



# 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

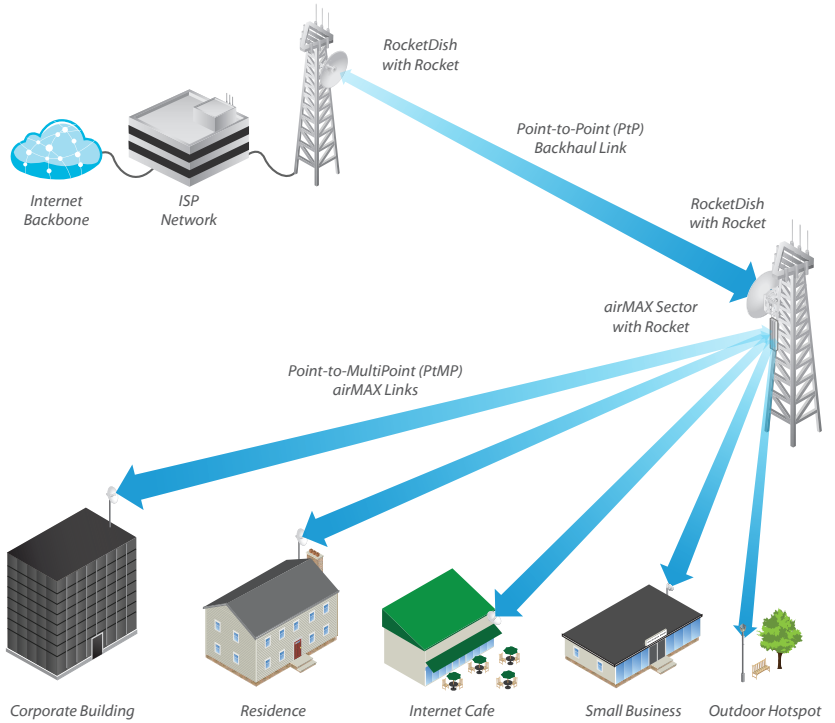
Incorporating a dish reflector design for excellent beam directivity, the RocketDish antennas feature robust mechanical design using industrial-strength hardware for outdoor application use.

## 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

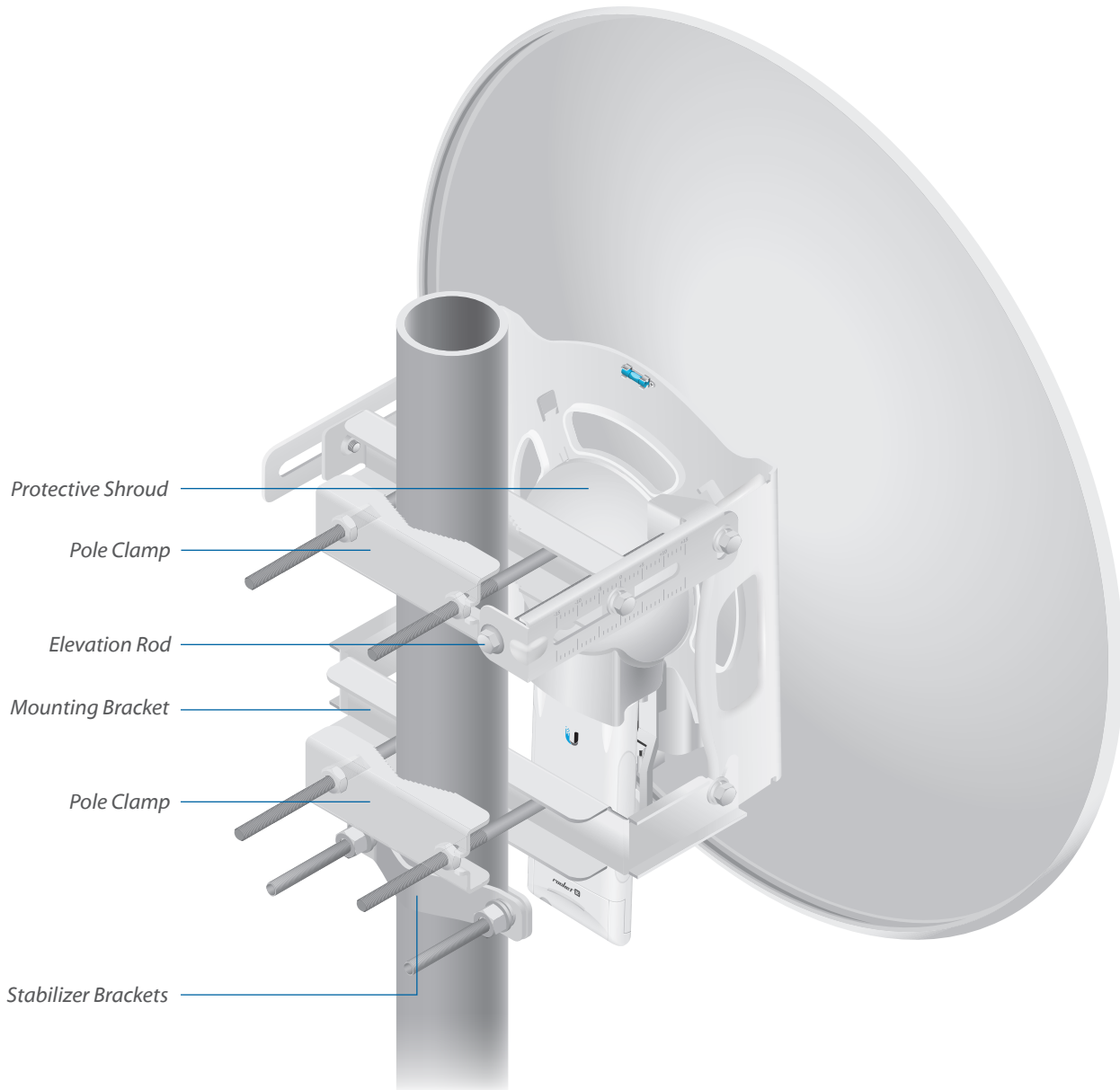
# Hardware Overview

## 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

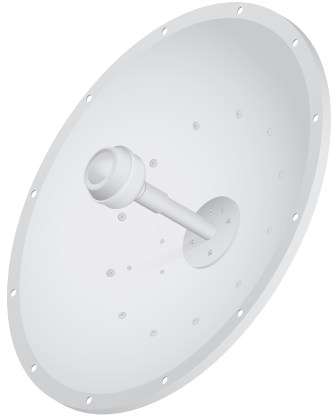
- **Protective shroud** The shroud\* protects the cables and connectors from nature's elements.
- **Mounting hardware of the RD-5G30-LW** Made of galvanized steel that is powder-coated for superior corrosion resistance.
- **Fasteners of the RD-5G30-LW** GEOMET-coated for improved corrosion resistance 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     | 18 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. Its innovative RF-choke perimeter delivers breakthrough isolation performance in co-location deployments, and the integrated radome provides additional advantages:

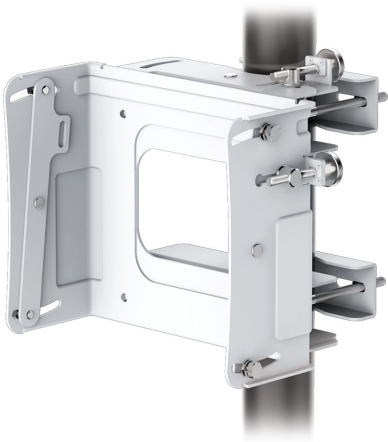
- Reduces wind load
- Protects antenna surfaces from nature's harshest elements
- Conceals antenna feed equipment from public view

The IsoBeam is also compatible with other dish antennas:

- PowerBeam™ PBE-5AC-620
- PowerBeam PBE-M5-620

### 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

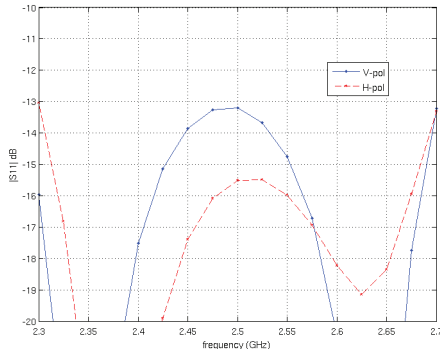
| Antenna Characteristics |   |  |  |   |  |
|-------------------------|---|--|--|---|--|
| Model                   | RD-2G24   | RD-3G26                                      | RD-5G30                                      | RD-5G30-LW                                  | RD-5G34  |
| Dimensions*             | 650 x 650 x 295 mm<br>(25.6 x 25.6 x 11.61")                                  | 650 x 650 x 300 mm<br>(25.6 x 25.6 x 11.81") | 650 x 650 x 304 mm<br>(25.6 x 25.6 x 11.97") | 650 x 650 x 386 mm<br>(25.6 x 25.6 x 15.2") | 1050 x 1050 x 421 mm<br>(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          | 3.8° (RX Dish)<br>6.6° (TX Dish)  | 7° (6 dB)                                    | 5° (3 dB)                                    | 5.8° (3 dB)                                 | 3° (3 dB)  |
| VPOL Beamwidth          | 3.8° (RX Dish)<br>6.6° (TX Dish)  | 7° (6 dB)                                    | 5° (6 dB)                                    | 5.8° (3 dB)                                 | 3° (6 dB)  |
| F/B Ratio               | 50 dB (RX Dish)<br>65 dB (TX Dish)  | 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<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, 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)

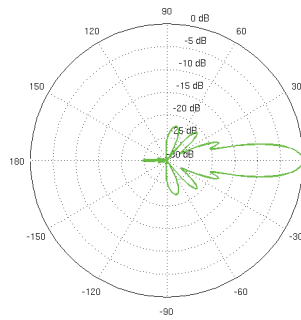


## RD-2G-24 Antenna Information

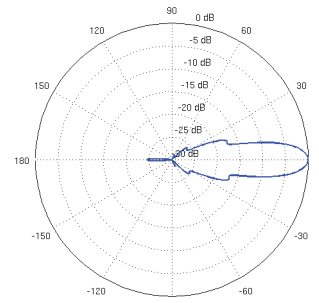
Return Loss



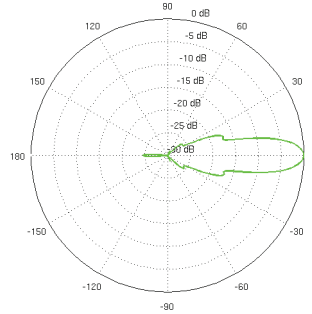
Vertical Azimuth



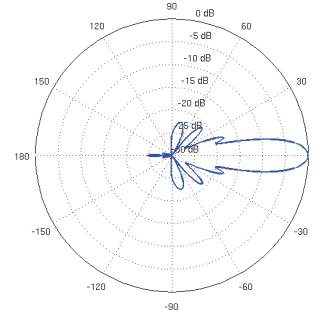
Vertical Elevation



Horizontal Azimuth

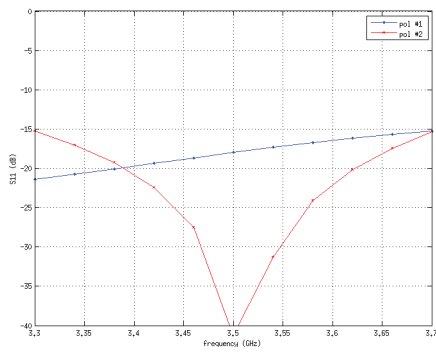


Horizontal Elevation

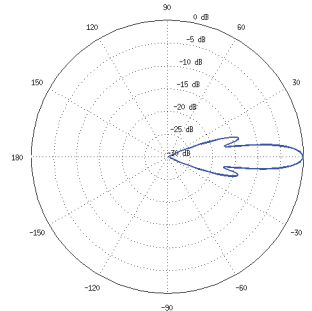


## RD-3G26 Antenna Information

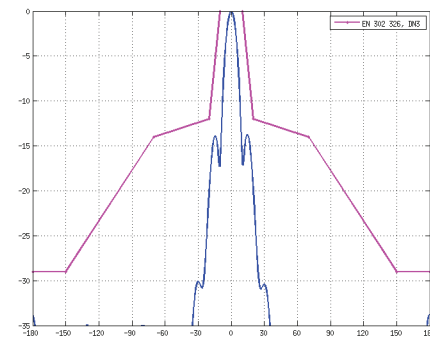
Return Loss



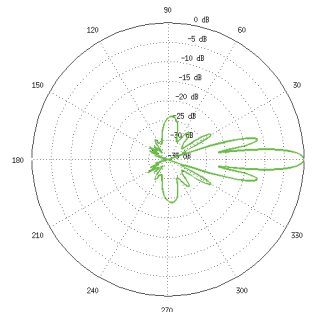
E-Plane, 3550 MHz



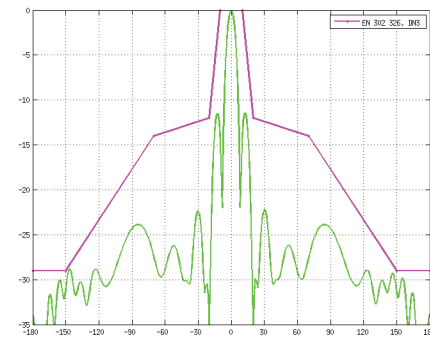
E-Plane Specs



H-Plane, 3550 MHz

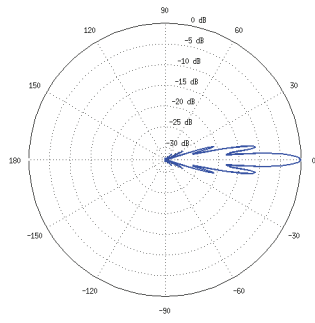


H-Plane Specs

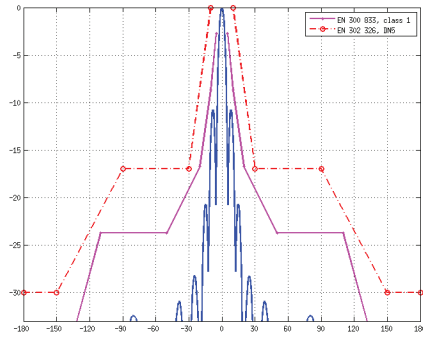


## RD-5G30 Antenna Information

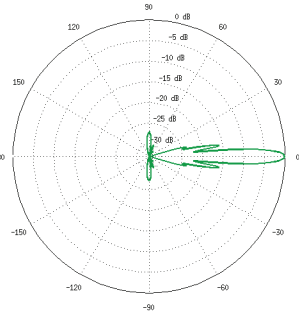
E-Plane, 5500 MHz



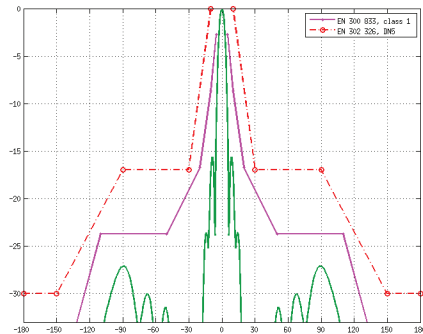
E-Plane Specs



H-Plane, 5500 MHz

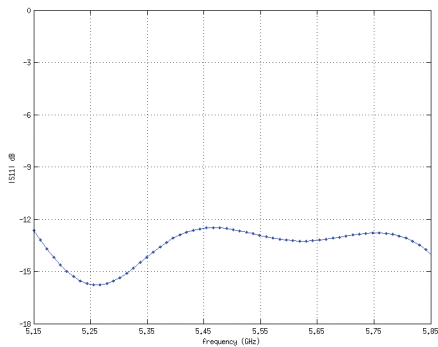


H-Plane Specs

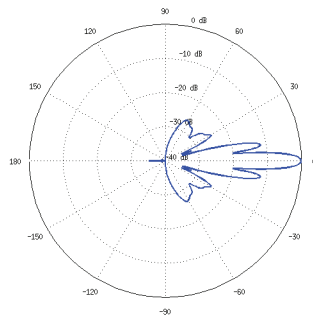


## RD-5G30-LW Antenna Information

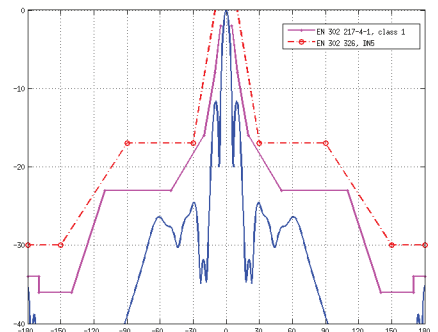
Return Loss



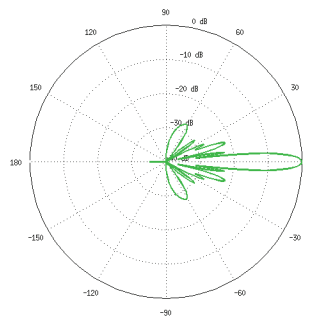
E-Plane, 5500 MHz



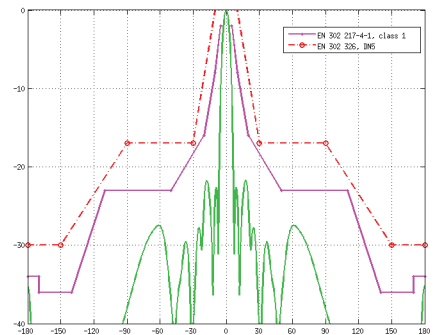
E-Plane Specs



H-Plane, 5500 MHz

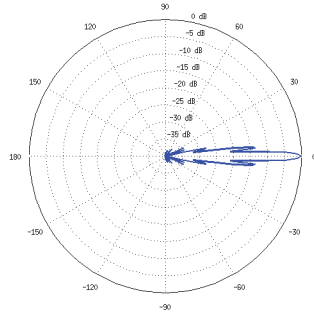


H-Plane Specs

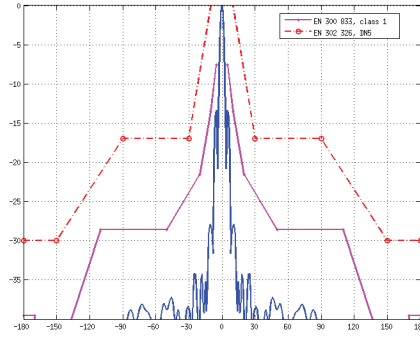


# RD-5G34 Antenna Information

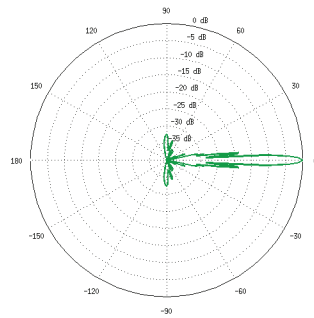
E-Plane, 5500 MHz



E-Plane Specs



H-Plane, 5500 MHz



H-Plane Specs

