STEP ELECTRONICS
A Division of Av-Comm

GENERAL DYNAMICS
SATCOM Technologies

2.4m C & Ku-Band Antennas
Rx/Tx
Series 1244

Technical Specifications

Electrical		C-Band Linear	C-Band Circular	Ku-Band
Antenna Size		2.4 M (8 ft.)	2.4 M (8 ft.)	2.4 M (8 ft.)
Operating Frequency (GHz)	Receive Transmit	3.625 - 4.20 GHz 5.85 - 6.425 GHz	3.625 - 4.20 GHz 5.85 - 6.425 GHz	10.70 - 12.75 GHz 13.75 - 14.50 GHz
Midband Gain (+/- .2 dB)	Receive Transmit	38.20 dBi 42.20 dBi	38.00 dBi 42.00 dBi	47.40 dBi 49.20 dBi
VSWR		1.3:1 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: 2.20° Tx: 1.40° Rx: 4.90° Tx: 3.10°	Rx: 2.20° Tx: 1.40° Rx: 4.90° Tx: 3.10°	Rx: 0.70° Tx: 0.60° Rx: 1.60° Tx: 1.40°
Sidelobe Envelope, Co-Pol (dBi) $100\lambda / D < \theta \leq 20°$ $20° < \theta \leq 26.3°$ $26.3° < \theta \leq 48°$ $\theta > 48°$		 29 - 25 Logθ dBi -3.5 dBi 32 - 25 Logθ dBi -10 dBi (averaged)	 29 - 25 Logθ dBi -3.5 dBi 32 - 25 Logθ dBi -10 dBi (averaged)	 29 - 25 Logθ dBi -3.5 dBi 32 - 25 Logθ dBi -10 dBi (averaged)
Antenna Noise Temperature 5° Elevation 10° Elevation 20° Elevation 40° Elevation		 55 K 47 K 43 K 43 K	 61 K 53 K 49 K 49 K	 56 K 51 K 48 K 41 K
Power Handling		1 kW	1 kW	100 W
Cross Polarization Isolation On Axis Within 1.0 dB Beamwidth		 > 30 dB > 27 dB	 Rx > 15 dB Tx > 17.7 dB Rx > 15 dB Tx > 17.7 dB	 Rx > 30 dB Tx > 35 dB Rx > 25 dB Tx > 26 dB
Output Waveguide Interface Flange		Rx: CPR 229 Tx: CPR 137 or Type N	Rx: CPR 229 Tx: CPR 137 or Type N	Rx: WR75 Tx: WR75

Mechanical			
Reflector Material	Glass Fiber Reinforced SMC		
Antenna Optics	Four-Piece, Prime Focus, Offset Feed		
Mast Pipe Size	6" SCH 40 Pipe (6.62" OD) 16.80 cm.		
Elevation Adjustment Range	5° to 90° Continuous Fine Adjustment		
Azimuth Adjustment Range	+/- 30° Fine Adjustment, 360° Continuous		
Mount Type	Elevation over Azimuth		
Shipping Specifications (Approximate Net Weight)	640 lbs	660 lbs	630 lbs.

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/ft2

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