

# 3.8M Rx/Tx High Wind Antenna

## Series 2385

### Technical Specifications

Electrical		C-Band Linear	C-Band Circular	Ku-Band Linear	X-Band Circular
Antenna Size		3.8 M	3.8 M	3.8 M	3.8 M
Operating Frequency (GHz)	Receive	3.625 - 4.20 GHz	3.625 - 4.20 GHz	10.95 - 12.75 GHz	7.25 - 7.75 GHz
	Transmit	5.845 - 6.425 GHz	5.845 - 6.425 GHz	13.75 - 14.50 GHz	7.9 - 8.4 GHz
Antenna Gain at Midband, dBi (± 0.2dB)	Receive	42.00 dBi	41.80 dBi	51.20 dBi	47.80 dBi
	Transmit	46.50 dBi	46.3 dBi	53.00dBi	48.40 dBi
Antenna Noise Temperature					
5° Elevation		55 K	62 K	70 K	60 K
10° Elevation		45 K	52 K	60 K	51 K
20° Elevation		38 K	45 K	55 K	47 K
40° Elevation		36 K	43 K	45 K	47 K
Sidelobe Envelope, Co-Pol (dBi)					
100λ / D < θ ≤ 20°		29 - 25 Logθ dBi	29 - 25 Logθ dBi	29 - 25 Logθ dBi	29 - 25 Logθ dBi
20° < θ ≤ 26.3°		-3.5 dBi	-3.5 dBi	-3.5 dBi	-3.5 dBi
26.3° < θ ≤ 48°		32 - 25 Logθ dBi	32 - 25 Logθ dBi	32 - 25 Logθ dBi	32 - 25 Logθ dBi
θ > 48°		-10 dBi (averaged)	-10 dBi (averaged)	-10 dBi (averaged)	-10 dBi (averaged)
Pattern Beamwidth (in degrees at midband)	-3 dB	Rx: 1.40° Tx: 0.90°	Rx: 1.40° Tx: 0.90°	Rx: 0.50° Tx: 0.40°	Rx: 0.80° Tx: 0.70°
	-15 dB	Rx: 3.20° Tx: 2.00°	Rx: 1.40° Tx: 0.90°	Rx: 1.00° Tx: 0.90°	Rx: 1.60° Tx: 1.50°
Power Handling		1 kW	1 kW	100 W	2 kW
Cross Polarization Isolation	On Axis	> 30 dB	Rx > 15 dB Tx > 17.7 dB	Rx > 30 dB Tx > 35dB	Rx > 23.2 dB Tx > 18.8 dB
	Within 1.0 Bandwidth	> 27 dB	Rx > 15 dB Tx > 17.7 dB	Rx > 25 dB Tx > 26dB	Rx > 23.2 dB Tx > 18.8 dB
Note: Standard C-band Circular polarization in Tx-Band provides an axial ratio of 1.3 (XPD equivalence of 17.7 dB). Optional F-1 station feed available with axial ratio of 1.09 (XPD equivalence >27.3 dB) in Tx band. Call factory when specifying this option. X Band filters available upon request.					
Output Waveguide Interface Flange	Receive	CPR 229	CPR 229	WR 75	WR 112
	Transmit	CPR 137 or Type N	CPR 137 or Type N	WR75	WR 112
VSWR	Receive	1.3:1 Max.(<-17.7 dB)	1.3:1 Max.(<-17.7 dB)	1.5:1 Max. (<-14.0 dB)	1.3:1 Max.(<-17.7 dB)
	Transmit	1.3:1 Max.(<-17.7 dB)	1.3:1 Max.(<-17.7 dB)	1.3:1 Max.(<-17.7 dB)	1.3:1 Max.(<-17.7 dB)

Mechanical	
Reflector Material	Glass Fiber Reinforced Polyester SMC
Antenna Optics	Easy-to-assemble, 4 Pc., Offset Fed Prime Focus Design with 0.6 F/D optics.
Mast Pipe Size	10" SCH 80 Pipe (10.75" OD) 27.3 cm.
Elevation Adjustment Range	12° to 90° or 0° to 15° for Polar Latitudes
Azimuth Adjustment Range	360° Continuous with +/- 35° Fine Adjustment

Environmental Performance		
Wind Loading	Operational	65 MPH (104 Km/H) with 0.5 dB loss @ 14.25 GHz 75 MPH (120 Km/H) with 0.5 dB loss @ 6.14 GHz 75 MPH (120 Km/H) with 1.0 dB loss @ 14.25 GHz
	Survival	150 MPH (240 Km/H)
Temperature	Operational	-40° to 140° F (-40° to 60° C)
Rain (operational)		½" (13mm) per hour
Ice (operational)		-----
Relative Humidity		0 to 100% Condensing
Atmospheric Conditions		Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas
Solar Radiation		360 BTU/h/ft2

**GENERAL DYNAMICS**  
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