

## Series 1383 Transmit / Receive Multi-band 3.8m VSAT Antenna

PARAMETERS				
	C-Band Linear	C-Band Circular	Ku-Band Linear	X-Band Circular
<b>Electrical Performance</b>				
Antenna Size	3.8m	3.8m	3.8m	3.8m
Frequency (GHz)	Rx 3.625 – 4.2 GHz Tx 5.845 – 6.425 GHz	Rx 3.625 – 4.2 GHz Tx 5.845 – 6.425 GHz	Rx 10.95 GHz – 12.75 GHz Tx 13.75 – 14.50 GHz	Rx 7.25 – 7.75 GHz Tx 7.9 – 8.4 GHz
Antenna Gain at Midband, dBi (± 0.2dB)	Rx 42.0 dBi Tx 46.5 dBi	Rx 41.8 dBi Tx 46.3 dBi	Rx 51.2 dBi Tx 53.0 dBi	Rx 47.8 dBi Tx 48.4 dBi
VSWR	Rx 1.3:1 Max. (<-17.7 dB) Tx 1.3:1 Max. (<-17.7 dB)	Rx 1.3:1 Max. (<-17.7 dB) Tx 1.3:1 Max. (<-17.7 dB)	Rx 1.5:1 Max. (<-14.0 dB) Tx 1.3:1 Max. (<-17.7 dB)	Rx 1.3:1 Max. (<-17.7 dB) Tx 1.3:1 Max. (<-17.7 dB)
Pattern Beamwidth (in degrees at midband)				
-3 dB	Rx 1.4 deg Tx 0.9 deg	Rx 1.4 deg Tx 0.9 deg	Rx 0.5 deg Tx 0.4 deg	Rx 0.8 deg Tx 0.7 deg
-15 dB	Rx 3.2 deg Tx 2.0 deg	Rx 1.4 deg Tx 0.9 deg	Rx 1.0 deg Tx 0.9 deg	Rx 1.6 deg Tx 1.5 deg
Sidelobe Performance				
1° ≤ θ ≤ 20°	29–25 log(θ) (Note)	29-25 log (θ) (Note)	29-25 log (θ) (Note)	29-25 log (θ) (Note)
20° < θ ≤ 26.3°	-3.5 dBi	-3.5 dBi	-3.5 dBi	-3.5 dBi
26.3° < θ ≤ 48°	32-35 log (θ)	32-35 log (θ)	32-35 log (θ)	32-35 log (θ)
48° < θ < 180°	≤ - 10 dBi averaged	≤ - 10 dBi averaged	≤ - 10 dBi averaged	≤ - 10 dBi averaged
Note: In receive portion of C-band only, sidelobe envelope specified from 100λ/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 dB Tx > 17.7 dB	Rx > 30 dB Tx > 35 dB	Rx > 23.2 dB Tx > 18.8 dB
Within 1.0 dB Beamwidth	> 27 dB	Rx > 15 dB Tx > 17.7 dB	Rx > 25 dB Tx > 26 dB	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	Rx CPR 229	Rx CPR 229	Rx WR75	Rx WR112
Flange	Tx CPR 137 or Type N	Tx CPR 137 or Type N	Tx WR75	Tx WR112
<b>Mechanical Performance</b>				
Reflector Material	Glass Fiber Reinforced 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				
Approximate Net Weight	Weight (nominal) 1125 lbs. (511 Kg).			
Approximate Packaged Weight	Weight (nominal) 1882 lbs., (855 Kg).			
<b>Environmental Performance</b>				
Wind Loading				
Operational	50 MPH (80 km/h)			
Survival	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

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