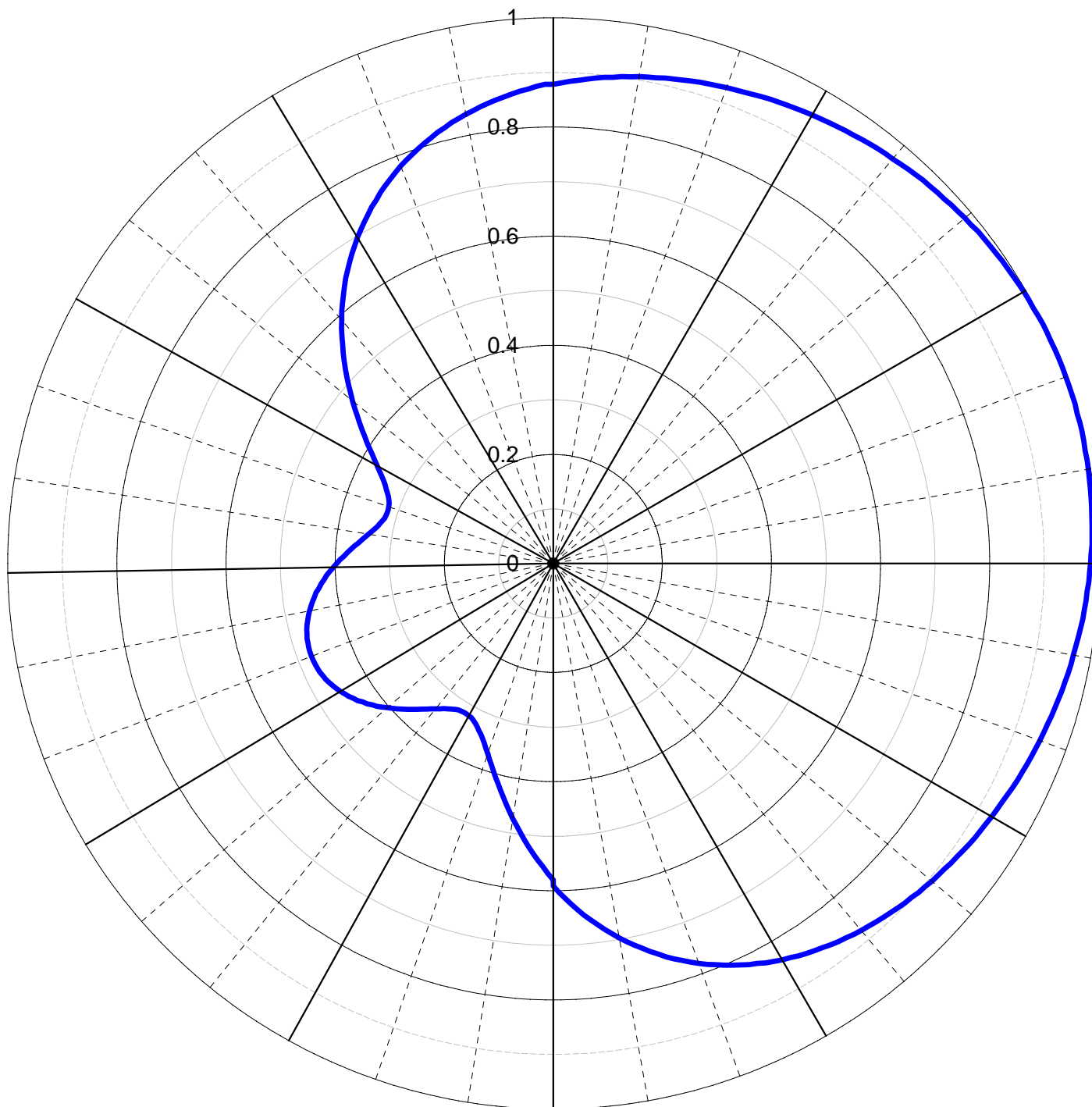


## AZIMUTH PATTERN

TYPE: CH27AZH  
Numeric dB

Polarization: Horizontal  
Channel: 27 (DTV)  
Location: Marlborough, MA

Directivity:



Note: Pattern shape and directivity may vary with channel and mounting configuration.



Electronics Research, Inc.

7777 Gardner Road  
Chandler, IN 47610

# TABULATED DATA FOR AZIMUTH PATTERN

TYPE: CH27AZH

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	0.88	-1.13	90	0.99	-0.13	180	0.59	-4.57	270	0.40	-7.89
2	0.88	-1.07	92	0.98	-0.16	182	0.57	-4.91	272	0.39	-8.16
4	0.89	-1.01	94	0.98	-0.18	184	0.55	-5.27	274	0.38	-8.45
6	0.90	-0.95	96	0.98	-0.21	186	0.52	-5.66	276	0.37	-8.73
8	0.90	-0.91	98	0.97	-0.25	188	0.50	-6.07	278	0.35	-9.02
10	0.91	-0.86	100	0.97	-0.28	190	0.47	-6.48	280	0.34	-9.29
12	0.91	-0.82	102	0.97	-0.31	192	0.45	-6.94	282	0.33	-9.55
14	0.92	-0.77	104	0.96	-0.35	194	0.43	-7.37	284	0.33	-9.74
16	0.92	-0.72	106	0.96	-0.38	196	0.41	-7.81	286	0.32	-9.90
18	0.92	-0.69	108	0.95	-0.42	198	0.39	-8.25	288	0.32	-9.95
20	0.93	-0.65	110	0.95	-0.45	200	0.37	-8.66	290	0.32	-9.92
22	0.93	-0.61	112	0.95	-0.49	202	0.35	-9.04	292	0.32	-9.82
24	0.94	-0.57	114	0.94	-0.53	204	0.34	-9.37	294	0.33	-9.63
26	0.94	-0.53	116	0.94	-0.57	206	0.33	-9.63	296	0.34	-9.37
28	0.95	-0.49	118	0.93	-0.61	208	0.32	-9.82	298	0.35	-9.04
30	0.95	-0.45	120	0.93	-0.65	210	0.32	-9.92	300	0.37	-8.66
32	0.95	-0.42	122	0.92	-0.69	212	0.32	-9.95	302	0.39	-8.25
34	0.96	-0.38	124	0.92	-0.72	214	0.32	-9.90	304	0.41	-7.81
36	0.96	-0.35	126	0.92	-0.77	216	0.33	-9.74	306	0.43	-7.37
38	0.97	-0.31	128	0.91	-0.82	218	0.33	-9.55	308	0.45	-6.94
40	0.97	-0.28	130	0.91	-0.86	220	0.34	-9.29	310	0.47	-6.48
42	0.97	-0.25	132	0.90	-0.91	222	0.35	-9.02	312	0.50	-6.07
44	0.98	-0.21	134	0.90	-0.95	224	0.37	-8.73	314	0.52	-5.66
46	0.98	-0.18	136	0.89	-1.01	226	0.38	-8.45	316	0.55	-5.27
48	0.98	-0.16	138	0.88	-1.07	228	0.39	-8.16	318	0.57	-4.91
50	0.99	-0.13	140	0.88	-1.13	230	0.40	-7.89	320	0.59	-4.57
52	0.99	-0.10	142	0.87	-1.20	232	0.42	-7.62	322	0.61	-4.24
54	0.99	-0.09	144	0.86	-1.27	234	0.43	-7.39	324	0.64	-3.93
56	0.99	-0.07	146	0.86	-1.35	236	0.44	-7.17	326	0.66	-3.65
58	0.99	-0.05	148	0.85	-1.43	238	0.45	-6.99	328	0.68	-3.39
60	1.00	-0.03	150	0.84	-1.52	240	0.46	-6.84	330	0.70	-3.14
62	1.00	-0.03	152	0.83	-1.63	242	0.46	-6.71	332	0.72	-2.91
64	1.00	-0.01	154	0.82	-1.74	244	0.47	-6.60	334	0.73	-2.70
66	1.00	-0.01	156	0.81	-1.87	246	0.47	-6.52	336	0.75	-2.50
68	1.00	0.00	158	0.79	-2.01	248	0.47	-6.48	338	0.77	-2.33
70	1.00	0.00	160	0.78	-2.16	250	0.48	-6.47	340	0.78	-2.16
72	1.00	0.00	162	0.77	-2.33	252	0.47	-6.48	342	0.79	-2.01
74	1.00	-0.01	164	0.75	-2.50	254	0.47	-6.52	344	0.81	-1.87
76	1.00	-0.01	166	0.73	-2.70	256	0.47	-6.60	346	0.82	-1.74
78	1.00	-0.03	168	0.72	-2.91	258	0.46	-6.71	348	0.83	-1.63
80	1.00	-0.03	170	0.70	-3.14	260	0.46	-6.84	350	0.84	-1.52
82	0.99	-0.05	172	0.68	-3.39	262	0.45	-6.99	352	0.85	-1.43
84	0.99	-0.07	174	0.66	-3.65	264	0.44	-7.17	354	0.86	-1.35
86	0.99	-0.09	176	0.64	-3.93	266	0.43	-7.39	356	0.86	-1.27
88	0.99	-0.10	178	0.61	-4.24	268	0.42	-7.62	358	0.87	-1.20



Electronics Research, Inc.

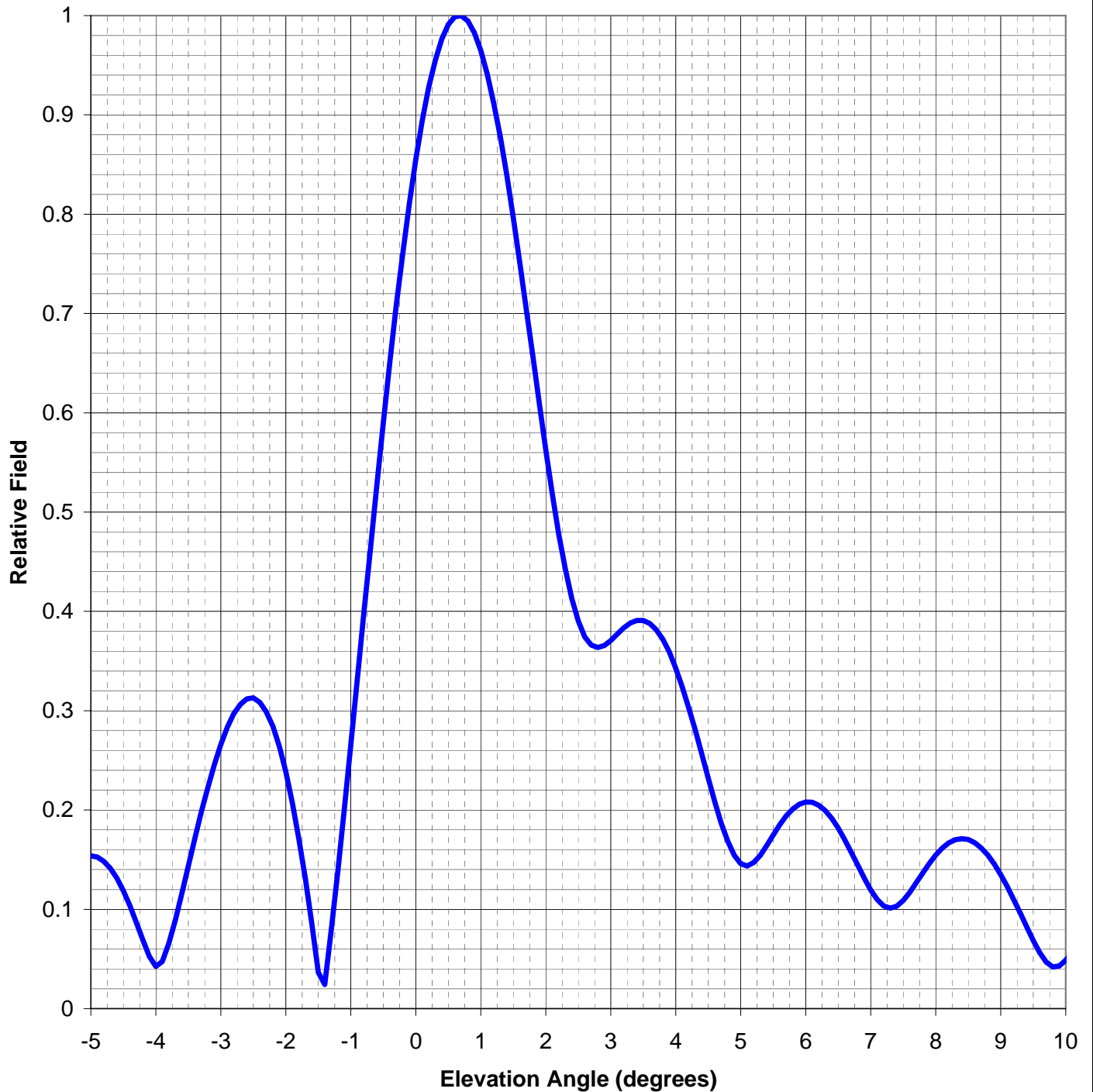
7777 Gardner Road

Chandler, IN 47610

## ELEVATION PATTERN

TYPE: CH27ELH  
Directivity: Numeric dBd  
Main Lobe:  
Horizontal:

Beam Tilt: \_\_\_\_\_  
Polarization: Horizontal  
Channel: 27 (DTV)  
Location: Marlborough, MA



Electronics Research, Inc.

7777 Gardner Road  
Chandler, IN 47610

# TABULATED DATA FOR ELEVATION PATTERN

TYPE: CH27ELH

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.00	0.15	-16.26	-0.50	0.59	-4.58	2.00	0.56	-4.99	6.50	0.18	-14.81
-4.90	0.15	-16.33	-0.40	0.65	-3.74	2.10	0.52	-5.70	6.60	0.17	-15.38
-4.80	0.15	-16.58	-0.30	0.71	-3.00	2.20	0.48	-6.41	6.70	0.16	-16.05
-4.70	0.14	-17.00	-0.20	0.76	-2.37	2.30	0.44	-7.08	6.80	0.14	-16.81
-4.60	0.13	-17.64	-0.10	0.81	-1.82	2.40	0.41	-7.68	6.90	0.13	-17.63
-4.50	0.12	-18.51	0.00	0.86	-1.36	2.50	0.39	-8.17	7.00	0.12	-18.46
-4.40	0.10	-19.68	0.05	0.86	-1.36	2.60	0.37	-8.53	7.10	0.11	-19.19
-4.30	0.09	-21.22	0.10	0.89	-0.97	2.70	0.37	-8.73	7.20	0.10	-19.72
-4.20	0.07	-23.23	0.15	0.89	-0.97	2.80	0.36	-8.79	7.30	0.10	-19.91
-4.10	0.05	-25.62	0.20	0.93	-0.65	2.90	0.37	-8.74	7.40	0.10	-19.73
-4.00	0.04	-27.42	0.25	0.93	-0.65	3.00	0.37	-8.62	7.50	0.11	-19.26
-3.90	0.05	-26.47	0.30	0.96	-0.40	3.10	0.38	-8.47	7.60	0.12	-18.64
-3.80	0.07	-23.69	0.35	0.96	-0.40	3.20	0.38	-8.33	7.70	0.13	-17.95
-3.70	0.09	-20.96	0.40	0.98	-0.21	3.30	0.39	-8.22	7.80	0.14	-17.30
-3.60	0.12	-18.70	0.45	0.98	-0.21	3.40	0.39	-8.16	7.90	0.15	-16.71
-3.50	0.14	-16.85	0.50	0.99	-0.08	3.50	0.39	-8.16	8.00	0.15	-16.22
-3.40	0.17	-15.34	0.55	0.99	-0.08	3.60	0.39	-8.22	8.10	0.16	-15.84
-3.30	0.20	-14.08	0.60	1.00	-0.01	3.70	0.38	-8.37	8.20	0.17	-15.56
-3.20	0.22	-13.05	0.65	1.00	-0.01	3.80	0.37	-8.59	8.30	0.17	-15.39
-3.10	0.25	-12.19	0.70	1.00	0.00	3.90	0.36	-8.90	8.40	0.17	-15.33
-3.00	0.27	-11.50	0.75	1.00	0.00	4.00	0.34	-9.30	8.50	0.17	-15.38
-2.90	0.28	-10.96	0.80	0.99	-0.05	4.10	0.32	-9.79	8.60	0.17	-15.54
-2.80	0.30	-10.55	0.85	0.99	-0.05	4.20	0.30	-10.37	8.70	0.16	-15.82
-2.70	0.31	-10.27	0.90	0.98	-0.15	4.30	0.28	-11.05	8.80	0.15	-16.21
-2.60	0.31	-10.12	0.95	0.98	-0.15	4.40	0.26	-11.82	8.90	0.15	-16.74
-2.50	0.31	-10.09	1.00	0.96	-0.31	4.50	0.23	-12.69	9.00	0.13	-17.40
-2.40	0.31	-10.22	1.05	0.96	-0.31	4.60	0.21	-13.62	9.10	0.12	-18.20
-2.30	0.30	-10.49	1.10	0.94	-0.53	4.70	0.19	-14.57	9.20	0.11	-19.18
-2.20	0.28	-10.93	1.15	0.94	-0.53	4.80	0.17	-15.48	9.30	0.10	-20.34
-2.10	0.26	-11.57	1.20	0.91	-0.80	4.90	0.15	-16.23	9.40	0.08	-21.70
-2.00	0.24	-12.45	1.25	0.91	-0.80	5.00	0.15	-16.72	9.50	0.07	-23.27
-1.90	0.21	-13.66	1.30	0.88	-1.13	5.10	0.14	-16.85	9.60	0.06	-24.97
-1.80	0.17	-15.32	1.35	0.88	-1.13	5.20	0.15	-16.65	9.70	0.05	-26.58
-1.70	0.13	-17.69	1.40	0.84	-1.52	5.30	0.15	-16.23	9.80	0.04	-27.54
-1.60	0.09	-21.40	1.45	0.84	-1.52	5.40	0.16	-15.69	9.90	0.04	-27.35
-1.50	0.04	-28.76	1.50	0.80	-1.98	5.50	0.17	-15.15	10.00	0.05	-26.25
-1.40	0.02	-32.31	1.55	0.80	-1.98	5.60	0.18	-14.66			
-1.30	0.08	-22.06	1.60	0.75	-2.48	5.70	0.19	-14.24			
-1.20	0.14	-17.15	1.65	0.75	-2.48	5.80	0.20	-13.93			
-1.10	0.20	-13.92	1.70	0.70	-3.04	5.90	0.21	-13.73			
-1.00	0.27	-11.51	1.75	0.70	-3.04	6.00	0.21	-13.63			
-0.90	0.33	-9.60	1.80	0.66	-3.65	6.10	0.21	-13.64			
-0.80	0.40	-8.02	1.85	0.66	-3.65	6.20	0.20	-13.78			
-0.70	0.46	-6.70	1.90	0.61	-4.30	6.30	0.20	-14.01			
-0.60	0.53	-5.56	1.95	0.61	-4.30	6.40	0.19	-14.35			



Electronics Research, Inc.

7777 Gardner Road

Chandler, IN 47610

# Calculated Data - Use Only for Angles Exceeding 10 Degrees

ATW25H3-ETS180-27H

KO121208-1979

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## TABULATED DATA FOR ELEVATION PATTERN

TYPE: ATW25H3H

-5 to 10 degrees in 0.25 increments

10 to 90 degrees in 0.50 increments

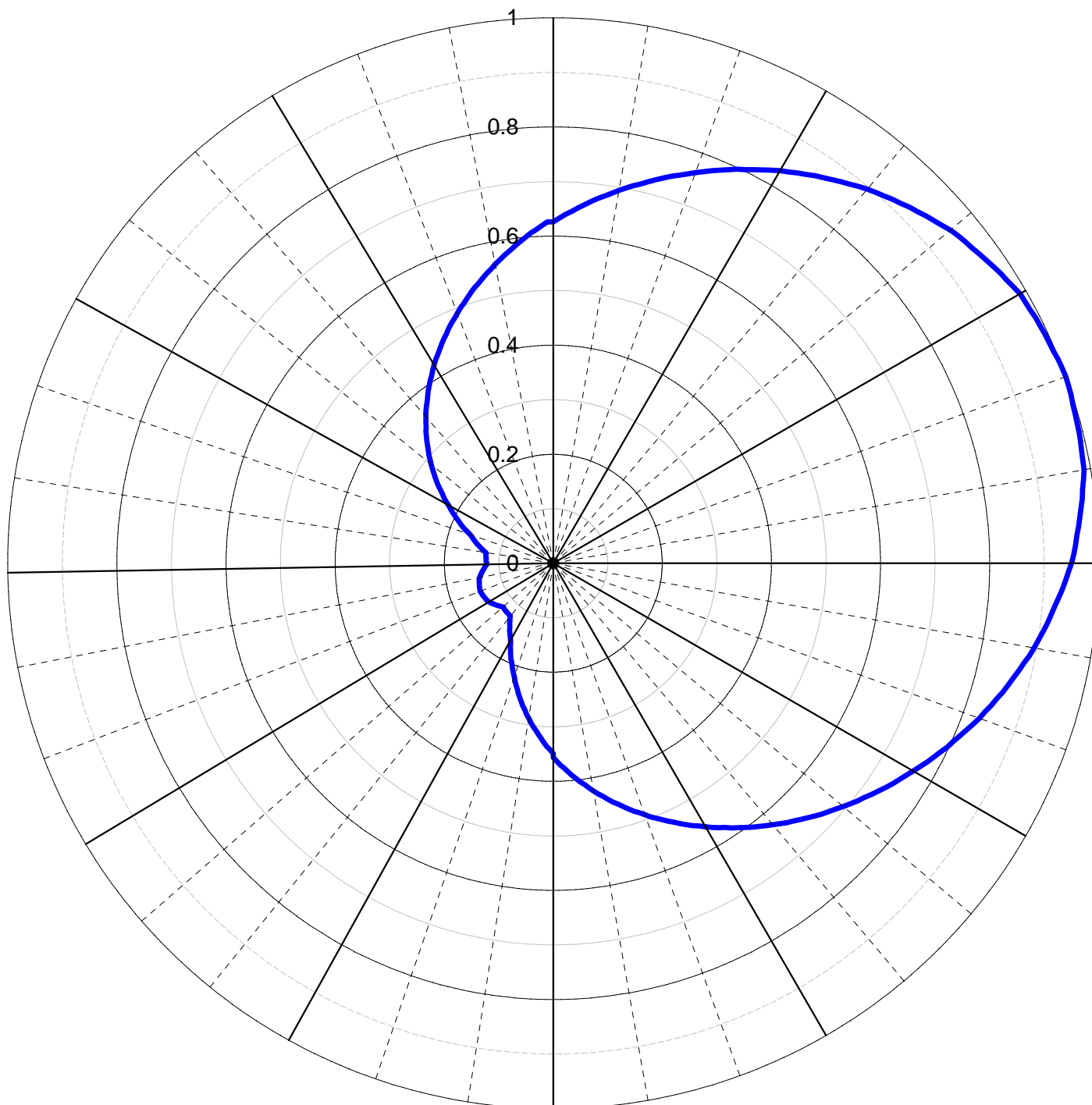
ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.00	0.127	-17.92	6.75	0.128	-17.86	27.00	0.035	-29.12	50.50	0.021	-33.56	74.00	0.021	-33.56
-4.75	0.145	-16.77	7.00	0.108	-19.33	27.50	0.023	-32.77	51.00	0.031	-30.17	74.50	0.028	-31.06
-4.50	0.148	-16.59	7.25	0.105	-19.58	28.00	0.028	-31.06	51.50	0.036	-28.87	75.00	0.033	-29.63
-4.25	0.135	-17.39	7.50	0.116	-18.71	28.50	0.038	-28.40	52.00	0.035	-29.12	75.50	0.037	-28.64
-4.00	0.108	-19.33	7.75	0.130	-17.72	29.00	0.040	-27.96	52.50	0.028	-31.06	76.00	0.040	-27.96
-3.75	0.076	-22.38	8.00	0.139	-17.14	29.50	0.031	-30.17	53.00	0.018	-34.89	76.50	0.042	-27.54
-3.50	0.071	-22.97	8.25	0.138	-17.20	30.00	0.021	-33.56	53.50	0.012	-38.42	77.00	0.042	-27.54
-3.25	0.112	-19.02	8.50	0.127	-17.92	30.50	0.027	-31.37	54.00	0.020	-33.98	77.50	0.041	-27.74
-3.00	0.165	-15.65	8.75	0.109	-19.25	31.00	0.037	-28.64	54.50	0.029	-30.75	78.00	0.040	-27.96
-2.75	0.213	-13.43	9.00	0.090	-20.92	31.50	0.038	-28.40	55.00	0.035	-29.12	78.50	0.037	-28.64
-2.50	0.244	-12.25	9.25	0.078	-22.16	32.00	0.030	-30.46	55.50	0.036	-28.87	79.00	0.034	-29.37
-2.25	0.251	-12.01	9.50	0.079	-22.05	32.50	0.020	-33.98	56.00	0.032	-29.90	79.50	0.030	-30.46
-2.00	0.230	-12.77	9.75	0.090	-20.92	33.00	0.024	-32.40	56.50	0.023	-32.77	80.00	0.027	-31.37
-1.75	0.185	-14.66	10.00	0.101	-19.91	33.50	0.034	-29.37	57.00	0.013	-37.72	80.50	0.023	-32.77
-1.50	0.136	-17.33	10.50	0.106	-19.49	34.00	0.037	-28.64	57.50	0.012	-38.42	81.00	0.018	-34.89
-1.25	0.154	-16.25	11.00	0.083	-21.62	34.50	0.030	-30.46	58.00	0.021	-33.56	81.50	0.015	-36.48
-1.00	0.257	-11.80	11.50	0.060	-24.44	35.00	0.020	-33.98	58.50	0.030	-30.46	82.00	0.011	-39.17
-0.75	0.399	-7.98	12.00	0.073	-22.73	35.50	0.021	-33.56	59.00	0.036	-28.87	82.50	0.008	-41.94
-0.50	0.550	-5.19	12.50	0.088	-21.11	36.00	0.031	-30.17	59.50	0.037	-28.64	83.00	0.005	-46.02
-0.25	0.695	-3.16	13.00	0.078	-22.16	36.50	0.036	-28.87	60.00	0.033	-29.63	83.50	0.003	-50.46
0.00	0.821	-1.71	13.50	0.055	-25.19	37.00	0.032	-29.90	60.50	0.026	-31.70	84.00	0.002	-53.98
0.25	0.918	-0.74	14.00	0.052	-25.68	37.50	0.022	-33.15	61.00	0.016	-35.92	84.50	0.003	-50.46
0.50	0.980	-0.18	14.50	0.069	-23.22	38.00	0.017	-35.39	61.50	0.008	-41.94	85.00	0.004	-47.96
0.75	1.000	0.00	15.00	0.072	-22.85	38.50	0.026	-31.70	62.00	0.014	-37.08	85.50	0.005	-46.02
1.00	0.981	-0.17	15.50	0.056	-25.04	39.00	0.034	-29.37	62.50	0.024	-32.40	86.00	0.005	-46.02
1.25	0.923	-0.70	16.00	0.041	-27.74	39.50	0.034	-29.37	63.00	0.032	-29.90	86.50	0.006	-44.44
1.50	0.835	-1.57	16.50	0.052	-25.68	40.00	0.027	-31.37	63.50	0.037	-28.64	87.00	0.005	-46.02
1.75	0.726	-2.78	17.00	0.062	-24.15	40.50	0.017	-35.39	64.00	0.038	-28.40	87.50	0.005	-46.02
2.00	0.610	-4.29	17.50	0.056	-25.04	41.00	0.019	-34.42	64.50	0.036	-28.87	88.00	0.004	-47.96
2.25	0.504	-5.95	18.00	0.038	-28.40	41.50	0.029	-30.75	65.00	0.030	-30.46	88.50	0.003	-50.46
2.50	0.420	-7.54	18.50	0.037	-28.64	42.00	0.035	-29.12	65.50	0.022	-33.15	89.00	0.002	-53.98
2.75	0.375	-8.52	19.00	0.052	-25.68	42.50	0.033	-29.63	66.00	0.012	-38.42	89.50	0.001	-60.00
3.00	0.359	-8.90	19.50	0.055	-25.19	43.00	0.024	-32.40	66.50	0.005	-46.02	90.00	0.000	---
3.25	0.358	-8.92	20.00	0.043	-27.33	43.50	0.015	-36.48	67.00	0.012	-38.42			
3.50	0.354	-9.02	20.50	0.030	-30.46	44.00	0.019	-34.42	67.50	0.022	-33.15			
3.75	0.336	-9.47	21.00	0.038	-28.40	44.50	0.029	-30.75	68.00	0.030	-30.46			
4.00	0.303	-10.37	21.50	0.049	-26.20	45.00	0.035	-29.12	68.50	0.036	-28.87			
4.25	0.259	-11.73	22.00	0.047	-26.56	45.50	0.033	-29.63	69.00	0.039	-28.18			
4.50	0.212	-13.47	22.50	0.033	-29.63	46.00	0.025	-32.04	69.50	0.040	-27.96			
4.75	0.177	-15.04	23.00	0.027	-31.37	46.50	0.015	-36.48	70.00	0.039	-28.18			
5.00	0.163	-15.76	23.50	0.039	-28.18	47.00	0.018	-34.89	70.50	0.035	-29.12			
5.25	0.171	-15.34	24.00	0.046	-26.74	47.50	0.027	-31.37	71.00	0.029	-30.75			
5.50	0.186	-14.61	24.50	0.039	-28.18	48.00	0.034	-29.37	71.50	0.022	-33.15			
5.75	0.196	-14.15	25.00	0.027	-31.37	48.50	0.035	-29.12	72.00	0.013	-37.72			
6.00	0.194	-14.24	25.50	0.028	-31.06	49.00	0.029	-30.75	72.50	0.004	-47.96			
6.25	0.179	-14.94	26.00	0.039	-28.18	49.50	0.019	-34.42	73.00	0.005	-46.02			
6.50	0.155	-16.19	26.50	0.043	-27.33	50.00	0.014	-37.08	73.50	0.013	-37.72			

## AZIMUTH PATTERN

TYPE: CH27AZV  
Numeric dB

Polarization: Vertical  
Channel: 27 (DTV)  
Location: Marlborough, MA

Directivity:



Note: Pattern shape and directivity may vary with channel and mounting configuration.



Electronics Research, Inc.

7777 Gardner Road  
Chandler, IN 47610

# TABULATED DATA FOR AZIMUTH PATTERN

TYPE: CH27AZV

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	0.63	-4.07	90	0.95	-0.45	180	0.36	-8.97	270	0.12	-18.27
2	0.64	-3.88	92	0.94	-0.55	182	0.34	-9.32	272	0.12	-18.20
4	0.65	-3.70	94	0.93	-0.65	184	0.33	-9.66	274	0.12	-18.20
6	0.67	-3.52	96	0.92	-0.75	186	0.32	-10.03	276	0.12	-18.13
8	0.68	-3.35	98	0.91	-0.86	188	0.30	-10.40	278	0.12	-18.13
10	0.69	-3.17	100	0.90	-0.96	190	0.29	-10.81	280	0.13	-18.06
12	0.71	-3.00	102	0.88	-1.09	192	0.27	-11.24	282	0.13	-17.59
14	0.72	-2.84	104	0.87	-1.22	194	0.26	-11.67	284	0.14	-17.14
16	0.74	-2.67	106	0.86	-1.34	196	0.25	-12.15	286	0.15	-16.65
18	0.75	-2.52	108	0.84	-1.47	198	0.23	-12.62	288	0.15	-16.25
20	0.76	-2.36	110	0.83	-1.61	200	0.22	-13.15	290	0.16	-15.86
22	0.78	-2.20	112	0.82	-1.76	202	0.21	-13.64	292	0.17	-15.24
24	0.79	-2.05	114	0.80	-1.91	204	0.20	-14.15	294	0.19	-14.66
26	0.80	-1.91	116	0.79	-2.05	206	0.19	-14.66	296	0.20	-14.15
28	0.82	-1.76	118	0.78	-2.20	208	0.17	-15.24	298	0.21	-13.64
30	0.83	-1.61	120	0.76	-2.36	210	0.16	-15.86	300	0.22	-13.15
32	0.84	-1.47	122	0.75	-2.52	212	0.15	-16.25	302	0.23	-12.62
34	0.86	-1.34	124	0.74	-2.67	214	0.15	-16.65	304	0.25	-12.15
36	0.87	-1.22	126	0.72	-2.84	216	0.14	-17.14	306	0.26	-11.67
38	0.88	-1.09	128	0.71	-3.00	218	0.13	-17.59	308	0.27	-11.24
40	0.90	-0.96	130	0.69	-3.17	220	0.13	-18.06	310	0.29	-10.81
42	0.91	-0.86	132	0.68	-3.35	222	0.12	-18.13	312	0.30	-10.40
44	0.92	-0.75	134	0.67	-3.52	224	0.12	-18.13	314	0.32	-10.03
46	0.93	-0.65	136	0.65	-3.70	226	0.12	-18.20	316	0.33	-9.66
48	0.94	-0.55	138	0.64	-3.88	228	0.12	-18.20	318	0.34	-9.32
50	0.95	-0.45	140	0.63	-4.07	230	0.12	-18.27	320	0.36	-8.97
52	0.96	-0.37	142	0.61	-4.26	232	0.13	-18.06	322	0.37	-8.64
54	0.97	-0.31	144	0.60	-4.45	234	0.13	-17.86	324	0.38	-8.34
56	0.97	-0.24	146	0.59	-4.66	236	0.13	-17.59	326	0.40	-8.02
58	0.98	-0.18	148	0.57	-4.85	238	0.14	-17.39	328	0.41	-7.74
60	0.99	-0.10	150	0.56	-5.07	240	0.14	-17.20	330	0.42	-7.45
62	0.99	-0.09	152	0.55	-5.27	242	0.14	-17.14	332	0.44	-7.19
64	0.99	-0.06	154	0.53	-5.50	244	0.14	-17.08	334	0.45	-6.92
66	1.00	-0.04	156	0.52	-5.71	246	0.14	-16.95	336	0.46	-6.67
68	1.00	-0.02	158	0.50	-5.95	248	0.14	-16.89	338	0.48	-6.41
70	1.00	0.00	160	0.49	-6.18	250	0.14	-16.83	340	0.49	-6.18
72	1.00	-0.02	162	0.48	-6.41	252	0.14	-16.89	342	0.50	-5.95
74	1.00	-0.04	164	0.46	-6.67	254	0.14	-16.95	344	0.52	-5.71
76	0.99	-0.06	166	0.45	-6.92	256	0.14	-17.08	346	0.53	-5.50
78	0.99	-0.09	168	0.44	-7.19	258	0.14	-17.14	348	0.55	-5.27
80	0.99	-0.10	170	0.42	-7.45	260	0.14	-17.20	350	0.56	-5.07
82	0.98	-0.18	172	0.41	-7.74	262	0.14	-17.39	352	0.57	-4.85
84	0.97	-0.24	174	0.40	-8.02	264	0.13	-17.59	354	0.59	-4.66
86	0.97	-0.31	176	0.38	-8.34	266	0.13	-17.86	356	0.60	-4.45
88	0.96	-0.37	178	0.37	-8.64	268	0.13	-18.06	358	0.61	-4.26



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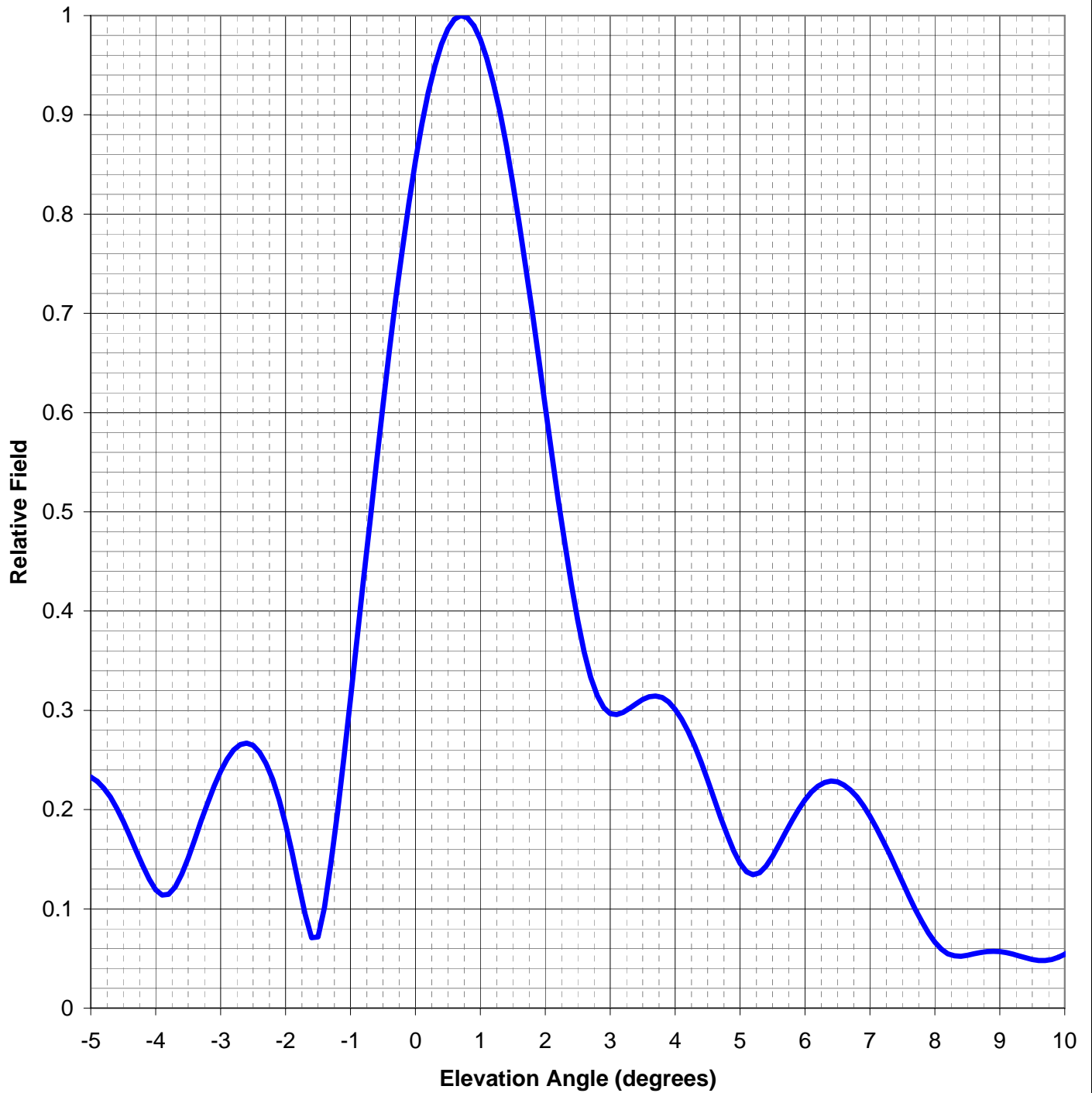
7777 Gardner Road

Chandler, IN 47610

## ELEVATION PATTERN

TYPE: CH27ELV  
Directivity: Numeric dBd  
Main Lobe:  
Horizontal:

Beam Tilt: \_\_\_\_\_  
Polarization: Vertical  
Channel: 27 (DTV)  
Location: Marlborough, MA



Electronics Research, Inc.

7777 Gardner Road  
Chandler, IN 47610



## TABULATED DATA FOR ELEVATION PATTERN

TYPE: CH27ELV

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.00	0.23	-12.67	-0.50	0.61	-4.33	2.00	0.61	-4.35	6.50	0.23	-12.85
-4.90	0.23	-12.82	-0.40	0.66	-3.57	2.10	0.56	-5.06	6.60	0.22	-12.97
-4.80	0.22	-13.08	-0.30	0.72	-2.91	2.20	0.51	-5.81	6.70	0.22	-13.16
-4.70	0.21	-13.45	-0.20	0.77	-2.32	2.30	0.47	-6.59	6.80	0.21	-13.45
-4.60	0.20	-13.92	-0.10	0.81	-1.81	2.40	0.43	-7.39	6.90	0.20	-13.82
-4.50	0.19	-14.51	0.00	0.85	-1.38	2.50	0.39	-8.17	7.00	0.19	-14.27
-4.40	0.17	-15.20	0.05	0.85	-1.38	2.60	0.36	-8.90	7.10	0.18	-14.81
-4.30	0.16	-16.00	0.10	0.89	-1.01	2.70	0.33	-9.54	7.20	0.17	-15.45
-4.20	0.14	-16.87	0.15	0.89	-1.01	2.80	0.31	-10.04	7.30	0.16	-16.18
-4.10	0.13	-17.74	0.20	0.92	-0.70	2.90	0.30	-10.38	7.40	0.14	-17.00
-4.00	0.12	-18.47	0.25	0.92	-0.70	3.00	0.30	-10.55	7.50	0.13	-17.92
-3.90	0.11	-18.88	0.30	0.95	-0.45	3.10	0.30	-10.58	7.60	0.11	-18.95
-3.80	0.11	-18.81	0.35	0.95	-0.45	3.20	0.30	-10.52	7.70	0.10	-20.05
-3.70	0.12	-18.27	0.40	0.97	-0.26	3.30	0.30	-10.39	7.80	0.09	-21.22
-3.60	0.13	-17.41	0.45	0.97	-0.26	3.40	0.31	-10.26	7.90	0.08	-22.41
-3.50	0.15	-16.41	0.50	0.99	-0.12	3.50	0.31	-10.15	8.00	0.07	-23.55
-3.40	0.17	-15.42	0.55	0.99	-0.12	3.60	0.31	-10.07	8.10	0.06	-24.53
-3.30	0.19	-14.50	0.60	1.00	-0.03	3.70	0.31	-10.05	8.20	0.05	-25.23
-3.20	0.21	-13.69	0.65	1.00	-0.03	3.80	0.31	-10.09	8.30	0.05	-25.58
-3.10	0.22	-13.01	0.70	1.00	0.00	3.90	0.31	-10.22	8.40	0.05	-25.64
-3.00	0.24	-12.45	0.75	1.00	0.00	4.00	0.30	-10.43	8.50	0.05	-25.48
-2.90	0.25	-12.01	0.80	1.00	-0.02	4.10	0.29	-10.72	8.60	0.05	-25.25
-2.80	0.26	-11.70	0.85	1.00	-0.02	4.20	0.28	-11.09	8.70	0.06	-25.05
-2.70	0.27	-11.52	0.90	0.99	-0.09	4.30	0.26	-11.56	8.80	0.06	-24.89
-2.60	0.27	-11.47	0.95	0.99	-0.09	4.40	0.25	-12.12	8.90	0.06	-24.85
-2.50	0.26	-11.54	1.00	0.98	-0.21	4.50	0.23	-12.78	9.00	0.06	-24.90
-2.40	0.26	-11.77	1.05	0.98	-0.21	4.60	0.21	-13.51	9.10	0.06	-25.05
-2.30	0.25	-12.17	1.10	0.96	-0.38	4.70	0.19	-14.32	9.20	0.05	-25.29
-2.20	0.23	-12.75	1.15	0.96	-0.38	4.80	0.17	-15.16	9.30	0.05	-25.59
-2.10	0.21	-13.55	1.20	0.93	-0.61	4.90	0.16	-15.99	9.40	0.05	-25.92
-2.00	0.19	-14.64	1.25	0.93	-0.61	5.00	0.15	-16.73	9.50	0.05	-26.20
-1.90	0.16	-16.08	1.30	0.90	-0.89	5.10	0.14	-17.24	9.60	0.05	-26.38
-1.80	0.13	-18.00	1.35	0.90	-0.89	5.20	0.13	-17.44	9.70	0.05	-26.39
-1.70	0.09	-20.48	1.40	0.87	-1.22	5.30	0.14	-17.30	9.80	0.05	-26.20
-1.60	0.07	-22.98	1.45	0.87	-1.22	5.40	0.14	-16.89	9.90	0.05	-25.83
-1.50	0.07	-22.91	1.50	0.83	-1.61	5.50	0.15	-16.32	10.00	0.05	-25.31
-1.40	0.10	-19.89	1.55	0.83	-1.61	5.60	0.16	-15.68			
-1.30	0.15	-16.71	1.60	0.79	-2.05	5.70	0.18	-15.04			
-1.20	0.20	-14.07	1.65	0.79	-2.05	5.80	0.19	-14.47			
-1.10	0.25	-11.92	1.70	0.75	-2.54	5.90	0.20	-13.98			
-1.00	0.31	-10.13	1.75	0.75	-2.54	6.00	0.21	-13.56			
-0.90	0.37	-8.62	1.80	0.70	-3.09	6.10	0.22	-13.24			
-0.80	0.43	-7.32	1.85	0.70	-3.09	6.20	0.22	-13.02			
-0.70	0.49	-6.19	1.90	0.65	-3.69	6.30	0.23	-12.87			
-0.60	0.55	-5.20	1.95	0.65	-3.69	6.40	0.23	-12.82			



Electronics Research, Inc.

7777 Gardner Road

Chandler, IN 47610

# Calculated Data - Use Only for Angles Exceeding 10 Degrees

ATW25H3-ETS180-27H

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## TABULATED DATA FOR ELEVATION PATTERN

TYPE: ATW22H3V

-5 to 10 degrees in 0.25 increments

10 to 90 degrees in 0.50 increments

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.00	0.228	-12.84	6.75	0.234	-12.62	27.00	0.088	-21.11	50.50	0.026	-31.70	74.00	0.034	-29.37
-4.75	0.234	-12.62	7.00	0.205	-13.76	27.50	0.102	-19.83	51.00	0.023	-32.77	74.50	0.039	-28.18
-4.50	0.223	-13.03	7.25	0.175	-15.14	28.00	0.102	-19.83	51.50	0.015	-36.48	75.00	0.044	-27.13
-4.25	0.198	-14.07	7.50	0.149	-16.54	28.50	0.089	-21.01	52.00	0.008	-41.94	75.50	0.048	-26.38
-4.00	0.165	-15.65	7.75	0.130	-17.72	29.00	0.073	-22.73	52.50	0.019	-34.42	76.00	0.050	-26.02
-3.75	0.141	-17.02	8.00	0.119	-18.49	29.50	0.060	-24.44	53.00	0.035	-29.12	76.50	0.052	-25.68
-3.50	0.145	-16.77	8.25	0.112	-19.02	30.00	0.050	-26.02	53.50	0.049	-26.20	77.00	0.052	-25.68
-3.25	0.182	-14.80	8.50	0.103	-19.74	30.50	0.039	-28.18	54.00	0.060	-24.44	77.50	0.051	-25.85
-3.00	0.231	-12.73	8.75	0.090	-20.92	31.00	0.025	-32.04	54.50	0.066	-23.61	78.00	0.049	-26.20
-2.75	0.274	-11.24	9.00	0.072	-22.85	31.50	0.014	-37.08	55.00	0.066	-23.61	78.50	0.046	-26.74
-2.50	0.301	-10.43	9.25	0.054	-25.35	32.00	0.015	-36.48	55.50	0.061	-24.29	79.00	0.043	-27.33
-2.25	0.304	-10.34	9.50	0.044	-27.13	32.50	0.016	-35.92	56.00	0.054	-25.35	79.50	0.039	-28.18
-2.00	0.285	-10.90	9.75	0.052	-25.68	33.00	0.007	-43.10	56.50	0.047	-26.56	80.00	0.035	-29.12
-1.75	0.247	-12.15	10.00	0.067	-23.48	33.50	0.012	-38.42	57.00	0.043	-27.33	80.50	0.031	-30.17
-1.50	0.214	-13.39	10.50	0.090	-20.92	34.00	0.037	-28.64	57.50	0.044	-27.13	81.00	0.027	-31.37
-1.25	0.231	-12.73	11.00	0.082	-21.72	34.50	0.062	-24.15	58.00	0.047	-26.56	81.50	0.023	-32.77
-1.00	0.312	-10.12	11.50	0.057	-24.88	35.00	0.081	-21.83	58.50	0.049	-26.20	82.00	0.019	-34.42
-0.75	0.437	-7.19	12.00	0.074	-22.62	35.50	0.090	-20.92	59.00	0.048	-26.38	82.50	0.016	-35.92
-0.50	0.575	-4.81	12.50	0.120	-18.42	36.00	0.088	-21.11	59.50	0.045	-26.94	83.00	0.012	-38.42
-0.25	0.710	-2.97	13.00	0.150	-16.48	36.50	0.078	-22.16	60.00	0.039	-28.18	83.50	0.010	-40.00
0.00	0.829	-1.63	13.50	0.150	-16.48	37.00	0.065	-23.74	60.50	0.032	-29.90	84.00	0.008	-41.94
0.25	0.920	-0.72	14.00	0.127	-17.92	37.50	0.055	-25.19	61.00	0.026	-31.70	84.50	0.006	-44.44
0.50	0.979	-0.18	14.50	0.096	-20.35	38.00	0.048	-26.38	61.50	0.025	-32.04	85.00	0.006	-44.44
0.75	1.000	0.00	15.00	0.073	-22.73	38.50	0.042	-27.54	62.00	0.028	-31.06	85.50	0.005	-46.02
1.00	0.983	-0.15	15.50	0.056	-25.04	39.00	0.033	-29.63	62.50	0.032	-29.90	86.00	0.005	-46.02
1.25	0.930	-0.63	16.00	0.033	-29.63	39.50	0.023	-32.77	63.00	0.034	-29.37	86.50	0.005	-46.02
1.50	0.848	-1.43	16.50	0.013	-37.72	40.00	0.018	-34.89	63.50	0.032	-29.90	87.00	0.004	-47.96
1.75	0.746	-2.55	17.00	0.031	-30.17	40.50	0.019	-34.42	64.00	0.028	-31.06	87.50	0.004	-47.96
2.00	0.636	-3.93	17.50	0.042	-27.54	41.00	0.018	-34.89	64.50	0.021	-33.56	88.00	0.003	-50.46
2.25	0.533	-5.47	18.00	0.033	-29.63	41.50	0.012	-38.42	65.00	0.011	-39.17	88.50	0.003	-50.46
2.50	0.451	-6.92	18.50	0.024	-32.40	42.00	0.011	-39.17	65.50	0.002	-53.98	89.00	0.002	-53.98
2.75	0.403	-7.89	19.00	0.055	-25.19	42.50	0.029	-30.75	66.00	0.014	-37.08	89.50	0.001	-60.00
3.00	0.384	-8.31	19.50	0.093	-20.63	43.00	0.049	-26.20	66.50	0.026	-31.70	90.00	0.000	---
3.25	0.384	-8.31	20.00	0.118	-18.56	43.50	0.066	-23.61	67.00	0.037	-28.64			
3.50	0.383	-8.34	20.50	0.122	-18.27	44.00	0.076	-22.38	67.50	0.047	-26.56			
3.75	0.370	-8.64	21.00	0.109	-19.25	44.50	0.079	-22.05	68.00	0.054	-25.35			
4.00	0.342	-9.32	21.50	0.088	-21.11	45.00	0.074	-22.62	68.50	0.058	-24.73			
4.25	0.301	-10.43	22.00	0.068	-23.35	45.50	0.064	-23.88	69.00	0.060	-24.44			
4.50	0.252	-11.97	22.50	0.053	-25.51	46.00	0.055	-25.19	69.50	0.059	-24.58			
4.75	0.210	-13.56	23.00	0.037	-28.64	46.50	0.049	-26.20	70.00	0.055	-25.19			
5.00	0.188	-14.52	23.50	0.019	-34.42	47.00	0.047	-26.56	70.50	0.050	-26.02			
5.25	0.195	-14.20	24.00	0.011	-39.17	47.50	0.045	-26.94	71.00	0.043	-27.33			
5.50	0.218	-13.23	24.50	0.020	-33.98	48.00	0.041	-27.74	71.50	0.036	-28.87			
5.75	0.244	-12.25	25.00	0.018	-34.89	48.50	0.034	-29.37	72.00	0.029	-30.75			
6.00	0.261	-11.67	25.50	0.005	-46.02	49.00	0.027	-31.37	72.50	0.025	-32.04			
6.25	0.265	-11.54	26.00	0.029	-30.75	49.50	0.024	-32.40	73.00	0.025	-32.04			
6.50	0.255	-11.87	26.50	0.062	-24.15	50.00	0.025	-32.04	73.50	0.029	-30.75			