

2.4M Ka-Band Antenna Receive Only

Series 3244

Technical Specifications

Electrical		Ka-Band Circular	Ka-Band Linear
Antenna Size		2.4 M	2.4 M
Operating Frequency (GHz)	Receive	19.20 - 20.20 GHz	18.20 - 21.20 GHz
Antenna Gain at Midband (\pm .2dB)	Receive	51.30 dBi	51.30 dBi
VSWR		1.3:1 max	1.5:1 max
Pattern Beamwidth (in degrees at midband)	-3 dB -15 dB	0.40° 1.00°	0.40° 1.00°
Sidelobe Envelope, Co-Pol (dBi)			
$100\lambda / D < \theta \leq 20^\circ$		29 - 25 Log θ dBi	29 - 25 Log θ dBi
$20^\circ < \theta \leq 26.3^\circ$		-3.5 dBi	-3.5 dBi
$26.3^\circ < \theta \leq 48^\circ$		32 - 25 Log θ dBi	32 - 25 Log θ dBi
$\theta > 48^\circ$		-10 dBi (averaged)	-10 dBi (averaged)
Antenna Noise Temperature			
5° Elevation		141 K	145 K
10° Elevation		115 K	117 K
20° Elevation		95 K	90 K
40° Elevation		84 K	87 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	WR42

Mechanical		
Reflector Material		Glass Fiber Reinforced Polyester SMC, Ka-Band Formulation
Antenna Optics		4-piece Offset, Prime Focus
Mast Pipe Size		6" SCH 80 Pipe (6.62" OD) 16.8 CM
Elevation Adjustment Range		5° to 90°, Continuous Fine Adjustment
Azimuth Adjustment Range		360° Continuous Coarse Adjustment, $\pm 45^\circ$ Fine Adjustment
Shipping Specifications		Net Weight: 545 lbs. (248 kg.) Packaged Weight: 885 lbs. (402 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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