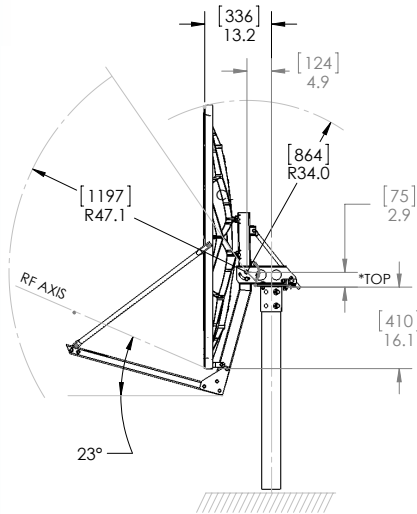


Type 121: 1.2m Standard Ka Band Antenna SFL RxTx



- One-piece precision SMC Reflector
- Precision Az/EI Mount
- Fine Azimuth and Elevation Adjustment Features
- All Materials Comply with EU Directive No. 2002/95/EC (RoHS)



- 720 Hour Salt Spray Hardware
- Designed for Skyware Global Ka Band Transceivers

The Skyware Global 1.2m Standard Ka Band Antenna SFL RxTx is a rugged, commercial quality product suitable for the most demanding applications.

- The reflector is constructed from glass fiber reinforced polyester (SMC) for strength and accuracy. A proprietary process developed by Skyware Global insures high RF reflectivity as needed for Ka Band operation
- The precision Az/EI mount is made of galvanized steel for excellent corrosion resistance. This mount includes special features to increase pointing accuracy with low backlash and lockdown error.
- This Az/EI allows the antenna to be installed on standard 89mm [3.5"] OD installation mounts.
- All hardware is plated to 720 hour salt spray standards under ASTM B-117.
- Designed for use with the Skyware Global line of Ka-band feed assemblies
- Tx Cross-Polarization Isolation of 25dB (within 1dB b/w) or better
- Excellent Tx Port to Port Isolation of 90dB or better
- Meets or exceeds regulator agency requirements
- System designed for typical Ka-band RF Electronics



• PRODUCT SPECIFICATIONS

RF Performance

Operating Frequency

TX29.50 -30.00 GHz
RX19.20 -20.20 GHz

Polarization

TX Circular, RH or LH
RX Circular, LH or RH

Gain¹ (min)

TX 49.3 dBi @ 30.0 GHz
RX 46.0 dBi @ 20.2 GHz

3 dB Beamwidth

TX 0.6° @ 30 GHz
RX 0.9° @ 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 (Typical)

Antenna Cross-Polarization (within 1dB b/w)

TX 25dB
RX 22dB

Antenna Noise Temperature¹

.....@ 30° EL 57°K Max

VSWR

..... 1.2:1 Max

Isolation

TX 90dB
RX 75dB

Feed Interface

Tx WR28 Flat Flange
Rx WR42 Flat Flange

¹ Gain and Noise Temperature at Feed Horn Flange
(All specifications typical)

1.2m Standard Ka Band Antenna SFL RxTx

Mechanical Performance

Reflector Material..... Glass Fiber Reinforced Polyester (SMC)

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; $\pm 3^\circ$ Fine Adjustment

Mast Size.....(3.5") (89mm) Diameter

Antenna Weight..... Approx 15.98Kg (Not Including Mast)

Environmental Performance

Operational Wind Speed..... 65km/h (40 mph)

Functional Survival..... 128km/h (80 mph)

Ultimate Survival..... 200km/h (125 mph)

Survival Temperature..... -50°C to +80°C

Operational Temperature..... -40°C to +55°C

Humidity..... 0 to 100% (Condensing)

Corrosion Protection..... Hot Dip Galvanized Structural Components, Hardware meets 720 hour Salt Spray Test (ASTM B-117)

Solar Radiation..... 360 BTU/h/ ft²

Shock and Vibration..... As Encountered during Shipping and handling



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Satcom solutions for the long haul

1315 Outlet Center Drive, Smithfield, NC 27577

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