Series 3180 & 3244

Ka-Band

Technical Specifications

Electrical		Series 3180	Series 3244
Antenna Size		**1.8M**	**2.4M**
Operating Frequency (GHz)	Receive	19.7 - 20.2 GHz	19.7 - 20.2 GHz
	Transmit	29.5 - 30.0 GHz	29.5 - 30.0 GHz
Midband Gain (± .2dB)	Receive	49.2 dB	51.5 dB
	Transmit	52.4 dB	54.7 dB
Sidelobe Envelope Mainbeam			
Mainbeam < θ < 7°		29-25 Log θ dBi	29-25 Log θ dBi
7° < θ < 9.2°		+8 dBi	+8 dBi
9.2° < θ < 48°		32 -25 Log θ dBi	32 -25 Log θ dBi
48° < θ < 180°		-10 dBi	-10 dBi
Polarization		Circular or Linear	Circular or Linear
TX/RX Isolation (w/ optional TRF)		35 dB (85 dB)	35 dB (85 dB)
Axial Ratio (Circular)		2.3 dB	2.3 dB
Feed Interface	RX	WR42	WR42
	TX	WR28	WR28
Insertion Loss		<0.4dB	<0.4dB
Cross-Pol Isolation (linear)		>30 dB (on axis)	>30 dB (on axis)
VSWR		1.3:1 Max.	1.3:1 Max.
Antenna Optics		Prime Focus Offset	Prime Focus Offset

Mechanical		
Reflector Material	Glass Fiber Reinforced Polyester SMC, Ka-Band Formulation	
Antenna Optics	Prime Focus, Offset Feed	
Mount Type	Elevation over Azimuth	
Mast Pipe Size	5” SCH 40 Pipe (5.56” OD) 14.1 CM	6” SCH 40 Pipe (6.62” OD) 16.8 CM
Elevation Adjustment Range	5° to 90° Continuous	
	Fine Adjustment	

Environmental Performance		
Wind Loading	Operational	45 mph (72 km/h)
	Survival	125 mph (201 km/h)
Temperature	Operational	-40° to 140° F (-40° to 60° C)
	Survival	-50° to 160° F (-46° to 71° C)
Rain	Operational	1/2” /hr
	Survival	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/ft^2

GENERAL DYNAMICS
C4 Systems
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