

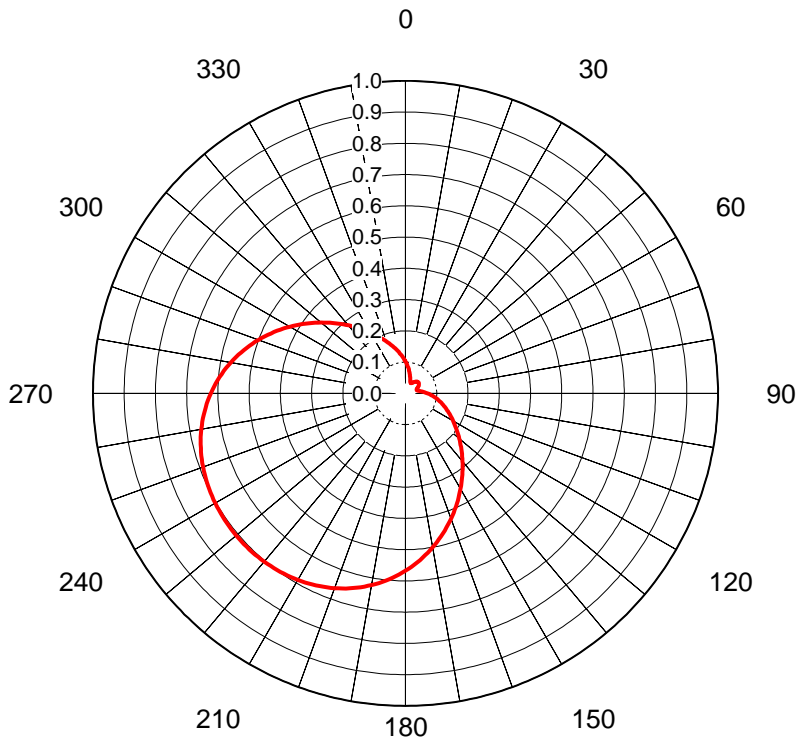
AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-71988**
Date **4-Jan-23**
Call Letters **KMCB**
Channel **22**
Frequency **521 MHz**
Antenna Type **TLP-12M(SP)/VP-R**
Gain **1.83 (2.63dB)**
Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.340	36	0.261	72	0.215	108	0.449	144	0.785	180	0.979	216	0.999	252	0.999	288	0.951
1	0.329	37	0.268	73	0.212	109	0.462	145	0.792	181	0.981	217	0.999	253	0.999	289	0.947
2	0.318	38	0.274	74	0.208	110	0.476	146	0.799	182	0.982	218	0.999	254	0.999	290	0.944
3	0.307	39	0.280	75	0.205	111	0.488	147	0.806	183	0.984	219	0.999	255	0.999	291	0.939
4	0.296	40	0.287	76	0.202	112	0.500	148	0.812	184	0.986	220	0.999	256	0.999	292	0.933
5	0.285	41	0.290	77	0.198	113	0.512	149	0.819	185	0.988	221	0.999	257	0.999	293	0.928
6	0.273	42	0.294	78	0.195	114	0.524	150	0.826	186	0.989	222	0.999	258	0.999	294	0.922
7	0.262	43	0.298	79	0.191	115	0.536	151	0.832	187	0.991	223	0.999	259	0.999	295	0.917
8	0.251	44	0.301	80	0.188	116	0.549	152	0.839	188	0.993	224	0.999	260	0.999	296	0.912
9	0.240	45	0.305	81	0.192	117	0.561	153	0.845	189	0.994	225	0.999	261	0.999	297	0.906
10	0.229	46	0.308	82	0.196	118	0.573	154	0.852	190	0.996	226	1.000	262	0.998	298	0.901
11	0.225	47	0.312	83	0.200	119	0.585	155	0.858	191	0.996	227	1.000	263	0.998	299	0.895
12	0.221	48	0.315	84	0.204	120	0.597	156	0.864	192	0.997	228	1.000	264	0.998	300	0.890
13	0.217	49	0.319	85	0.208	121	0.606	157	0.871	193	0.997	229	1.000	265	0.998	301	0.884
14	0.213	50	0.322	86	0.213	122	0.615	158	0.877	194	0.997	230	1.000	266	0.997	302	0.877
15	0.208	51	0.319	87	0.217	123	0.624	159	0.884	195	0.998	231	1.000	267	0.997	303	0.871
16	0.204	52	0.315	88	0.221	124	0.633	160	0.890	196	0.998	232	1.000	268	0.997	304	0.864
17	0.200	53	0.312	89	0.225	125	0.642	161	0.895	197	0.998	233	1.000	269	0.996	305	0.858
18	0.196	54	0.308	90	0.229	126	0.651	162	0.901	198	0.998	234	1.000	270	0.996	306	0.852
19	0.192	55	0.305	91	0.240	127	0.660	163	0.906	199	0.999	235	0.999	271	0.994	307	0.845
20	0.188	56	0.301	92	0.251	128	0.669	164	0.912	200	0.999	236	0.999	272	0.993	308	0.839
21	0.191	57	0.298	93	0.262	129	0.678	165	0.917	201	0.999	237	0.999	273	0.991	309	0.832
22	0.195	58	0.294	94	0.273	130	0.687	166	0.922	202	0.999	238	0.999	274	0.989	310	0.826
23	0.198	59	0.290	95	0.285	131	0.694	167	0.928	203	0.999	239	0.999	275	0.988	311	0.819
24	0.202	60	0.287	96	0.296	132	0.701	168	0.933	204	0.999	240	0.999	276	0.986	312	0.812
25	0.205	61	0.280	97	0.307	133	0.708	169	0.939	205	0.999	241	0.999	277	0.984	313	0.806
26	0.208	62	0.274	98	0.318	134	0.715	170	0.944	206	0.999	242	0.999	278	0.982	314	0.799
27	0.212	63	0.268	99	0.329	135	0.723	171	0.947	207	0.999	243	0.999	279	0.981	315	0.792
28	0.215	64	0.261	100	0.340	136	0.730	172	0.951	208	0.999	244	0.999	280	0.979	316	0.785
29	0.219	65	0.255	101	0.354	137	0.737	173	0.955	209	0.999	245	0.999	281	0.975	317	0.778
30	0.222	66	0.248	102	0.367	138	0.744	174	0.958	210	0.999	246	0.999	282	0.972	318	0.772
31	0.228	67	0.242	103	0.381	139	0.751	175	0.961	211	0.999	247	0.999	283	0.969	319	0.765
32	0.235	68	0.235	104	0.394	140	0.758	176	0.965	212	0.999	248	0.999	284	0.965	320	0.758
33	0.242	69	0.228	105	0.408	141	0.765	177	0.969	213	0.999	249	0.999	285	0.961	321	0.751
34	0.248	70	0.222	106	0.422	142	0.772	178	0.972	214	0.999	250	0.999	286	0.958	322	0.744
35	0.255	71	0.219	107	0.435	143	0.778	179	0.975	215	0.999	251	0.999	287	0.955	323	0.737

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AZIMUTH PATTERN Vertical Polarization

In Free Space

Proposal No. **C-71988**
Date **4-Jan-23**
Call Letters **KMCB**
Channel **22**
Frequency **521 MHz**
Antenna Type **TLP-12M(SP)/VP-R**
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	0.103	36	0.044	72	0.037	108	0.130	144	0.310	180	0.568	216	0.699	252	0.685	288	0.515	324	0.259
1	0.099	37	0.045	73	0.037	109	0.133	145	0.317	181	0.574	217	0.700	253	0.683	289	0.507	325	0.253
2	0.096	38	0.046	74	0.038	110	0.137	146	0.324	182	0.580	218	0.701	254	0.680	290	0.500	326	0.247
3	0.093	39	0.047	75	0.038	111	0.140	147	0.331	183	0.586	219	0.702	255	0.678	291	0.493	327	0.241
4	0.090	40	0.049	76	0.039	112	0.144	148	0.338	184	0.591	220	0.703	256	0.675	292	0.486	328	0.236
5	0.086	41	0.050	77	0.040	113	0.148	149	0.345	185	0.597	221	0.704	257	0.673	293	0.479	329	0.230
6	0.083	42	0.051	78	0.041	114	0.152	150	0.353	186	0.602	222	0.704	258	0.670	294	0.471	330	0.225
7	0.080	43	0.051	79	0.043	115	0.155	151	0.360	187	0.608	223	0.705	259	0.666	295	0.464	331	0.219
8	0.077	44	0.052	80	0.045	116	0.159	152	0.367	188	0.613	224	0.706	260	0.663	296	0.457	332	0.214
9	0.074	45	0.053	81	0.047	117	0.163	153	0.374	189	0.618	225	0.706	261	0.660	297	0.449	333	0.209
10	0.071	46	0.053	82	0.049	118	0.168	154	0.382	190	0.623	226	0.706	262	0.656	298	0.442	334	0.204
11	0.068	47	0.054	83	0.051	119	0.172	155	0.389	191	0.627	227	0.707	263	0.653	299	0.434	335	0.199
12	0.065	48	0.054	84	0.054	120	0.176	156	0.397	192	0.632	228	0.707	264	0.649	300	0.427	336	0.194
13	0.062	49	0.054	85	0.056	121	0.180	157	0.404	193	0.636	229	0.707	265	0.645	301	0.419	337	0.190
14	0.059	50	0.055	86	0.059	122	0.185	158	0.412	194	0.641	230	0.707	266	0.641	302	0.412	338	0.185
15	0.056	51	0.054	87	0.062	123	0.190	159	0.419	195	0.645	231	0.707	267	0.636	303	0.404	339	0.180
16	0.054	52	0.054	88	0.065	124	0.194	160	0.427	196	0.649	232	0.707	268	0.632	304	0.397	340	0.176
17	0.051	53	0.054	89	0.068	125	0.199	161	0.434	197	0.653	233	0.707	269	0.627	305	0.389	341	0.172
18	0.049	54	0.053	90	0.071	126	0.204	162	0.442	198	0.656	234	0.706	270	0.623	306	0.382	342	0.168
19	0.047	55	0.053	91	0.074	127	0.209	163	0.449	199	0.660	235	0.706	271	0.618	307	0.374	343	0.163
20	0.045	56	0.052	92	0.077	128	0.214	164	0.457	200	0.663	236	0.706	272	0.613	308	0.367	344	0.159
21	0.043	57	0.051	93	0.080	129	0.219	165	0.464	201	0.666	237	0.705	273	0.608	309	0.360	345	0.155
22	0.041	58	0.051	94	0.083	130	0.225	166	0.471	202	0.670	238	0.704	274	0.602	310	0.353	346	0.152
23	0.040	59	0.050	95	0.086	131	0.230	167	0.479	203	0.673	239	0.704	275	0.597	311	0.345	347	0.148
24	0.039	60	0.049	96	0.090	132	0.236	168	0.486	204	0.675	240	0.703	276	0.591	312	0.338	348	0.144
25	0.038	61	0.047	97	0.093	133	0.241	169	0.493	205	0.678	241	0.702	277	0.586	313	0.331	349	0.140
26	0.038	62	0.046	98	0.096	134	0.247	170	0.500	206	0.680	242	0.701	278	0.580	314	0.324	350	0.137
27	0.037	63	0.045	99	0.099	135	0.253	171	0.507	207	0.683	243	0.700	279	0.574	315	0.317	351	0.133
28	0.037	64	0.044	100	0.103	136	0.259	172	0.515	208	0.685	244	0.699	280	0.568	316	0.310	352	0.130
29	0.038	65	0.043	101	0.106	137	0.265	173	0.521	209	0.687	245	0.697	281	0.561	317	0.304	353	0.126
30	0.038	66	0.042	102	0.109	138	0.271	174	0.528	210	0.689	246	0.696	282	0.555	318	0.297	354	0.123
31	0.039	67	0.041	103	0.112	139	0.278	175	0.535	211	0.691	247	0.694	283	0.548	319	0.290	355	0.119
32	0.040	68	0.040	104	0.116	140	0.284	176	0.542	212	0.693	248	0.693	284	0.542	320	0.284	356	0.116
33	0.041	69	0.039	105	0.119	141	0.290	177	0.548	213	0.694	249	0.691	285	0.535	321	0.278	357	0.112
34	0.042	70	0.038	106	0.123	142	0.297	178	0.555	214	0.696	250	0.689	286	0.528	322	0.271	358	0.109
35	0.043	71	0.038	107	0.126	143	0.304	179	0.561	215	0.697	251	0.687	287	0.521	323	0.265	359	0.106

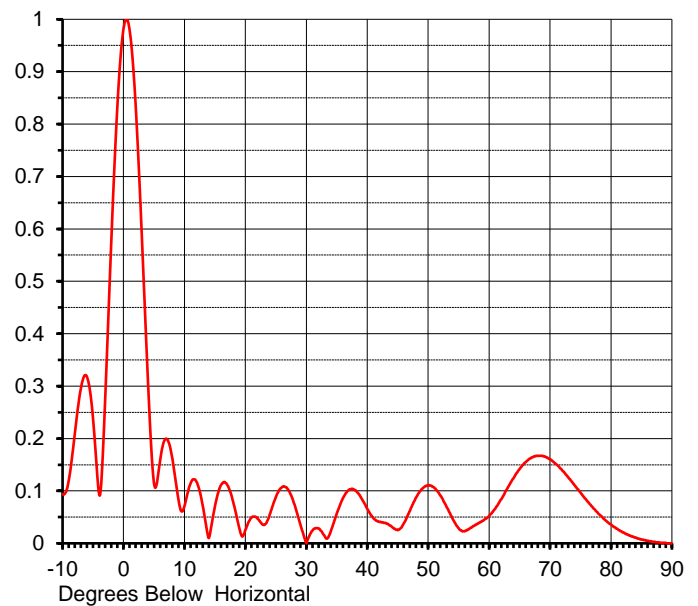
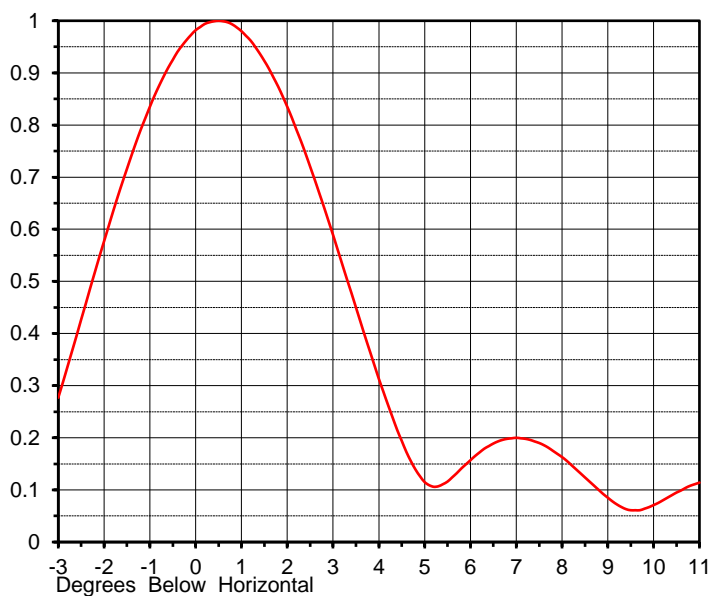
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ELEVATION PATTERN

Proposal No. **C-71988**
 Date **4-Jan-23**
 Call Letters **KMCB**
 Channel **22**
 Frequency **521 MHz**
 Antenna Type **TLP-12M(SP)/VP-R**

RMS Directivity at Main Lobe **12.6 (11.00 dB)**
 RMS Directivity at Horizontal **12.1 (10.83 dB)**
Calculated

Beam Tilt **0.50 deg**
 Pattern Number **12L126050**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.094	10.0	0.071	30.0	0.000	50.0	0.111	70.0	0.160
-9.0	0.119	11.0	0.114	31.0	0.024	51.0	0.106	71.0	0.151
-8.0	0.208	12.0	0.117	32.0	0.028	52.0	0.091	72.0	0.139
-7.0	0.295	13.0	0.072	33.0	0.014	53.0	0.070	73.0	0.126
-6.0	0.318	14.0	0.010	34.0	0.022	54.0	0.047	74.0	0.111
-5.0	0.238	15.0	0.070	35.0	0.057	55.0	0.029	75.0	0.097
-4.0	0.094	16.0	0.111	36.0	0.086	56.0	0.023	76.0	0.082
-3.0	0.277	17.0	0.112	37.0	0.102	57.0	0.030	77.0	0.069
-2.0	0.577	18.0	0.079	38.0	0.101	58.0	0.037	78.0	0.056
-1.0	0.835	19.0	0.029	39.0	0.087	59.0	0.043	79.0	0.045
0.0	0.982	20.0	0.025	40.0	0.066	60.0	0.052	80.0	0.036
1.0	0.980	21.0	0.049	41.0	0.048	61.0	0.066	81.0	0.028
2.0	0.835	22.0	0.047	42.0	0.041	62.0	0.084	82.0	0.021
3.0	0.589	23.0	0.035	43.0	0.039	63.0	0.105	83.0	0.015
4.0	0.313	24.0	0.055	44.0	0.032	64.0	0.124	84.0	0.011
5.0	0.115	25.0	0.088	45.0	0.025	65.0	0.142	85.0	0.007
6.0	0.157	26.0	0.107	46.0	0.038	66.0	0.155	86.0	0.005
7.0	0.200	27.0	0.103	47.0	0.062	67.0	0.164	87.0	0.003
8.0	0.163	28.0	0.076	48.0	0.087	68.0	0.167	88.0	0.001
9.0	0.085	29.0	0.037	49.0	0.104	69.0	0.166	89.0	0.001
								90.0	0.000

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