

Dielectric

December 2004

ANTENNA THEORETICAL HORIZONTAL PLANE RADIATION PATTERN

Prepared for

URBANA-CHAPAIN BROADCASTING PARTNERS

STATION WCCU-DT
CH 26

URBANA, ILLINOIS
507 KW (MAX-DA, BT) 114 METERS

Denny & Associates, P.C.

Consulting Engineers

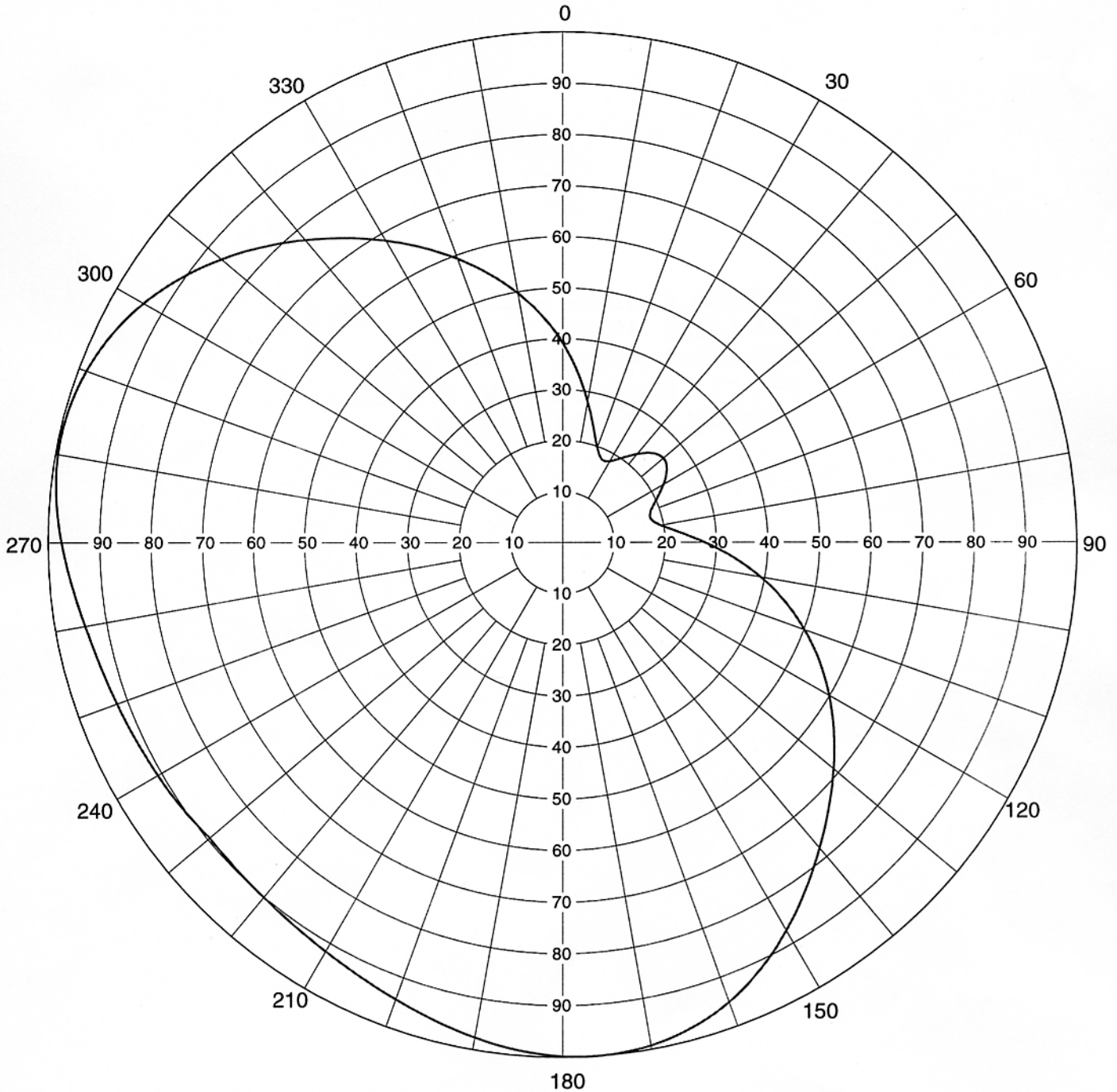
AZIMUTH PATTERN

RMS Gain at Main Lobe
Calculated / Measured

1.90 (2.79 dB)
Calculated

Frequency
Drawing #

545 MHz
DSB-M



Remarks:

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TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # **DSB-M**

Angle	Field	ERP (kW)	ERP (dBk)
0	0.392	77.9	18.92
10	0.280	39.7	15.99
20	0.197	19.7	12.94
30	0.184	17.2	12.35
40	0.226	25.9	14.13
50	0.257	33.5	15.25
60	0.227	26.1	14.17
70	0.183	17.0	12.30
80	0.194	19.1	12.81
90	0.278	39.2	15.93
100	0.393	78.3	18.94
110	0.502	127.8	21.06
120	0.599	181.9	22.60
130	0.688	240.0	23.80
140	0.778	306.9	24.87
150	0.873	386.4	25.87
160	0.951	458.5	26.61
170	0.993	499.9	26.99
180	0.998	505.0	27.03
190	0.976	483.0	26.84
200	0.944	451.8	26.55
210	0.918	427.3	26.31
220	0.901	411.6	26.14
230	0.895	406.1	26.09
240	0.908	418.0	26.21
250	0.921	430.1	26.34
260	0.942	449.9	26.53
270	0.974	481.0	26.82
280	0.995	501.9	27.01
290	0.985	491.9	26.92
300	0.940	448.0	26.51
310	0.865	379.4	25.79
320	0.775	304.5	24.84
330	0.684	237.2	23.75
340	0.593	178.3	22.51
350	0.497	125.2	20.98

Maxima

Angle	Field	ERP (kW)	ERP (dBk)
50	0.257	33.5	15.25
177	1.000	507.0	27.05
282	0.996	503.0	27.02

Minima

Angle	Field	ERP (kW)	ERP (dBk)
26	0.179	16.2	12.11
74	0.178	16.1	12.06
230	0.895	406.1	26.09

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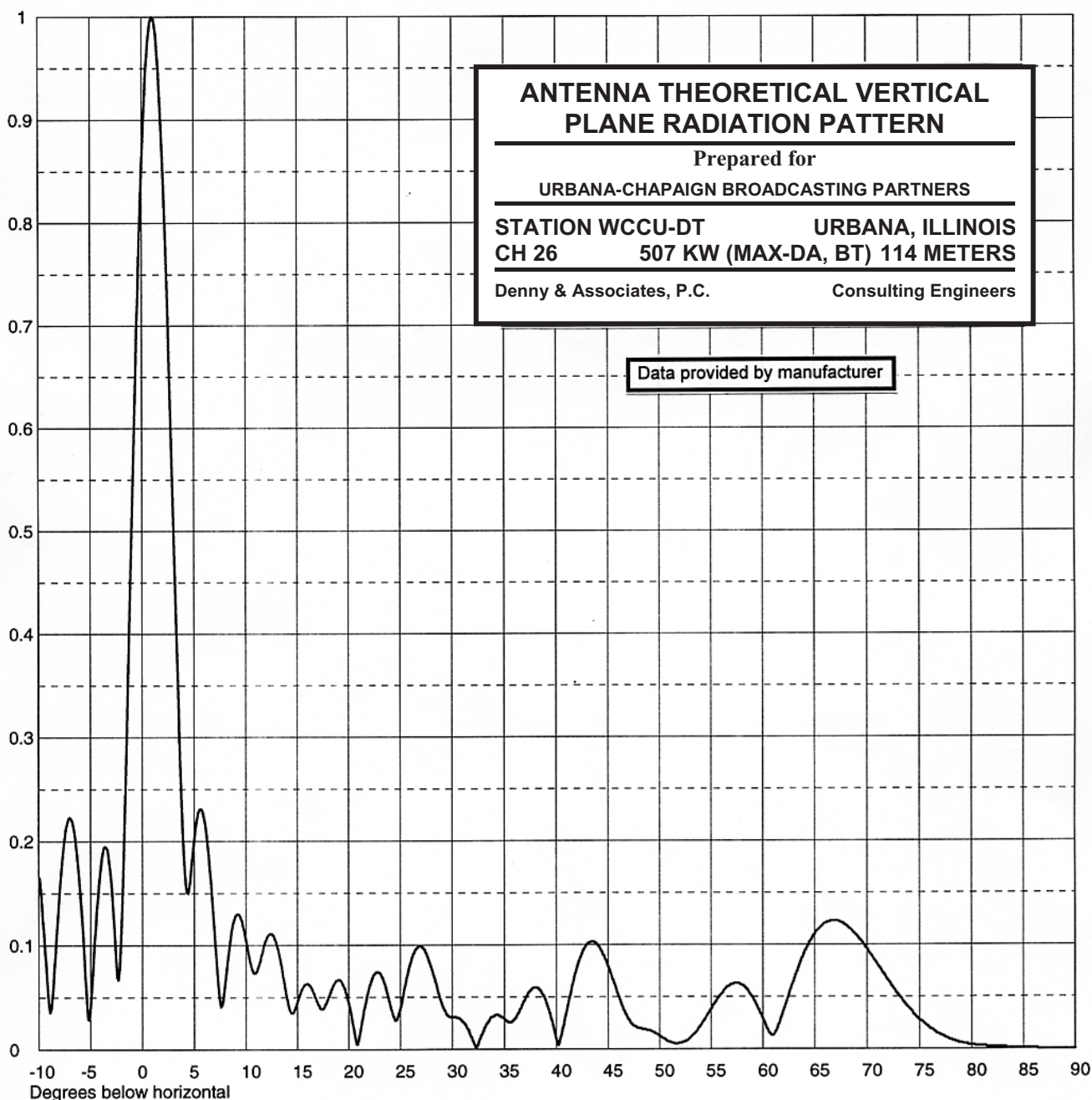
December 2004

ELEVATION PATTERN

RMS Gain at Main Lobe
RMS Gain at Horizontal
Calculated / Measured

16.0 (12.04 dB)
11.8 (10.72 dB)
Calculated

Beam Tilt **1.00 Degrees**
Frequency **545.00 MHz**
Drawing # **16B160100**



Remarks:

Dielectric

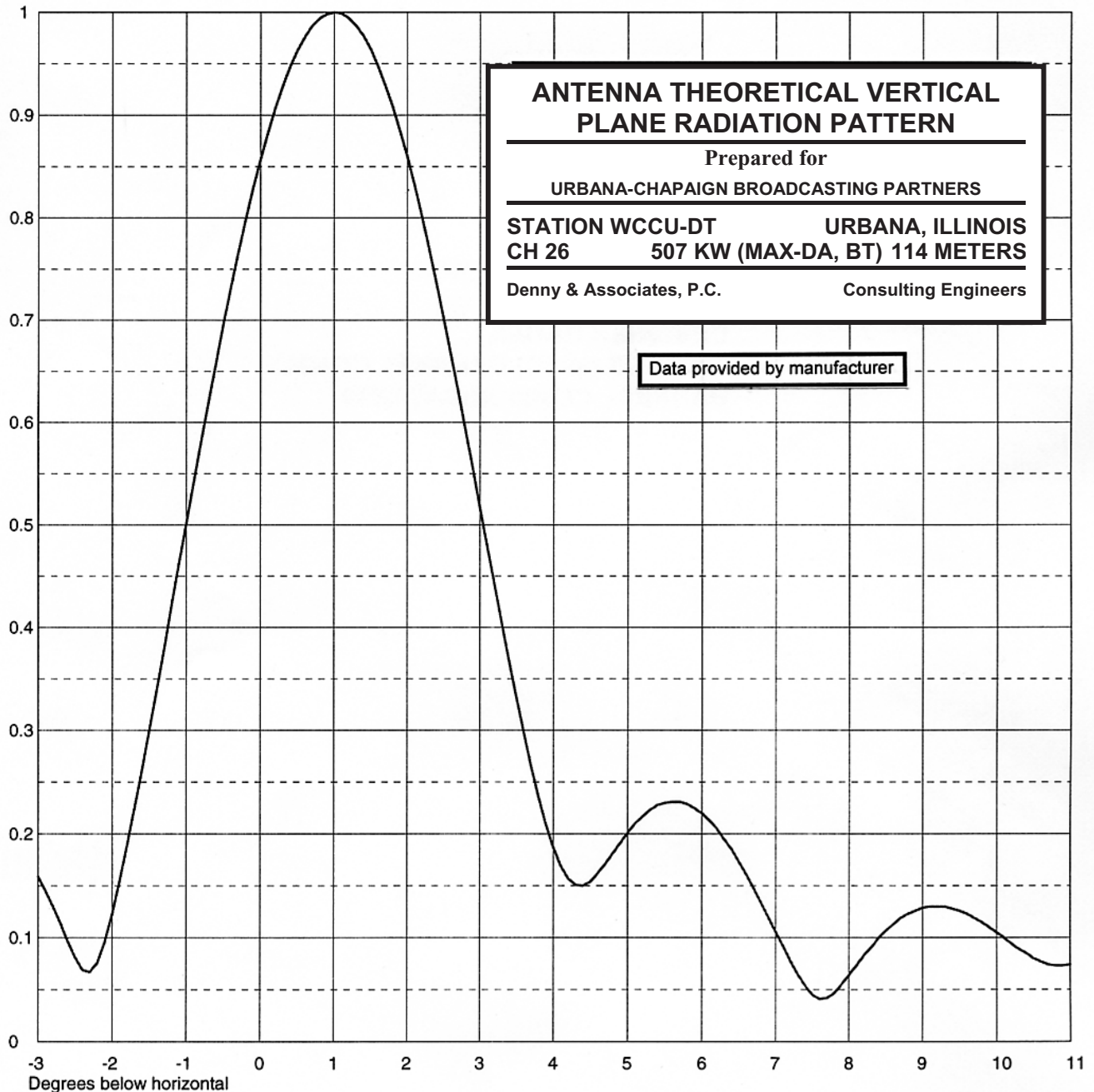
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ELEVATION PATTERN

RMS Gain at Main Lobe
RMS Gain at Horizontal
Calculated / Measured

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11.8 (10.72 dB)
Calculated

Beam Tilt **1.00 Degrees**
Frequency **545.00 MHz**
Drawing # **16B160100**



Remarks: