



Antenna Model: **TUA-P4-8/20H-1-R SM**

Proposal Number: **C-71142-4**
Date: **9-Oct-18**
Customer: **Tegna**
Location: **Seattle, CA**

Electrical Specifications

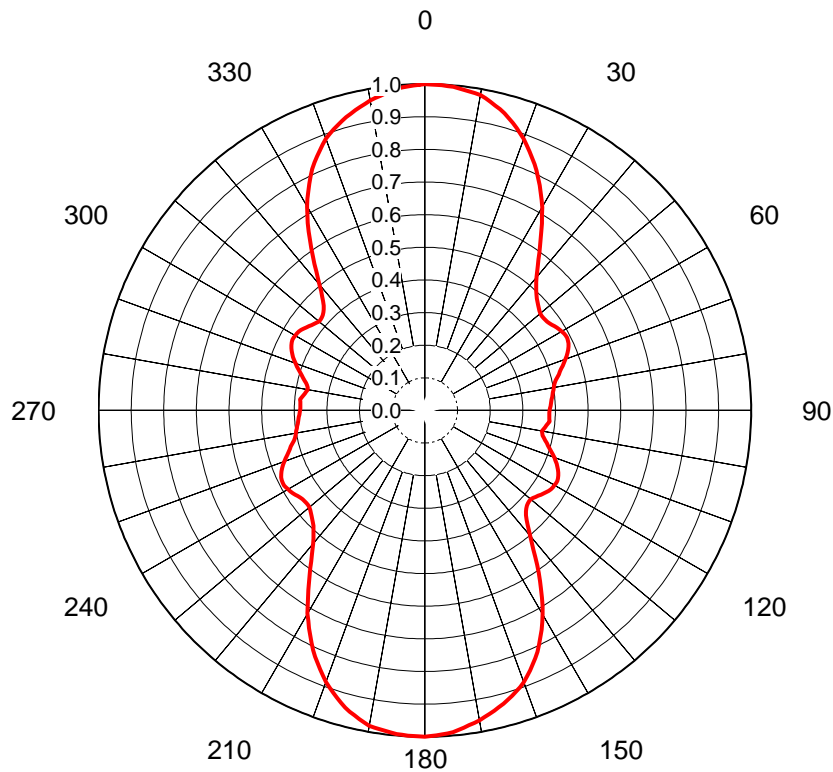
Polarization: **Horizontal**
Azimuth Pattern: **Directional**
Antenna Input: **6-1/8"** **75 Ohm** **EIA/DCA**
VSWR: **Channel** **1.10 : 1** **Band** **1.10 : 1**
Bandwidth: **470 - 860 MHz**
Rated Input Power: **30 kW** **(14.77 dBk)** **Maximum combined average power**

Mechanical Specifications

Mounting: **Side Mounted**
Environmental Protection: **Full Radome**
Height: **31.8 ft (9.7m)**
Weight: **5400 lb (2.4t)** **Excludes Mounts**
Effective Projected Area: **68.3 ft² (6.3m²)** **TIA-222-G** **Basic Wind Speed: 90 m/h (144.8 km/h)**

Channel Specifications

	Call	CH	Freq	Hpol ERP	TPO	Peak Main Lobe Hpol Gain	Peak at Horizontal Hpol Gain
1	KING	25	539 MHz	1,000 kW (30.00 dBk)	28.4 kW (14.53 dBk)	39.36 (15.95dB)	29.93 (14.76dB)
2	KING	48	677 MHz	1,000 kW (30.00 dBk)	26.2 kW (14.19 dBk)	43.23 (16.36dB)	27.81 (14.44dB)



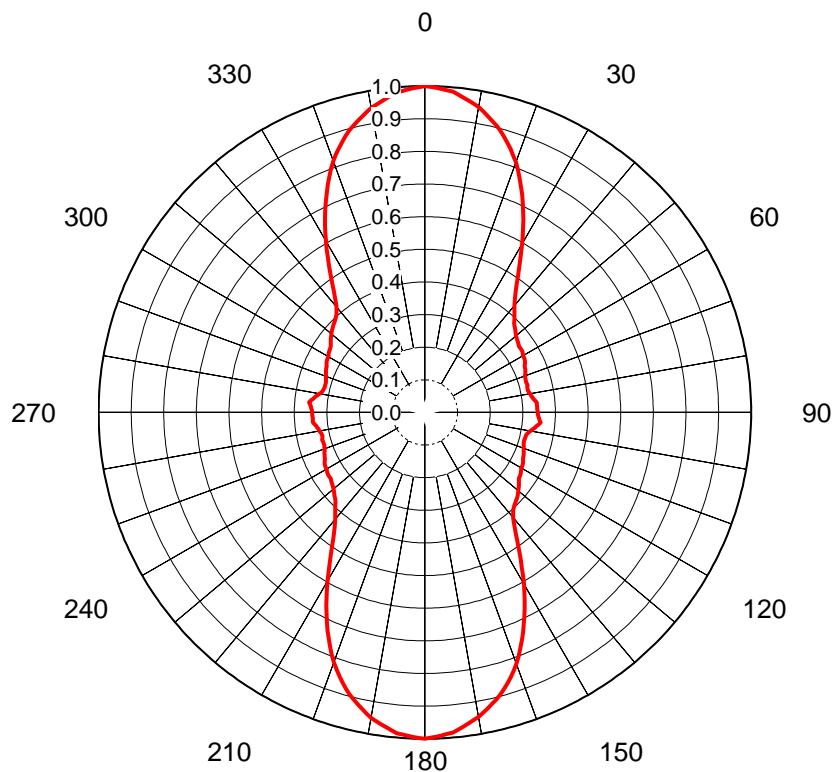
AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-71142-4**
 Date **9-Oct-18**
 Call Letters **KING**
 Channel **25**
 Frequency **539 MHz**
 Antenna Type **TUA-P4-8/20H-1-R SM**
 Gain **2.34 (3.69dB)**
 Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.597	72	0.444	108	0.407	144	0.585	180	1.000	216	0.597	252	0.444	288	0.407	324	0.585
1	0.999	37	0.579	73	0.437	109	0.415	145	0.608	181	0.999	217	0.579	253	0.437	289	0.415	325	0.608
2	0.999	38	0.562	74	0.431	110	0.422	146	0.631	182	0.999	218	0.562	254	0.431	290	0.422	326	0.631
3	0.998	39	0.547	75	0.426	111	0.429	147	0.654	183	0.998	219	0.547	255	0.426	291	0.429	327	0.654
4	0.997	40	0.533	76	0.418	112	0.435	148	0.677	184	0.997	220	0.533	256	0.418	292	0.435	328	0.677
5	0.996	41	0.520	77	0.412	113	0.441	149	0.700	185	0.996	221	0.520	257	0.412	293	0.441	329	0.700
6	0.993	42	0.510	78	0.407	114	0.447	150	0.722	186	0.993	222	0.510	258	0.407	294	0.447	330	0.722
7	0.990	43	0.500	79	0.404	115	0.451	151	0.742	187	0.990	223	0.500	259	0.404	295	0.451	331	0.742
8	0.987	44	0.492	80	0.402	116	0.455	152	0.761	188	0.987	224	0.492	260	0.402	296	0.455	332	0.761
9	0.984	45	0.485	81	0.399	117	0.458	153	0.780	189	0.984	225	0.485	261	0.399	297	0.458	333	0.780
10	0.981	46	0.479	82	0.396	118	0.460	154	0.798	190	0.981	226	0.479	262	0.396	298	0.460	334	0.798
11	0.974	47	0.474	83	0.394	119	0.460	155	0.816	191	0.974	227	0.474	263	0.394	299	0.460	335	0.816
12	0.967	48	0.470	84	0.392	120	0.459	156	0.831	192	0.967	228	0.470	264	0.392	300	0.459	336	0.831
13	0.959	49	0.466	85	0.390	121	0.458	157	0.846	193	0.959	229	0.466	265	0.390	301	0.458	337	0.846
14	0.951	50	0.462	86	0.388	122	0.456	158	0.860	194	0.951	230	0.462	266	0.388	302	0.456	338	0.860
15	0.943	51	0.461	87	0.387	123	0.453	159	0.874	195	0.943	231	0.461	267	0.387	303	0.453	339	0.874
16	0.932	52	0.461	88	0.385	124	0.449	160	0.887	196	0.932	232	0.461	268	0.385	304	0.449	340	0.887
17	0.921	53	0.462	89	0.384	125	0.444	161	0.896	197	0.921	233	0.462	269	0.384	305	0.444	341	0.896
18	0.910	54	0.463	90	0.382	126	0.439	162	0.905	198	0.910	234	0.463	270	0.382	306	0.439	342	0.905
19	0.898	55	0.465	91	0.382	127	0.435	163	0.914	199	0.898	235	0.465	271	0.382	307	0.435	343	0.914
20	0.886	56	0.470	92	0.382	128	0.431	164	0.923	200	0.886	236	0.470	272	0.382	308	0.431	344	0.923
21	0.871	57	0.474	93	0.382	129	0.427	165	0.931	201	0.871	237	0.474	273	0.382	309	0.427	345	0.931
22	0.856	58	0.478	94	0.383	130	0.424	166	0.938	202	0.856	238	0.478	274	0.383	310	0.424	346	0.938
23	0.841	59	0.481	95	0.384	131	0.424	167	0.944	203	0.841	239	0.481	275	0.384	311	0.424	347	0.944
24	0.826	60	0.484	96	0.380	132	0.425	168	0.951	204	0.826	240	0.484	276	0.380	312	0.425	348	0.951
25	0.811	61	0.487	97	0.376	133	0.428	169	0.958	205	0.811	241	0.487	277	0.376	313	0.428	349	0.958
26	0.793	62	0.489	98	0.372	134	0.432	170	0.964	206	0.793	242	0.489	278	0.372	314	0.432	350	0.964
27	0.774	63	0.489	99	0.368	135	0.438	171	0.969	207	0.774	243	0.489	279	0.368	315	0.438	351	0.969
28	0.756	64	0.488	100	0.364	136	0.447	172	0.974	208	0.756	244	0.488	280	0.364	316	0.447	352	0.974
29	0.737	65	0.486	101	0.366	137	0.457	173	0.980	209	0.737	245	0.486	281	0.366	317	0.457	353	0.980
30	0.719	66	0.482	102	0.369	138	0.470	174	0.985	210	0.719	246	0.482	282	0.369	318	0.470	354	0.985
31	0.698	67	0.477	103	0.374	139	0.485	175	0.990	211	0.698	247	0.477	283	0.374	319	0.485	355	0.990
32	0.676	68	0.471	104	0.380	140	0.502	176	0.992	212	0.676	248	0.471	284	0.380	320	0.502	356	0.992
33	0.656	69	0.465	105	0.386	141	0.520	177	0.994	213	0.656	249	0.465	285	0.386	321	0.520	357	0.994
34	0.635	70	0.458	106	0.393	142	0.541	178	0.996	214	0.635	250	0.458	286	0.393	322	0.541	358	0.996
35	0.616	71	0.451	107	0.400	143	0.562	179	0.998	215	0.616	251	0.451	287	0.400	323	0.562	359	0.998

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AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-71142-4**
Date **9-Oct-18**
Call Letters **KING**
Channel **48**
Frequency **677 MHz**
Antenna Type **TUA-P4-8/20H-1-R SM**
Gain **2.87 (4.58dB)**
Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.478	72	0.324	108	0.319	144	0.480	180	1.000	216	0.478	252	0.324	288	0.319	324	0.480
1	0.998	37	0.463	73	0.324	109	0.320	145	0.500	181	0.998	217	0.463	253	0.324	289	0.320	325	0.500
2	0.995	38	0.450	74	0.324	110	0.323	146	0.519	182	0.995	218	0.450	254	0.324	290	0.323	326	0.519
3	0.993	39	0.438	75	0.325	111	0.325	147	0.540	183	0.993	219	0.438	255	0.325	291	0.325	327	0.540
4	0.990	40	0.427	76	0.323	112	0.327	148	0.561	184	0.990	220	0.427	256	0.323	292	0.327	328	0.561
5	0.986	41	0.418	77	0.323	113	0.329	149	0.584	185	0.986	221	0.418	257	0.323	293	0.329	329	0.584
6	0.979	42	0.410	78	0.323	114	0.331	150	0.607	186	0.979	222	0.410	258	0.323	294	0.331	330	0.607
7	0.972	43	0.402	79	0.325	115	0.332	151	0.629	187	0.972	223	0.402	259	0.325	295	0.332	331	0.629
8	0.965	44	0.395	80	0.328	116	0.335	152	0.651	188	0.965	224	0.395	260	0.328	296	0.335	332	0.651
9	0.958	45	0.387	81	0.330	117	0.338	153	0.674	189	0.958	225	0.387	261	0.330	297	0.338	333	0.674
10	0.950	46	0.382	82	0.333	118	0.340	154	0.696	190	0.950	226	0.382	262	0.333	298	0.340	334	0.696
11	0.939	47	0.378	83	0.336	119	0.341	155	0.717	191	0.939	227	0.378	263	0.336	299	0.341	335	0.717
12	0.928	48	0.373	84	0.340	120	0.341	156	0.739	192	0.928	228	0.373	264	0.340	300	0.341	336	0.739
13	0.917	49	0.369	85	0.344	121	0.344	157	0.760	193	0.917	229	0.369	265	0.344	301	0.344	337	0.760
14	0.906	50	0.365	86	0.344	122	0.347	158	0.781	194	0.906	230	0.365	266	0.344	302	0.347	338	0.781
15	0.894	51	0.362	87	0.344	123	0.349	159	0.801	195	0.894	231	0.362	267	0.344	303	0.349	339	0.801
16	0.880	52	0.359	88	0.344	124	0.351	160	0.820	196	0.880	232	0.359	268	0.344	304	0.351	340	0.820
17	0.864	53	0.357	89	0.345	125	0.352	161	0.836	197	0.864	233	0.357	269	0.345	305	0.352	341	0.836
18	0.849	54	0.355	90	0.346	126	0.357	162	0.852	198	0.849	234	0.355	270	0.346	306	0.357	342	0.852
19	0.832	55	0.352	91	0.347	127	0.361	163	0.867	199	0.832	235	0.352	271	0.347	307	0.361	343	0.867
20	0.816	56	0.353	92	0.348	128	0.365	164	0.881	200	0.816	236	0.353	272	0.348	308	0.365	344	0.881
21	0.796	57	0.353	93	0.350	129	0.370	165	0.895	201	0.796	237	0.353	273	0.350	309	0.370	345	0.895
22	0.775	58	0.352	94	0.353	130	0.374	166	0.906	202	0.775	238	0.352	274	0.353	310	0.374	346	0.906
23	0.754	59	0.350	95	0.356	131	0.378	167	0.916	203	0.754	239	0.350	275	0.356	311	0.378	347	0.916
24	0.732	60	0.348	96	0.351	132	0.382	168	0.927	204	0.732	240	0.348	276	0.351	312	0.382	348	0.927
25	0.710	61	0.348	97	0.345	133	0.385	169	0.937	205	0.710	241	0.348	277	0.345	313	0.385	349	0.937
26	0.687	62	0.346	98	0.339	134	0.389	170	0.948	206	0.687	242	0.346	278	0.339	314	0.389	350	0.948
27	0.665	63	0.344	99	0.334	135	0.392	171	0.955	207	0.665	243	0.344	279	0.334	315	0.392	351	0.955
28	0.642	64	0.341	100	0.328	136	0.395	172	0.962	208	0.642	244	0.341	280	0.328	316	0.395	352	0.962
29	0.619	65	0.337	101	0.323	137	0.399	173	0.970	209	0.619	245	0.337	281	0.323	317	0.399	353	0.970
30	0.596	66	0.336	102	0.320	138	0.405	174	0.977	210	0.596	246	0.336	282	0.320	318	0.405	354	0.977
31	0.573	67	0.334	103	0.318	139	0.412	175	0.985	211	0.573	247	0.334	283	0.318	319	0.412	355	0.985
32	0.551	68	0.332	104	0.317	140	0.422	176	0.988	212	0.551	248	0.332	284	0.317	320	0.422	356	0.988
33	0.530	69	0.329	105	0.317	141	0.434	177	0.991	213	0.530	249	0.329	285	0.317	321	0.434	357	0.991
34	0.512	70	0.327	106	0.317	142	0.447	178	0.994	214	0.512	250	0.327	286	0.317	322	0.447	358	0.994
35	0.494	71	0.325	107	0.317	143	0.463	179	0.997	215	0.494	251	0.325	287	0.317	323	0.463	359	0.997

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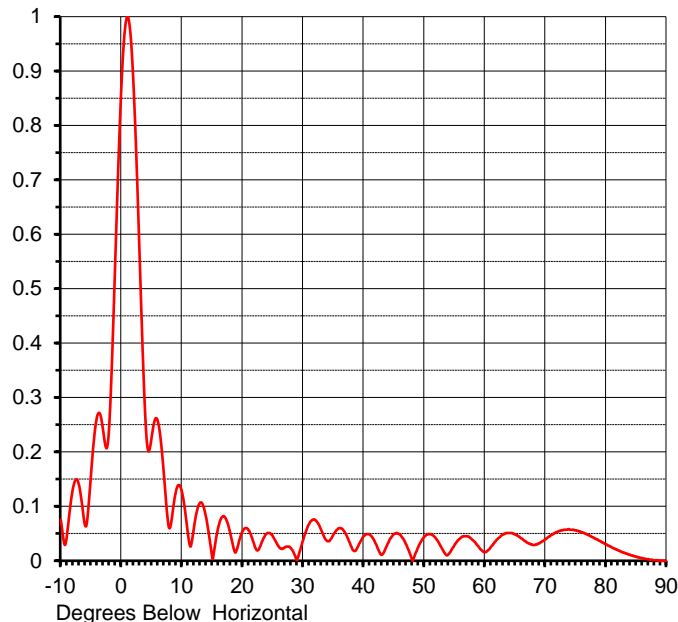
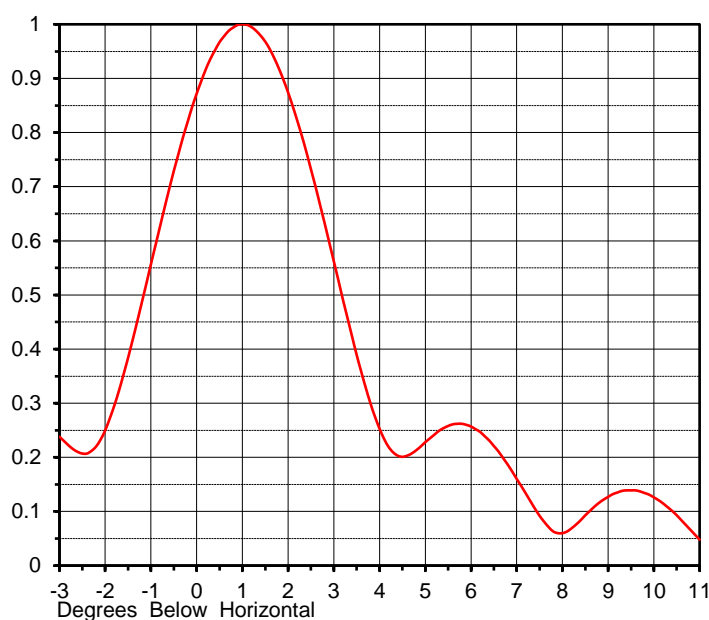
Faces A and C

ELEVATION PATTERN

Proposal No. **C-71142-4**
 Date **9-Oct-18**
 Call Letters **KING**
 Channel **25**
 Frequency **539 MHz**
 Antenna Type **TUA-P4-8/20H-1-R SM**

RMS Directivity at Main Lobe **16.8 (12.26 dB)**
 RMS Directivity at Horizontal **12.8 (11.07 dB)**
Calculated

Beam Tilt **1.00 deg**
 Pattern Number **08U169100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.075	10.0	0.126	30.0	0.038	50.0	0.044	70.0	0.040
-9.0	0.046	11.0	0.048	31.0	0.068	51.0	0.049	71.0	0.047
-8.0	0.133	12.0	0.063	32.0	0.075	52.0	0.040	72.0	0.053
-7.0	0.139	13.0	0.107	33.0	0.056	53.0	0.021	73.0	0.057
-6.0	0.065	14.0	0.079	34.0	0.036	54.0	0.012	74.0	0.057
-5.0	0.161	15.0	0.005	35.0	0.048	55.0	0.029	75.0	0.056
-4.0	0.266	16.0	0.062	36.0	0.060	56.0	0.042	76.0	0.052
-3.0	0.238	17.0	0.081	37.0	0.050	57.0	0.045	77.0	0.048
-2.0	0.250	18.0	0.049	38.0	0.025	58.0	0.038	78.0	0.042
-1.0	0.557	19.0	0.019	39.0	0.025	59.0	0.025	79.0	0.036
0.0	0.872	20.0	0.054	40.0	0.045	60.0	0.016	80.0	0.030
1.0	1.000	21.0	0.056	41.0	0.048	61.0	0.025	81.0	0.024
2.0	0.874	22.0	0.027	42.0	0.031	62.0	0.039	82.0	0.019
3.0	0.562	23.0	0.029	43.0	0.011	63.0	0.048	83.0	0.015
4.0	0.253	24.0	0.050	44.0	0.032	64.0	0.051	84.0	0.011
5.0	0.228	25.0	0.045	45.0	0.049	65.0	0.048	85.0	0.007
6.0	0.257	26.0	0.026	46.0	0.048	66.0	0.041	86.0	0.005
7.0	0.160	27.0	0.025	47.0	0.030	67.0	0.033	87.0	0.003
8.0	0.060	28.0	0.023	48.0	0.002	68.0	0.029	88.0	0.001
9.0	0.127	29.0	0.001	49.0	0.025	69.0	0.032	89.0	0.000
								90.0	0.000

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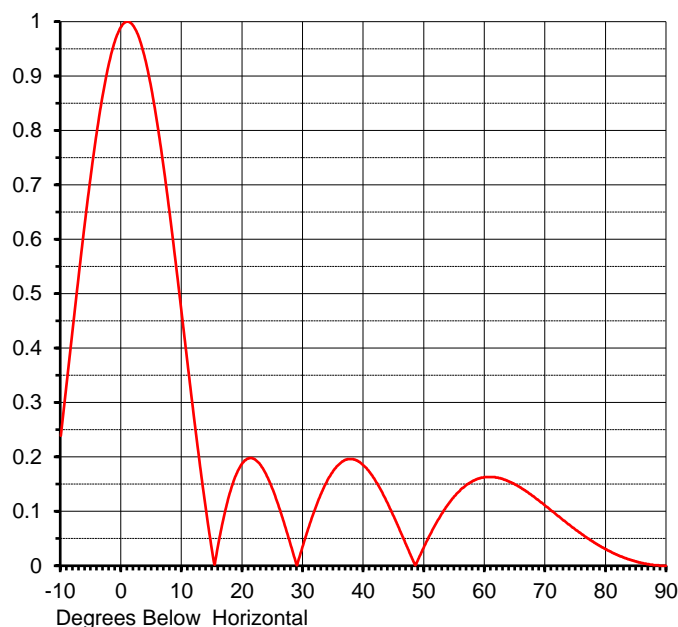
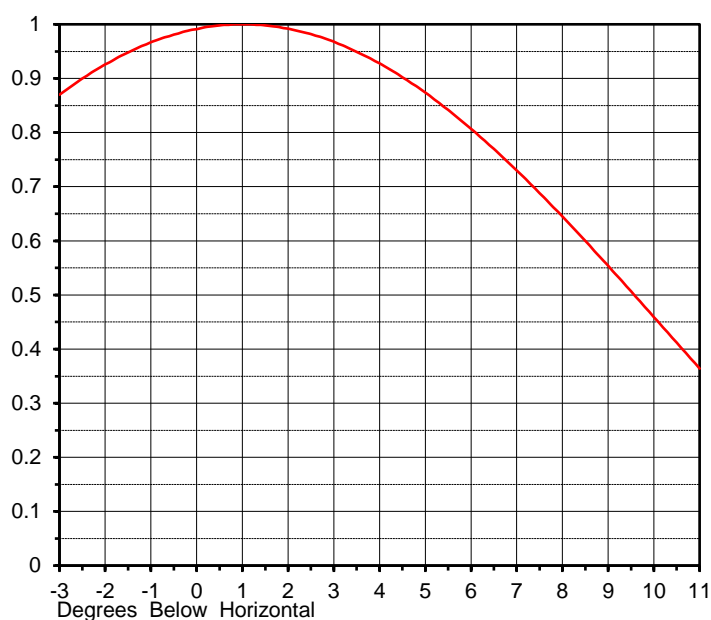
ELEVATION PATTERN

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 Date **9-Oct-18**
 Call Letters **KING**
 Channel **25**
 Frequency **539 MHz**
 Antenna Type **TUA-P4-8/20H-1-R SM**

Faces B and D

RMS Directivity at Main Lobe **4.5 (6.56 dB)**
 RMS Directivity at Horizontal **4.4 (6.43 dB)**
Calculated

Beam Tilt **1.00 deg**
 Pattern Number **02U046100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.239	10.0	0.459	30.0	0.038	50.0	0.036	70.0	0.110
-9.0	0.339	11.0	0.364	31.0	0.073	51.0	0.058	71.0	0.101
-8.0	0.439	12.0	0.271	32.0	0.105	52.0	0.079	72.0	0.092
-7.0	0.538	13.0	0.182	33.0	0.133	53.0	0.097	73.0	0.083
-6.0	0.633	14.0	0.100	34.0	0.157	54.0	0.114	74.0	0.075
-5.0	0.722	15.0	0.025	35.0	0.175	55.0	0.128	75.0	0.066
-4.0	0.802	16.0	0.040	36.0	0.187	56.0	0.140	76.0	0.058
-3.0	0.870	17.0	0.094	37.0	0.195	57.0	0.149	77.0	0.050
-2.0	0.926	18.0	0.137	38.0	0.196	58.0	0.156	78.0	0.043
-1.0	0.967	19.0	0.169	39.0	0.193	59.0	0.160	79.0	0.036
0.0	0.991	20.0	0.189	40.0	0.184	60.0	0.163	80.0	0.030
1.0	1.000	21.0	0.197	41.0	0.172	61.0	0.163	81.0	0.024
2.0	0.992	22.0	0.196	42.0	0.155	62.0	0.162	82.0	0.019
3.0	0.968	23.0	0.185	43.0	0.136	63.0	0.159	83.0	0.015
4.0	0.928	24.0	0.165	44.0	0.114	64.0	0.155	84.0	0.011
5.0	0.874	25.0	0.140	45.0	0.090	65.0	0.149	85.0	0.008
6.0	0.807	26.0	0.108	46.0	0.064	66.0	0.143	86.0	0.005
7.0	0.730	27.0	0.073	47.0	0.039	67.0	0.136	87.0	0.003
8.0	0.645	28.0	0.036	48.0	0.013	68.0	0.128	88.0	0.001
9.0	0.554	29.0	0.001	49.0	0.012	69.0	0.119	89.0	0.000
								90.0	0.000

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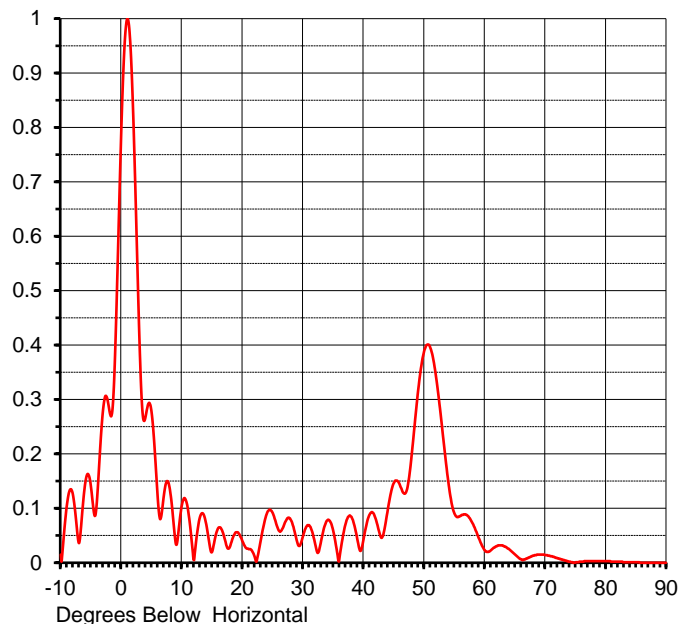
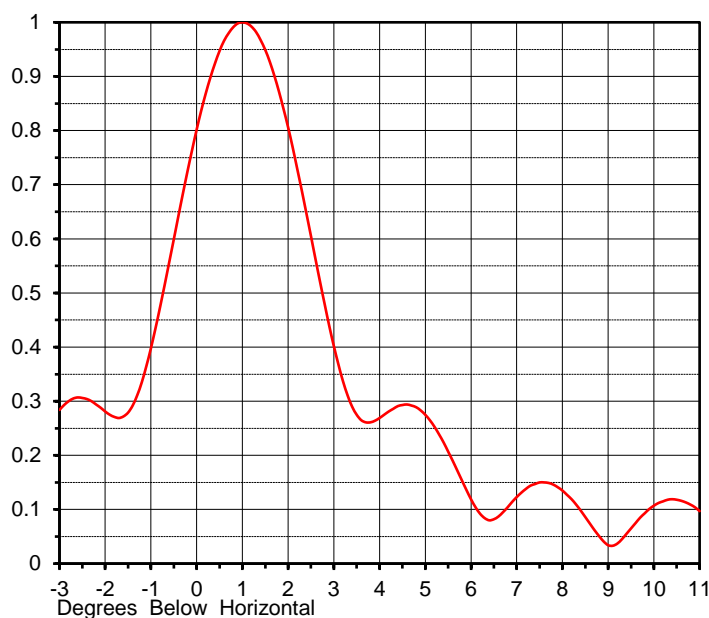
ELEVATION PATTERN

Proposal No. **C-71142-4**
 Date **9-Oct-18**
 Call Letters **KING**
 Channel **48**
 Frequency **677 MHz**
 Antenna Type **TUA-P4-8/20H-1-R SM**

Faces A and C

RMS Directivity at Main Lobe **15.1 (11.78 dB)**
 RMS Directivity at Horizontal **9.7 (9.87 dB)**
Calculated

Beam Tilt **1.00 deg**
 Pattern Number **08U151100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.015	10.0	0.107	30.0	0.050	50.0	0.390	70.0	0.014
-9.0	0.106	11.0	0.097	31.0	0.069	51.0	0.395	71.0	0.012
-8.0	0.125	12.0	0.005	32.0	0.034	52.0	0.337	72.0	0.008
-7.0	0.036	13.0	0.085	33.0	0.042	53.0	0.242	73.0	0.005
-6.0	0.144	14.0	0.071	34.0	0.078	54.0	0.146	74.0	0.002
-5.0	0.137	15.0	0.021	35.0	0.057	55.0	0.090	75.0	0.001
-4.0	0.120	16.0	0.064	36.0	0.009	56.0	0.086	76.0	0.002
-3.0	0.284	17.0	0.046	37.0	0.071	57.0	0.088	77.0	0.003
-2.0	0.281	18.0	0.032	38.0	0.084	58.0	0.072	78.0	0.003
-1.0	0.398	19.0	0.056	39.0	0.040	59.0	0.045	79.0	0.003
0.0	0.802	20.0	0.039	40.0	0.045	60.0	0.023	80.0	0.003
1.0	1.000	21.0	0.025	41.0	0.089	61.0	0.023	81.0	0.002
2.0	0.806	22.0	0.011	42.0	0.080	62.0	0.031	82.0	0.002
3.0	0.402	23.0	0.041	43.0	0.046	63.0	0.031	83.0	0.001
4.0	0.269	24.0	0.090	44.0	0.099	64.0	0.025	84.0	0.001
5.0	0.275	25.0	0.091	45.0	0.147	65.0	0.015	85.0	0.001
6.0	0.119	26.0	0.059	46.0	0.142	66.0	0.006	86.0	0.000
7.0	0.123	27.0	0.074	47.0	0.130	67.0	0.008	87.0	0.000
8.0	0.135	28.0	0.078	48.0	0.207	68.0	0.013	88.0	0.000
9.0	0.034	29.0	0.039	49.0	0.318	69.0	0.015	89.0	0.000
								90.0	0.000

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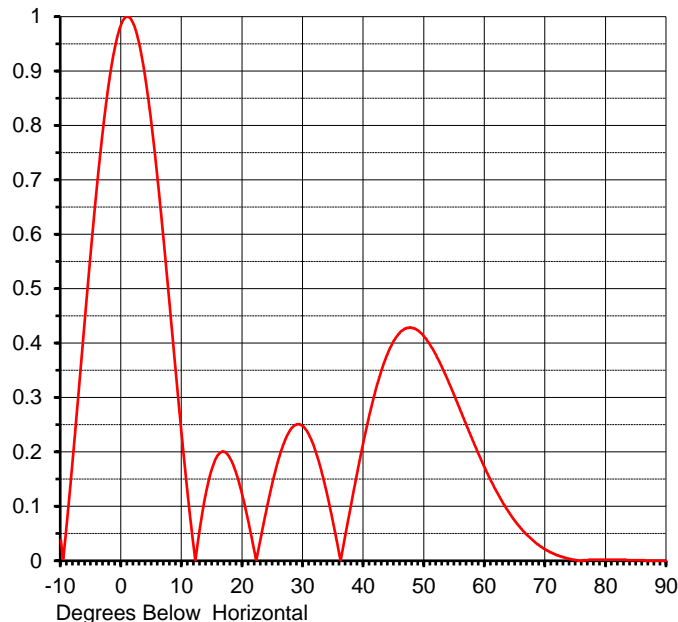
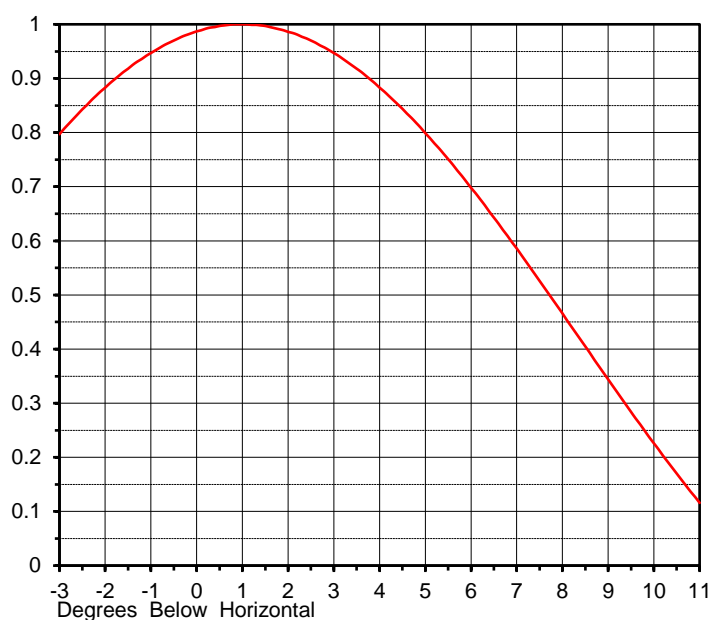
ELEVATION PATTERN

Proposal No. **C-71142-4**
 Date **9-Oct-18**
 Call Letters **KING**
 Channel **48**
 Frequency **677 MHz**
 Antenna Type **TUA-P4-8/20H-1-R SM**

Faces B and D

RMS Directivity at Main Lobe **4.4 (6.40 dB)**
 RMS Directivity at Horizontal **4.3 (6.33 dB)**
Calculated

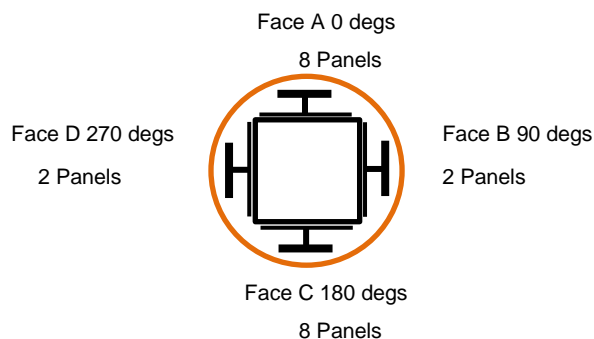
Beam Tilt **1.00 deg**
 Pattern Number **02U044100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.038	10.0	0.226	30.0	0.247	50.0	0.412	70.0	0.021
-9.0	0.070	11.0	0.116	31.0	0.231	51.0	0.396	71.0	0.015
-8.0	0.191	12.0	0.019	32.0	0.203	52.0	0.377	72.0	0.010
-7.0	0.318	13.0	0.063	33.0	0.166	53.0	0.354	73.0	0.006
-6.0	0.448	14.0	0.127	34.0	0.120	54.0	0.329	74.0	0.003
-5.0	0.575	15.0	0.171	35.0	0.067	55.0	0.303	75.0	0.001
-4.0	0.693	16.0	0.195	36.0	0.010	56.0	0.275	76.0	0.000
-3.0	0.797	17.0	0.200	37.0	0.049	57.0	0.248	77.0	0.001
-2.0	0.883	18.0	0.187	38.0	0.108	58.0	0.221	78.0	0.002
-1.0	0.947	19.0	0.159	39.0	0.166	59.0	0.195	79.0	0.002
0.0	0.987	20.0	0.119	40.0	0.221	60.0	0.171	80.0	0.002
1.0	1.000	21.0	0.070	41.0	0.271	61.0	0.147	81.0	0.002
2.0	0.986	22.0	0.015	42.0	0.315	62.0	0.126	82.0	0.002
3.0	0.947	23.0	0.042	43.0	0.352	63.0	0.106	83.0	0.002
4.0	0.883	24.0	0.097	44.0	0.382	64.0	0.089	84.0	0.001
5.0	0.799	25.0	0.147	45.0	0.405	65.0	0.073	85.0	0.001
6.0	0.698	26.0	0.189	46.0	0.420	66.0	0.059	86.0	0.001
7.0	0.586	27.0	0.221	47.0	0.427	67.0	0.047	87.0	0.000
8.0	0.466	28.0	0.242	48.0	0.428	68.0	0.037	88.0	0.000
9.0	0.344	29.0	0.251	49.0	0.423	69.0	0.028	89.0	0.000
								90.0	0.000

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MECHANICAL SPECIFICATIONS



Proposal No. **C-71142-4**
 Date **9-Oct-18**
 Call Letters **KING**
 Channel **25**
 Frequency **539 MHz**
 Antenna Type **TUA-P4-8/20H-1-R SM**

Preliminary Specifications

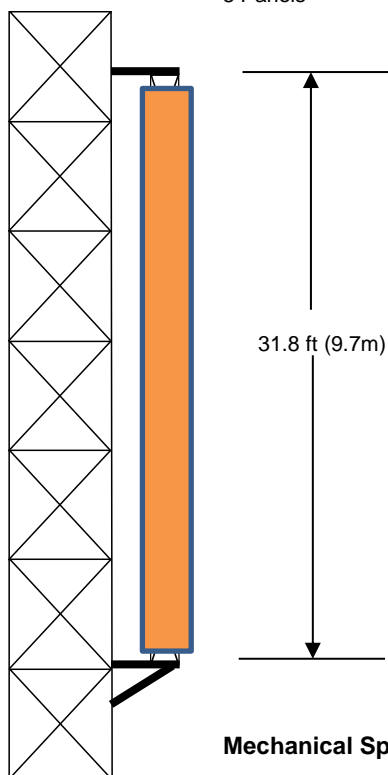
Side Mounted

With ice TIA-222-G

Height AGL(z) 350 ft (106.7 m)
 Basic Wind Speed 90 m/h (144.8 km/h)

Structure Class II
 Exposure Category C
 Topography Category 1

Design Ice 0.5 in $t_{iz} = 1.27$ in
 Wind Speed w/Ice 40 m/h (64.4 km/h)



Mechanical Specifications

		without ice	with ice	
Height	H2	31.8 ft (9.7m)		
Height of Center of Radiation	H3	15.9 ft (4.8m)		
Effective Projected Area	(EPA) _A	68.3 ft ² (6.3m ²)	134.8 ft ² (12.5m ²)	Mounts Excluded
Weight	W	5400 lb (2.4t)	7400 lb (3.4t)	Mounts Excluded

Antenna designed in accordance with AISC specifications for design of structural steel as prescribed by TIA-222-G

Prepared by: JBC
 Rev. No.4 by: JBC

Date: 12-Jun-18
 Date: 9-Oct-18

ME: EE:

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Summary

Proposal No.	C-71142-4
Date	9-Oct-18
Call Letters	KING
Channel	25
Frequency	539 MHz
Antenna Type	TUA-P4-8/20H-1-R SM

Antenna

		Hpol
ERP:	1,000 kW	(30.00 dBk)
Peak Gain*	39.36	(15.95 dB)

Antenna Input Power	25.4 kW	(14.05 dBk)
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Transmission Line

Type:	Rigid	Attenuation:	(0.48 dB)
Size:	6-1/8"	Efficiency:	89.5%
Impedance:	75 Ohm		
Length:	425 ft	129.5 m	

Transmitter Output

28.4 kW	(14.53 dBk)
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Transmitter filter losses not included

* Directivity and Gain are with respect to half wave dipole. The gain includes feed system losses

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Summary

Proposal No.	C-71142-4
Date	9-Oct-18
Call Letters	KING
Channel	48
Frequency	677 MHz
Antenna Type	TUA-P4-8/20H-1-R SM

Antenna

	Hpol
ERP:	1,000 kW (30.00 dBk)
Peak Gain*	43.23 (16.36 dB)

Antenna Input Power	23.1 kW (13.64 dBk)
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Transmission Line

Type:	Rigid	Attenuation:	(0.54 dB)
Size:	6-1/8"	Efficiency:	88.2%
Impedance:	75 Ohm		
Length:	425 ft	129.5 m	

Transmitter Output

26.2 kW (14.19 dBk)

Transmitter filter losses not included

* Directivity and Gain are with respect to half wave dipole. The gain includes feed system losses

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