ENGINEERING STATEMENT

In support of a request for a

Minor Modification to a Construction Permit

For Digital Channel 23

KEDT Corpus Christi, TX

50 kW ERP 270 m HAAT

PURPOSE

MARSAND, INC. has been retained by South Texas Public Broadcasting System (the "Permittee") of KEDT digital Channel 23 of Corpus Christi, TX (the "Station"), to prepare this engineering statement in support of a request for a Minor Modification to a Construction Permit (CP). The Federal Communications Commission (the "Commission") established Channel 23 for the Station's post-transition operation in "Appendix B" allotment (Seventh Report and Order in MB Docket No. 87-258). The Permittee currently operates the post-transitional digital Channel 23 facility at reduced power under a Special Temporary Authority (STA) BSTA-20030422ABM. A CP exists for full power operation at 200 kW Effective Radiated Power (ERP) and 273 m Height Above Average Terrain (HAAT) granted by the Commission in 2000 (BPEDT-20000303AAG). Under this instant proposal, the Permittee seeks authorization to modify the CP for operation at 50 kW ERP and 270 m HAAT.

DISCUSSION

The Permittee proposes to establish its post-transition digital service on Channel 23 at 50 kW ERP and 270 m HAAT utilizing the same directional antenna pattern authorized under the existing CP. The proposed facility is located at the site authorized under the existing CP. The calculated F(50,90) 48 dBu contour would encompass the principal community, Corpus Christi, TX, entirely as shown in **Figure 1**. Also shown in **Figure 1** is the F(50,90) 41 dBu contour.

A population study under the 41 dBu contour predicts service to 485,544 people or 97% of the population specified in the new DTV Table Appendix B. These figures are derived using the 2000 Census.

Since the 41 dBu contour lies entirely within the coverage authorized, shown in **Figure 1**, no additional interference to others is predicted other than what is already allowed under the existingn CP. The proposal is clear of any FCC monitoring stations and quiet zones. It is also further than 3.2 km from the nearest AM station.

CONCLUSION

It is respectfully requested that the Commission grant this request for Minor Modification to a CP for the proposed transmission facility as indicated in the accompanying TECH BOX.

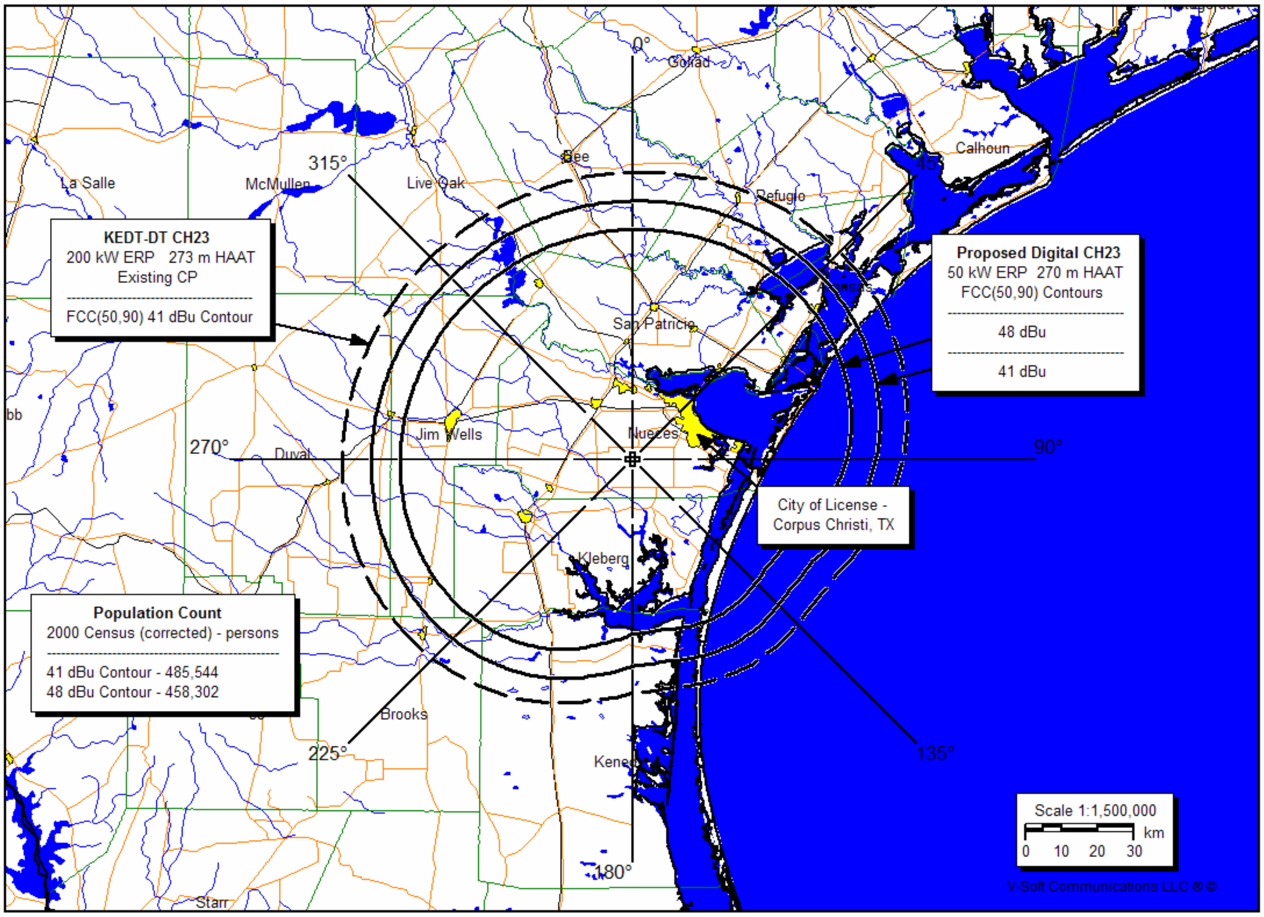

KEDT-DT CH23
200 kW ERP 273 m HAAT
Existing CP
FCC(50,90) 41 dBu Contour
Proposed Digital CH23
50 kW ERP 270 m HAAT
FCC(50,90) Contours
48 dBu
41 dBu
City of License -
Corpus Christi, TX
Population Count
2000 Census (corrected) - persons
41 dBu Contour - 485,544
48 dBu Contour - 458,302
Scale 1:1,500,000
km
0 10 20 30
0°
45°
90°
135°
180°
225°
270°
315°
Goliad
Calhoun
Bee
La Salle
McMullen
Live Oak
Refugio
San Patricio
Jim Wells
Nueces
Duval
Kleberg
Brooks
Kenedy
Starr
V-Soft Communications LLC

Figure 1

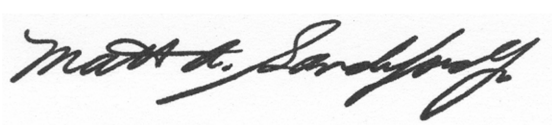
MARSAND, INC.
Matthew A. Sanderford, Jr., P.E.

DECLARATION

Matthew A. Sanderford, Jr., P.E., declares and states that he is a graduate Electrical Engineer with a Bachelor of Science Degree in Electrical Engineering from the University of Texas at El Paso, a Licensed Professional Engineer in the State of Texas, and his qualifications are known to the Federal Communications Commission, and that he is President of MARSAND, INC., a Registered Professional Engineering firm in the State of Texas, and that firm has been retained by South Texas Public Broadcasting System, to perform the engineering support as contained in this report.

All facts contained herein are true of his own knowledge except where stated to be on information or belief provided by South Texas Public Broadcasting System, and as to those facts, he believes them to be true.

I declare under penalty of perjury that the foregoing is true and correct.



Matthew A. Sanderford, Jr., P.E.
President - MARSAND, INC.

Executed this 14th day of March, 2008
State of Texas

6100 IH-35W PO Box 485 * Alvarado, Texas 76009-0485 * (817) 783-5566 * FAX (817) 783-5577

Appendix

Dielectric
A Unit of SPX Corporation

Specification Number	**535:3:100054**
Date	**February 20, 2003**
Call Letters	**KEDT**
Channel	**DT23**
Location	**Corpus Christi, TX**
Antenna Type	**TFU-30DSC-R C170**
Customer	

SPECIFICATION SHEET

Electrical Specifications		Value		
		Ratio	dB	Remarks
RMS Gain at Main Lobe over Halfwave Dipole	Hpol			
	Vpol			
RMS Gain at Horizontal over Halfwave Dipole	Hpol			
	Vpol			
Peak Directional Gain at Main Lobe over Halfwave Dipole	Hpol	43.4	16.37	
	Vpol			
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol	19.5	12.90	
	Vpol			
Circularity				
Axial Ratio				
Beam Tilt		1 deg		
Average Power DTV		40 kW	16.02 dBk	
Antenna Input: T/L		6 1/8 inch	50 ohm EIA	
Maximum Antenna Input VSWR				
		Channel 1.08:1		
Patterns	Azimuth	TFU-C170		
	Elevation	30Q25510	30Q25510-90	

Mechanical Specifications		Metric	English	Preliminary	
Height with Lightning Protector	H4	0.0 m	ft		
Height Less Lightning Protector	H2	18.7 m	61.7 ft		
Height of Center of Radiation	H3	9.4 m	30.8 ft		
Basic Wind Speed	V	112.6 km/h	70 mi/h		
Force Coeff. x Projected Area	CaAc	9.1 m²	97.7 ft²		
Moment Arm	D1				
Force Coeff. x Projected Area	CaAc				
Moment Arm	D3				
Pole Bury Length	D2				
Weight	W	0.5 t	1140 lbs		
Radome					
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F					

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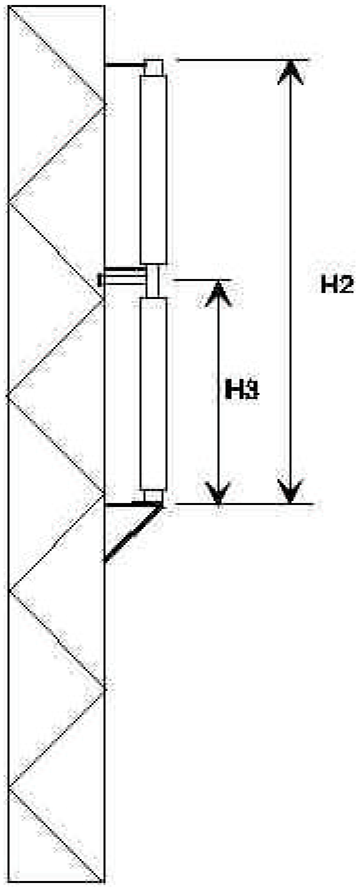

MEASUREMENTS

H2 = 61.7 ft
H3 = 30.8 ft

MECHANICAL DATA

Designed Wind Speed = 70 mi/h
Weight = 1,140 lbs
CaAc = 97.7 ft²

NOT DRAWN TO SCALE

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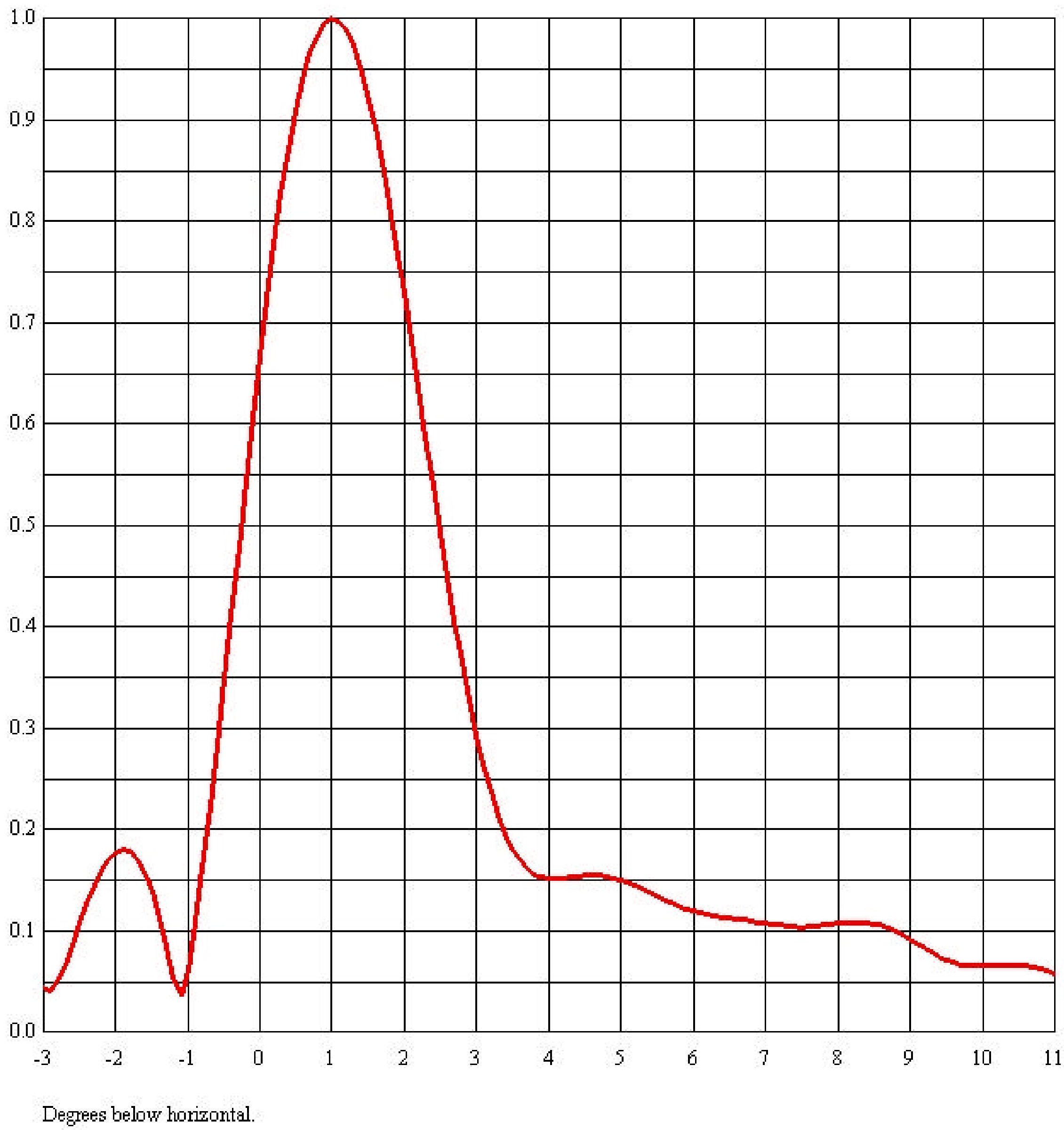
Elevation Pattern

RMS Gain at Main Lobe	**25.5**	**14.07 dB**	Beam Tilt	**1 degrees**
RMS Gain at Horizontal	**11.4**	**10.57 dB**	Frequency	**527 MHz**
Calculated / Measured	**Calculated**		Drawing#	**30Q25510-90**



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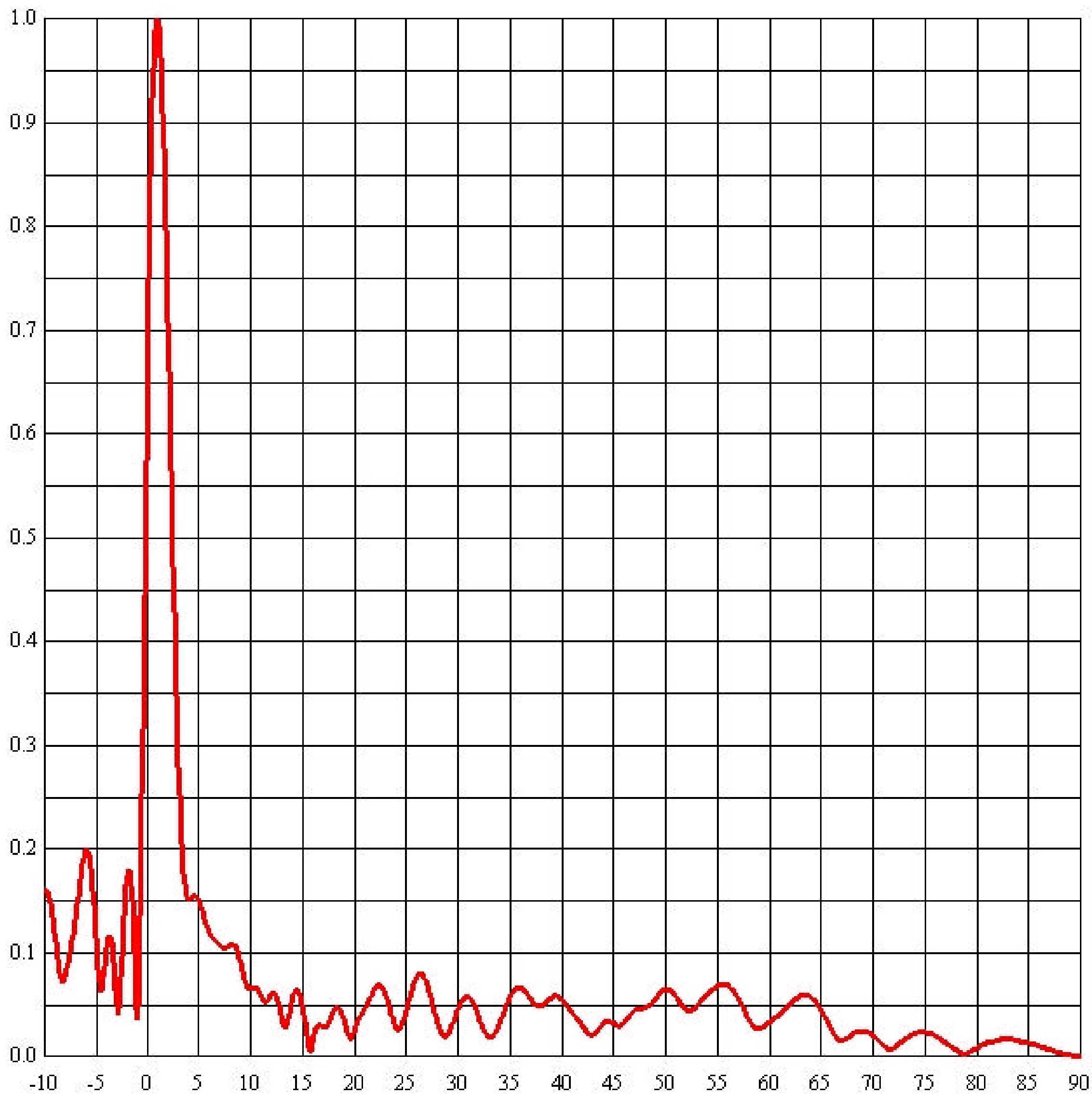

Degrees below horizontal.

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Customer	

TABULATION OF ELEVATION PATTERN

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.161	2.4	0.541	10.6	0.066	30.5	0.056	51.0	0.058	71.5	0.008
-9.5	0.151	2.6	0.449	10.8	0.063	31.0	0.058	51.5	0.051	72.0	0.009
-9.0	0.115	2.8	0.366	11.0	0.058	31.5	0.051	52.0	0.046	72.5	0.013
-8.5	0.077	3.0	0.294	11.5	0.053	32.0	0.038	52.5	0.045	73.0	0.017
-8.0	0.078	3.2	0.237	12.0	0.060	32.5	0.026	53.0	0.049	73.5	0.020
-7.5	0.103	3.4	0.196	12.5	0.058	33.0	0.019	53.5	0.055	74.0	0.023
-7.0	0.135	3.6	0.170	13.0	0.038	33.5	0.022	54.0	0.060	74.5	0.024
-6.5	0.175	3.8	0.156	13.5	0.031	34.0	0.032	54.5	0.065	75.0	0.024
-6.0	0.200	4.0	0.152	14.0	0.055	34.5	0.045	55.0	0.068	75.5	0.023
-5.5	0.176	4.2	0.152	14.5	0.064	35.0	0.058	55.5	0.070	76.0	0.020
-5.0	0.106	4.4	0.154	15.0	0.048	35.5	0.065	56.0	0.069	76.5	0.017
-4.5	0.065	4.6	0.155	15.5	0.017	36.0	0.067	56.5	0.064	77.0	0.014
-4.0	0.109	4.8	0.154	16.0	0.016	36.5	0.063	57.0	0.056	77.5	0.010
-3.5	0.106	5.0	0.151	16.5	0.030	37.0	0.056	57.5	0.046	78.0	0.007
-3.0	0.044	5.2	0.145	17.0	0.029	37.5	0.050	58.0	0.036	78.5	0.004
-2.8	0.051	5.4	0.139	17.5	0.032	38.0	0.049	58.5	0.029	79.0	0.004
-2.6	0.087	5.6	0.131	18.0	0.044	38.5	0.053	59.0	0.027	79.5	0.006
-2.4	0.127	5.8	0.125	18.5	0.047	39.0	0.057	59.5	0.029	80.0	0.009
-2.2	0.160	6.0	0.120	19.0	0.035	39.5	0.058	60.0	0.033	80.5	0.011
-2.0	0.178	6.2	0.116	19.5	0.019	40.0	0.055	60.5	0.037	81.0	0.014
-1.8	0.179	6.4	0.114	20.0	0.025	40.5	0.049	61.0	0.041	81.5	0.015
-1.6	0.158	6.6	0.112	20.5	0.038	41.0	0.043	61.5	0.046	82.0	0.016
-1.4	0.114	6.8	0.110	21.0	0.046	41.5	0.036	62.0	0.051	82.5	0.017
-1.2	0.053	7.0	0.108	21.5	0.056	42.0	0.030	62.5	0.056	83.0	0.017
-1.0	0.062	7.2	0.106	22.0	0.066	42.5	0.023	63.0	0.059	83.5	0.017
-0.8	0.163	7.4	0.105	22.5	0.068	43.0	0.021	63.5	0.060	84.0	0.016
-0.6	0.284	7.6	0.105	23.0	0.059	43.5	0.026	64.0	0.058	84.5	0.015
-0.4	0.413	7.8	0.106	23.5	0.042	44.0	0.032	64.5	0.053	85.0	0.014
-0.2	0.543	8.0	0.108	24.0	0.028	44.5	0.034	65.0	0.045	85.5	0.012
0.0	0.667	8.2	0.109	24.5	0.029	45.0	0.032	65.5	0.036	86.0	0.011
0.2	0.778	8.4	0.109	25.0	0.043	45.5	0.030	66.0	0.026	86.5	0.009
0.4	0.871	8.6	0.106	25.5	0.062	46.0	0.033	66.5	0.018	87.0	0.007
0.6	0.940	8.8	0.100	26.0	0.076	46.5	0.040	67.0	0.015	87.5	0.006
0.8	0.984	9.0	0.092	26.5	0.080	47.0	0.045	67.5	0.018	88.0	0.004
1.0	1.000	9.2	0.083	27.0	0.070	47.5	0.047	68.0	0.022	88.5	0.003
1.2	0.989	9.4	0.075	27.5	0.051	48.0	0.048	68.5	0.025	89.0	0.002
1.4	0.952	9.6	0.069	28.0	0.033	48.5	0.050	69.0	0.025	89.5	0.001
1.6	0.894	9.8	0.066	28.5	0.022	49.0	0.056	69.5	0.024	90.0	0.000
1.8	0.818	10.0	0.066	29.0	0.022	49.5	0.062	70.0	0.020		
2.0	0.731	10.2	0.067	29.5	0.032	50.0	0.065	70.5	0.016		
2.2	0.636	10.4	0.067	30.0	0.046	50.5	0.064	71.0	0.011		

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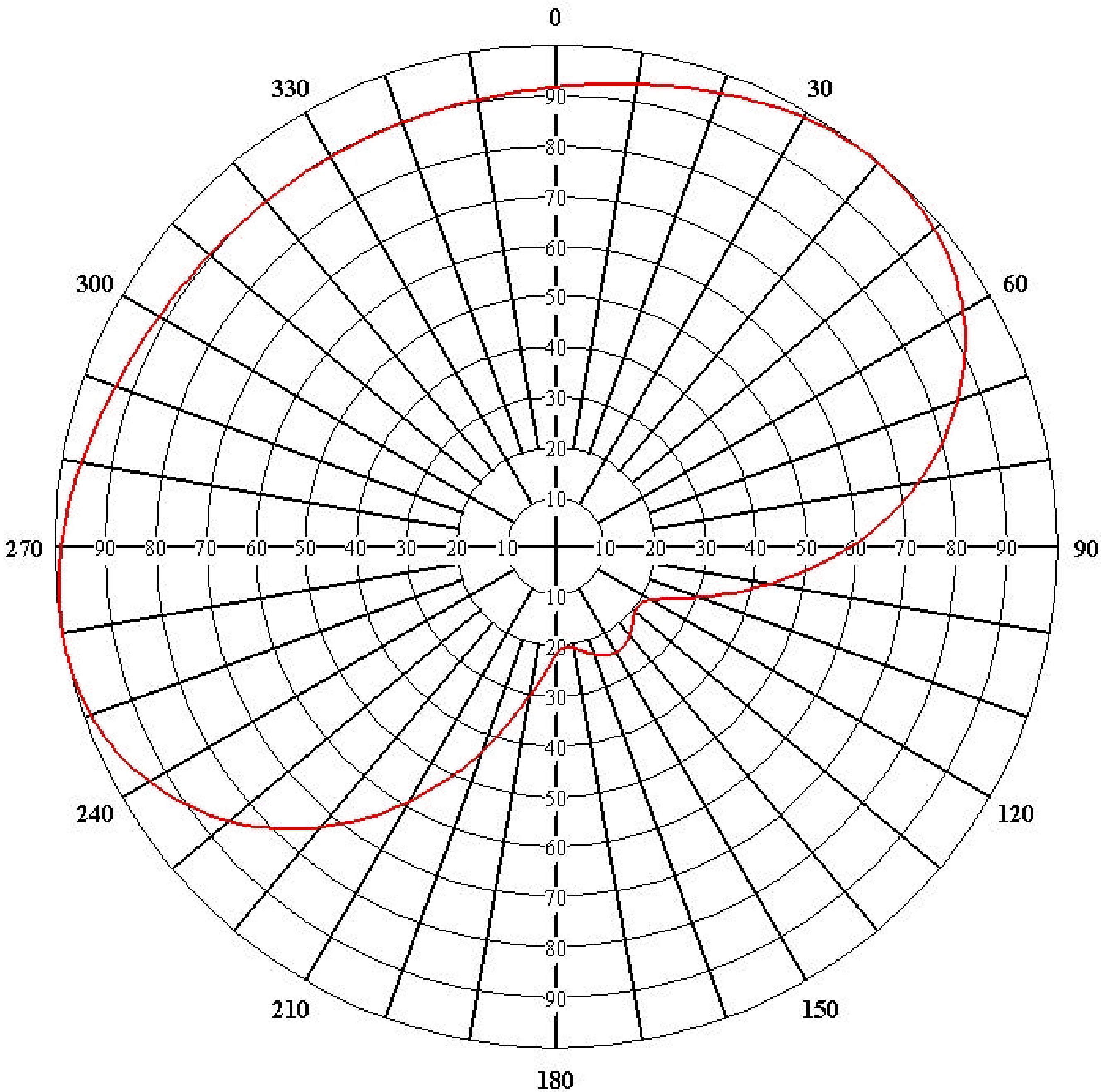
Customer	

Azimuth Pattern

Gain	**1.7**	**(2.30dB)**	Frequency	**527 MHz**
Calculated / measured	**Calculated**		Drawing#	**TFU-C170**



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Customer	

TABULATION OF AZIMUTH PATTERN

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.917	45	0.997	90	0.588	135	0.219	180	0.218	225	0.797	270	0.988	315	0.902
1	0.918	46	0.996	91	0.573	136	0.222	181	0.223	226	0.809	271	0.986	316	0.902
2	0.920	47	0.994	92	0.558	137	0.224	182	0.229	227	0.821	272	0.983	317	0.901
3	0.922	48	0.992	93	0.543	138	0.227	183	0.235	228	0.832	273	0.981	318	0.901
4	0.924	49	0.990	94	0.527	139	0.229	184	0.243	229	0.843	274	0.978	319	0.901
5	0.926	50	0.987	95	0.512	140	0.232	185	0.251	230	0.854	275	0.976	320	0.900
6	0.928	51	0.984	96	0.497	141	0.234	186	0.260	231	0.864	276	0.973	321	0.900
7	0.930	52	0.981	97	0.482	142	0.236	187	0.269	232	0.874	277	0.971	322	0.900
8	0.932	53	0.977	98	0.466	143	0.238	188	0.280	233	0.883	278	0.968	323	0.900
9	0.934	54	0.973	99	0.451	144	0.240	189	0.290	234	0.893	279	0.965	324	0.900
10	0.936	55	0.968	100	0.437	145	0.241	190	0.302	235	0.901	280	0.963	325	0.900
11	0.939	56	0.963	101	0.422	146	0.242	191	0.313	236	0.910	281	0.960	326	0.899
12	0.941	57	0.958	102	0.407	147	0.243	192	0.326	237	0.918	282	0.957	327	0.899
13	0.944	58	0.952	103	0.393	148	0.244	193	0.338	238	0.925	283	0.954	328	0.899
14	0.946	59	0.946	104	0.379	149	0.244	194	0.352	239	0.933	284	0.952	329	0.899
15	0.949	60	0.940	105	0.365	150	0.245	195	0.365	240	0.940	285	0.949	330	0.899
16	0.952	61	0.933	106	0.352	151	0.244	196	0.379	241	0.946	286	0.946	331	0.899
17	0.954	62	0.925	107	0.338	152	0.244	197	0.393	242	0.952	287	0.944	332	0.899
18	0.957	63	0.918	108	0.326	153	0.243	198	0.407	243	0.958	288	0.941	333	0.899
19	0.960	64	0.910	109	0.313	154	0.242	199	0.422	244	0.963	289	0.939	334	0.899
20	0.963	65	0.901	110	0.302	155	0.241	200	0.437	245	0.968	290	0.936	335	0.900
21	0.965	66	0.893	111	0.290	156	0.240	201	0.451	246	0.973	291	0.934	336	0.900
22	0.968	67	0.883	112	0.280	157	0.238	202	0.466	247	0.977	292	0.932	337	0.900
23	0.971	68	0.874	113	0.269	158	0.236	203	0.482	248	0.981	293	0.930	338	0.900
24	0.973	69	0.864	114	0.260	159	0.234	204	0.497	249	0.984	294	0.928	339	0.900
25	0.976	70	0.854	115	0.251	160	0.232	205	0.512	250	0.987	295	0.926	340	0.900
26	0.978	71	0.843	116	0.243	161	0.229	206	0.527	251	0.990	296	0.924	341	0.901
27	0.981	72	0.832	117	0.235	162	0.227	207	0.543	252	0.992	297	0.922	342	0.901
28	0.983	73	0.821	118	0.229	163	0.224	208	0.558	253	0.994	298	0.920	343	0.901
29	0.986	74	0.809	119	0.223	164	0.222	209	0.573	254	0.996	299	0.918	344	0.902
30	0.988	75	0.797	120	0.218	165	0.219	210	0.588	255	0.997	300	0.917	345	0.902
31	0.990	76	0.785	121	0.214	166	0.216	211	0.604	256	0.998	301	0.915	346	0.903
32	0.992	77	0.773	122	0.210	167	0.214	212	0.619	257	0.999	302	0.914	347	0.903
33	0.993	78	0.760	123	0.207	168	0.211	213	0.634	258	1.000	303	0.912	348	0.904
34	0.995	79	0.747	124	0.206	169	0.209	214	0.648	259	1.000	304	0.911	349	0.905
35	0.996	80	0.733	125	0.204	170	0.207	215	0.663	260	1.000	305	0.910	350	0.905
36	0.997	81	0.720	126	0.204	171	0.206	216	0.677	261	1.000	306	0.909	351	0.906
37	0.998	82	0.706	127	0.204	172	0.205	217	0.692	262	0.999	307	0.908	352	0.907
38	0.999	83	0.692	128	0.205	173	0.204	218	0.706	263	0.998	308	0.907	353	0.908
39	1.000	84	0.677	129	0.206	174	0.204	219	0.720	264	0.997	309	0.906	354	0.909
40	1.000	85	0.663	130	0.207	175	0.204	220	0.733	265	0.996	310	0.905	355	0.910
41	1.000	86	0.648	131	0.209	176	0.206	221	0.747	266	0.995	311	0.905	356	0.911
42	1.000	87	0.634	132	0.211	177	0.207	222	0.760	267	0.993	312	0.904	357	0.912
43	0.999	88	0.619	133	0.214	178	0.210	223	0.773	268	0.992	313	0.903	358	0.914
44	0.998	89	0.604	134	0.216	179	0.214	224	0.785	269	0.990	314	0.903	359	0.915