2.4M C & Ku-Band Rx/Tx Antenna

Series 1241

Technical Specifications

Electrical		C-Band Linear	C-Band Circular	Ku-Band
Antenna Size		2.4M (96 in.)	2.4M (96 in.)	2.4M (96 in.)
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
Antenna Gain at Midband, dBi (± .2dB)	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 10° Elevation 20° Elevation 30° Elevation 40° Elevation		 52 K 46 K 45 K 44 K	 57 K 49 K 45 K 45 K	 85 K 78 K 73 K 70 K
Cross Polarization Isolation (Linear) On Axis	Receive Transmit	>30 dB >30 dB	N/A N/A	>30 dB >35 dB
Axial Ratio (Circular)	Receive Transmit	N/A N/A	2.28 dB 1.94 dB	N/A N/A
Feed Interface	Receive Transmit	CPR 229F CPR 137 or Type N	CPR 229F CPR 137 or Type N	WR 75 or Direct Radio Mounting
Maximum Radio Weight *(Optional Feed Stabilizer available for higher radio weight)*		20 Lbs. (9 Kg.)	20 Lbs. (9 Kg.)	12 Lbs. (5.5 Kg.)

Mechanical	
Reflector Material	Glass Fiber Reinforced Polyester SMC
Antenna Optics	Prime Focus, Offset Feed, Four-piece
Mast Pipe Size	6" SCH 40 Pipe (6.63" OD) 16.83 cm.
Elevation Adjustment Range	5°to 90°Continuous Fine Adjustment
Azimuth Adjustment Range	360°Continuous, +/- 10°Fine Adjustment
Mount Type	Elevation over Azimuth
Shipping Specifications Shipping Weight (Total): Install (Net) Weight:	 545 lbs. (248 kg.) 365 lbs. (166 kg.)

Environmental Performance		
Wind Loading	Operational Survival	50 mph (80 km/h) 125 mph (201 km/h)
Temperature Range (operational)		-40°to 140°F (-40°to 60°C)
Rain (operational)		1/2" (13mm) / hr
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

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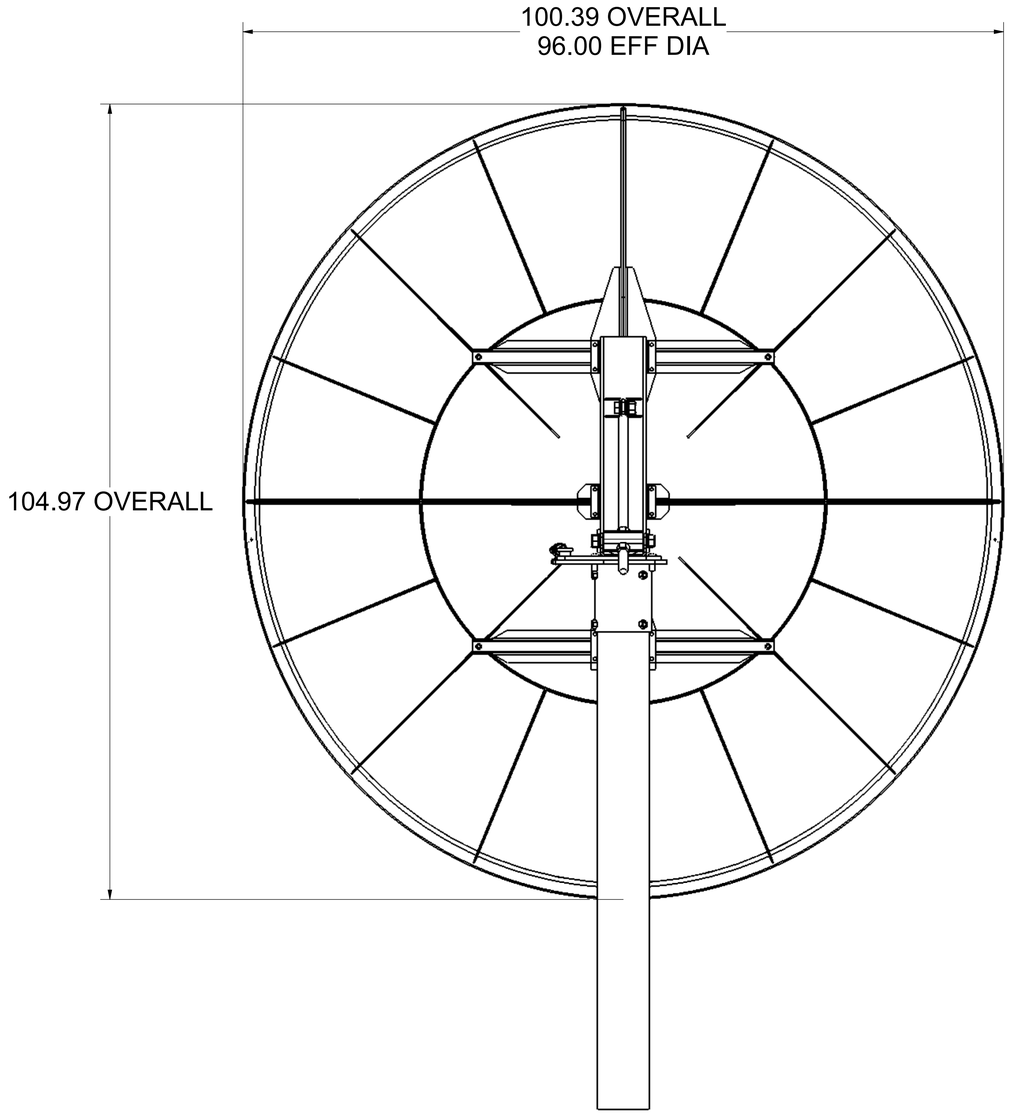
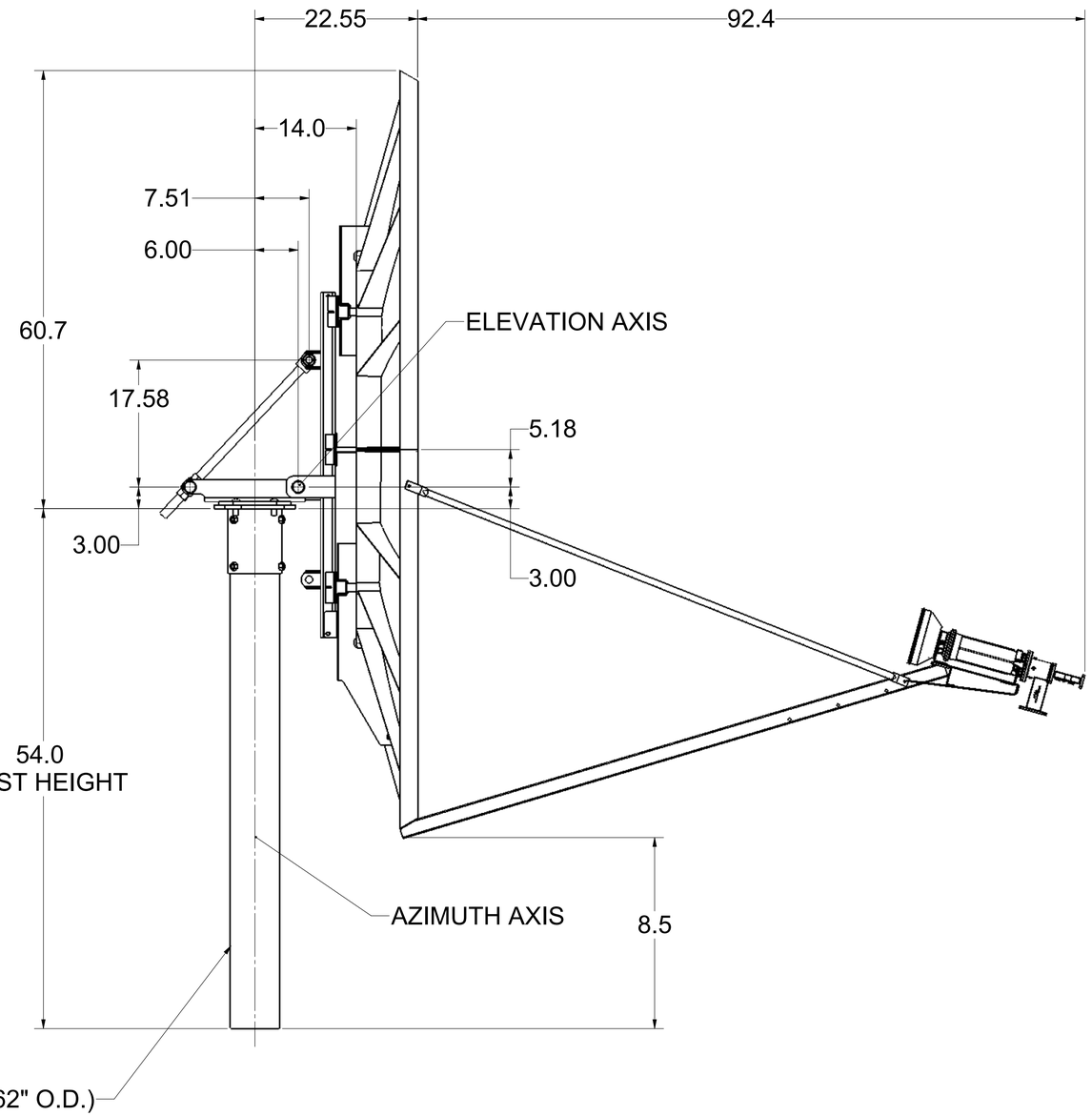
1000-063 Rev. 08/12

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	UPDATED AND RELEASED.	7/26/2012	R.F.





NOTES:

1. C-BAND CIRCULAR POLARIZED FEED SHOWN. C-BAND LINEAR AND KU-BAND ALSO AVAILABLE.

DIMENSIONS ARE IN DECIMAL INCHES. UNLESS OTHERWISE NOTED.
TOLERANCES ON FINISHED DIMENSIONS ARE AS FOLLOWS:

X.X ± 0.1 X.XXX ± 0.010
X.XX ± 0.05 ANGULAR ± 1°

GENERAL DYNAMICS
SATCOM Technologies

TITLE
2.4M Rx/Tx ANTENNA
GEOMETRY SERIES 1241

MATERIAL		FINISH	
NEXT ASS'Y		CODE IDENT. NO. 94661	
DRAWN	BY	TD0666	REV. A
CHECKED	BY		
ENGR.	BY		
MFG APVD	BY	SCALE 1:10	SH. 1 0F 1

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