



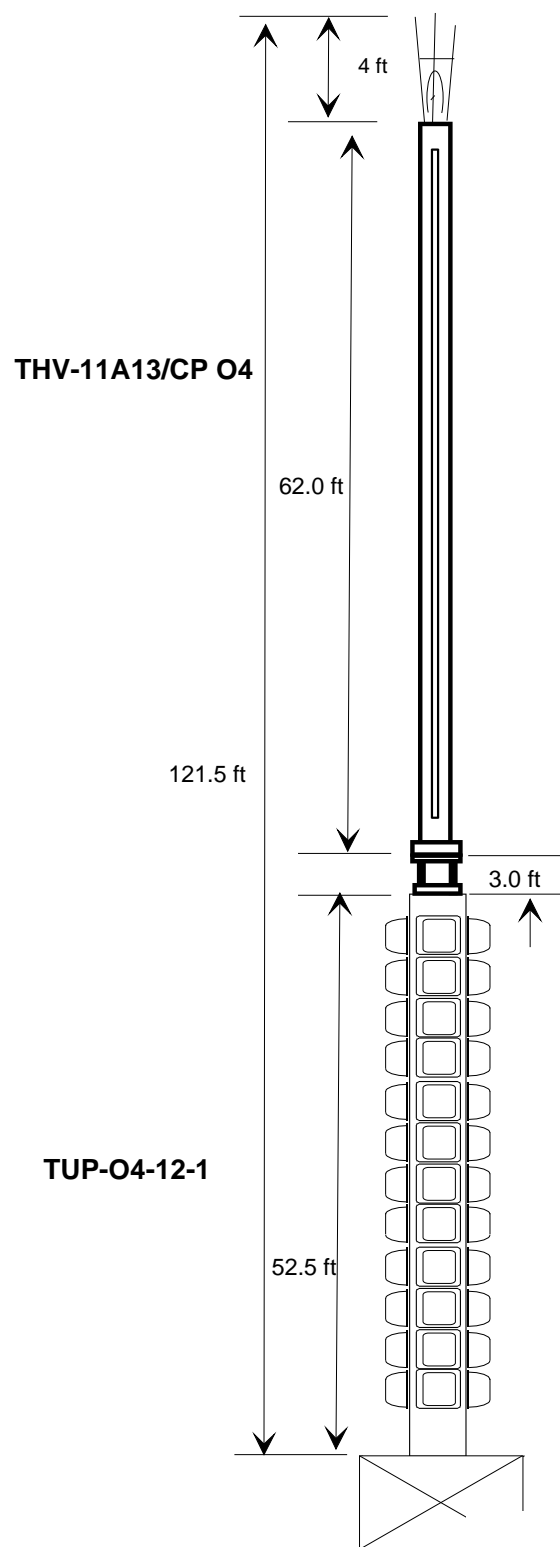
Proposal #: **C-02406** Antenna Type: **THV-11A13/CP 04 SP** Channel: **13 DTV**
 Call Letters: **WEDU-DT** Location: **Tampa, FL**

Electrical Specifications		Value		Remarks	
		Ratio	dBd		
RMS Gain at Main Lobe over Halfwave Dipole	Hpol	5.5	7.40		
	Vpol	5.5	7.40		
RMS Gain at Horizontal over Halfwave Dipole	Hpol	5.2	7.16		
	Vpol	5.2	7.16		
Peak Directional Gain over Halfwave Dipole	Hpol				
	Vpol				
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol				
	Vpol				
Circularity		+/- 1.0 dB			
Axial Ratio		dB			
Beam Tilt		0.75 deg			
Average Power		25 kW	13.98 dBk		
Antenna Input: T/L		6-1/8 in	75.0 ohm	Type: EIA/DCA	
Maximum Antenna Input VSWR				Notes: 5 psi dry air or Nitrogen required.	
		Channel 1.10 : 1			
Patterns	Azimuth	THV-04 HP	THV-04 VP		
	Elevation	11V110075	11V110075-90		
Mechanical Specifications		Metric	English		Preliminary
Height with Lightning Protector	H4	20.1 m	66.0 ft		
Height Less Lightning Protector	H2	18.9 m	62.0 ft	TIA/EIA-222-F.	
Height of Center of Radiation	H3	9.0 m	31.0 ft	Above base flange	
Basic Wind Speed	V	169.0 km/h	105 mi/h		
Force Coeff. x Projected Area	CaAc	m²	ft²	Above base flange	
Moment Arm	D1	m	ft	Above base flange	
Force Coeff. x Projected Area	CaAc	m²	ft²		
Moment Arm	D3	m	ft		
Pole Bury Length	D2	m	ft		
Weight	W	t	lbs		
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F.					

NOTE:

Prepared By : **SWB** RMS Approved By : **JLS**
 Original Date : **12-Mar-08**

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Mechanical Specifications
TIA/EIA-222-F. @ 105 mi/h (169 km/h)

SWB-080312-4

Not to Scale

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Proposal Number	C-02406	
Date	12-Mar-08	
Call Letters	WEDU-DT	Channel 13
Location	Tampa, FL	
Customer		
Antenna Type	THV-11A13/CP 04 SP	

SYSTEM SUMMARY

Antenna:

Type:	THV-11A13/CP 04 SP	ERP:	37 kW	(15.68 dBk)	37 kW	(15.68 dBk)
Channel:	13	RMS Gain*:	5.5	(7.40 dB)	5.5	(7.40 dB)
Location:	Tampa, FL	Input Power:	6.7 kW	(8.28 dBk)		

Transmission Line:

Type:	EIA/DCA	Attenuation:	1.13 dB
Size:	6-1/8 in	Efficiency:	77.1%
Impedance:	75 ohm		
Length:	1,700 ft		518.2 m

Tower Top to Antenna Input Transmission Line:

Type:	DCA	Attenuation:	0.04 dB
Size:	6-1/8	Efficiency:	99.1%
Impedance:	75 ohm		
Length:	58 ft		17.5 m

Transmitter:

Power Required: **8.8 kW (9.45 dBk)**

* Gain is with respect to half wave dipole.

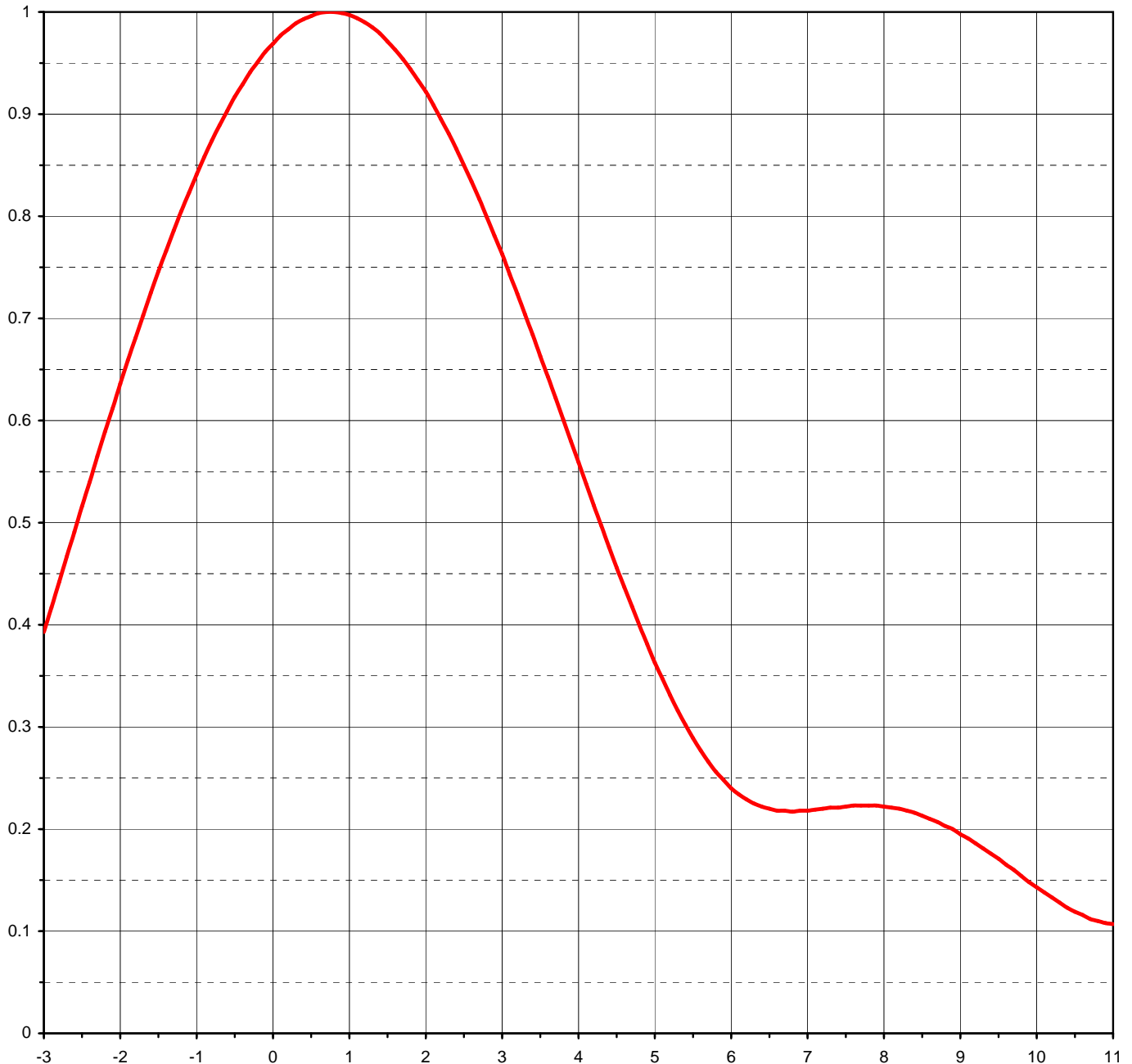
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Proposal Number	C-02406	
Date	12-Mar-08	
Call Letters	WEDU-DT	Channel 13
Location	Tampa, FL	
Customer		
Antenna Type	THV-11A13/CP 04 SP	

ELEVATION PATTERN

RMS Gain at Main Lobe	11.00 (10.41 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	10.30 (10.13 dB)	Frequency	213.00 MHz
Calculated / Measured	Calculated	Drawing #	11V110075



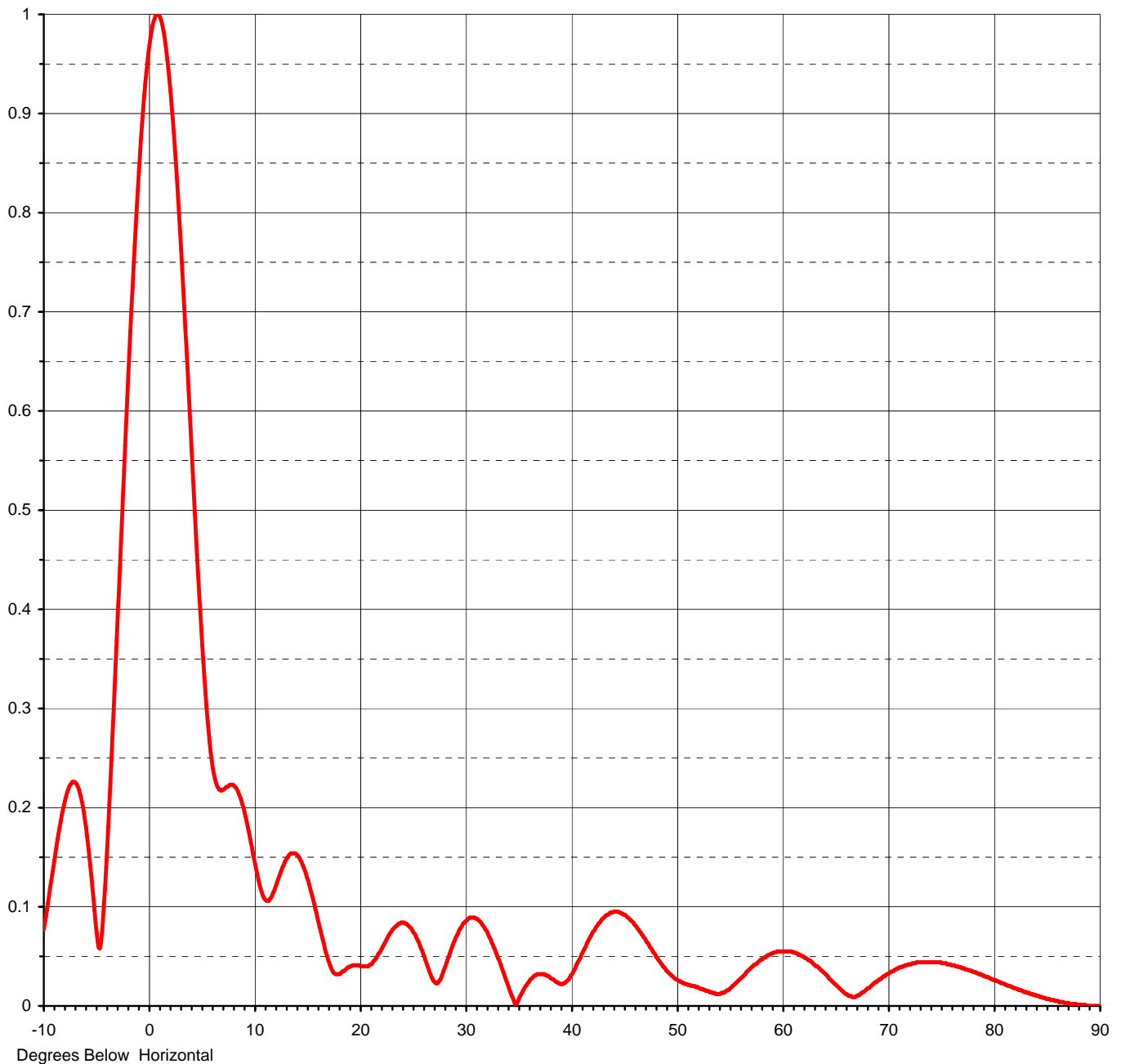
Degrees Below Horizontal



Proposal Number	C-02406	
Date	12-Mar-08	
Call Letters	WEDU-DT	Channel 13
Location	Tampa, FL	
Customer		
Antenna Type	THV-11A13/CP 04 SP	

ELEVATION PATTERN

RMS Gain at Main Lobe	11.00 (10.41 dB)	Beam Tilt	0.75 deg
RMS Gain at Horizontal	10.30 (10.13 dB)	Frequency	213.00 MHz
Calculated / Measured	Calculated	Drawing #	11V110075-90





Proposal Number **C-02406**
Date **12-Mar-08**
Call Letters **WEDU-DT** Channel **13**
Location **Tampa, FL**
Customer
Antenna Type **THV-11A13/CP 04 SP**

TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **11V110075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.077	2.4	0.866	10.6	0.119	30.5	0.089	51.0	0.022	71.5	0.041
-9.5	0.111	2.6	0.834	10.8	0.112	31.0	0.088	51.5	0.020	72.0	0.042
-9.0	0.147	2.8	0.799	11.0	0.108	31.5	0.084	52.0	0.019	72.5	0.043
-8.5	0.180	3.0	0.763	11.5	0.108	32.0	0.076	52.5	0.017	73.0	0.044
-8.0	0.207	3.2	0.724	12.0	0.119	32.5	0.064	53.0	0.015	73.5	0.044
-7.5	0.223	3.4	0.684	12.5	0.134	33.0	0.051	53.5	0.013	74.0	0.044
-7.0	0.225	3.6	0.643	13.0	0.147	33.5	0.037	54.0	0.012	74.5	0.044
-6.5	0.211	3.8	0.601	13.5	0.154	34.0	0.022	54.5	0.014	75.0	0.043
-6.0	0.180	4.0	0.559	14.0	0.153	34.5	0.008	55.0	0.017	75.5	0.042
-5.5	0.131	4.2	0.517	14.5	0.145	35.0	0.005	55.5	0.022	76.0	0.041
-5.0	0.074	4.4	0.476	15.0	0.130	35.5	0.016	56.0	0.027	76.5	0.040
-4.5	0.073	4.6	0.437	15.5	0.111	36.0	0.024	56.5	0.032	77.0	0.038
-4.0	0.160	4.8	0.399	16.0	0.089	36.5	0.030	57.0	0.038	77.5	0.036
-3.5	0.272	5.0	0.363	16.5	0.067	37.0	0.032	57.5	0.042	78.0	0.034
-3.0	0.393	5.2	0.331	17.0	0.047	37.5	0.032	58.0	0.047	78.5	0.032
-2.8	0.442	5.4	0.302	17.5	0.034	38.0	0.029	58.5	0.050	79.0	0.030
-2.6	0.491	5.6	0.277	18.0	0.032	38.5	0.025	59.0	0.053	79.5	0.028
-2.4	0.540	5.8	0.256	18.5	0.035	39.0	0.022	59.5	0.055	80.0	0.026
-2.2	0.589	6.0	0.240	19.0	0.039	39.5	0.024	60.0	0.055	80.5	0.024
-2.0	0.636	6.2	0.229	19.5	0.041	40.0	0.031	60.5	0.055	81.0	0.022
-1.8	0.681	6.4	0.222	20.0	0.041	40.5	0.041	61.0	0.054	81.5	0.020
-1.6	0.725	6.6	0.218	20.5	0.040	41.0	0.052	61.5	0.052	82.0	0.018
-1.4	0.766	6.8	0.217	21.0	0.042	41.5	0.063	62.0	0.050	82.5	0.016
-1.2	0.805	7.0	0.218	21.5	0.047	42.0	0.073	62.5	0.046	83.0	0.014
-1.0	0.841	7.2	0.220	22.0	0.056	42.5	0.081	63.0	0.042	83.5	0.012
-0.8	0.874	7.4	0.221	22.5	0.066	43.0	0.088	63.5	0.038	84.0	0.010
-0.6	0.903	7.6	0.223	23.0	0.075	43.5	0.092	64.0	0.033	84.5	0.009
-0.4	0.929	7.8	0.223	23.5	0.081	44.0	0.095	64.5	0.026	85.0	0.007
-0.2	0.951	8.0	0.222	24.0	0.084	44.5	0.095	65.0	0.021	85.5	0.006
0.0	0.969	8.2	0.220	24.5	0.082	45.0	0.092	65.5	0.016	86.0	0.005
0.2	0.983	8.4	0.216	25.0	0.076	45.5	0.088	66.0	0.012	86.5	0.004
0.4	0.993	8.6	0.210	25.5	0.066	46.0	0.082	66.5	0.009	87.0	0.003
0.6	0.999	8.8	0.203	26.0	0.053	46.5	0.075	67.0	0.010	87.5	0.002
0.8	1.000	9.0	0.195	26.5	0.038	47.0	0.068	67.5	0.014	88.0	0.001
1.0	0.997	9.2	0.186	27.0	0.025	47.5	0.059	68.0	0.018	88.5	0.001
1.2	0.990	9.4	0.176	27.5	0.025	48.0	0.051	68.5	0.022	89.0	0.000
1.4	0.979	9.6	0.165	28.0	0.037	48.5	0.043	69.0	0.026	89.5	0.000
1.6	0.963	9.8	0.160	28.5	0.052	49.0	0.036	69.5	0.030	90.0	0.000
1.8	0.944	10.0	0.148	29.0	0.066	49.5	0.031	70.0	0.033		
2.0	0.922	10.2	0.138	29.5	0.078	50.0	0.027	70.5	0.036		
2.2	0.895	10.4	0.128	30.0	0.085	50.5	0.024	71.0	0.039		

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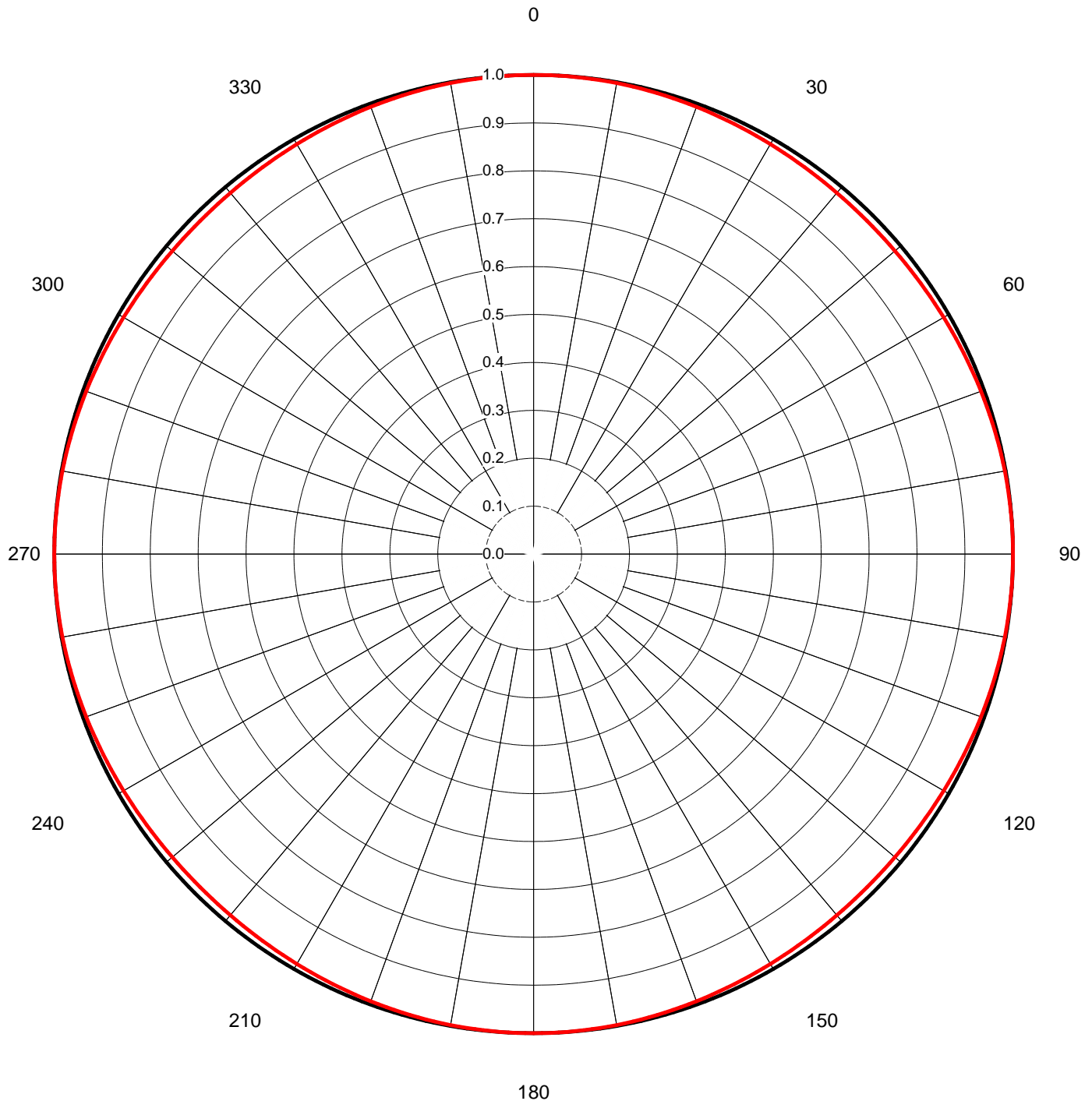


Proposal Number	C-02406	
Date	12-Mar-08	
Call Letters	WEDU-DT	Channel 13
Location	Tampa, FL	
Customer		
Antenna Type	THV-11A13/CP 04 SP	

AZIMUTH PATTERN

Gain	1.00	(0.00 dB)
Calculated / Measured		Calculated

Frequency	213.00 MHz
Drawing #	THV-04 HP





Proposal Number

C-02406

Date

12-Mar-08

Call Letters

WEDU-DT

Channel

13

Location

Tampa, FL

Customer

Antenna Type

THV-11A13/CP 04 SP**TABULATION OF AZIMUTH PATTERN**Azimuth Pattern Drawing #: **THV-04 HP**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	1.000	45	0.984	90	1.000	135	0.984	180	1.000	225	0.984	270	1.000	315	0.984
1	1.000	46	0.984	91	1.000	136	0.984	181	1.000	226	0.984	271	1.000	316	0.984
2	1.000	47	0.984	92	1.000	137	0.984	182	1.000	227	0.984	272	1.000	317	0.984
3	1.000	48	0.984	93	1.000	138	0.984	183	1.000	228	0.984	273	1.000	318	0.984
4	1.000	49	0.984	94	1.000	139	0.984	184	1.000	229	0.984	274	1.000	319	0.984
5	1.000	50	0.984	95	1.000	140	0.984	185	1.000	230	0.984	275	1.000	320	0.984
6	0.999	51	0.984	96	0.999	141	0.984	186	0.999	231	0.984	276	0.999	321	0.984
7	0.999	52	0.985	97	0.999	142	0.985	187	0.999	232	0.985	277	0.999	322	0.985
8	0.999	53	0.985	98	0.999	143	0.985	188	0.999	233	0.985	278	0.999	323	0.985
9	0.998	54	0.985	99	0.998	144	0.985	189	0.998	234	0.985	279	0.998	324	0.985
10	0.998	55	0.986	100	0.998	145	0.986	190	0.998	235	0.986	280	0.998	325	0.986
11	0.998	56	0.986	101	0.998	146	0.986	191	0.998	236	0.986	281	0.998	326	0.986
12	0.997	57	0.986	102	0.997	147	0.986	192	0.997	237	0.986	282	0.997	327	0.986
13	0.997	58	0.987	103	0.997	148	0.987	193	0.997	238	0.987	283	0.997	328	0.987
14	0.996	59	0.987	104	0.996	149	0.987	194	0.996	239	0.987	284	0.996	329	0.987
15	0.996	60	0.988	105	0.996	150	0.988	195	0.996	240	0.988	285	0.996	330	0.988
16	0.995	61	0.988	106	0.995	151	0.988	196	0.995	241	0.988	286	0.995	331	0.988
17	0.995	62	0.989	107	0.995	152	0.989	197	0.995	242	0.989	287	0.995	332	0.989
18	0.994	63	0.989	108	0.994	153	0.989	198	0.994	243	0.989	288	0.994	333	0.989
19	0.994	64	0.990	109	0.994	154	0.990	199	0.994	244	0.990	289	0.994	334	0.990
20	0.993	65	0.990	110	0.993	155	0.990	200	0.993	245	0.990	290	0.993	335	0.990
21	0.993	66	0.991	111	0.993	156	0.991	201	0.993	246	0.991	291	0.993	336	0.991
22	0.992	67	0.992	112	0.992	157	0.992	202	0.992	247	0.992	292	0.992	337	0.992
23	0.992	68	0.992	113	0.992	158	0.992	203	0.992	248	0.992	293	0.992	338	0.992
24	0.991	69	0.993	114	0.991	159	0.993	204	0.991	249	0.993	294	0.991	339	0.993
25	0.990	70	0.993	115	0.990	160	0.993	205	0.990	250	0.993	295	0.990	340	0.993
26	0.990	71	0.994	116	0.990	161	0.994	206	0.990	251	0.994	296	0.990	341	0.994
27	0.989	72	0.994	117	0.989	162	0.994	207	0.989	252	0.994	297	0.989	342	0.994
28	0.989	73	0.995	118	0.989	163	0.995	208	0.989	253	0.995	298	0.989	343	0.995
29	0.988	74	0.995	119	0.988	164	0.995	209	0.988	254	0.995	299	0.988	344	0.995
30	0.988	75	0.996	120	0.988	165	0.996	210	0.988	255	0.996	300	0.988	345	0.996
31	0.987	76	0.996	121	0.987	166	0.996	211	0.987	256	0.996	301	0.987	346	0.996
32	0.987	77	0.997	122	0.987	167	0.997	212	0.987	257	0.997	302	0.987	347	0.997
33	0.986	78	0.997	123	0.986	168	0.997	213	0.986	258	0.997	303	0.986	348	0.997
34	0.986	79	0.998	124	0.986	169	0.998	214	0.986	259	0.998	304	0.986	349	0.998
35	0.986	80	0.998	125	0.986	170	0.998	215	0.986	260	0.998	305	0.986	350	0.998
36	0.985	81	0.998	126	0.985	171	0.998	216	0.985	261	0.998	306	0.985	351	0.998
37	0.985	82	0.999	127	0.985	172	0.999	217	0.985	262	0.999	307	0.985	352	0.999
38	0.985	83	0.999	128	0.985	173	0.999	218	0.985	263	0.999	308	0.985	353	0.999
39	0.984	84	0.999	129	0.984	174	0.999	219	0.984	264	0.999	309	0.984	354	0.999
40	0.984	85	1.000	130	0.984	175	1.000	220	0.984	265	1.000	310	0.984	355	1.000
41	0.984	86	1.000	131	0.984	176	1.000	221	0.984	266	1.000	311	0.984	356	1.000
42	0.984	87	1.000	132	0.984	177	1.000	222	0.984	267	1.000	312	0.984	357	1.000
43	0.984	88	1.000	133	0.984	178	1.000	223	0.984	268	1.000	313	0.984	358	1.000
44	0.984	89	1.000	134	0.984	179	1.000	224	0.984	269	1.000	314	0.984	359	1.000

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Proposal Number	C-02406	
Date	12-Mar-08	
Call Letters	WEDU-DT	Channel 13
Location	Tampa, FL	
Customer		
Antenna Type	THV-11A13/CP 04 SP	

AZIMUTH PATTERN/VERTICAL POLARIZATION

Gain	1.00	(0.00 dB)
Calculated / Measured		Calculated

Frequency	213.00 MHz
Drawing #	THV-04 VP

