

AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-70534-1**
Date **30-Oct-17**
Call Letters **KDTV-CD**
Channel **21**
Frequency **515 MHz**
Antenna Type **TLP-12H/VP-R**
Gain **1.72 (2.36dB)**
Calculated

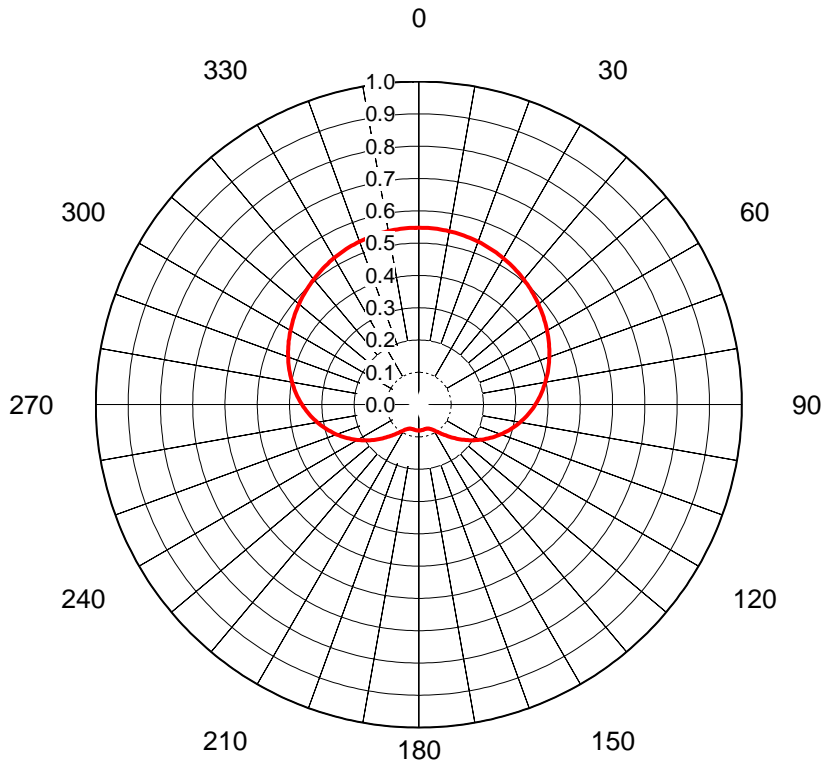
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.797	72	0.841	108	0.810	144	0.443	180	0.521	216	0.450	252	0.830	288	0.844
1	0.998	37	0.791	73	0.847	109	0.800	145	0.439	181	0.522	217	0.453	253	0.839	289	0.839
2	0.996	38	0.785	74	0.853	110	0.788	146	0.436	182	0.522	218	0.458	254	0.848	290	0.834
3	0.994	39	0.780	75	0.858	111	0.777	147	0.433	183	0.522	219	0.463	255	0.856	291	0.830
4	0.993	40	0.776	76	0.864	112	0.766	148	0.432	184	0.521	220	0.468	256	0.864	292	0.825
5	0.991	41	0.773	77	0.870	113	0.754	149	0.431	185	0.520	221	0.475	257	0.872	293	0.821
6	0.989	42	0.770	78	0.875	114	0.742	150	0.430	186	0.519	222	0.482	258	0.879	294	0.816
7	0.986	43	0.769	79	0.880	115	0.731	151	0.430	187	0.517	223	0.490	259	0.885	295	0.812
8	0.984	44	0.768	80	0.885	116	0.719	152	0.431	188	0.515	224	0.498	260	0.891	296	0.808
9	0.980	45	0.768	81	0.890	117	0.707	153	0.432	189	0.513	225	0.507	261	0.896	297	0.804
10	0.977	46	0.768	82	0.894	118	0.696	154	0.434	190	0.511	226	0.517	262	0.901	298	0.800
11	0.972	47	0.768	83	0.898	119	0.684	155	0.436	191	0.508	227	0.527	263	0.906	299	0.796
12	0.968	48	0.768	84	0.901	120	0.673	156	0.438	192	0.505	228	0.537	264	0.909	300	0.793
13	0.962	49	0.768	85	0.904	121	0.661	157	0.441	193	0.502	229	0.548	265	0.912	301	0.789
14	0.957	50	0.768	86	0.906	122	0.650	158	0.444	194	0.499	230	0.560	266	0.915	302	0.786
15	0.951	51	0.768	87	0.909	123	0.638	159	0.448	195	0.496	231	0.571	267	0.917	303	0.783
16	0.945	52	0.768	88	0.910	124	0.627	160	0.452	196	0.492	232	0.584	268	0.918	304	0.781
17	0.938	53	0.769	89	0.911	125	0.615	161	0.456	197	0.489	233	0.596	269	0.918	305	0.779
18	0.931	54	0.769	90	0.911	126	0.604	162	0.460	198	0.485	234	0.609	270	0.918	306	0.777
19	0.924	55	0.770	91	0.911	127	0.593	163	0.464	199	0.481	235	0.622	271	0.917	307	0.776
20	0.917	56	0.771	92	0.910	128	0.582	164	0.468	200	0.477	236	0.635	272	0.915	308	0.776
21	0.910	57	0.772	93	0.909	129	0.571	165	0.473	201	0.474	237	0.648	273	0.913	309	0.776
22	0.903	58	0.774	94	0.906	130	0.560	166	0.477	202	0.470	238	0.661	274	0.911	310	0.777
23	0.896	59	0.776	95	0.904	131	0.550	167	0.482	203	0.466	239	0.675	275	0.907	311	0.779
24	0.888	60	0.779	96	0.900	132	0.539	168	0.486	204	0.463	240	0.688	276	0.904	312	0.781
25	0.881	61	0.783	97	0.896	133	0.529	169	0.491	205	0.459	241	0.701	277	0.900	313	0.784
26	0.873	62	0.786	98	0.891	134	0.519	170	0.495	206	0.456	242	0.714	278	0.895	314	0.787
27	0.865	63	0.791	99	0.886	135	0.510	171	0.499	207	0.453	243	0.727	279	0.890	315	0.791
28	0.858	64	0.795	100	0.880	136	0.500	172	0.503	208	0.450	244	0.740	280	0.885	316	0.795
29	0.850	65	0.800	101	0.873	137	0.492	173	0.506	209	0.448	245	0.752	281	0.880	317	0.800
30	0.842	66	0.805	102	0.866	138	0.483	174	0.509	210	0.446	246	0.765	282	0.875	318	0.805
31	0.834	67	0.811	103	0.858	139	0.475	175	0.512	211	0.445	247	0.777	283	0.870	319	0.811
32	0.827	68	0.817	104	0.850	140	0.467	176	0.515	212	0.444	248	0.788	284	0.865	320	0.816
33	0.819	69	0.823	105	0.841	141	0.460	177	0.517	213	0.444	249	0.799	285	0.859	321	0.822
34	0.811	70	0.828	106	0.831	142	0.454	178	0.519	214	0.445	250	0.810	286	0.854	322	0.829
35	0.804	71	0.835	107	0.821	143	0.448	179	0.520	215	0.447	251	0.820	287	0.849	323	0.835

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

AZIMUTH PATTERN Vertical Polarization

In Free Space

Proposal No. **C-70534-1**
Date **30-Oct-17**
Call Letters **KDTV-CD**
Channel **21**
Frequency **515 MHz**
Antenna Type **TLP-12H/VP-R**
Gain **2.18 (3.39dB)**
Calculated



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.548	36	0.513	72	0.424	108	0.280	144	0.108	180	0.081	216	0.108	252	0.280	288	0.425
1	0.548	37	0.512	73	0.421	109	0.275	145	0.105	181	0.081	217	0.112	253	0.285	289	0.428
2	0.548	38	0.510	74	0.418	110	0.270	146	0.102	182	0.080	218	0.115	254	0.290	290	0.431
3	0.547	39	0.508	75	0.414	111	0.265	147	0.099	183	0.080	219	0.119	255	0.295	291	0.434
4	0.547	40	0.506	76	0.411	112	0.260	148	0.096	184	0.080	220	0.123	256	0.300	292	0.437
5	0.547	41	0.504	77	0.408	113	0.255	149	0.094	185	0.080	221	0.127	257	0.305	293	0.439
6	0.547	42	0.502	78	0.405	114	0.249	150	0.091	186	0.080	222	0.131	258	0.309	294	0.442
7	0.546	43	0.499	79	0.401	115	0.244	151	0.089	187	0.080	223	0.135	259	0.314	295	0.445
8	0.546	44	0.497	80	0.398	116	0.239	152	0.087	188	0.080	224	0.139	260	0.319	296	0.448
9	0.546	45	0.495	81	0.394	117	0.234	153	0.086	189	0.079	225	0.144	261	0.323	297	0.451
10	0.545	46	0.493	82	0.391	118	0.229	154	0.084	190	0.079	226	0.148	262	0.328	298	0.454
11	0.544	47	0.491	83	0.387	119	0.223	155	0.083	191	0.079	227	0.153	263	0.332	299	0.456
12	0.544	48	0.488	84	0.384	120	0.218	156	0.082	192	0.079	228	0.158	264	0.336	300	0.459
13	0.543	49	0.486	85	0.380	121	0.213	157	0.081	193	0.078	229	0.163	265	0.341	301	0.462
14	0.542	50	0.484	86	0.376	122	0.208	158	0.080	194	0.078	230	0.168	266	0.345	302	0.464
15	0.542	51	0.481	87	0.372	123	0.203	159	0.079	195	0.078	231	0.172	267	0.349	303	0.467
16	0.541	52	0.479	88	0.369	124	0.197	160	0.079	196	0.078	232	0.177	268	0.353	304	0.469
17	0.540	53	0.476	89	0.365	125	0.192	161	0.079	197	0.078	233	0.183	269	0.357	305	0.472
18	0.539	54	0.474	90	0.361	126	0.187	162	0.078	198	0.078	234	0.188	270	0.361	306	0.475
19	0.538	55	0.471	91	0.357	127	0.182	163	0.078	199	0.079	235	0.193	271	0.365	307	0.477
20	0.537	56	0.469	92	0.353	128	0.177	164	0.078	200	0.079	236	0.198	272	0.369	308	0.479
21	0.536	57	0.466	93	0.349	129	0.172	165	0.078	201	0.080	237	0.203	273	0.373	309	0.482
22	0.535	58	0.464	94	0.344	130	0.167	166	0.078	202	0.080	238	0.208	274	0.377	310	0.484
23	0.533	59	0.461	95	0.340	131	0.162	167	0.078	203	0.081	239	0.213	275	0.381	311	0.487
24	0.532	60	0.458	96	0.336	132	0.157	168	0.079	204	0.082	240	0.219	276	0.384	312	0.489
25	0.531	61	0.456	97	0.331	133	0.153	169	0.079	205	0.083	241	0.224	277	0.388	313	0.491
26	0.530	62	0.453	98	0.327	134	0.148	170	0.079	206	0.085	242	0.229	278	0.391	314	0.493
27	0.528	63	0.450	99	0.322	135	0.144	171	0.079	207	0.086	243	0.234	279	0.395	315	0.496
28	0.527	64	0.447	100	0.318	136	0.139	172	0.079	208	0.088	244	0.240	280	0.398	316	0.498
29	0.525	65	0.445	101	0.313	137	0.135	173	0.080	209	0.090	245	0.245	281	0.402	317	0.500
30	0.524	66	0.442	102	0.309	138	0.130	174	0.080	210	0.092	246	0.250	282	0.405	318	0.502
31	0.522	67	0.439	103	0.304	139	0.126	175	0.080	211	0.094	247	0.255	283	0.409	319	0.504
32	0.520	68	0.436	104	0.299	140	0.122	176	0.080	212	0.096	248	0.260	284	0.412	320	0.506
33	0.519	69	0.433	105	0.294	141	0.119	177	0.080	213	0.099	249	0.265	285	0.415	321	0.508
34	0.517	70	0.430	106	0.290	142	0.115	178	0.080	214	0.102	250	0.270	286	0.418	322	0.510
35	0.515	71	0.427	107	0.285	143	0.111	179	0.080	215	0.105	251	0.275	287	0.421	323	0.512

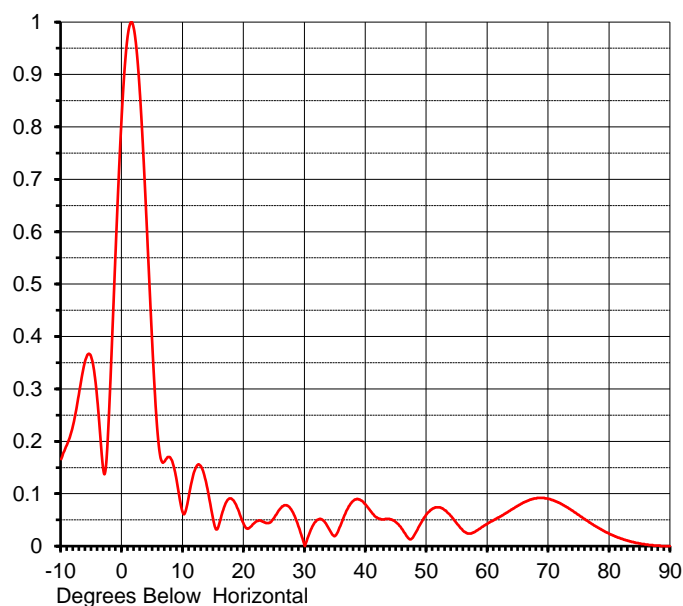
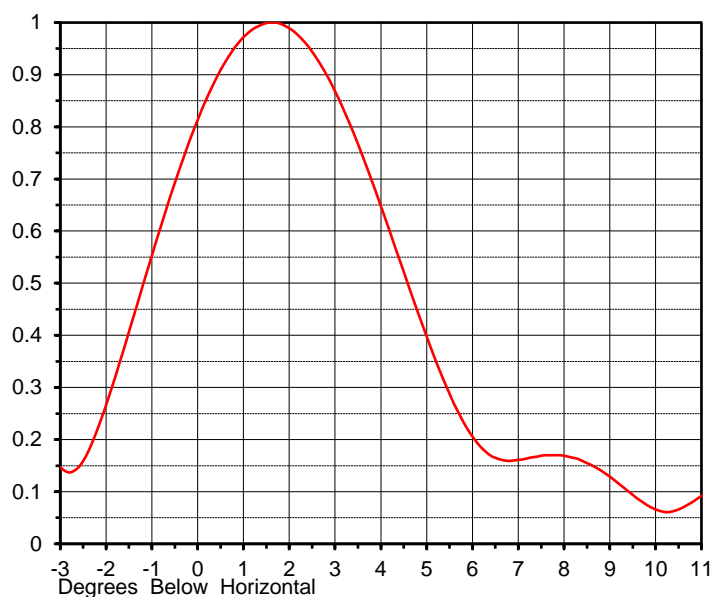
This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.

ELEVATION PATTERN

Proposal No. **C-70534-1**
 Date **30-Oct-17**
 Call Letters **KDTV-CD**
 Channel **21**
 Frequency **515 MHz**
 Antenna Type **TLP-12H/VP-R**

RMS Directivity at Main Lobe **11.8 (10.72 dB)**
 RMS Directivity at Horizontal **8.2 (9.14 dB)**
Calculated

Beam Tilt **1.50 deg**
 Pattern Number **12L118150**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.166	10.0	0.063	30.0	0.000	50.0	0.061	70.0	0.090
-9.0	0.195	11.0	0.099	31.0	0.032	51.0	0.072	71.0	0.086
-8.0	0.233	12.0	0.147	32.0	0.050	52.0	0.074	72.0	0.081
-7.0	0.297	13.0	0.151	33.0	0.049	53.0	0.068	73.0	0.074
-6.0	0.356	14.0	0.110	34.0	0.032	54.0	0.057	74.0	0.067
-5.0	0.358	15.0	0.048	35.0	0.020	55.0	0.042	75.0	0.059
-4.0	0.271	16.0	0.045	36.0	0.044	56.0	0.029	76.0	0.051
-3.0	0.140	17.0	0.082	37.0	0.071	57.0	0.024	77.0	0.043
-2.0	0.293	18.0	0.090	38.0	0.087	58.0	0.028	78.0	0.036
-1.0	0.582	19.0	0.071	39.0	0.089	59.0	0.036	79.0	0.029
0.0	0.835	20.0	0.041	40.0	0.079	60.0	0.043	80.0	0.023
1.0	0.980	21.0	0.036	41.0	0.064	61.0	0.050	81.0	0.018
2.0	0.983	22.0	0.047	42.0	0.053	62.0	0.056	82.0	0.014
3.0	0.850	23.0	0.047	43.0	0.051	63.0	0.063	83.0	0.010
4.0	0.623	24.0	0.044	44.0	0.051	64.0	0.070	84.0	0.007
5.0	0.374	25.0	0.055	45.0	0.045	65.0	0.077	85.0	0.005
6.0	0.194	26.0	0.072	46.0	0.032	66.0	0.084	86.0	0.003
7.0	0.162	27.0	0.078	47.0	0.015	67.0	0.089	87.0	0.002
8.0	0.167	28.0	0.065	48.0	0.022	68.0	0.091	88.0	0.001
9.0	0.122	29.0	0.036	49.0	0.043	69.0	0.092	89.0	0.000
								90.0	0.000

This document contains proprietary and confidential information of Dielectric. It is to be used solely for the purpose for which it is provided. No disclosure, reproduction, or use of this document or any part of it may be made without the written permission of Dielectric.