

0.89M Ka-Band Antenna Rx/Tx

Series 3892

Technical Specifications

Electrical		Ka-Band Circular	Ka-Band Circular	Ka-Band Linear
Antenna Size		0.89 M	0.89 M	0.89 M
Operating Frequency (GHz)	Receive Transmit	19.40 - 21.20 GHz 29.20 - 31.00 GHz	20.20 - 21.20 GHz 30.00 - 31.00 GHz	18.70 - 21.20 GHz 27.00 - 31.00 GHz
Antenna Gain at Midband (\pm .2dB)	Receive Transmit	43.10 dBi 46.40 dBi	43.30 dBi 46.50 dBi	43.10 dBi 46.30 dBi
VSWR		1.3:1 max	1.25:1 Max	Rx: 1.5:1 max Tx: 1.3:1 max
Pattern Beamwidth (in degrees at midband)	-3 dB -15 dB	Rx: 1.16° Tx: 0.78° Rx: 2.60° Tx: 1.75°	Rx: 1.14° Tx: 0.77° Rx: 2.55° Tx: 1.73°	Rx: 1.15° Tx: 0.80° Rx: 2.58° Tx: 1.79°
Sidelobe Envelope, Co-Pol (dBi)				
100l / D < q \leq 20°		29 - 25 Logq dBi	29 - 25 Logq dBi	29 - 25 Logq dBi
20° < q \leq 26.3°		-3.5 dBi	-3.5 dBi	-3.5 dBi
26.3° < q \leq 48°		32 - 25 Logq dBi	32 - 25 Logq dBi	32 - 25 Logq dBi
q > 48°		-10 dBi (averaged)	-10 dBi (averaged)	-10 dBi (averaged)
Antenna Noise Temperature				
5° Elevation		187 K	187 K	189 K
10° Elevation		141 K	141 K	144 K
20° Elevation		107 K	107 K	110 K
40° Elevation		87 K	87 K	90 K
Power Handling		100 W	100 W	100 W
Cross Polarization Isolation				
On Axis		Rx: 17.70 dB Tx: 21.30 dB	24.80 dB	Rx: 30.00 dB Tx: 35.00 dB
Within 1.0 dB Beamwidth		Rx: 17.70 dB Tx: 21.30 dB	24.80 dB	26.00 dB
Output Waveguide Interface Flange		Rx: WR42 Tx: WR28	Rx: WR42 Tx: WR28	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 51 lbs. (23 kg.) Approx Packaged Weight 61 lbs. (28 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 ²

GENERAL DYNAMICS SATCOM Technologies

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