



Proposal Number
Date
Call Letters
Location
Customer
Antenna Type

DCA-10892 Revision: **2**
12-Apr-05
WVCY-DT Channel **22**
Milwaukee, WI
TFU-31JSC-R C170

SYSTEM SUMMARY

Antenna:

Type:	TFU-31JSC-R C170	ERP:	196 kW	H Pol	(22.92 dBk)
Channel:	22	Peak Gain*:	51.0		(17.08 dB)
Location:	Milwaukee, WI	Input Power:	3.8 kW		(5.85 dBk)

Transmission Line:

Type:	EIA/DCA	Attenuation:	1.92 dB
Size:	4-1/16 in	Efficiency:	64.2%
Impedance:	50 ohm		
Length:	1,250 ft		381.0 m

Transmitter:

Power Required: **6.0 kW** **(7.77 dBk)**

* Gain is with respect to half wave dipole.

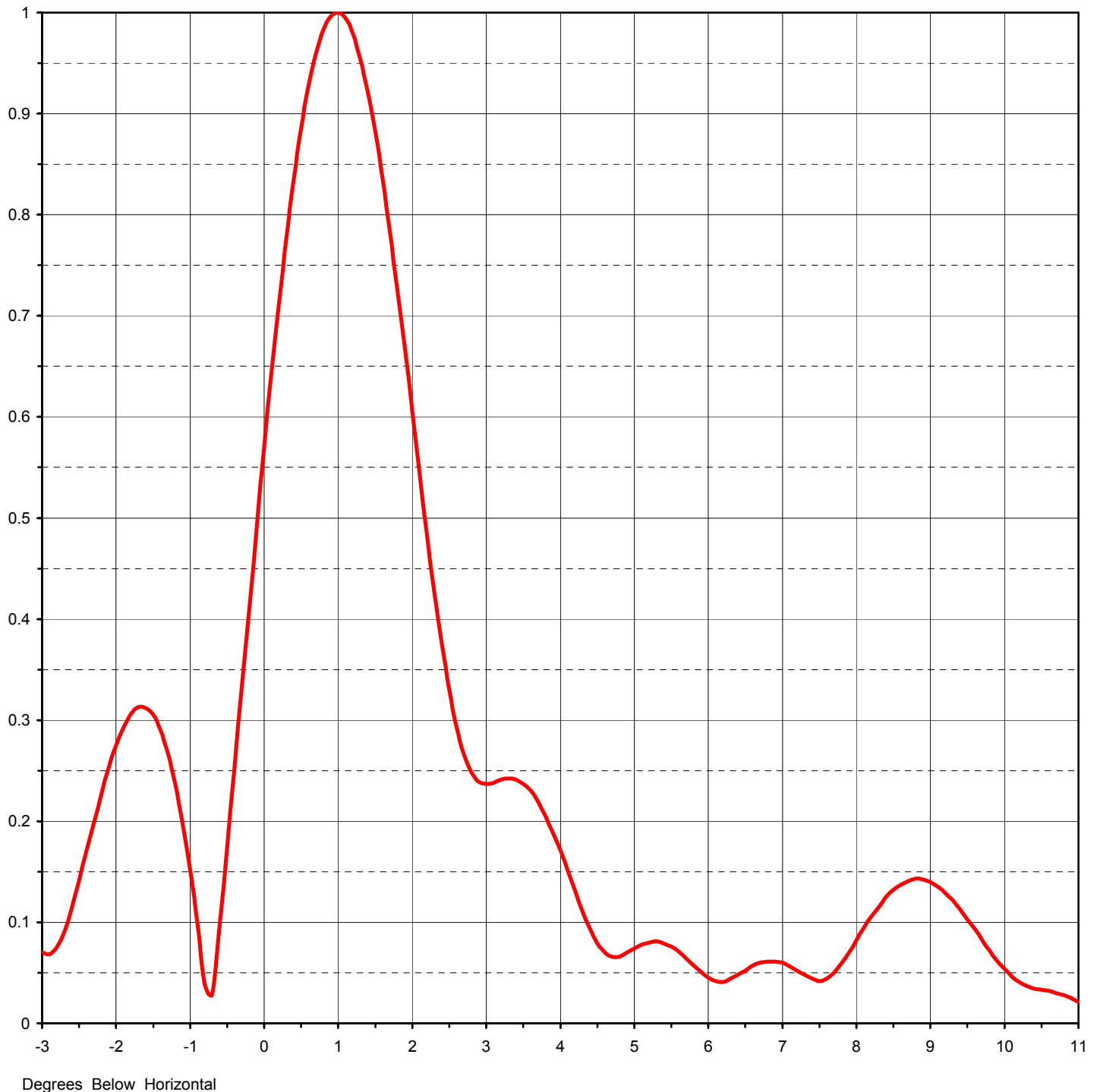


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ELEVATION PATTERN

RMS Gain at Main Lobe	30.00 (14.77 dB)
RMS Gain at Horizontal	9.70 (9.87 dB)
Calculated / Measured	Calculated

Beam Tilt	1.00 deg
Frequency	521.00 MHz
Drawing #	31Y300100



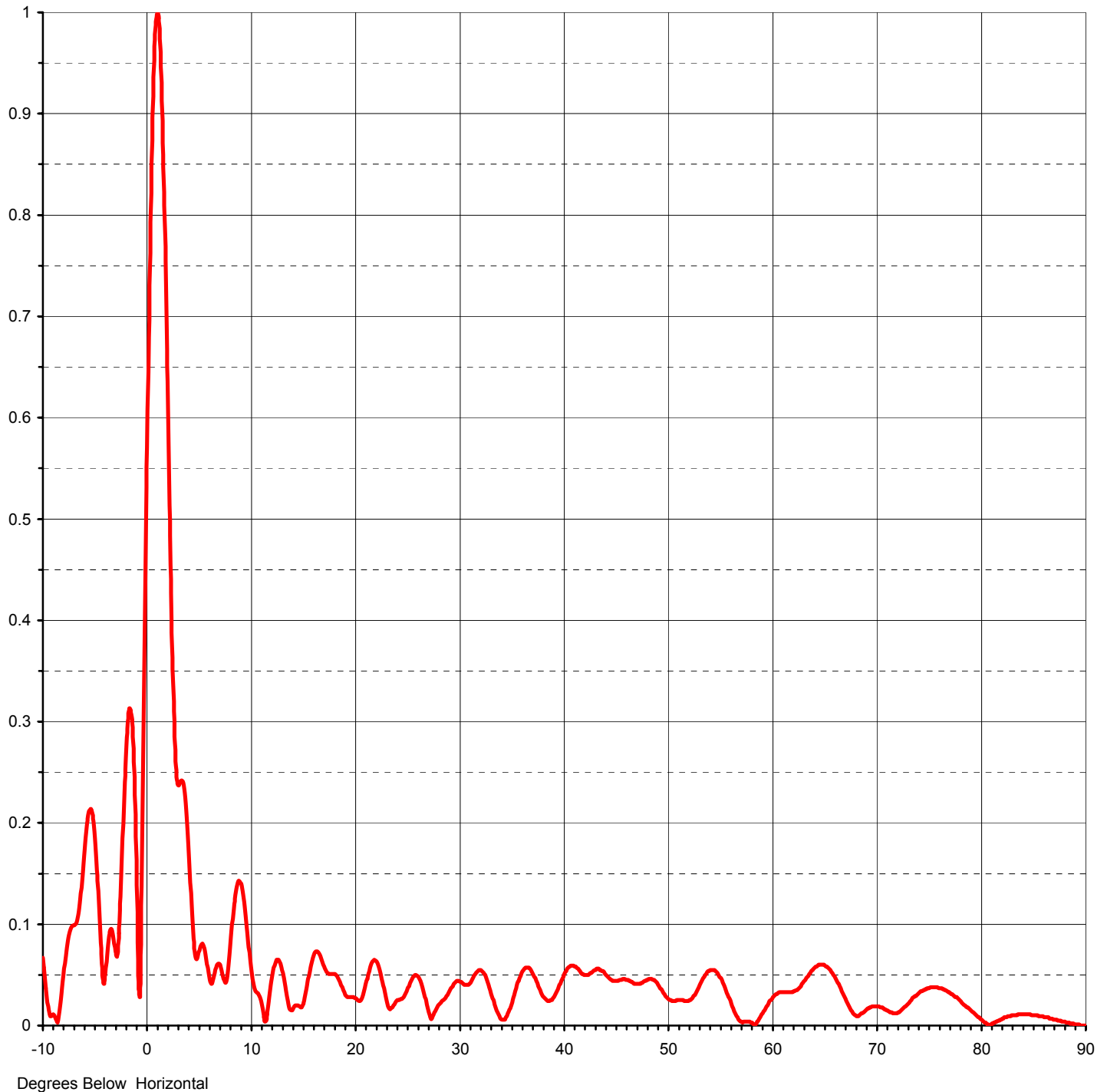


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ELEVATION PATTERN

RMS Gain at Main Lobe	30.00 (14.77 dB)
RMS Gain at Horizontal	9.70 (9.87 dB)
Calculated / Measured	Calculated

Beam Tilt	1.00 deg
Frequency	521.00 MHz
Drawing #	31Y300100-90





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TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **31Y300100-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.067	2.4	0.375	10.6	0.033	30.5	0.040	51.0	0.025	71.5	0.012
-9.5	0.019	2.6	0.293	10.8	0.030	31.0	0.041	51.5	0.025	72.0	0.013
-9.0	0.011	2.8	0.248	11.0	0.025	31.5	0.050	52.0	0.024	72.5	0.017
-8.5	0.008	3.0	0.237	11.5	0.005	32.0	0.055	52.5	0.029	73.0	0.022
-8.0	0.051	3.2	0.241	12.0	0.043	32.5	0.050	53.0	0.038	73.5	0.028
-7.5	0.089	3.4	0.241	12.5	0.065	33.0	0.035	53.5	0.048	74.0	0.032
-7.0	0.099	3.6	0.230	13.0	0.057	33.5	0.018	54.0	0.054	74.5	0.035
-6.5	0.116	3.8	0.205	13.5	0.029	34.0	0.007	54.5	0.055	75.0	0.037
-6.0	0.173	4.0	0.171	14.0	0.015	34.5	0.008	55.0	0.048	75.5	0.038
-5.5	0.213	4.2	0.131	14.5	0.020	35.0	0.020	55.5	0.038	76.0	0.037
-5.0	0.185	4.4	0.094	15.0	0.020	35.5	0.037	56.0	0.025	76.5	0.035
-4.5	0.092	4.6	0.070	15.5	0.043	36.0	0.052	56.5	0.012	77.0	0.032
-4.0	0.051	4.8	0.066	16.0	0.067	36.5	0.057	57.0	0.004	77.5	0.028
-3.5	0.095	5.0	0.074	16.5	0.072	37.0	0.053	57.5	0.004	78.0	0.024
-3.0	0.070	5.2	0.080	17.0	0.060	37.5	0.042	58.0	0.003	78.5	0.019
-2.8	0.075	5.4	0.079	17.5	0.051	38.0	0.030	58.5	0.002	79.0	0.015
-2.6	0.114	5.6	0.071	18.0	0.051	38.5	0.024	59.0	0.010	79.5	0.010
-2.4	0.170	5.8	0.057	18.5	0.045	39.0	0.027	59.5	0.019	80.0	0.006
-2.2	0.227	6.0	0.045	19.0	0.033	39.5	0.036	60.0	0.026	80.5	0.002
-2.0	0.275	6.2	0.041	19.5	0.028	40.0	0.048	60.5	0.031	81.0	0.002
-1.8	0.306	6.4	0.048	20.0	0.027	40.5	0.057	61.0	0.033	81.5	0.004
-1.6	0.312	6.6	0.057	20.5	0.024	41.0	0.059	61.5	0.033	82.0	0.007
-1.4	0.290	6.8	0.061	21.0	0.038	41.5	0.055	62.0	0.033	82.5	0.009
-1.2	0.237	7.0	0.060	21.5	0.058	42.0	0.050	62.5	0.036	83.0	0.010
-1.0	0.151	7.2	0.052	22.0	0.064	42.5	0.051	63.0	0.042	83.5	0.011
-0.8	0.038	7.4	0.044	22.5	0.051	43.0	0.055	63.5	0.049	84.0	0.011
-0.6	0.100	7.6	0.044	23.0	0.027	43.5	0.055	64.0	0.056	84.5	0.011
-0.4	0.253	7.8	0.059	23.5	0.017	44.0	0.051	64.5	0.060	85.0	0.010
-0.2	0.413	8.0	0.082	24.0	0.024	44.5	0.046	65.0	0.059	85.5	0.009
0.0	0.570	8.2	0.105	24.5	0.026	45.0	0.044	65.5	0.055	86.0	0.008
0.2	0.714	8.4	0.125	25.0	0.034	45.5	0.045	66.0	0.047	86.5	0.007
0.4	0.835	8.6	0.137	25.5	0.046	46.0	0.045	66.5	0.037	87.0	0.006
0.6	0.927	8.8	0.143	26.0	0.049	46.5	0.043	67.0	0.026	87.5	0.005
0.8	0.983	9.0	0.140	26.5	0.038	47.0	0.041	67.5	0.015	88.0	0.004
1.0	1.000	9.2	0.129	27.0	0.017	47.5	0.042	68.0	0.009	88.5	0.002
1.2	0.979	9.4	0.113	27.5	0.009	48.0	0.045	68.5	0.012	89.0	0.001
1.4	0.922	9.6	0.093	28.0	0.020	48.5	0.046	69.0	0.016	89.5	0.000
1.6	0.835	9.8	0.082	28.5	0.025	49.0	0.042	69.5	0.019	90.0	0.000
1.8	0.726	10.0	0.062	29.0	0.032	49.5	0.034	70.0	0.019		
2.0	0.605	10.2	0.046	29.5	0.041	50.0	0.027	70.5	0.018		
2.2	0.484	10.4	0.037	30.0	0.044	50.5	0.024	71.0	0.015		



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AZIMUTH PATTERN

Gain **1.70** **(2.30 dB)**
Calculated / Measured **Calculated**

Frequency **521.00 MHz**
Drawing # **TFU-C170**

