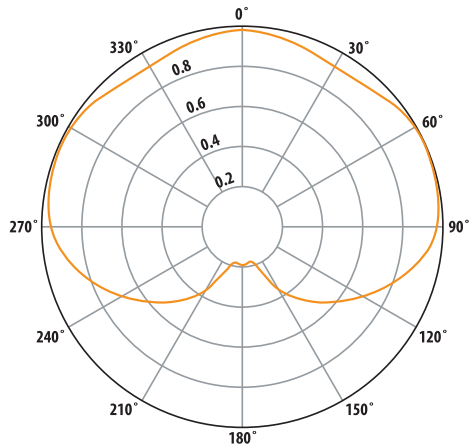


## TRASAR®

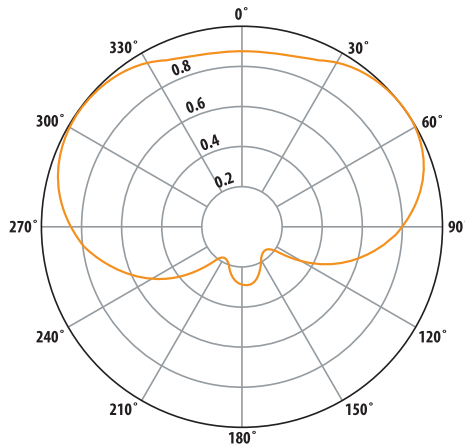
### UHF-TV transmitting antennas

#### Typical Azimuth Patterns

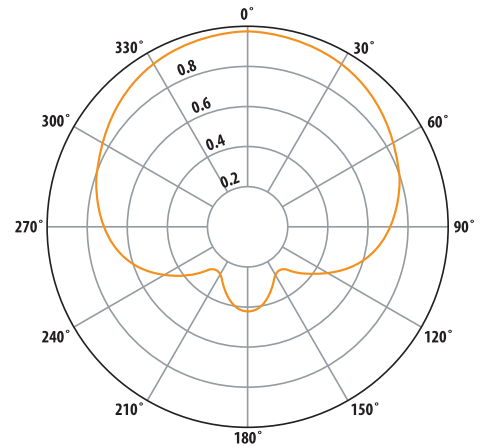
As shown below and on the following page, a wide variety of Azimuth patterns can be selected or customized for TRASAR® antennas.



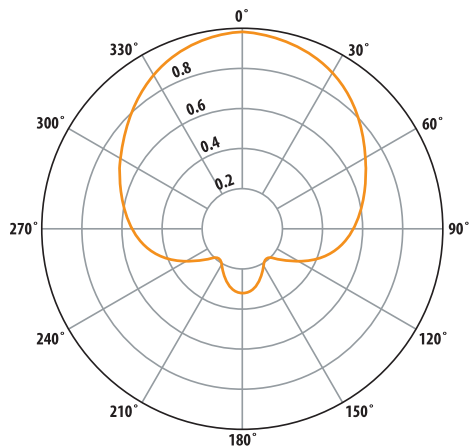
**Pattern Code: C1**  
Directivity: 1.52 (1.82 dB)



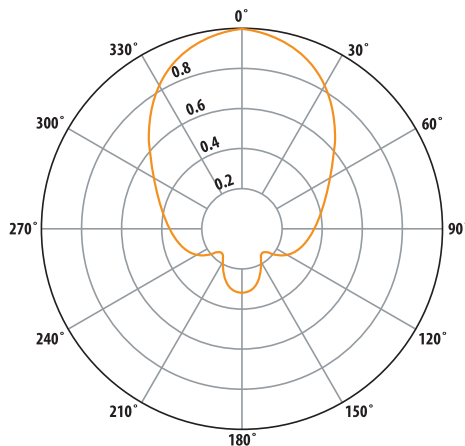
**Pattern Code: C2**  
Directivity: 1.80 (2.55 dB)



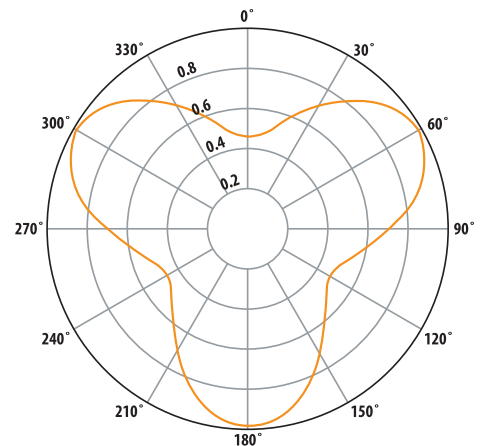
**Pattern Code: C3**  
Directivity: 2.00 (3.01 dB)



**Pattern Code: C4**  
Directivity: 2.54 (4.05 dB)



**Pattern Code: C5**  
Directivity: 3.40 (5.31 dB)



**Pattern Code: T1**  
Directivity: 1.78 (2.50 dB)

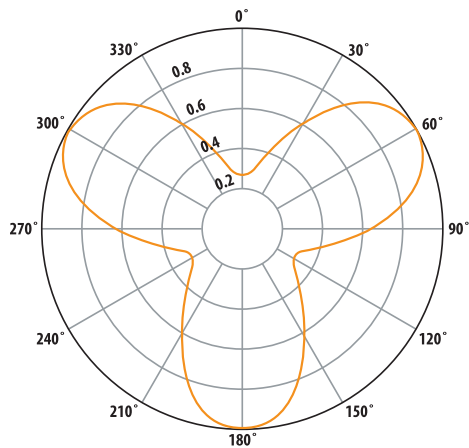
Note: These are typical free space patterns and will vary depending on channel, structural design criteria and tower mounting configuration. For specific requests, contact ERI.



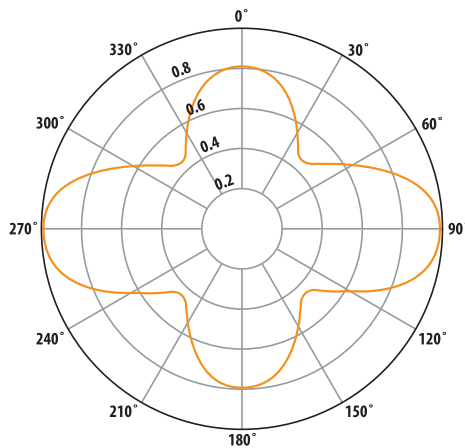
# TRASAR®

## UHF-TV transmitting antennas

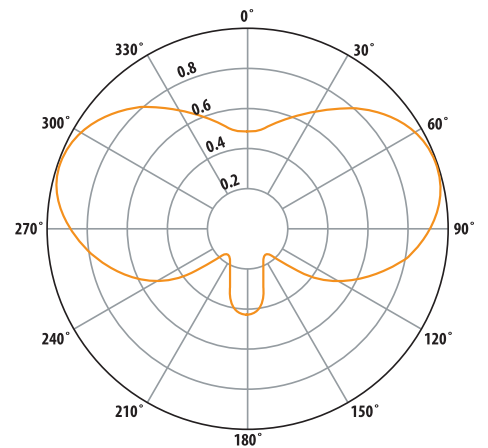
### Typical Azimuth Patterns



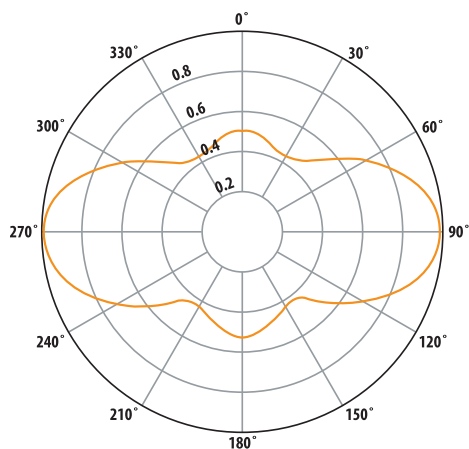
**Pattern Code: T2**  
Directivity: 2.18 (3.38 dB)



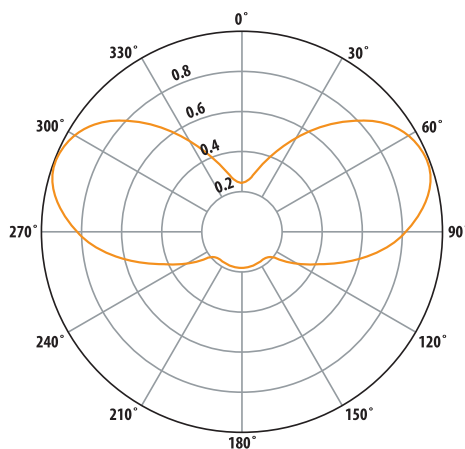
**Pattern Code: P1**  
Directivity: 1.82 (2.83 dB)



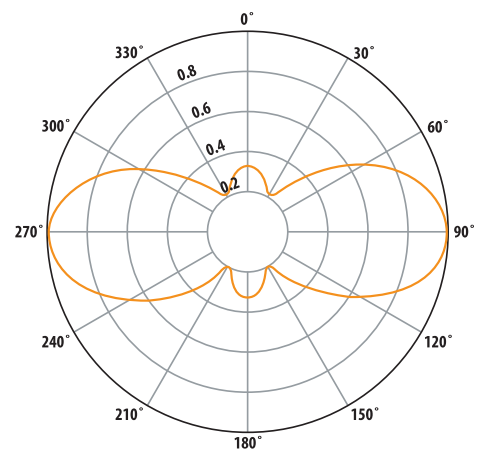
**Pattern Code: P2**  
Directivity: 2.20 (3.42 dB)



**Pattern Code: P3**  
Directivity: 2.24 (3.50 dB)



**Pattern Code: P4**  
Directivity: 2.85 (4.55 dB)



**Pattern Code: P5**  
Directivity: 2.90 (4.62 dB)

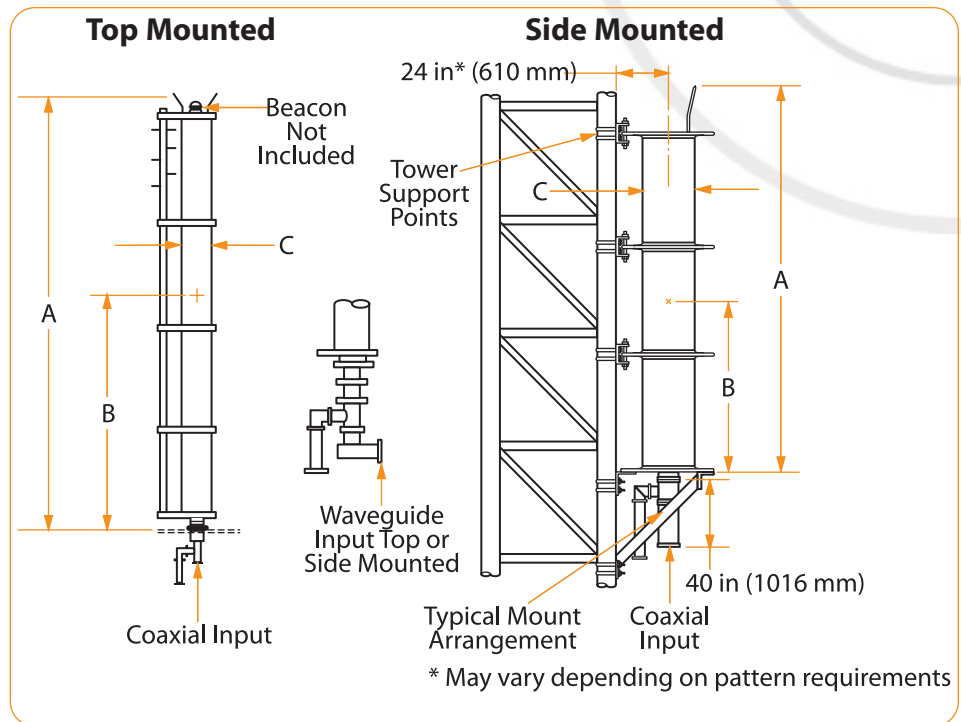
Note: These are typical free space patterns and will vary depending on channel, structural design criteria and tower mounting configuration. For specific requests, contact ERI.

## TRASAR®

### UHF-TV transmitting antennas

#### Typical Mechanical Data

The mechanical data presented below apply to the UHF TRASAR® transmitting antennas. Loads are typical for 50 lb/ft<sup>2</sup> (2.4 kPa) for flat surfaces and 33 lb/ft<sup>2</sup> (1.6 kPa) for cylindrical surfaces. For loading per other criteria, contact ERI.



### Mechanical Specifications

#### TRASAR® Horizontally Polarized Antennas

Channel Number	[A] Antenna Height* ft (m)	[B] Radiation Center Above Base ft (m)	[C] Radome Outer Diameter in (mm)	Nominal Antenna Weight lb (kg)	Wind Load ** [Shear] lb (N)	Overturning Moment** lb-ft (N-m)
<b>Top Mounted Antenna - Elevation Gain of 30</b>						
14	73.0 (22.3)	35.0 (10.7)	16.4 (417)	12100 (5500)	4400 (19600)	154000 (209500)
22	66.7 (20.4)	31.9 (9.8)	16.4 (417)	11000 (5000)	4000 (17800)	127400 (173300)
30	61.5 (18.8)	29.3 (9.0)	16.4 (417)	10100 (4600)	3700 (16500)	108300 (147300)
38	57.1 (17.5)	27.1 (8.3)	16.4 (417)	9400 (4300)	3500 (15600)	94700 (128800)
46	53.3 (16.3)	25.2 (7.7)	14.4 (366)	6300 (2900)	2900 (12900)	73000 (99300)
54	50.1 (15.3)	23.6 (7.2)	14.4 (366)	5900 (2700)	2800 (12500)	66000 (89800)
62	47.3 (14.5)	22.2 (6.8)	14.4 (366)	5600 (2600)	2600 (11600)	57600 (78400)
69	45.1 (13.8)	21.1 (6.5)	14.4 (366)	5300 (2500)	2500 (11200)	52700 (71700)
<b>Top Mounted Antenna - Elevation Gain of 25</b>						
14	62.8 (19.2)	29.9 (9.2)	16.4 (417)	10300 (4700)	3800 (17000)	113620 (154600)
22	57.4 (17.5)	27.2 (8.3)	16.4 (417)	9400 (4300)	3500 (15600)	95200 (129500)
30	53.0 (16.2)	25.0 (7.7)	16.4 (417)	8600 (4000)	3200 (14300)	80000 (108800)
38	49.3 (15.1)	23.2 (7.1)	16.4 (417)	8000 (3700)	3000 (13400)	69450 (94500)
46	46.1 (14.1)	21.6 (6.6)	14.4 (366)	5400 (2500)	2600 (11600)	56030 (76300)
54	43.3 (13.2)	20.2 (6.2)	14.4 (366)	5100 (2400)	2400 (10700)	48360 (65800)
62	40.9 (12.5)	19.0 (5.8)	14.4 (366)	4800 (2200)	2300 (10300)	43585 (59300)
69	39.0 (11.9)	18.0 (5.5)	14.4 (366)	4500 (2100)	2200 (9800)	39600 (53900)

\* Typical height including 3-foot long (1 m) lightning rods.

\*\* 50 lb/ft<sup>2</sup> (2.4 kPa) for flat surfaces and 33 lb/ft<sup>2</sup> (1.6 kPa) for cylindrical surfaces.



# TRASAR®

## UHF-TV transmitting antennas

### Mechanical Specifications (continued)

#### TRASAR® Horizontally Polarized Antennas

Channel Number	[A] Antenna Height* ft (m)	[B] Radiation Center Above Base ft (m)	[C] Radome Outer Diameter in (mm)	Nominal Antenna Weight lb (kg)	Wind Load ** [Shear] lb (N)	Overturning Moment** lb-ft (N-m)
<b>Side Mounted Antenna - Elevation Gain of 30</b>						
14	71.7 (21.9)	34.4 (10.5)	18.4 (467)	2200 (1000)	4200 (18700)	—
22	65.5 (20.0)	31.3 (9.6)	18.4 (467)	2000 (1000)	3800 (17000)	—
30	60.3 (18.4)	28.7 (8.8)	18.4 (467)	1800 (900)	3600 (16100)	—
38	55.9 (17.1)	26.5 (8.1)	18.4 (467)	1700 (800)	3300 (14700)	—
46	52.2 (16.0)	24.6 (7.5)	18.4 (467)	1600 (800)	3100 (13800)	—
54	49.0 (15.0)	23.0 (7.1)	18.4 (467)	1500 (700)	2900 (12900)	—
62	46.2 (14.1)	21.6 (6.6)	18.4 (467)	1400 (700)	2800 (12500)	—
69	44.0 (13.50)	20.5 (6.3)	18.4 (467)	1300 (600)	2700 (12100)	—
<b>Side Mounted Antenna - Elevation Gain of 25</b>						
14	71.7 (21.9)	34.4 (10.5)	18.4 (467)	2200 (1000)	4200 (18700)	—
22	65.5 (20.0)	31.3 (9.6)	18.4 (467)	2000 (1000)	3800 (17000)	—
30	60.3 (18.4)	28.7 (8.8)	18.4 (467)	1800 (900)	3600 (16100)	—
38	55.9 (17.1)	26.5 (8.1)	18.4 (467)	1700 (800)	3300 (14700)	—
46	52.2 (16.0)	24.6 (7.5)	18.4 (467)	1600 (800)	3100 (13800)	—
54	49.0 (15.0)	23.0 (7.1)	18.4 (467)	1500 (700)	2900 (12900)	—
62	46.2 (14.1)	21.6 (6.6)	18.4 (467)	1400 (700)	2800 (12500)	—
69	44.0 (13.50)	20.5 (6.3)	18.4 (467)	1300 (600)	2700 (12100)	—

\* Typical height including 3-foot long (1 m) lightning rods.

\*\* 50 lb/ft<sup>2</sup> (2.4 kPa) for flat surfaces and 33 lb/ft<sup>2</sup> (1.6 kPa) for cylindrical surfaces.

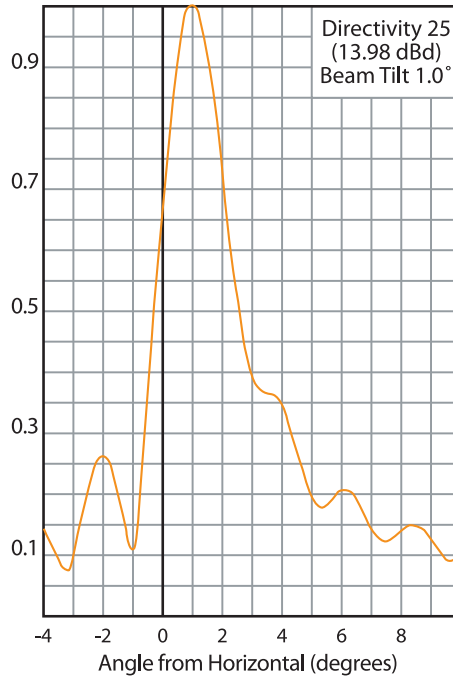
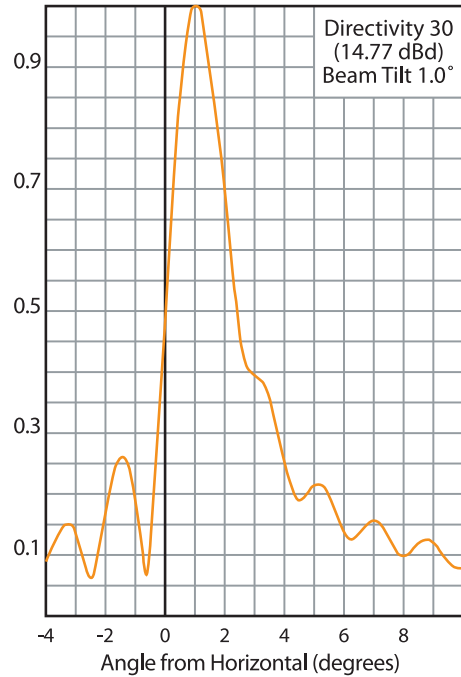
## TRASAR® and GUIDELINER®

### UHF-TV transmitting antennas

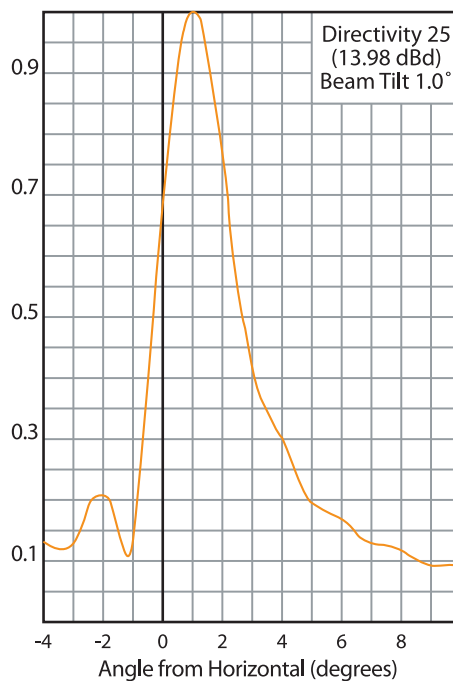
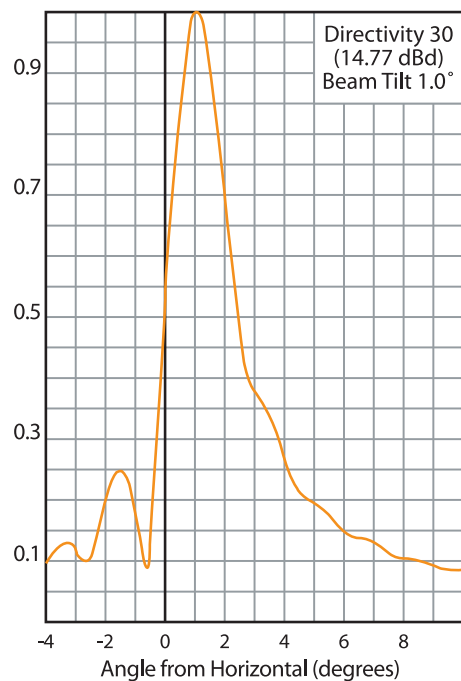
#### Typical Elevation Patterns

The patterns on this page apply to the TRASAR® and GUIDELINER® UHF-TV transmitting antennas described on pages 7 and 12. The patterns are typical; other Directivities, Beam tilts and Null Fills are available.

#### Standard Elevation Patterns



#### Smooth Elevation Patterns





# TRASAR®

## UHF High Power Dual-Channel Transmitting Antenna

Now broadcast engineers have greater flexibility in system planning and transition to DTV with the new Dual-Channel TRASAR® UHF high power transmitting antenna from ERI. These antennas allow stations with N+1/N-1 or adjacent DTV/DTV assignments to share a single antenna.

Dual-Channel TRASAR® antennas are an ideal solution for overcrowded towers or for broadcasters who need to increase tower top “real estate.” The antenna offers the latest in advanced antenna design technology for superior performance over other multi-channel solutions. Broadcasters can also significantly reduce tower windloading by combining Dual-Channel TRASAR® antennas with ERI DUALine™ or WIDELine™ rigid transmission line for a two-channel, one-antenna, one-transmission line solution.

The Dual-Channel TRASAR® can be top or side mounted, or used as a structural member in the ERI STACKER™ optimized antenna structure solution.

ERI offers a complete range of broadcast antennas, including traveling wave, panel, and batwing. Utilized with our superior transmission lines and ERI filters and combiners, we provide broadcasters worldwide with a complete “transmitter-to-the-beacon” solution offering superior RF path performance backed by a 10-year system warranty.

### Features

- Minimizes costs
- Maximizes tower top real estate
- Provides superior azimuth and elevation patterns compared to other multi-channel solutions
- Significantly reduces windload

### Specifications

<b>VSWR</b>	<b>Maximum, 6 MHz per channel for NTSC</b>
	1.05 Visual +0.5 MHz
	1.08 Chroma
	1.10 Remainder of Channel
	<b>Maximum, 6 MHz per channel for DTV</b>
	1.10
<b>Azimuth patterns</b>	Choose from 12 standard TRASAR® high power antenna patterns



# TRASAR®

## UHF High Power Triple Channel Transmitting Antenna

Now broadcast engineers have greater flexibility in system planning and deployment with the new ERI Tri-Channel TRASAR® antenna. This new antenna extends the capabilities of the TRASAR® single and dual channel transmit antenna with the capacity of up to three adjacent channels. The horizontally polarized antenna provides a custom design to meet the needs of multi-station applications for combined NTSC and DTV, or up to three DTV stations. The Tri-Channel TRASAR® can be top mounted, side mounted, or used as a structural member in our new STACKER™ optimized antenna structure solution.



### Features

- Solution for overcrowded towers
- Minimizes costs for multiple stations
- Offers second adjacent channel utilization or increased tower top real estate
- Superior azimuth and elevation patterns versus other multi-channel solutions
- Wind load dramatically lower than other multiple antenna system configurations

### Specifications

<b>VSWR</b>	<b>Maximum, 6 MHz per channel for NTSC</b>		
	1.05 Visual +0.5 MHz		
	1.08 Chroma		
	1.10 Remainder of Channel		
	<b>Maximum, 6 MHz per channel for DTV</b>		
	1.10		
<b>Elevation Directivity</b>	<b>Channel</b>	<b>Maximum Gain</b>	
	14-35	22 (13.42 dBd)	
	36-51	24 (13.80 dBd)	
	52-69	27 (14.30 dBd)	
<b>Channel Configurations</b>	<b>Low Channel</b>	<b>Mid Channel</b>	<b>High Channel</b>
	DTV	DTV	DTV
	DTV	NTSC	DTV
	NTSC	DTV	DTV
	DTV	OPEN	NTSC



# TRASAR®

## UHF High Power Triple Channel Transmitting Antenna

### Elevation Patterns

#### Directivity:

Main Lobe  
22.00 Numeric 13.42 dBd

#### Beam Tilt:

0.75

#### Directivity:

Main Lobe  
24.00 Numeric 13.80 dBd

#### Beam Tilt:

0.75

#### Directivity

Main Lobe  
27.00 Numeric 14.31 dBd

#### Beam Tilt

0.75

#### Polarization

Horizontal

