

1.2m Ka RxTx Class I Antenna System

RF Performance



Type 127 Antenna Product Specification

- Fine azimuth and elevation adjustment features
- ISO 9001:2008 Certificate of Registration
- Meets or exceeds regulatory agency requirements

Effective Aperture	1.2m (47 in)
Operating Frequency	Tx 28.00-30.00 GHz
	Rx 18.10-20.20 GHz
Polarization	Circular RH or LH
Gain (± 0.3 dB)	Tx 49.5 dBi @ 30.00 GHz
	Rx 46.3 dBi @ 20.20 GHz
3dB Beamwidth	Tx 0.56° @ 30.00 GHz
	Rx 0.83° @ 20.20 GHz
Sidelobe Envelope (Tx, Co-Pol dBi)	
	100 $\lambda/D < \Theta < 20^\circ$ 29 - 25 Log Θ dBi
	20° $< \Theta < 26.3^\circ$ -3.5 dBi
	26.3° $< \Theta < 48^\circ$ 32-25 Log Θ dBi
	48° $< \Theta < 180^\circ$ -10 dBi (averaged)
Antenna Cross-Polarization (within 1 dB B/W)	
	Tx 25 dBi
	Rx 22 dBi
Antenna Noise Temperature*	
	10° El. 90K
	20° El. 53K
	30° El. 51K
VSWR	1.3:1 Max
Isolation (Port to Port)	Tx 90dB
	Rx 80dB
Feed Interface	Tx WR28
	Rx WR42

Mechanical Performance

Reflector Material	Glass Fiber Reinforced Polyester
Antenna Optics	One-Piece Offset Feed Prime Focus
Mount Type	Elevation over Azimuth
Elevation Adjustment Range	5° - 90° Continuous Fine Adjustment
Azimuth Adjustment Range	360° Continuous, $\pm 5^\circ$ Fine
Mast Pipe Interface	73.2 mm (2.88 in) or 76.1mm (3.00 in) Diameter O.D.
Wind Loading	Operational 72 km/h (45 mph)
	Survival 200 km/h (125 mph)
Temperature	-50°C to 80°C
Humidity	0 to 100% (Condensing)
Atmosphere	Standard Hardware Meets 720 Hour Salt Spray Test Requirements (ASTM B-117)
Solar Radiation360 BTU/h/ft2
Shock and Vibration	As Encountered During Shipping and Handling

*Gain and Noise Temperature at Feed Horn Flange
(All Specifications Typical)



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