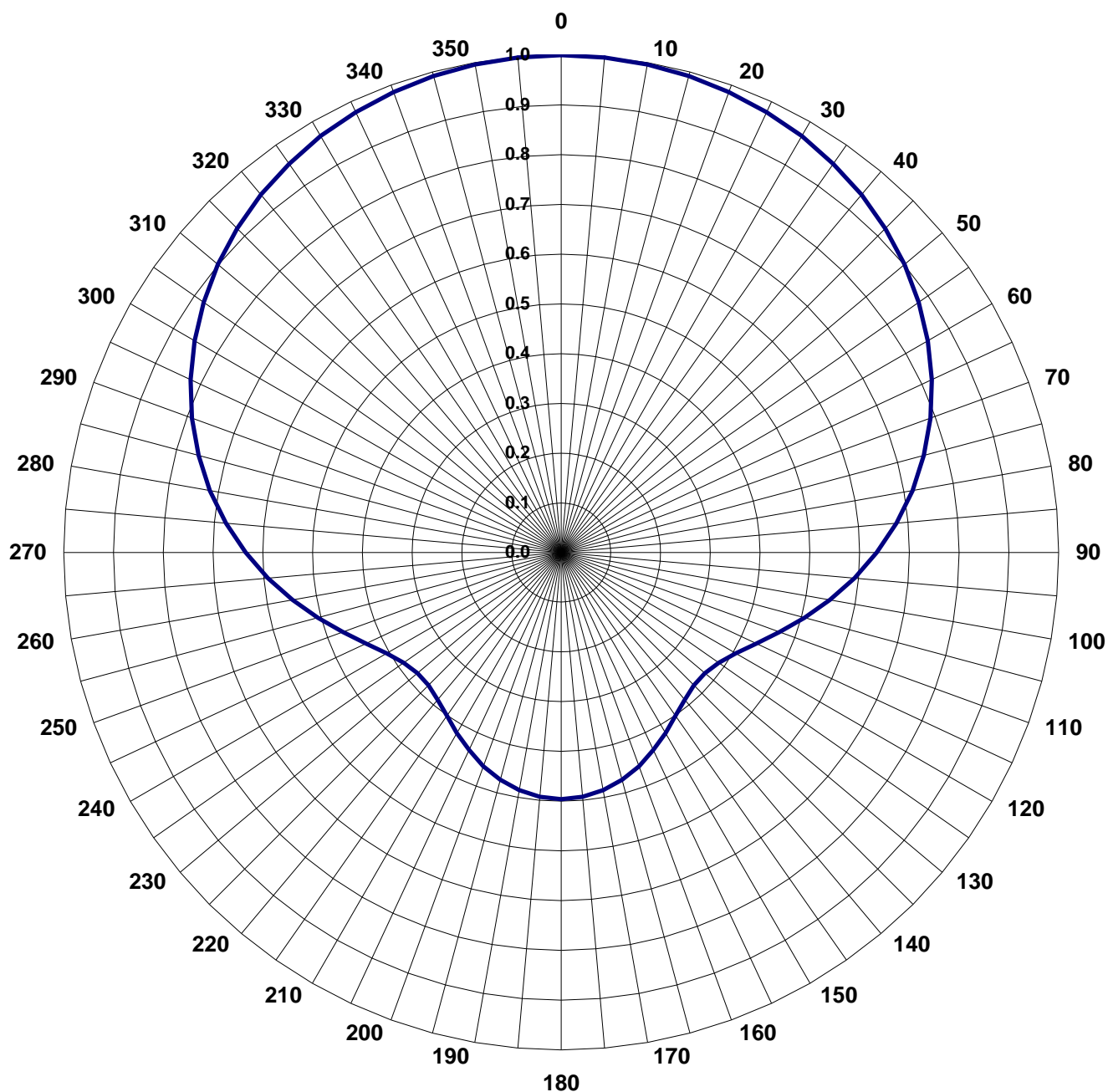


AZIMUTH PATTERN

TYPE:**ATW-GS****Frequency:****17 (DTV)****Directivity:****Numeric****dB****Location:****Phoenix, AZ****Peak(s) at:****2.00****3.01****Polarization:****Horizontal**

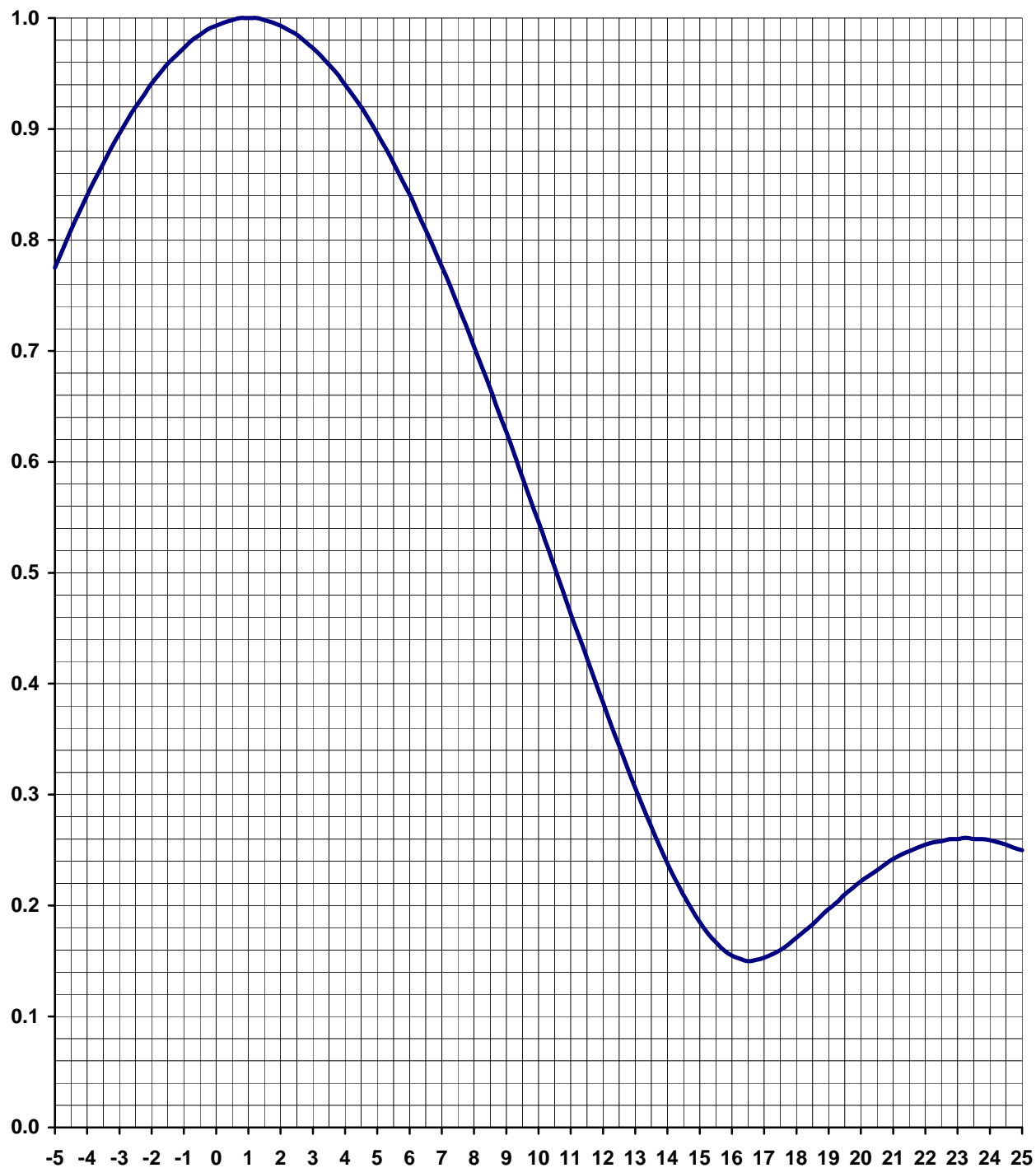
Note: Pattern shape and directivity may vary with channel and mounting configuration.



TABULATED DATA FOR AZIMUTH PATTERN

TYPE: ATW-GS

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	1.000	0.00	92	0.617	-4.19	184	0.494	-6.13	276	0.685	-3.29
2	1.000	0.00	94	0.600	-4.44	186	0.492	-6.16	278	0.701	-3.09
4	0.999	-0.01	96	0.583	-4.69	188	0.489	-6.21	280	0.717	-2.89
6	0.999	-0.01	98	0.565	-4.96	190	0.485	-6.29	282	0.732	-2.71
8	0.998	-0.02	100	0.548	-5.22	192	0.481	-6.36	284	0.747	-2.53
10	0.996	-0.03	102	0.531	-5.50	194	0.476	-6.45	286	0.762	-2.36
12	0.995	-0.04	104	0.514	-5.78	196	0.470	-6.56	288	0.776	-2.20
14	0.993	-0.06	106	0.498	-6.06	198	0.464	-6.67	290	0.790	-2.05
16	0.991	-0.08	108	0.482	-6.34	200	0.457	-6.80	292	0.803	-1.91
18	0.988	-0.10	110	0.467	-6.61	202	0.450	-6.94	294	0.816	-1.77
20	0.985	-0.13	112	0.453	-6.88	204	0.442	-7.09	296	0.828	-1.64
22	0.982	-0.16	114	0.439	-7.15	206	0.434	-7.25	298	0.840	-1.51
24	0.979	-0.18	116	0.427	-7.39	208	0.427	-7.39	300	0.851	-1.40
26	0.975	-0.22	118	0.415	-7.64	210	0.419	-7.56	302	0.862	-1.29
28	0.971	-0.26	120	0.405	-7.85	212	0.411	-7.72	304	0.873	-1.18
30	0.967	-0.29	122	0.396	-8.05	214	0.404	-7.87	306	0.882	-1.09
32	0.962	-0.34	124	0.389	-8.20	216	0.397	-8.02	308	0.892	-0.99
34	0.957	-0.38	126	0.384	-8.31	218	0.391	-8.16	310	0.901	-0.91
36	0.951	-0.44	128	0.379	-8.43	220	0.386	-8.27	312	0.909	-0.83
38	0.945	-0.49	130	0.377	-8.47	222	0.382	-8.36	314	0.917	-0.75
40	0.939	-0.55	132	0.376	-8.50	224	0.378	-8.45	316	0.925	-0.68
42	0.932	-0.61	134	0.376	-8.50	226	0.376	-8.50	318	0.932	-0.61
44	0.925	-0.68	136	0.378	-8.45	228	0.376	-8.50	320	0.939	-0.55
46	0.917	-0.75	138	0.382	-8.36	230	0.377	-8.47	322	0.945	-0.49
48	0.909	-0.83	140	0.386	-8.27	232	0.379	-8.43	324	0.951	-0.44
50	0.901	-0.91	142	0.391	-8.16	234	0.384	-8.31	326	0.957	-0.38
52	0.892	-0.99	144	0.397	-8.02	236	0.389	-8.20	328	0.962	-0.34
54	0.882	-1.09	146	0.404	-7.87	238	0.396	-8.05	330	0.967	-0.29
56	0.873	-1.18	148	0.411	-7.72	240	0.405	-7.85	332	0.971	-0.26
58	0.862	-1.29	150	0.419	-7.56	242	0.415	-7.64	334	0.975	-0.22
60	0.851	-1.40	152	0.427	-7.39	244	0.427	-7.39	336	0.979	-0.18
62	0.840	-1.51	154	0.434	-7.25	246	0.439	-7.15	338	0.982	-0.16
64	0.828	-1.64	156	0.442	-7.09	248	0.453	-6.88	340	0.985	-0.13
66	0.816	-1.77	158	0.450	-6.94	250	0.467	-6.61	342	0.988	-0.10
68	0.803	-1.91	160	0.457	-6.80	252	0.482	-6.34	344	0.991	-0.08
70	0.790	-2.05	162	0.464	-6.67	254	0.498	-6.06	346	0.993	-0.06
72	0.776	-2.20	164	0.470	-6.56	256	0.514	-5.78	348	0.995	-0.04
74	0.762	-2.36	166	0.476	-6.45	258	0.531	-5.50	350	0.996	-0.03
76	0.747	-2.53	168	0.481	-6.36	260	0.548	-5.22	352	0.998	-0.02
78	0.732	-2.71	170	0.485	-6.29	262	0.565	-4.96	354	0.999	-0.01
80	0.717	-2.89	172	0.489	-6.21	264	0.583	-4.69	356	0.999	-0.01
82	0.701	-3.09	174	0.492	-6.16	266	0.600	-4.44	358	1.000	0.00
84	0.685	-3.29	176	0.494	-6.13	268	0.617	-4.19	360	1.000	0.00
86	0.668	-3.50	178	0.495	-6.11	270	0.634	-3.96			
88	0.651	-3.73	180	0.496	-6.09	272	0.651	-3.73			
90	0.634	-3.96	182	0.495	-6.11	274	0.668	-3.50			

ELEVATION PATTERN**TYPE:****ATW4G4H****Frequency:****17 (DTV)****Directivity:****Numeric****dBd****Location:****Phoenix, AZ****Main Lobe:****4.00****6.02****Beam Tilt:****1.00****Horizontal:****3.94****5.96****Polarization:****Horizontal**

TABULATED DATA FOR ELEVATION PATTERN

ATW4G4H

-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
-5.000	0.775	-2.21	6.75	0.793	-2.01	27.00	0.214	-13.39	50.50	0.098	-20.18	74.00	0.163	-15.76
-4.750	0.792	-2.03	7.00	0.776	-2.20	27.50	0.202	-13.89	51.00	0.091	-20.82	74.50	0.160	-15.92
-4.500	0.809	-1.84	7.25	0.759	-2.40	28.00	0.189	-14.47	51.50	0.085	-21.41	75.00	0.156	-16.14
-4.250	0.825	-1.67	7.50	0.741	-2.60	28.50	0.175	-15.14	52.00	0.080	-21.94	75.50	0.152	-16.36
-4.000	0.840	-1.51	7.75	0.723	-2.82	29.00	0.161	-15.86	52.50	0.076	-22.38	76.00	0.149	-16.54
-3.750	0.855	-1.36	8.00	0.704	-3.05	29.50	0.147	-16.65	53.00	0.073	-22.73	76.50	0.145	-16.77
-3.500	0.869	-1.22	8.25	0.685	-3.29	30.00	0.132	-17.59	53.50	0.071	-22.97	77.00	0.140	-17.08
-3.250	0.883	-1.08	8.50	0.666	-3.53	30.50	0.118	-18.56	54.00	0.071	-22.97	77.50	0.136	-17.33
-3.000	0.896	-0.95	8.75	0.646	-3.80	31.00	0.104	-19.66	54.50	0.072	-22.85	78.00	0.132	-17.59
-2.750	0.908	-0.84	9.00	0.627	-4.05	31.50	0.091	-20.82	55.00	0.074	-22.62	78.50	0.127	-17.92
-2.500	0.920	-0.72	9.25	0.607	-4.34	32.00	0.079	-22.05	55.50	0.078	-22.16	79.00	0.122	-18.27
-2.250	0.930	-0.63	9.50	0.586	-4.64	32.50	0.071	-22.97	56.00	0.083	-21.62	79.50	0.117	-18.64
-2.000	0.941	-0.53	9.75	0.566	-4.94	33.00	0.065	-23.74	56.50	0.088	-21.11	80.00	0.112	-19.02
-1.750	0.950	-0.45	10.00	0.546	-5.26	33.50	0.064	-23.88	57.00	0.094	-20.54	80.50	0.107	-19.41
-1.500	0.959	-0.36	10.50	0.505	-5.93	34.00	0.067	-23.48	57.50	0.100	-20.00	81.00	0.102	-19.83
-1.250	0.966	-0.30	11.00	0.463	-6.69	34.50	0.073	-22.73	58.00	0.106	-19.49	81.50	0.096	-20.35
-1.000	0.973	-0.24	11.50	0.423	-7.47	35.00	0.081	-21.83	58.50	0.112	-19.02	82.00	0.091	-20.82
-0.750	0.980	-0.18	12.00	0.383	-8.34	35.50	0.091	-20.82	59.00	0.118	-18.56	82.50	0.085	-21.41
-0.500	0.985	-0.13	12.50	0.344	-9.27	36.00	0.101	-19.91	59.50	0.124	-18.13	83.00	0.080	-21.94
-0.250	0.990	-0.09	13.00	0.306	-10.29	36.50	0.111	-19.09	60.00	0.130	-17.72	83.50	0.074	-22.62
0.000	0.993	-0.06	13.50	0.271	-11.34	37.00	0.120	-18.42	60.50	0.136	-17.33	84.00	0.068	-23.35
0.250	0.996	-0.03	14.00	0.238	-12.47	37.50	0.130	-17.72	61.00	0.141	-17.02	84.50	0.063	-24.01
0.500	0.998	-0.02	14.50	0.209	-13.60	38.00	0.138	-17.20	61.50	0.146	-16.71	85.00	0.057	-24.88
0.750	1.000	0.00	15.00	0.185	-14.66	38.50	0.146	-16.71	62.00	0.151	-16.42	85.50	0.051	-25.85
1.000	1.000	0.00	15.50	0.167	-15.55	39.00	0.154	-16.25	62.50	0.156	-16.14	86.00	0.045	-26.94
1.250	1.000	0.00	16.00	0.155	-16.19	39.50	0.160	-15.92	63.00	0.160	-15.92	86.50	0.039	-28.18
1.500	0.998	-0.02	16.50	0.150	-16.48	40.00	0.165	-15.65	63.50	0.164	-15.70	87.00	0.033	-29.63
1.750	0.996	-0.03	17.00	0.153	-16.31	40.50	0.169	-15.44	64.00	0.167	-15.55	87.50	0.027	-31.37
2.000	0.993	-0.06	17.50	0.160	-15.92	41.00	0.173	-15.24	64.50	0.170	-15.39	88.00	0.021	-33.56
2.250	0.989	-0.10	18.00	0.171	-15.34	41.50	0.175	-15.14	65.00	0.173	-15.24	88.50	0.015	-36.48
2.500	0.985	-0.13	18.50	0.183	-14.75	42.00	0.177	-15.04	65.50	0.175	-15.14	89.00	0.009	-40.92
2.750	0.979	-0.18	19.00	0.197	-14.11	42.50	0.177	-15.04	66.00	0.177	-15.04	89.50	0.003	-50.46
3.000	0.973	-0.24	19.50	0.210	-13.56	43.00	0.177	-15.04	66.50	0.179	-14.94	90.00	0.000	---
3.250	0.966	-0.30	20.00	0.222	-13.07	43.50	0.176	-15.09	67.00	0.180	-14.89			
3.500	0.958	-0.37	20.50	0.232	-12.69	44.00	0.174	-15.19	67.50	0.181	-14.85			
3.750	0.950	-0.45	21.00	0.242	-12.32	44.50	0.171	-15.34	68.00	0.181	-14.85			
4.000	0.940	-0.54	21.50	0.249	-12.08	45.00	0.168	-15.49	68.50	0.181	-14.85			
4.250	0.930	-0.63	22.00	0.255	-11.87	45.50	0.163	-15.76	69.00	0.181	-14.85			
4.500	0.920	-0.72	22.50	0.258	-11.77	46.00	0.158	-16.03	69.50	0.181	-14.85			
4.750	0.908	-0.84	23.00	0.260	-11.70	46.50	0.153	-16.31	70.00	0.180	-14.89			
5.000	0.896	-0.95	23.50	0.260	-11.70	47.00	0.147	-16.65	70.50	0.179	-14.94			
5.250	0.883	-1.08	24.00	0.259	-11.73	47.50	0.141	-17.02	71.00	0.177	-15.04			
5.500	0.869	-1.22	24.50	0.255	-11.87	48.00	0.134	-17.46	71.50	0.175	-15.14			
5.750	0.855	-1.36	25.00	0.250	-12.04	48.50	0.127	-17.92	72.00	0.173	-15.24			
6.000	0.841	-1.50	25.50	0.243	-12.29	49.00	0.120	-18.42	72.50	0.171	-15.34			
6.250	0.825	-1.67	26.00	0.234	-12.62	49.50	0.112	-19.02	73.00	0.169	-15.44			
6.500	0.809	-1.84	26.50	0.225	-12.96	50.00	0.105	-19.58	73.50	0.166	-15.60			