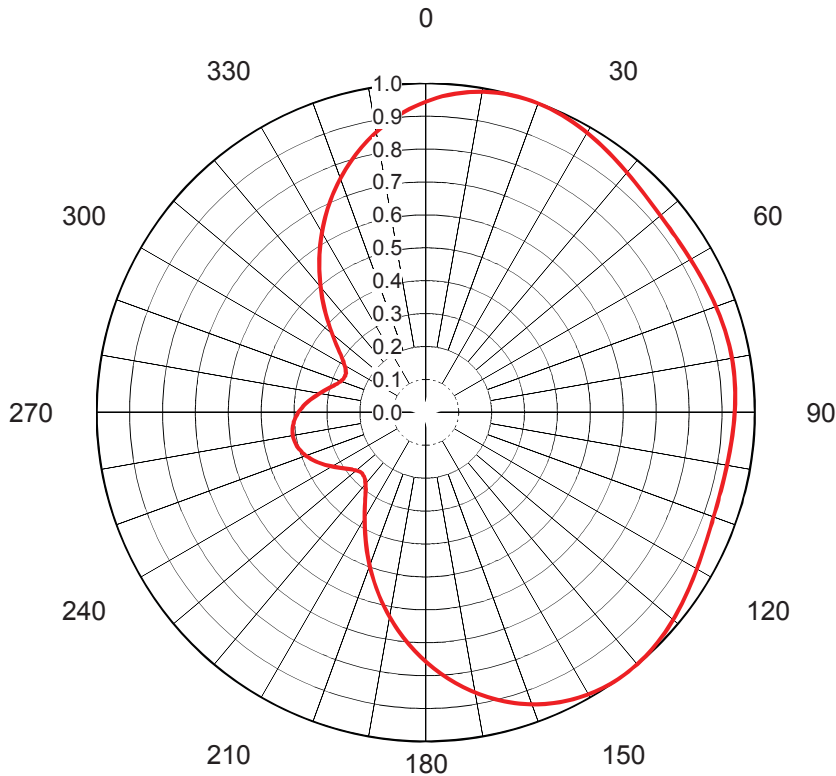


## AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70294-1**  
Date **24-Feb-17**  
Call Letters **KTXL 22**  
Frequency **521 MHz**  
Antenna Type **TFU-19ETT/VP-R 4C170**

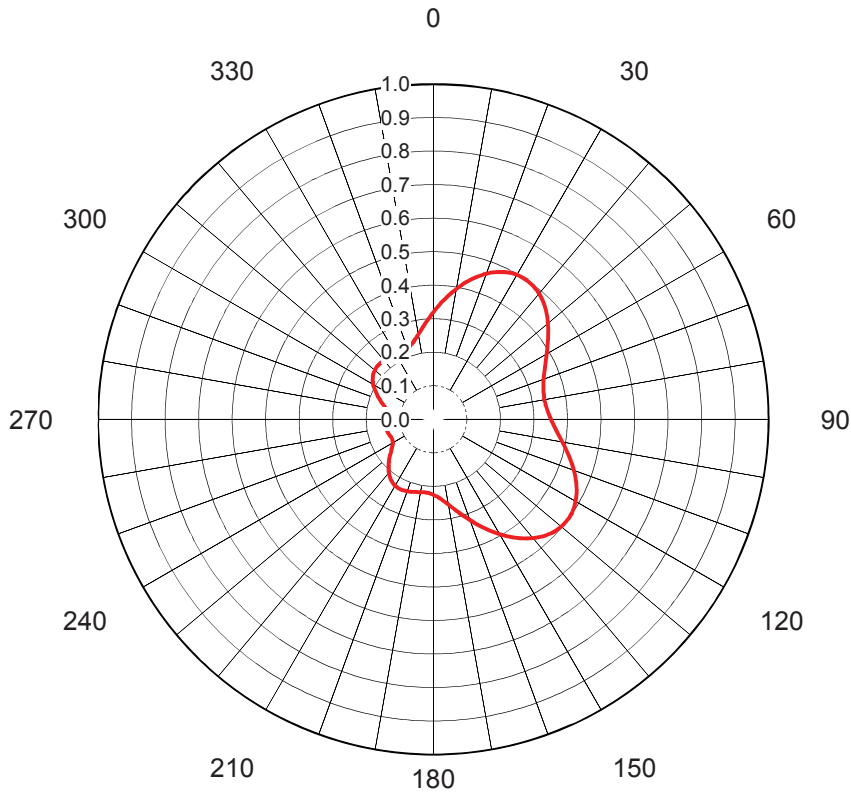
Gain **1.73 (2.38dB)**  
**Calculated**

Directional  
Drawing # **4C170H**



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.944	36	0.963	72	0.941	108	0.929	144	0.999	180	0.758	216	0.312	252	0.395	288	0.283	324	0.551
1	0.950	37	0.960	73	0.942	109	0.930	145	0.998	181	0.746	217	0.304	253	0.398	289	0.279	325	0.564
2	0.956	38	0.957	74	0.943	110	0.931	146	0.997	182	0.734	218	0.296	254	0.401	290	0.275	326	0.578
3	0.961	39	0.954	75	0.943	111	0.932	147	0.996	183	0.721	219	0.290	255	0.404	291	0.273	327	0.591
4	0.967	40	0.951	76	0.944	112	0.933	148	0.994	184	0.709	220	0.284	256	0.406	292	0.270	328	0.605
5	0.971	41	0.949	77	0.944	113	0.935	149	0.992	185	0.696	221	0.280	257	0.408	293	0.269	329	0.618
6	0.976	42	0.946	78	0.945	114	0.937	150	0.989	186	0.683	222	0.275	258	0.409	294	0.268	330	0.631
7	0.979	43	0.943	79	0.945	115	0.939	151	0.986	187	0.670	223	0.273	259	0.409	295	0.269	331	0.644
8	0.983	44	0.941	80	0.945	116	0.941	152	0.983	188	0.658	224	0.270	260	0.410	296	0.270	332	0.658
9	0.986	45	0.939	81	0.945	117	0.943	153	0.979	189	0.644	225	0.269	261	0.409	297	0.273	333	0.670
10	0.989	46	0.937	82	0.945	118	0.946	154	0.976	190	0.631	226	0.268	262	0.409	298	0.275	334	0.683
11	0.992	47	0.935	83	0.944	119	0.949	155	0.971	191	0.618	227	0.269	263	0.408	299	0.280	335	0.696
12	0.994	48	0.933	84	0.944	120	0.951	156	0.967	192	0.605	228	0.270	264	0.406	300	0.284	336	0.709
13	0.996	49	0.932	85	0.943	121	0.954	157	0.961	193	0.591	229	0.273	265	0.404	301	0.290	337	0.721
14	0.997	50	0.931	86	0.943	122	0.957	158	0.956	194	0.578	230	0.275	266	0.401	302	0.296	338	0.734
15	0.998	51	0.930	87	0.942	123	0.960	159	0.950	195	0.564	231	0.279	267	0.398	303	0.304	339	0.746
16	0.999	52	0.929	88	0.941	124	0.963	160	0.944	196	0.551	232	0.283	268	0.395	304	0.312	340	0.758
17	1.000	53	0.928	89	0.940	125	0.966	161	0.937	197	0.537	233	0.288	269	0.391	305	0.320	341	0.769
18	1.000	54	0.928	90	0.939	126	0.969	162	0.931	198	0.524	234	0.292	270	0.387	306	0.329	342	0.781
19	1.000	55	0.928	91	0.938	127	0.972	163	0.924	199	0.510	235	0.298	271	0.382	307	0.339	343	0.792
20	0.999	56	0.928	92	0.937	128	0.975	164	0.916	200	0.497	236	0.304	272	0.377	308	0.349	344	0.803
21	0.998	57	0.928	93	0.936	129	0.978	165	0.908	201	0.484	237	0.310	273	0.372	309	0.360	345	0.814
22	0.998	58	0.928	94	0.935	130	0.981	166	0.900	202	0.470	238	0.316	274	0.366	310	0.371	346	0.825
23	0.996	59	0.929	95	0.934	131	0.984	167	0.892	203	0.457	239	0.323	275	0.360	311	0.383	347	0.835
24	0.995	60	0.929	96	0.933	132	0.986	168	0.883	204	0.444	240	0.329	276	0.354	312	0.394	348	0.845
25	0.993	61	0.930	97	0.932	133	0.989	169	0.874	205	0.432	241	0.335	277	0.348	313	0.407	349	0.855
26	0.991	62	0.931	98	0.931	134	0.991	170	0.865	206	0.419	242	0.342	278	0.342	314	0.419	350	0.865
27	0.989	63	0.932	99	0.930	135	0.993	171	0.855	207	0.407	243	0.348	279	0.335	315	0.432	351	0.874
28	0.986	64	0.933	100	0.929	136	0.995	172	0.845	208	0.394	244	0.354	280	0.329	316	0.444	352	0.883
29	0.984	65	0.934	101	0.929	137	0.996	173	0.835	209	0.383	245	0.360	281	0.323	317	0.457	353	0.892
30	0.981	66	0.935	102	0.928	138	0.998	174	0.825	210	0.371	246	0.366	282	0.316	318	0.470	354	0.900
31	0.978	67	0.936	103	0.928	139	0.998	175	0.814	211	0.360	247	0.372	283	0.310	319	0.484	355	0.908
32	0.975	68	0.937	104	0.928	140	0.999	176	0.803	212	0.349	248	0.377	284	0.304	320	0.497	356	0.916
33	0.972	69	0.938	105	0.928	141	1.000	177	0.792	213	0.339	249	0.382	285	0.298	321	0.510	357	0.924
34	0.969	70	0.939	106	0.928	142	1.000	178	0.781	214	0.329	250	0.387	286	0.292	322	0.524	358	0.931
35	0.966	71	0.940	107	0.928	143	1.000	179	0.769	215	0.320	251	0.391	287	0.288	323	0.537	359	0.937

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## AZIMUTH PATTERN Vertical Polarization

Proposal No. **C-70294-1**  
 Date **24-Feb-17**  
 Call Letters **KTXL 22**  
 Frequency **521 MHz**  
 Antenna Type **TFU-19ETT/VP-R 4C170**  
  
 Gain **2.39 (3.78dB)**  
**Calculated**  
  
 Directional  
 Drawing # **4C170V**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.320	36	0.498	72	0.345	108	0.435	144	0.439	180	0.225	216	0.218	252	0.140	288	0.162
1	0.327	37	0.497	73	0.343	109	0.441	145	0.432	181	0.224	217	0.216	253	0.141	289	0.165
2	0.335	38	0.495	74	0.342	110	0.446	146	0.425	182	0.222	218	0.213	254	0.142	290	0.169
3	0.342	39	0.493	75	0.340	111	0.451	147	0.418	183	0.221	219	0.210	255	0.142	291	0.173
4	0.350	40	0.490	76	0.339	112	0.457	148	0.411	184	0.220	220	0.207	256	0.143	292	0.177
5	0.357	41	0.487	77	0.338	113	0.462	149	0.403	185	0.220	221	0.203	257	0.143	293	0.181
6	0.365	42	0.483	78	0.337	114	0.467	150	0.396	186	0.220	222	0.200	258	0.144	294	0.185
7	0.373	43	0.480	79	0.337	115	0.471	151	0.388	187	0.220	223	0.196	259	0.144	295	0.189
8	0.381	44	0.476	80	0.337	116	0.476	152	0.381	188	0.220	224	0.193	260	0.144	296	0.193
9	0.388	45	0.471	81	0.337	117	0.480	153	0.373	189	0.220	225	0.189	261	0.144	297	0.196
10	0.396	46	0.467	82	0.337	118	0.483	154	0.365	190	0.221	226	0.185	262	0.144	298	0.200
11	0.403	47	0.462	83	0.338	119	0.487	155	0.357	191	0.221	227	0.181	263	0.143	299	0.203
12	0.411	48	0.457	84	0.339	120	0.490	156	0.350	192	0.222	228	0.177	264	0.143	300	0.207
13	0.418	49	0.451	85	0.340	121	0.493	157	0.342	193	0.223	229	0.173	265	0.142	301	0.210
14	0.425	50	0.446	86	0.342	122	0.495	158	0.335	194	0.224	230	0.169	266	0.142	302	0.213
15	0.432	51	0.441	87	0.343	123	0.497	159	0.327	195	0.225	231	0.165	267	0.141	303	0.216
16	0.439	52	0.435	88	0.345	124	0.498	160	0.320	196	0.225	232	0.162	268	0.140	304	0.218
17	0.445	53	0.429	89	0.348	125	0.499	161	0.313	197	0.226	233	0.158	269	0.139	305	0.220
18	0.451	54	0.424	90	0.350	126	0.500	162	0.306	198	0.227	234	0.155	270	0.139	306	0.223
19	0.457	55	0.418	91	0.353	127	0.500	163	0.299	199	0.228	235	0.152	271	0.138	307	0.224
20	0.463	56	0.412	92	0.356	128	0.500	164	0.292	200	0.229	236	0.149	272	0.137	308	0.226
21	0.468	57	0.407	93	0.360	129	0.499	165	0.286	201	0.229	237	0.146	273	0.137	309	0.227
22	0.473	58	0.401	94	0.363	130	0.498	166	0.280	202	0.230	238	0.144	274	0.137	310	0.228
23	0.477	59	0.396	95	0.367	131	0.496	167	0.274	203	0.230	239	0.142	275	0.137	311	0.229
24	0.481	60	0.391	96	0.371	132	0.494	168	0.268	204	0.231	240	0.140	276	0.137	312	0.230
25	0.485	61	0.385	97	0.376	133	0.492	169	0.263	205	0.231	241	0.139	277	0.137	313	0.230
26	0.489	62	0.381	98	0.381	134	0.489	170	0.258	206	0.231	242	0.138	278	0.138	314	0.231
27	0.492	63	0.376	99	0.385	135	0.485	171	0.253	207	0.230	243	0.137	279	0.139	315	0.231
28	0.494	64	0.371	100	0.391	136	0.481	172	0.249	208	0.230	244	0.137	280	0.140	316	0.231
29	0.496	65	0.367	101	0.396	137	0.477	173	0.245	209	0.229	245	0.137	281	0.142	317	0.230
30	0.498	66	0.363	102	0.401	138	0.473	174	0.241	210	0.228	246	0.137	282	0.144	318	0.230
31	0.499	67	0.360	103	0.407	139	0.468	175	0.238	211	0.227	247	0.137	283	0.146	319	0.229
32	0.500	68	0.356	104	0.412	140	0.463	176	0.234	212	0.226	248	0.137	284	0.149	320	0.229
33	0.500	69	0.353	105	0.418	141	0.457	177	0.232	213	0.224	249	0.138	285	0.152	321	0.228
34	0.500	70	0.350	106	0.424	142	0.451	178	0.229	214	0.223	250	0.139	286	0.155	322	0.227
35	0.499	71	0.348	107	0.429	143	0.445	179	0.227	215	0.220	251	0.139	287	0.158	323	0.226

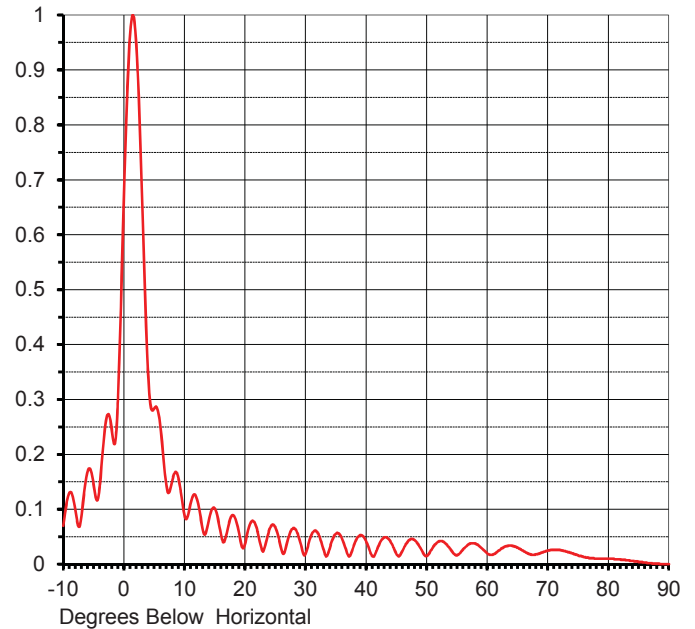
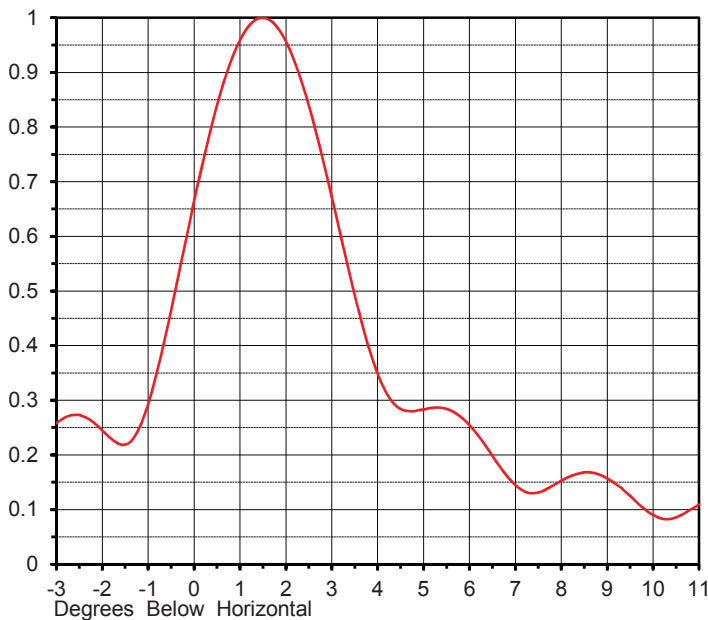
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## ELEVATION PATTERN

Proposal No. **C-70294-1**  
 Date **24-Feb-17**  
 Call Letters **KTXL 22**  
 Frequency **521 MHz**  
 Antenna Type **TFU-19ETT/VP-R 4C170**

RMS Directivity at Main Lobe **18.30 ( 12.62 dB )**  
 RMS Directivity at Horizontal **8.10 ( 9.08 dB )**  
**Calculated**

Beam Tilt **1.50 deg**  
 Drawing Number **19E183150**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.070	10.0	0.090	30.0	0.019	50.0	0.015	70.0	0.025
-9.0	0.130	11.0	0.109	31.0	0.054	51.0	0.030	71.0	0.026
-8.0	0.098	12.0	0.121	32.0	0.057	52.0	0.041	72.0	0.026
-7.0	0.088	13.0	0.065	33.0	0.026	53.0	0.039	73.0	0.023
-6.0	0.168	14.0	0.078	34.0	0.029	54.0	0.026	74.0	0.020
-5.0	0.146	15.0	0.101	35.0	0.055	55.0	0.016	75.0	0.016
-4.0	0.140	16.0	0.057	36.0	0.047	56.0	0.027	76.0	0.013
-3.0	0.258	17.0	0.057	37.0	0.017	57.0	0.037	77.0	0.011
-2.0	0.245	18.0	0.089	38.0	0.034	58.0	0.038	78.0	0.010
-1.0	0.293	19.0	0.058	39.0	0.053	59.0	0.030	79.0	0.010
0.0	0.664	20.0	0.037	40.0	0.042	60.0	0.020	80.0	0.010
1.0	0.959	21.0	0.077	41.0	0.015	61.0	0.018	81.0	0.009
2.0	0.957	22.0	0.063	42.0	0.032	62.0	0.025	82.0	0.009
3.0	0.672	23.0	0.023	43.0	0.049	63.0	0.032	83.0	0.007
4.0	0.348	24.0	0.062	44.0	0.042	64.0	0.034	84.0	0.006
5.0	0.283	25.0	0.068	45.0	0.019	65.0	0.030	85.0	0.004
6.0	0.254	26.0	0.028	46.0	0.024	66.0	0.024	86.0	0.003
7.0	0.145	27.0	0.041	47.0	0.043	67.0	0.018	87.0	0.002
8.0	0.153	28.0	0.066	48.0	0.044	68.0	0.018	88.0	0.001
9.0	0.157	29.0	0.045	49.0	0.029	69.0	0.021	89.0	0.000
								90.0	0.000

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