



Antenna Model:

TUA-C2-2/4M-1

Proposal Number: **C-70986**
Date: **2-Apr-18**
Customer: **NE Pennsylvania ED**
Location: **Williamsport, PA**

Electrical Specifications

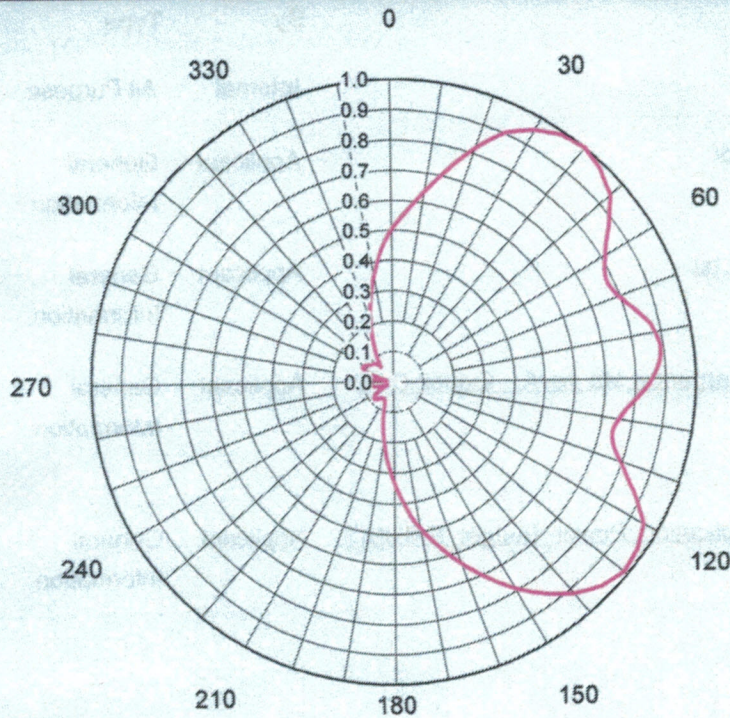
Polarization: **Horizontal**
Azimuth Pattern: **Directional**
Antenna Input: **1-5/8"** **50 Ohm** **EIA/DCA**
VSWR: **Channel** **1.10 : 1** **Band** **1.10 : 1**
Bandwidth: **470 - 860 MHz**
Rated Input Power: **2 kW** **(3.01 dBk)** **Maximum combined average power**

Mechanical Specifications

Mounting: **Side Mounted**
Environmental Protection: **Panel Cover**
Height: **7 ft (2.1m)**
Weight: **120 lb (0.1t)** **Excludes Mounts**
Effective Projected Area: **26.3 ft² (2.4m²)** **TIA/EIA-222-F** **Basic Wind Speed: 70 m/h (112.7 km/h)**

Channel Specifications

	Call	CH	Freq	Hpol ERP	TPO	Peak Main Lobe Hpol Gain	Peak at Horizontal Hpol Gain
1	WVIA LD	51	695 MHz	0.121 kW -(9.17 dBk)	0.012 kW -(19.04 dBk)	11.51 (10.61dB)	8.75 (9.42dB)
2	WVIA LD	17	491 MHz	0.121 kW -(9.17 dBk)	0.012 kW -(19.36 dBk)	12.04 (10.81dB)	10.59 (10.25dB)



AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-70986**
Date **2-Apr-18**
Call Letters **WVIA LD**
Channel **17**
Frequency **491 MHz**
Antenna Type **TUA-C2-2/4M-1**
Gain **2.88 (4.59dB)**
Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.506	36	0.990	72	0.813	108	0.767	144	0.871	180	0.337	216	0.065	252	0.039	288	0.069	324	0.084
1	0.518	37	0.993	73	0.823	109	0.779	145	0.859	181	0.323	217	0.066	253	0.044	289	0.077	325	0.089
2	0.530	38	0.995	74	0.832	110	0.794	146	0.845	182	0.308	218	0.067	254	0.048	290	0.085	326	0.096
3	0.543	39	0.997	75	0.841	111	0.805	147	0.832	183	0.293	219	0.067	255	0.053	291	0.092	327	0.102
4	0.555	40	1.000	76	0.851	112	0.819	148	0.818	184	0.279	220	0.068	256	0.057	292	0.099	328	0.109
5	0.568	41	0.996	77	0.861	113	0.835	149	0.805	185	0.265	221	0.070	257	0.061	293	0.105	329	0.116
6	0.581	42	0.992	78	0.869	114	0.852	150	0.792	186	0.251	222	0.072	258	0.064	294	0.110	330	0.123
7	0.595	43	0.988	79	0.875	115	0.870	151	0.776	187	0.237	223	0.074	259	0.067	295	0.114	331	0.131
8	0.609	44	0.985	80	0.880	116	0.884	152	0.761	188	0.224	224	0.076	260	0.069	296	0.114	332	0.139
9	0.624	45	0.981	81	0.885	117	0.900	153	0.746	189	0.210	225	0.078	261	0.071	297	0.114	333	0.148
10	0.639	46	0.973	82	0.888	118	0.916	154	0.730	190	0.197	226	0.080	262	0.073	298	0.114	334	0.156
11	0.655	47	0.965	83	0.890	119	0.931	155	0.715	191	0.186	227	0.081	263	0.074	299	0.113	335	0.164
12	0.672	48	0.958	84	0.889	120	0.948	156	0.700	192	0.175	228	0.083	264	0.075	300	0.112	336	0.175
13	0.689	49	0.952	85	0.887	121	0.953	157	0.685	193	0.163	229	0.084	265	0.074	301	0.109	337	0.185
14	0.707	50	0.947	86	0.883	122	0.958	158	0.670	194	0.152	230	0.086	266	0.078	302	0.107	338	0.196
15	0.726	51	0.931	87	0.878	123	0.964	159	0.655	195	0.141	231	0.085	267	0.081	303	0.104	339	0.207
16	0.744	52	0.916	88	0.871	124	0.970	160	0.640	196	0.132	232	0.084	268	0.083	304	0.101	340	0.217
17	0.762	53	0.902	89	0.863	125	0.976	161	0.624	197	0.123	233	0.083	269	0.084	305	0.099	341	0.231
18	0.781	54	0.888	90	0.854	126	0.978	162	0.609	198	0.115	234	0.081	270	0.083	306	0.098	342	0.244
19	0.800	55	0.876	91	0.844	127	0.980	163	0.594	199	0.106	235	0.079	271	0.083	307	0.097	343	0.258
20	0.820	56	0.860	92	0.834	128	0.982	164	0.579	200	0.097	236	0.075	272	0.082	308	0.096	344	0.272
21	0.837	57	0.846	93	0.823	129	0.984	165	0.563	201	0.092	237	0.071	273	0.079	309	0.095	345	0.285
22	0.854	58	0.834	94	0.811	130	0.986	166	0.549	202	0.086	238	0.067	274	0.075	310	0.094	346	0.300
23	0.871	59	0.824	95	0.799	131	0.981	167	0.534	203	0.081	239	0.062	275	0.069	311	0.093	347	0.314
24	0.888	60	0.815	96	0.788	132	0.976	168	0.519	204	0.076	240	0.058	276	0.063	312	0.092	348	0.329
25	0.905	61	0.804	97	0.778	133	0.972	169	0.505	205	0.071	241	0.052	277	0.055	313	0.091	349	0.343
26	0.915	62	0.795	98	0.768	134	0.967	170	0.490	206	0.070	242	0.046	278	0.047	314	0.089	350	0.357
27	0.925	63	0.788	99	0.760	135	0.963	171	0.475	207	0.068	243	0.041	279	0.038	315	0.088	351	0.373
28	0.935	64	0.783	100	0.754	136	0.954	172	0.460	208	0.066	244	0.035	280	0.030	316	0.085	352	0.389
29	0.945	65	0.780	101	0.748	137	0.946	173	0.446	209	0.065	245	0.031	281	0.024	317	0.081	353	0.404
30	0.955	66	0.780	102	0.744	138	0.937	174	0.431	210	0.063	246	0.026	282	0.023	318	0.077	354	0.420
31	0.962	67	0.781	103	0.742	139	0.928	175	0.416	211	0.064	247	0.024	283	0.027	319	0.072	355	0.436
32	0.968	68	0.785	104	0.742	140	0.920	176	0.400	212	0.064	248	0.023	284	0.035	320	0.066	356	0.450
33	0.975	69	0.790	105	0.746	141	0.908	177	0.384	213	0.064	249	0.026	285	0.044	321	0.070	357	0.464
34	0.981	70	0.797	106	0.751	142	0.895	178	0.369	214	0.064	250	0.030	286	0.052	322	0.074	358	0.478
35	0.988	71	0.805	107	0.758	143	0.883	179	0.353	215	0.065	251	0.034	287	0.061	323	0.079	359	0.492

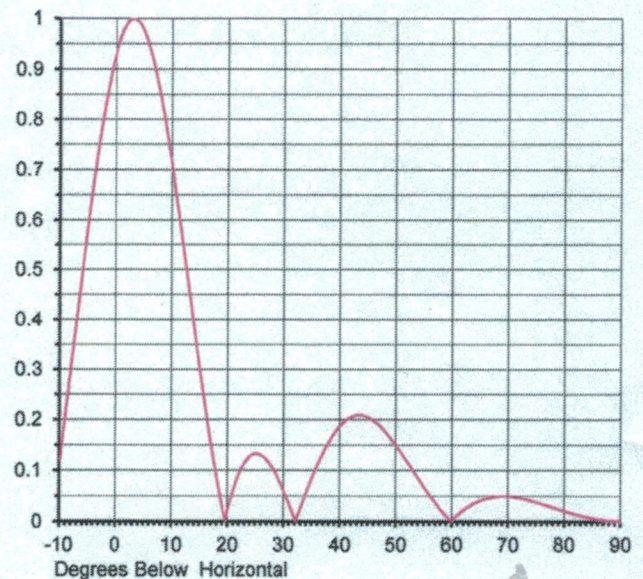
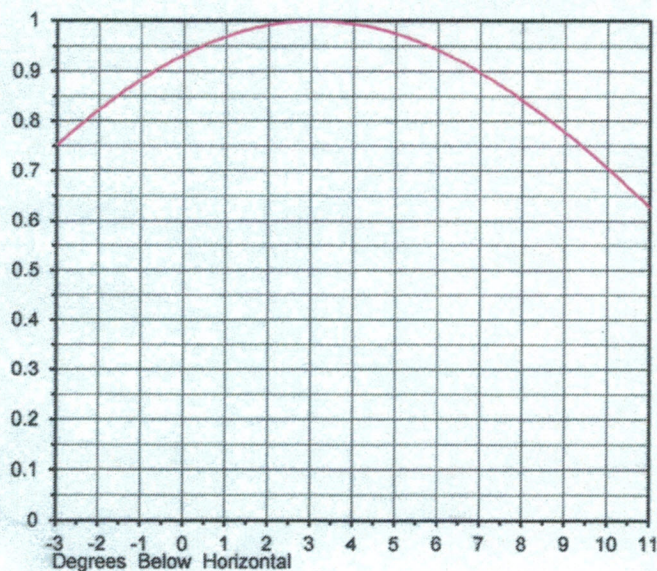
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ELEVATION PATTERN

Proposal No. C-70986
 Date 2-Apr-18
 Call Letters WVIA LD
 Channel 17
 Frequency 491 MHz
 Antenna Type TUA-C2-2/4M-1

RMS Directivity at Main Lobe 4.2 (6.21 dB)
 RMS Directivity at Horizontal 3.7 (5.68 dB)
 Calculated

Beam Tilt 3.00 deg
 Pattern Number 02U042300



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.120	10.0	0.698	30.0	0.058	50.0	0.148	70.0	0.048
-9.0	0.213	11.0	0.620	31.0	0.030	51.0	0.132	71.0	0.047
-8.0	0.309	12.0	0.538	32.0	0.001	52.0	0.116	72.0	0.046
-7.0	0.405	13.0	0.455	33.0	0.028	53.0	0.099	73.0	0.043
-6.0	0.501	14.0	0.373	34.0	0.058	54.0	0.083	74.0	0.040
-5.0	0.593	15.0	0.293	35.0	0.086	55.0	0.066	75.0	0.037
-4.0	0.680	16.0	0.216	36.0	0.112	56.0	0.050	76.0	0.034
-3.0	0.760	17.0	0.145	37.0	0.136	57.0	0.036	77.0	0.030
-2.0	0.830	18.0	0.081	38.0	0.157	58.0	0.022	78.0	0.027
-1.0	0.890	19.0	0.024	39.0	0.175	59.0	0.009	79.0	0.023
0.0	0.938	20.0	0.025	40.0	0.188	60.0	0.003	80.0	0.020
1.0	0.972	21.0	0.064	41.0	0.199	61.0	0.013	81.0	0.016
2.0	0.993	22.0	0.094	42.0	0.205	62.0	0.022	82.0	0.013
3.0	1.000	23.0	0.116	43.0	0.208	63.0	0.029	83.0	0.010
4.0	0.993	24.0	0.128	44.0	0.208	64.0	0.036	84.0	0.008
5.0	0.972	25.0	0.133	45.0	0.204	65.0	0.041	85.0	0.005
6.0	0.938	26.0	0.129	46.0	0.197	66.0	0.044	86.0	0.003
7.0	0.892	27.0	0.119	47.0	0.188	67.0	0.047	87.0	0.002
8.0	0.836	28.0	0.103	48.0	0.176	68.0	0.048	88.0	0.001
9.0	0.771	29.0	0.082	49.0	0.163	69.0	0.049	89.0	0.000
								90.0	0.000

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