

# 3.8M Tx/Rx VSAT Antenna

## Series 1383

### 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 Transmit	3.625 - 4.20 GHz 5.85 - 6.425 GHz	3.625 - 4.20 GHz 5.85 - 6.425 GHz	10.95 - 12.75 GHz 13.75 - 14.50 GHz	7.25 - 7.75 GHz 7.90 - 8.40 GHz
Midband Gain ( +/- .2dB)	Receive Transmit	42.00 dBi 46.50 dBi	41.80 dBi 46.30 dBi	51.20 dBi 53.00 dBi	47.80 dBi 48.40 dBi
VSWR	Receive Transmit	1.3:1 Max.(<-17.70 dB) 1.3:1 Max.(<-17.70 dB)	1.3:1 Max.(<-17.70 dB) 1.3:1 Max.(<-17.70 dB)	1.5:1 Max.(<-14.00 dB) 1.3:1 Max.(<-17.70 dB)	1.3:1 Max.(<-17.70 dB) 1.3:1 Max.(<-17.70 dB)
Pattern Beamwidth (in degrees at midband)	-3 dB  -15 dB	Rx 1.40 deg Tx 0.90 deg Rx 3.20 deg Tx 2.00 deg	Rx 1.40 deg Tx 0.90 deg Rx 1.40 deg Tx 0.90 deg	Rx 0.50 deg Tx 0.40 deg Rx 1.00 deg Tx 0.90 deg	Rx 0.80 deg Tx 0.70 deg Rx 1.60 deg Tx 1.50 deg
Sidelobe Envelope, Co-Pol (dBi)		29 - 25 Log $\theta$ dBi (Note) -3.5 dBi 32 - 25 Log $\theta$ dBi -10 dBi (averaged)	29 - 25 Log $\theta$ dBi (Note) -3.5 dBi 32 - 25 Log $\theta$ dBi -10 dBi (averaged)	29 - 25 Log $\theta$ dBi (Note) -3.5 dBi 32 - 25 Log $\theta$ dBi -10 dBi (averaged)	29 - 25 Log $\theta$ dBi (Note) -3.5 dBi 32 - 25 Log $\theta$ dBi -10 dBi (averaged)
Note: In receive portion of C-band only, sidelobe envelope specified from 100 $\lambda$ /D rather than 1°					
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
Power Handling		1 kW	1 kW	100 W	2 kW
Cross Polarization Isolation					
On Axis		> 30 dB	Rx > 15.00 dB Tx > 17.70 dB	Rx > 30.00 dB Tx > 35.00 dB	Rx > 23.20 dB Tx > 18.80 dB
Within 1.0 dB Beamwidth		> 27 dB	Rx > 15.00 dB Tx > 17.70 dB	Rx > 25.00 dB Tx > 26.00 dB	Rx > 23.20 dB Tx > 18.80 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 feedavailable 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	Receive Transmit	CPR 229 F CPR 137 or Type N	CPR 229 F CPR 137 or Type N	WR 75 WR 75	WR 112 WR 112
<b>Mechanical</b>					
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 40 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				
Shipping Specifications	Approx. Net Weight Approx. Packaged Weight	Weight (nominal) 1125 lbs. (511 Kg.) Weight (nominal) 1882 lbs., (855 Kg.)			
<b>Environmental Performance</b>					
Wind Loading	Operational Survival	50 mph (80 km/h) 125 mph (201 km/h)			
Temperature Range (operational)	-40° to 140° F (-40° to 60° C)				
Rain (operational)	½" (13mm) per hour				
Ice (operational)	-----				
Atmospheric Conditions	Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas				
Relative Humidity	0 to 100% Condensing				
Solar Radiation	360 BTU/h/ft2				

## GENERAL DYNAMICS SATCOM Technologies

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