



Proposal #: **DCA-9684**      Antenna Type: **TFU-30DSC-R O4**      Channel: **46 DTV**  
 Call Letters: **WTHR-DT**      Location: **Indianapolis, IN**

Electrical Specifications		Value		Remarks
		Ratio	dB	
RMS Gain at Main Lobe over Halfwave Dipole	Hpol	25.5	14.07	
	Vpol			
RMS Gain at Horizontal over Halfwave Dipole	Hpol	16.6	12.20	
	Vpol			
Peak Directional Gain over Halfwave Dipole	Hpol			
	Vpol			
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol			
	Vpol			
Circularity		+/- 1.0 dB		In free space
Axial Ratio		dB		
Beam Tilt		0.75 deg		
Average Power	DTV	60 kW	17.78 dBk	
Antenna Input:	T/L	6-1/8 in	50.0 ohm	Type: EIA/DCA
Maximum Antenna Input VSWR		Channel	1.08 : 1	
Patterns	Azimuth	TFU-O4-46		
	Elevation	30Q255075	30Q255075-90	
Mechanical Specifications		Metric	English	Preliminary
Height with Lightning Protector	H4	m	ft	Side mounted
Height Less Lightning Protector	H2	15.0 m	49.3 ft	
Height of Center of Radiation	H3	7.5 m	24.7 ft	
Basic Wind Speed	V	112.7 km/h	70 mi/h	TIA/EIA-222-F.
Force Coeff. x Projected Area	CaAc	7.55 m <sup>2</sup>	81.3 ft <sup>2</sup>	Excludes Mounts
Weight	W	0.6 t	1,300 lbs	Excludes Mounts
Radome				
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F.				

NOTE:

Prepared By : JBC  
 Original Date : 7-Nov-01

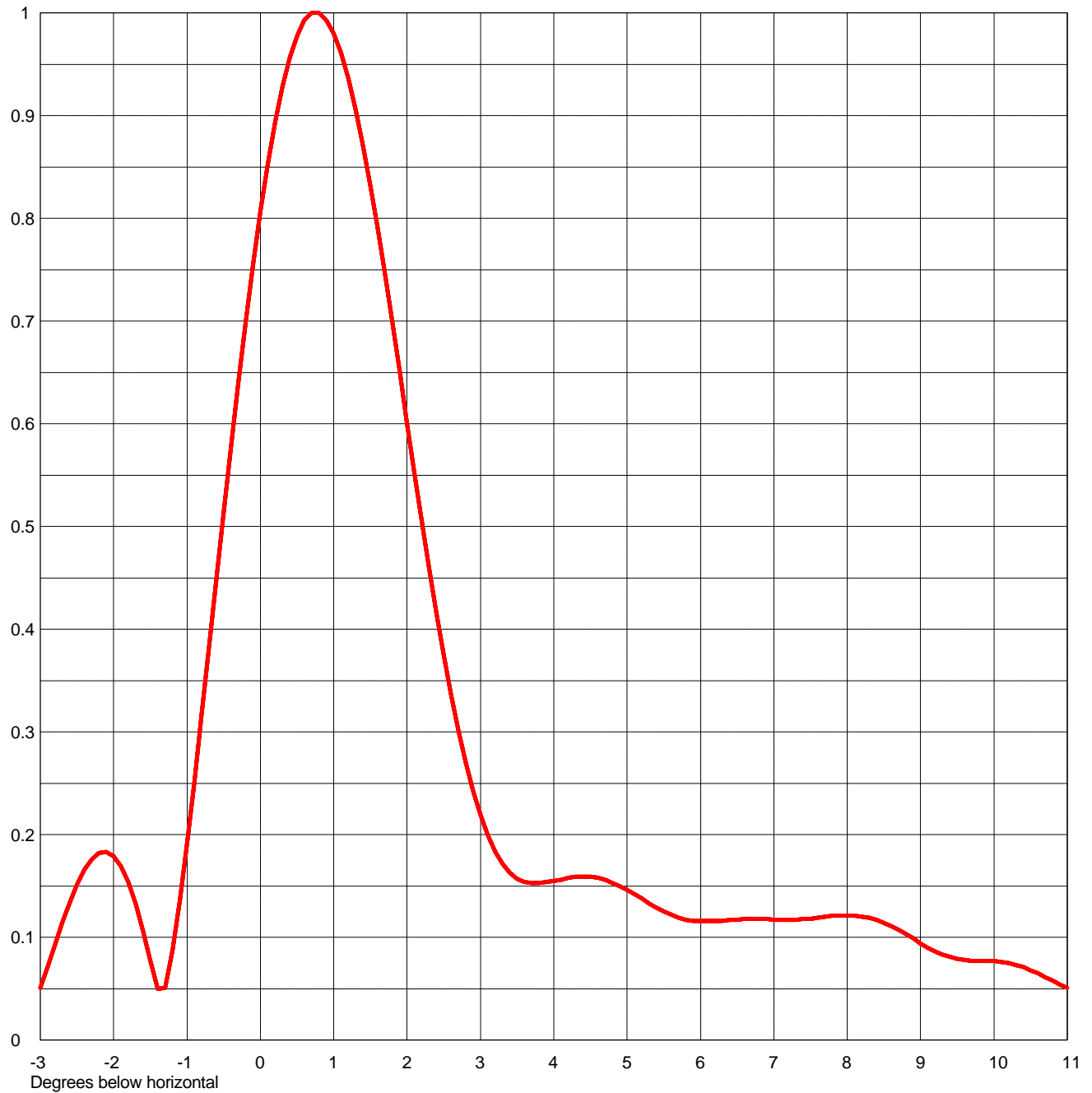
Approved By : AJS



Proposal Number	<b>DCA-9684</b>	Revision	
Date	<b>7 Nov 2001</b>		
Call Letters	<b>WTHR-DT</b>	Channel	<b>46</b>
Location	<b>Columbus, OH</b>		
Customer			
Antenna Type	<b>TFU-30DSC-R O4</b>		

### ELEVATION PATTERN

RMS Gain at Main Lobe	<b>25.5 (14.07 dB)</b>	Beam Tilt	<b>0.75 Degrees</b>
RMS Gain at Horizontal	<b>16.6 (12.20 dB)</b>	Frequency	<b>665.00 MHz</b>
Calculated / Measured	<b>Calculated</b>	Drawing #	<b>30Q255075</b>



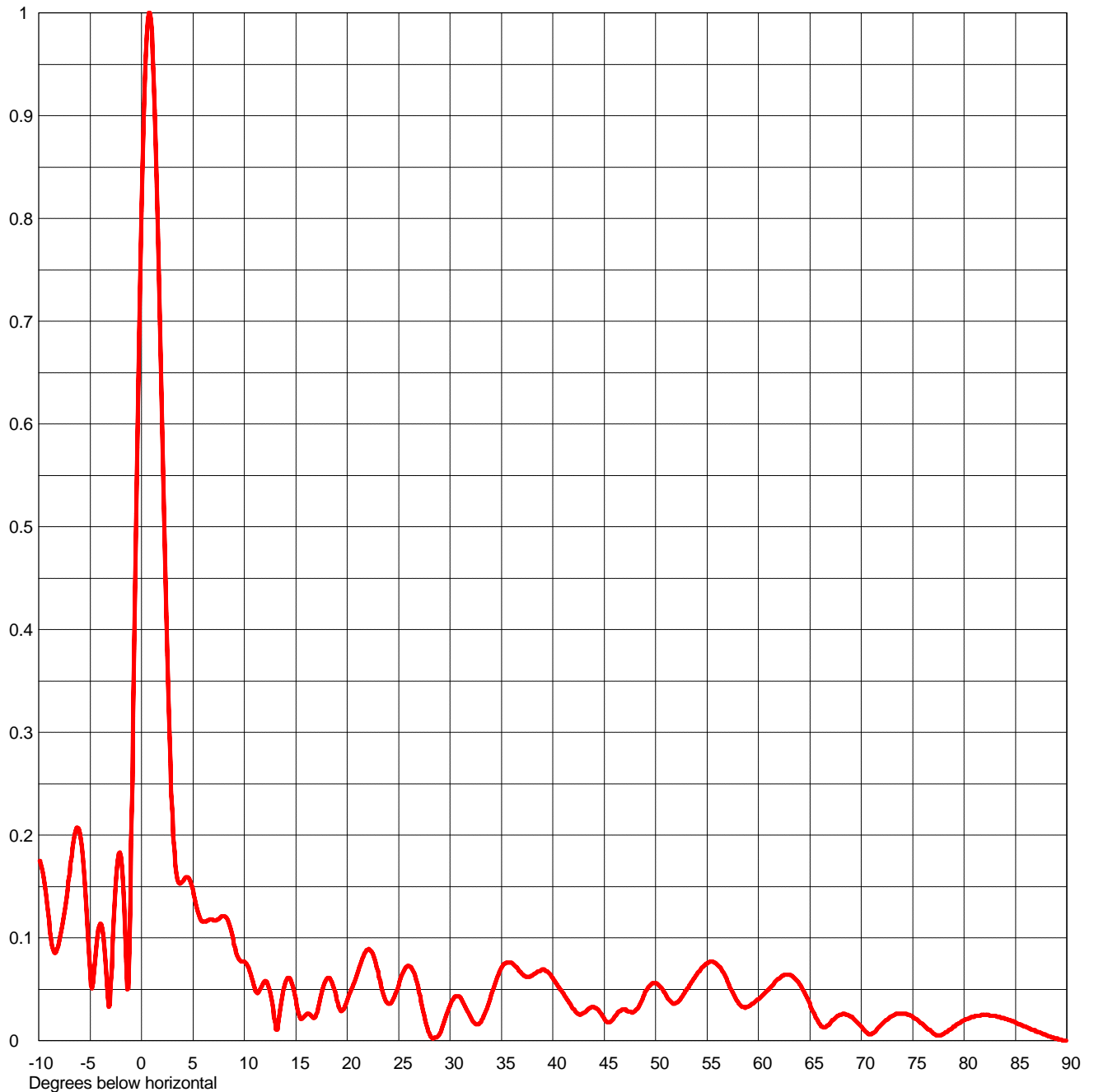
Remarks:



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Remarks:



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 Call Letters **WTHR-DT**      Channel **46**  
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 Customer  
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## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **30Q255075**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.176	2.4	0.416	10.6	0.065	30.5	0.043	51.0	0.044	71.5	0.010
-9.5	0.157	2.6	0.336	10.8	0.058	31.0	0.042	51.5	0.038	72.0	0.016
-9.0	0.116	2.8	0.270	11.0	0.051	31.5	0.033	52.0	0.037	72.5	0.020
-8.5	0.086	3.0	0.219	11.5	0.049	32.0	0.023	52.5	0.042	73.0	0.024
-8.0	0.097	3.2	0.183	12.0	0.058	32.5	0.016	53.0	0.049	73.5	0.026
-7.5	0.125	3.4	0.163	12.5	0.047	33.0	0.018	53.5	0.057	74.0	0.026
-7.0	0.163	3.6	0.154	13.0	0.017	33.5	0.029	54.0	0.064	74.5	0.025
-6.5	0.200	3.8	0.153	13.5	0.030	34.0	0.044	54.5	0.071	75.0	0.023
-6.0	0.202	4.0	0.155	14.0	0.057	34.5	0.059	55.0	0.075	75.5	0.020
-5.5	0.149	4.2	0.158	14.5	0.059	35.0	0.071	55.5	0.077	76.0	0.016
-5.0	0.065	4.4	0.159	15.0	0.040	35.5	0.076	56.0	0.074	76.5	0.011
-4.5	0.078	4.6	0.158	15.5	0.021	36.0	0.076	56.5	0.067	77.0	0.007
-4.0	0.114	4.8	0.153	16.0	0.025	36.5	0.071	57.0	0.058	77.5	0.005
-3.5	0.075	5.0	0.146	16.5	0.024	37.0	0.065	57.5	0.047	78.0	0.006
-3.0	0.051	5.2	0.138	17.0	0.025	37.5	0.062	58.0	0.038	78.5	0.010
-2.8	0.093	5.4	0.129	17.5	0.045	38.0	0.063	58.5	0.033	79.0	0.014
-2.6	0.134	5.6	0.122	18.0	0.060	38.5	0.067	59.0	0.033	79.5	0.017
-2.4	0.166	5.8	0.117	18.5	0.057	39.0	0.069	59.5	0.036	80.0	0.020
-2.2	0.182	6.0	0.116	19.0	0.040	39.5	0.067	60.0	0.040	80.5	0.022
-2.0	0.179	6.2	0.116	19.5	0.029	40.0	0.061	60.5	0.045	81.0	0.023
-1.8	0.154	6.4	0.117	20.0	0.039	40.5	0.053	61.0	0.050	81.5	0.024
-1.6	0.106	6.6	0.118	20.5	0.052	41.0	0.046	61.5	0.055	82.0	0.025
-1.4	0.050	6.8	0.118	21.0	0.066	41.5	0.039	62.0	0.060	82.5	0.024
-1.2	0.087	7.0	0.117	21.5	0.080	42.0	0.031	62.5	0.064	83.0	0.024
-1.0	0.193	7.2	0.117	22.0	0.088	42.5	0.026	63.0	0.064	83.5	0.023
-0.8	0.316	7.4	0.118	22.5	0.084	43.0	0.027	63.5	0.061	84.0	0.021
-0.6	0.447	7.6	0.119	23.0	0.067	43.5	0.031	64.0	0.055	84.5	0.020
-0.4	0.577	7.8	0.121	23.5	0.046	44.0	0.033	64.5	0.046	85.0	0.018
-0.2	0.699	8.0	0.121	24.0	0.036	44.5	0.029	65.0	0.036	85.5	0.016
0.0	0.807	8.2	0.120	24.5	0.041	45.0	0.021	65.5	0.025	86.0	0.014
0.2	0.894	8.4	0.117	25.0	0.054	45.5	0.018	66.0	0.016	86.5	0.011
0.4	0.957	8.6	0.111	25.5	0.067	46.0	0.023	66.5	0.013	87.0	0.009
0.6	0.993	8.8	0.103	26.0	0.073	46.5	0.029	67.0	0.017	87.5	0.007
0.8	1.000	9.0	0.094	26.5	0.066	47.0	0.030	67.5	0.022	88.0	0.005
1.0	0.980	9.2	0.086	27.0	0.047	47.5	0.028	68.0	0.025	88.5	0.003
1.2	0.936	9.4	0.081	27.5	0.025	48.0	0.029	68.5	0.025	89.0	0.002
1.4	0.870	9.6	0.078	28.0	0.007	48.5	0.036	69.0	0.023	89.5	0.001
1.6	0.789	9.8	0.077	28.5	0.003	49.0	0.047	69.5	0.019	90.0	0.000
1.8	0.697	10.0	0.077	29.0	0.006	49.5	0.054	70.0	0.014		
2.0	0.601	10.2	0.075	29.5	0.020	50.0	0.056	70.5	0.008		
2.2	0.506	10.4	0.071	30.0	0.034	50.5	0.052	71.0	0.006		

Remarks: