

1.2m Ka RxTx Class I Antenna System

XRZ Model#12139

Overview

This is a 1.2m Ka Band Receiver Transmitter (RxTx) Class I Antenna System.

RF PERFORMANCE

EFFECTIVE APERTURE		1.2M (48 in)
OPERATING FREQUENCY	TX	13.75-14.50GHz
	RX	10.70-12.75GHz
POLARIZATION		Linear
GAIN (± 0.3 DB)	TX	43.3 dBi @ 14.3 GHz
	RX	41.8dBi@12.0GHz
3DB BEAMWIDTH	TX	1.2° @14.3GHz
	RX	1.5° @ 12.0 GHz
SIDELOBE ENVELOPE (TX, CO-POL DBI)	100λ/D < Θ < 20°	29 - 25 Log Θ dB
	20° < Θ < 26.3°	-3.5 dB
	26.3° < Θ < 48°	32-25 Log Θ dB
	48° < Θ < 180°	-10 dB
ANTENNA CROSS-POLARIZATION	30 dB in 1	
ANTENNA NOISE TEMPERATURE*	10° Elev	48° K
	20° Elev	35° K
	30° Elev	29° K
VSWR	TX	1.3:1 Max
	RX	1.5:1 Max
ISOLATION (PORT TO PORT)	TX	90 dB
	RX	40 dB



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

MECHANICAL PERFORMANCE

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, ±5° Fine Adjustment
MAST PIPE INTERFACE		73.2mm (2.88 in) or 76 mm (3.00 in) Diameter O.D.
WIND LOADING	Operational	56 km/h (35 mph)
	Survival)	201 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 RADIATION		360 BTU/h/ft ²
SHOCK & VIBRATION		As Encountered During Shipping and Handling