



RocketDish™

airMAX® 2x2 PtP Bridge Dish Antenna

Models: RD-2G24, RD-3G26, RD-5G30, RD-5G30-LW, RD-5G34

Powerful Performance for Long-Range Links

Robust Design and Construction for Outdoor Use

Seamless Integration with Rocket Radios

Overview

Pair a RocketDish™ antenna with a Rocket™ basestation to create the endpoint of a high-performance, Point-to-Point (PtP) bridge or network backhaul (Rocket sold separately).

The RocketDish is available in the following frequency models:

- 2.4 GHz
- 3 GHz
- 5 GHz

Powerful Performance

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

Carrier-Class Construction

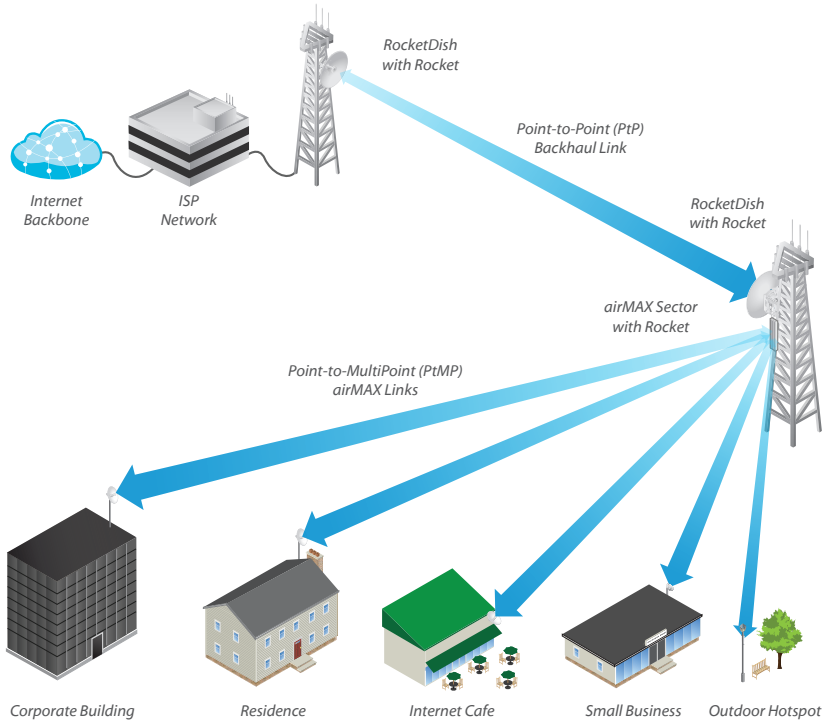
Incorporating a dish reflector design for excellent beam directivity, the RocketDish antennas feature robust mechanical design using industrial-strength hardware for outdoor application use.

Plug and Play Integration

RocketDish antennas and Rocket basestations have been designed to seamlessly work together. Every RocketDish has a built-in Rocket mount, so installation requires no special tools.

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

Application Example



Mounting a Rocket on the RD-5G30-LW

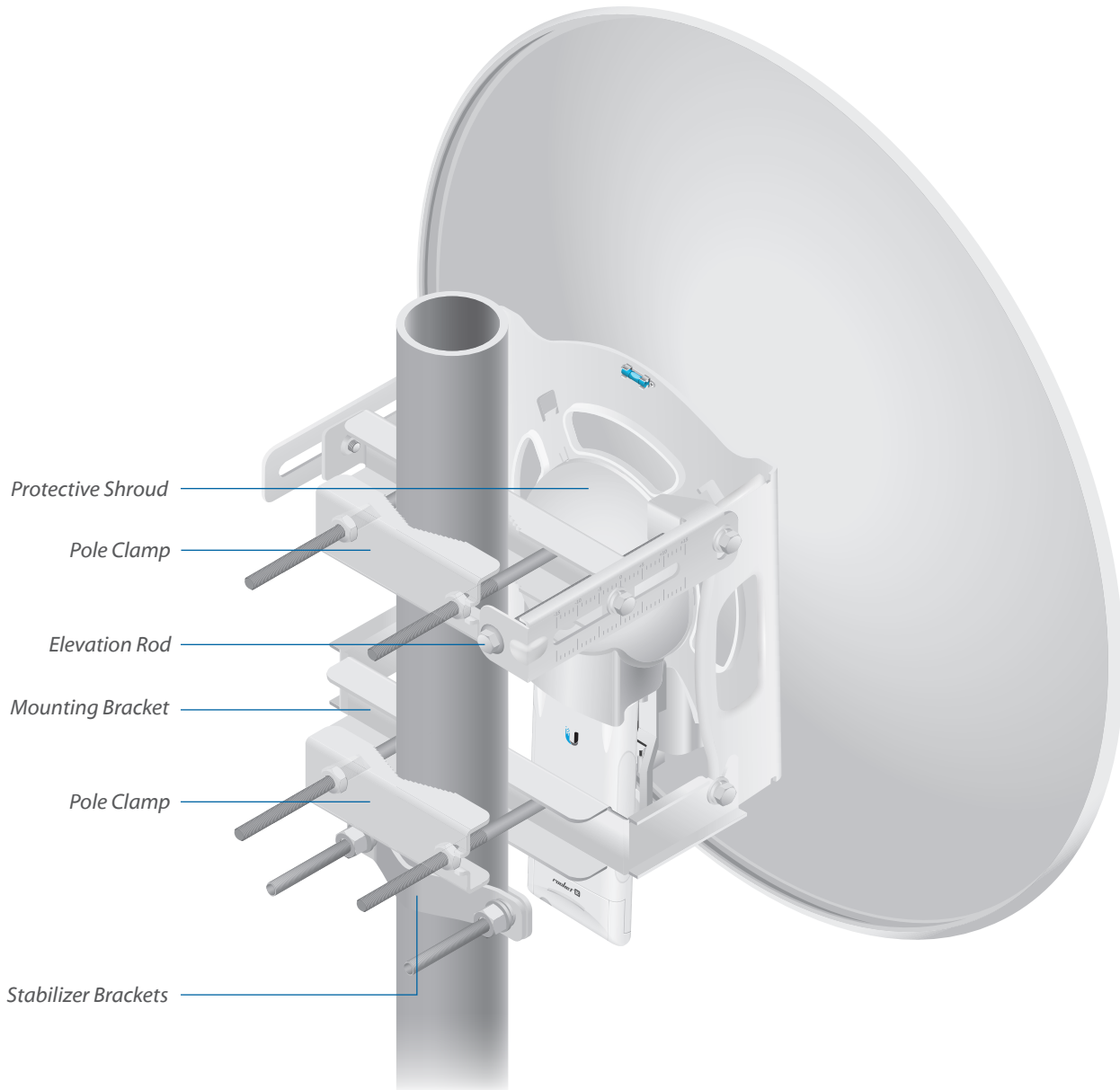
Hardware Overview

Innovative Mechanical Design

- **Secure pole-mounting** The hardware is designed to securely mount and maintain the position of the dish during harsh outdoor conditions.
- **Convenient installation** The bubble level allows for easy alignment.
- **Precision elevation adjustment of the RD-5G30-LW** Use this new feature to quickly fine-tune and adjust the elevation.

Weatherproof Design

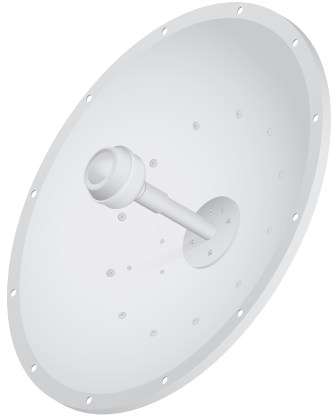
- **Protective shroud** The shroud* protects the cables and connectors from nature's elements.
- **Mounting hardware of the RD-5G30-LW** Made of galvanized steel that is powder-coated for superior corrosion resistance.
- **Fasteners of the RD-5G30-LW** GEOMET-coated for improved corrosion resistance when compared with zinc-plated fasteners.



Back View of the Fully Assembled RD-5G30-LW

* All models except for the RD-2G24 include a shroud.

2.4 GHz Model



| Model | Frequency | Gain | Radome* |
|---------|-----------|--------|---------|
| RD-2G24 | 2 GHz | 24 dBi | RAD-2RD |

The 2.4 GHz frequency band is free to use, worldwide; however, it is extremely crowded due to interference from other wireless devices. Also, there are only three non-overlapping, 20 MHz channels available for use.

3 GHz Model



| Model | Frequency | Gain | Radome* |
|---------|-----------|--------|---------|
| RD-3G26 | 3 GHz | 26 dBi | RAD-2RD |

The 3 or 3.65 GHz frequency band is noise-free in most areas; however, its use requires a license. There may be additional restrictions on its use depending on local country regulations.

5 GHz Models



| Model | Frequency | Gain | Radome* |
|---------|-----------|--------|---------|
| RD-5G30 | 5 GHz | 30 dBi | RAD-2RD |

The 5 GHz frequency band is free to use, worldwide, offers plentiful spectrum, and works well for long-distance links. However, 5 GHz signals have more difficulty passing through obstacles than lower-frequency signals.



| Model | Frequency | Gain | Radome* |
|------------|-----------|--------|--------------|
| RD-5G30-LW | 5 GHz | 30 dBi | ISO-BEAM-620 |

The RD-5G30-LW features the same gain as the RD-5G30 and adds the following advantages:

- Lightweight yet robust components lessen the load.
- The extended depth of the dish reflector rejects noise interference in co-location deployments.
- The design of the mounting bracket allows for ease of installation on a pole or tower.



| Model | Frequency | Gain | Radome* |
|---------|-----------|--------|---------|
| RD-5G34 | 5 GHz | 34 dBi | RAD-3RD |

The RD-5G34 offers 34 dBi of gain in a 1050-mm diameter size.

* A radome is available as an optional accessory.

RocketDish™ Radome

Models: RAD-2RD, RAD-3RD



| Model | RD-2G24 | RD-3G26 | RD-5G30 | RD-5G30-LW | RD-5G34 |
|---------|---------|---------|---------|------------|---------|
| RAD-2RD | ✓ | ✓ | ✓ | | |
| RAD-3RD | | | | | ✓ |

A protective radome is available as an optional accessory for the RD-2G24, RD-3G26, RD-5G30, and RD-5G34. The RAD-2RD or RAD-3RD provides the following advantages:

- Reduces wind load
- Protects antenna surfaces from nature’s harshest elements
- Conceals antenna feed equipment from public view

airFiber® X Conversion Kit

Model: AF-5G-OMT-S45



| Model | RD-2G24 | RD-3G26 | RD-5G30 | RD-5G30-LW | RD-5G34 |
|---------------|---------|---------|---------|------------|---------|
| AF-5G-OMT-S45 | | | ✓ | | ✓ |

The 5 GHz RocketDish to airFiber® Antenna Conversion Kit converts the RocketDish RD-5G30 or RD-5G34 antenna for use with the airFiber AF-5X radio.

RocketDish™ LW Accessories IsoBeam™

Model: ISO-BEAM-620



The IsoBeam™ is an isolator radome that is available as an optional accessory for the RD-5G30-LW and two PowerBeam™ models:

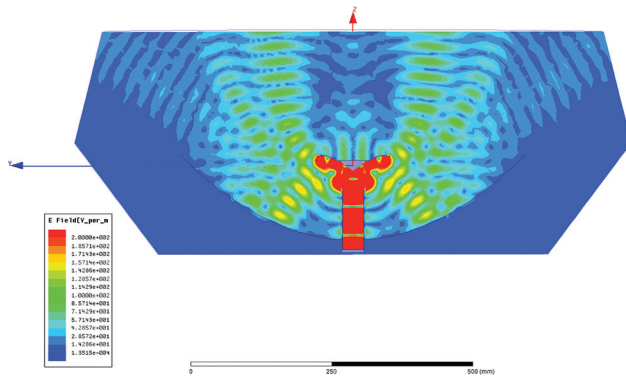
- PBE-5AC-620
- PBE-M5-620

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.

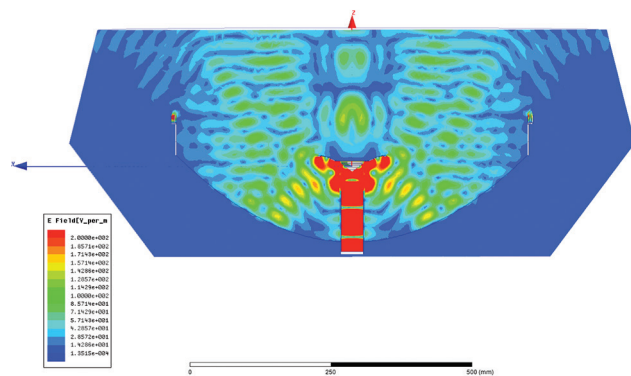
Both near-field plots are displayed in watts and use a linear scale. The strength of the electromagnetic field is color-coded:

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

Without IsoBeam

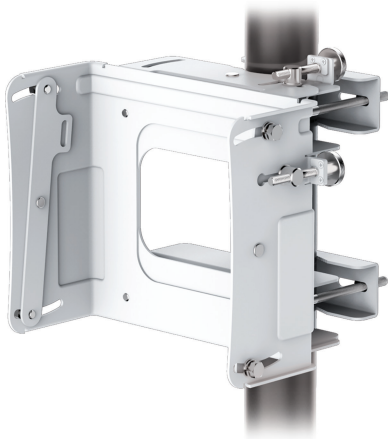


With IsoBeam



Precision Alignment Kit

Model: PAK-620



The Precision Alignment Kit is available as an optional accessory for the RD-5G30-LW. 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 antennas:

- airFiber® AF-5G30-S45
- PowerBeam PBE-5AC-620
- PowerBeam PBE-M5-620

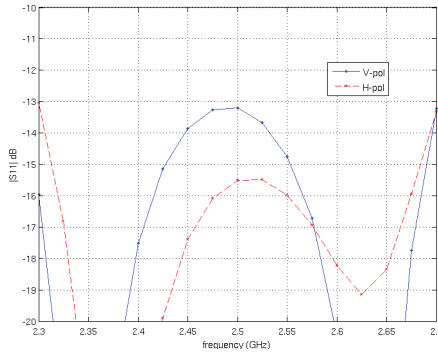
Specifications

| Antenna Characteristics | | | | | |
|-------------------------|---|--|--|---|--|
| Model | RD-2G24 | RD-3G26 | RD-5G30 | RD-5G30-LW | RD-5G34 |
| Dimensions* | 650 x 650 x 295 mm (25.6 x 25.6 x 11.61") | 650 x 650 x 300 mm (25.6 x 25.6 x 11.81") | 650 x 650 x 304 mm (25.6 x 25.6 x 11.97") | 650 x 650 x 386 mm (25.6 x 25.6 x 15.2") | 1050 x 1050 x 421 mm (41.34 x 41.34 x 16.57") |
| Weight** | 9.8 kg (21.61 lb) | 9.8 kg (21.61 lb) | 9.8 kg (21.61 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 - 5.8 GHz | 5.1 - 5.9 GHz | 5.1 - 5.8 GHz |
| Gain | 24 dBi | 26 dBi | 30 dBi | 30 dBi | 34 dBi |
| HPOL Beamwidth | 6.6° (3 dB) | 7° (3 dB) | 5° (3 dB) | 5.8° (3 dB) | 3° (3 dB) |
| VPOL Beamwidth | 6.8° (3 dB) | 7° (3 dB) | 5° (3 dB) | 5.8° (3 dB) | 3° (3 dB) |
| F/B Ratio | 28 dB | 33 dB | 34 dB | 30 dB | 42 dB |
| Max. VSWR | 1.6:1 | 1.4:1 | 1.4:1 | 1.6:1 | 1.4:1 |
| Wind Loading | 787 N @ 200 km/h (177 lbf @ 125 mph) | | | 790 N @ 200 km/h (178 lbf @ 125 mph) | 1,779 N @ 200 km/h (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, Rocket Bracket, and Weatherproof RF Connectors Included | | | | |

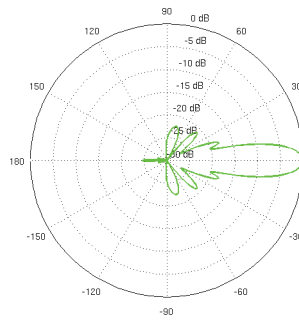
* Dimensions exclude pole mount and Rocket (Rocket sold separately)
 ** Weight includes pole mount and excludes Rocket (Rocket sold separately)

RD-2G-24 Antenna Information

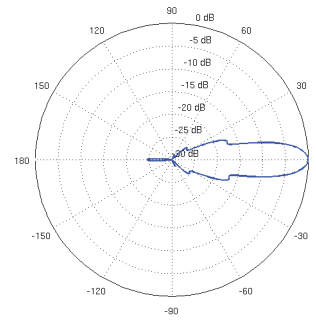
Return Loss



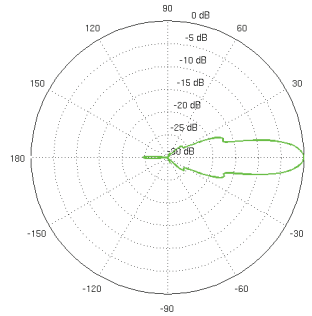
Vertical Azimuth



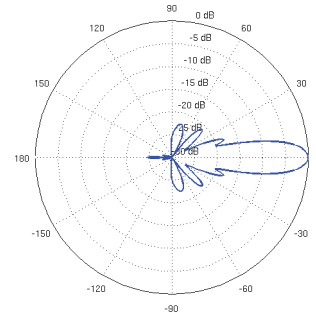
Vertical Elevation



Horizontal Azimuth

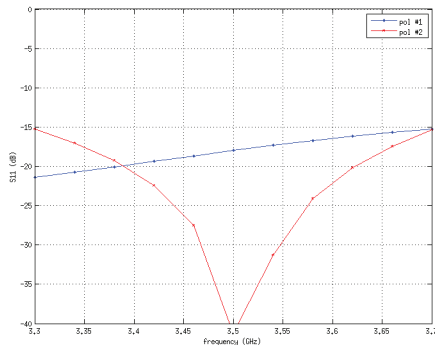


Horizontal Elevation

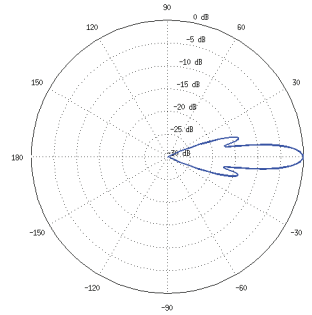


RD-3G26 Antenna Information

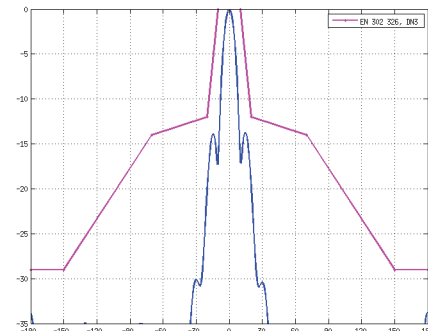
Return Loss



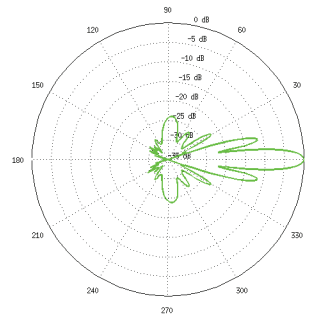
E-Plane, 3550 MHz



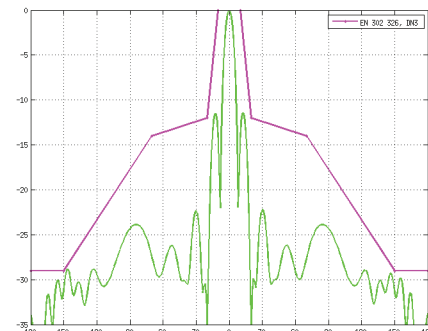
E-Plane Specs



H-Plane, 3550 MHz

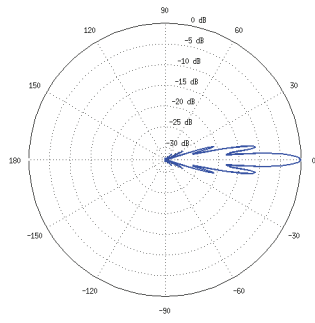


H-Plane Specs

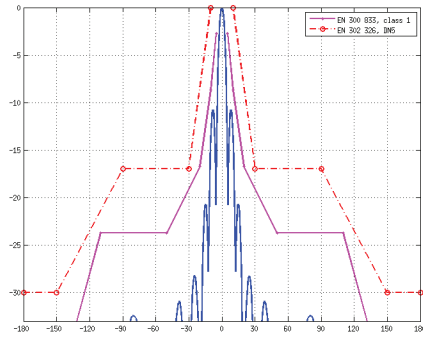


RD-5G30 Antenna Information

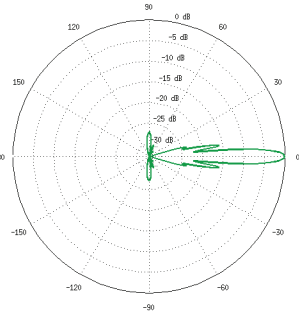
E-Plane, 5500 MHz



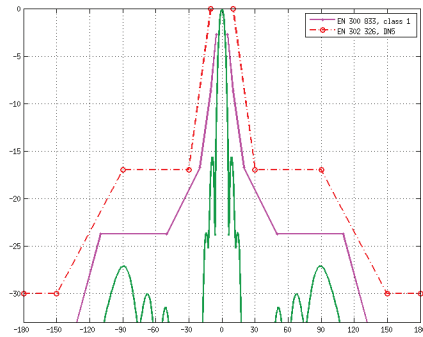
E-Plane Specs



H-Plane, 5500 MHz

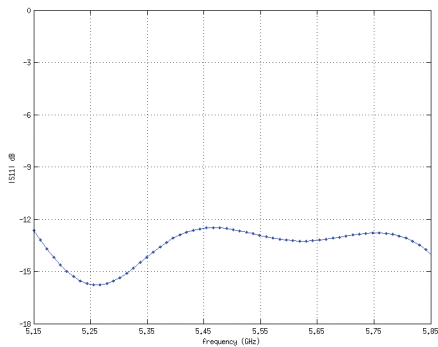


H-Plane Specs

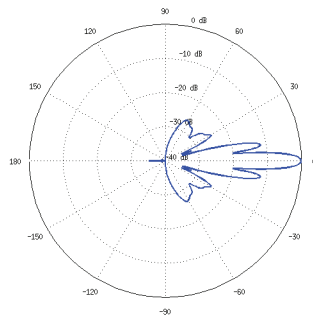


RD-5G30-LW Antenna Information

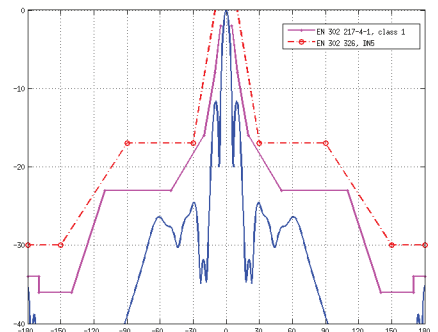
Return Loss



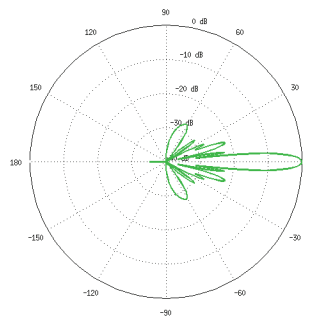
E-Plane, 5500 MHz



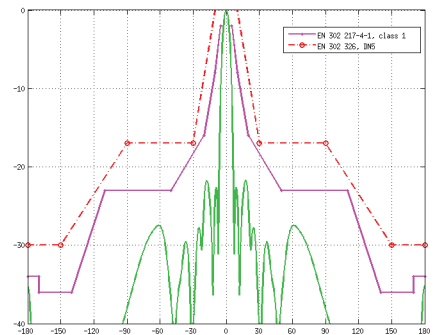
E-Plane Specs



H-Plane, 5500 MHz

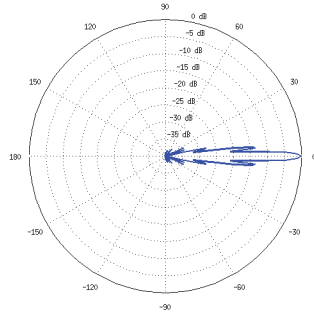


H-Plane Specs

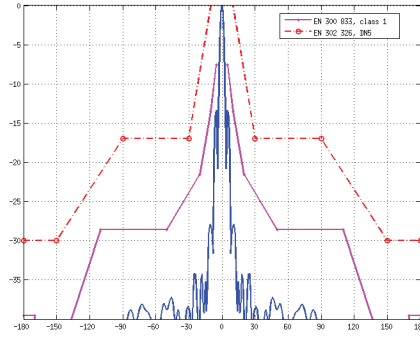


RD-5G34 Antenna Information

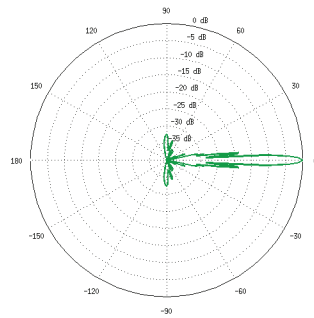
E-Plane, 5500 MHz



E-Plane Specs



H-Plane, 5500 MHz



H-Plane Specs

