

3.8M Tx/Rx VSAT Antenna

Series 1385

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 5.845 - 6.425 GHz	3.625 - 4.20 GHz 5.845 - 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 (+/- .5dB)	Receive Transmit	42.00 dBi 46.20 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 3.20 deg Tx 2.00 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)					
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)
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 > 15.00 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 Flange	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
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 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.)			
Environmental Performance					
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
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