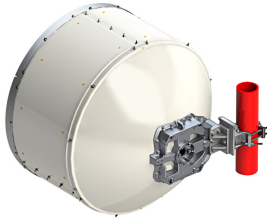


SHPX3-23/A

Base Product



0.9 m | 3 ft Sentinel® High Performance Antenna, dual-polarized, 21.200 – 23.600 GHz

OBSOLETE

This product was discontinued on: June 11, 2021

Replaced By:

SHPX3-23/B

0.9m | 3 ft Sentinel® High Performance Antenna, dual-polarized, 21.200 – 23.600 GHz

Product Classification

Product Type

Microwave antenna

Product Brand

Sentinel®

General Specifications

Antenna Type

SHPX - Sentinel® High Performance Antenna, dual-polarized

Polarization

Dual

Side Struts, Included

0

Side Struts, Optional

1

Dimensions

Diameter, nominal

0.9 m | 3 ft

Electrical Specifications

Operating Frequency Band

21.200 – 23.600 GHz

Gain, Low Band

44.5 dBi

Gain, Mid Band

44.8 dBi

Gain, Top Band

45 dBi

Boresite Cross Polarization Discrimination (XPD)

30 dB

Front-to-Back Ratio

75 dB

Beamwidth, Horizontal

1 °

SHPX3-23/A

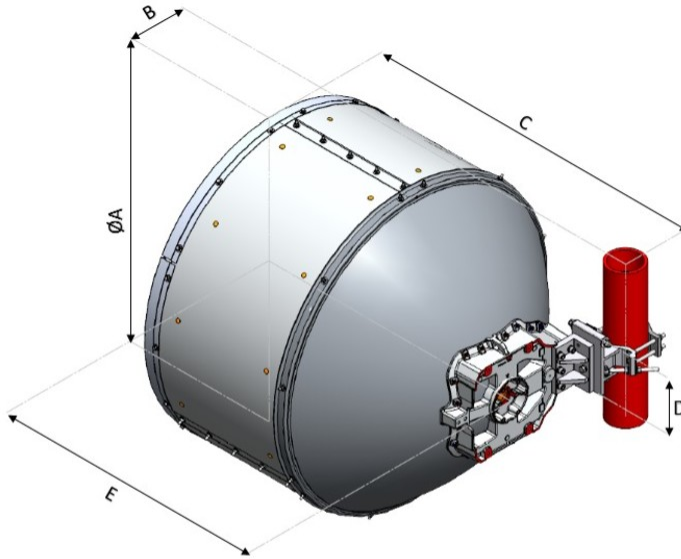
Return Loss	17.7 dB
VSWR	1.3
Radiation Pattern Envelope Reference (RPE)	7302A
Electrical Compliance	Brazil Anatel Class 2 Canada SRSP 321.8 Part A ETSI 302 217 Class 4 US FCC Part 101A
Cross Polarization Discrimination (XPD) Electrical Compliance	ETSI EN 302217 XPD Category 2

Mechanical Specifications

Compatible Mounting Pipe Diameter	90 mm–120 mm 3.5 in–4.7 in
Fine Azimuth Adjustment Range	±15°
Fine Elevation Adjustment Range	±15°
Wind Speed, operational	180 km/h 111.847 mph
Wind Speed, survival	250 km/h 155.343 mph

SHPX3-23/A

Antenna Dimensions and Mounting Information



Dimensions in inches (mm)					
Antenna Size, ft (m)	A	B	C	D	E
3 (0.9)	38.9 (987)	16 (407)	36.3 (923)	7.2 (183)	34.7 (882.2)

Wind Forces at Wind Velocity Survival Rating

Axial Force (FA)

2956 N | 664.535 lbf

Angle α for MT Max

40 °

Side Force (FS)

1464 N | 329.12 lbf

Twisting Moment (MT)

1203 N-m | 10,647.447 in lb

Zcg without Ice

325 mm | 12.795 in

Zcg with 1/2 in (12 mm) Radial Ice

481 mm | 18.937 in

Weight with 1/2 in (12 mm) Radial Ice

89 kg | 196.211 lb

SHPX3-23/A

Wind Forces at Wind Velocity Survival Rating Image



Packaging and Weights

Weight, net

27 kg | 59.525 lb

Regulatory Compliance/Certifications

Agency

Classification

ISO 9001:2015

Designed, manufactured and/or distributed under this quality management system

* Footnotes

Operating Frequency Band

Bands correspond with CCIR recommendations or common allocations used throughout the world. Other ranges can be accommodated on special order.

SHPX3-23/A

Gain, Mid Band

For a given frequency band, gain is primarily a function of antenna size. The gain of Andrew antennas is determined by either gain by comparison or by computer integration of the measured antenna patterns.

Boresite Cross Polarization Discrimination (XPD)

The difference between the peak of the co-polarized main beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.

Front-to-Back Ratio

Denotes highest radiation relative to the main beam, at $180^\circ \pm 40^\circ$, across the band. Production antennas do not exceed rated values by more than 2 dB unless stated otherwise.

Return Loss

The figure that indicates the proportion of radio waves incident upon the antenna that are rejected as a ratio of those that are accepted.

VSWR

Maximum; is the guaranteed Peak Voltage-Standing-Wave-Ratio within the operating band.

Radiation Pattern Envelope Reference (RPE)

Radiation patterns define an antenna's ability to discriminate against unwanted signals. Under still dry conditions, production antennas will not have any peak exceeding the current RPE by more than 3dB, maintaining an angular accuracy of $\pm 1^\circ$ throughout

Cross Polarization Discrimination (XPD) Electrical Compliance

The difference between the peak of the co-polarized main beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.

Wind Speed, operational

For VHLP(X), SHP(X), HX and USX antennas, the wind speed where the maximum antenna deflection is 0.3 x the 3 dB beam width of the antenna. For other antennas, it is defined as a deflection is equal to or less than 0.1 degrees.

Wind Speed, survival

The maximum wind speed the antenna, including mounts and radomes, where applicable, will withstand without permanent deformation. Realignment may be required. This wind speed is applicable to antenna with the specified amount of radial ice.

Axial Force (FA)

Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

Side Force (FS)

Maximum side force exerted on the mounting pipe as a result of wind from the most critical direction for this

Twisting Moment (MT)

parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.