STEP ELECTRONICS
A Division of Av-Comm

GENERAL DYNAMICS
SATCOM Technologies

1.8m C & Ku-Band Rx/Tx

Series 1194

Technical Specifications

Electrical		Series 1194 C-Band		Series 1194 Ku-Band
Antenna Size		1.8 M (71 in.)		1.8 M (71 in.)
Operating Frequency (GHz)	Receive Transmit	3.625 - 4.20 GHz 5.85 - 6.425 GHz		10.95 - 12.75 GHz 13.75 - 14.50 GHz
Midband Gain (+/- .2 dB)	Receive Transmit	35.50 dBi 39.50 dBi		45.20 dBi 46.70 dBi
Antenna Noise Temperature 20° Elevation 30° Elevation		Linear 49 K 37 K	Circular 23 K 21 K	 38 K 35 K
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)
Cross-Pol Isolation	Within B.P.E. Any Angle off Axis	-26 dB Max. -23 dB Max.		-30 dB Max. -25 dB Max.
VSWR		1.3:1 Max.		1.3:1 Max. Tx, 1.5:1 Max. Rx
Axial Ratio (circular)	Receive Transmit	1.4 VAR (2.95 dB) 1.3 VAR (2.28 dB)		
Feed Interface	Receive Transmit	CPR 229 F CPR 137 or Type N		Available in a variety of designs Available in a variety of designs

Mechanical	
Reflector Material	Glass Fiber Reinforced Polyester SMC
Antenna Optics	Prime Focus, Offset Feed
Mast Pipe Size	5" SCH 40 Pipe (5.56" OD) 141 mm.
Elevation Adjustment Range	5° to 90°, Continuous Fine Adjustment
Azimuth Adjustment Range	+/- 45° Fine, 360° Continuous
Shipping Specifications	C-Band: 245 lbs. (111 kg.) Ku-Band: 235 lbs. (106.5 kg.)

Environmental Performance		
Wind Loading	Operational Survival	50 mph (80 km/h) 125 mph (201 km/h)
Temperature	Operational Survival	-40° to 140° F (-40° to 60° C) -50° to 160° F (-46° to 71° C)
Rain	Operational Survival	1/2"/hr 2"/hr
Ice	Operational Survival	------ 1/2" radial
Atmospheric Conditions		Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas
Solar Radiation		360 BTU/h/ft2

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