

0.67M Ka-Band Antenna Rx/Tx

Series 3672

Technical Specifications

Electrical		Ka-Band Circular	Ka-Band Circular	Ka-Band Linear
Antenna Size		0.67 M	0.67 M	0.67 M
Operating Frequency (GHz)	Receive Transmit	20.20 - 21.20 GHz 30.00 - 31.00 GHz	19.40 - 21.20 GHz 29.20 - 31.00 GHz	18.70 - 21.20 GHz 27.00 - 32.00 GHz
Antenna Gain at Midband ($\pm .2$ dB)	Receive Transmit	40.80 dBi 44.10 dBi	40.70 dBi 43.90 dBi	40.60 dBi 43.90 dBi
VSWR		1.25:1 max	1.3:1 max	Rx: 1.5:1 max Tx: 1.3:1 max
Pattern Beamwidth (in degrees at midband)	-3 dB -15 dB	Rx: 1.51° Tx: 1.03° Rx: 3.39° Tx: 2.30°	Rx: 1.54° Tx: 1.04° Rx: 3.45° Tx: 2.33°	Rx: 1.53° Tx: 1.06° Rx: 3.43° Tx: 2.38°
Sidelobe Envelope, Co-Pol (dBi)				
$100\lambda / D < \theta \leq 20^\circ$		29 - 25 Log θ dBi	29 - 25 Log θ dBi	29 - 25 Log θ dBi
$20^\circ < \theta \leq 26.3^\circ$		-3.5 dBi	-3.5 dBi	-3.5 dBi
$26.3^\circ < \theta \leq 48^\circ$		32 - 25 Log θ dBi	32 - 25 Log θ dBi	32 - 25 Log θ dBi
$\theta > 48^\circ$		-10 dBi (averaged)	-10 dBi (averaged)	-10 dBi (averaged)
Antenna Noise Temperature				
5° Elevation		193 K	193 K	195 K
10° Elevation		143 K	143 K	146 K
20° Elevation		107 K	107 K	110 K
40° Elevation		85 K	85 K	88 K
Power Handling		100 W	100 W	100 W
Cross Polarization Isolation				
On Axis		24.80 dB	Rx: 17.70 dB Tx: 21.30 dB	Rx: 30.00 dB Tx: 35.00 dB
Within 1.0 dB Beamwidth		24.80 dB	Rx: 17.70 dB Tx: 21.30 dB	26.00 dB
Output Waveguide Interface Flange		Rx: WR42 Tx: WR28	Rx: WR42 Tx: WR28	Rx: WR42 Tx: WR28

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: 46 lbs. (21 kg.) Approx. Packaged Weight: 56 lbs. (25 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

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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