0.74M Ku-Band Rx/Tx Antenna

Series 1742

Technical Specifications

Electrical		Ku-Band
Antenna Size		74cm (29 in.)
Reflector Dimensions		36"x 25"Ellipse
Operating Frequency (GHz)	Receive Transmit	10.95 - 12.75 GHz 13.75 - 14.50 GHz
Antenna Gain at Midband, dBi (±.5dB)	Receive Transmit	37.60 dBi 38.60 dBi
First Sidelobe (typical)		-27 dB
2"Rejection		-16 dB
VSWR	Receive Transmit	1.5:1 1.3:1
Pattern Beamwidth (in degrees at midband)	-3 dB -15 dB	1.9° Rx 1.6° Tx 4.3° Rx 3.6° Tx
Sidelobe Envelope, Co-Pol (dBi) $100\lambda/D \leq \theta \leq 20°$ $20° < \theta \leq 26.3°$ $26.3° < \theta \leq 48°$ $48° < \theta$		 29 - 25 Logθ dBi -3.5 dBi 32 - 25 Logθ dBi -10 dBi (averaged)
Antenna Noise Temperature	20° Elevation 30° Elevation	63 K 60 K
Power Handling		50 W
Cross Polarization Isolation (Linear)	On Axis Within 1.0 dB Beamwidth	30 dB max 27 dB max
Output Waveguide Interface Flange		WR75

Mechanical	
Reflector Material	One-piece, Steel Metal
Antenna Optics	Prime Focus, Offset Feed Elliptical
Mast Pipe Size	(2.38"OD) 6.05 cm.
Elevation Adjustment Range	5°to 90°Continuous Fine Adjustment
Azimuth Adjustment Range	360°Continuous, ±10°Fine Adjust
Mount Type	3-Axis - El/Az/Polar Mount
Shipping Specifications	29 pounds (13 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	1/2"(13mm) / 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/ft2

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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