-5.0°	0.7177	2.88	31.0°	0.1249	18.07	67.0°	0.0833	21.59
-76.5°	0.0416	27.61	-40.5°	0.0748	22.52	-4.5°	0.7656	2.32	31.5°	0.1184	18.53	67.5°	0.0820	21.72
-76.0°	0.0443	27.06	-40.0°	0.0672	23.45	-4.0°	0.8134	1.79	32.0°	0.1119	19.02	68.0°	0.0808	21.86
-75.5°	0.0470	26.57	-39.5°	0.0579	24.75	-3.5°	0.8530	1.38	32.5°	0.1028	19.76	68.5°	0.0790	22.04
-75.0°	0.0496	26.10	-39.0°	0.0486	26.27	-3.0°	0.8926	0.99	33.0°	0.0938	20.56	69.0°	0.0773	22.24
-74.5°	0.0520	25.67	-38.5°	0.0377	28.48	-2.5°	0.9217	0.71	33.5°	0.0828	21.64	69.5°	0.0752	22.48
-74.0°	0.0545	25.27	-38.0°	0.0268	31.44	-2.0°	0.9507	0.44	34.0°	0.0719	22.87	70.0°	0.0731	22.73
-73.5°	0.0573	24.84	-37.5°	0.0147	36.67	-1.5°	0.9689	0.27	34.5°	0.0598	24.47	70.5°	0.0706	23.03
-73.0°	0.0601	24.43	-37.0°	0.0026	51.84	-1.0°	0.9870	0.11	35.0°	0.0477	26.43	71.0°	0.0681	23.34
-72.5°	0.0626	24.06	-36.5°	0.0128	37.85	-0.5°	0.9935	0.06	35.5°	0.0351	29.10	71.5°	0.0657	23.64
-72.0°	0.0652	23.71	-36.0°	0.0231	32.75	0.0°	1.0000	0.00	36.0°	0.0225	32.96	72.0°	0.0634	23.96
-71.5°	0.0675	23.41	-35.5°	0.0360	28.87	0.5°	0.9935	0.06	36.5°	0.0125	38.07	72.5°	0.0608	24.32
-71.0°	0.0698	23.12	-35.0°	0.0489	26.21	1.0°	0.9870	0.11	37.0°	0.0025	52.07	73.0°	0.0582	24.70
-70.5°	0.0723	22.82	-34.5°	0.0613	24.25	1.5°	0.9684	0.28	37.5°	0.0143	36.90	73.5°	0.0559	25.05
-70.0°	0.0748	22.53	-34.0°	0.0737	22.65	2.0°	0.9498	0.45	38.0°	0.0261	31.67	74.0°	0.0536	25.42
-69.5°	0.0769	22.28	-33.5°	0.0848	21.43	2.5°	0.9198	0.73	38.5°	0.0367	28.70	74.5°	0.0511	25.83
-69.0°	0.0790	22.05	-33.0°	0.0960	20.36	3.0°	0.8899	1.01	39.0°	0.0473	26.50	75.0°	0.0486	26.27
-68.5°	0.0807	21.87	-32.5°	0.1053	19.55	3.5°	0.8504	1.41	39.5°	0.0564	24.97	75.5°	0.0460	26.75
-68.0°	0.0824	21.69	-32.0°	0.1146	18.82	4.0°	0.8110	1.82	40.0°	0.0655	23.68	76.0°	0.0434	27.25
-67.5°	0.0840	21.52	-31.5°	0.1212	18.33	4.5°	0.7633	2.35	40.5°	0.0727	22.77	76.5°	0.0411	27.71
-67.0°	0.0856	21.35	-31.0°	0.1279	17.87	5.0°	0.7155	2.91	41.0°	0.0799	21.95	77.0°	0.0389	28.20
-66.5°	0.0870	21.21	-30.5°	0.1313	17.63	5.5°	0.6614	3.59	41.5°	0.0852	21.39	77.5°	0.0366	28.73
-66.0°	0.0885	21.06	-30.0°	0.1348	17.41	6.0°	0.6072	4.33	42.0°	0.0905	20.87	78.0°	0.0343	29.29
-65.5°	0.0889	21.02	-29.5°	0.1346	17.42	6.5°	0.5496	5.20	42.5°	0.0938	20.56	78.5°	0.0319	29.91
-65.0°	0.0894	20.97	-29.0°	0.1345	17.43	7.0°	0.4920	6.16	43.0°	0.0970	20.26	79.0°	0.0296	30.58
-64.5°	0.0895	20.96	-28.5°	0.1304	17.70	7.5°	0.4330	7.27	43.5°	0.0982	20.16	79.5°	0.0277	31.16
-64.0°	0.0897	20.95	-28.0°	0.1263	17.98	8.0°	0.3740	8.54	44.0°	0.0994	20.05	80.0°	0.0257	31.79
-63.5°	0.0894	20.98	-27.5°	0.1180	18.56	8.5°	0.3161	10.00	44.5°	0.0986	20.12	80.5°	0.0238	32.47
-63.0°	0.0891	21.01	-27.0°	0.1098	19.19	9.0°	0.2581	11.76	45.0°	0.0979	20.19	81.0°	0.0219	33.21
-62.5°	0.0879	21.12	-26.5°	0.0976	20.21	9.5°	0.2032	13.84	45.5°	0.0954	20.41	81.5°	0.0199	34.03
-62.0°	0.0868	21.23	-26.0°	0.0855	21.36	10.0°	0.1483	16.58	46.0°	0.0928	20.65	82.0°	0.0179	34.93
-61.5°	0.0848	21.43	-25.5°	0.0698	23.13	10.5°	0.0985	20.13	46.5°	0.0889	21.03	82.5°	0.0164	35.68
-61.0°	0.0829	21.63	-25.0°	0.0540	25.35	11.0°	0.0488	26.24	47.0°	0.0849	21.42	83.0°	0.0150	36.50
-60.5°	0.0803	21.91	-24.5°	0.0352	29.06	11.5°	0.0431	27.31	47.5°	0.0796	21.98	83.5°	0.0135	37.41
-60.0°	0.0777	22.20	-24.0°	0.0165	35.66	12.0°	0.0374	28.54	48.0°	0.0743	22.57	84.0°	0.0120	38.43
-59.5°	0.0741	22.60	-23.5°	0.0208	33.62	12.5°	0.0727	22.77	48.5°	0.0681	23.33	84.5°	0.0105	39.59
-59.0°	0.0706	23.02	-23.0°	0.0252	31.98	13.0°	0.1079	19.34	49.0°	0.0619	24.16	85.0°	0.0090	40.92
-58.5°	0.0662	23.58	-22.5°	0.0470	26.55	13.5°	0.1347	17.42	49.5°	0.0550	25.20	85.5°	0.0080	41.94
-58.0°	0.0618	24.18	-22.0°	0.0689	23.24	14.0°	0.1614	15.84	50.0°	0.0480	26.37	86.0°	0.0070	43.10
-57.5°	0.0567	24.92	-21.5°	0.0904	20.88	14.5°	0.1792	14.93	50.5°	0.0406	27.83	86.5°	0.0060	44.44
-57.0°	0.0516	25.74	-21.0°	0.1119	19.02	15.0°	0.1970	14.11	51.0°	0.0331	29.59	87.0°	0.0050	46.02
-56.5°	0.0457	26.80	-20.5°	0.1317	17.61	15.5°	0.2063	13.71	51.5°	0.0255	31.87	87.5°	0.0040	47.96
-56.0°	0.0398	28.00	-20.0°	0.1516	16.39	16.0°	0.2157	13.32	52.0°	0.0179	34.97	88.0°	0.0030	50.46
-55.5°	0.0333	29.56	-19.5°	0.1683	15.48	16.5°	0.2168	13.28	52.5°	0.0103	39.76	88.5°	0.0025	52.04
-55.0°	0.0267	31.47	-19.0°	0.1850	14.66	17.0°	0.2179	13.23	53.0°	0.0027	51.37	89.0°	0.0020	53.98
-54.5°	0.0195	34.18	-18.5°	0.1969	14.11	17.5°	0.2120	13.48	53.5°	0.0073	42.69	89.5°	0.0015	56.48

Elevação



Parâmetros da configuração

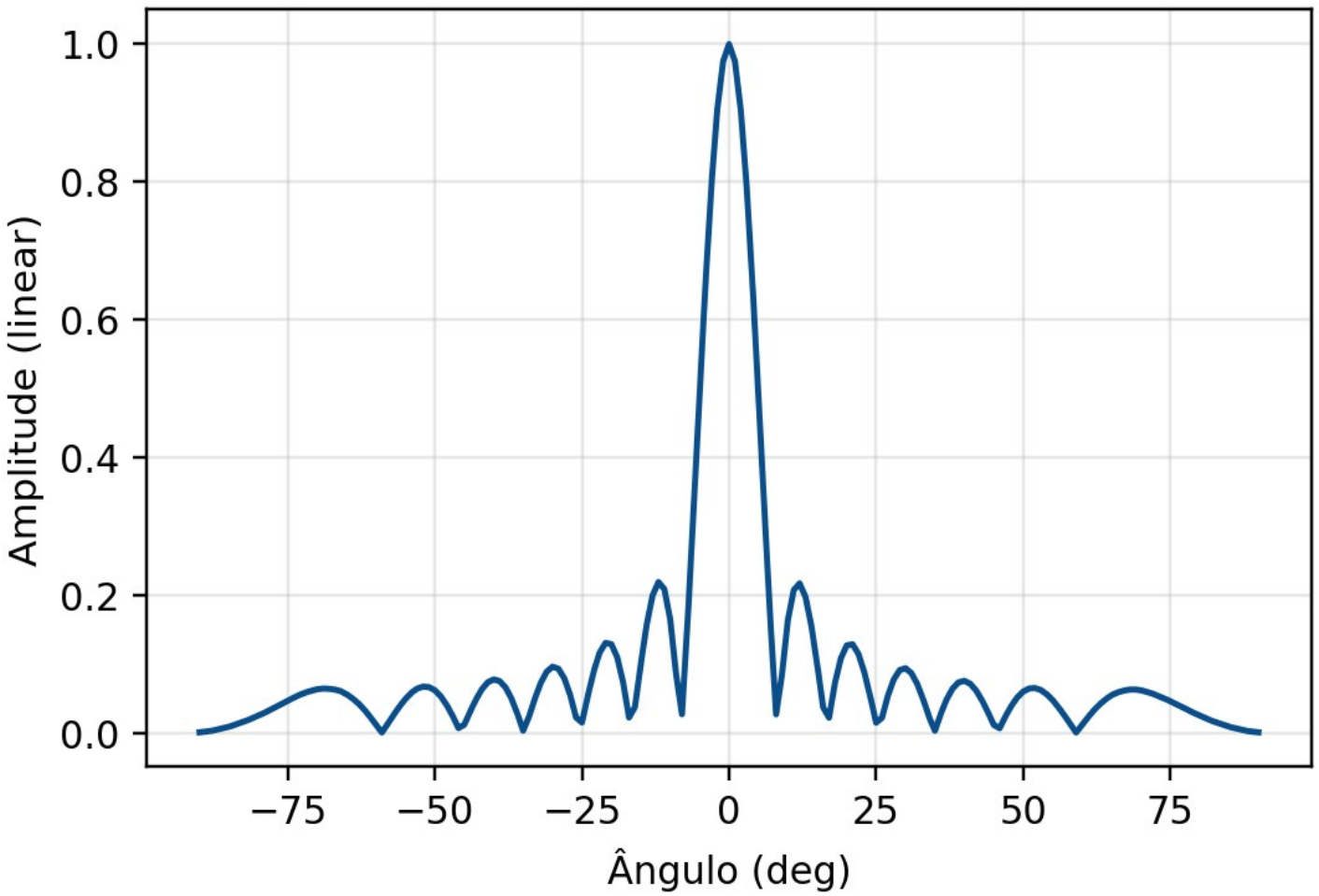
ELEMENTOS VERTICAIS	ÂNGULO DE MEIA POTÊNCIA VERTICAL	GANHO	PRIMEIRO NULO
6	9.24°	7.77 dBd	10.00°

Tabela completa - Elevação

EFtX Broadcast: Television & Radio

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
-90.0°	0.0010	60.00	-54.0°	0.0351	29.09	-18.0°	0.0784	22.12	18.0°	0.0773	22.24	54.0°	0.0339	29.40
-89.5°	0.0015	56.48	-53.5°	0.0416	27.61	-17.5°	0.1041	19.65	18.5°	0.0510	25.85	54.5°	0.0272	31.31
-89.0°	0.0020	53.98	-53.0°	0.0482	26.34	-17.0°	0.1297	17.74	19.0°	0.0247	32.14	55.0°	0.0205	33.77
-88.5°	0.0025	52.04	-52.5°	0.0540	25.35	-16.5°	0.1519	16.37	19.5°	0.0248	32.10	55.5°	0.0136	37.32
-88.0°	0.0030	50.46	-52.0°	0.0598	24.47	-16.0°	0.1740	15.19	20.0°	0.0250	32.05	56.0°	0.0068	43.41
-87.5°	0.0040	47.96	-51.5°	0.0646	23.79	-15.5°	0.1898	14.43	20.5°	0.0464	26.68	56.5°	0.0067	43.47
-87.0°	0.0050	46.02	-51.0°	0.0695	23.16	-15.0°	0.2057	13.74	21.0°	0.0677	23.38	57.0°	0.0067	43.54
-86.5°	0.0060	44.44	-50.5°	0.0731	22.72	-14.5°	0.2128	13.44	21.5°	0.0842	21.49	57.5°	0.0130	37.72
-86.0°	0.0070	43.10	-50.0°	0.0767	22.30	-14.0°	0.2200	13.15	22.0°	0.1006	19.94	58.0°	0.0193	34.27
-85.5°	0.0080	41.95	-49.5°	0.0786	22.09	-13.5°	0.2163	13.30	22.5°	0.1112	19.08	58.5°	0.0252	31.97
-85.0°	0.0090	40.93	-49.0°	0.0805	21.89	-13.0°	0.2126	13.45	23.0°	0.1218	18.29	59.0°	0.0310	30.16
-84.5°	0.0105	39.59	-48.5°	0.0806	21.87	-12.5°	0.1966	14.13	23.5°	0.1263	17.97	59.5°	0.0363	28.79
-84.0°	0.0120	38.44	-48.0°	0.0808	21.85	-12.0°	0.1807	14.86	24.0°	0.1308	17.67	60.0°	0.0416	27.61
-83.5°	0.0135	37.42	-47.5°	0.0791	22.04	-11.5°	0.1517	16.38	24.5°	0.1292	17.77	60.5°	0.0462	26.71
-83.0°	0.0149	36.51	-47.0°	0.0773	22.23	-11.0°	0.1228	18.21	25.0°	0.1277	17.87	61.0°	0.0507	25.90
-82.5°	0.0164	35.69	-46.5°	0.0734	22.69	-10.5°	0.0813	21.80	25.5°	0.1210	18.35	61.5°	0.0545	25.28
-82.0°	0.0179	34.95	-46.0°	0.0695	23.16	-10.0°	0.0398	28.01	26.0°	0.1142	18.85	62.0°	0.0582	24.70
-81.5°	0.0198	34.05	-45.5°	0.0637	23.92	-9.5°	0.0530	25.52	26.5°	0.1031	19.73	62.5°	0.0610	24.29
-81.0°	0.0218	33.24	-45.0°	0.0578	24.76	-9.0°	0.0662	23.59	27.0°	0.0920	20.72	63.0°	0.0639	23.89
-80.5°	0.0237	32.50	-44.5°	0.0501	26.00	-8.5°	0.1284	17.83	27.5°	0.0780	22.16	63.5°	0.0661	23.60
-80.0°	0.0256	31.83	-44.0°	0.0425	27.44	-8.0°	0.1906	14.40	28.0°	0.0639	23.89	64.0°	0.0683	23.32
-79.5°	0.0275	31.21	-43.5°	0.0332	29.57	-7.5°	0.2591	11.73	28.5°	0.0482	26.33	64.5°	0.0699	23.11
-79.0°	0.0294	30.64	-43.0°	0.0240	32.39	-7.0°	0.3275	9.70	29.0°	0.0326	29.75	65.0°	0.0715	22.91
-78.5°	0.0317	29.98	-42.5°	0.0137	37.28	-6.5°	0.3987	7.99	29.5°	0.0166	35.59	65.5°	0.0721	22.84
-78.0°	0.0340	29.37	-42.0°	0.0034	49.49	-6.0°	0.4700	6.56	30.0°	0.0007	63.28	66.0°	0.0726	22.78
-77.5°	0.0362	28.82	-41.5°	0.0109	39.23	-5.5°	0.5395	5.36	30.5°	0.0150	36.50	66.5°	0.0727	22.77
-77.0°	0.0384	28.31	-41.0°	0.0185	34.66	-5.0°	0.6091	4.31	31.0°	0.0293	30.68	67.0°	0.0728	22.75
-76.5°	0.0410	27.74	-40.5°	0.0293	30.66	-4.5°	0.6733	3.44	31.5°	0.0422	27.49	67.5°	0.0726	22.78
-76.0°	0.0436	27.21	-40.0°	0.0401	27.93	-4.0°	0.7375	2.64	32.0°	0.0552	25.17	68.0°	0.0723	22.81
-75.5°	0.0460	26.74	-39.5°	0.0502	25.98	-3.5°	0.7923	2.02	32.5°	0.0653	23.70	68.5°	0.0715	22.91
-75.0°	0.0485	26.29	-39.0°	0.0603	24.40	-3.0°	0.8470	1.44	33.0°	0.0755	22.45	69.0°	0.0707	23.01
-74.5°	0.0507	25.90	-38.5°	0.0689	23.23	-2.5°	0.8882	1.03	33.5°	0.0822	21.70	69.5°	0.0693	23.19
-74.0°	0.0530	25.52	-38.0°	0.0776	22.21	-2.0°	0.9295	0.63	34.0°	0.0889	21.02	70.0°	0.0679	23.36
-73.5°	0.0554	25.13	-37.5°	0.0839	21.52	-1.5°	0.9556	0.39	34.5°	0.0922	20.71	70.5°	0.0661	23.60
-73.0°	0.0579	24.75	-37.0°	0.0903	20.89	-1.0°	0.9816	0.16	35.0°	0.0955	20.40	71.0°	0.0642	23.85
-72.5°	0.0601	24.43	-36.5°	0.0938	20.55	-0.5°	0.9908	0.08	35.5°	0.0952	20.43	71.5°	0.0623	24.10
-72.0°	0.0622	24.12	-36.0°	0.0974	20.23	0.0°	1.0000	0.00	36.0°	0.0950	20.45	72.0°	0.0605	24.37
-71.5°	0.0640	23.87	-35.5°	0.0977	20.20	0.5°	0.9908	0.08	36.5°	0.0915	20.77	72.5°	0.0583	24.69
-71.0°	0.0659	23.63	-35.0°	0.0980	20.18	1.0°	0.9816	0.16	37.0°	0.0880	21.11	73.0°	0.0561	25.02
-70.5°	0.0677	23.39	-34.5°	0.0946	20.48	1.5°	0.9551	0.40	37.5°	0.0818	21.75	73.5°	0.0541	25.34
-70.0°	0.0695	23.16	-34.0°	0.0912	20.80	2.0°	0.9286	0.64	38.0°	0.0755	22.44	74.0°	0.0520	25.67
-69.5°	0.0709	22.99	-33.5°	0.0842	21.49	2.5°	0.8865	1.05	38.5°	0.0671	23.46	74.5°	0.0498	26.06
-69.0°	0.0722	22.83	-33.0°	0.0772	22.25	3.0°	0.8444	1.47	39.0°	0.0588	24.62	75.0°	0.0475	26.46
-68.5°	0.0730	22.74	-32.5°	0.0668	23.50	3.5°	0.7899	2.05	39.5°	0.0489	26.21	75.5°	0.0451	26.92
-68.0°	0.0738	22.64	-32.0°	0.0565	24.96	4.0°	0.7353	2.67	40.0°	0.0391	28.16	76.0°	0.0427	27.40
-67.5°	0.0743	22.58	-31.5°	0.0432	27.29	4.5°	0.6713	3.46	40.5°	0.0285	30.90	76.5°	0.0405	27.84
-67.0°	0.0748	22.52	-31.0°	0.0299	30.48	5.0°	0.6072	4.33	41.0°	0.0179	34.92	77.0°	0.0384	28.31
-66.5°	0.0750	22.50	-30.5°	0.0153	36.30	5.5°	0.5374	5.39	41.5°	0.0106	39.49	77.5°	0.0362	28.82
-66.0°	0.0751	22.49	-30.0°	0.0007	63.09	6.0°	0.4676	6.60	42.0°	0.0033	49.74	78.0°	0.0340	29.37
-65.5°	0.0741	22.60	-29.5°	0.0170	35.40	6.5°	0.3967	8.03	42.5°	0.0133	37.52	78.5°	0.0317	29.98
-65.0°	0.0732	22.71	-29.0°	0.0333	29.56	7.0°	0.3258	9.74	43.0°	0.0234	32.63	79.0°	0.0294	30.64
-64.5°	0.0717	22.89	-28.5°	0.0493	26.15	7.5°	0.2576	11.78	43.5°	0.0323	29.82	79.5°	0.0275	31.21
-64.0°	0.0703	23.07	-28.0°	0.0653	23.70	8.0°	0.1894	14.45	44.0°	0.0413	27.69	80.0°	0.0256	31.83
-63.5°	0.0682	23.33	-27.5°	0.0796	21.99	8.5°	0.1276	17.88	44.5°	0.0487	26.25	80.5°	0.0237	32.50
-63.0°	0.0661	23.60	-27.0°	0.0938	20.55	9.0°	0.0657	23.64	45.0°	0.0561	25.02	81.0°	0.0218	33.24
-62.5°	0.0630	24.01	-26.5°	0.1051	19.57	9.5°	0.0526	25.58	45.5°	0.0617	24.19	81.5°	0.0198	34.05
-62.0°	0.0600	24.43	-26.0°	0.1164	18.68	10.0°	0.0395	28.07	46.0°	0.0673	23.43	82.0°	0.0179	34.95
-61.5°	0.0561	25.02	-25.5°	0.1233	18.18	10.5°	0.0807	21.86	46.5°	0.0711	22.97	82.5°	0.0164	35.69
-61.0°	0.0522	25.64	-25.0°	0.1301	17.71	11.0°	0.1219	18.28	47.0°	0.0748	22.52	83.0°	0.0149	36.51
-60.5°	0.0476	26.44	-24.5°	0.1316	17.62	11.5°	0.1505	16.45	47.5°	0.0766	22.32	83.5°	0.0135	37.42
-60.0°	0.0430	27.33	-24.0°	0.1330	17.52	12.0°	0.1791	14.94	48.0°	0.0783	22.13	84.0°	0.0120	38.44
-59.5°	0.0376	28.50	-23.5°	0.1285	17.82	12.5°	0.1948	14.21	48.5°	0.0782	22.14	84.5°	0.0105	39.59
-59.0°	0.0322	29.85	-23.0°	0.1239	18.14	13.0°	0.2106	13.53	49.0°	0.0781	22.15	85.0°	0.0090	40.93
-58.5°	0.0261	31.67	-22.5°	0.1131	18.93	13.5°	0.2142	13.38	49.5°	0.0762	22.36	85.5°	0.0080	41.95
-58.0°	0.0200	33.97	-22.0°	0.1023	19.80	14.0°	0.2179	13.24	50.0°	0.0743	22.57	86.0°	0.0070	43.10
-57.5°	0.0134	37.43	-21.5°	0.0855	21.36	14.5°	0.2106	13.53	50.5°	0.0709	22.99	86.5°	0.0060	44.44
-57.0°	0.0069	43.26	-21.0°	0.0687	23.26	15.0°	0.2034	13.83	51.0°	0.0674	23.42	87.0°	0.0050	46.02
-56.5°	0.0069	43.18	-20.5°	0.0470	26.55	15.5°	0.1877	14.53	51.5°	0.0627	24.06	87.5°	0.0040	47.96
-56.0°	0.0070	43.11	-20.0°	0.0253	31.93	16.0°	0.1721	15.29	52.0°	0.0579	24.74	88.0°	0.0030	50.46
-55.5°	0.0141	37.03	-19.5°	0.0252	31.98	16.5°	0.1501	16.47	52.5°	0.0523	25.63	88.5°	0.0025	52.04
-55.0°	0.0212	33.49	-19.0°	0.0251	32.02	17.0°	0.1281	17.85	53.0°	0.0466	26.63	89.0°	0.0020	53.98
-54.5°	0.0281	31.02	-18.5°	0.0517	25.73	17.5°	0.1027	19.77	53.5°	0.0403	27.90	89.5°	0.0015	56.48

Elevação



Parâmetros da configuração

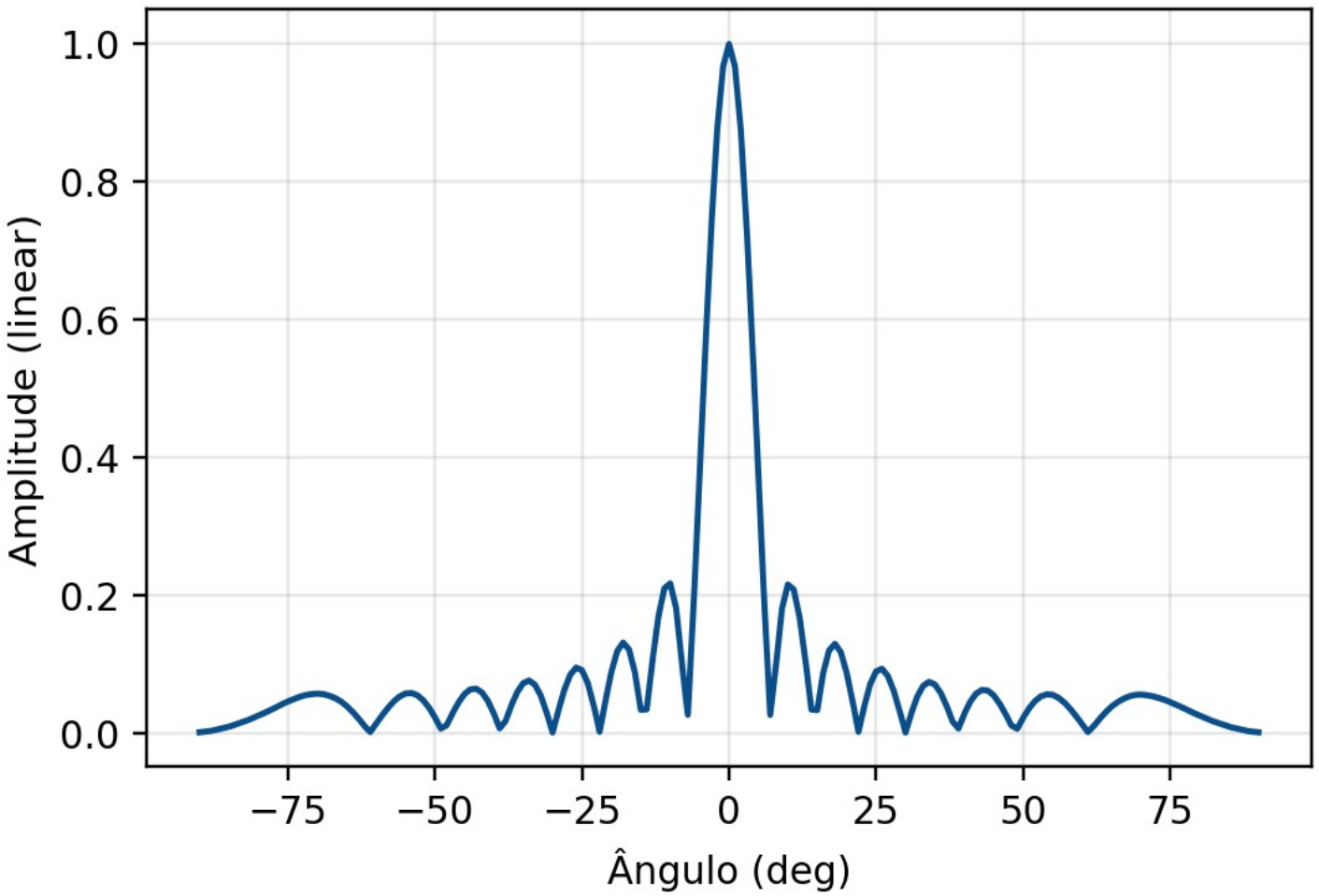
ELEMENTOS VERTICAIS	ÂNGULO DE MEIA POTÊNCIA VERTICAL	GANHO	PRIMEIRO NULO
7	7.62°	8.43 dBd	8.00°

Tabela completa - Elevação

EFtX Broadcast: Television & Radio

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
-90.0°	0.0010	60.00	-54.0°	0.0585	24.66	-18.0°	0.0733	22.70	18.0°	0.0723	22.82	54.0°	0.0565	24.97
-89.5°	0.0015	56.48	-53.5°	0.0615	24.22	-17.5°	0.0479	26.40	18.5°	0.0902	20.89	54.5°	0.0522	25.64
-89.0°	0.0020	53.98	-53.0°	0.0645	23.80	-17.0°	0.0225	32.96	19.0°	0.1082	19.32	55.0°	0.0480	26.37
-88.5°	0.0025	52.04	-52.5°	0.0659	23.62	-16.5°	0.0301	30.44	19.5°	0.1176	18.59	55.5°	0.0427	27.39
-88.0°	0.0030	50.46	-52.0°	0.0673	23.44	-16.0°	0.0376	28.49	20.0°	0.1271	17.92	56.0°	0.0374	28.54
-87.5°	0.0040	47.96	-51.5°	0.0670	23.48	-15.5°	0.0689	23.24	20.5°	0.1280	17.86	56.5°	0.0316	30.01
-87.0°	0.0050	46.02	-51.0°	0.0666	23.53	-15.0°	0.1002	19.99	21.0°	0.1288	17.80	57.0°	0.0257	31.78
-86.5°	0.0060	44.44	-50.5°	0.0643	23.83	-14.5°	0.1286	17.81	21.5°	0.1218	18.29	57.5°	0.0195	34.20
-86.0°	0.0070	43.10	-50.0°	0.0620	24.15	-14.0°	0.1571	16.08	22.0°	0.1148	18.80	58.0°	0.0133	37.55
-85.5°	0.0080	41.95	-49.5°	0.0576	24.78	-13.5°	0.1783	14.98	22.5°	0.1014	19.88	58.5°	0.0070	43.09
-85.0°	0.0090	40.93	-49.0°	0.0533	25.47	-13.0°	0.1995	14.00	23.0°	0.0881	21.10	59.0°	0.0007	62.52
-84.5°	0.0105	39.60	-48.5°	0.0470	26.55	-12.5°	0.2093	13.59	23.5°	0.0707	23.01	59.5°	0.0061	44.34
-84.0°	0.0120	38.44	-48.0°	0.0408	27.78	-12.0°	0.2191	13.19	24.0°	0.0533	25.46	60.0°	0.0114	38.87
-83.5°	0.0134	37.43	-47.5°	0.0331	29.62	-11.5°	0.2140	13.39	24.5°	0.0342	29.32	60.5°	0.0171	35.36
-83.0°	0.0149	36.52	-47.0°	0.0253	31.95	-11.0°	0.2090	13.60	25.0°	0.0150	36.45	61.0°	0.0227	32.86
-82.5°	0.0164	35.71	-46.5°	0.0162	35.80	-10.5°	0.1870	14.56	25.5°	0.0186	34.62	61.5°	0.0278	31.11
-82.0°	0.0178	34.97	-46.0°	0.0072	42.87	-10.0°	0.1650	15.65	26.0°	0.0221	33.11	62.0°	0.0329	29.65
-81.5°	0.0198	34.08	-45.5°	0.0097	40.30	-9.5°	0.1253	18.04	26.5°	0.0381	28.39	62.5°	0.0372	28.58
-81.0°	0.0217	33.27	-45.0°	0.0121	38.33	-9.0°	0.0855	21.36	27.0°	0.0540	25.35	63.0°	0.0416	27.62
-80.5°	0.0236	32.54	-44.5°	0.0217	33.25	-8.5°	0.0564	24.97	27.5°	0.0658	23.63	63.5°	0.0452	26.89
-80.0°	0.0255	31.87	-44.0°	0.0314	30.07	-8.0°	0.0273	31.28	28.0°	0.0777	22.19	64.0°	0.0489	26.22
-79.5°	0.0273	31.27	-43.5°	0.0402	27.92	-7.5°	0.0974	20.23	28.5°	0.0845	21.47	64.5°	0.0519	25.70
-79.0°	0.0291	30.71	-43.0°	0.0490	26.19	-7.0°	0.1676	15.52	29.0°	0.0913	20.80	65.0°	0.0549	25.21
-78.5°	0.0314	30.07	-42.5°	0.0563	24.99	-6.5°	0.2472	12.14	29.5°	0.0927	20.66	65.5°	0.0568	24.91
-78.0°	0.0336	29.47	-42.0°	0.0636	23.93	-6.0°	0.3267	9.72	30.0°	0.0941	20.52	66.0°	0.0588	24.62
-77.5°	0.0357	28.94	-41.5°	0.0687	23.26	-5.5°	0.4097	7.75	30.5°	0.0905	20.86	66.5°	0.0601	24.43
-77.0°	0.0379	28.44	-41.0°	0.0737	22.65	-5.0°	0.4926	6.15	31.0°	0.0869	21.22	67.0°	0.0614	24.24
-76.5°	0.0403	27.90	-40.5°	0.0757	22.41	-4.5°	0.5729	4.84	31.5°	0.0790	22.04	67.5°	0.0622	24.12
-76.0°	0.0427	27.39	-40.0°	0.0778	22.18	-4.0°	0.6531	3.70	32.0°	0.0711	22.96	68.0°	0.0630	24.01
-75.5°	0.0450	26.94	-39.5°	0.0766	22.31	-3.5°	0.7240	2.81	32.5°	0.0601	24.42	68.5°	0.0631	23.99
-75.0°	0.0472	26.52	-39.0°	0.0754	22.45	-3.0°	0.7948	1.99	33.0°	0.0491	26.18	69.0°	0.0633	23.98
-74.5°	0.0492	26.17	-38.5°	0.0708	23.00	-2.5°	0.8498	1.41	33.5°	0.0362	28.83	69.5°	0.0627	24.06
-74.0°	0.0511	25.82	-38.0°	0.0662	23.58	-2.0°	0.9048	0.87	34.0°	0.0233	32.65	70.0°	0.0621	24.13
-73.5°	0.0533	25.47	-37.5°	0.0583	24.69	-1.5°	0.9400	0.54	34.5°	0.0133	37.54	70.5°	0.0610	24.30
-73.0°	0.0554	25.14	-37.0°	0.0503	25.96	-1.0°	0.9752	0.22	35.0°	0.0032	49.79	71.0°	0.0598	24.47
-72.5°	0.0571	24.87	-36.5°	0.0396	28.06	-0.5°	0.9876	0.11	35.5°	0.0157	36.10	71.5°	0.0585	24.66
-72.0°	0.0588	24.61	-36.0°	0.0288	30.81	0.0°	1.0000	0.00	36.0°	0.0281	31.03	72.0°	0.0572	24.86
-71.5°	0.0601	24.43	-35.5°	0.0161	35.89	0.5°	0.9876	0.11	36.5°	0.0386	28.28	72.5°	0.0554	25.13
-71.0°	0.0613	24.25	-35.0°	0.0033	49.56	1.0°	0.9752	0.22	37.0°	0.0490	26.19	73.0°	0.0537	25.41
-70.5°	0.0625	24.09	-34.5°	0.0136	37.32	1.5°	0.9395	0.54	37.5°	0.0568	24.92	73.5°	0.0520	25.69
-70.0°	0.0636	23.93	-34.0°	0.0239	32.43	2.0°	0.9039	0.88	38.0°	0.0645	23.81	74.0°	0.0503	25.97
-69.5°	0.0641	23.86	-33.5°	0.0371	28.62	2.5°	0.8482	1.43	38.5°	0.0690	23.22	74.5°	0.0483	26.33
-69.0°	0.0646	23.79	-33.0°	0.0502	25.99	3.0°	0.7924	2.02	39.0°	0.0735	22.68	75.0°	0.0463	26.69
-68.5°	0.0645	23.81	-32.5°	0.0615	24.22	3.5°	0.7218	2.83	39.5°	0.0746	22.54	75.5°	0.0440	27.12
-68.0°	0.0643	23.84	-32.0°	0.0729	22.75	4.0°	0.6512	3.73	40.0°	0.0757	22.41	76.0°	0.0418	27.58
-67.5°	0.0637	23.92	-31.5°	0.0809	21.84	4.5°	0.5711	4.87	40.5°	0.0736	22.66	76.5°	0.0398	28.00
-67.0°	0.0631	24.00	-31.0°	0.0890	21.02	5.0°	0.4911	6.18	41.0°	0.0715	22.91	77.0°	0.0379	28.44
-66.5°	0.0619	24.16	-30.5°	0.0926	20.67	5.5°	0.4081	7.79	41.5°	0.0667	23.52	77.5°	0.0357	28.94
-66.0°	0.0607	24.33	-30.0°	0.0963	20.33	6.0°	0.3251	9.76	42.0°	0.0618	24.18	78.0°	0.0336	29.47
-65.5°	0.0585	24.66	-29.5°	0.0948	20.47	6.5°	0.2459	12.18	42.5°	0.0548	25.23	78.5°	0.0314	30.07
-65.0°	0.0562	25.01	-29.0°	0.0933	20.60	7.0°	0.1667	15.56	43.0°	0.0477	26.43	79.0°	0.0291	30.71
-64.5°	0.0532	25.48	-28.5°	0.0863	21.28	7.5°	0.0969	20.27	43.5°	0.0391	28.16	79.5°	0.0273	31.27
-64.0°	0.0503	25.97	-28.0°	0.0794	22.01	8.0°	0.0271	31.34	44.0°	0.0305	30.32	80.0°	0.0255	31.87
-63.5°	0.0466	26.62	-27.5°	0.0672	23.45	8.5°	0.0561	25.03	44.5°	0.0211	33.51	80.5°	0.0236	32.54
-63.0°	0.0430	27.33	-27.0°	0.0551	25.18	9.0°	0.0850	21.41	45.0°	0.0118	38.59	81.0°	0.0217	33.27
-62.5°	0.0385	28.30	-26.5°	0.0388	28.22	9.5°	0.1244	18.10	45.5°	0.0094	40.57	81.5°	0.0198	34.08
-62.0°	0.0339	29.38	-26.0°	0.0225	32.95	10.0°	0.1638	15.71	46.0°	0.0070	43.14	82.0°	0.0178	34.97
-61.5°	0.0287	30.85	-25.5°	0.0189	34.46	10.5°	0.1856	14.63	46.5°	0.0157	36.08	82.5°	0.0164	35.71
-61.0°	0.0234	32.61	-25.0°	0.0153	36.29	11.0°	0.2074	13.66	47.0°	0.0244	32.24	83.0°	0.0149	36.52
-60.5°	0.0176	35.09	-24.5°	0.0348	29.17	11.5°	0.2123	13.46	47.5°	0.0320	29.89	83.5°	0.0134	37.43
-60.0°	0.0118	38.58	-24.0°	0.0542	25.31	12.0°	0.2172	13.26	48.0°	0.0396	28.05	84.0°	0.0120	38.44
-59.5°	0.0063	44.05	-23.5°	0.0720	22.86	12.5°	0.2074	13.66	48.5°	0.0456	26.82	84.5°	0.0105	39.60
-59.0°	0.0008	62.21	-23.0°	0.0897	20.95	13.0°	0.1976	14.09	49.0°	0.0517	25.73	85.0°	0.0090	40.93
-58.5°	0.0072	42.80	-22.5°	0.1031	19.73	13.5°	0.1765	15.06	49.5°	0.0559	25.05	85.5°	0.0080	41.95
-58.0°	0.0137	37.26	-22.0°	0.1166	18.66	14.0°	0.1555	16.16	50.0°	0.0601	24.42	86.0°	0.0070	43.10
-57.5°	0.0201	33.91	-21.5°	0.1237	18.15	14.5°	0.1273	17.90	50.5°	0.0624	24.10	86.5°	0.0060	44.44
-57.0°	0.0266	31.51	-21.0°	0.1307	17.67	15.0°	0.0991	20.08	51.0°	0.0646	23.79	87.0°	0.0050	46.02
-56.5°	0.0327	29.72	-20.5°	0.1299	17.73	15.5°	0.0681	23.33	51.5°	0.0649	23.75	87.5°	0.0040	47.96
-56.0°	0.0387	28.24	-20.0°	0.1290	17.79	16.0°	0.0372	28.59	52.0°	0.0653	23.71	88.0°	0.0030	50.46
-55.5°	0.0442	27.10	-19.5°	0.1193	18.46	16.5°	0.0297	30.54	52.5°	0.0639	23.90	88.5°	0.0025	52.04
-55.0°	0.0496	26.09	-19.0°	0.1097	19.20	17.0°	0.0222	33.07	53.0°	0.0625	24.09	89.0°	0.0020	53.98
-54.5°	0.0540	25.35	-18.5°	0.0915	20.77	17.5°	0.0472	26.51	53.5°	0.0595	24.52	89.5°	0.0015	56.48

Elevação



Parâmetros da configuração

ELEMENTOS VERTICAIS	ÂNGULO DE MEIA POTÊNCIA VERTICAL	GANHO	PRIMEIRO NULO
8	7.17°	9.01 dBd	7.00°

Tabela completa - Elevação

EFtX Broadcast: Television & Radio

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
-90.0°	0.0010	60.00	-54.0°	0.0580	24.73	-18.0°	0.1313	17.64	18.0°	0.1294	17.76	54.0°	0.0560	25.03
-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°	0.0020	53.98	-53.0°	0.0548	25.22	-17.0°	0.1212	18.33	19.0°	0.1173	18.62	55.0°	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°	0.0030	50.46	-52.0°	0.0477	26.43	-16.0°	0.0878	21.13	20.0°	0.0874	21.17	56.0°	0.0511	25.83
-87.5°	0.0040	47.96	-51.5°	0.0423	27.48	-15.5°	0.0608	24.33	20.5°	0.0669	23.49	56.5°	0.0477	26.42
-87.0°	0.0050	46.02	-51.0°	0.0369	28.66	-15.0°	0.0337	29.45	21.0°	0.0464	26.67	57.0°	0.0443	27.06
-86.5°	0.0060	44.44	-50.5°	0.0299	30.49	-14.5°	0.0340	29.37	21.5°	0.0241	32.37	57.5°	0.0397	28.02
-86.0°	0.0070	43.11	-50.0°	0.0229	32.81	-14.0°	0.0343	29.29	22.0°	0.0017	55.18	58.0°	0.0351	29.09
-85.5°	0.0080	41.95	-49.5°	0.0146	36.69	-13.5°	0.0702	23.07	22.5°	0.0205	33.75	58.5°	0.0298	30.52
-85.0°	0.0090	40.93	-49.0°	0.0064	43.88	-13.0°	0.1061	19.48	23.0°	0.0393	28.11	59.0°	0.0245	32.23
-84.5°	0.0105	39.60	-48.5°	0.0088	41.10	-12.5°	0.1376	17.23	23.5°	0.0552	25.17	59.5°	0.0187	34.54
-84.0°	0.0120	38.45	-48.0°	0.0112	38.99	-12.0°	0.1691	15.44	24.0°	0.0710	22.97	60.0°	0.0130	37.70
-83.5°	0.0134	37.44	-47.5°	0.0199	34.00	-11.5°	0.1895	14.45	24.5°	0.0802	21.91	60.5°	0.0072	42.88
-83.0°	0.0149	36.54	-47.0°	0.0287	30.85	-11.0°	0.2099	13.56	25.0°	0.0894	20.97	61.0°	0.0013	57.58
-82.5°	0.0163	35.73	-46.5°	0.0364	28.78	-10.5°	0.2135	13.41	25.5°	0.0913	20.79	61.5°	0.0057	44.90
-82.0°	0.0178	34.99	-46.0°	0.0441	27.10	-10.0°	0.2171	13.27	26.0°	0.0931	20.62	62.0°	0.0101	39.95
-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	36.30
-81.0°	0.0216	33.30	-45.0°	0.0562	25.00	-9.0°	0.1816	14.82	27.0°	0.0827	21.65	63.0°	0.0206	33.73
-80.5°	0.0235	32.59	-44.5°	0.0598	24.47	-8.5°	0.1407	17.04	27.5°	0.0719	22.87	63.5°	0.0253	31.94
-80.0°	0.0253	31.93	-44.0°	0.0633	23.97	-8.0°	0.0997	20.03	28.0°	0.0611	24.28	64.0°	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	26.62	64.5°	0.0341	29.34
-79.0°	0.0289	30.79	-43.0°	0.0643	23.83	-7.0°	0.0265	31.55	29.0°	0.0322	29.84	65.0°	0.0382	28.35
-78.5°	0.0310	30.16	-42.5°	0.0616	24.21	-6.5°	0.1076	19.36	29.5°	0.0164	35.68	65.5°	0.0414	27.66
-78.0°	0.0332	29.58	-42.0°	0.0588	24.61	-6.0°	0.1888	14.48	30.0°	0.0007	63.28	66.0°	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	36.58	66.5°	0.0470	26.56
-77.0°	0.0372	28.59	-41.0°	0.0467	26.61	-5.0°	0.3732	8.56	31.0°	0.0290	30.76	67.0°	0.0494	26.12
-76.5°	0.0395	28.08	-40.5°	0.0377	28.46	-4.5°	0.4679	6.60	31.5°	0.0409	27.76	67.5°	0.0513	25.80
-76.0°	0.0417	27.59	-40.0°	0.0288	30.82	-4.0°	0.5625	5.00	32.0°	0.0529	25.53	68.0°	0.0531	25.49
-75.5°	0.0437	27.18	-39.5°	0.0178	35.00	-3.5°	0.6498	3.74	32.5°	0.0607	24.34	68.5°	0.0542	25.32
-75.0°	0.0457	26.79	-39.0°	0.0068	43.37	-3.0°	0.7370	2.65	33.0°	0.0685	23.29	69.0°	0.0552	25.15
-74.5°	0.0474	26.48	-38.5°	0.0119	38.45	-2.5°	0.8069	1.86	33.5°	0.0713	22.93	69.5°	0.0555	25.11
-74.0°	0.0491	26.18	-38.0°	0.0171	35.33	-2.0°	0.8768	1.14	34.0°	0.0742	22.59	70.0°	0.0558	25.07
-73.5°	0.0508	25.88	-37.5°	0.0286	30.86	-1.5°	0.9223	0.70	34.5°	0.0723	22.82	70.5°	0.0554	25.14
-73.0°	0.0525	25.59	-37.0°	0.0401	27.93	-1.0°	0.9678	0.28	35.0°	0.0703	23.06	71.0°	0.0549	25.21
-72.5°	0.0538	25.39	-36.5°	0.0498	26.06	-0.5°	0.9839	0.14	35.5°	0.0641	23.86	71.5°	0.0542	25.32
-72.0°	0.0550	25.19	-36.0°	0.0594	24.53	0.0°	1.0000	0.00	36.0°	0.0579	24.75	72.0°	0.0535	25.44
-71.5°	0.0557	25.09	-35.5°	0.0658	23.64	0.5°	0.9839	0.14	36.5°	0.0485	26.28	72.5°	0.0522	25.65
-71.0°	0.0563	24.98	-35.0°	0.0722	22.83	1.0°	0.9678	0.28	37.0°	0.0391	28.15	73.0°	0.0509	25.86
-70.5°	0.0567	24.92	-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°	0.0571	24.86	-34.0°	0.0761	22.37	2.0°	0.8759	1.15	38.0°	0.0167	35.57	74.0°	0.0483	26.33
-69.5°	0.0568	24.92	-33.5°	0.0731	22.72	2.5°	0.8053	1.88	38.5°	0.0116	38.69	74.5°	0.0466	26.64
-69.0°	0.0564	24.97	-33.0°	0.0701	23.09	3.0°	0.7348	2.68	39.0°	0.0066	43.60	75.0°	0.0449	26.96
-68.5°	0.0553	25.14	-32.5°	0.0621	24.13	3.5°	0.6478	3.77	39.5°	0.0173	35.24	75.5°	0.0428	27.36
-68.0°	0.0542	25.32	-32.0°	0.0542	25.32	4.0°	0.5608	5.02	40.0°	0.0280	31.05	76.0°	0.0408	27.78
-67.5°	0.0525	25.60	-31.5°	0.0419	27.55	4.5°	0.4665	6.62	40.5°	0.0367	28.71	76.5°	0.0390	28.18
-67.0°	0.0508	25.88	-31.0°	0.0296	30.56	5.0°	0.3721	8.59	41.0°	0.0453	26.87	77.0°	0.0372	28.59
-66.5°	0.0484	26.30	-30.5°	0.0152	36.38	5.5°	0.2799	11.06	41.5°	0.0512	25.81	77.5°	0.0352	29.07
-66.0°	0.0460	26.74	-30.0°	0.0007	63.09	6.0°	0.1878	14.53	42.0°	0.0571	24.86	78.0°	0.0332	29.58
-65.5°	0.0426	27.42	-29.5°	0.0168	35.49	6.5°	0.1071	19.41	42.5°	0.0598	24.46	78.5°	0.0310	30.16
-65.0°	0.0391	28.15	-29.0°	0.0329	29.65	7.0°	0.0263	31.59	43.0°	0.0626	24.07	79.0°	0.0289	30.79
-64.5°	0.0350	29.12	-28.5°	0.0477	26.44	7.5°	0.0627	24.05	43.5°	0.0620	24.15	79.5°	0.0271	31.34
-64.0°	0.0309	30.21	-28.0°	0.0624	24.10	8.0°	0.0991	20.08	44.0°	0.0615	24.22	80.0°	0.0253	31.93
-63.5°	0.0261	31.68	-27.5°	0.0734	22.69	8.5°	0.1398	17.09	44.5°	0.0580	24.73	80.5°	0.0235	32.59
-63.0°	0.0213	33.44	-27.0°	0.0843	21.48	9.0°	0.1805	14.87	45.0°	0.0545	25.27	81.0°	0.0216	33.30
-62.5°	0.0158	36.01	-26.5°	0.0896	20.95	9.5°	0.1980	14.07	45.5°	0.0487	26.26	81.5°	0.0197	34.11
-62.0°	0.0104	39.68	-26.0°	0.0949	20.45	10.0°	0.2155	13.33	46.0°	0.0428	27.38	82.0°	0.0178	34.99
-61.5°	0.0059	44.63	-25.5°	0.0930	20.63	10.5°	0.2119	13.48	46.5°	0.0353	29.06	82.5°	0.0163	35.73
-61.0°	0.0014	57.33	-25.0°	0.0911	20.81	11.0°	0.2084	13.62	47.0°	0.0277	31.14	83.0°	0.0149	36.54
-60.5°	0.0074	42.60	-24.5°	0.0817	21.76	11.5°	0.1880	14.52	47.5°	0.0193	34.28	83.5°	0.0134	37.44
-60.0°	0.0135	37.41	-24.0°	0.0722	22.82	12.0°	0.1676	15.51	48.0°	0.0109	39.26	84.0°	0.0120	38.45
-59.5°	0.0194	34.24	-23.5°	0.0561	25.02	12.5°	0.1364	17.31	48.5°	0.0085	41.37	84.5°	0.0105	39.60
-59.0°	0.0254	31.92	-23.0°	0.0400	27.95	13.0°	0.1051	19.57	49.0°	0.0062	44.14	85.0°	0.0090	40.93
-58.5°	0.0308	30.22	-22.5°	0.0209	33.60	13.5°	0.0695	23.15	49.5°	0.0142	36.96	85.5°	0.0080	41.95
-58.0°	0.0363	28.80	-22.0°	0.0018	55.04	14.0°	0.0340	29.37	50.0°	0.0222	33.08	86.0°	0.0070	43.11
-57.5°	0.0410	27.73	-21.5°	0.0244	32.24	14.5°	0.0337	29.46	50.5°	0.0290	30.76	86.5°	0.0060	44.44
-57.0°	0.0458	26.79	-21.0°	0.0471	26.54	15.0°	0.0333	29.54	51.0°	0.0358	28.92	87.0°	0.0050	46.02
-56.5°	0.0493	26.13	-20.5°	0.0678	23.37	15.5°	0.0601	24.42	51.5°	0.0410	27.74	87.5°	0.0040	47.96
-56.0°	0.0529	25.53	-20.0°	0.0886	21.05	16.0°	0.0868	21.23	52.0°	0.0462	26.70	88.0°	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	26.08	88.5°	0.0025	52.04
-55.0°	0.0572	24.85	-19.0°	0.1189	18.49	17.0°	0.1197	18.44	53.0°	0.0531	25.50	89.0°	0.0020	53.98
-54.5°	0.0576	24.79	-18.5°	0.1251	18.06	17.5°	0.1246	18.09	53.5°	0.0545	25.26	89.5°	0.0015	56.48