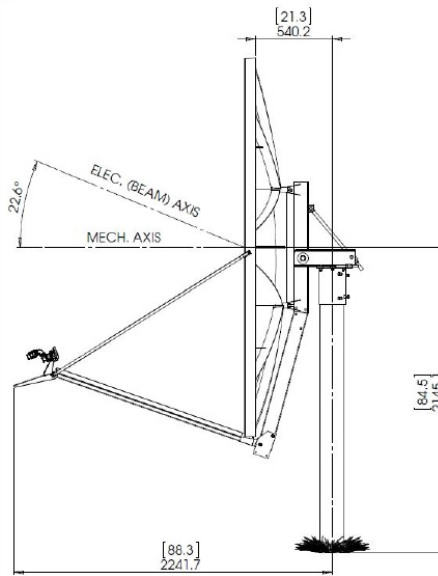


# Type 243: 2.4m BSS Band Antenna

## 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 2.4m 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 (168mm) 6.63" 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 90dB or better
- Meets or exceeds regulator agency requirements
- Heavy-duty Class III mount for 11 kg (25 lb) RF electronics (LNB & BUC).



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## • PRODUCT SPECIFICATIONS

### RF Performance

#### Operating Frequency

TX .....17.3 -18.1 GHz  
RX ..... 10.95 -12.75 GHz

#### Polarization

Tx.....Linear V-Pol or H-Pol  
Rx.....Linear H-Pol or V-Pol

#### Gain ( $\pm 0.3$ dB)

TX ..... 50.4 dBi @ 17.7 GHz  
RX ..... 47.4 dBi @ 12.0 GHz

#### 3 dB Beamwidth

TX ..... 0.5° @ 17.7 GHz  
RX ..... 0.7° @ 12.0 GHz

#### Sidelobe Envelope (Tx, Co-Pol dBi)

100  $\lambda/D < \theta < 20^\circ$  ..... 29-25 log  $\theta$  dBi  
20° <  $\theta < 26.3^\circ$  ..... -3.5 dBi  
26.3° <  $\theta < 48^\circ$  ..... 32-25 log  $\theta$  dBi  
48° <  $\theta < 180^\circ$  ..... -10 dBi (Typical)

#### Antenna Cross-Polarization (Within 1 dB)

TX ..... >30dB  
RX ..... >23dB

#### Antenna Noise Temperature

.....31K° @ 30° Elevation @ 12.0 GHz

#### VSWR

Tx .....1.3:1 Max  
Rx ..... 1.5:1 Max

#### Isolation

Tx ..... 90 dB  
Rx ..... 45 dB

#### Feed Interface

Tx ..... WR62 Flat Flange  
Rx ..... WR75 Flat Flange

## 2.4m BSS Band Antenna

### SFL RxTx Class 1

### Mechanical Performance

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

Antenna Optics ..... Two-Piece Offset Feed Prime Focus

Mount Type ..... Elevation Over Azimuth

Elevation Adjustment Range ..... 10° - 90° Continuous  
Fine Adjustment

Coarse Azimuth Adjustment Range ..... 360° Continuous;

Fine Azimuth Adjustment Range.....  $\pm 12^\circ$

Mast Size ..... .6.63" (168mm) Diameter

Antenna Weight. .... Approx 110.63Kg (Not Including Mast)

### Environmental Performance

Operational Wind Speed..... 80km/h (50 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°C

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

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

Solar Radiation ..... 360 BTU/h/ ft<sup>2</sup>

Rain Operational..... 0.5" Per Hour



REV 08/14-01  
Page 2 of 2