Dielectric®

AZIMUTH PATTERN
Horizontal Polarization

Proposal No.	C-70166-3
Date	25-Jan-19
Call Letters	WJTC
Channel	35
Frequency	599 MHz
Antenna Type	TFU-18ETT/VP-R 4C160
Gain	1.67 (2.22dB)
	Calculated
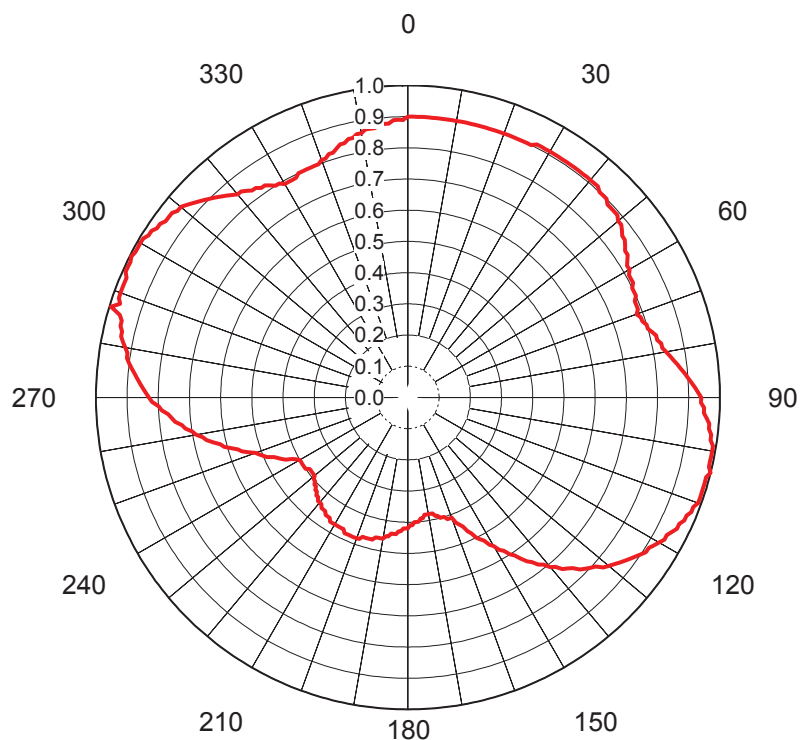
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.900	36	0.910	72	0.790	108	0.990	144	0.650	180	0.420	216	0.450	252	0.560	288	0.970	324	0.830
1	0.900	37	0.910	73	0.800	109	0.990	145	0.630	181	0.420	217	0.450	253	0.570	289	0.980	325	0.820
2	0.900	38	0.910	74	0.800	110	0.990	146	0.610	182	0.420	218	0.450	254	0.590	290	0.980	326	0.820
3	0.900	39	0.910	75	0.810	111	0.980	147	0.600	183	0.430	219	0.440	255	0.610	291	0.980	327	0.810
4	0.900	40	0.910	76	0.820	112	0.980	148	0.580	184	0.430	220	0.440	256	0.620	292	0.980	328	0.800
5	0.900	41	0.910	77	0.820	113	0.970	149	0.570	185	0.440	221	0.440	257	0.640	293	0.980	329	0.800
6	0.900	42	0.910	78	0.830	114	0.970	150	0.550	186	0.440	222	0.430	258	0.660	294	0.990	330	0.790
7	0.900	43	0.900	79	0.830	115	0.960	151	0.540	187	0.440	223	0.430	259	0.670	295	0.990	331	0.790
8	0.900	44	0.900	80	0.840	116	0.960	152	0.520	188	0.450	224	0.420	260	0.690	296	0.990	332	0.790
9	0.900	45	0.900	81	0.850	117	0.950	153	0.510	189	0.450	225	0.420	261	0.700	297	0.995	333	0.790
10	0.900	46	0.890	82	0.860	118	0.940	154	0.500	190	0.460	226	0.410	262	0.720	298	0.990	334	0.800
11	0.900	47	0.890	83	0.870	119	0.940	155	0.480	191	0.460	227	0.410	263	0.730	299	0.990	335	0.800
12	0.900	48	0.890	84	0.880	120	0.930	156	0.470	192	0.460	228	0.400	264	0.750	300	0.990	336	0.800
13	0.900	49	0.890	85	0.890	121	0.920	157	0.450	193	0.460	229	0.400	265	0.760	301	0.990	337	0.800
14	0.900	50	0.880	86	0.900	122	0.910	158	0.440	194	0.470	230	0.390	266	0.770	302	0.980	338	0.800
15	0.900	51	0.880	87	0.910	123	0.910	159	0.430	195	0.470	231	0.390	267	0.790	303	0.980	339	0.800
16	0.900	52	0.870	88	0.920	124	0.900	160	0.410	196	0.470	232	0.390	268	0.800	304	0.970	340	0.810
17	0.900	53	0.860	89	0.930	125	0.890	161	0.410	197	0.470	233	0.390	269	0.820	305	0.970	341	0.810
18	0.900	54	0.860	90	0.940	126	0.880	162	0.410	198	0.470	234	0.390	270	0.830	306	0.960	342	0.820
19	0.900	55	0.850	91	0.940	127	0.870	163	0.400	199	0.480	235	0.400	271	0.840	307	0.960	343	0.820
20	0.900	56	0.840	92	0.950	128	0.860	164	0.400	200	0.480	236	0.400	272	0.850	308	0.960	344	0.830
21	0.900	57	0.840	93	0.950	129	0.850	165	0.400	201	0.480	237	0.400	273	0.860	309	0.950	345	0.840
22	0.900	58	0.830	94	0.960	130	0.840	166	0.390	202	0.480	238	0.400	274	0.870	310	0.950	346	0.840
23	0.900	59	0.820	95	0.970	131	0.830	167	0.390	203	0.480	239	0.400	275	0.880	311	0.940	347	0.850
24	0.900	60	0.820	96	0.970	132	0.810	168	0.380	204	0.480	240	0.400	276	0.890	312	0.930	348	0.850
25	0.900	61	0.810	97	0.980	133	0.800	169	0.380	205	0.480	241	0.410	277	0.900	313	0.920	349	0.860
26	0.900	62	0.810	98	0.980	134	0.790	170	0.380	206	0.470	242	0.420	278	0.910	314	0.910	350	0.860
27	0.910	63	0.810	99	0.990	135	0.780	171	0.380	207	0.470	243	0.440	279	0.910	315	0.900	351	0.870
28	0.910	64	0.800	100	0.990	136	0.760	172	0.380	208	0.470	244	0.450	280	0.920	316	0.890	352	0.870
29	0.910	65	0.800	101	0.990	137	0.750	173	0.390	209	0.470	245	0.460	281	0.930	317	0.880	353	0.870
30	0.910	66	0.800	102	0.990	138	0.740	174	0.390	210	0.470	246	0.470	282	0.940	318	0.870	354	0.880
31	0.910	67	0.790	103	0.990	139	0.720	175	0.400	211	0.470	247	0.490	283	0.940	319	0.860	355	0.880
32	0.910	68	0.790	104	1.000	140	0.710	176	0.400	212	0.470	248	0.500	284	0.950	320	0.850	356	0.880
33	0.910	69	0.790	105	0.990	141	0.690	177	0.400	213	0.460	249	0.510	285	0.950	321	0.850	357	0.890
34	0.910	70	0.780	106	0.990	142	0.680	178	0.410	214	0.460	250	0.520	286	0.960	322	0.840	358	0.890
35	0.910	71	0.790	107	0.990	143	0.660	179	0.410	215	0.460	251	0.540	287	0.995	323	0.830	359	0.890

Trusted for Decades. Ready for Tomorrow.

AZIMUTH PATTERN
Vertical Polarization

Proposal No.	**C-70166-3**
Date	**25-Jan-19**
Call Letters	**WJTC**
Channel	**35**
Frequency	**599 MHz**
Antenna Type	**TFU-18ETT/VP-R 4C160**
Gain	**2.06 (3.14dB)**
	Calculated

TFU-4C170-35V
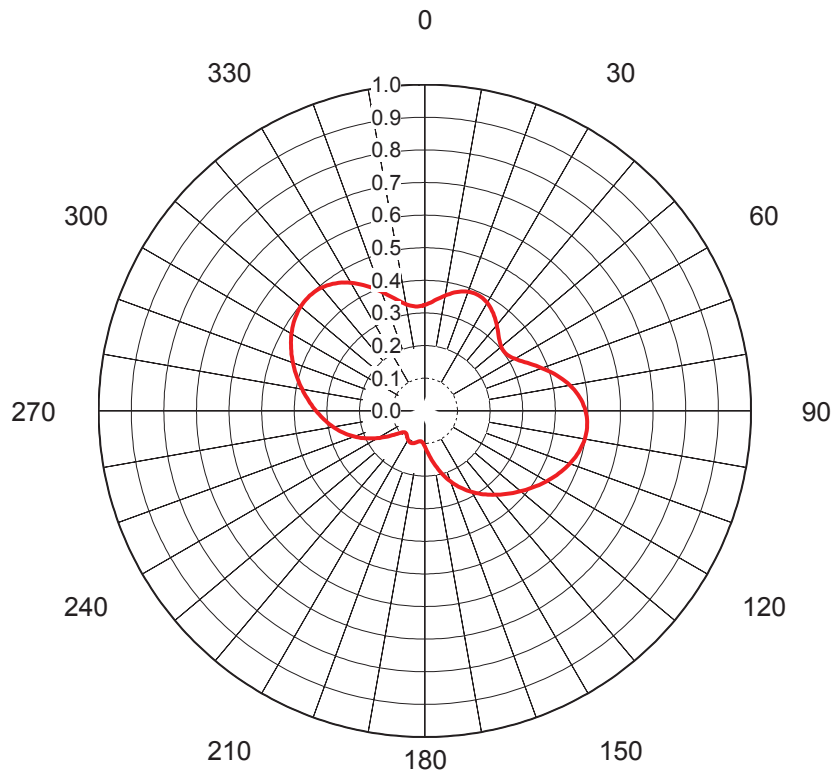
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.325	36	0.361	72	0.397	108	0.480	144	0.317	180	0.109	216	0.094	252	0.242	288	0.421	324	0.481
1	0.327	37	0.357	73	0.405	109	0.477	145	0.312	181	0.106	217	0.092	253	0.248	289	0.425	325	0.477
2	0.329	38	0.352	74	0.412	110	0.473	146	0.307	182	0.102	218	0.091	254	0.254	290	0.430	326	0.473
3	0.332	39	0.348	75	0.419	111	0.470	147	0.302	183	0.100	219	0.090	255	0.259	291	0.435	327	0.468
4	0.336	40	0.343	76	0.426	112	0.466	148	0.297	184	0.098	220	0.090	256	0.265	292	0.439	328	0.464
5	0.339	41	0.339	77	0.433	113	0.462	149	0.292	185	0.096	221	0.089	257	0.270	293	0.444	329	0.459
6	0.343	42	0.334	78	0.439	114	0.458	150	0.287	186	0.095	222	0.089	258	0.275	294	0.448	330	0.453
7	0.347	43	0.329	79	0.446	115	0.454	151	0.282	187	0.094	223	0.090	259	0.280	295	0.452	331	0.447
8	0.351	44	0.325	80	0.452	116	0.449	152	0.277	188	0.094	224	0.091	260	0.285	296	0.457	332	0.441
9	0.355	45	0.321	81	0.457	117	0.445	153	0.271	189	0.094	225	0.093	261	0.290	297	0.461	333	0.435
10	0.359	46	0.317	82	0.463	118	0.441	154	0.266	190	0.095	226	0.095	262	0.295	298	0.465	334	0.429
11	0.363	47	0.314	83	0.468	119	0.436	155	0.260	191	0.096	227	0.098	263	0.300	299	0.468	335	0.422
12	0.367	48	0.311	84	0.472	120	0.431	156	0.254	192	0.097	228	0.101	264	0.305	300	0.472	336	0.416
13	0.370	49	0.308	85	0.477	121	0.427	157	0.248	193	0.098	229	0.105	265	0.310	301	0.475	337	0.409
14	0.374	50	0.306	86	0.481	122	0.422	158	0.242	194	0.099	230	0.110	266	0.315	302	0.479	338	0.402
15	0.377	51	0.304	87	0.484	123	0.417	159	0.236	195	0.100	231	0.114	267	0.319	303	0.482	339	0.395
16	0.380	52	0.303	88	0.488	124	0.412	160	0.230	196	0.102	232	0.119	268	0.324	304	0.485	340	0.388
17	0.382	53	0.303	89	0.490	125	0.408	161	0.224	197	0.103	233	0.125	269	0.329	305	0.487	341	0.382
18	0.385	54	0.303	90	0.493	126	0.403	162	0.217	198	0.104	234	0.130	270	0.334	306	0.490	342	0.375
19	0.387	55	0.304	91	0.495	127	0.398	163	0.211	199	0.105	235	0.136	271	0.338	307	0.492	343	0.368
20	0.388	56	0.306	92	0.497	128	0.393	164	0.204	200	0.106	236	0.142	272	0.343	308	0.494	344	0.362
21	0.390	57	0.308	93	0.498	129	0.388	165	0.198	201	0.106	237	0.148	273	0.348	309	0.495	345	0.356
22	0.390	58	0.311	94	0.499	130	0.384	166	0.191	202	0.107	238	0.155	274	0.353	310	0.497	346	0.351
23	0.391	59	0.315	95	0.500	131	0.379	167	0.185	203	0.107	239	0.161	275	0.358	311	0.498	347	0.345
24	0.391	60	0.319	96	0.500	132	0.374	168	0.178	204	0.107	240	0.168	276	0.362	312	0.499	348	0.340
25	0.390	61	0.324	97	0.500	133	0.369	169	0.171	205	0.107	241	0.174	277	0.367	313	0.499	349	0.336
26	0.390	62	0.329	98	0.500	134	0.364	170	0.165	206	0.106	242	0.180	278	0.372	314	0.499	350	0.332
27	0.388	63	0.335	99	0.499	135	0.360	171	0.158	207	0.106	243	0.187	279	0.377	315	0.499	351	0.329
28	0.387	64	0.341	100	0.498	136	0.355	172	0.152	208	0.105	244	0.193	280	0.382	316	0.498	352	0.326
29	0.385	65	0.347	101	0.496	137	0.350	173	0.146	209	0.104	245	0.200	281	0.387	317	0.498	353	0.324
30	0.382	66	0.354	102	0.495	138	0.345	174	0.140	210	0.103	246	0.206	282	0.392	318	0.496	354	0.322
31	0.380	67	0.361	103	0.493	139	0.341	175	0.134	211	0.101	247	0.212	283	0.397	319	0.495	355	0.321
32	0.377	68	0.368	104	0.491	140	0.336	176	0.128	212	0.100	248	0.219	284	0.401	320	0.493	356	0.321
33	0.373	69	0.375	105	0.488	141	0.331	177	0.123	213	0.098	249	0.225	285	0.406	321	0.490	357	0.321
34	0.369	70	0.383	106	0.486	142	0.327	178	0.118	214	0.097	250	0.231	286	0.411	322	0.488	358	0.322
35	0.366	71	0.390	107	0.483	143	0.322	179	0.113	215	0.095	251	0.237	287	0.416	323	0.484	359	0.323

Trusted for Decades. Ready for Tomorrow.

ELEVATION PATTERN

Proposal No.	**C-70166-3**
Date	**25-Jan-19**
Call Letters	**WJTC**
Channel	**35**
Frequency	**599 MHz**
Antenna Type	**TFU-18ETT/VP-R 4C160**

RMS Directivity at Main Lobe   **18.4 (12.65 dB)**   Beam Tilt   **0.75 deg**

RMS Directivity at Horizontal   **14.3 (11.55 dB)**   Pattern Number   **18E184075**

Calculated
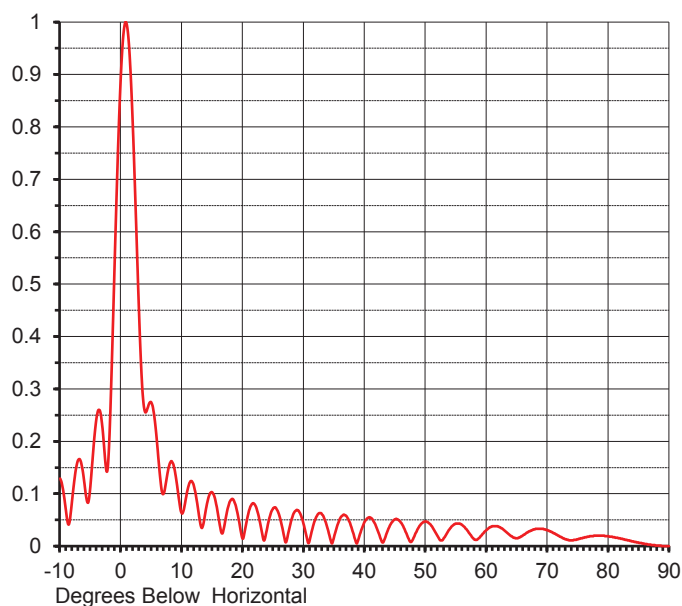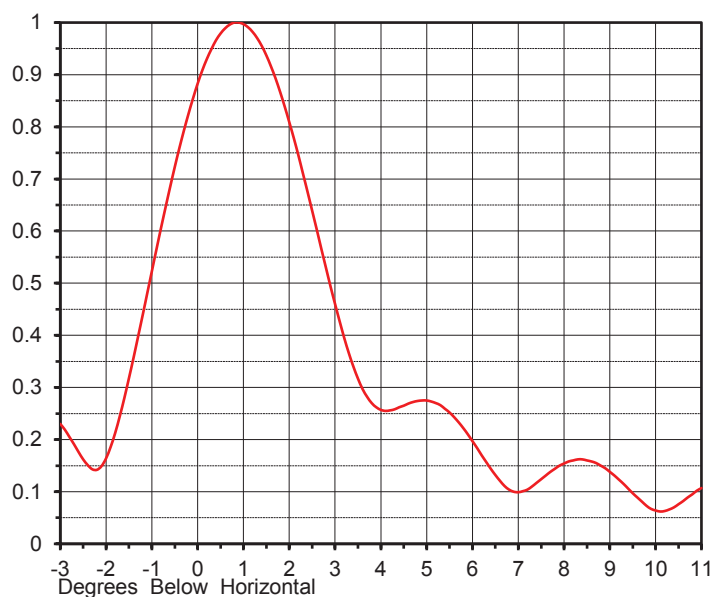
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.129	10.0	0.062	30.0	0.040	50.0	0.047	70.0	0.030
-9.0	0.063	11.0	0.112	31.0	0.014	51.0	0.038	71.0	0.025
-8.0	0.092	12.0	0.112	32.0	0.055	52.0	0.018	72.0	0.018
-7.0	0.165	13.0	0.043	33.0	0.060	53.0	0.016	73.0	0.013
-6.0	0.118	14.0	0.075	34.0	0.029	54.0	0.034	74.0	0.011
-5.0	0.120	15.0	0.102	35.0	0.020	55.0	0.043	75.0	0.013
-4.0	0.247	16.0	0.054	36.0	0.054	56.0	0.040	76.0	0.016
-3.0	0.219	17.0	0.042	37.0	0.057	57.0	0.027	77.0	0.019
-2.0	0.186	18.0	0.088	38.0	0.028	58.0	0.013	78.0	0.020
-1.0	0.565	19.0	0.068	39.0	0.015	59.0	0.019	79.0	0.020
0.0	0.908	20.0	0.014	40.0	0.047	60.0	0.031	80.0	0.019
1.0	0.991	21.0	0.068	41.0	0.054	61.0	0.038	81.0	0.017
2.0	0.778	22.0	0.078	42.0	0.033	62.0	0.037	82.0	0.014
3.0	0.427	23.0	0.033	43.0	0.007	63.0	0.029	83.0	0.012
4.0	0.255	24.0	0.036	44.0	0.036	64.0	0.019	84.0	0.009
5.0	0.273	25.0	0.073	45.0	0.051	65.0	0.015	85.0	0.006
6.0	0.184	26.0	0.057	46.0	0.044	66.0	0.021	86.0	0.004
7.0	0.101	27.0	0.007	47.0	0.019	67.0	0.028	87.0	0.002
8.0	0.158	28.0	0.052	48.0	0.016	68.0	0.033	88.0	0.001
9.0	0.131	29.0	0.068	49.0	0.039	69.0	0.033	89.0	0.000
								90.0	0.000

Trusted for Decades. Ready for Tomorrow.