



Exhibit No.

Date	16 Nov 2004	
Call Letters	KUPN-DT	Channel 23
Location		
Customer		
Antenna Type	TUA-C2-08/16U-T	

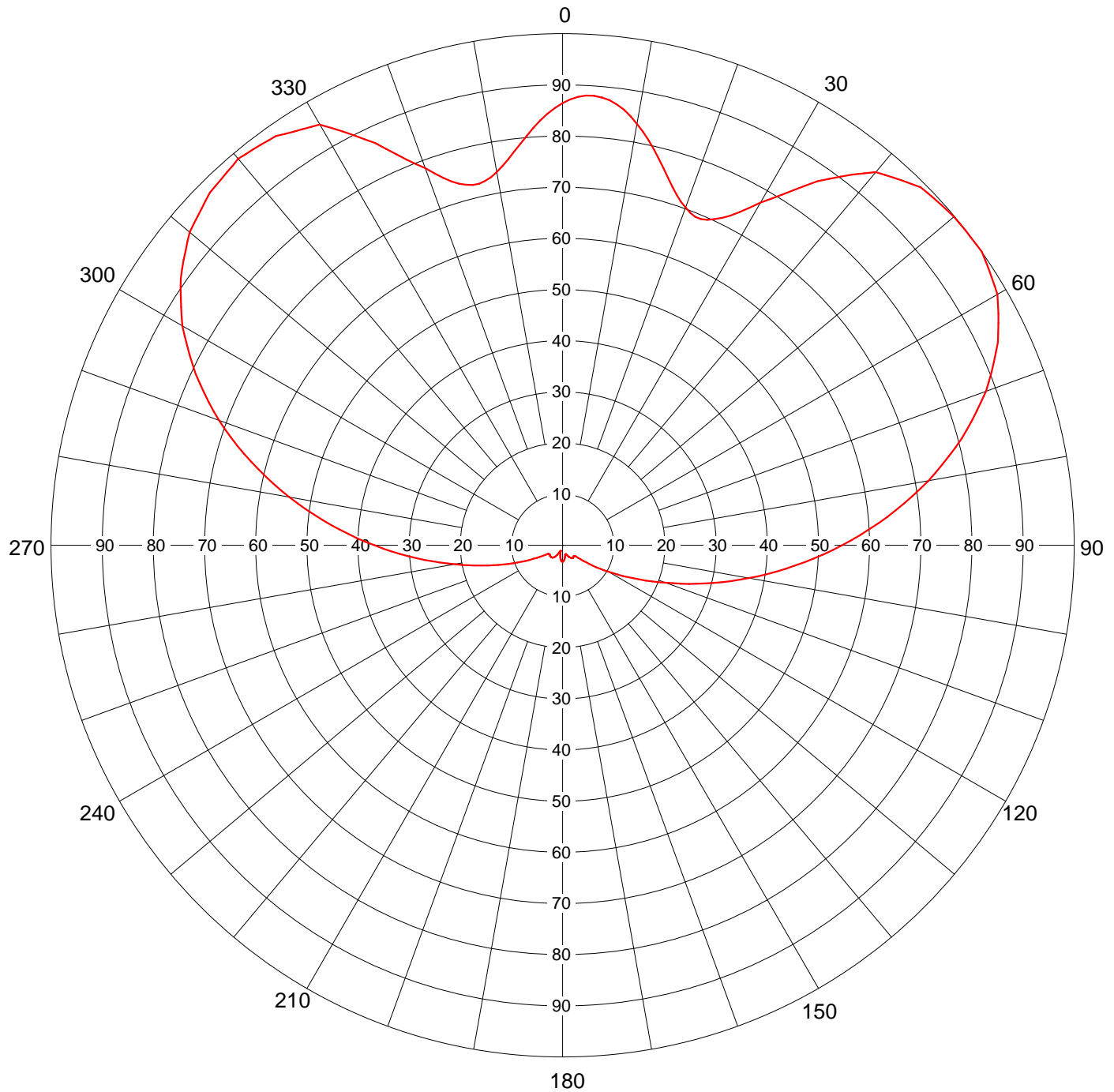
**AZIMUTH PATTERN**

Gain  
Calculated / Measured

**2.80 (4.47 dB)**  
**Calculated**

Frequency  
Drawing #

**527 MHz**  
**TUA-C2**



Remarks:



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### TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **TUA-C2**

Angle	Field	ERP (kW)	ERP (dBk)
0	0.864	746.5	28.73
10	0.836	698.9	28.44
20	0.703	494.2	26.94
30	0.773	597.5	27.76
40	0.952	906.3	29.57
50	0.999	998.0	29.99
60	0.981	962.4	29.83
70	0.881	776.2	28.90
80	0.726	527.1	27.22
90	0.546	298.1	24.74
100	0.369	136.2	21.34
110	0.213	45.4	16.57
120	0.103	10.6	10.26
130	0.032	1.0	0.10
140	0.032	1.0	0.10
150	0.027	0.7	-1.37
160	0.018	0.3	-4.89
170	0.025	0.6	-2.04
180	0.032	1.0	0.10
190	0.025	0.6	-2.04
200	0.012	0.1	-8.42
210	0.022	0.5	-3.15
220	0.031	1.0	-0.17
230	0.032	1.0	0.10
240	0.032	1.0	0.10
250	0.102	10.4	10.17
260	0.213	45.4	16.57
270	0.367	134.7	21.29
280	0.542	293.8	24.68
290	0.715	511.2	27.09
300	0.858	736.2	28.67
310	0.952	906.3	29.57
320	0.986	972.2	29.88
330	0.950	902.5	29.55
340	0.785	616.2	27.90
350	0.741	549.1	27.40

#### Maxima

Angle	Field	ERP (kW)	ERP (dBk)
4	0.881	776.2	28.90
55	1.000	1000.0	30.00
140	0.032	1.0	0.10
181	0.032	1.0	0.10
226	0.032	1.0	0.10
230	0.032	1.0	0.10
320	0.986	972.2	29.88

#### Minima

Angle	Field	ERP (kW)	ERP (dBk)
23	0.693	480.2	26.81
135	0.030	0.9	-0.46
161	0.018	0.3	-4.89
201	0.012	0.1	-8.42
228	0.032	1.0	0.10
235	0.031	1.0	-0.17
347	0.725	525.6	27.21

Remarks:

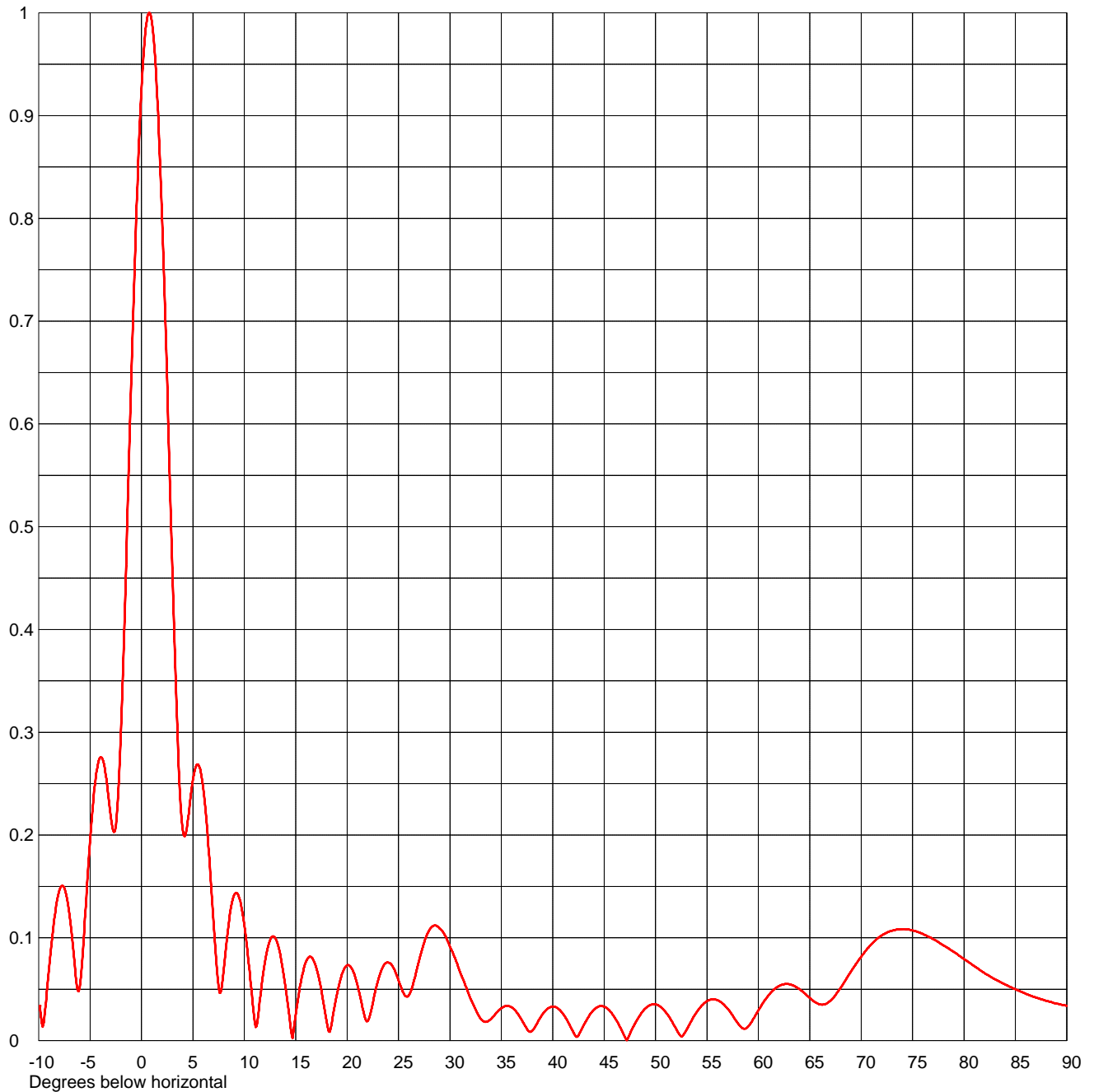


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ELEVATION PATTERN

RMS Gain at Main Lobe	16.1 (12.07 dB)	Beam Tilt	0.75 Degrees
RMS Gain at Horizontal	13.8 (11.40 dB)	Frequency	527.00 MHz
Calculated / Measured	Calculated	Drawing #	08U161075-90



Remarks:



Exhibit No.
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### TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **08U161075-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.043	2.4	0.672	10.6	0.058	30.5	0.080	51.0	0.028	71.5	0.099
-9.5	0.018	2.6	0.602	10.8	0.038	31.0	0.066	51.5	0.020	72.0	0.102
-9.0	0.070	2.8	0.530	11.0	0.019	31.5	0.054	52.0	0.011	72.5	0.105
-8.5	0.117	3.0	0.459	11.5	0.038	32.0	0.041	52.5	0.004	73.0	0.107
-8.0	0.146	3.2	0.389	12.0	0.076	32.5	0.030	53.0	0.010	73.5	0.108
-7.5	0.148	3.4	0.326	12.5	0.098	33.0	0.021	53.5	0.020	74.0	0.109
-7.0	0.122	3.6	0.271	13.0	0.100	33.5	0.018	54.0	0.028	74.5	0.108
-6.5	0.073	3.8	0.230	13.5	0.083	34.0	0.021	54.5	0.034	75.0	0.107
-6.0	0.053	4.0	0.205	14.0	0.052	34.5	0.027	55.0	0.038	75.5	0.106
-5.5	0.119	4.2	0.199	14.5	0.014	35.0	0.032	55.5	0.040	76.0	0.104
-5.0	0.195	4.4	0.207	15.0	0.025	35.5	0.034	56.0	0.039	76.5	0.101
-4.5	0.252	4.6	0.222	15.5	0.057	36.0	0.032	56.5	0.036	77.0	0.099
-4.0	0.276	4.8	0.239	16.0	0.077	36.5	0.028	57.0	0.031	77.5	0.096
-3.5	0.260	5.0	0.254	16.5	0.081	37.0	0.020	57.5	0.024	78.0	0.093
-3.0	0.219	5.2	0.264	17.0	0.071	37.5	0.011	58.0	0.017	78.5	0.090
-2.8	0.206	5.4	0.269	17.5	0.048	38.0	0.010	58.5	0.012	79.0	0.086
-2.6	0.204	5.6	0.267	18.0	0.019	38.5	0.017	59.0	0.014	79.5	0.083
-2.4	0.219	5.8	0.259	18.5	0.017	39.0	0.026	59.5	0.021	80.0	0.079
-2.2	0.252	6.0	0.246	19.0	0.045	39.5	0.031	60.0	0.029	80.5	0.076
-2.0	0.301	6.2	0.227	19.5	0.065	40.0	0.033	60.5	0.037	81.0	0.073
-1.8	0.361	6.4	0.203	20.0	0.073	40.5	0.031	61.0	0.044	81.5	0.069
-1.6	0.428	6.6	0.176	20.5	0.069	41.0	0.026	61.5	0.050	82.0	0.066
-1.4	0.499	6.8	0.147	21.0	0.054	41.5	0.018	62.0	0.053	82.5	0.063
-1.2	0.571	7.0	0.116	21.5	0.032	42.0	0.008	62.5	0.055	83.0	0.060
-1.0	0.643	7.2	0.086	22.0	0.019	42.5	0.005	63.0	0.055	83.5	0.057
-0.8	0.711	7.4	0.061	22.5	0.037	43.0	0.015	63.5	0.053	84.0	0.055
-0.6	0.775	7.6	0.046	23.0	0.058	43.5	0.024	64.0	0.050	84.5	0.052
-0.4	0.833	7.8	0.052	23.5	0.072	44.0	0.030	64.5	0.046	85.0	0.050
-0.2	0.884	8.0	0.069	24.0	0.076	44.5	0.033	65.0	0.042	85.5	0.048
0.0	0.927	8.2	0.089	24.5	0.071	45.0	0.033	65.5	0.038	86.0	0.046
0.2	0.960	8.4	0.108	25.0	0.059	45.5	0.029	66.0	0.035	86.5	0.044
0.4	0.984	8.6	0.123	25.5	0.046	46.0	0.023	66.5	0.036	87.0	0.042
0.6	0.997	8.8	0.134	26.0	0.044	46.5	0.014	67.0	0.039	87.5	0.040
0.8	1.000	9.0	0.141	26.5	0.058	47.0	0.004	67.5	0.044	88.0	0.039
1.0	0.992	9.2	0.144	27.0	0.078	47.5	0.007	68.0	0.051	88.5	0.037
1.2	0.972	9.4	0.142	27.5	0.096	48.0	0.017	68.5	0.059	89.0	0.036
1.4	0.943	9.6	0.136	28.0	0.108	48.5	0.025	69.0	0.067	89.5	0.035
1.6	0.904	9.8	0.126	28.5	0.112	49.0	0.031	69.5	0.075	90.0	0.034
1.8	0.856	10.0	0.113	29.0	0.109	49.5	0.035	70.0	0.082		
2.0	0.801	10.2	0.096	29.5	0.103	50.0	0.035	70.5	0.088		
2.2	0.739	10.4	0.078	30.0	0.091	50.5	0.033	71.0	0.094		

Remarks: