

# 2.4M Rx/Tx High Wind Antenna

## Series 2244

### Technical Specifications

Electrical		C-Band Linear	C-Band Circular	Ku-Band
Antenna Size		2.4 M (96.00 in.)	2.4 M (8 ft.)	2.4 M (96.00 in.)
Operating Frequency (GHz)	Receive Transmit	3.625 - 4.20 GHz 5.85 - 6.425 GHz	3.625 - 4.20 GHz 5.85 - 6.425 GHz	10.70 - 12.75 GHz 13.75 - 14.50 GHz
Antenna Gain at Midband, dBi ( $\pm .2$ dB)	Receive Transmit	38.20 dBi 42.20 dBi	38.20 dBi 42.20 dBi	47.40 dBi 49.20 dBi
VSWR		1.3:1 Max	1.3:1 Max	Tx: 1.3:1 Max Rx: 1.5:1 Max
Pattern Beamwidth (in degrees at midband) -3 dB -15 dB		2.20° Rx 1.40° Tx 4.90° Rx 3.10° Tx	2.20° Rx 1.40° Tx 4.90° Rx 3.10° Tx	0.70° Rx 0.60° Tx 1.60° Rx 1.40° Tx
Sidelobe Envelope, Co-Pol (dBi) 100 $\lambda$ / D < $\theta$ $\leq$ 20° 20° < $\theta$ $\leq$ 26.3° 26.3° < $\theta$ $\leq$ 48° $\theta$ > 48°		29 - 25 Log $\theta$ dBi -3.5 dBi 32 - 25 Log $\theta$ dBi -10 dBi (averaged)	29 - 25 Log $\theta$ dBi -3.5 dBi 32 - 25 Log $\theta$ dBi -10 dBi (averaged)	29 - 25 Log $\theta$ dBi -3.5 dBi 32 - 25 Log $\theta$ dBi -10 dBi (averaged)
Antenna Noise Temperature 5° Elevation 10° Elevation 20° Elevation 40° Elevation		55 K 47 K 43 K 43 K	61 K 53 K 49 K 49 K	85 K 78 K 73 K 70 K
Cross Polarization Isolation On Axis With 1.0 dB Beamwidth`		> 30 dB > 27 db	Rx > 15 dB Tx > 17.7 dB Rx > 15 dB Tx > 17.7 dB	Rx > 30 dB Tx > 35 dB Rx > 25 dB Tx > 26 dB
Output Waveguide Interface		Rx CPR 229 Tx CPR 137 or Type N	Rx CPR 229 Tx CPR 137 or Type N	Rx WR75 Tx WR75

Mechanical			
Reflector Material		Glass Fiber Reinforced Polyester SMC	
Antenna Optics		Four Piece Offset, Prime Focus	
Mast Pipe Size		6" SCH 80 Pipe (6.62" OD) 16.80 cm.	
Elevation Adjustment Range		5° - 90° Continuous Fine Adjust	
Azimuth Adjustment Range		+/- 45° Fine Adjustment, 360° Continuous	
Mount Type		Elevation over Azimuth	
Shipping Specifications (Approximate Net Weight):		930 lbs.	950 lbs. 920 lbs.

Environmental Performance			
Wind Loading	Operational	65 MPH (104 km/h) with 0.5dB loss @ 14.25GHz 75 MPH (120 km/h) with 1.0dB loss @ 14.25GHz, 0.5dB loss @ 6.14GHz 90 MPH (145 km/h) with 1.0dB loss @ 6.14GHz	
	Survival	150 MPH (240 km/h)	
Temperature	Operational	-40° to 140° F (-40° to 60° C)	
	Survival	-50° to 160° F (-46° to 71° C)	
Atmospheric Conditions		Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas	
Relative Humidity		0 to 100% With Condensation	
Solar Radiation		360 BTU/h/ft <sup>2</sup>	

## GENERAL DYNAMICS SATCOM Technologies

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1000-025 Rev. 02/12