

ANTENNA SPECIFICATIONS

Compliance with 47 C.F.R. Section 73.682(a)(14)

Antenna polarization: The proposed antenna employs horizontal polarization. No vertical polarization is proposed, thus the antenna is in compliance with 47 C.F.R. Section 73.682(a)(14).

Compliance with 47 C.F.R. Section 73.625(c) and 73.685

Antenna location: The proposed KHRR-DT antenna will be located on Tucson Mountain, one of two main antenna farms serving the Tucson area.

Directional antenna: A directional antenna is proposed. The antenna is a side-mounted slotted coaxial antenna. Tabulated antenna azimuth and elevation pattern data is attached. Azimuth and elevation relative field pattern plots are included. Azimuth and elevation pattern plots showing radiated power in dBk can be prepared and provided if required.

KHRR-DT Application to Modify CP**EXHIBIT 41**
June 22, 2006**TABULATION OF AZIMUTH RADIATION PATTERN: DIELECTRIC TLP-8M (NO ROTATION)****Major lobe axis of symmetry: 36 degrees true (Tabulation at 0 degrees true)****Electrical Beam Tilt: 1.00 degrees****Mechanical Beam Tilt: None****Calculated Maximum Horizontal Plane Azimuth Pattern Gain: 1.90 (2.79dB)****Maximum Horizontal Plane Effective Radiated Power: 12.7 kW**

Angle	Field	ERP (kw)	ERP (dBk)
0	0.895	10.2	10.07
10	0.908	10.5	10.20
20	0.921	10.8	10.32
30	0.942	11.3	10.52
40	0.974	12.0	10.81
50	0.995	12.6	10.99
60	0.985	12.3	10.91
70	0.940	11.2	10.50
80	0.865	9.5	9.78
90	0.775	7.6	8.82
100	0.684	5.9	7.74
110	0.593	4.5	6.50
120	0.497	3.1	4.97
130	0.392	2.0	2.90
140	0.280	1.0	-0.02
150	0.197	0.5	-3.07
160	0.184	0.4	-3.67
170	0.226	0.6	-1.88
180	0.257	0.8	-0.76
190	0.227	0.7	-1.84
200	0.183	0.4	-3.71
210	0.194	0.5	-3.21
220	0.278	1.0	-0.08
230	0.393	2.0	2.93
240	0.502	3.2	5.05
250	0.599	4.6	6.59
260	0.688	6.0	7.79
270	0.778	7.7	8.86
280	0.873	9.7	9.86
290	0.951	11.5	10.60
300	0.993	12.5	10.98
310	0.998	12.6	11.02
320	0.976	12.1	10.83
330	0.944	11.3	10.54
340	0.918	10.7	10.29
350	0.901	10.3	10.13

MAXIMA

Angle	Field	ERP (kw)	ERP (dBk)
52	0.996	12.6	11.00
53	0.996	12.6	11.00
180	0.257	0.8	-0.76
306	1.000	12.7	11.04
307	1.000	12.7	11.04

MINIMA

Angle	Field	ERP (kw)	ERP (dBk)
0	0.895	10.2	10.07
156	0.179	0.4	-3.90
157	0.179	0.4	-3.90
204	0.178	0.4	-3.95

Prepared by Doug Lung, June 22, 2006



Date	16 Dec 2002	Channel	42
Call Letters	KHRR-DT		
Location	Tucson, AZ		
Customer			
Antenna Type	TLP-8M		

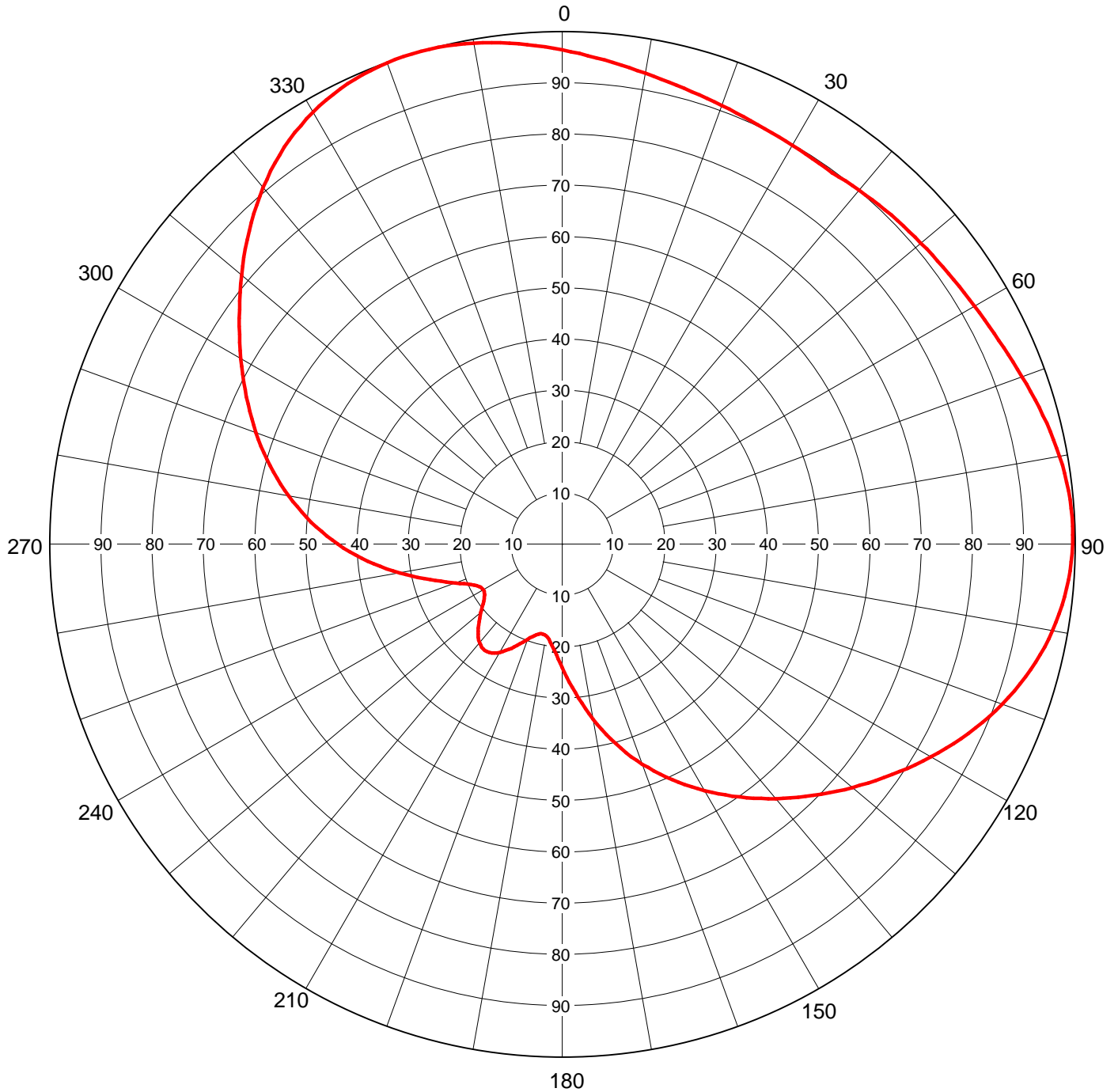
AZIMUTH PATTERN

Gain
Calculated / Measured

1.90 (2.79 dB)
Calculated

Frequency
Drawing #

641 MHz
TLP-M



Remarks: Pattern shown with 36 degree rotation



Date
Call Letters
Location
Customer
Antenna Type

16 Dec 2002
KHRR-DT
Tucson, AZ

TLP-8M

Channel 42

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # TLP-M

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.964	45	0.907	90	0.996	135	0.693	180	0.241	225	0.232	270	0.438	315	0.863
1	0.960	46	0.908	91	0.995	136	0.684	181	0.232	226	0.227	271	0.449	316	0.873
2	0.957	47	0.910	92	0.993	137	0.675	182	0.224	227	0.222	272	0.460	317	0.882
3	0.954	48	0.911	93	0.992	138	0.666	183	0.216	228	0.217	273	0.470	318	0.890
4	0.951	49	0.912	94	0.990	139	0.657	184	0.209	229	0.212	274	0.481	319	0.899
5	0.947	50	0.913	95	0.988	140	0.648	185	0.203	230	0.207	275	0.491	320	0.907
6	0.944	51	0.914	96	0.985	141	0.639	186	0.197	231	0.202	276	0.502	321	0.916
7	0.941	52	0.916	97	0.982	142	0.630	187	0.192	232	0.198	277	0.512	322	0.923
8	0.938	53	0.917	98	0.979	143	0.620	188	0.188	233	0.194	278	0.522	323	0.931
9	0.935	54	0.918	99	0.975	144	0.611	189	0.184	234	0.190	279	0.532	324	0.938
10	0.933	55	0.920	100	0.971	145	0.602	190	0.182	235	0.186	280	0.542	325	0.945
11	0.930	56	0.921	101	0.967	146	0.593	191	0.180	236	0.183	281	0.552	326	0.951
12	0.927	57	0.923	102	0.962	147	0.583	192	0.179	237	0.181	282	0.561	327	0.957
13	0.925	58	0.925	103	0.957	148	0.574	193	0.179	238	0.179	283	0.571	328	0.963
14	0.922	59	0.926	104	0.952	149	0.565	194	0.180	239	0.178	284	0.580	329	0.968
15	0.920	60	0.928	105	0.946	150	0.555	195	0.182	240	0.178	285	0.590	330	0.972
16	0.918	61	0.930	106	0.940	151	0.546	196	0.184	241	0.178	286	0.599	331	0.977
17	0.916	62	0.932	107	0.934	152	0.536	197	0.187	242	0.180	287	0.608	332	0.981
18	0.914	63	0.935	108	0.927	153	0.527	198	0.190	243	0.182	288	0.617	333	0.984
19	0.912	64	0.937	109	0.920	154	0.517	199	0.194	244	0.185	289	0.626	334	0.987
20	0.910	65	0.940	110	0.913	155	0.507	200	0.198	245	0.189	290	0.635	335	0.990
21	0.908	66	0.942	111	0.906	156	0.497	201	0.202	246	0.194	291	0.644	336	0.993
22	0.907	67	0.945	112	0.898	157	0.487	202	0.207	247	0.200	292	0.653	337	0.995
23	0.905	68	0.948	113	0.890	158	0.477	203	0.211	248	0.206	293	0.662	338	0.996
24	0.904	69	0.951	114	0.882	159	0.467	204	0.216	249	0.214	294	0.671	339	0.998
25	0.903	70	0.954	115	0.874	160	0.457	205	0.221	250	0.221	295	0.680	340	0.999
26	0.901	71	0.958	116	0.865	161	0.446	206	0.226	251	0.229	296	0.688	341	1.000
27	0.900	72	0.961	117	0.857	162	0.436	207	0.231	252	0.238	297	0.697	342	1.000
28	0.899	73	0.964	118	0.848	163	0.425	208	0.235	253	0.248	298	0.706	343	1.000
29	0.899	74	0.967	119	0.839	164	0.414	209	0.240	254	0.257	299	0.715	344	1.000
30	0.898	75	0.971	120	0.830	165	0.403	210	0.244	255	0.267	300	0.724	345	0.999
31	0.897	76	0.974	121	0.821	166	0.392	211	0.247	256	0.278	301	0.733	346	0.998
32	0.897	77	0.977	122	0.812	167	0.381	212	0.250	257	0.289	302	0.742	347	0.997
33	0.896	78	0.980	123	0.803	168	0.370	213	0.253	258	0.300	303	0.751	348	0.996
34	0.896	79	0.983	124	0.794	169	0.358	214	0.255	259	0.311	304	0.760	349	0.994
35	0.896	80	0.985	125	0.784	170	0.347	215	0.256	260	0.322	305	0.769	350	0.992
36	0.895	81	0.988	126	0.775	171	0.335	216	0.257	261	0.334	306	0.778	351	0.990
37	0.897	82	0.990	127	0.766	172	0.324	217	0.256	262	0.346	307	0.788	352	0.987
38	0.898	83	0.992	128	0.757	173	0.313	218	0.255	263	0.357	308	0.797	353	0.985
39	0.900	84	0.993	129	0.748	174	0.302	219	0.253	264	0.369	309	0.807	354	0.982
40	0.901	85	0.994	130	0.739	175	0.291	220	0.251	265	0.381	310	0.816	355	0.979
41	0.902	86	0.995	131	0.730	176	0.280	221	0.248	266	0.393	311	0.826	356	0.976
42	0.904	87	0.996	132	0.720	177	0.270	222	0.245	267	0.404	312	0.835	357	0.973
43	0.905	88	0.996	133	0.711	178	0.260	223	0.241	268	0.415	313	0.845	358	0.970
44	0.906	89	0.996	134	0.702	179	0.250	224	0.236	269	0.427	314	0.854	359	0.967

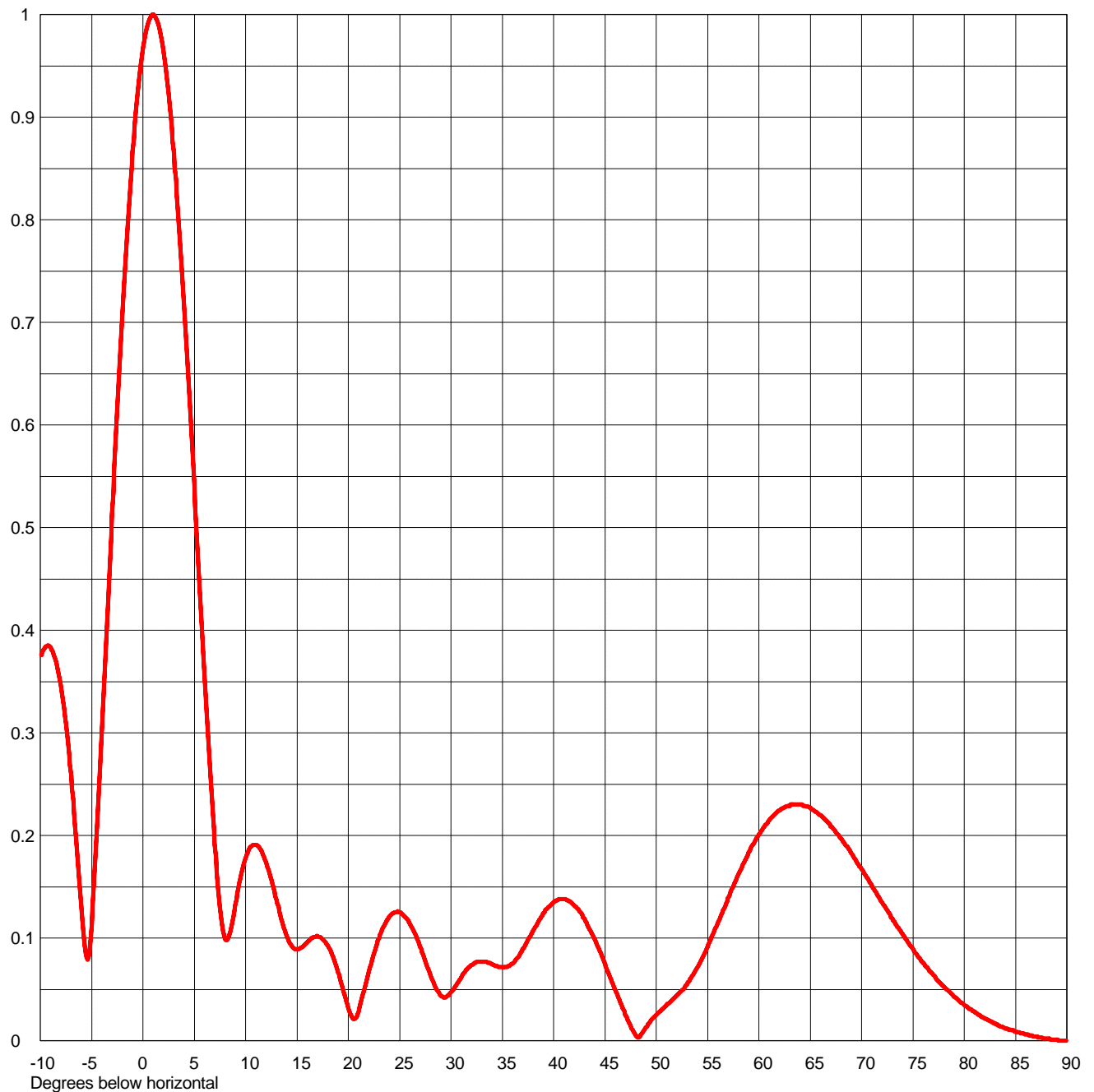
Remarks: Pattern shown with 36 degree rotation



Date	16 Dec 2002	
Call Letters	KHRR-DT	Channel 42
Location	Tucson, AZ	
Customer		
Antenna Type	TLP-8M	

ELEVATION PATTERN

RMS Gain at Main Lobe	8.0 (9.03 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	7.5 (8.75 dB)	Frequency	641.00 MHz
Calculated / Measured	Calculated	Drawing #	08L080100-90



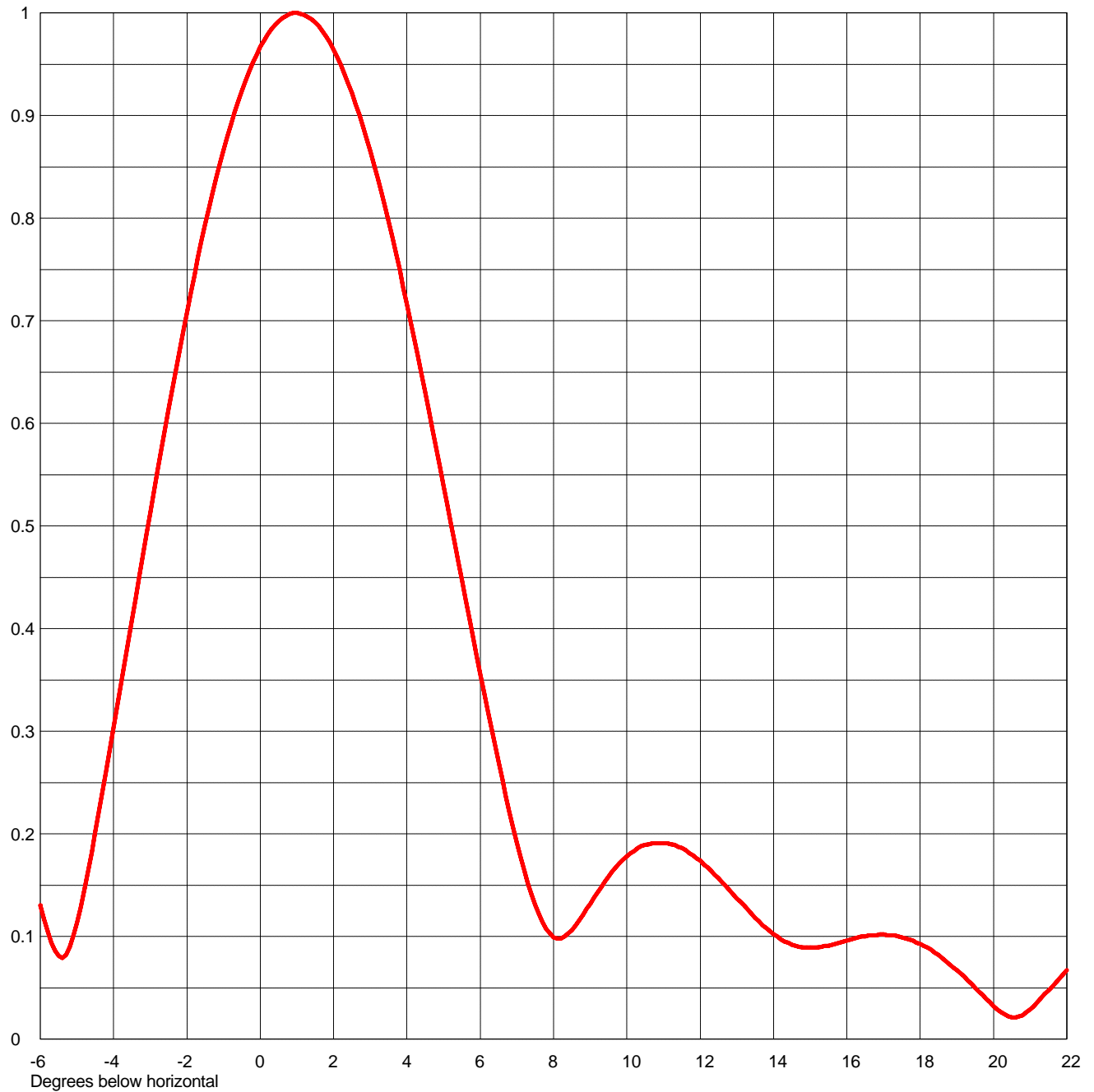
Remarks:



Date	16 Dec 2002	Channel	42
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Location	Tucson, AZ		
Customer			
Antenna Type	TLP-8M		

ELEVATION PATTERN

RMS Gain at Main Lobe	8.0 (9.03 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	7.5 (8.75 dB)	Frequency	641.00 MHz
Calculated / Measured	Calculated	Drawing #	08L080100



Remarks:



Date	16 Dec 2002	Channel	42
Call Letters	KHRR-DT		
Location	Tucson, AZ		
Customer			
Antenna Type	TLP-8M		

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **08L080100**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.374	2.4	0.931	10.6	0.190	30.5	0.054	51.0	0.035	71.5	0.143
-9.5	0.384	2.6	0.911	10.8	0.191	31.0	0.062	51.5	0.039	72.0	0.135
-9.0	0.383	2.8	0.889	11.0	0.191	31.5	0.069	52.0	0.044	72.5	0.127
-8.5	0.371	3.0	0.865	11.5	0.186	32.0	0.074	52.5	0.049	73.0	0.119
-8.0	0.346	3.2	0.839	12.0	0.174	32.5	0.077	53.0	0.055	73.5	0.111
-7.5	0.308	3.4	0.811	12.5	0.157	33.0	0.077	53.5	0.063	74.0	0.104
-7.0	0.258	3.6	0.781	13.0	0.137	33.5	0.077	54.0	0.071	74.5	0.096
-6.5	0.197	3.8	0.750	13.5	0.118	34.0	0.075	54.5	0.081	75.0	0.089
-6.0	0.130	4.0	0.717	14.0	0.102	34.5	0.073	55.0	0.092	75.5	0.082
-5.5	0.081	4.2	0.683	14.5	0.092	35.0	0.072	55.5	0.103	76.0	0.076
-5.0	0.114	4.4	0.648	15.0	0.089	35.5	0.072	56.0	0.115	76.5	0.070
-4.5	0.201	4.6	0.613	15.5	0.091	36.0	0.075	56.5	0.127	77.0	0.064
-4.0	0.303	4.8	0.576	16.0	0.096	36.5	0.081	57.0	0.139	77.5	0.058
-3.5	0.408	5.0	0.539	16.5	0.100	37.0	0.089	57.5	0.150	78.0	0.053
-3.0	0.513	5.2	0.502	17.0	0.102	37.5	0.098	58.0	0.162	78.5	0.048
-2.8	0.555	5.4	0.465	17.5	0.099	38.0	0.107	58.5	0.173	79.0	0.043
-2.6	0.595	5.6	0.428	18.0	0.093	38.5	0.116	59.0	0.183	79.5	0.039
-2.4	0.634	5.8	0.392	18.5	0.082	39.0	0.124	59.5	0.192	80.0	0.035
-2.2	0.672	6.0	0.355	19.0	0.067	39.5	0.130	60.0	0.201	80.5	0.031
-2.0	0.709	6.2	0.320	19.5	0.050	40.0	0.135	60.5	0.208	81.0	0.028
-1.8	0.744	6.4	0.286	20.0	0.032	40.5	0.138	61.0	0.215	81.5	0.025
-1.6	0.778	6.6	0.253	20.5	0.021	41.0	0.138	61.5	0.220	82.0	0.022
-1.4	0.809	6.8	0.221	21.0	0.029	41.5	0.136	62.0	0.224	82.5	0.019
-1.2	0.839	7.0	0.192	21.5	0.047	42.0	0.132	62.5	0.227	83.0	0.017
-1.0	0.866	7.2	0.165	22.0	0.067	42.5	0.126	63.0	0.229	83.5	0.014
-0.8	0.891	7.4	0.141	22.5	0.085	43.0	0.119	63.5	0.230	84.0	0.012
-0.6	0.914	7.6	0.122	23.0	0.100	43.5	0.109	64.0	0.230	84.5	0.011
-0.4	0.934	7.8	0.107	23.5	0.112	44.0	0.099	64.5	0.229	85.0	0.009
-0.2	0.952	8.0	0.099	24.0	0.121	44.5	0.087	65.0	0.227	85.5	0.007
0.0	0.967	8.2	0.098	24.5	0.125	45.0	0.075	65.5	0.223	86.0	0.006
0.2	0.979	8.4	0.103	25.0	0.125	45.5	0.062	66.0	0.220	86.5	0.005
0.4	0.988	8.6	0.111	25.5	0.121	46.0	0.050	66.5	0.215	87.0	0.004
0.6	0.995	8.8	0.121	26.0	0.114	46.5	0.037	67.0	0.209	87.5	0.003
0.8	0.999	9.0	0.132	26.5	0.104	47.0	0.025	67.5	0.203	88.0	0.002
1.0	1.000	9.2	0.143	27.0	0.092	47.5	0.015	68.0	0.197	88.5	0.001
1.2	0.998	9.4	0.154	27.5	0.078	48.0	0.005	68.5	0.190	89.0	0.001
1.4	0.994	9.6	0.163	28.0	0.064	48.5	0.006	69.0	0.183	89.5	0.000
1.6	0.987	9.8	0.171	28.5	0.052	49.0	0.013	69.5	0.175	90.0	0.000
1.8	0.977	10.0	0.178	29.0	0.044	49.5	0.020	70.0	0.167		
2.0	0.964	10.2	0.183	29.5	0.042	50.0	0.025	70.5	0.159		
2.2	0.949	10.4	0.188	30.0	0.047	50.5	0.030	71.0	0.151		

Remarks: