



## airFiber<sup>®</sup> X Antenna

### Slant 45 Antenna for airFiber<sup>®</sup>

Model: AF-2G24-S45, AF-3G26-S45,  
AF-5G23-S45, AF-5G30-S45, AF-5G34-S45

Powerful Performance for Long-Range Links

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Robust Design and Construction for Outdoor Use

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Seamless Integration with airFiber Radio

# Overview

Pair an airFiber® X antenna with an airFiber X radio to create the endpoint of a high-performance, Point-to-Point (PtP) bridge or network backhaul (airFiber X radio sold separately).

The airFiber X antenna uses the 5 GHz frequency band and is available for the following frequency bands:

- 2.4 GHz
- 3 GHz
- 4 GHz
- 5 GHz

## Powerful Performance

The airFiber X antenna delivers 2x2, dual-polarity performance. On the right is one example of how the airFiber X antenna with an airFiber X radio can be deployed as endpoints in a backhaul link to deliver bandwidth from a WISP network out to a neighborhood tower. From there, an airMAX® Sector antenna with a Rocket® radio delivers bandwidth to the WISP's customers.

## Carrier-Class Construction

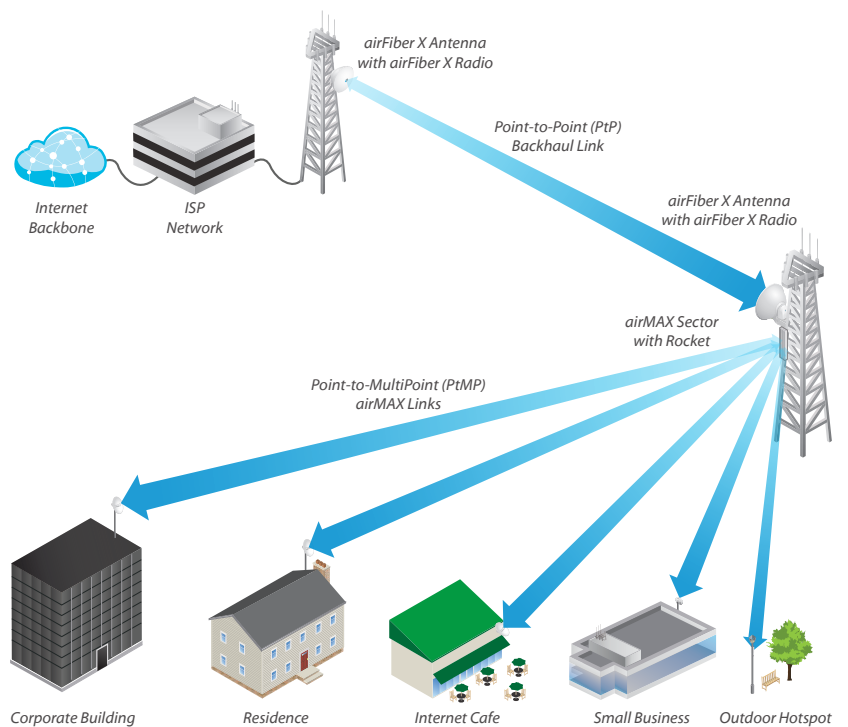
Incorporating a dish reflector design for excellent beam directivity, the airFiber X antennas feature robust mechanical design using industrial-strength hardware for outdoor application use.

## Plug and Play Integration

airFiber X antennas and airFiber X radios have been designed to seamlessly work together. Every airFiber X antenna has a built-in airFiber X radio mount, so installation requires no special tools.

Snap the airFiber X radio securely into place and mount the antenna; you then have the optimal combination of airFiber X antenna and airFiber X radio for your PtP application.

## Application Example



Mounting the AF-5X on the AF-5G23-S45

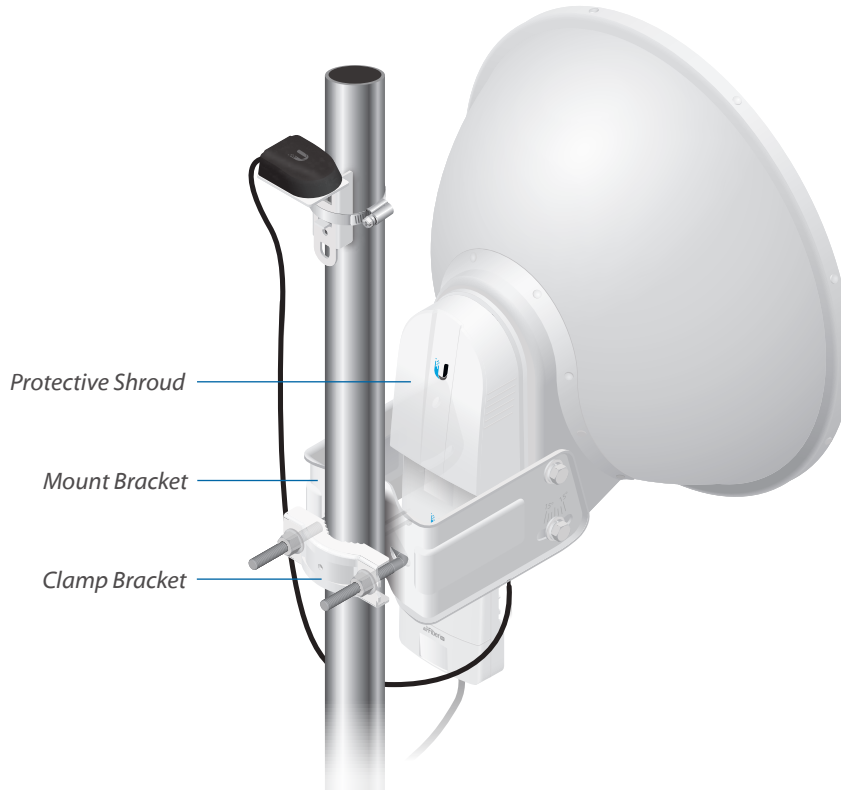
# Hardware Overview

## Innovative Mechanical Design

- **Secure Pole-Mounting** Maintains the position of the dish during harsh outdoor conditions.
- **Low-Profile Form Factor of the AF-5G23-S45** Reduces wind-loading.

## Weatherproof Design

- **Protective Shroud** Protects the cables and connectors from the elements.
- **Integrated Radome of the AF-5G23-S45** Shields the radio from the environment.



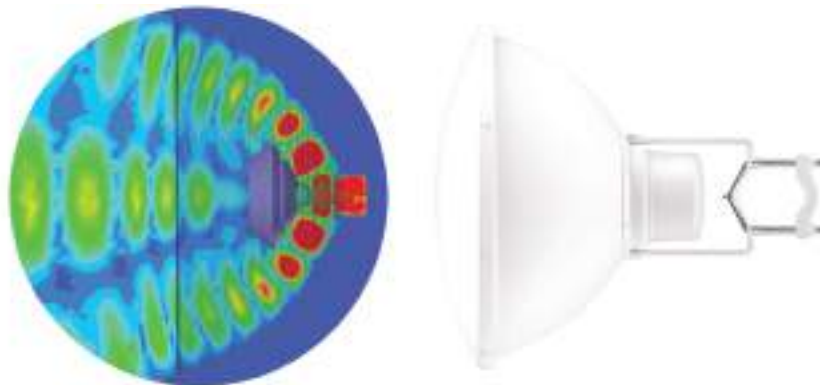
## Advanced RF Isolation Design

### Model: AF-5G23-S45

The innovative industrial design improves RF isolation to significantly reduce interference and deliver superior gain for high-capacity, multipoint networks.

The near-field plot of the AF-5G23-S45 is displayed in watts and uses a linear scale. The strength of the electromagnetic field is color-coded:

- Red: Highest strength
- Green: Medium strength
- Indigo: Lowest strength



## Deployment Flexibility

The airFiber X supports  $\pm 45^\circ$  slant polarization for improved noise immunity and Signal-to-Noise Ratio (SNR). The compact form factor of the airFiber X allows it to fit into the radio mount of Ubiquiti antennas, so installation requires no special tools.

The airFiber X antennas are purpose-built with  $45^\circ$  slant polarity for seamless integration with the airFiber X.

### airFiber® X Antenna

#### 2.4 GHz Model



| Model       | Frequency | Gain   | Radome* |
|-------------|-----------|--------|---------|
| AF-2G24-S45 | 2.4 GHz   | 24 dBi | RAD-RD2 |

The AF-2G24-S45 offers 24 dBi of gain in a 650-mm diameter size.

### airFiber® X Antenna

#### 3 GHz Model



| Model       | Frequency | Gain   | Radome* |
|-------------|-----------|--------|---------|
| AF-3G26-S45 | 3 GHz     | 26 dBi | RAD-RD2 |

The AF-3G26-S45 offers 26 dBi of gain in a 650-mm diameter size.

## 5 GHz Models



| Model       | Frequency     | Gain   | Radome     |
|-------------|---------------|--------|------------|
| AF-5G23-S45 | 5.1 - 5.9 GHz | 23 dBi | Integrated |

Housed in a compact form factor (378-mm diameter size), the AF-5G23-S45 offers 23 dBi of gain and features the following advantages:

- Low sidelobes reduce interference from other transmitters in the area.
- High isolation enhances performance for co-location in tower-mounted installations.
- The low-profile design with integrated radome reduces wind-loading.



| Model       | Frequency     | Gain <sup>1</sup> | Radome <sup>2</sup> |
|-------------|---------------|-------------------|---------------------|
| AF-5G30-S45 | 4.9 - 5.9 GHz | 26 - 30 dBi       | ISO-BEAM-620        |

The AF-5G30-S45 offers up to 30 dBi of gain in a 650-mm diameter size.



| Model       | Frequency     | Gain <sup>1</sup> | Radome <sup>2</sup> |
|-------------|---------------|-------------------|---------------------|
| AF-5G34-S45 | 4.9 - 5.8 GHz | 30 - 34 dBi       | RAD-RD3             |

The AF-5G34-S45 offers up to 34 dBi of gain in a 1050-mm diameter size.

<sup>1</sup> Check your local/regional regulations for the maximum antenna gain allowed for your application.

<sup>2</sup> A radome is available as an optional accessory.

# airFiber X Antenna

## AF-5G30-S45 Accessories

### IsoBeam™

**Model: ISO-BEAM-620**



The IsoBeam™ is an isolator radome that is available as an optional accessory for the AF-5G30-S45 and other dish antenna models:

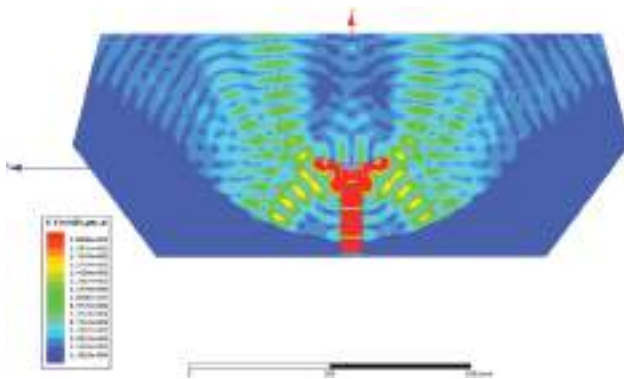
- RocketDish® RD-5G30-LW
- PowerBeam™ PBE-5AC-620
- PowerBeam PBE-M5-620

The innovative RF-choke perimeter of the IsoBeam delivers superior noise immunity in co-location deployments; its perimeter corrugation provides enhanced RF shielding. Compare the two near-field plots below, and note the breakthrough isolation performance of the IsoBeam.

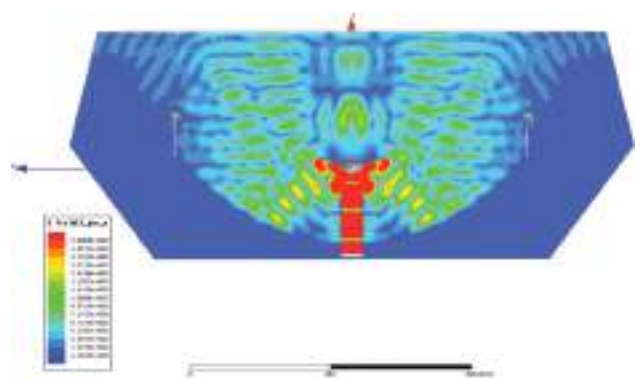
Both near-field plots are displayed in watts and use a linear scale. The strength of the electromagnetic field is color-coded:

- Red: Highest strength
- Green: Medium strength
- Indigo: Lowest strength

**Without IsoBeam**



**With IsoBeam**



### Precision Alignment Kit

**Model: PAK-620**



The Precision Alignment Kit is available as an optional accessory for the AF-5G30-S45. It features 15° of azimuth adjustment and 15° of elevation adjustment to enable extremely accurate aiming for optimal PtP link performance.

The Precision Alignment Kit is also compatible with other dish antenna models:

- RocketDish RD-5G30-LW
- PowerBeam PBE-5AC-620
- PowerBeam PBE-M5-620

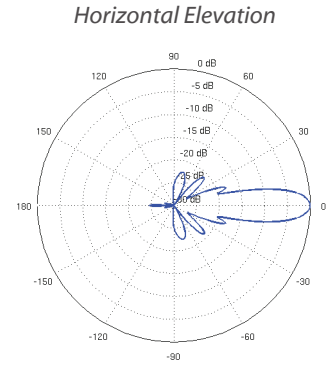
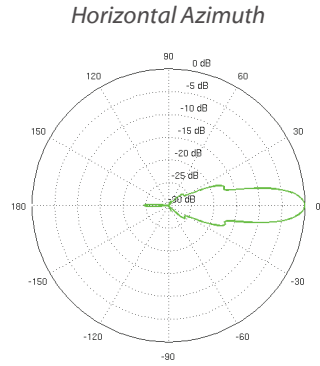
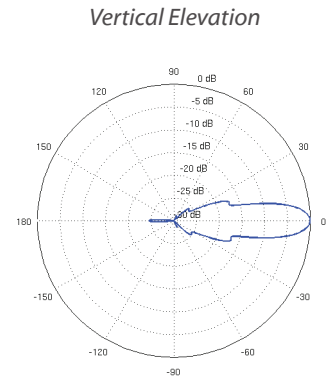
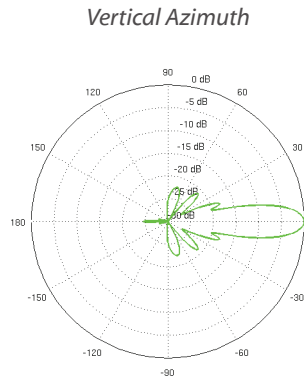
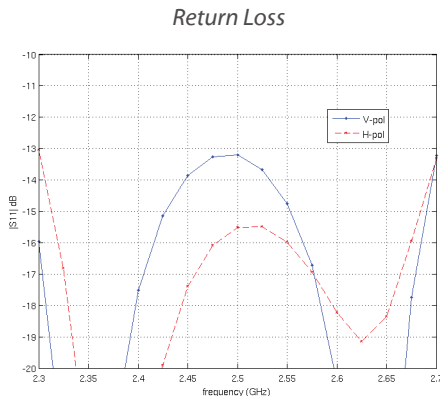
# Specifications

| Antenna Characteristics |   |   |  |   |   |
|-------------------------|---|---|--|---|---|
| Model                   | AF-2G24-S45   | AF-3G26-S45                             | AF-5G23-S45                            | AF-5G30-S45                             | AF-5G34-S45                               |
| Dimensions*             | ø 650 x 295 mm<br>(ø 25.59 x 11.61")  | ø 650 x 300 mm<br>(ø 25.59 x 11.81")    | ø 378 x 290 mm<br>(ø 14.88 x 11.42")   | ø 650 x 386 mm<br>(ø 25.59 x 15.20")    | ø 1050 x 421 mm<br>(ø 41.34 x 16.57")     |
| Weight**                | 9.8 kg (21.61 lb)   | 9.8 kg (21.61 lb)                       | 3.4 kg (7.50 lb)                       | 7.4 kg (16.31 lb)                       | 13.5 kg (29.76 lb)                        |
| Frequency Range         | 2.3 - 2.7 GHz   | 3.3 - 3.8 GHz                           | 5.1 - 5.9 GHz                          | 4.9 - 5.9 GHz                           | 4.9 - 5.8 GHz                             |
| Gain                    | 24 dBi  | 26 dBi                                  | 23 dBi                                 | 4.9 GHz: 26 dBi<br>5 - 5.9 GHz: 30 dBi  | 4.9 GHz: 30 dBi<br>5 - 5.8 GHz: 34 dBi    |
| + 45° Beamwidth         | 6.6° (3 dB)   | 7° (3 dB)                               | 10° (3 dB)                             | 5.8° (3 dB)                             | 3° (3 dB)                                 |
| - 45° Beamwidth         | 6.8° (3 dB)   | 7° (3 dB)                               | 10° (3 dB)                             | 5.8° (3 dB)                             | 3° (3 dB)                                 |
| F/B Ratio               | 28 dB   | 33 dB                                   | 30 dB                                  | 30 dB                                   | 42 dB                                     |
| Max. VSWR               | 1.6:1   | 1.4:1                                   | 1.5:1                                  | 1.6:1                                   | 1.4:1                                     |
| Wind Loading            | 787 N @ 200 km/h<br>(177 lbf @ 125 mph)   | 787 N @ 200 km/h<br>(177 lbf @ 125 mph) | 190 N @ 200 km/h<br>(43 lbf @ 125 mph) | 790 N @ 200 km/h<br>(178 lbf @ 125 mph) | 1,779 N @ 200 km/h<br>(400 lbf @ 125 mph) |
| Wind Survivability      | 200 km/h (125 mph)  |   |  |   |   |
| Polarization            | Dual-Linear   |   |  |   |   |
| Cross-pol Isolation     | 35 dB Min.  |   |  |   |   |
| ETSI Specification      | EN 302 326 DN2  |   |  |   |   |
| Mounting                | Universal Pole Mount, airFiber X Radio Bracket, and Weatherproof RF Connectors Included |   |  |   |   |

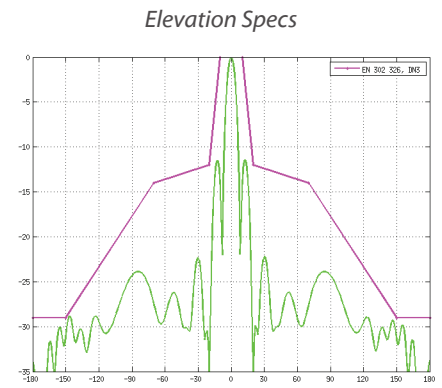
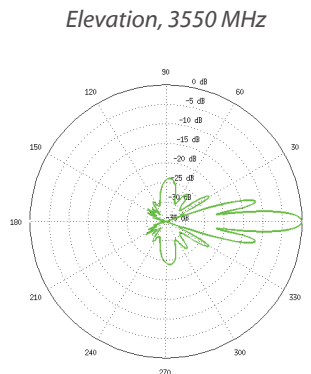
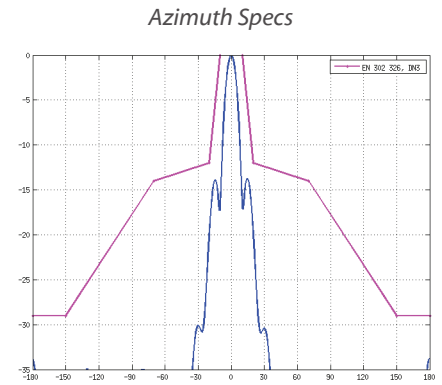
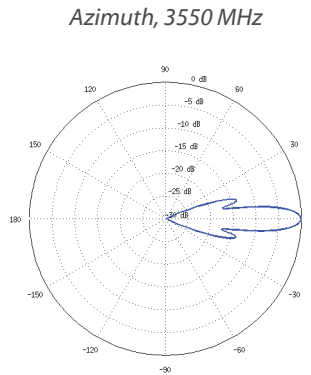
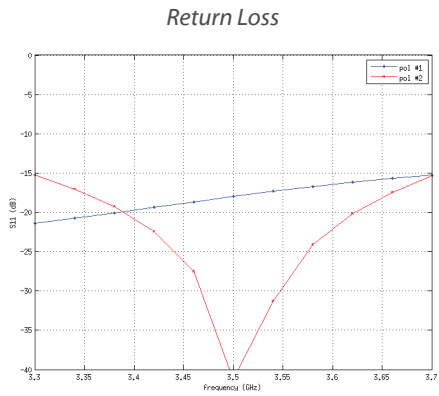
\* Dimensions exclude pole mount and airFiber X radio (airFiber X radio sold separately)

\*\* Weight includes pole mount and excludes airFiber X radio (airFiber X radio sold separately)

## AF-2G24-S45 Antenna Information



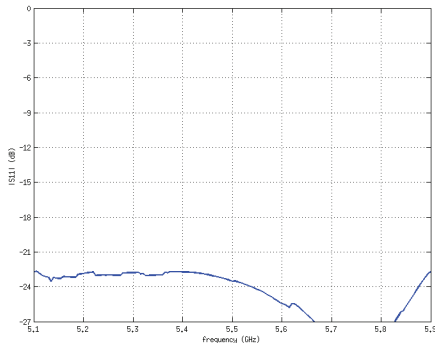
## AF-3G26-S45 Antenna Information



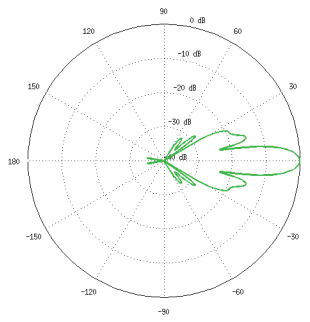


## AF-5G23-S45 Antenna Information

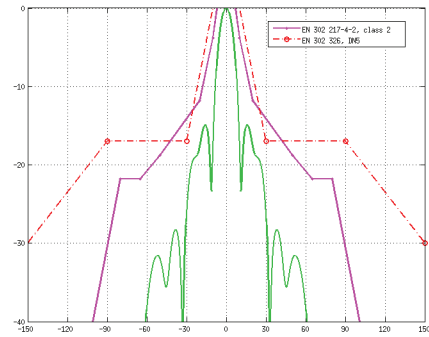
Return Loss



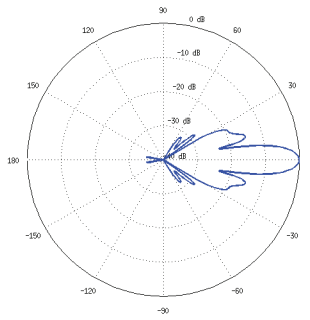
Azimuth, 5500 MHz



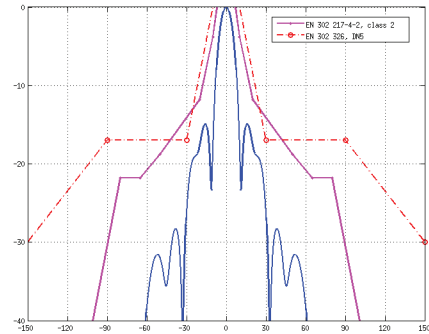
Azimuth Specs



Elevation, 5500 MHz

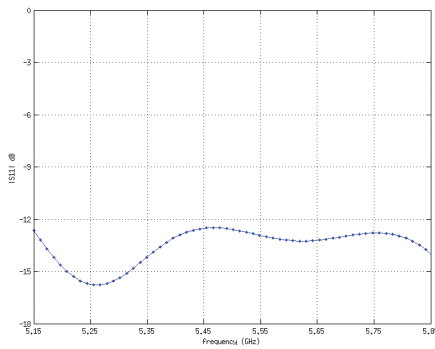


Elevation Specs

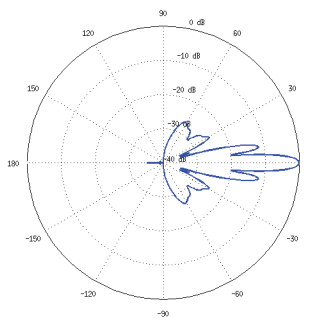


## AF-5G30-S45 Antenna Information

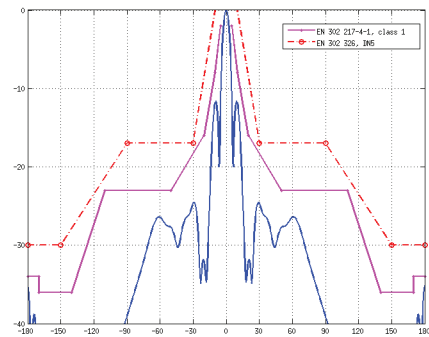
Return Loss



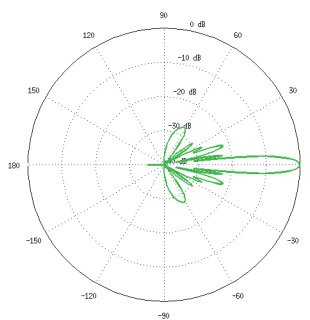
Azimuth, 5500 MHz



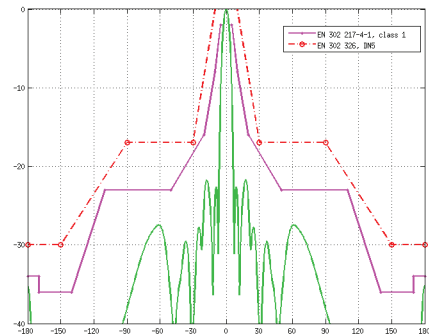
Azimuth Specs



Elevation, 5500 MHz

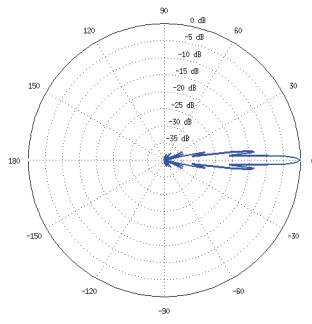


Elevation Specs

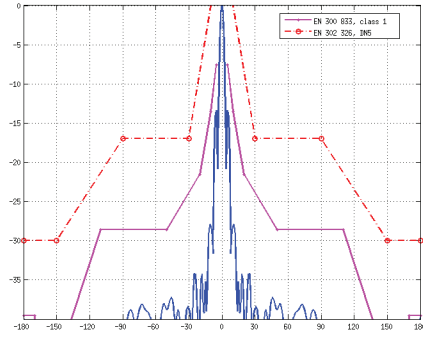


# AF-5G34-S45 Antenna Information

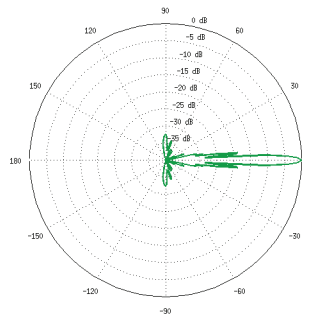
Azimuth, 5500 MHz



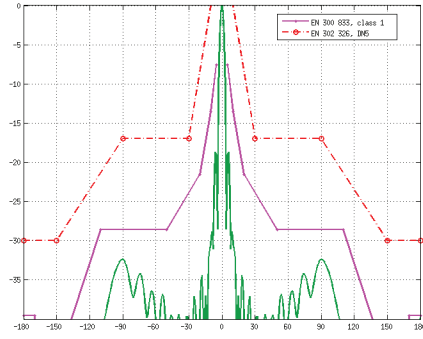
Azimuth Specs



Elevation, 5500 MHz



Elevation Specs



Specifications are subject to change. Ubiquiti products are sold with a limited warranty described at: [www.ubnt.com/support/warranty](http://www.ubnt.com/support/warranty)  
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