

# 1.8M C & Ku-Band Antennas

## Series 1182 - With Fine Adjustment

### Technical Specifications

Electrical		C-Band Linear	C-Band Circular	Ku-Band Linear
Antenna Size		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
	Transmit	5.85 - 6.425 GHz	5.85 - 6.425 GHz	13.75 - 14.50 GHz
Midband Gain ( +/- .2dB)	Receive	35.50 dBi	35.30 dBi	44.80 dBi
	Transmit	39.50 dBi	39.30 dBi	46.80 dBi
VSWR		1.3:1 max	1.3:1 max	Rx: 1.5:1 max Tx: 1.3:1 max
Pattern Beamwidth (in degrees at midband)	-3 dB	Rx: 3.00° Tx: 1.90°	Rx: 3.00° Tx: 1.90°	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°
Sidelobe Envelope, 100λ/D ≤ θ ≤ 20° 20° < θ ≤ 26.3° 26.3° < θ ≤ 48° 48° < θ		29 - 25 Logθ dBi +8 dBi 32 - 25 Logθ dBi -10 dBi (averaged)	29 - 25 Logθ dBi +8 dBi 32 - 25 Logθ dBi -10 dBi (averaged)	29 - 25 Logθ dBi +8 dBi 32 - 25 Logθ dBi -10 dBi (averaged)
Antenna Noise Temperature				
10° Elevation		45 K	45 K	69 K
20° Elevation		41 K	41 K	64 K
30° Elevation		41 K	41 K	63 K
40° Elevation		40 K	40 K	62 K
Power Handling		1 kW	1 kW	100 W
Cross Polarization Isolation				
On Axis		30.00 dB	Rx: 15.50 dB Tx: 17.30 dB	30.00 dB
Within 1.0 dB Beamwidth		26.00 dB	Rx: 15.50 dB Tx: 17.30 dB	26.00 dB
Output Waveguide Interface Flange		Rx: WR229 Tx: WR137	Rx: WR229 Tx: WR137	Rx: WR229 Tx: 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.	190 lbs.	175 lbs.

Environmental Performance		
Wind Loading	Operational	45 mph (72 km/h)
	Survival	125 mph (201 km/h)
Temperature (operational)	- 40° to 140°F (- 40° to 60°C)	
Rain (operational)	½" / 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/ft <sup>2</sup>	

## GENERAL DYNAMICS SATCOM Technologies

1500 Prodelin Drive • Newton, NC 28658 USA • Telephone: +1-828-464-4141 • Fax: +1-828-464-4147  
Email: vsat@gdsatcom.com • Web Site: www.gdsatcom.com

1000-045 Rev. 05/11