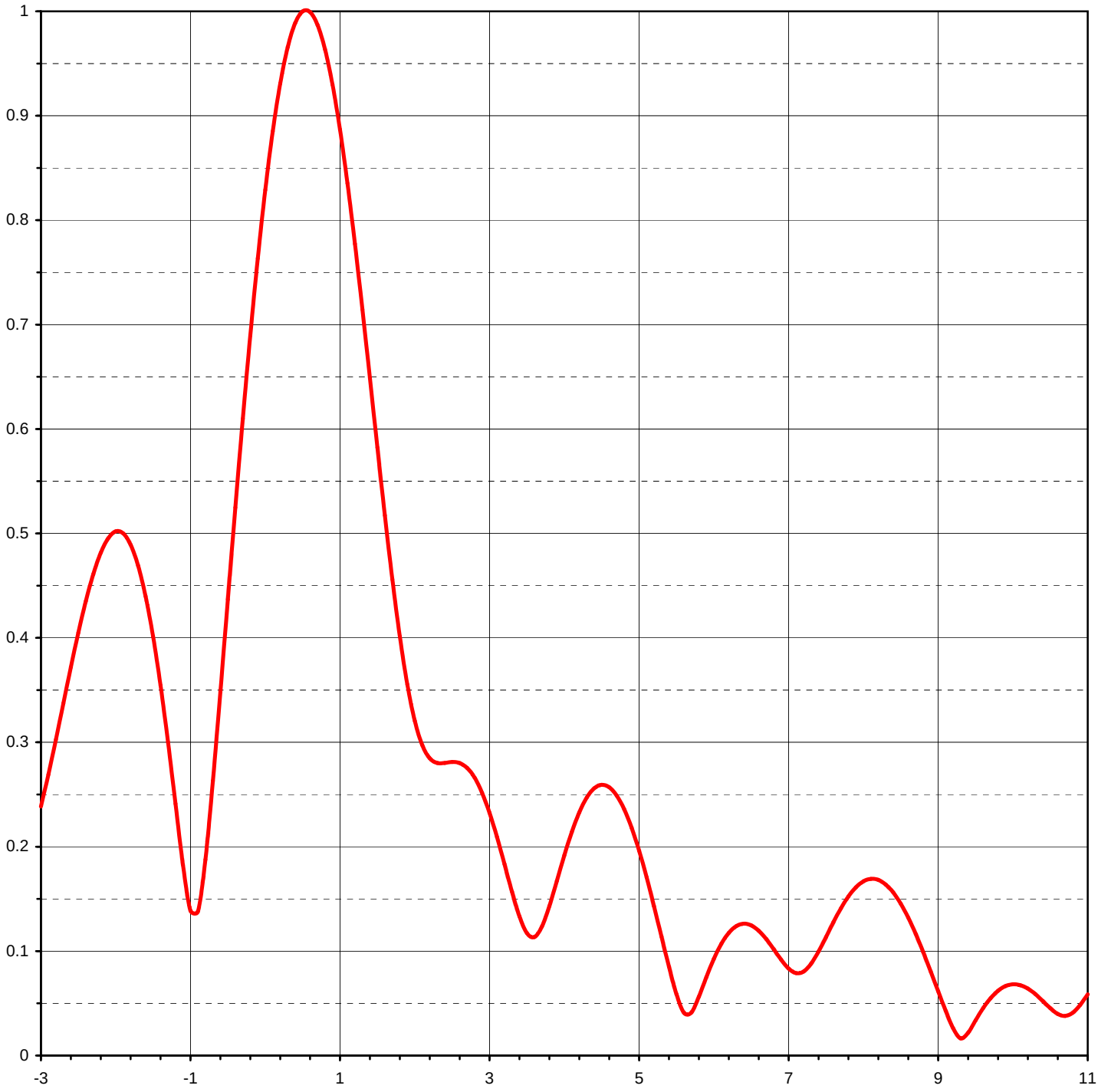
Dielectric

Proposal Number	**DCA-8938**	Revision:	**3**
Date	**6-Jun-01**		
Call Letters		Channel	**39**
Location	**Greenbay, WI**		
Customer	**CBS**		
Antenna Type	**TUD-C5SP-14/70H-1**		

ELEVATION PATTERN

RMS Gain at Main Lobe	**25.70 (14.10 dB)**	Beam Tilt	**0.50 deg**
RMS Gain at Horizontal	**17.70 (12.48 dB)**	Frequency	**623.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**14U257050-B623**



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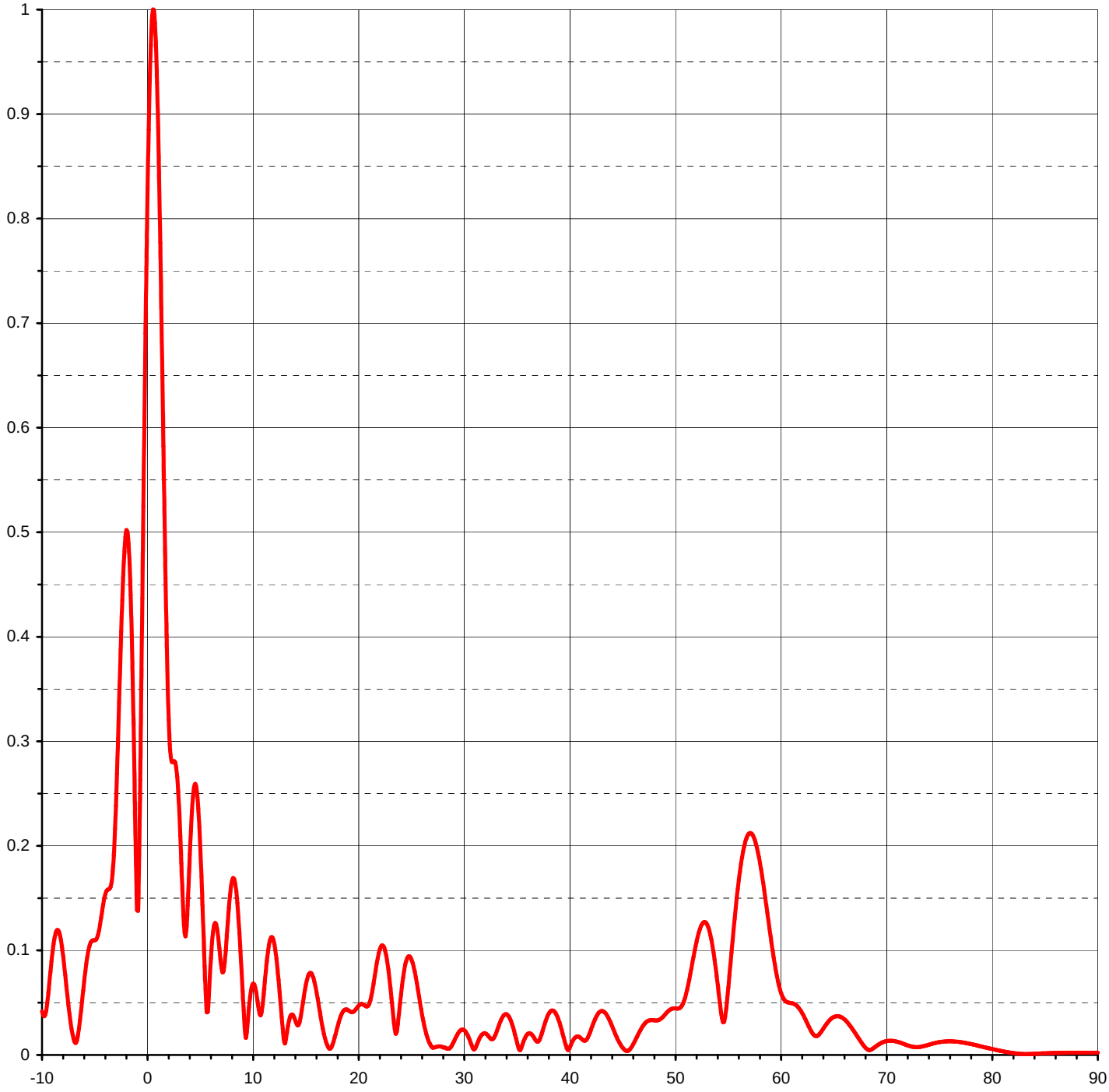
Antenna Type	**TUD-C5SP-14/70H-1**		

ELEVATION PATTERN

RMS Gain at Main Lobe	**25.70 (14.10 dB)**	Beam Tilt	**0.50 deg**
RMS Gain at Horizontal	**17.70 (12.48 dB)**	Frequency	**623.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**14U257050-B623-90**



Dielectric

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Call Letters		Channel	**39**
Location	**Greenbay, WI**		
Customer	**CBS**		
Antenna Type	**TUD-C5SP-14/70H-1**		

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **14U257050-B623-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.042	2.4	0.280	10.6	0.045	30.5	0.017	51.0	0.054	71.5	0.011
-9.5	0.050	2.6	0.280	10.8	0.038	31.0	0.005	51.5	0.077	72.0	0.009
-9.0	0.099	2.8	0.266	11.0	0.049	31.5	0.015	52.0	0.104	72.5	0.008
-8.5	0.119	3.0	0.233	11.5	0.099	32.0	0.021	52.5	0.123	73.0	0.007
-8.0	0.095	3.2	0.183	12.0	0.111	32.5	0.016	53.0	0.126	73.5	0.008
-7.5	0.048	3.4	0.133	12.5	0.072	33.0	0.018	53.5	0.110	74.0	0.010
-7.0	0.015	3.6	0.113	13.0	0.015	33.5	0.032	54.0	0.075	74.5	0.011
-6.5	0.025	3.8	0.143	13.5	0.033	34.0	0.039	54.5	0.035	75.0	0.012
-6.0	0.071	4.0	0.192	14.0	0.036	34.5	0.033	55.0	0.054	75.5	0.013
-5.5	0.104	4.2	0.233	14.5	0.032	35.0	0.016	55.5	0.109	76.0	0.013
-5.0	0.110	4.4	0.256	15.0	0.062	35.5	0.007	56.0	0.159	76.5	0.013
-4.5	0.125	4.6	0.257	15.5	0.079	36.0	0.019	56.5	0.194	77.0	0.012
-4.0	0.154	4.8	0.236	16.0	0.065	36.5	0.019	57.0	0.211	77.5	0.011
-3.5	0.161	5.0	0.196	16.5	0.036	37.0	0.013	57.5	0.208	78.0	0.010
-3.0	0.238	5.2	0.143	17.0	0.013	37.5	0.023	58.0	0.189	78.5	0.009
-2.8	0.303	5.4	0.085	17.5	0.007	38.0	0.038	58.5	0.157	79.0	0.008
-2.6	0.372	5.6	0.041	18.0	0.024	38.5	0.042	59.0	0.121	79.5	0.007
-2.4	0.435	5.8	0.056	18.5	0.040	39.0	0.034	59.5	0.087	80.0	0.006
-2.2	0.481	6.0	0.093	19.0	0.043	39.5	0.017	60.0	0.062	80.5	0.004
-2.0	0.502	6.2	0.117	19.5	0.041	40.0	0.005	60.5	0.052	81.0	0.004
-1.8	0.489	6.4	0.126	20.0	0.046	40.5	0.016	61.0	0.050	81.5	0.003
-1.6	0.440	6.6	0.119	20.5	0.048	41.0	0.017	61.5	0.048	82.0	0.002
-1.4	0.355	6.8	0.102	21.0	0.047	41.5	0.014	62.0	0.042	82.5	0.001
-1.2	0.241	7.0	0.083	21.5	0.068	42.0	0.022	62.5	0.032	83.0	0.001
-1.0	0.139	7.2	0.080	22.0	0.097	42.5	0.035	63.0	0.022	83.5	0.001
-0.8	0.188	7.4	0.100	22.5	0.103	43.0	0.042	63.5	0.018	84.0	0.001
-0.6	0.348	7.6	0.128	23.0	0.073	43.5	0.040	64.0	0.024	84.5	0.001
-0.4	0.525	7.8	0.152	23.5	0.025	44.0	0.030	64.5	0.032	85.0	0.002
-0.2	0.690	8.0	0.167	24.0	0.049	44.5	0.018	65.0	0.036	85.5	0.002
0.0	0.829	8.2	0.168	24.5	0.086	45.0	0.008	65.5	0.037	86.0	0.002
0.2	0.931	8.4	0.156	25.0	0.093	45.5	0.004	66.0	0.034	86.5	0.002
0.4	0.989	8.6	0.132	25.5	0.075	46.0	0.009	66.5	0.028	87.0	0.002
0.6	0.999	8.8	0.099	26.0	0.044	46.5	0.018	67.0	0.021	87.5	0.002
0.8	0.964	9.0	0.062	26.5	0.020	47.0	0.028	67.5	0.013	88.0	0.002
1.0	0.887	9.2	0.026	27.0	0.008	47.5	0.033	68.0	0.007	88.5	0.002
1.2	0.777	9.4	0.022	27.5	0.008	48.0	0.033	68.5	0.005	89.0	0.002
1.4	0.649	9.6	0.045	28.0	0.008	48.5	0.033	69.0	0.008	89.5	0.002
1.6	0.517	9.8	0.055	28.5	0.006	49.0	0.037	69.5	0.012	90.0	0.002
1.8	0.401	10.0	0.067	29.0	0.011	49.5	0.043	70.0	0.013		
2.0	0.320	10.2	0.067	29.5	0.021	50.0	0.045	70.5	0.014		
2.2	0.285	10.4	0.059	30.0	0.024	50.5	0.045	71.0	0.013		

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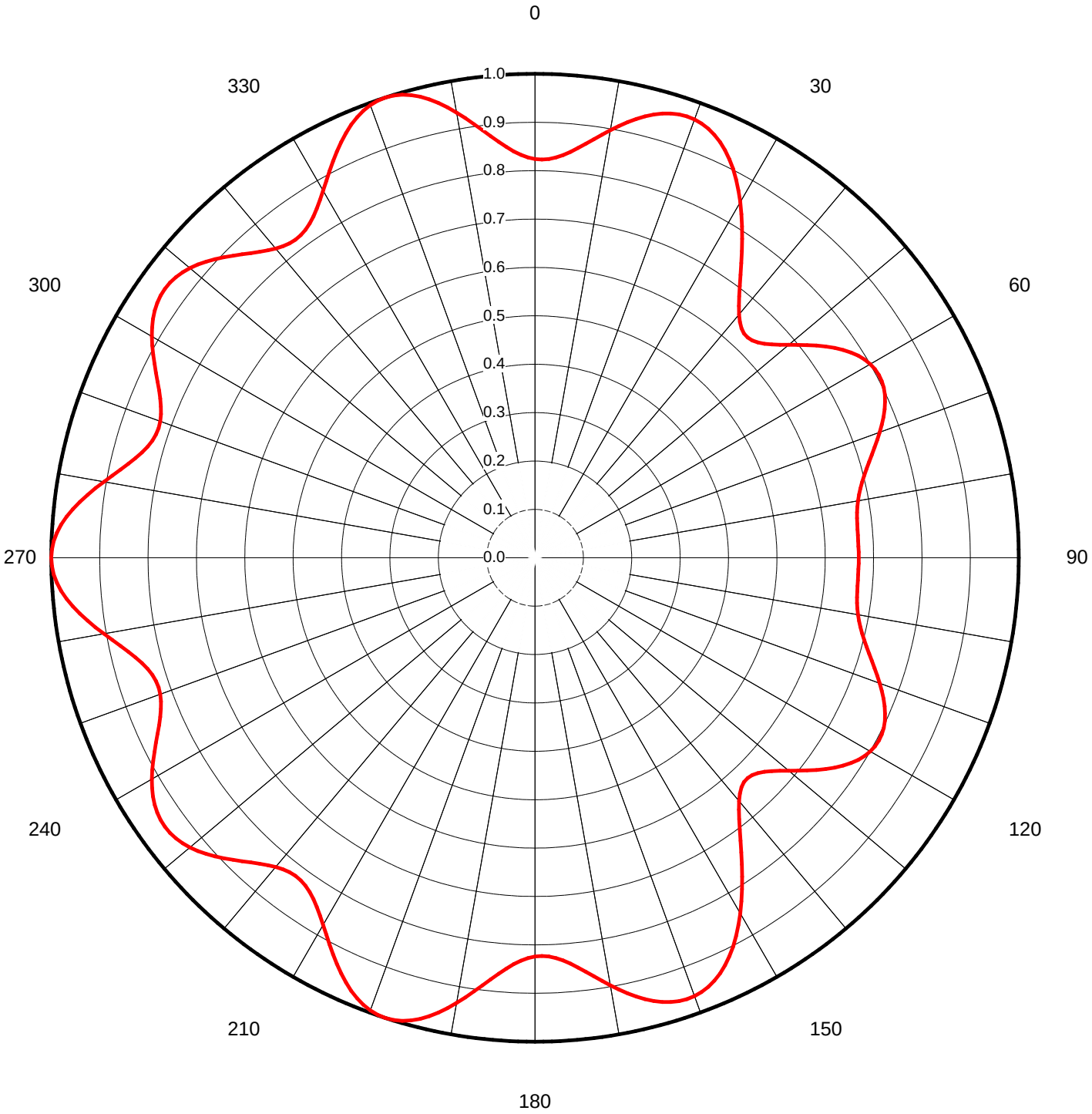
Antenna Type	**TUD-C5SP-14/70H-1**		

AZIMUTH PATTERN

Gain	**1.39**	**(1.43 dB)**	
Calculated / Measured	**Calculated**		
Frequency	**623.00 MHz**		
Drawing #	**TUD-C5SP-623**		



Dielectric

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Call Letters		Channel	**39**
Location	**Greenbay, WI**		
Customer	**CBS**		
Antenna Type	**TUD-C5SP-14/70H-1**		

TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TUD-C5SP-623**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.824	45	0.635	90	0.669	135	0.635	180	0.824	225	0.883	270	1.000	315	0.883
1	0.823	46	0.640	91	0.669	136	0.633	181	0.827	226	0.894	271	0.999	316	0.872
2	0.825	47	0.648	92	0.669	137	0.634	182	0.833	227	0.905	272	0.995	317	0.861
3	0.828	48	0.659	93	0.669	138	0.638	183	0.841	228	0.915	273	0.990	318	0.851
4	0.834	49	0.671	94	0.669	139	0.646	184	0.851	229	0.924	274	0.982	319	0.842
5	0.842	50	0.685	95	0.669	140	0.656	185	0.863	230	0.931	275	0.972	320	0.834
6	0.851	51	0.699	96	0.670	141	0.670	186	0.876	231	0.937	276	0.961	321	0.828
7	0.862	52	0.714	97	0.671	142	0.685	187	0.890	232	0.942	277	0.948	322	0.825
8	0.873	53	0.729	98	0.672	143	0.703	188	0.905	233	0.945	278	0.934	323	0.823
9	0.885	54	0.743	99	0.675	144	0.723	189	0.920	234	0.946	279	0.920	324	0.824
10	0.897	55	0.756	100	0.678	145	0.743	190	0.934	235	0.945	280	0.905	325	0.827
11	0.909	56	0.768	101	0.682	146	0.765	191	0.948	236	0.942	281	0.890	326	0.833
12	0.920	57	0.779	102	0.688	147	0.786	192	0.961	237	0.937	282	0.876	327	0.841
13	0.931	58	0.788	103	0.694	148	0.807	193	0.972	238	0.931	283	0.863	328	0.851
14	0.940	59	0.795	104	0.701	149	0.828	194	0.982	239	0.924	284	0.851	329	0.863
15	0.948	60	0.800	105	0.710	150	0.849	195	0.990	240	0.915	285	0.841	330	0.876
16	0.955	61	0.804	106	0.718	151	0.868	196	0.995	241	0.905	286	0.833	331	0.890
17	0.960	62	0.805	107	0.728	152	0.885	197	0.999	242	0.894	287	0.827	332	0.905
18	0.963	63	0.804	108	0.738	153	0.902	198	1.000	243	0.883	288	0.824	333	0.920
19	0.965	64	0.802	109	0.748	154	0.916	199	0.999	244	0.872	289	0.823	334	0.934
20	0.964	65	0.798	110	0.758	155	0.929	200	0.995	245	0.861	290	0.825	335	0.948
21	0.961	66	0.792	111	0.768	156	0.940	201	0.990	246	0.851	291	0.828	336	0.961
22	0.956	67	0.785	112	0.777	157	0.949	202	0.982	247	0.842	292	0.834	337	0.972
23	0.949	68	0.777	113	0.785	158	0.956	203	0.972	248	0.834	293	0.842	338	0.982
24	0.940	69	0.768	114	0.792	159	0.961	204	0.961	249	0.828	294	0.851	339	0.990
25	0.929	70	0.758	115	0.798	160	0.964	205	0.948	250	0.825	295	0.861	340	0.995
26	0.916	71	0.748	116	0.802	161	0.965	206	0.934	251	0.823	296	0.872	341	0.999
27	0.902	72	0.738	117	0.804	162	0.963	207	0.920	252	0.824	297	0.883	342	1.000
28	0.885	73	0.728	118	0.805	163	0.960	208	0.905	253	0.827	298	0.894	343	0.999
29	0.868	74	0.718	119	0.804	164	0.955	209	0.890	254	0.833	299	0.905	344	0.995
30	0.849	75	0.710	120	0.800	165	0.948	210	0.876	255	0.841	300	0.915	345	0.990
31	0.828	76	0.701	121	0.795	166	0.940	211	0.863	256	0.851	301	0.924	346	0.982
32	0.807	77	0.694	122	0.788	167	0.931	212	0.851	257	0.863	302	0.931	347	0.972
33	0.786	78	0.688	123	0.779	168	0.920	213	0.841	258	0.876	303	0.937	348	0.961
34	0.765	79	0.682	124	0.768	169	0.909	214	0.833	259	0.890	304	0.942	349	0.948
35	0.743	80	0.678	125	0.756	170	0.897	215	0.827	260	0.905	305	0.945	350	0.934
36	0.723	81	0.675	126	0.743	171	0.885	216	0.824	261	0.920	306	0.946	351	0.920
37	0.703	82	0.672	127	0.729	172	0.873	217	0.823	262	0.934	307	0.945	352	0.905
38	0.685	83	0.671	128	0.714	173	0.862	218	0.825	263	0.948	308	0.942	353	0.890
39	0.670	84	0.670	129	0.699	174	0.851	219	0.828	264	0.961	309	0.937	354	0.876
40	0.656	85	0.669	130	0.685	175	0.842	220	0.834	265	0.972	310	0.931	355	0.863
41	0.646	86	0.669	131	0.671	176	0.834	221	0.842	266	0.982	311	0.924	356	0.851
42	0.638	87	0.669	132	0.659	177	0.828	222	0.851	267	0.990	312	0.915	357	0.841
43	0.634	88	0.669	133	0.648	178	0.825	223	0.861	268	0.995	313	0.905	358	0.833
44	0.633	89	0.669	134	0.640	179	0.823	224	0.872	269	0.999	314	0.894	359	0.827