

1.8M C & Ku-Band Antennas

Series 1182 - With Fine Adjustment

Technical Specifications

Electrical		C-Band Linear	C-Band Circular	Ku-Band Linear	Ku-Band Circular
Antenna Size		1.8M (71 in.)	1.8M (71 in.)	1.8M (71 in.)	1.8M (71 in.)
Operating Frequency (GHz)	Receive	3.625 - 4.20 GHz	3.625 - 4.20 GHz	10.70 - 12.75 GHz	10.70 - 12.75 GHz
	Transmit	5.85 - 6.425 GHz	5.85 - 6.425 GHz	13.75 - 14.50 GHz	12.75 - 14.50 GHz This frequency requires a special TRF
Midband Gain (+/- .2dB)	Receive	35.50 dBi	35.30 dBi	44.80 dBi	44.60 dBi
	Transmit	39.50 dBi	39.30 dBi	46.80 dBi	46.50 dBi
VSWR		1.3:1 max	1.3:1 max	Rx: 1.5:1 max Tx: 1.3:1 max	Rx: 1.5:1 max Tx: 1.3:1 max
Pattern Beamwidth (in degrees at mid-band)	-3 dB	Rx: 3.00° Tx: 1.90°	Rx: 3.00° Tx: 1.90°	Rx: 1.00° Tx: 0.80°	Rx: 1.00° Tx: 0.80°
	-15 dB	Rx: 6.70° Tx: 4.30°	Rx: 6.70° Tx: 4.30°	Rx: 2.20° Tx: 1.80°	Rx: 2.20° Tx: 1.80°
Sidelobe Envelope, 100λ/D ≤ θ ≤ 20° 20° < θ ≤ 26.3° 26.3° < θ ≤ 48° 48° < θ		29 - 25 Logθ dBi -3.5 dBi 32 - 25 Logθ dBi -10 dBi (averaged)	29 - 25 Logθ dBi -3.5 dBi 32 - 25 Logθ dBi -10 dBi (averaged)	29 - 25 Logθ dBi -3.5 dBi 32 - 25 Logθ dBi -10 dBi (averaged)	29 - 25 Logθ dBi -3.5 dBi 32 - 25 Logθ dBi -10 dBi (averaged)
Antenna Noise Temperature					
10° Elevation		45 K	45 K	69 K	69 K
20° Elevation		41 K	41 K	64 K	64 K
30° Elevation		41 K	41 K	63 K	63 K
40° Elevation		40 K	40 K	62 K	62 K
Power Handling		1 kW	1 kW	100 W	100 W
Cross Polarization Isolation					
On Axis		30.00 dB	Rx: 15.50 dB Tx: 17.70 dB	30.00 dB	30.00 dB
Within 1.0 dB Beamwidth		26.00 dB	Rx: 15.50 dB Tx: 17.70 dB	26.00 dB	26.00 dB
Output Waveguide Interface Flange		Rx: WR229 Tx: WR137 or N	Rx: WR229 Tx: WR137 or N	WR75	WR75

Mechanical				
Reflector Material		Glass Fiber Reinforced SMC		
Antenna Optics		Prime Focus, One-Piece, Offset Feed		
Mast Pipe Size		3.5" SCH 40 Pipe (4.0" OD) 10.16 cm.		
Elevation Adjustment Range		10° to 80° Continuous Fine Adjustment		
Azimuth Adjustment Range		+/- 10° Fine Adjustment, 360° Continuous		
Mount Type		Elevation over Azimuth		
Shipping Specifications	185 lbs. (84 kg.)	185 lbs. (87 kg.)	190 lbs. (80 kg.)	175 lbs. (80 kg.)

Environmental Performance	
Wind Loading	Operational Survival
	45 mph (72 km/h) 125 mph (201 km/h)
Temperature (operational)	- 40° to 140°F (- 40° to 60°C)
Rain (operational)	½" (13mm) / hr
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/ft2

GENERAL DYNAMICS SATCOM Technologies

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