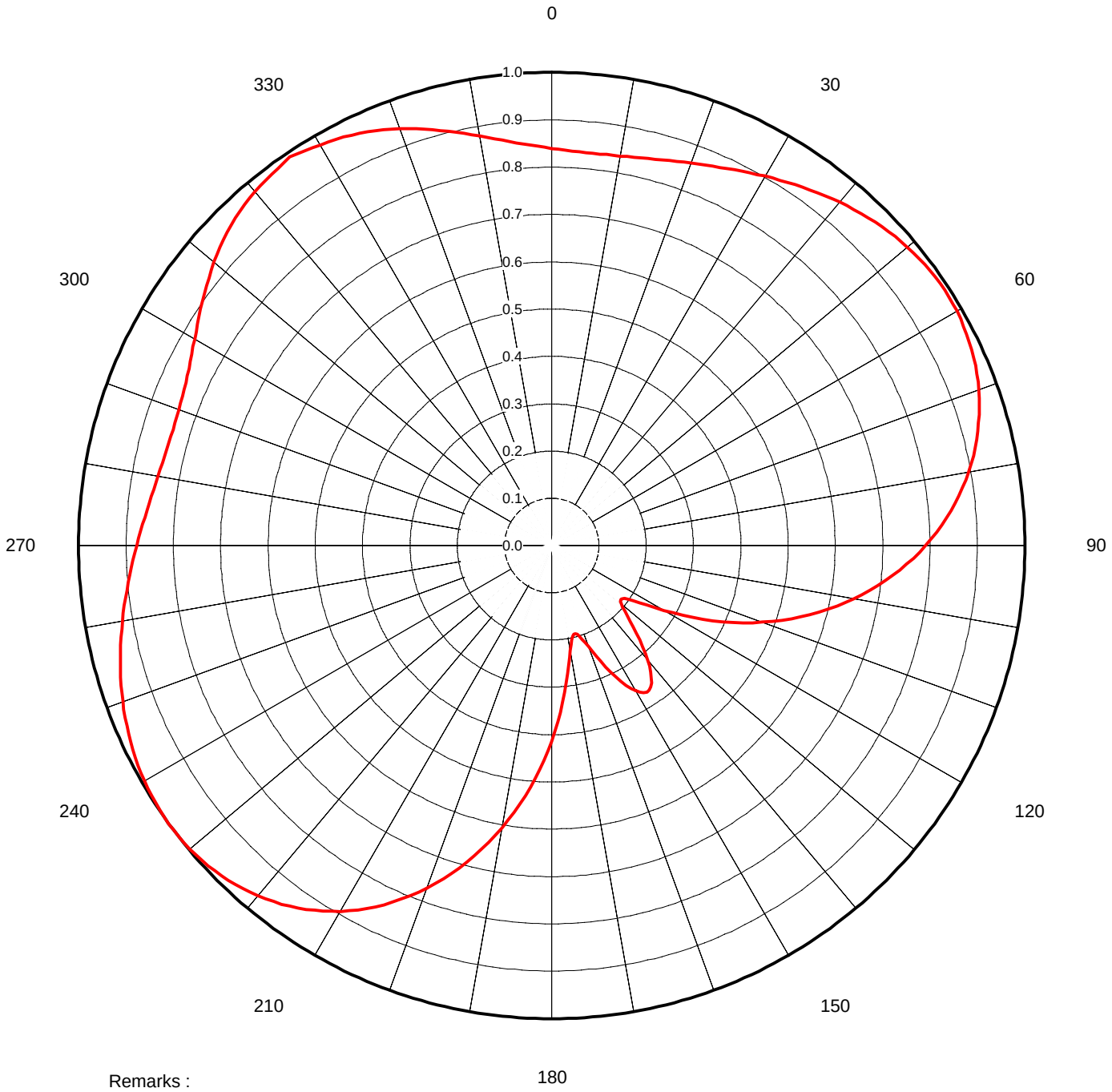
DIELECTRIC COMMUNICATIONS
A UNIT OF GENERAL SIGNAL

Proposal Number	**DCA-7871**		
Date	**13-Mar-98**		
Call Letters	**WDIV-DT**	Channel	**45**
Location	**Detroit, MI**		
Customer			
Antenna Type	**TFU-18DSC-R CT3**		

AZIMUTH PATTERN

Gain	**1.56**	**(1.93 dB)**
Calculated / Measured	**Calculated**	

Frequency	**659.00 MHz**
Drawing #	**CT3**



Remarks :

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TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **CT3**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.839	45	0.966	90	0.790	135	0.244	180	0.414	225	0.987	270	0.877	315	0.958
1	0.837	46	0.970	91	0.777	136	0.258	181	0.434	226	0.990	271	0.873	316	0.962
2	0.836	47	0.973	92	0.764	137	0.273	182	0.454	227	0.992	272	0.869	317	0.966
3	0.835	48	0.976	93	0.751	138	0.287	183	0.473	228	0.994	273	0.865	318	0.970
4	0.834	49	0.978	94	0.738	139	0.302	184	0.493	229	0.996	274	0.862	319	0.973
5	0.833	50	0.981	95	0.724	140	0.316	185	0.512	230	0.998	275	0.858	320	0.976
6	0.833	51	0.983	96	0.709	141	0.328	186	0.531	231	0.999	276	0.855	321	0.978
7	0.833	52	0.985	97	0.695	142	0.340	187	0.550	232	0.999	277	0.852	322	0.981
8	0.834	53	0.987	98	0.679	143	0.350	188	0.569	233	1.000	278	0.850	323	0.983
9	0.835	54	0.988	99	0.664	144	0.359	189	0.588	234	1.000	279	0.847	324	0.985
10	0.836	55	0.989	100	0.648	145	0.365	190	0.606	235	1.000	280	0.845	325	0.987
11	0.837	56	0.990	101	0.632	146	0.368	191	0.624	236	0.999	281	0.843	326	0.990
12	0.839	57	0.990	102	0.616	147	0.369	192	0.641	237	0.998	282	0.841	327	0.987
13	0.841	58	0.990	103	0.599	148	0.367	193	0.659	238	0.997	283	0.840	328	0.983
14	0.843	59	0.990	104	0.582	149	0.362	194	0.676	239	0.996	284	0.838	329	0.981
15	0.845	60	0.989	105	0.565	150	0.355	195	0.692	240	0.994	285	0.838	330	0.978
16	0.848	61	0.988	106	0.547	151	0.345	196	0.709	241	0.992	286	0.837	331	0.975
17	0.850	62	0.986	107	0.529	152	0.335	197	0.725	242	0.990	287	0.837	332	0.972
18	0.853	63	0.984	108	0.511	153	0.322	198	0.740	243	0.987	288	0.837	333	0.968
19	0.856	64	0.982	109	0.493	154	0.309	199	0.755	244	0.985	289	0.838	334	0.965
20	0.860	65	0.979	110	0.474	155	0.295	200	0.770	245	0.982	290	0.839	335	0.961
21	0.863	66	0.976	111	0.455	156	0.281	201	0.785	246	0.979	291	0.840	336	0.957
22	0.867	67	0.973	112	0.436	157	0.267	202	0.799	247	0.975	292	0.842	337	0.952
23	0.871	68	0.969	113	0.416	158	0.253	203	0.812	248	0.972	293	0.844	338	0.948
24	0.875	69	0.965	114	0.396	159	0.240	204	0.825	249	0.968	294	0.847	339	0.942
25	0.879	70	0.960	115	0.376	160	0.228	205	0.837	250	0.964	295	0.850	340	0.937
26	0.883	71	0.956	116	0.355	161	0.217	206	0.849	251	0.960	296	0.853	341	0.932
27	0.888	72	0.950	117	0.335	162	0.208	207	0.861	252	0.956	297	0.857	342	0.926
28	0.892	73	0.945	118	0.314	163	0.200	208	0.872	253	0.952	298	0.862	343	0.920
29	0.896	74	0.939	119	0.294	164	0.195	209	0.882	254	0.948	299	0.866	344	0.914
30	0.901	75	0.932	120	0.274	165	0.193	210	0.892	255	0.944	300	0.871	345	0.908
31	0.906	76	0.925	121	0.255	166	0.193	211	0.902	256	0.939	301	0.877	346	0.902
32	0.910	77	0.918	122	0.238	167	0.197	212	0.911	257	0.935	302	0.883	347	0.896
33	0.915	78	0.911	123	0.222	168	0.204	213	0.919	258	0.930	303	0.888	348	0.890
34	0.920	79	0.903	124	0.209	169	0.213	214	0.927	259	0.926	304	0.895	349	0.884
35	0.924	80	0.894	125	0.198	170	0.225	215	0.935	260	0.921	305	0.901	350	0.879
36	0.929	81	0.886	126	0.190	171	0.240	216	0.942	261	0.916	306	0.907	351	0.873
37	0.933	82	0.877	127	0.186	172	0.256	217	0.949	262	0.912	307	0.913	352	0.868
38	0.938	83	0.867	128	0.185	173	0.274	218	0.955	263	0.907	308	0.919	353	0.863
39	0.942	84	0.857	129	0.187	174	0.292	219	0.961	264	0.903	309	0.925	354	0.859
40	0.947	85	0.847	130	0.192	175	0.312	220	0.966	265	0.898	310	0.931	355	0.854
41	0.951	86	0.836	131	0.199	176	0.332	221	0.971	266	0.894	311	0.937	356	0.850
42	0.955	87	0.825	132	0.208	177	0.353	222	0.976	267	0.889	312	0.943	357	0.847
43	0.959	88	0.814	133	0.219	178	0.373	223	0.980	268	0.885	313	0.948	358	0.844
44	0.963	89	0.802	134	0.231	179	0.393	224	0.983	269	0.881	314	0.953	359	0.841

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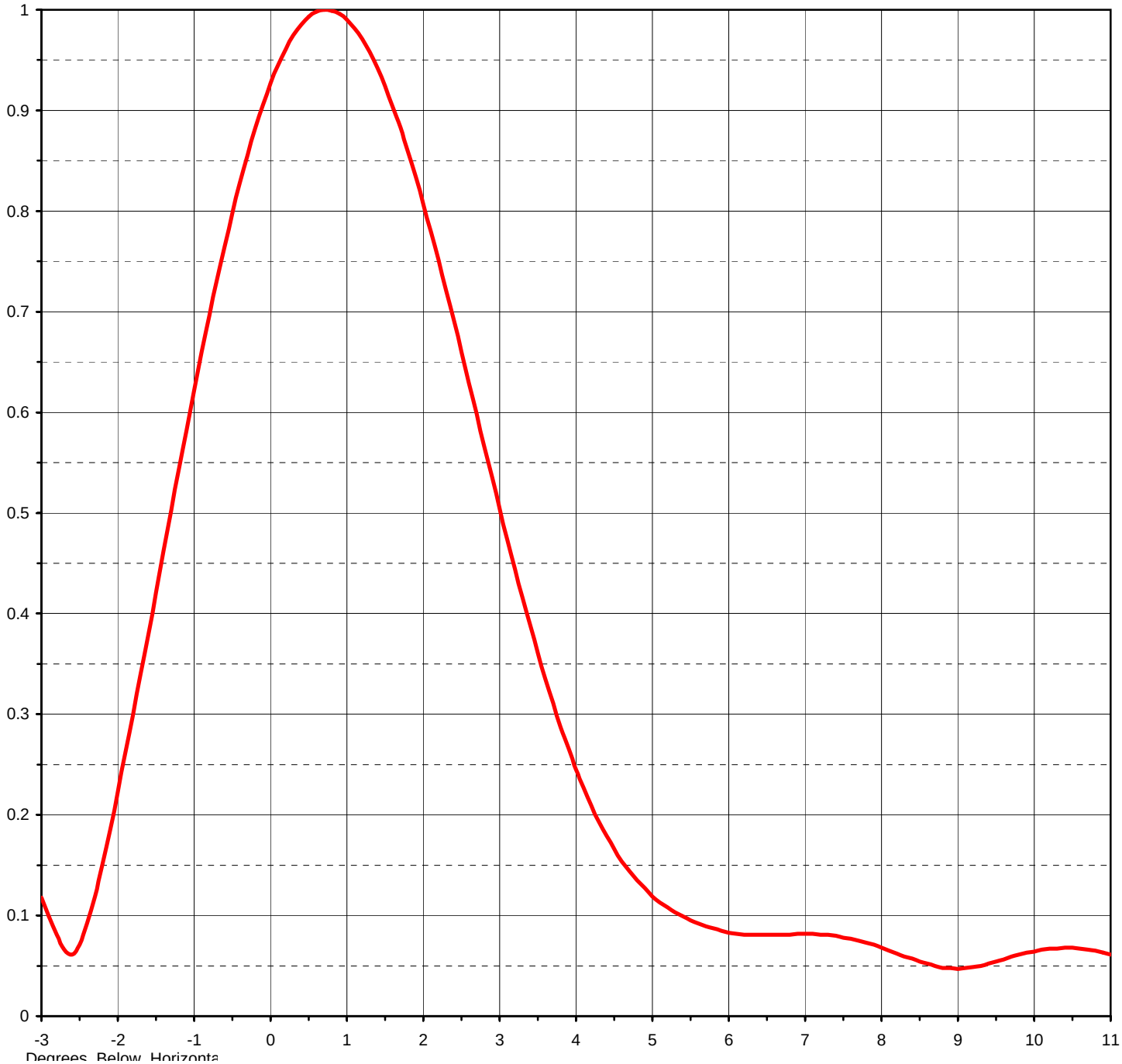
ELEVATION PATTERN

RMS Gain at Main Lobe	**15.5 (11.90 dB)**	Beam Tilt	**0.75 deg**
RMS Gain at Horizontal	**13.3 (11.25 dB)**	Frequency	**659.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**18Q155075**



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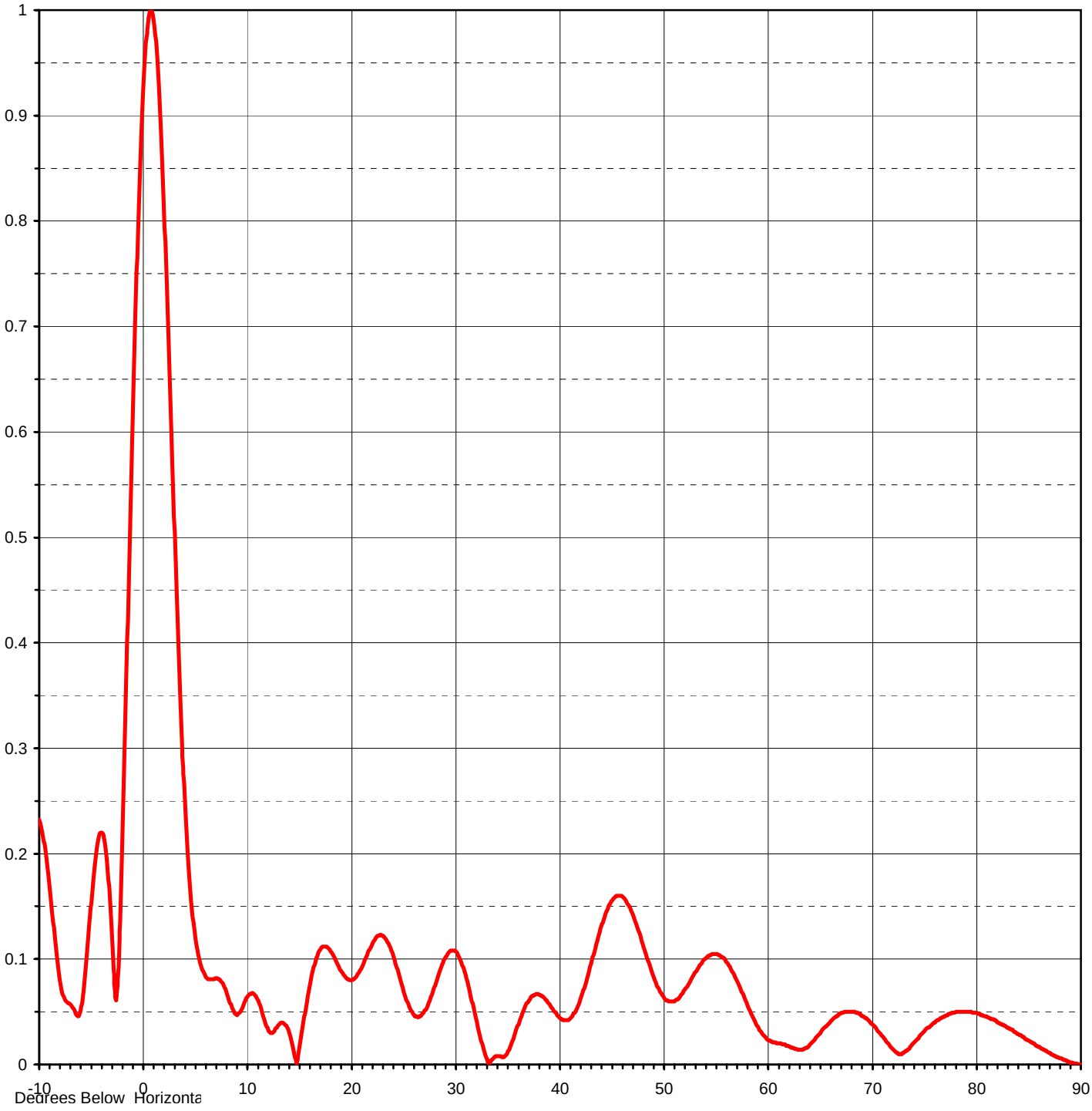
ELEVATION PATTERN

RMS Gain at Main Lobe	**15.5 (11.90 dB)**	Beam Tilt	**0.75 deg**
RMS Gain at Horizontal	**13.3 (11.25 dB)**	Frequency	**659.00 MHz**
Calculated / Measured	**Calculated**	Drawing #	**18Q155075-90**



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TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **18Q155075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.232	2.4	0.691	10.6	0.068	30.5	0.100	51.0	0.060	71.5	0.020
-9.5	0.209	2.6	0.629	10.8	0.066	31.0	0.086	51.5	0.063	72.0	0.014
-9.0	0.168	2.8	0.566	11.0	0.063	31.5	0.066	52.0	0.070	72.5	0.010
-8.5	0.120	3.0	0.504	11.5	0.049	32.0	0.045	52.5	0.077	73.0	0.011
-8.0	0.079	3.2	0.444	12.0	0.035	32.5	0.024	53.0	0.086	73.5	0.015
-7.5	0.061	3.4	0.388	12.5	0.030	33.0	0.007	53.5	0.094	74.0	0.021
-7.0	0.057	3.6	0.335	13.0	0.037	33.5	0.004	54.0	0.100	74.5	0.027
-6.5	0.048	3.8	0.287	13.5	0.040	34.0	0.008	54.5	0.104	75.0	0.032
-6.0	0.052	4.0	0.245	14.0	0.033	34.5	0.007	55.0	0.105	75.5	0.036
-5.5	0.096	4.2	0.209	14.5	0.015	35.0	0.010	55.5	0.103	76.0	0.040
-5.0	0.154	4.4	0.179	15.0	0.012	35.5	0.022	56.0	0.098	76.5	0.044
-4.5	0.202	4.6	0.154	15.5	0.042	36.0	0.036	56.5	0.091	77.0	0.046
-4.0	0.220	4.8	0.135	16.0	0.071	36.5	0.049	57.0	0.081	77.5	0.048
-3.5	0.194	5.0	0.119	16.5	0.094	37.0	0.059	57.5	0.070	78.0	0.050
-3.0	0.118	5.2	0.108	17.0	0.108	37.5	0.065	58.0	0.059	78.5	0.050
-2.8	0.081	5.4	0.099	17.5	0.112	38.0	0.067	58.5	0.047	79.0	0.050
-2.6	0.061	5.6	0.092	18.0	0.109	38.5	0.064	59.0	0.037	79.5	0.050
-2.4	0.092	5.8	0.087	18.5	0.100	39.0	0.058	59.5	0.029	80.0	0.049
-2.2	0.151	6.0	0.083	19.0	0.090	39.5	0.051	60.0	0.024	80.5	0.047
-2.0	0.223	6.2	0.081	19.5	0.083	40.0	0.045	60.5	0.021	81.0	0.045
-1.8	0.300	6.4	0.081	20.0	0.080	40.5	0.042	61.0	0.020	81.5	0.043
-1.6	0.380	6.6	0.081	20.5	0.083	41.0	0.043	61.5	0.019	82.0	0.040
-1.4	0.462	6.8	0.081	21.0	0.091	41.5	0.049	62.0	0.018	82.5	0.038
-1.2	0.543	7.0	0.082	21.5	0.102	42.0	0.060	62.5	0.016	83.0	0.035
-1.0	0.622	7.2	0.081	22.0	0.113	42.5	0.075	63.0	0.014	83.5	0.032
-0.8	0.697	7.4	0.080	22.5	0.121	43.0	0.093	63.5	0.015	84.0	0.029
-0.6	0.766	7.6	0.077	23.0	0.122	43.5	0.111	64.0	0.018	84.5	0.026
-0.4	0.828	7.8	0.073	23.5	0.117	44.0	0.129	64.5	0.024	85.0	0.023
-0.2	0.882	8.0	0.068	24.0	0.106	44.5	0.144	65.0	0.030	85.5	0.020
0.0	0.927	8.2	0.062	24.5	0.090	45.0	0.154	65.5	0.036	86.0	0.017
0.2	0.961	8.4	0.057	25.0	0.073	45.5	0.160	66.0	0.041	86.5	0.014
0.4	0.985	8.6	0.052	25.5	0.058	46.0	0.160	66.5	0.046	87.0	0.011
0.6	0.998	8.8	0.048	26.0	0.048	46.5	0.154	67.0	0.049	87.5	0.008
0.8	0.999	9.0	0.047	26.5	0.045	47.0	0.144	67.5	0.050	88.0	0.006
1.0	0.990	9.2	0.049	27.0	0.049	47.5	0.131	68.0	0.050	88.5	0.004
1.2	0.971	9.4	0.052	27.5	0.059	48.0	0.115	68.5	0.049	89.0	0.002
1.4	0.942	9.6	0.056	28.0	0.072	48.5	0.100	69.0	0.046	89.5	0.001
1.6	0.904	9.8	0.059	28.5	0.087	49.0	0.085	69.5	0.043	90.0	0.000
1.8	0.859	10.0	0.063	29.0	0.100	49.5	0.073	70.0	0.038		
2.0	0.807	10.2	0.066	29.5	0.107	50.0	0.065	70.5	0.032		
2.2	0.751	10.4	0.067	30.0	0.108	50.5	0.060	71.0	0.026		