

TECHNICAL EXHIBIT
APPLICATION FOR LICENSE
WRFB-DT
CAROLINA, PUERTO RICO
FACILITY ID 54443
CH 51 16.0 KW (MAX. DA) 563 M

Antenna Installed: Alive Telecommunications, ATC-24H6C2-51

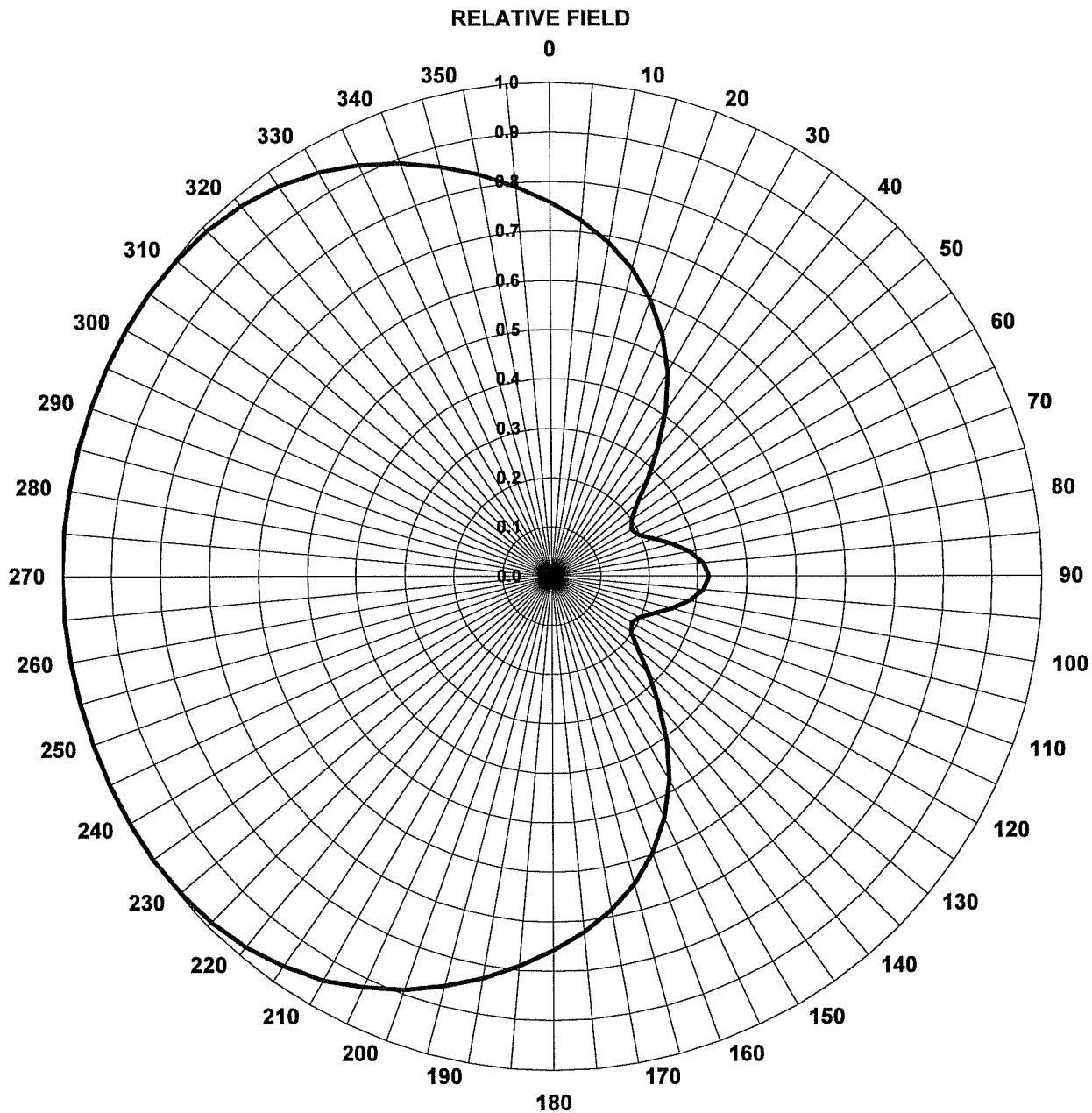
Antenna Horizontal and Vertical Plane Pattern Data

{four sheets follow}

AZIMUTH PATTERN



PROJECT #	<u>WRFB</u>	
TYPE:	<u>ATC-C2</u>	
	Numeric	dB
Directivity:	<u>1.9</u>	<u>2.70</u>
Polarization:	<u>Horizontal</u>	
Channel:	<u>51</u>	
Location:	<u>Carolina PR</u>	



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

AZIMUTH PATTERN TABULATION

TYPE: ATC- C2

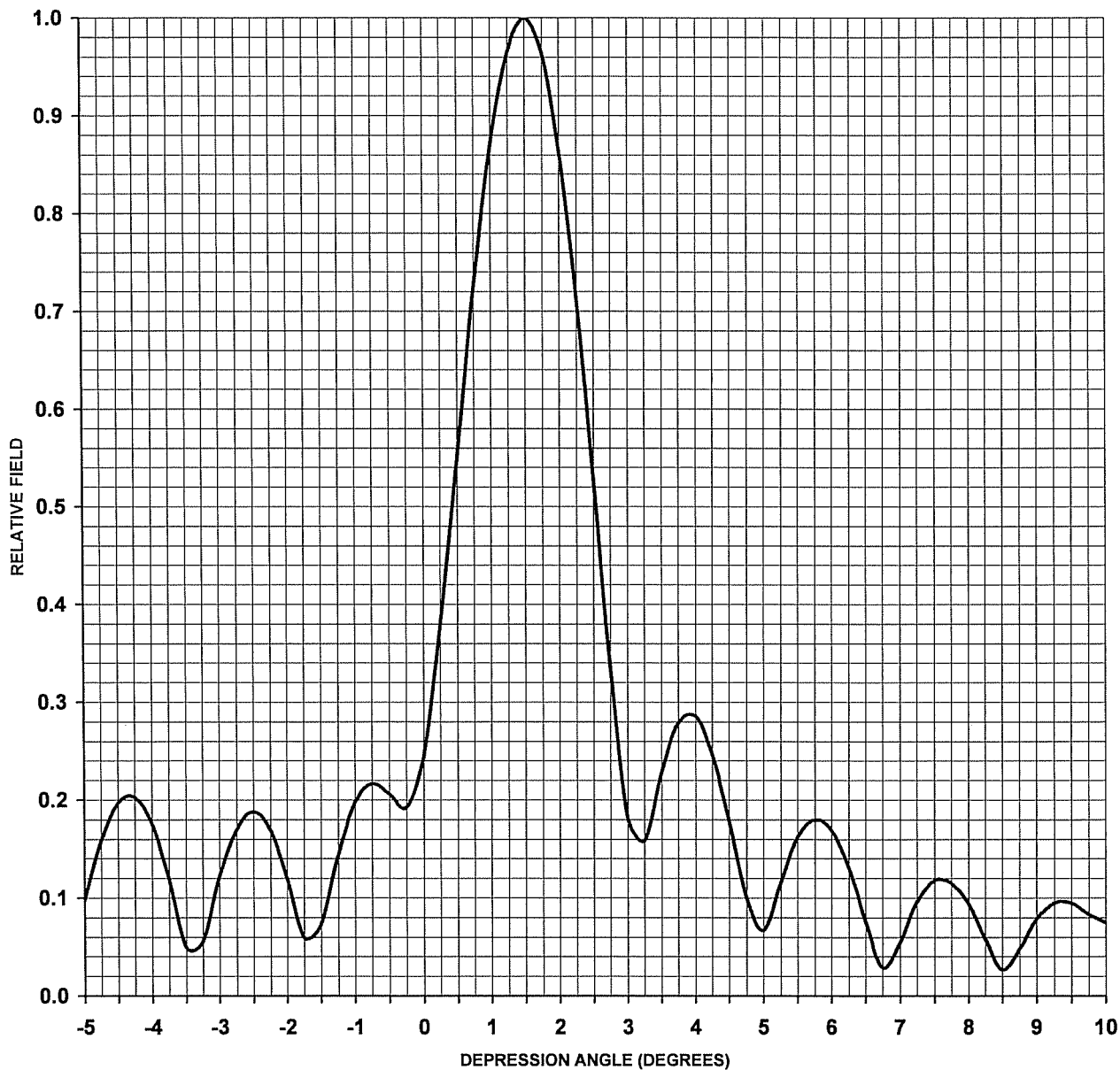


ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	0.758	-2.41	94	0.314	-10.06	188	0.812	-1.81	282	0.999	-0.01
2	0.745	-2.56	96	0.307	-10.26	190	0.826	-1.66	284	0.999	-0.01
4	0.731	-2.72	98	0.298	-10.52	192	0.839	-1.52	286	0.999	-0.01
6	0.717	-2.89	100	0.287	-10.84	194	0.852	-1.39	288	0.999	-0.01
8	0.702	-3.07	102	0.274	-11.24	196	0.865	-1.26	290	0.999	-0.01
10	0.687	-3.26	104	0.261	-11.67	198	0.878	-1.13	292	0.999	-0.01
12	0.671	-3.47	106	0.248	-12.11	200	0.890	-1.01	294	0.999	-0.01
14	0.654	-3.69	108	0.234	-12.62	202	0.902	-0.90	296	0.999	-0.01
16	0.636	-3.93	110	0.222	-13.07	204	0.913	-0.79	298	0.999	-0.01
18	0.617	-4.19	112	0.211	-13.51	206	0.924	-0.69	300	0.999	-0.01
20	0.597	-4.48	114	0.201	-13.94	208	0.934	-0.59	302	0.999	-0.01
22	0.575	-4.81	116	0.194	-14.24	210	0.944	-0.50	304	0.999	-0.01
24	0.552	-5.16	118	0.189	-14.47	212	0.952	-0.43	306	0.999	-0.01
26	0.528	-5.55	120	0.188	-14.52	214	0.960	-0.35	308	0.998	-0.02
28	0.503	-5.97	122	0.189	-14.47	216	0.967	-0.29	310	0.996	-0.03
30	0.476	-6.45	124	0.194	-14.24	218	0.974	-0.23	312	0.994	-0.05
32	0.449	-6.96	126	0.203	-13.85	220	0.979	-0.18	314	0.991	-0.08
34	0.422	-7.49	128	0.214	-13.39	222	0.984	-0.14	316	0.988	-0.10
36	0.394	-8.09	130	0.229	-12.80	224	0.988	-0.10	318	0.984	-0.14
38	0.366	-8.73	132	0.247	-12.15	226	0.991	-0.08	320	0.979	-0.18
40	0.340	-9.37	134	0.267	-11.47	228	0.994	-0.05	322	0.974	-0.23
42	0.314	-10.06	136	0.289	-10.78	230	0.996	-0.03	324	0.967	-0.29
44	0.289	-10.78	138	0.314	-10.06	232	0.998	-0.02	326	0.960	-0.35
46	0.267	-11.47	140	0.340	-9.37	234	0.999	-0.01	328	0.952	-0.43
48	0.247	-12.15	142	0.366	-8.73	236	0.999	-0.01	330	0.944	-0.50
50	0.229	-12.80	144	0.394	-8.09	238	0.999	-0.01	332	0.934	-0.59
52	0.214	-13.39	146	0.422	-7.49	240	0.999	-0.01	334	0.924	-0.69
54	0.203	-13.85	148	0.449	-6.96	242	0.999	-0.01	336	0.913	-0.79
56	0.194	-14.24	150	0.476	-6.45	244	0.999	-0.01	338	0.902	-0.90
58	0.189	-14.47	152	0.503	-5.97	246	0.999	-0.01	340	0.890	-1.01
60	0.188	-14.52	154	0.528	-5.55	248	0.999	-0.01	342	0.878	-1.13
62	0.189	-14.47	156	0.552	-5.16	250	0.999	-0.01	344	0.865	-1.26
64	0.194	-14.24	158	0.575	-4.81	252	0.999	-0.01	346	0.852	-1.39
66	0.201	-13.94	160	0.597	-4.48	254	0.999	-0.01	348	0.839	-1.52
68	0.211	-13.51	162	0.617	-4.19	256	0.999	-0.01	350	0.826	-1.66
70	0.222	-13.07	164	0.636	-3.93	258	0.999	-0.01	352	0.812	-1.81
72	0.234	-12.62	166	0.654	-3.69	260	0.999	-0.01	354	0.799	-1.95
74	0.248	-12.11	168	0.671	-3.47	262	0.999	-0.01	356	0.785	-2.10
76	0.261	-11.67	170	0.687	-3.26	264	0.999	-0.01	358	0.772	-2.25
78	0.274	-11.24	172	0.702	-3.07	266	0.999	-0.01	360	0.758	-2.41
80	0.287	-10.84	174	0.717	-2.89	268	0.999	-0.01			
82	0.298	-10.52	176	0.731	-2.72	270	1.000	0.00			
84	0.307	-10.26	178	0.745	-2.56	272	0.999	-0.01			
86	0.314	-10.06	180	0.758	-2.41	274	0.999	-0.01			
88	0.319	-9.92	182	0.772	-2.25	276	0.999	-0.01			
90	0.322	-9.84	184	0.785	-2.10	278	0.999	-0.01			
92	0.319	-9.92	186	0.799	-1.95	280	0.999	-0.01			

ELEVATION PATTERN



TYPE:	ATC-24H6C2	
PROJECT #	WRFB-DT	
Directivity:	Numeric	dBd
Main Lobe:	25.2	14.1
Beam Tilt:	1.50	
Polarization:	Horizontal	
Channel:	51	
Location:	Carolina Puerto Rico	



ELEVATION PATTERN TABULATION

TYPE: ATC-24H6 -5 to 10 in 0.25 increments 10 to 90 in 0.50 increments

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
-5.00	0.098	-20.18	6.75	0.029	-30.75	27.00	0.028	-31.06	50.50	0.016	-35.92	74.00	0.056	-25.04
-4.75	0.158	-16.03	7.00	0.055	-25.19	27.50	0.020	-33.98	51.00	0.023	-32.77	74.50	0.046	-26.74
-4.50	0.197	-14.11	7.25	0.096	-20.35	28.00	0.006	-44.44	51.50	0.024	-32.40	75.00	0.035	-29.12
-4.25	0.203	-13.85	7.50	0.118	-18.56	28.50	0.006	-44.44	52.00	0.019	-34.42	75.50	0.025	-32.04
-4.00	0.176	-15.09	7.75	0.115	-18.79	29.00	0.007	-43.10	52.50	0.010	-40.00	76.00	0.017	-35.39
-3.75	0.119	-18.49	8.00	0.094	-20.54	29.50	0.003	-50.46	53.00	0.015	-36.48	76.50	0.014	-37.08
-3.50	0.050	-26.02	8.25	0.058	-24.73	30.00	0.001	-60.00	53.50	0.028	-31.06	77.00	0.017	-35.39
-3.25	0.056	-25.04	8.50	0.027	-31.37	30.50	0.002	-53.98	54.00	0.036	-28.87	77.50	0.022	-33.15
-3.00	0.122	-18.27	8.75	0.048	-26.38	31.00	0.008	-41.94	54.50	0.036	-28.87	78.00	0.026	-31.70
-2.75	0.170	-15.39	9.00	0.078	-22.16	31.50	0.012	-38.42	55.00	0.027	-31.37	78.50	0.029	-30.75
-2.50	0.188	-14.52	9.25	0.095	-20.45	32.00	0.016	-35.92	55.50	0.012	-38.42	79.00	0.031	-30.17
-2.25	0.169	-15.44	9.50	0.095	-20.45	32.50	0.039	-28.18	56.00	0.012	-38.42	79.50	0.032	-29.90
-2.00	0.120	-18.42	9.75	0.083	-21.62	33.00	0.077	-22.27	56.50	0.028	-31.06	80.00	0.032	-29.90
-1.75	0.060	-24.44	10.00	0.075	-22.50	33.50	0.114	-18.86	57.00	0.040	-27.96	80.50	0.031	-30.17
-1.50	0.074	-22.62	10.50	0.138	-17.20	34.00	0.135	-17.39	57.50	0.043	-27.33	81.00	0.029	-30.75
-1.25	0.144	-16.83	11.00	0.219	-13.19	34.50	0.129	-17.79	58.00	0.037	-28.64	81.50	0.027	-31.37
-1.00	0.198	-14.07	11.50	0.242	-12.32	35.00	0.096	-20.35	58.50	0.023	-32.77	82.00	0.025	-32.04
-0.75	0.217	-13.27	12.00	0.198	-14.07	35.50	0.050	-26.02	59.00	0.012	-38.42	82.50	0.022	-33.15
-0.50	0.206	-13.72	12.50	0.116	-18.71	36.00	0.029	-30.75	59.50	0.027	-31.37	83.00	0.020	-33.98
-0.25	0.193	-14.29	13.00	0.042	-27.54	36.50	0.052	-25.68	60.00	0.045	-26.94	83.50	0.017	-35.39
0.00	0.244	-12.25	13.50	0.012	-38.42	37.00	0.060	-24.44	60.50	0.055	-25.19	84.00	0.015	-36.48
0.25	0.379	-8.43	14.00	0.011	-39.17	37.50	0.044	-27.13	61.00	0.057	-24.88	84.50	0.013	-37.72
0.50	0.551	-5.18	14.50	0.005	-46.02	38.00	0.018	-34.89	61.50	0.052	-25.68	85.00	0.011	-39.17
0.75	0.724	-2.81	15.00	0.005	-46.02	38.50	0.027	-31.37	62.00	0.054	-25.35	85.50	0.009	-40.92
1.00	0.869	-1.22	15.50	0.008	-41.94	39.00	0.044	-27.13	62.50	0.075	-22.50	86.00	0.007	-43.10
1.25	0.965	-0.31	16.00	0.023	-32.77	39.50	0.043	-27.33	63.00	0.113	-18.94	86.50	0.006	-44.44
1.50	1.000	0.00	16.50	0.026	-31.70	40.00	0.027	-31.37	63.50	0.157	-16.08	87.00	0.005	-46.02
1.75	0.964	-0.32	17.00	0.011	-39.17	40.50	0.007	-43.10	64.00	0.200	-13.98	87.50	0.004	-47.96
2.00	0.865	-1.26	17.50	0.019	-34.42	41.00	0.023	-32.77	64.50	0.237	-12.51	88.00	0.003	-50.46
2.25	0.713	-2.94	18.00	0.037	-28.64	41.50	0.033	-29.63	65.00	0.264	-11.57	88.50	0.002	-53.98
2.50	0.527	-5.56	18.50	0.031	-30.17	42.00	0.029	-30.75	65.50	0.278	-11.12	89.00	0.001	-60.00
2.75	0.336	-9.47	19.00	0.011	-39.17	42.50	0.015	-36.48	66.00	0.279	-11.09	89.50	0.001	-60.00
3.00	0.181	-14.85	19.50	0.038	-28.40	43.00	0.010	-40.00	66.50	0.266	-11.50	90.00	0.000	0.00
3.25	0.158	-16.03	20.00	0.052	-25.68	43.50	0.023	-32.77	67.00	0.243	-12.29			
3.50	0.228	-12.84	20.50	0.047	-26.56	44.00	0.027	-31.37	67.50	0.211	-13.51			
3.75	0.279	-11.09	21.00	0.090	-20.92	44.50	0.023	-32.77	68.00	0.173	-15.24			
4.00	0.286	-10.87	21.50	0.170	-15.39	45.00	0.022	-33.15	68.50	0.133	-17.52			
4.25	0.247	-12.15	22.00	0.231	-12.73	45.50	0.034	-29.37	69.00	0.094	-20.54			
4.50	0.179	-14.94	22.50	0.241	-12.36	46.00	0.047	-26.56	69.50	0.061	-24.29			
4.75	0.100	-20.00	23.00	0.195	-14.20	46.50	0.052	-25.68	70.00	0.041	-27.74			
5.00	0.067	-23.48	23.50	0.115	-18.79	47.00	0.046	-26.74	70.50	0.043	-27.33			
5.25	0.116	-18.71	24.00	0.040	-27.96	47.50	0.032	-29.90	71.00	0.055	-25.19			
5.50	0.162	-15.81	24.50	0.048	-26.38	48.00	0.016	-35.92	71.50	0.066	-23.61			
5.75	0.180	-14.89	25.00	0.060	-24.44	48.50	0.002	-53.98	72.00	0.073	-22.73			
6.00	0.169	-15.44	25.50	0.043	-27.33	49.00	0.005	-46.02	72.50	0.075	-22.50			
6.25	0.131	-17.65	26.00	0.015	-36.48	49.50	0.006	-44.44	73.00	0.072	-22.85			
6.50	0.076	-22.38	26.50	0.021	-33.56	50.00	0.008	-41.94	73.50	0.065	-23.74			

TECHNICAL EXHIBIT
APPLICATION FOR LICENSE
WRFB-DT
CAROLINA, PUERTO RICO
FACILITY ID 54443
CH 51 16.0 KW (MAX. DA) 563 M

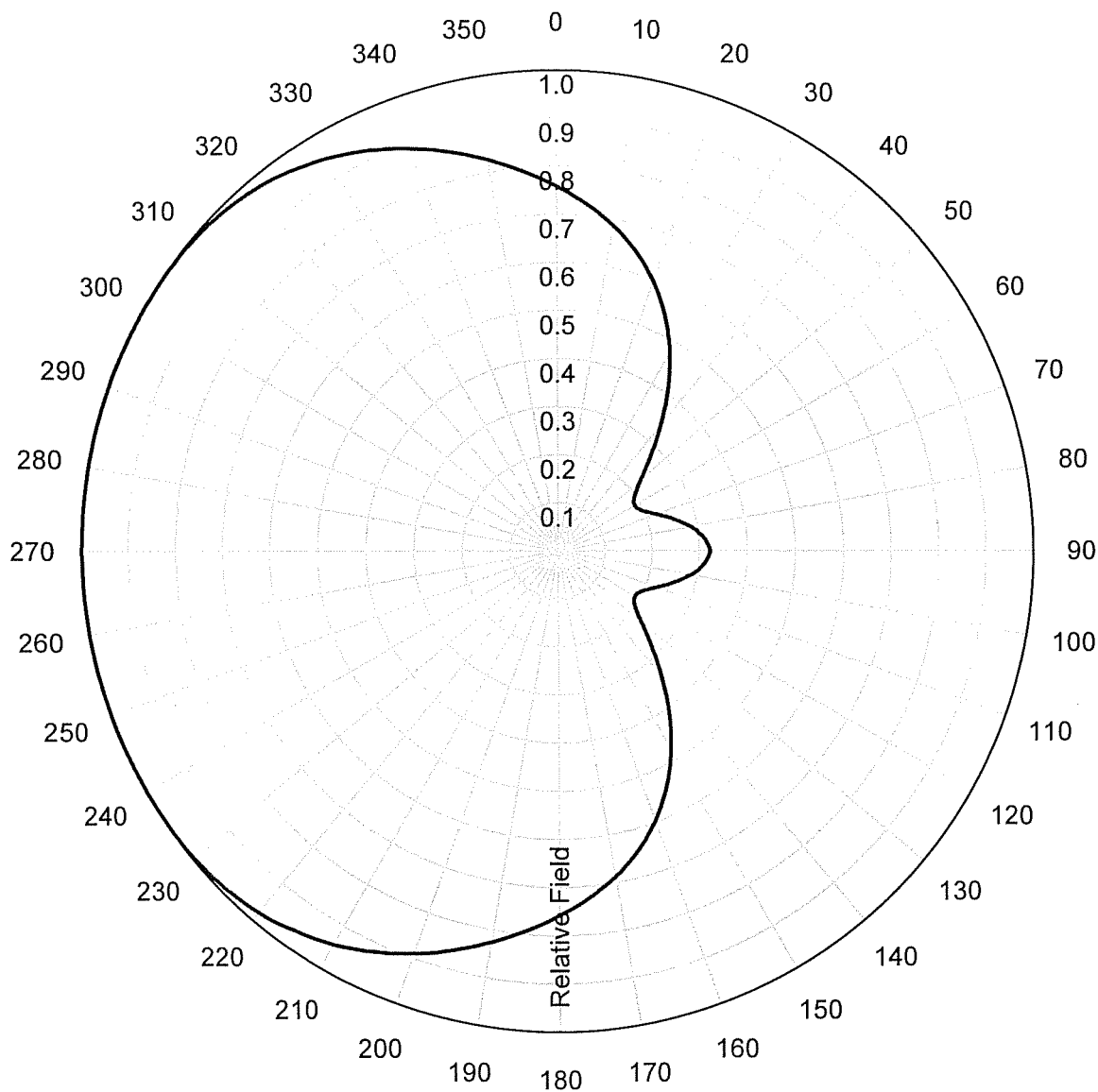
Antenna Proposed (CP): ERI, ALP24L6-HSE-51
Antenna Horizontal and Vertical Plane Pattern Data

{four sheets follow}

AZIMUTH PATTERN

Type: ALP-E
Numeric 1.86 dBd 2.70
Directivity: 1.86
Peak(s) at:

Channel: 51
Location:
Polarization: Horizontal
Note: Pattern shape and directivity may vary with
channel and mouting configuration.



TABULATED DATA FOR AZIMUTH PATTERN FCC FILING FORMAT

Type: ALP-E

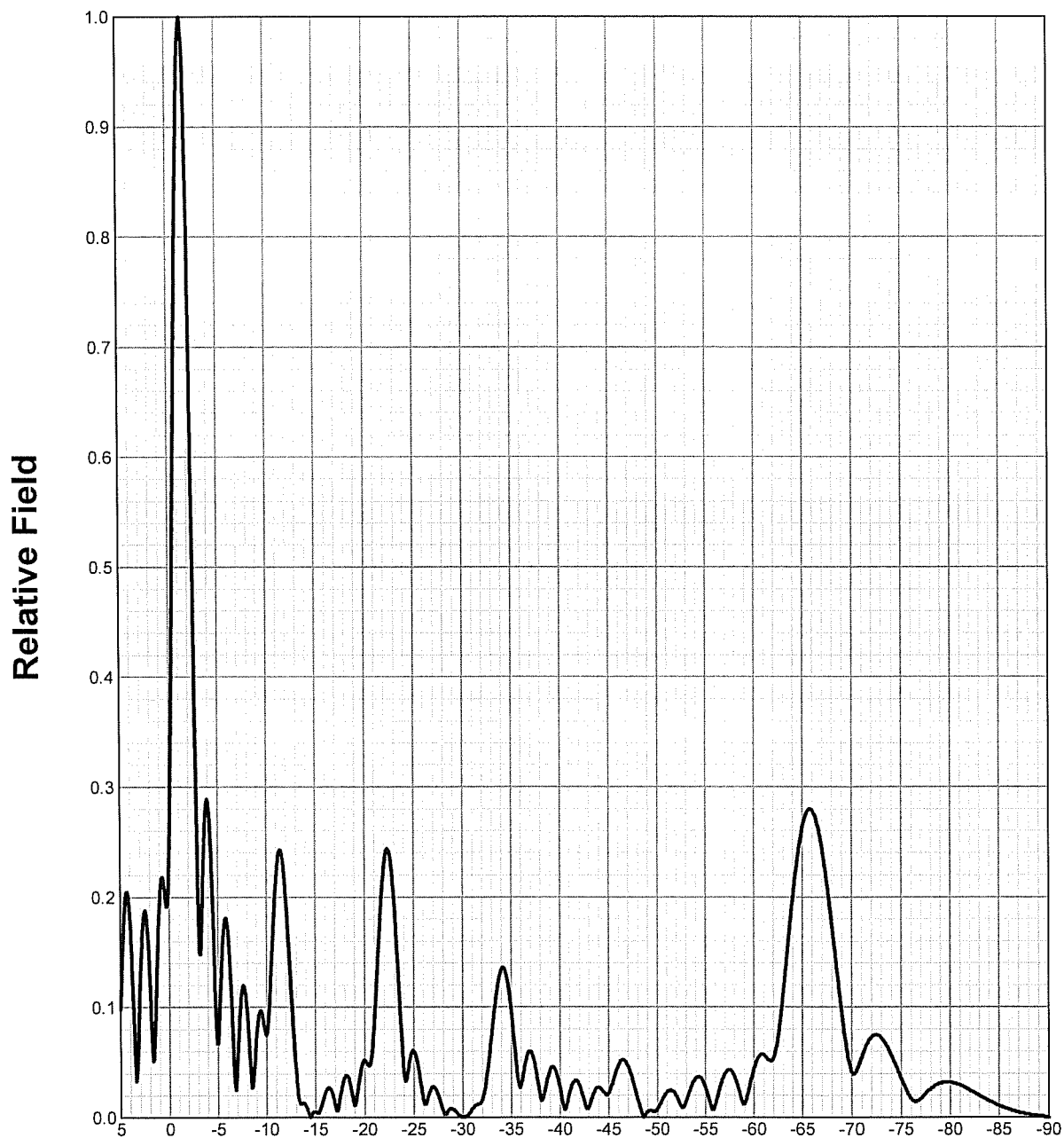
PolarizationHorizontal

ANGLE	FIELD	ERP (kW)	ERP (dBk)
0	0.758	9.395	9.729
10	0.687	7.717	8.875
20	0.597	5.828	7.655
30	0.476	3.705	5.688
40	0.340	1.890	2.765
50	0.229	0.857	-0.668
60	0.188	0.578	-2.381
70	0.222	0.806	-0.937
80	0.287	1.347	1.293
90	0.322	1.695	2.293
100	0.287	1.347	1.293
110	0.222	0.806	-0.937
120	0.188	0.578	-2.381
130	0.229	0.857	-0.668
140	0.340	1.890	2.765
150	0.476	3.705	5.688
160	0.597	5.828	7.655
170	0.687	7.717	8.875
180	0.758	9.395	9.729
190	0.826	11.156	10.475
200	0.890	12.952	11.123
210	0.944	14.571	11.635
220	0.979	15.672	11.951
230	0.996	16.221	12.101
240	0.999	16.319	12.127
250	0.999	16.319	12.127
260	0.999	16.319	12.127
270	1.000	16.352	12.136
280	0.999	16.319	12.127
290	0.999	16.319	12.127
300	0.999	16.319	12.127
310	0.996	16.221	12.101
320	0.979	15.672	11.951
330	0.944	14.571	11.635
340	0.890	12.952	11.123
350	0.826	11.156	10.475

ELEVATION PATTERN

Type: ALP24L6
Directivity: Numeric dBd
Main Lobe: 25.21 14.02
Horizontal: 1.50 1.76

Channel: 51
Location:
Beam Tilt: -1.50
Polarization: Horizontal



TABULATED DATA FOR ELEVATION PATTERN

Type: ALP24L6

PolarizationHorizontal

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB
5.00	0.098	-20.18	-6.75	0.029	-30.90	-27.00	0.028	-31.06	-50.50
4.75	0.158	-16.05	-7.00	0.055	-25.19	-27.50	0.020	-33.98	-51.00
4.50	0.197	-14.11	-7.25	0.096	-20.40	-28.00	0.006	-44.44	-51.50
4.25	0.203	-13.85	-7.50	0.118	-18.56	-28.50	0.006	-44.44	-52.00
4.00	0.176	-15.09	-7.75	0.116	-18.75	-29.00	0.007	-43.10	-52.50
3.75	0.120	-18.45	-8.00	0.094	-20.54	-29.50	0.003	-50.46	-53.00
3.50	0.050	-26.02	-8.25	0.058	-24.81	-30.00	0.000	-40.00	-53.50
3.25	0.056	-25.04	-8.50	0.027	-31.37	-30.50	0.002	-53.98	-54.00
3.00	0.122	-18.27	-8.75	0.048	-26.47	-31.00	0.008	-41.94	-54.50
2.75	0.171	-15.37	-9.00	0.078	-22.16	-31.50	0.012	-38.42	-55.00
2.50	0.188	-14.52	-9.25	0.095	-20.49	-32.00	0.016	-35.92	-55.50
2.25	0.169	-15.44	-9.50	0.095	-20.45	-32.50	0.039	-28.18	-56.00
2.00	0.120	-18.42	-9.75	0.083	-21.67	-33.00	0.077	-22.27	-56.50
1.75	0.060	-24.44	-10.00	0.075	-22.50	-33.50	0.114	-18.86	-57.00
1.50	0.074	-22.62	-10.50	0.138	-17.20	-34.00	0.135	-17.39	-57.50
1.25	0.144	-16.86	-11.00	0.219	-13.19	-34.50	0.129	-17.79	-58.00
1.00	0.198	-14.07	-11.50	0.242	-12.32	-35.00	0.096	-20.35	-58.50
0.75	0.218	-13.25	-12.00	0.198	-14.07	-35.50	0.050	-26.02	-59.00
0.50	0.206	-13.72	-12.50	0.116	-18.71	-36.00	0.029	-30.75	-59.50
0.25	0.193	-14.31	-13.00	0.042	-27.54	-36.50	0.052	-25.68	-60.00
0.00	0.244	-12.25	-13.50	0.012	-38.42	-37.00	0.060	-24.44	-60.50
-0.25	0.379	-8.42	-14.00	0.011	-39.17	-37.50	0.044	-27.13	-61.00
-0.50	0.551	-5.18	-14.50	0.000	-40.00	-38.00	0.018	-34.89	-61.50
-0.75	0.724	-2.81	-15.00	0.005	-46.02	-38.50	0.027	-31.37	-62.00
-1.00	0.869	-1.22	-15.50	0.008	-41.94	-39.00	0.044	-27.13	-62.50
-1.25	0.965	-0.31	-16.00	0.023	-32.77	-39.50	0.043	-27.33	-63.00
-1.50	1.000	0.00	-16.50	0.026	-31.70	-40.00	0.027	-31.37	-63.50
-1.75	0.964	-0.32	-17.00	0.011	-39.17	-40.50	0.007	-43.10	-64.00
-2.00	0.865	-1.26	-17.50	0.019	-34.42	-41.00	0.023	-32.77	-64.50
-2.25	0.713	-2.94	-18.00	0.037	-28.64	-41.50	0.033	-29.63	-65.00
-2.50	0.527	-5.56	-18.50	0.031	-30.17	-42.00	0.029	-30.75	-65.50
-2.75	0.336	-9.47	-19.00	0.011	-39.17	-42.50	0.015	-36.48	-66.00
-3.00	0.181	-14.85	-19.50	0.038	-28.40	-43.00	0.010	-40.00	-66.50
-3.25	0.158	-16.03	-20.00	0.052	-25.68	-43.50	0.023	-32.77	-67.00
-3.50	0.228	-12.84	-20.50	0.047	-26.56	-44.00	0.027	-31.37	-67.50
-3.75	0.279	-11.09	-21.00	0.090	-20.92	-44.50	0.023	-32.77	-68.00
-4.00	0.286	-10.87	-21.50	0.170	-15.39	-45.00	0.022	-33.15	-68.50
-4.25	0.248	-12.13	-22.00	0.231	-12.73	-45.50	0.034	-29.37	-69.00
-4.50	0.179	-14.94	-22.50	0.241	-12.36	-46.00	0.047	-26.56	-69.50
-4.75	0.100	-20.00	-23.00	0.195	-14.20	-46.50	0.052	-25.68	-70.00
-5.00	0.067	-23.48	-23.50	0.115	-18.79	-47.00	0.046	-26.74	-70.50
-5.25	0.116	-18.71	-24.00	0.040	-27.96	-47.50	0.032	-29.90	-71.00
-5.50	0.162	-15.81	-24.50	0.048	-26.38	-48.00	0.016	-35.92	-71.50
-5.75	0.181	-14.87	-25.00	0.060	-24.44	-48.50	0.002	-53.98	-72.00
-6.00	0.169	-15.44	-25.50	0.043	-27.33	-49.00	0.005	-46.02	-72.50
-6.25	0.131	-17.69	-26.00	0.015	-36.48	-49.50	0.006	-44.44	-73.00
-6.50	0.076	-22.38	-26.50	0.021	-33.56	-50.00	0.008	-41.94	-73.50