

ELEVATION PATTERN

RMS Gain at Main Lobe	20.60 (13.14 dB)	Beam Tilt	1.20 deg
RMS Gain at Horizontal	7.70 (8.86 dB)	Frequency	503.00 MHz
Calculated / Measured	Calculated	Drawing #	12U206120

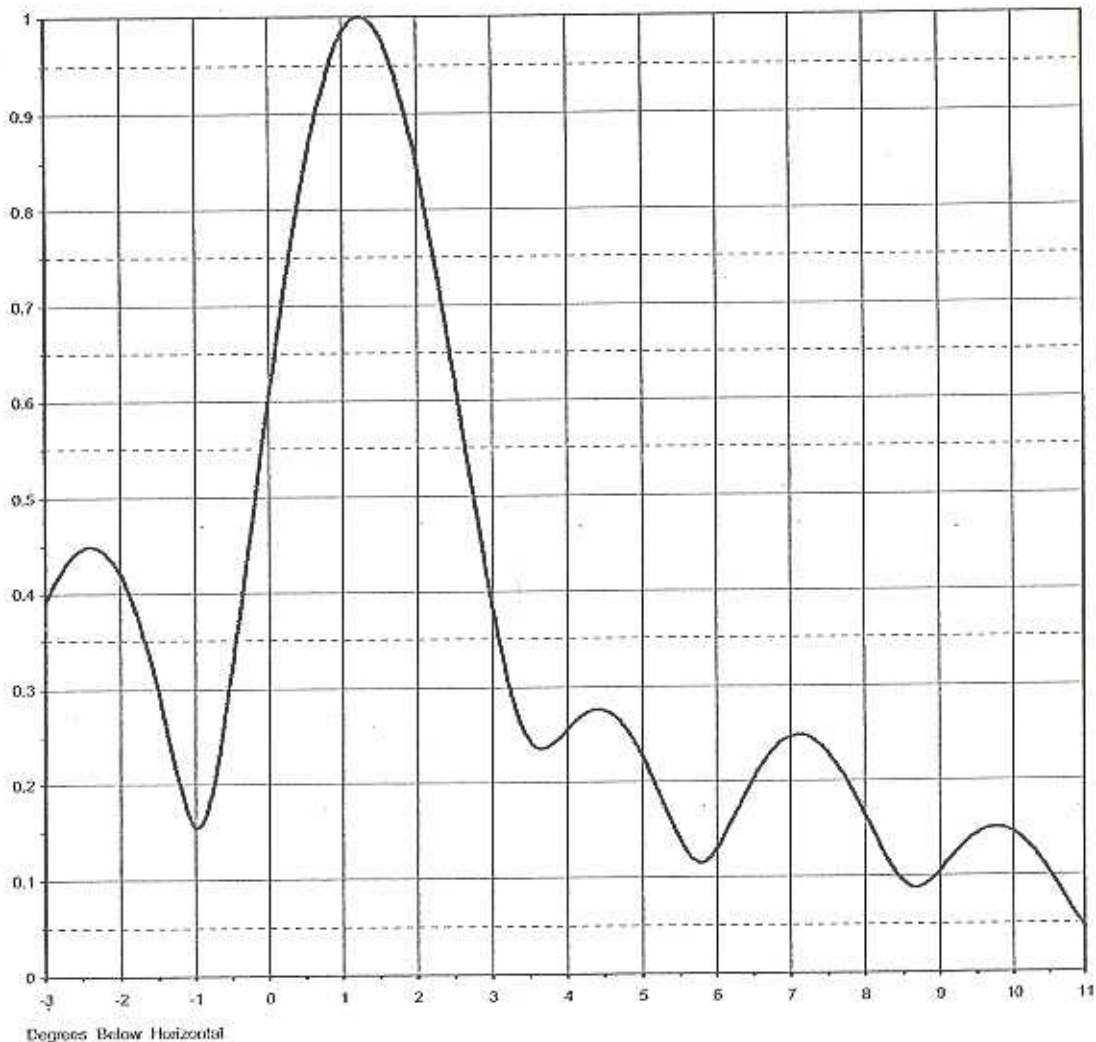


EXHIBIT B-1

VERTICAL RELATIVE FIELD PATTERN

PROPOSED KTTU-DT
CHANNEL 19 - TUCSON, ARIZONA
[AMENDMENT TO BMPCDT-20021030AAC]

SMITH AND FISHER



Proposal Number	DCA-9368	Revision:	4
Date	11-Sep-02		
Call Letters		Channel	19
Location	Tucson, AZ		
Customer			
Antenna Type	TUA-C3-12/36H-1-R		

ELEVATION PATTERN

RMS Gain at Main Lobe	20.60 (13.14 dB)	Beam Tilt	1.20 deg
RMS Gain at Horizontal	7.70 (8.86 dB)	Frequency	503.00 MHz
Calculated / Measured	Calculated	Drawing #	12U206120-90

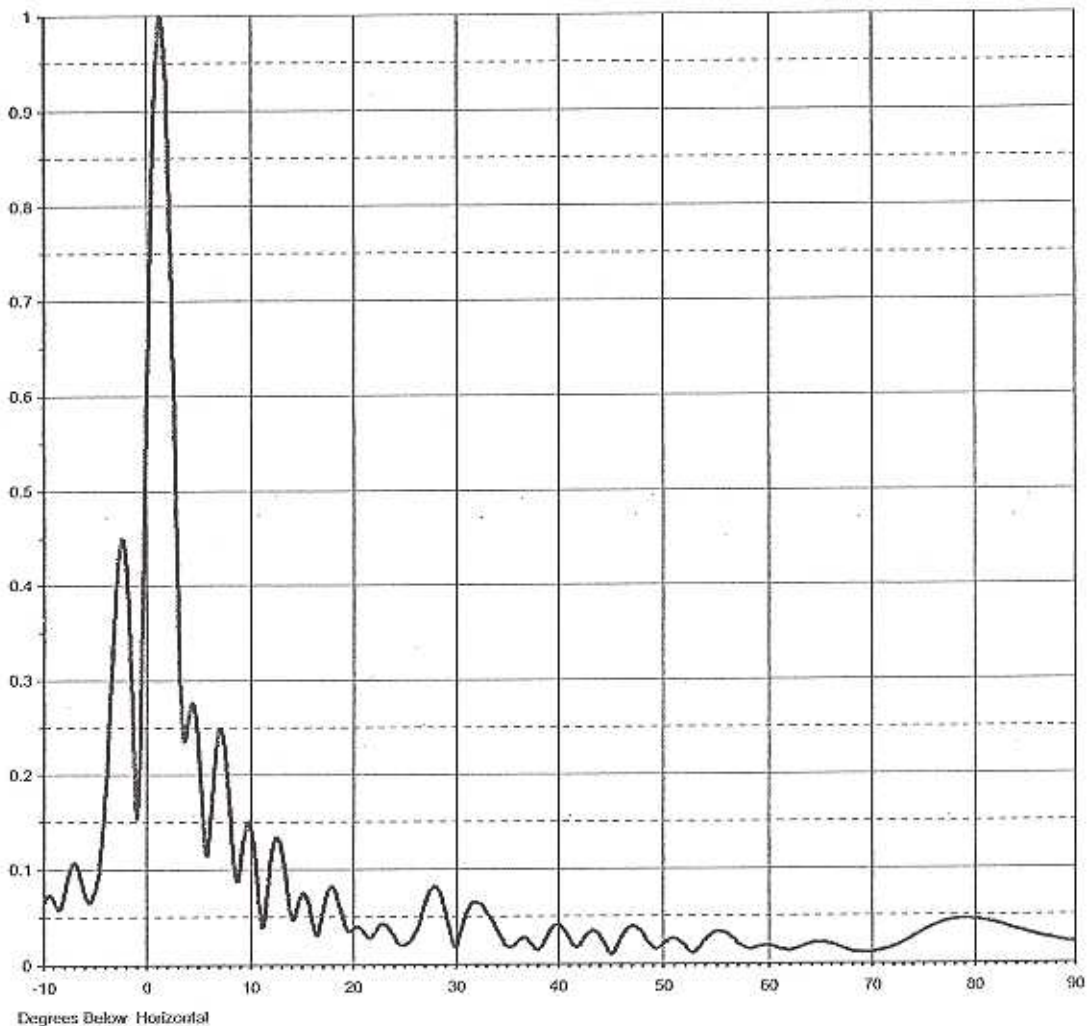


EXHIBIT B-2

VERTICAL RELATIVE FIELD PATTERN

PROPOSED KTTU-DT
CHANNEL 19 - TUCSON, ARIZONA
[AMENDMENT TO BMPCDT-20021030AAC]

SMITH AND FISHER

Proposal Number	DCA-9368	Revision:	4
Date	11-Sep-02	Channel	19
Call Letters			
Location	Tucson, AZ		
Customer			
Antenna Type	TUA-C3-12/36H-1-R		

AZIMUTH PATTERN

Gain **1.83** (2.62 dB)
Calculated / Measured **Calculated**

Frequency: **503.00 MHz**
Drawing # **TUA-C3-5030**

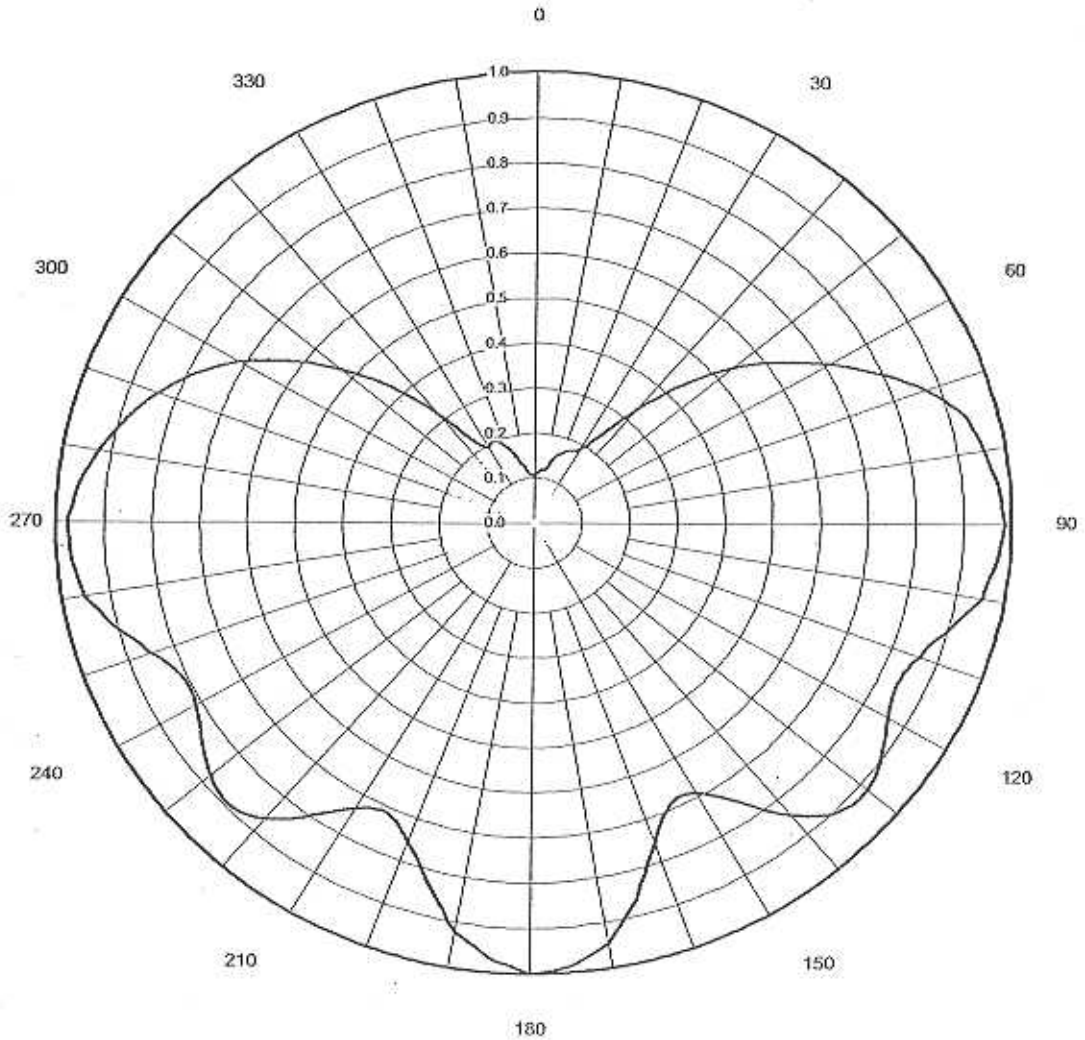


EXHIBIT B-3

HORIZONTAL RELATIVE FIELD PATTERN

**PROPOSED KTTU-DT
CHANNEL 19 - TUCSON, ARIZONA
[AMENDMENT TO BMPCDT-20021030AAC]**

SMITH AND FISHER

MAIN LOBE
DIRECTIONAL ANTENNA PATTERN DATAPROPOSED KTTU-TV
CHANNEL 19 – TUCSON, ARIZONA
[AMENDMENT TO BMPCDT-20021030AAC]

<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>	<u>Azimuth</u> <u>(° T)</u>	<u>Relative</u> <u>Field</u>	<u>ERP</u> <u>(dbk)</u>
0	0.105	7.2	180	1.000	26.8
10	0.119	8.3	190	0.920	26.1
20	0.166	11.2	200	0.756	24.4
30	0.189	12.3	210	0.733	24.1
40	0.329	17.1	220	0.860	25.5
50	0.540	21.4	230	0.876	25.7
60	0.710	23.8	240	0.813	25.0
70	0.871	25.6	250	0.851	25.4
80	0.954	26.4	260	0.953	26.4
90	0.985	26.7	270	0.976	26.6
100	0.953	26.4	280	0.925	26.1
110	0.861	25.5	290	0.841	25.3
120	0.859	25.5	300	0.714	23.9
130	0.917	26.0	310	0.530	21.3
140	0.843	25.3	320	0.313	16.7
150	0.691	23.6	330	0.198	12.7
160	0.757	24.4	340	0.183	12.0
170	0.947	26.3	350	0.125	8.7