

3.7M C-Band Rx/Tx Antenna

Series 1374

Technical Specifications

Electrical		Linear	Circular
Antenna Size		3.7 M (144 in.)	3.7 M (144 in.)
Operating Frequency (GHz)	Receive	3.625 - 4.20 GHz	3.625 - 4.20 GHz
	Transmit	5.85 - 6.425 GHz	5.85 - 6.425 GHz
Midband Gain (+ .2dB)	Receive	40.40 dBi	40.20 dBi
	Transmit	44.00 dBi	44.00 dBi
VSWR		1.3:1 Maximum	1.3:1 Maximum
Pattern Beamwidth (in degrees at midband)			
-3 dB		Rx 1.4° Tx 1.0°	Rx 1.4° Tx 1.0°
-15 dB		Rx 3.2° Tx 2.2°	Rx 3.2° Tx 2.2°
Sidelobe Envelope, Co-Pol (dBi)			
100λ / D < θ ≤ 20°		29 - 25 Logθ dBi	29 - 25 Logθ dBi
20° < θ ≤ 26.3°		-3.5 dBi	-3.5 dBi
26.3° < θ ≤ 48°		32 - 25 Logθ dBi	32 - 25 Logθ dBi
θ > 48°		-10 dBi (averaged)	-10 dBi (averaged)
Antenna Noise Temperature			
5° Elevation		55 K	58 K
10° Elevation		47 K	50 K
20° Elevation		42 K	45 K
40° Elevation		40 K	43 K
Power Handling		500 Watts	500 Watts
Cross Polarization Isolation			
On Axis		> 30 dB	> 17.7 dB Tx, >15.5 dB Rx
Within 1.0 dB Beamwidth		> 25 dB	> 17.7 dB Tx, >15.5 dB Rx
Output Waveguide Interface Flange		Rx WR229 Tx Type N or WR137	Rx WR229 Tx Type N or WR137

Mechanical

Reflector Material	Glass Fiber Reinforced Polyester SMC
Antenna Optics	8 Pc. Prime Focus, Axisymmetric, f/D = 0.375
Mast Pipe Size	6" SCH 80 Pipe (6.62" OD) 16.83 cm.
Elevation Adjustment Range	10° to 70° Continuous Fine Adjustment (90° Optional)
Azimuth Adjustment Range	360° Continuous
Shipping Specifications	
Approximate Net Weight	660 lbs. (300 kg.)
Approximate Packaged Weight	735 lbs. (334 kg.) 77" x 80" x 29"

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	1/2"/Hour
Atmospheric Conditions	Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas	
Relative Humidity	0 to 100% Condensing	
Solar Radiation	360 BTU/h/ft ²	

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

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