

TRASAR® H Series Dual Channel Model

High Power Traveling Wave UHF Television Antenna



Configurations

- Top, Side or Invert mounted
- Pressurized or Unpressurized
- Slot covered or full radome enclosure
- Customized azimuth and elevation patterns available

Antennas Features

- Heavy null fill is standard
- Bellows section and fixed shorting device
- On-site antenna check out prior to installation

Design and Testing Features

- Computer aided design, engineering, and manufacturing
- Full size antenna modeling for every antenna ordered
- Welding performed by certified AWS welders
- Welds examined with high-power X-rays or Magnaflux methods as required



ERI TRASAR® antennas can be shipped to your site fully assembled or disassembled providing flexible shipping options



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

Characteristics

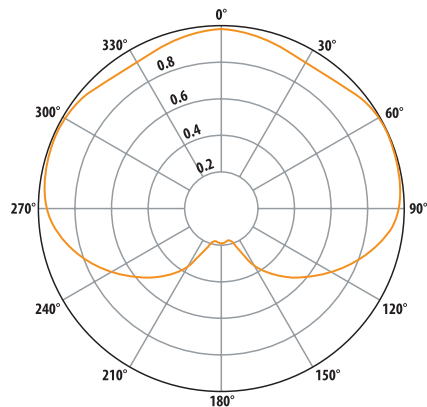
Channel Range	UHF: UHF Channels 14-51 (470-700 MHz) and CCIR Bands IV and V single 6 MHz channel or 12 MHz dual adjacent channels
VSWR	1.05 Visual +0.5 MHz 1.08 Color Sub-Carrier 1.10 Remainder of Channel
Deicing	Fiberglass Radome Enclosed
Input Power	UHF: 125 kw, 60 kW, or 30 kW DTV Average (240 kW, 120, or 60 kW Nominal)
Input Type	50 or 75 ohm 6-1/8 EIA" 75 ohm 8-3/16 EIA" WR1150 or WR1500

TRASAR® H Series Dual Channel Model

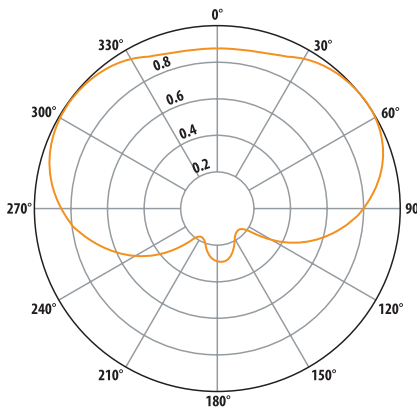
High Power Traveling Wave UHF Television Antenna

Typical Azimuth Patterns

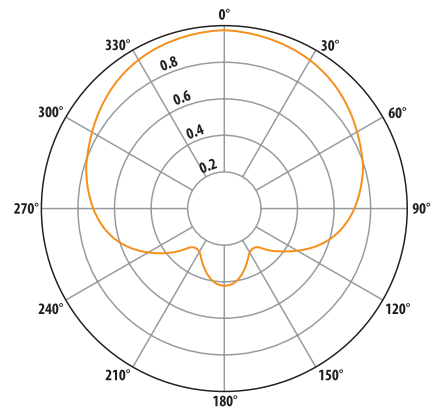
As shown below and on the following page, a wide variety of Azimuth patterns can be selected or customized for TRASAR® antennas.



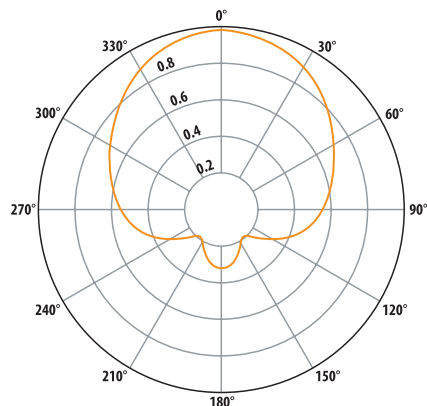
Type	C1
Directivity	1.52 (1.82 dB)



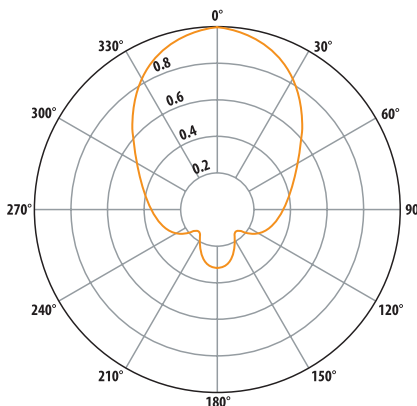
Type	C2
Directivity	1.80 (2.55 dB)



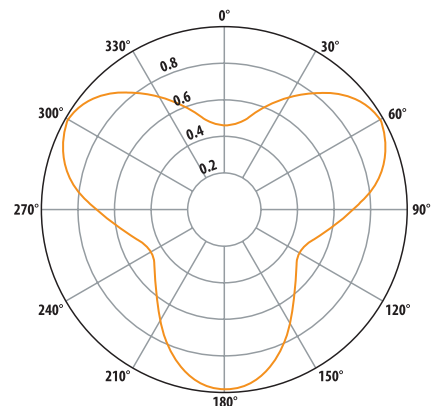
Type	C3
Directivity	2.00 (3.01 dB)



Type	C4
Directivity	2.54 (4.05 dB)



Type	C5
Directivity	3.40 (5.31 dB)



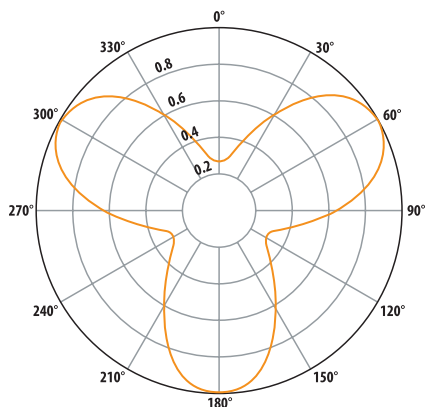
Type	T1
Directivity	1.78 (2.50 dB)

TRASAR® H Series Dual Channel Model

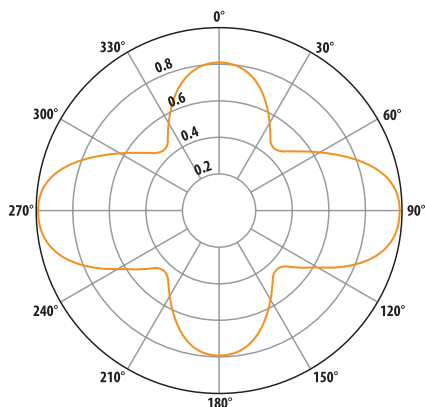
High Power Traveling Wave UHF Television Antenna

Typical Azimuth Patterns

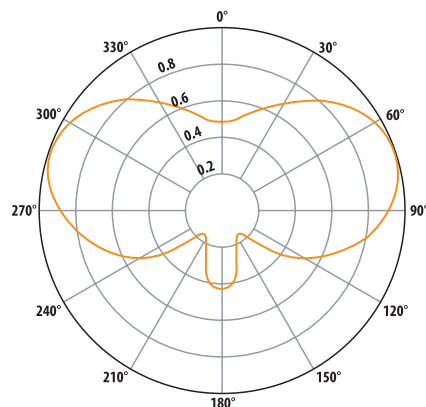
As shown below and on the preceding page, a wide variety of Azimuth patterns can be selected or customized for TRASAR® antennas.



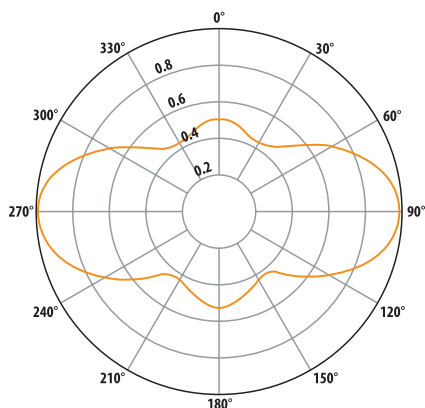
Type	T2
Directivity	2.18 (3.38 dB)



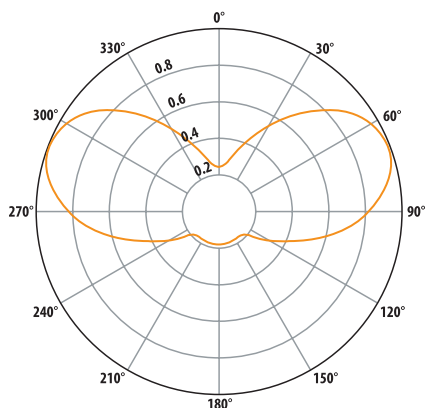
Type	P1
Directivity	1.82 (2.83 dB)



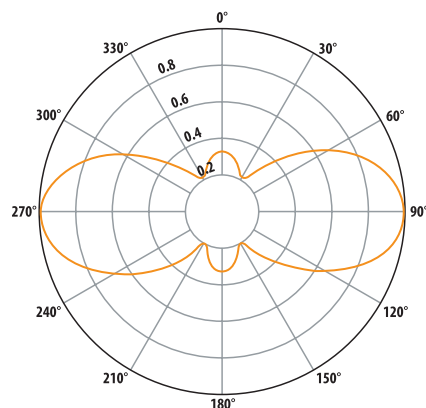
Type	P2
Directivity	2.20 (3.42 dB)



Type	P3
Directivity	2.24 (3.50 dB)



Type	P4
Directivity	2.85 (4.55 dB)



Type	P5
Directivity	2.90 (4.62 dB)

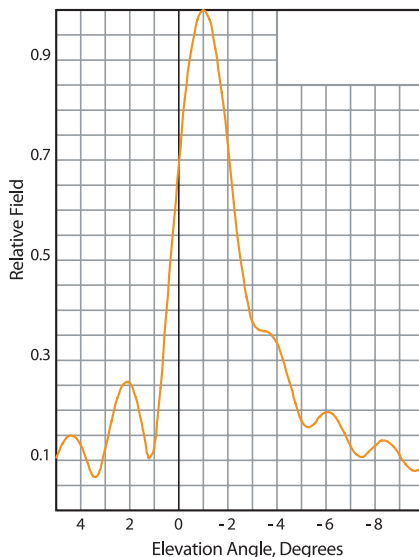
TRASAR® H Series Dual Channel Model

High Power Traveling Wave UHF Television Antenna

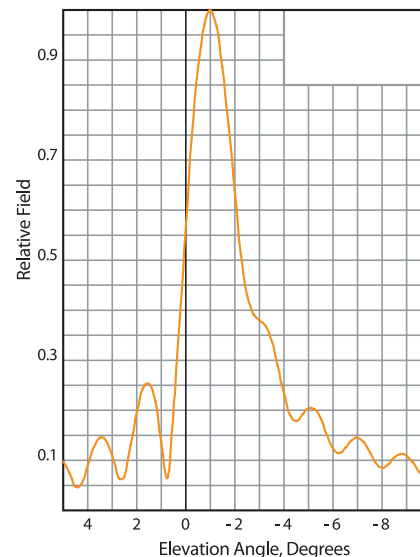
Typical Elevation Patterns

The patterns are typical: other directivities, Beam tilts and Null Fills are available.

Standard Elevation Patterns

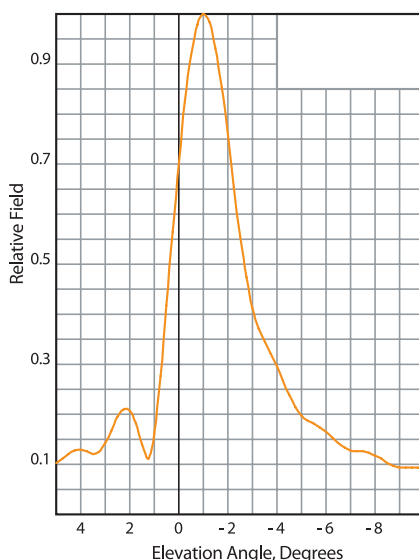


Type	ATW25H4H	
Directivity	Numeric	dBd
Main Lobe	25.00	(13.98)
Horizontal	12.11	(10.83)
Beam Tilt	1.00 Degrees	
Polarization	Horizontal	

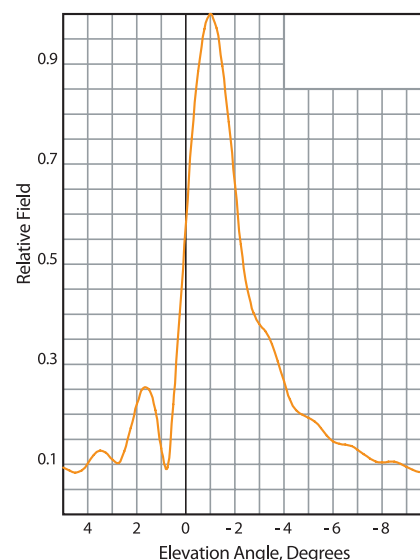


Type	ATW30H4H	
Directivity	Numeric	dBd
Main Lobe	30.00	(14.77)
Horizontal	9.82	(9.92)
Beam Tilt	1.00 Degrees	
Polarization	Horizontal	

Smooth Elevation Patterns



Type	ATW25HS4H	
Directivity	Numeric	dBd
Main Lobe	25.00	(13.98)
Horizontal	12.39	(10.93)
Beam Tilt	1.00 Degrees	
Polarization	Horizontal	



Type	ATW30HS4H	
Directivity	Numeric	dBd
Main Lobe	30.00	(14.77)
Horizontal	10.23	(10.10)
Beam Tilt	1.00 Degrees	
Polarization	Horizontal	

Electronics Research, Inc. • 7777 Gardner Road • Chandler, IN 47610-9219 • USA | +1 812 925-6000 (tel) • +1 812 925-4030 (fax)

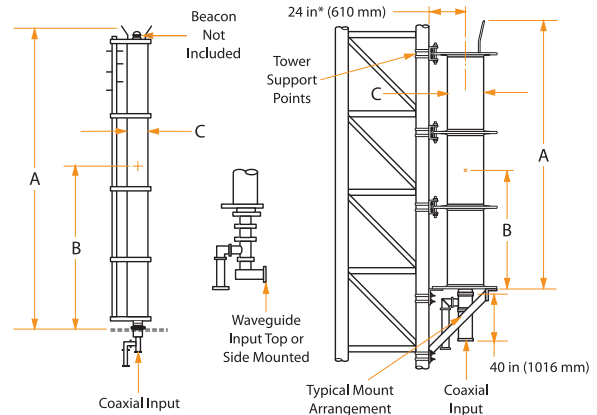
Your Single Source for Broadcast Solutions™ • Call Toll-free at 877 ERI-LINE • Visit Online at www.eriinc.com

TRASAR® H Series Dual Channel Model

High Power Traveling Wave UHF Television Antenna

Typical Mechanical Data

Loads are typical for 50 lb/ft² (2.4 kPa) for flat surfaces and 33 lb/ft² (1.6 kPa) for cylindrical surfaces. For loading per other criteria, contact ERI. Mounts not included.



* May vary depending on pattern requirements

Mechanical Specifications

Channel Number	[A] Antenna Height*, ft (m)	[B] Radiation Center Above Base, ft (m)	[C] Radome Outer Diameter, in (cm)	Nominal Antenna Weight, lb (Kg)	Windload** [Shear], lb (N)	Overturning Moment**, lb-ft (N-m)
Top Mounted Antenna - Elevation Gain of 30						
14	73.0 (22.3)	35.0 (10.7)	16.4 (417)	12,100 (5,500)	4,400 (19,600)	154,000 (209500)
22	66.7 (20.4)	31.9 (9.8)	16.4 (417)	11,000 (5,000)	4,000 (17,800)	127,400 (173300)
30	61.5 (18.8)	29.3 (9.0)	16.4 (417)	10,100 (4,600)	3,700 (16,500)	108,300 (147300)
38	57.1 (17.5)	27.1 (8.3)	16.4 (417)	9,400 (4,300)	3,500 (15,600)	94,700 (128800)
46	53.3 (16.3)	25.2 (7.7)	14.4 (366)	6,300 (2,900)	2,900 (12,900)	73,000 (99300)
54	50.1 (15.3)	23.6 (7.2)	14.4 (366)	5,900 (2,700)	2,800 (12,500)	66,000 (89800)
62	47.3 (14.5)	22.2 (6.8)	14.4 (366)	5,600 (2,600)	2,600 (11,600)	57,600 (78400)
69	45.1 (13.8)	21.1 (6.5)	14.4 (366)	5,300 (2,500)	2,500 (11,200)	52,700 (71700)
Top Mounted Antenna - Elevation Gain of 25						
14	62.8 (19.2)	29.9 (9.2)	16.4 (417)	10,300 (4,700)	3,800 (17,000)	113,620 (154,600)
22	57.4 (17.5)	27.2 (8.3)	16.4 (417)	9,400 (4,300)	3,500 (15,600)	95,200 (129,500)
30	53.0 (16.2)	25.0 (7.7)	16.4 (417)	8,600 (4,000)	3,200 (14,300)	80,000 (108,800)
38	49.3 (15.1)	23.2 (7.1)	16.4 (417)	8,000 (3,700)	3,000 (13,400)	69,450 (94,500)
46	46.1 (14.1)	21.6 (6.6)	14.4 (366)	5,400 (2,500)	2,600 (11,600)	56,030 (76,300)
54	43.3 (13.2)	20.2 (6.2)	14.4 (366)	5,100 (2,400)	2,400 (10,700)	48,360 (65,800)
62	40.9 (12.5)	19.0 (5.8)	14.4 (366)	4,800 (2,200)	2,300 (10,300)	43,585 (59,300)
69	39.0 (11.9)	18.0 (5.5)	14.4 (366)	4,500 (2,100)	2,200 (9,800)	39,600 (53,900)
Side Mounted Antenna - Elevation Gain of 30						
14	71.7 (21.9)	34.4 (10.5)	18.4 (467)	2,200 (1,000)	4,200 (18,700)	—
22	65.5 (20.0)	31.3 (9.6)	18.4 (467)	2,000 (1,000)	3,800 (17,000)	—
30	60.3 (18.4)	28.7 (8.8)	18.4 (467)	1,800 (900)	3,600 (16,100)	—
38	55.9 (17.1)	26.5 (8.1)	18.4 (467)	1,700 (800)	3,300 (14,700)	—
46	52.2 (16.0)	24.6 (7.5)	18.4 (467)	1,600 (800)	3,100 (13,800)	—
54	49.0 (15.0)	23.0 (7.1)	18.4 (467)	1,500 (700)	2,900 (12,900)	—
62	46.2 (14.1)	21.6 (6.6)	18.4 (467)	1,400 (700)	2,800 (12,500)	—
69	44.0 (13.5)	20.5 (6.3)	18.4 (467)	1,300 (600)	2,700 (12,100)	—
Side Mounted Antenna - Elevation Gain of 25						
14	61.5 (18.8)	29.3 (9.0)	18.4 (467)	1,900 (900)	3,600 (16,100)	—
22	56.2 (17.2)	26.6 (8.2)	18.4 (467)	1,700 (800)	3,300 (14,700)	—
30	51.8 (15.8)	24.4 (7.5)	18.4 (467)	1,600 (800)	3,100 (13,800)	—
38	48.1 (14.7)	22.4 (6.9)	18.4 (467)	1,400 (700)	2,900 (12,900)	—
46	44.9 (13.7)	21.0 (6.4)	18.4 (467)	1,300 (600)	2,700 (12,100)	—
54	42.2 (12.9)	19.6 (6.0)	18.4 (467)	1,300 (600)	2,600 (11,600)	—
62	39.8 (12.2)	18.4 (5.7)	18.4 (467)	1,200 (600)	2,400 (10,700)	—
69	37.9 (11.6)	17.5 (5.4)	18.4 (467)	1,100 (500)	2,300 (10,300)	—

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

** 50 lb/ft² (2.4 kPa) for flat surfaces and 33 lb/ft² (1.6 kPa) for cylindrical surfaces.