

# 0.98M Ka-Band Antenna Receive Only

## Series 3982

### Technical Specifications

Electrical		Ka-Band Circular	Ka-Band Linear
Antenna Size		0.98 M	0.98 M
Operating Frequency (GHz)	Receive	19.20 - 20.20 GHz	18.20 - 21.20 GHz
Midband Gain ( +/- .2 dB)	Receive	44.30 dBi	44.30 dBi
VSWR		1.3:1 max	1.5:1 max
Pattern Beamwidth (in degrees at midband)	-3 dB -15 dB	1.10° 2.50°	1.10° 2.50°
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		171 K	174 K
10° Elevation		127 K	130 K
20° Elevation		94 K	97 K
40° Elevation		74 K	77 K
Power Handling		N/A	N/A
Cross Polarization Isolation			
On Axis		17.70 dB	30.00 dB
Within 1.0 dB Beamwidth		17.70 dB	26.00 dB
Output Waveguide Interface Flange		WR42	Rx: WR42

### Mechanical

Reflector Material	Glass Fiber Reinforced Polyester SMC, Ka-Band Formulation
Antenna Optics	1-piece Offset, Prime Focus
Mast Pipe Size	2.5" SCH 40 Pipe (2.88" OD) 73.2 mm
Elevation Adjustment Range	5° to 90°, Continuous Fine Adjustment
Azimuth Adjustment Range	360° Continuous Coarse Adjustment, ± 10° Fine Adjustment
Shipping Specifications	Approx. Net Weight: 55 lbs. (25 kg.)    Approx. Packaged Weight: 65 lbs. (30 kg.)

### Environmental Performance

Wind Loading	Operational Survival	50 mph (80 km/h) 125 mph (201 km/h)
Temperature (operational)		- 40° to 140°F (- 40° to 60°C)
Rain (operational)		½" / hr
Ice (operational)		-----
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

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