



Date 01 Sep 2017
Call Letters KWHY-TV Channel 4
Location Los Angeles
Customer KWHY-TV, LLC
Antenna Type THA-S4-4/16-1

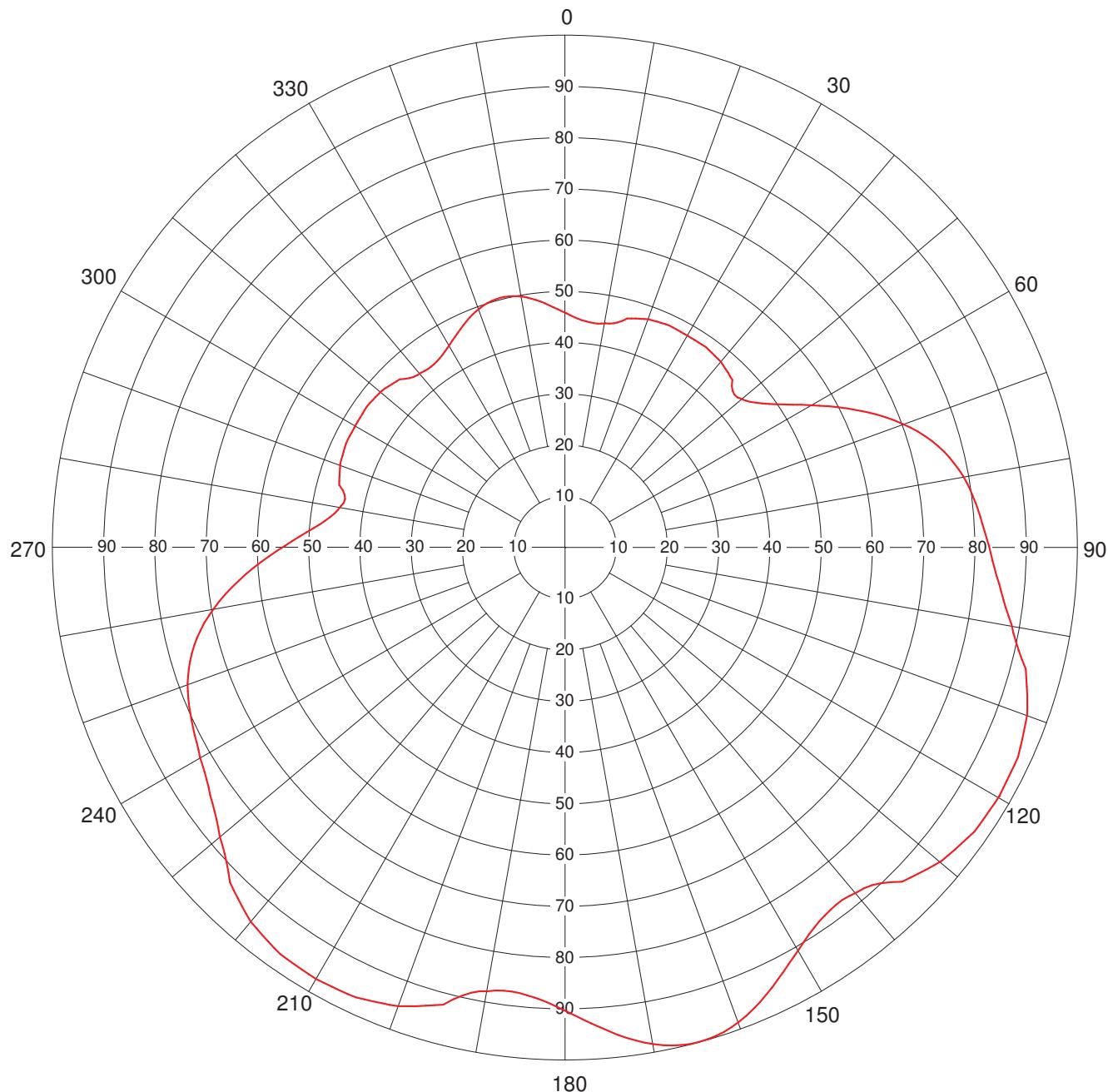
AZIMUTH PATTERN

Gain
Calculated / Measured

1.90 (2.79 dB)
Calculated

Frequency
Drawing #

69 MHz
THA-S4



Remarks:



Exhibit No.

3

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TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **THA-S4**

Angle	Field																
0	0.453	45	0.457	90	0.823	135	0.925	180	0.906	225	0.926	270	0.548	315	0.459		
1	0.449	46	0.449	91	0.827	136	0.910	181	0.899	226	0.915	271	0.534	316	0.452		
2	0.446	47	0.443	92	0.831	137	0.899	182	0.892	227	0.904	272	0.520	317	0.447		
3	0.443	48	0.440	93	0.835	138	0.890	183	0.886	228	0.895	273	0.506	318	0.443		
4	0.441	49	0.441	94	0.840	139	0.884	184	0.882	229	0.887	274	0.494	319	0.441		
5	0.439	50	0.446	95	0.846	140	0.880	185	0.878	230	0.881	275	0.482	320	0.440		
6	0.438	51	0.450	96	0.852	141	0.877	186	0.876	231	0.872	276	0.472	321	0.438		
7	0.437	52	0.456	97	0.858	142	0.875	187	0.874	232	0.864	277	0.463	322	0.437		
8	0.437	53	0.463	98	0.864	143	0.874	188	0.875	233	0.858	278	0.456	323	0.437		
9	0.438	54	0.472	99	0.872	144	0.876	189	0.877	234	0.852	279	0.450	324	0.438		
10	0.440	55	0.482	100	0.881	145	0.878	190	0.880	235	0.846	280	0.446	325	0.439		
11	0.441	56	0.494	101	0.887	146	0.882	191	0.884	236	0.840	281	0.441	326	0.441		
12	0.443	57	0.506	102	0.895	147	0.886	192	0.890	237	0.835	282	0.440	327	0.443		
13	0.447	58	0.520	103	0.904	148	0.892	193	0.899	238	0.831	283	0.443	328	0.446		
14	0.452	59	0.534	104	0.915	149	0.899	194	0.910	239	0.827	284	0.449	329	0.449		
15	0.459	60	0.548	105	0.926	150	0.906	195	0.925	240	0.823	285	0.457	330	0.453		
16	0.461	61	0.564	106	0.932	151	0.914	196	0.931	241	0.819	286	0.460	331	0.457		
17	0.463	62	0.579	107	0.938	152	0.923	197	0.936	242	0.815	287	0.462	332	0.461		
18	0.465	63	0.595	108	0.944	153	0.931	198	0.942	243	0.812	288	0.464	333	0.466		
19	0.467	64	0.610	109	0.950	154	0.940	199	0.948	244	0.808	289	0.466	334	0.470		
20	0.470	65	0.625	110	0.956	155	0.949	200	0.954	245	0.805	290	0.468	335	0.474		
21	0.470	66	0.641	111	0.959	156	0.957	201	0.957	246	0.801	291	0.469	336	0.479		
22	0.471	67	0.656	112	0.962	157	0.965	202	0.960	247	0.798	292	0.470	337	0.483		
23	0.472	68	0.670	113	0.965	158	0.973	203	0.964	248	0.794	293	0.471	338	0.486		
24	0.473	69	0.683	114	0.968	159	0.980	204	0.967	249	0.789	294	0.472	339	0.490		
25	0.474	70	0.696	115	0.971	160	0.986	205	0.970	250	0.785	295	0.473	340	0.493		
26	0.473	71	0.709	116	0.971	161	0.991	206	0.971	251	0.779	296	0.473	341	0.495		
27	0.473	72	0.720	117	0.972	162	0.995	207	0.971	252	0.773	297	0.473	342	0.497		
28	0.473	73	0.731	118	0.972	163	0.998	208	0.972	253	0.766	298	0.473	343	0.499		
29	0.473	74	0.741	119	0.973	164	0.999	209	0.973	254	0.758	299	0.473	344	0.500		
30	0.473	75	0.750	120	0.974	165	1.000	210	0.974	255	0.750	300	0.473	345	0.500		
31	0.473	76	0.758	121	0.973	166	0.999	211	0.973	256	0.741	301	0.473	346	0.500		
32	0.473	77	0.766	122	0.972	167	0.998	212	0.972	257	0.731	302	0.473	347	0.499		
33	0.473	78	0.773	123	0.971	168	0.995	213	0.972	258	0.720	303	0.473	348	0.497		
34	0.473	79	0.779	124	0.971	169	0.991	214	0.971	259	0.709	304	0.473	349	0.495		
35	0.473	80	0.785	125	0.970	170	0.986	215	0.971	260	0.696	305	0.474	350	0.493		
36	0.472	81	0.789	126	0.967	171	0.980	216	0.968	261	0.683	306	0.473	351	0.490		
37	0.471	82	0.794	127	0.964	172	0.973	217	0.965	262	0.670	307	0.472	352	0.486		
38	0.470	83	0.798	128	0.960	173	0.965	218	0.962	263	0.656	308	0.471	353	0.483		
39	0.469	84	0.801	129	0.957	174	0.957	219	0.959	264	0.641	309	0.470	354	0.479		
40	0.468	85	0.805	130	0.954	175	0.949	220	0.956	265	0.625	310	0.470	355	0.474		
41	0.466	86	0.808	131	0.948	176	0.940	221	0.950	266	0.610	311	0.467	356	0.470		
42	0.464	87	0.812	132	0.942	177	0.931	222	0.944	267	0.595	312	0.465	357	0.466		
43	0.462	88	0.815	133	0.936	178	0.923	223	0.938	268	0.579	313	0.463	358	0.461		
44	0.460	89	0.819	134	0.931	179	0.914	224	0.932	269	0.564	314	0.461	359	0.457		

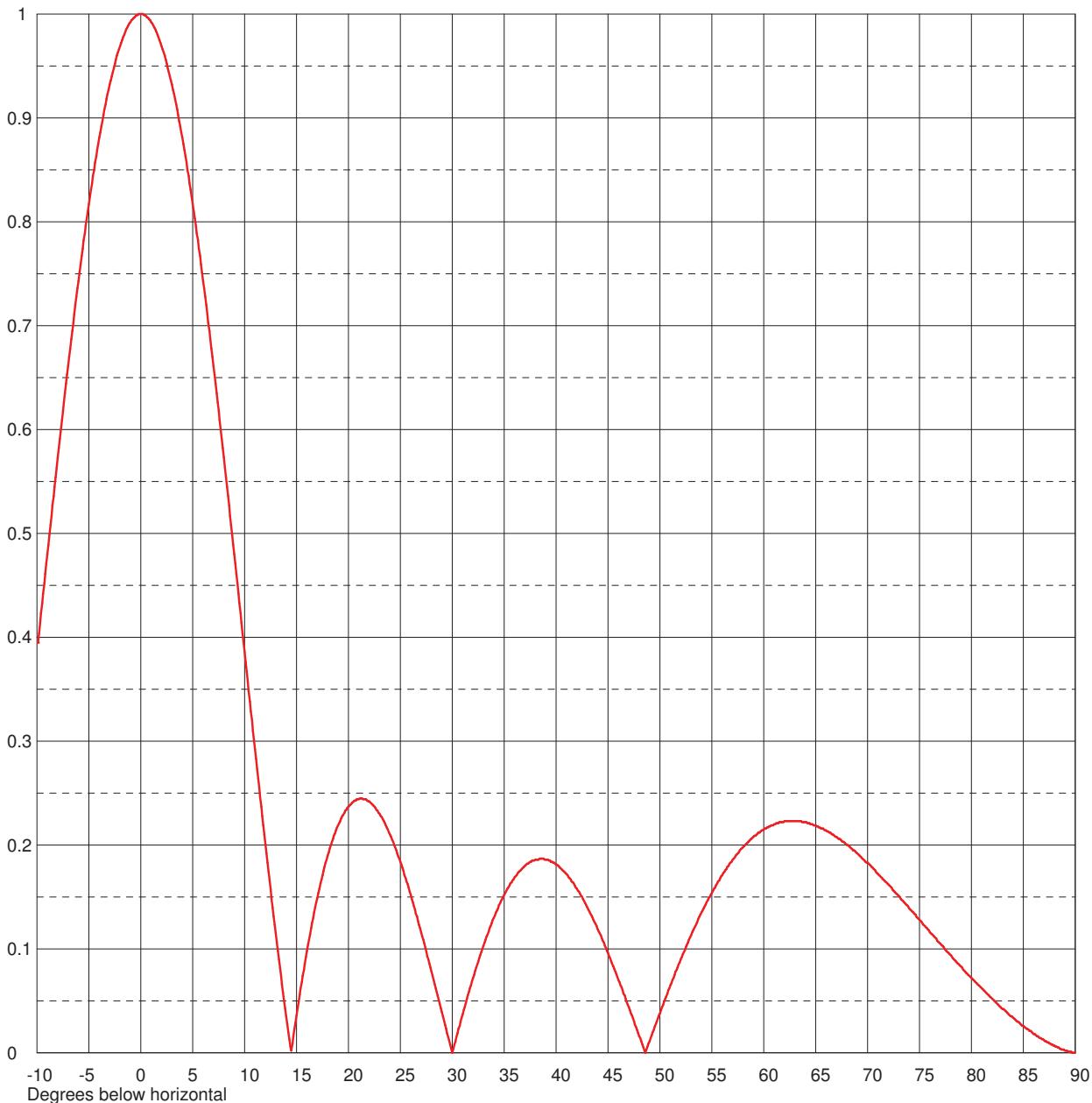
Remarks:



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Antenna Type	THA-S4-4/16-1

ELEVATION PATTERN

RMS Gain at Main Lobe	4.2 (6.23 dB)	Beam Tilt	0.00 Degrees
RMS Gain at Horizontal	4.2 (6.23 dB)	Frequency	69.00 MHz
Calculated / Measured	Calculated	Drawing #	04H042000-90



Remarks:



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TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **04H042000-90**

Angle	Field												
-10.0	0.386	2.4	0.956	10.6	0.329	30.5	0.019	51.0	0.065	71.5	0.167		
-9.5	0.433	2.6	0.948	10.8	0.310	31.0	0.037	51.5	0.078	72.0	0.162		
-9.0	0.480	2.8	0.940	11.0	0.292	31.5	0.055	52.0	0.090	72.5	0.156		
-8.5	0.527	3.0	0.932	11.5	0.246	32.0	0.072	52.5	0.102	73.0	0.151		
-8.0	0.573	3.2	0.923	12.0	0.201	32.5	0.088	53.0	0.113	73.5	0.145		
-7.5	0.618	3.4	0.913	12.5	0.157	33.0	0.103	53.5	0.124	74.0	0.139		
-7.0	0.661	3.6	0.903	13.0	0.115	33.5	0.117	54.0	0.135	74.5	0.134		
-6.5	0.703	3.8	0.892	13.5	0.074	34.0	0.130	54.5	0.145	75.0	0.128		
-6.0	0.743	4.0	0.881	14.0	0.035	34.5	0.142	55.0	0.154	75.5	0.122		
-5.5	0.782	4.2	0.869	14.5	0.002	35.0	0.152	55.5	0.163	76.0	0.116		
-5.0	0.817	4.4	0.857	15.0	0.036	35.5	0.161	56.0	0.171	76.5	0.111		
-4.5	0.850	4.6	0.844	15.5	0.068	36.0	0.169	56.5	0.179	77.0	0.105		
-4.0	0.881	4.8	0.831	16.0	0.098	36.5	0.175	57.0	0.186	77.5	0.099		
-3.5	0.908	5.0	0.817	16.5	0.125	37.0	0.180	57.5	0.192	78.0	0.094		
-3.0	0.932	5.2	0.803	17.0	0.149	37.5	0.184	58.0	0.198	78.5	0.088		
-2.8	0.940	5.4	0.789	17.5	0.171	38.0	0.186	58.5	0.203	79.0	0.083		
-2.6	0.948	5.6	0.774	18.0	0.190	38.5	0.187	59.0	0.208	79.5	0.077		
-2.4	0.956	5.8	0.759	18.5	0.206	39.0	0.186	59.5	0.212	80.0	0.072		
-2.2	0.963	6.0	0.743	19.0	0.219	39.5	0.184	60.0	0.215	80.5	0.067		
-2.0	0.969	6.2	0.728	19.5	0.229	40.0	0.181	60.5	0.218	81.0	0.062		
-1.8	0.975	6.4	0.711	20.0	0.237	40.5	0.177	61.0	0.220	81.5	0.057		
-1.6	0.980	6.6	0.695	20.5	0.242	41.0	0.172	61.5	0.222	82.0	0.052		
-1.4	0.985	6.8	0.678	21.0	0.244	41.5	0.165	62.0	0.223	82.5	0.047		
-1.2	0.989	7.0	0.661	21.5	0.244	42.0	0.158	62.5	0.223	83.0	0.042		
-1.0	0.992	7.2	0.644	22.0	0.242	42.5	0.150	63.0	0.223	83.5	0.038		
-0.8	0.995	7.4	0.626	22.5	0.237	43.0	0.140	63.5	0.223	84.0	0.034		
-0.6	0.997	7.6	0.609	23.0	0.230	43.5	0.130	64.0	0.222	84.5	0.030		
-0.4	0.999	7.8	0.591	23.5	0.221	44.0	0.119	64.5	0.220	85.0	0.026		
-0.2	1.000	8.0	0.573	24.0	0.210	44.5	0.108	65.0	0.219	85.5	0.022		
0.0	1.000	8.2	0.554	24.5	0.198	45.0	0.096	65.5	0.216	86.0	0.018		
0.2	1.000	8.4	0.536	25.0	0.184	45.5	0.083	66.0	0.214	86.5	0.015		
0.4	0.999	8.6	0.517	25.5	0.168	46.0	0.070	66.5	0.211	87.0	0.012		
0.6	0.997	8.8	0.499	26.0	0.152	46.5	0.057	67.0	0.208	87.5	0.009		
0.8	0.995	9.0	0.480	26.5	0.134	47.0	0.044	67.5	0.204	88.0	0.007		
1.0	0.992	9.2	0.461	27.0	0.116	47.5	0.030	68.0	0.200	88.5	0.004		
1.2	0.989	9.4	0.442	27.5	0.097	48.0	0.016	68.5	0.196	89.0	0.002		
1.4	0.985	9.6	0.423	28.0	0.078	48.5	0.002	69.0	0.192	89.5	0.001		
1.6	0.980	9.8	0.404	28.5	0.058	49.0	0.011	69.5	0.187	90.0	0.000		
1.8	0.975	10.0	0.386	29.0	0.039	49.5	0.025	70.0	0.183				
2.0	0.969	10.2	0.367	29.5	0.019	50.0	0.038	70.5	0.178				
2.2	0.963	10.4	0.348	30.0	0.000	50.5	0.052	71.0	0.172				

Remarks: