

Type 180: 1.8m BSS Band Antenna SFL RxTx Class I



- 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
- Standard Waveguide Flange Interface



The **Skyware Global 1.8m BSS Band Antenna SFL RxTx Class I** 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 Ku 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 (114mm) 4.50" OD installation mounts.
- All hardware is plated to 720 hour salt spray standards under ASTM B-117.
- Cross-Polarization Isolation of 30dB on axis
- Excellent Tx Port-to-Port Isolation of 80dB or better
- Meets or exceeds regulator agency requirements

• PRODUCT SPECIFICATIONS

RF Performance

Operating Frequency
TX 17.30-18.10 GHz
RX 10.95-12.75 GHz

Polarization
TX Linear V-Pol or H-Pol
RX Linear H-Pol or V-Pol

Gain (± 0.3 dB)
TX 48.2 dBi @ 17.7 GHz
RX 45.3 dBi @ 12.0 GHz

3 dB Beamwidth
TX 0.7° @ 17.7 GHz
RX 1.0° @ 12.0 GHz

Sidelobe Envelope (Tx, Co-Pol dBi)
 $100 \lambda/D < \theta < 20^\circ$ $29-25 \log \theta$ dBi
 $20^\circ < \theta < 26.3^\circ$ -3.5 dBi
 $26.3^\circ < \theta < 48^\circ$ $32-25 \log \theta$ dBi
 $48^\circ < \theta < 180^\circ$ -10 dBi (Typical)

Antenna Cross-Polarization
TX >30 dB
RX >30 dB

Antenna Noise Temperature
..... $45K^\circ$ @ 30° Elevation @ 12.0 GHz

VSWR
TX 1.3:1 Max
RX 1.5:1 Max

Isolation
TX 80 dB
RX 45 dB

Feed Interface
TX WR62 Flat Flange
RX WR75 Flat Flange

1.8m BSS Band Antenna SFL RxTx Class 1

Mechanical Performance

Reflector Material. Glass Fiber Reinforced Polyester (SMC) with Aluminium Screen

Antenna Optics One-Piece Offset Feed Prime Focus

Mount Type Elevation Over Azimuth

Elevation Adjustment Range $8^\circ-90^\circ$ Continuous
Fine Adjustment

Coarse Azimuth Adjustment Range . . . 360° Continuous;

Fine Azimuth Adjustment Range. $\pm 10^\circ$

Mast Size 4.50" (114mm) Diameter

Antenna Weight. Approx 50.50Kg
(Not Including Mast)

Environmental Performance

Operational Wind Speed. 72km/h (45 mph)

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

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

Atmosphere. Standard Hardware 720 Hrs
SST Requirements (ASTM B-117)

Marinized Version. Also Possible

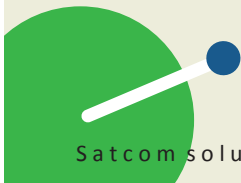
Operational Temperature -40°C to $+55^\circ\text{C}$

Survival Temperature Range -50°C to $+80^\circ\text{C}$

Humidity. 0 to 100% (Condensing)

Solar Radiation 360 BTU/h/ ft²

Rain Operational. 0.5" Per Hour



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