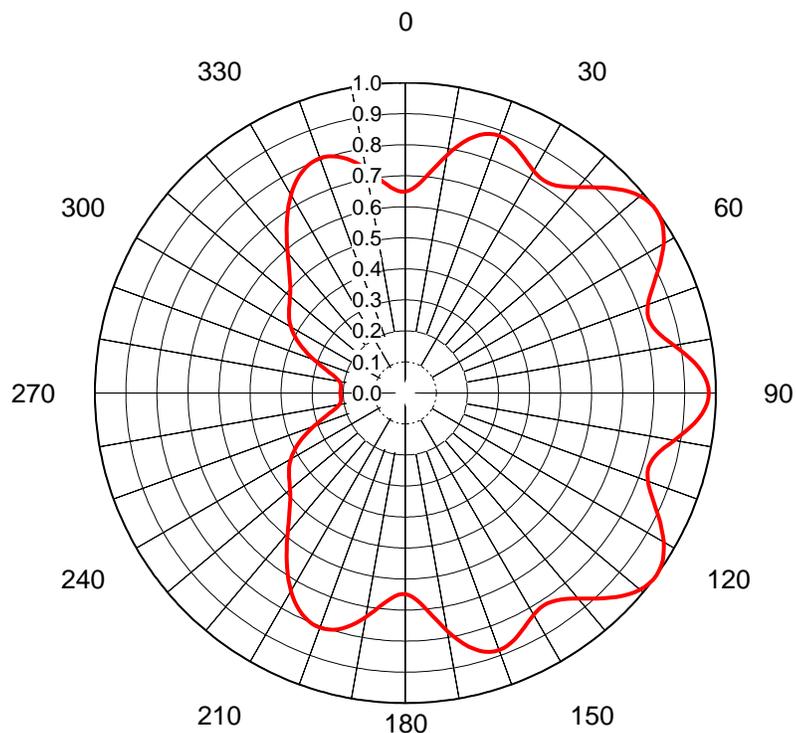


AZIMUTH PATTERN Horizontal Polarization

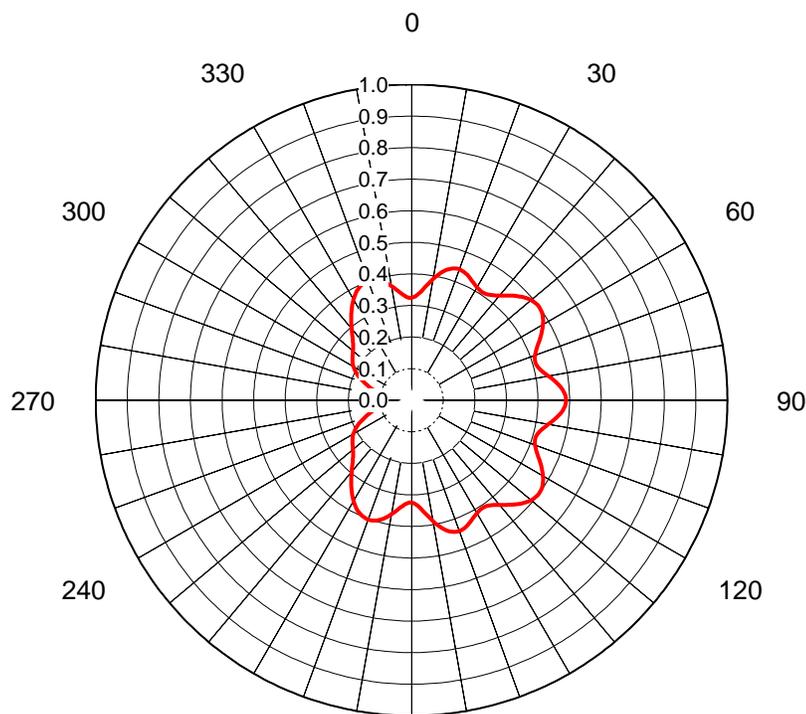


Proposal No. **C-70648**
 Date **31-May-17**
 Call Letters **KCSM**
 Channel **27**
 Frequency **551 MHz**
 Antenna Type
 Gain **1.85 (2.67dB)**
 Calculated

Deg	Value																		
0	0.649	36	0.827	72	0.821	108	0.821	144	0.827	180	0.649	216	0.651	252	0.287	288	0.287	324	0.651
1	0.652	37	0.834	73	0.819	109	0.825	145	0.821	181	0.649	217	0.635	253	0.275	289	0.300	325	0.666
2	0.658	38	0.843	74	0.821	110	0.832	146	0.818	182	0.651	218	0.620	254	0.263	290	0.313	326	0.681
3	0.667	39	0.854	75	0.825	111	0.840	147	0.817	183	0.657	219	0.605	255	0.252	291	0.326	327	0.696
4	0.678	40	0.865	76	0.832	112	0.851	148	0.819	184	0.664	220	0.590	256	0.243	292	0.339	328	0.710
5	0.692	41	0.878	77	0.841	113	0.864	149	0.822	185	0.674	221	0.576	257	0.234	293	0.352	329	0.724
6	0.708	42	0.892	78	0.853	114	0.878	150	0.826	186	0.684	222	0.562	258	0.227	294	0.365	330	0.737
7	0.725	43	0.906	79	0.866	115	0.892	151	0.832	187	0.696	223	0.549	259	0.221	295	0.377	331	0.749
8	0.743	44	0.920	80	0.879	116	0.907	152	0.839	188	0.709	224	0.537	260	0.216	296	0.388	332	0.760
9	0.761	45	0.934	81	0.894	117	0.921	153	0.847	189	0.722	225	0.526	261	0.212	297	0.398	333	0.770
10	0.779	46	0.947	82	0.908	118	0.935	154	0.854	190	0.734	226	0.516	262	0.210	298	0.408	334	0.779
11	0.797	47	0.959	83	0.923	119	0.949	155	0.862	191	0.746	227	0.507	263	0.209	299	0.417	335	0.787
12	0.813	48	0.970	84	0.936	120	0.961	156	0.869	192	0.758	228	0.499	264	0.208	300	0.426	336	0.793
13	0.829	49	0.979	85	0.948	121	0.972	157	0.874	193	0.768	229	0.491	265	0.208	301	0.433	337	0.798
14	0.843	50	0.987	86	0.958	122	0.981	158	0.879	194	0.778	230	0.485	266	0.208	302	0.440	338	0.802
15	0.855	51	0.993	87	0.967	123	0.989	159	0.881	195	0.786	231	0.479	267	0.208	303	0.446	339	0.804
16	0.865	52	0.997	88	0.973	124	0.995	160	0.882	196	0.793	232	0.473	268	0.209	304	0.452	340	0.805
17	0.872	53	1.000	89	0.976	125	0.998	161	0.881	197	0.798	233	0.468	269	0.209	305	0.458	341	0.804
18	0.878	54	1.000	90	0.978	126	1.000	162	0.878	198	0.802	234	0.463	270	0.209	306	0.463	342	0.802
19	0.881	55	0.998	91	0.976	127	1.000	163	0.872	199	0.804	235	0.458	271	0.209	307	0.468	343	0.798
20	0.882	56	0.995	92	0.973	128	0.997	164	0.865	200	0.805	236	0.452	272	0.209	308	0.473	344	0.793
21	0.881	57	0.989	93	0.967	129	0.993	165	0.855	201	0.804	237	0.446	273	0.208	309	0.479	345	0.786
22	0.879	58	0.981	94	0.958	130	0.987	166	0.843	202	0.802	238	0.440	274	0.208	310	0.485	346	0.778
23	0.874	59	0.972	95	0.948	131	0.979	167	0.829	203	0.798	239	0.433	275	0.208	311	0.491	347	0.768
24	0.869	60	0.961	96	0.936	132	0.970	168	0.813	204	0.793	240	0.426	276	0.208	312	0.499	348	0.758
25	0.862	61	0.949	97	0.923	133	0.959	169	0.797	205	0.787	241	0.417	277	0.209	313	0.507	349	0.746
26	0.854	62	0.935	98	0.908	134	0.947	170	0.779	206	0.779	242	0.408	278	0.210	314	0.516	350	0.734
27	0.847	63	0.921	99	0.894	135	0.934	171	0.761	207	0.770	243	0.398	279	0.212	315	0.526	351	0.722
28	0.839	64	0.907	100	0.879	136	0.920	172	0.743	208	0.760	244	0.388	280	0.216	316	0.537	352	0.709
29	0.832	65	0.892	101	0.866	137	0.906	173	0.725	209	0.749	245	0.377	281	0.221	317	0.549	353	0.696
30	0.826	66	0.878	102	0.853	138	0.892	174	0.708	210	0.737	246	0.365	282	0.227	318	0.562	354	0.684
31	0.822	67	0.864	103	0.841	139	0.878	175	0.692	211	0.724	247	0.352	283	0.234	319	0.576	355	0.674
32	0.819	68	0.851	104	0.832	140	0.865	176	0.678	212	0.710	248	0.339	284	0.243	320	0.590	356	0.664
33	0.817	69	0.840	105	0.825	141	0.854	177	0.667	213	0.696	249	0.326	285	0.252	321	0.605	357	0.657
34	0.818	70	0.832	106	0.821	142	0.843	178	0.658	214	0.681	250	0.313	286	0.263	322	0.620	358	0.651
35	0.821	71	0.825	107	0.819	143	0.834	179	0.652	215	0.666	251	0.300	287	0.275	323	0.635	359	0.649

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AZIMUTH PATTERN Vertical Polarization



Proposal No. **C-70648**
 Date **31-May-17**
 Call Letters **KCSM**
 Channel **27**
 Frequency **551 MHz**
 Antenna Type
 Gain **1.85 (2.67dB)**
 Calculated

Deg	Value																		
0	0.324	36	0.413	72	0.410	108	0.410	144	0.413	180	0.324	216	0.325	252	0.144	288	0.144	324	0.325
1	0.326	37	0.417	73	0.410	109	0.412	145	0.411	181	0.324	217	0.318	253	0.137	289	0.150	325	0.333
2	0.329	38	0.421	74	0.410	110	0.416	146	0.409	182	0.326	218	0.310	254	0.132	290	0.157	326	0.341
3	0.333	39	0.427	75	0.413	111	0.420	147	0.409	183	0.328	219	0.302	255	0.126	291	0.163	327	0.348
4	0.339	40	0.433	76	0.416	112	0.426	148	0.409	184	0.332	220	0.295	256	0.121	292	0.170	328	0.355
5	0.346	41	0.439	77	0.421	113	0.432	149	0.411	185	0.337	221	0.288	257	0.117	293	0.176	329	0.362
6	0.354	42	0.446	78	0.426	114	0.439	150	0.413	186	0.342	222	0.281	258	0.113	294	0.182	330	0.368
7	0.362	43	0.453	79	0.433	115	0.446	151	0.416	187	0.348	223	0.275	259	0.110	295	0.188	331	0.374
8	0.371	44	0.460	80	0.440	116	0.453	152	0.420	188	0.354	224	0.269	260	0.108	296	0.194	332	0.380
9	0.380	45	0.467	81	0.447	117	0.461	153	0.423	189	0.361	225	0.263	261	0.106	297	0.199	333	0.385
10	0.389	46	0.473	82	0.454	118	0.468	154	0.427	190	0.367	226	0.258	262	0.105	298	0.204	334	0.389
11	0.398	47	0.479	83	0.461	119	0.474	155	0.431	191	0.373	227	0.253	263	0.104	299	0.209	335	0.393
12	0.407	48	0.485	84	0.468	120	0.481	156	0.434	192	0.379	228	0.249	264	0.104	300	0.213	336	0.397
13	0.414	49	0.490	85	0.474	121	0.486	157	0.437	193	0.384	229	0.246	265	0.104	301	0.217	337	0.399
14	0.421	50	0.493	86	0.479	122	0.491	158	0.439	194	0.389	230	0.242	266	0.104	302	0.220	338	0.401
15	0.427	51	0.497	87	0.483	123	0.494	159	0.441	195	0.393	231	0.239	267	0.104	303	0.223	339	0.402
16	0.432	52	0.499	88	0.486	124	0.497	160	0.441	196	0.396	232	0.237	268	0.104	304	0.226	340	0.402
17	0.436	53	0.500	89	0.488	125	0.499	161	0.441	197	0.399	233	0.234	269	0.104	305	0.229	341	0.402
18	0.439	54	0.500	90	0.489	126	0.500	162	0.439	198	0.401	234	0.231	270	0.105	306	0.231	342	0.401
19	0.441	55	0.499	91	0.488	127	0.500	163	0.436	199	0.402	235	0.229	271	0.104	307	0.234	343	0.399
20	0.441	56	0.497	92	0.486	128	0.499	164	0.432	200	0.402	236	0.226	272	0.104	308	0.237	344	0.396
21	0.441	57	0.494	93	0.483	129	0.497	165	0.427	201	0.402	237	0.223	273	0.104	309	0.239	345	0.393
22	0.439	58	0.491	94	0.479	130	0.493	166	0.421	202	0.401	238	0.220	274	0.104	310	0.242	346	0.389
23	0.437	59	0.486	95	0.474	131	0.490	167	0.414	203	0.399	239	0.217	275	0.104	311	0.246	347	0.384
24	0.434	60	0.481	96	0.468	132	0.485	168	0.407	204	0.397	240	0.213	276	0.104	312	0.249	348	0.379
25	0.431	61	0.474	97	0.461	133	0.479	169	0.398	205	0.393	241	0.209	277	0.104	313	0.253	349	0.373
26	0.427	62	0.468	98	0.454	134	0.473	170	0.389	206	0.389	242	0.204	278	0.105	314	0.258	350	0.367
27	0.423	63	0.461	99	0.447	135	0.467	171	0.380	207	0.385	243	0.199	279	0.106	315	0.263	351	0.361
28	0.420	64	0.453	100	0.440	136	0.460	172	0.371	208	0.380	244	0.194	280	0.108	316	0.269	352	0.354
29	0.416	65	0.446	101	0.433	137	0.453	173	0.362	209	0.374	245	0.188	281	0.110	317	0.275	353	0.348
30	0.413	66	0.439	102	0.426	138	0.446	174	0.354	210	0.368	246	0.182	282	0.113	318	0.281	354	0.342
31	0.411	67	0.432	103	0.421	139	0.439	175	0.346	211	0.362	247	0.176	283	0.117	319	0.288	355	0.337
32	0.409	68	0.426	104	0.416	140	0.433	176	0.339	212	0.355	248	0.170	284	0.121	320	0.295	356	0.332
33	0.409	69	0.420	105	0.413	141	0.427	177	0.333	213	0.348	249	0.163	285	0.126	321	0.302	357	0.328
34	0.409	70	0.416	106	0.410	142	0.421	178	0.329	214	0.341	250	0.157	286	0.132	322	0.310	358	0.326
35	0.411	71	0.412	107	0.410	143	0.417	179	0.326	215	0.333	251	0.150	287	0.137	323	0.318	359	0.324

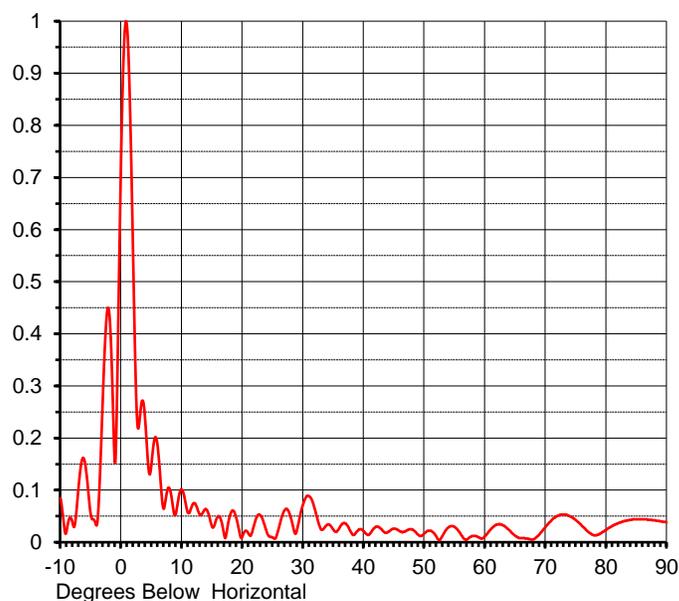
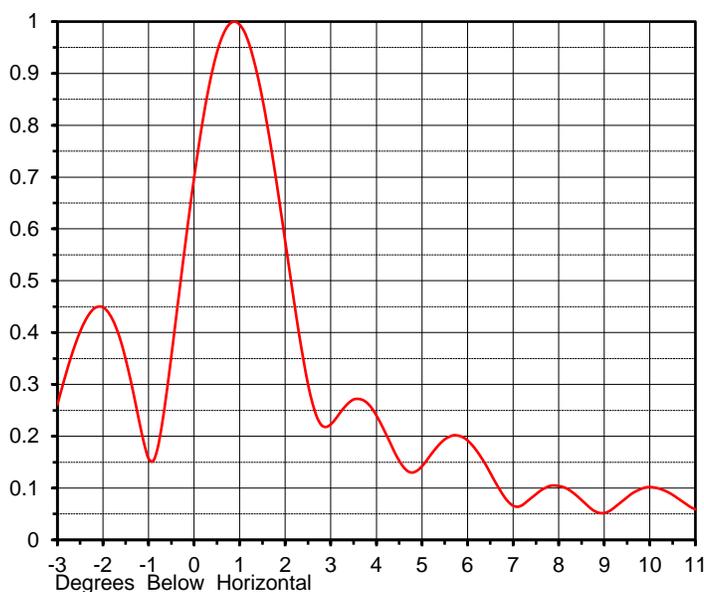
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ELEVATION PATTERN

Proposal No. **C-70648**
 Date **31-May-17**
 Call Letters **KCSM**
 Channel **27**
 Frequency **551 MHz**
 Antenna Type

RMS Directivity at Main Lobe **25.8 (14.12 dB)**
 RMS Directivity at Horizontal **14.9 (11.73 dB)**
Calculated

Beam Tilt **0.80 deg**
 Pattern Number **14U258080**



Angle	Field								
-10.0	0.084	10.0	0.101	30.0	0.073	50.0	0.017	70.0	0.030
-9.0	0.023	11.0	0.056	31.0	0.088	51.0	0.022	71.0	0.043
-8.0	0.035	12.0	0.075	32.0	0.060	52.0	0.010	72.0	0.051
-7.0	0.112	13.0	0.052	33.0	0.024	53.0	0.013	73.0	0.053
-6.0	0.153	14.0	0.063	34.0	0.034	54.0	0.029	74.0	0.050
-5.0	0.051	15.0	0.029	35.0	0.024	55.0	0.029	75.0	0.042
-4.0	0.034	16.0	0.050	36.0	0.028	56.0	0.015	76.0	0.031
-3.0	0.293	17.0	0.012	37.0	0.036	57.0	0.005	77.0	0.020
-2.0	0.441	18.0	0.054	38.0	0.017	58.0	0.012	78.0	0.013
-1.0	0.152	19.0	0.045	39.0	0.022	59.0	0.009	79.0	0.017
0.0	0.759	20.0	0.012	40.0	0.021	60.0	0.012	80.0	0.024
1.0	0.981	21.0	0.016	41.0	0.016	61.0	0.026	81.0	0.031
2.0	0.516	22.0	0.037	42.0	0.030	62.0	0.034	82.0	0.037
3.0	0.233	23.0	0.051	43.0	0.024	63.0	0.032	83.0	0.041
4.0	0.224	24.0	0.019	44.0	0.020	64.0	0.023	84.0	0.043
5.0	0.153	25.0	0.009	45.0	0.026	65.0	0.012	85.0	0.044
6.0	0.183	26.0	0.028	46.0	0.021	66.0	0.008	86.0	0.044
7.0	0.064	27.0	0.062	47.0	0.022	67.0	0.007	87.0	0.043
8.0	0.102	28.0	0.045	48.0	0.024	68.0	0.006	88.0	0.042
9.0	0.055	29.0	0.025	49.0	0.014	69.0	0.016	89.0	0.040
								90.0	0.038

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