



Specially developed for EMC/EMI testing. This dual-polarized antenna operates from 1 GHz up to 18 GHz and, with a proper 90deg hybrid coupler, can obtain circular polarization (LHCP or RHCP). Thanks to radome, this antenna is suitable for outdoor applications. It is equipped with the standard L-shape holder, hermetically sealed, and a Gore air vent.

Cloned antenna series are available through [AU Technology](#), which guarantees constant parameters.

Manufactured with RF SPIN's [SPM Technology](#) to achieve the best mechanical and radio parameters.

See the equivalent naked antenna [QRH18](#)

## Features and Specifications



### Technical Performance

- Wide bandwidth
- Low return loss
- Individual calibration
- Covers 5G frequency band



### Design and Surface Treatment

- Protective water-resistant case
- Corrosion-resistant coating
- Includes standard mount



### Manufacturing Technology

- Manufactured using a high grade aluminum alloy
- High quality SMA type coaxial connector



### Product Packaging Includes

- Antenna

## Product Parameters

### PRODUCT IDENTIFICATION

Product Name	<b>QRH18R</b>
Product Category	<b>Quad Ridged Horn Outdoor Antenna</b>

### ELECTRICAL SPECIFICATIONS

Frequency Range	<b>1 GHz – 18 GHz</b>
VSWR (max.)	<b>3.5</b>
VSWR (avg.)	<b>1.8</b>
Impedance	<b>50 Ohm</b>
Connector	<b>SMA (female)</b>
Power (CW / Peak)	<b>100 W / 170 W</b>
Antenna Factor	<b>23 – 43 dB/m</b>
Port Isolation	<b>-25 dB</b>
Polarization	<b>Dual Linear, Circular (with hybrid)</b>

### PHYSICAL SPECIFICATIONS

Width	<b>360 mm (14.173 in)</b>
Height	<b>293 mm (11.535 in)</b>
Depth	<b>360 mm (14.173 in)</b>
Weight	<b>2.7 kg (5.952 lb)</b>

### OPERATING CONDITIONS

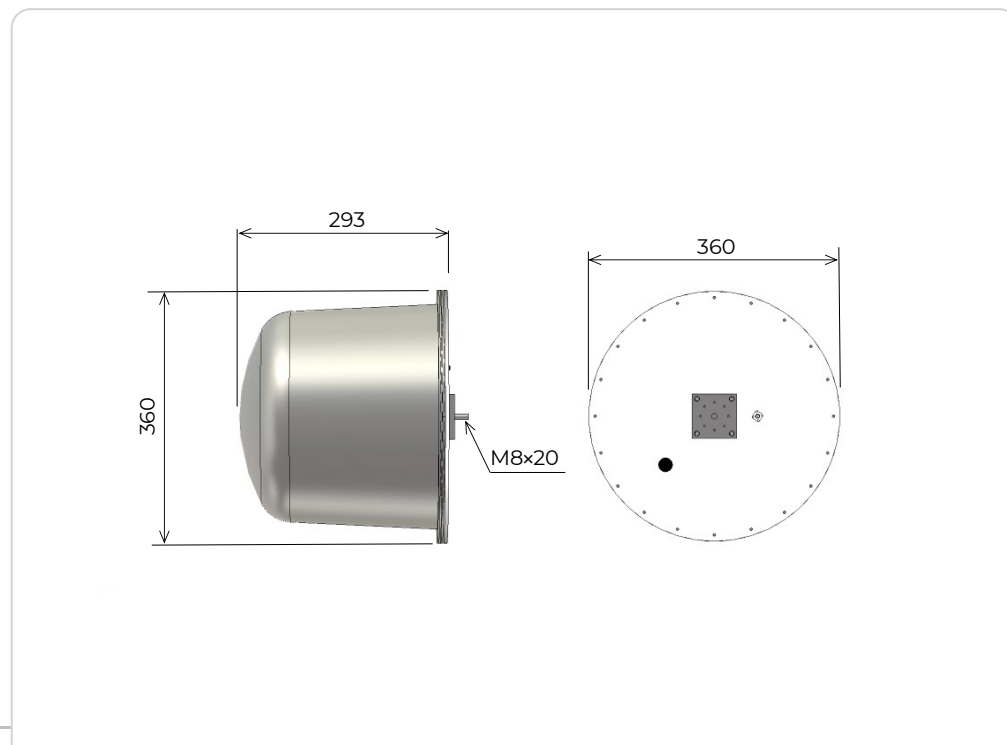
Rated Temperature Range	<b>-10°C – +50°C</b>
Storage Temperature Range	<b>-20°C – +70°C</b>

### MOUNTING FLANGE

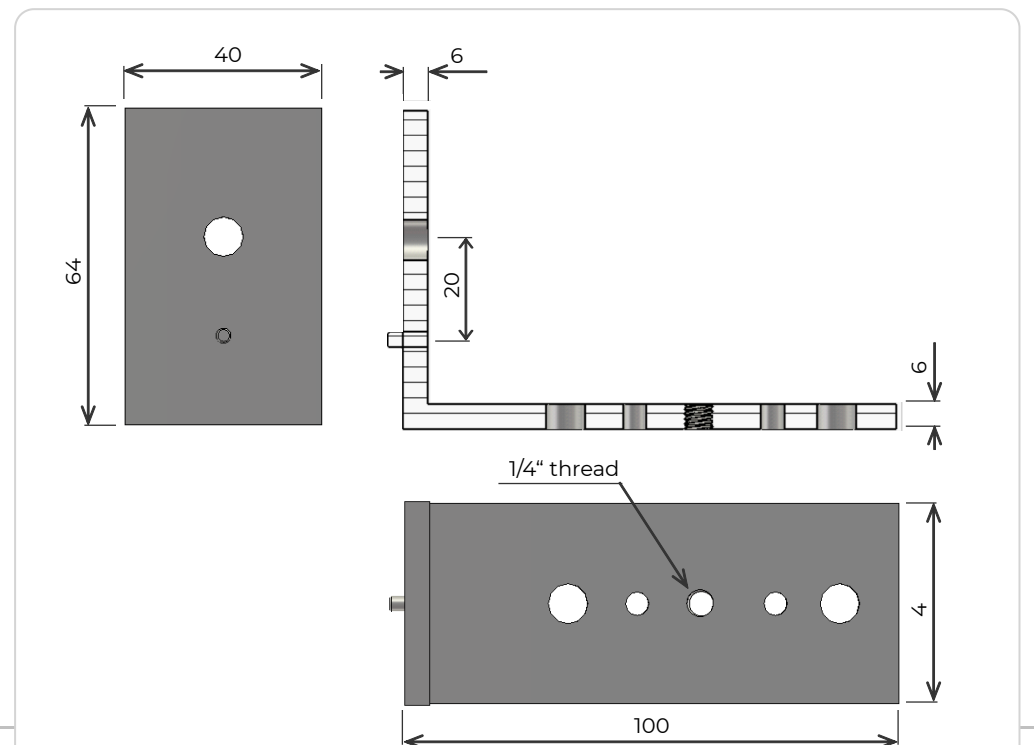
Mounting	<b>Universal antenna mount</b>
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## Mechanical Drawings

Antenna



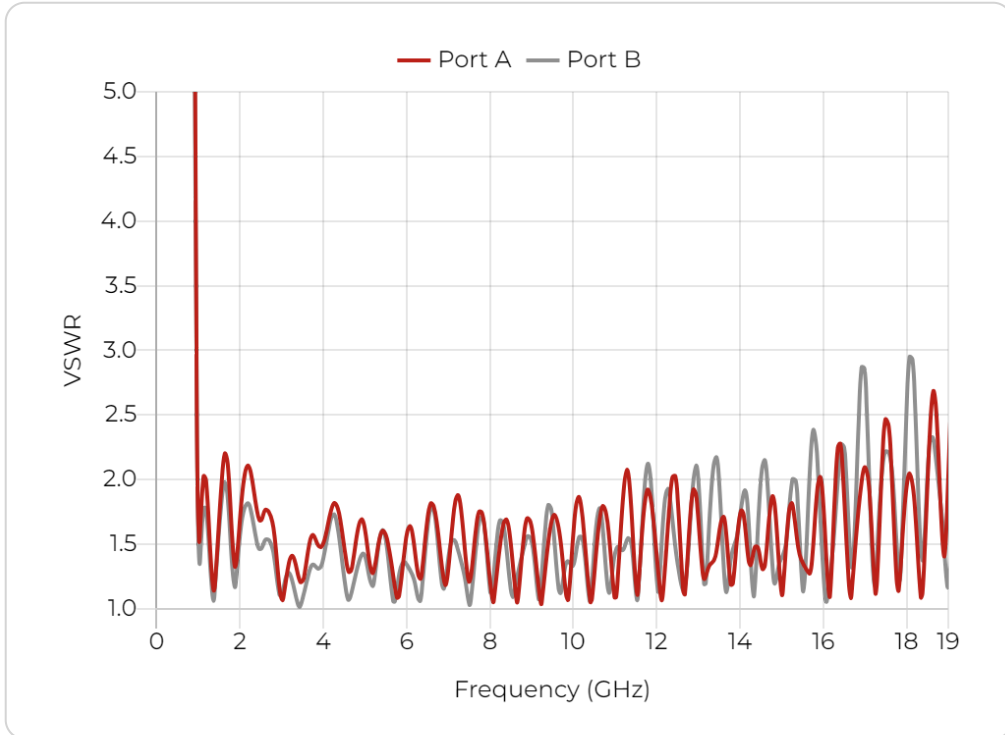
Mounting flange



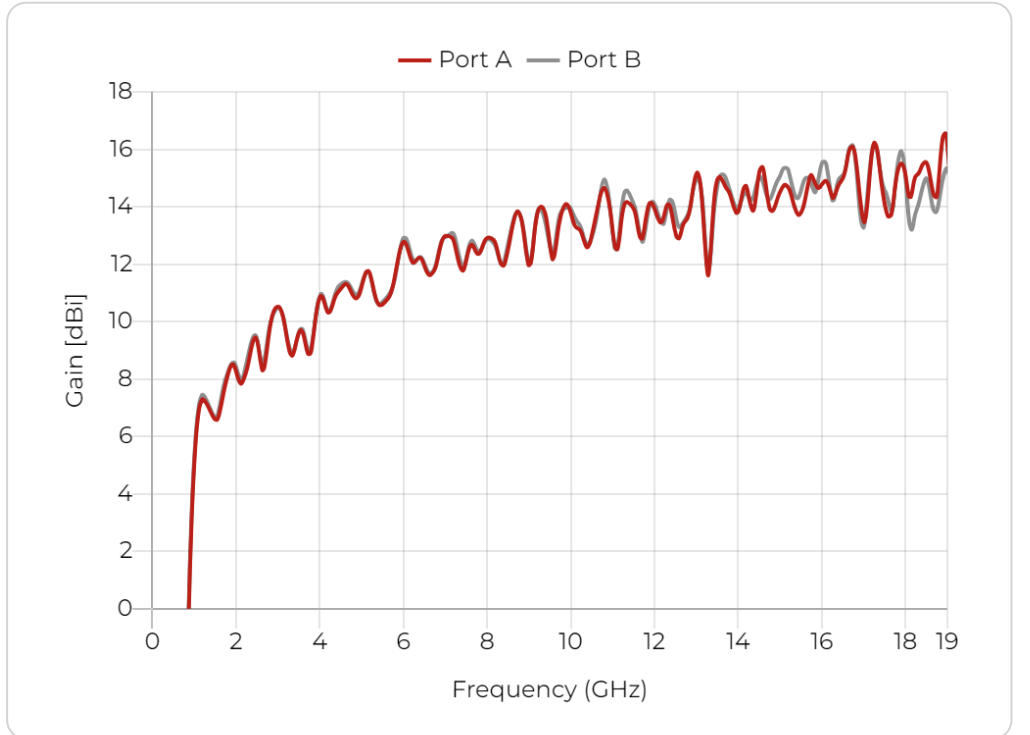
# Parameters and Performance

## Typical parameters

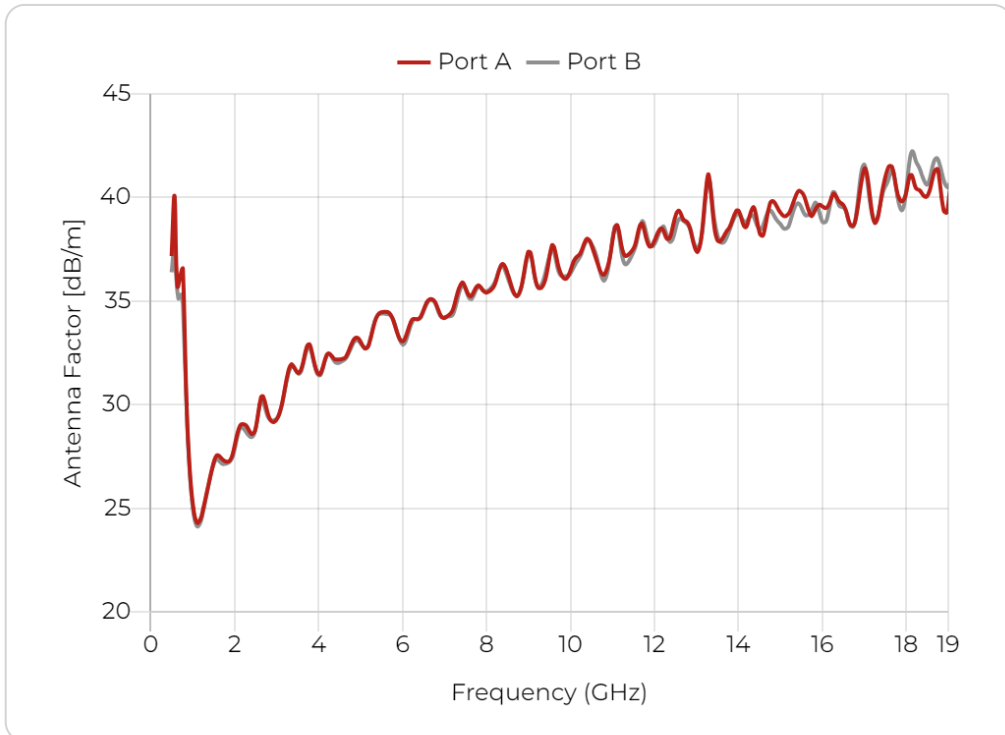
VSWR



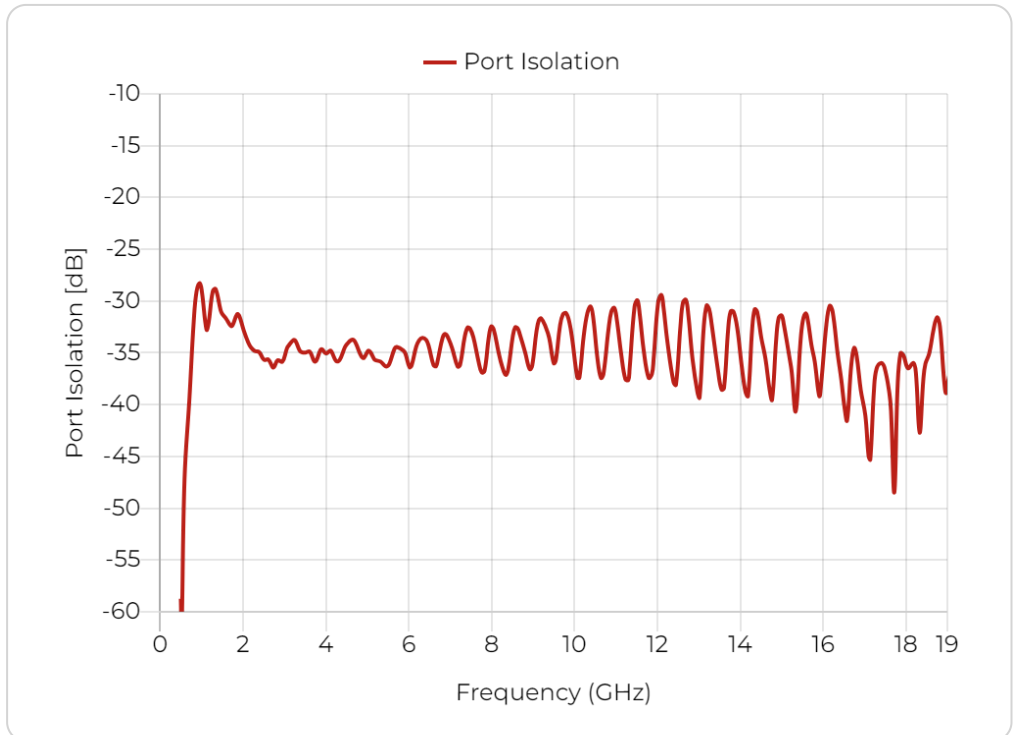
Gain



Antenna Factor

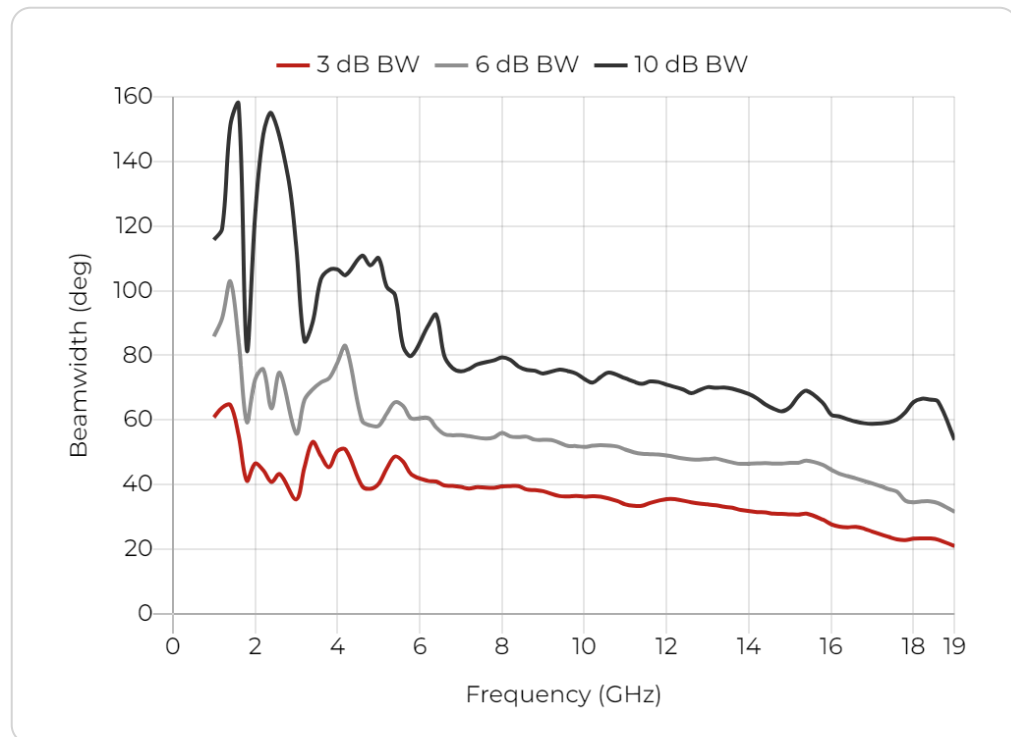


Port Isolation

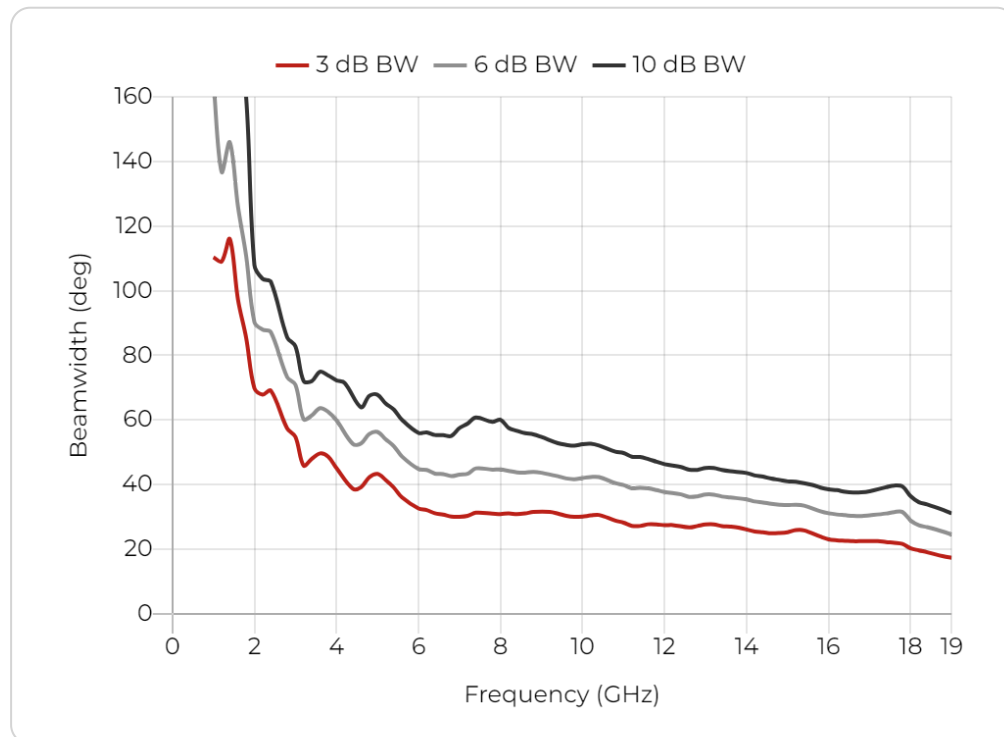


# Beamwidth

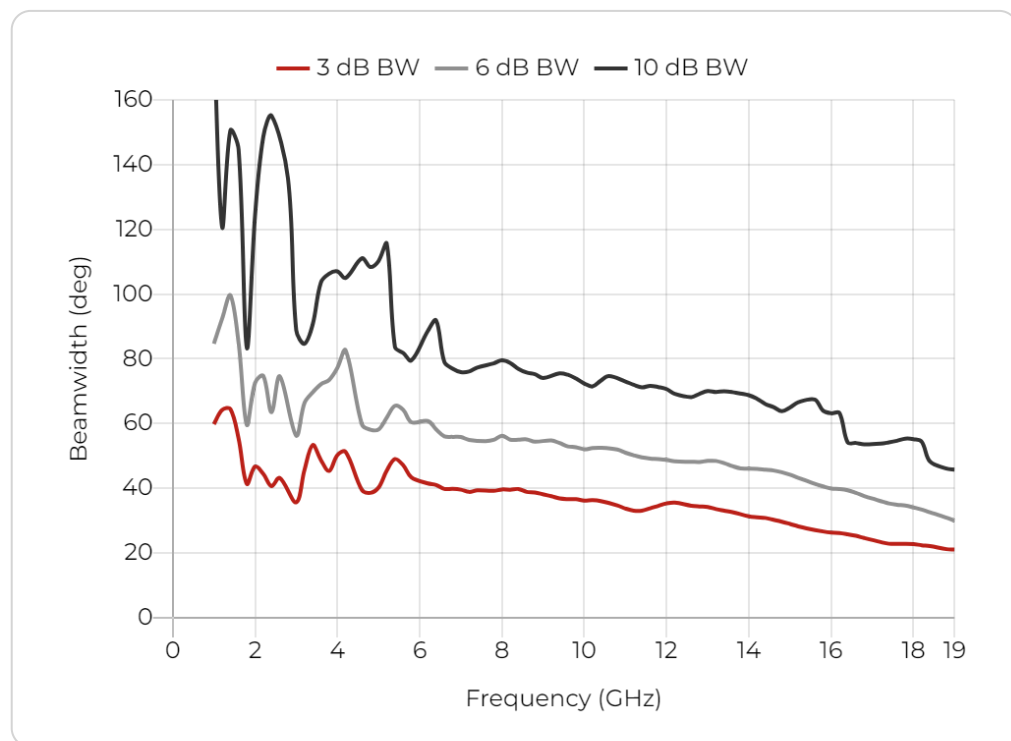
Port A, E plane



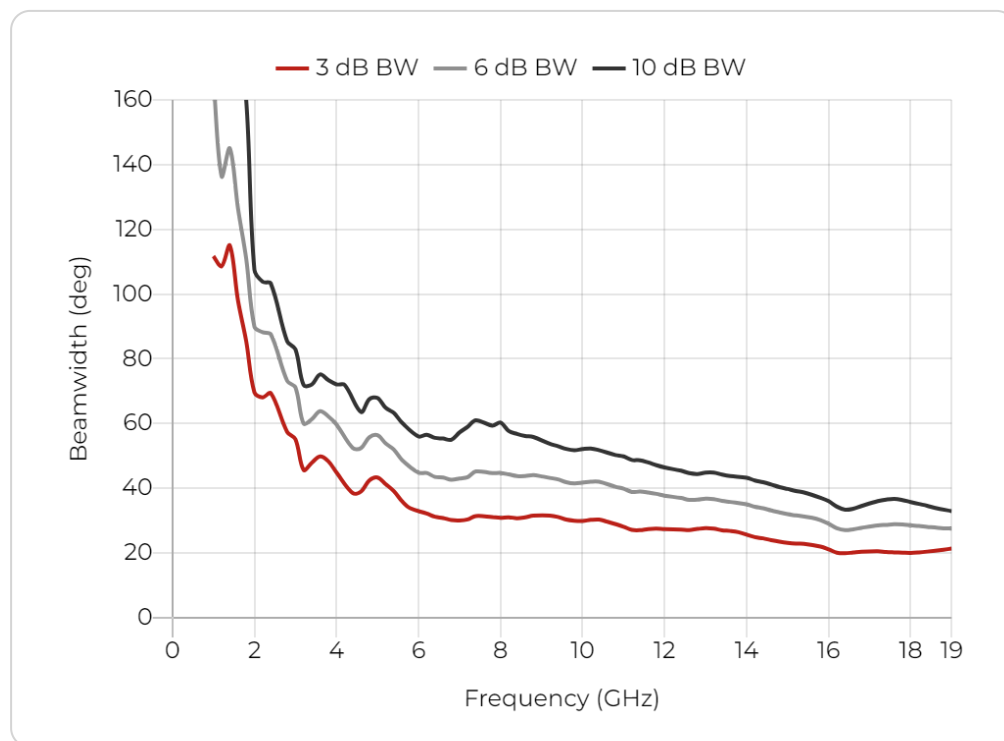
Port A, H plane



Port B, E plane

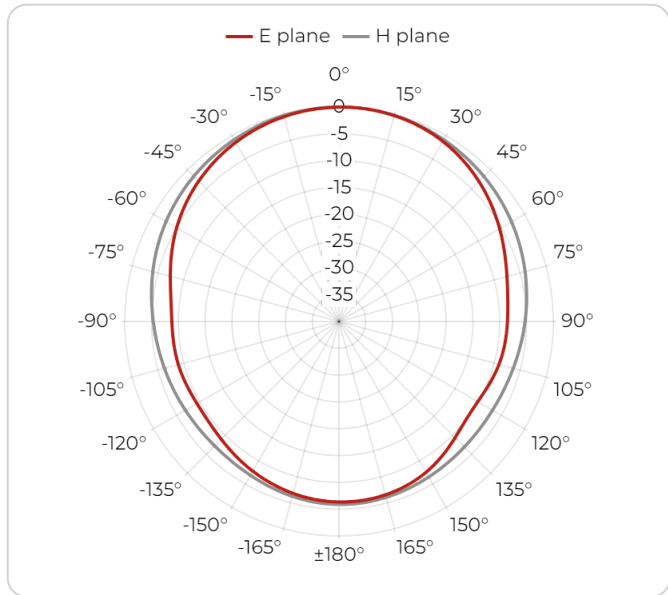


Port B, H plane

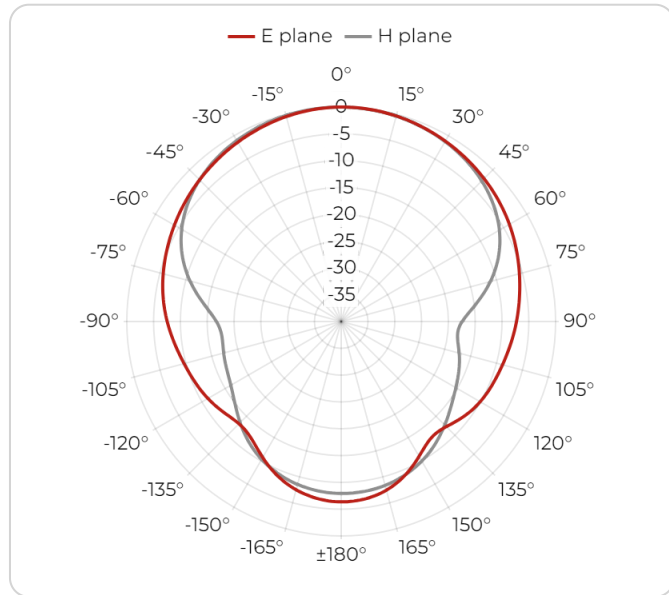


# Radiation Patterns - Port A

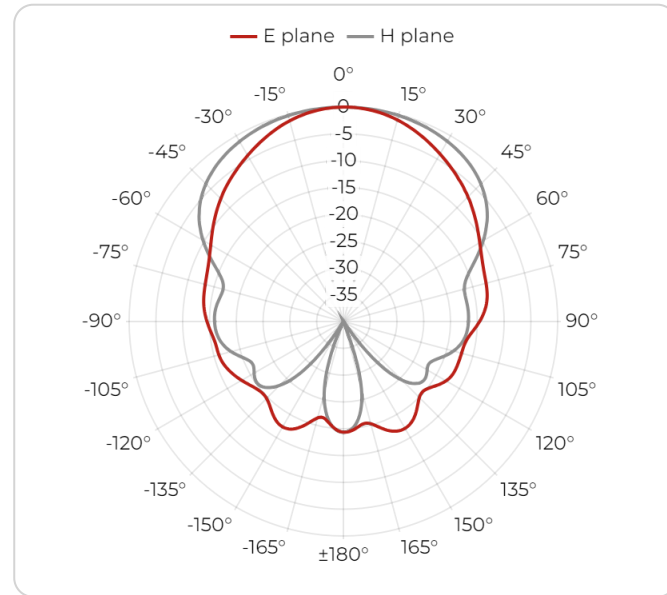
0.75 GHz



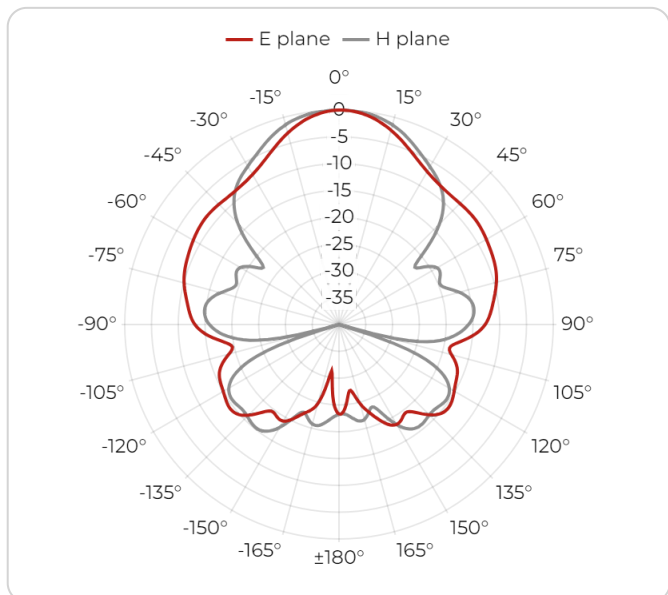
1 GHz



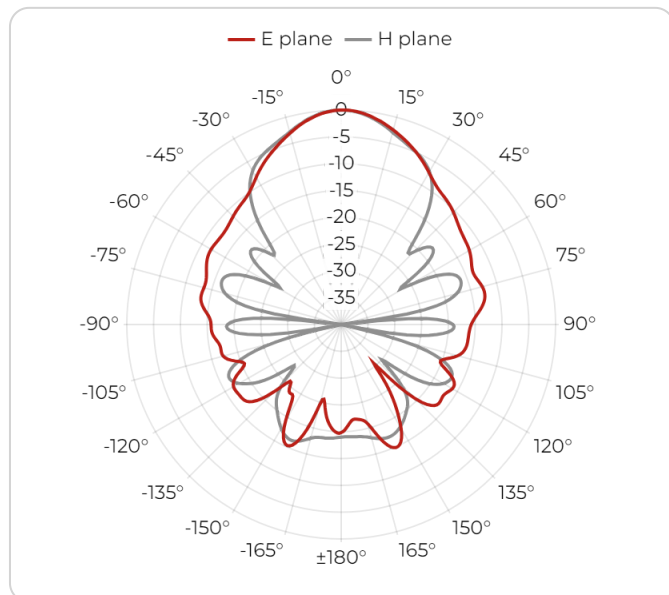
2 GHz



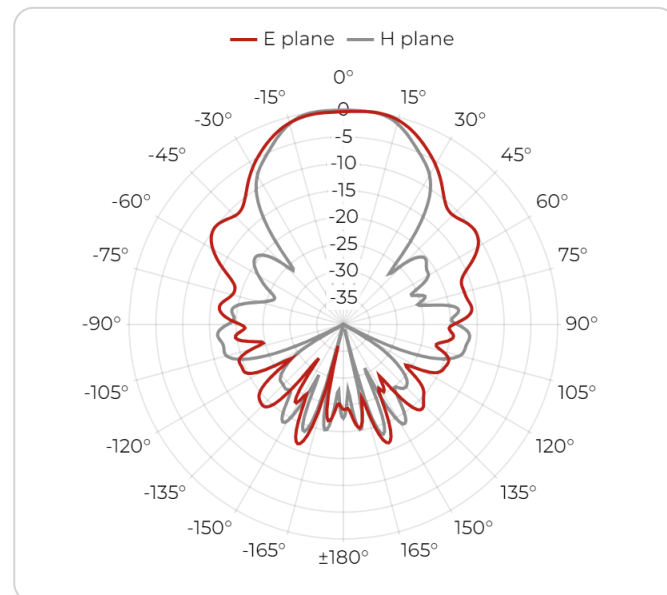
3 GHz



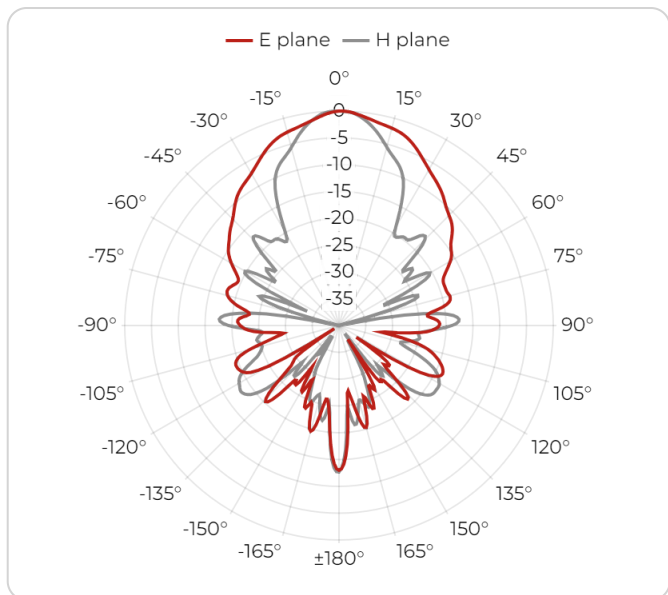
4 GHz



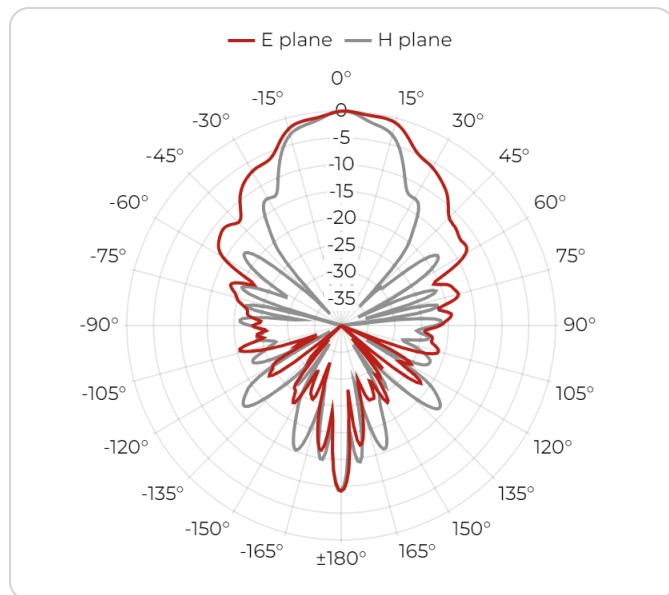
5 GHz



7 GHz



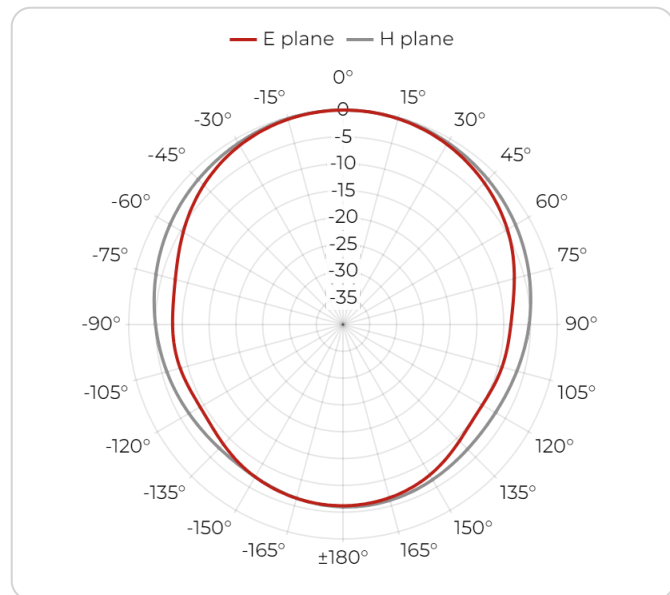
8 GHz



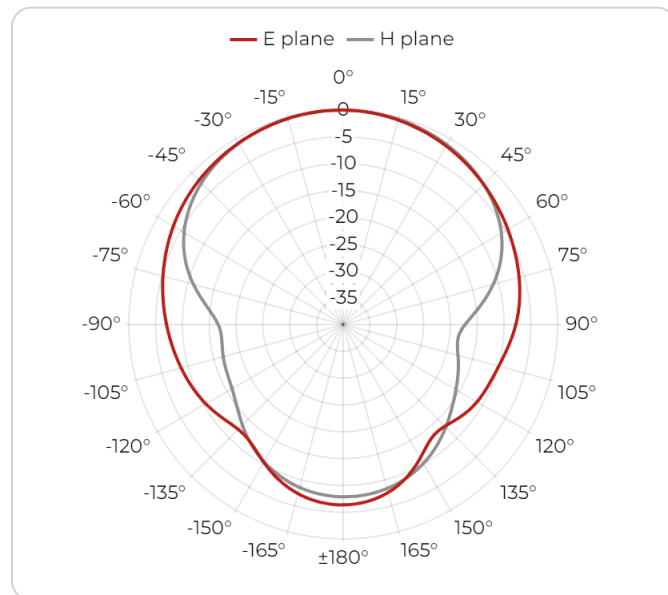


# Radiation Patterns - Port B

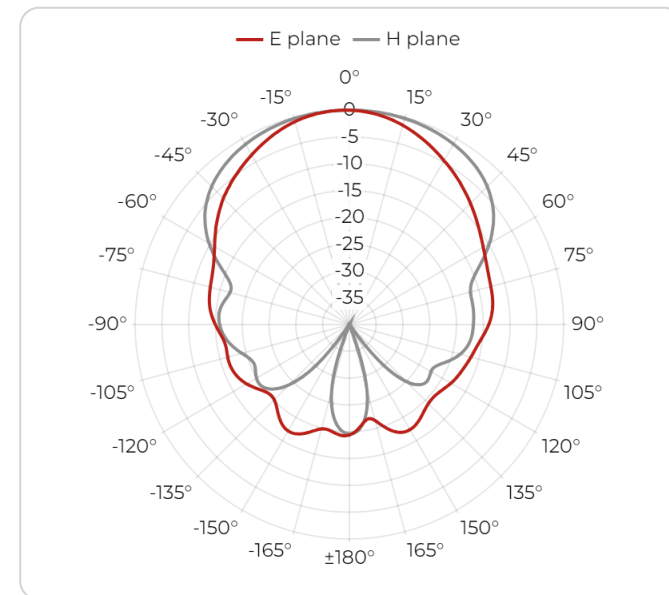
Port B, 0.75 GHz



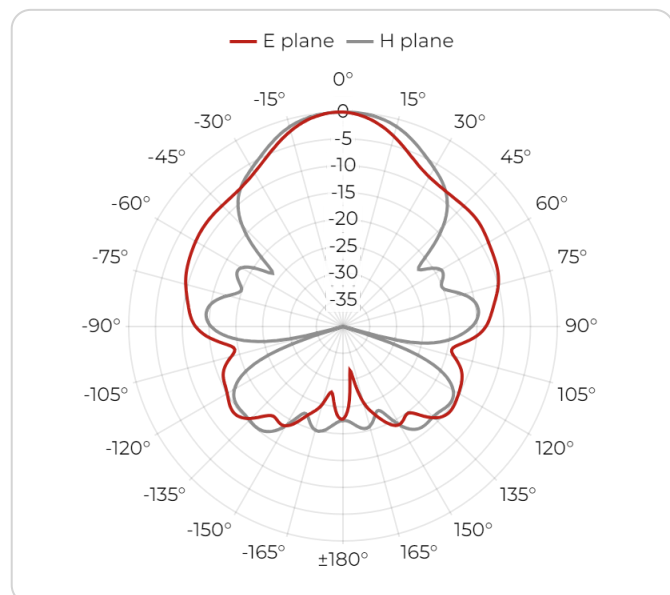
Port B, 1 GHz



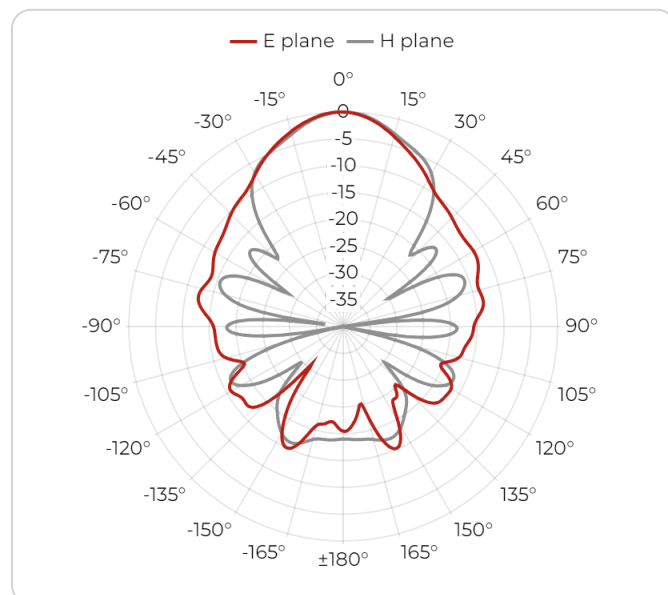
Port B, 2 GHz



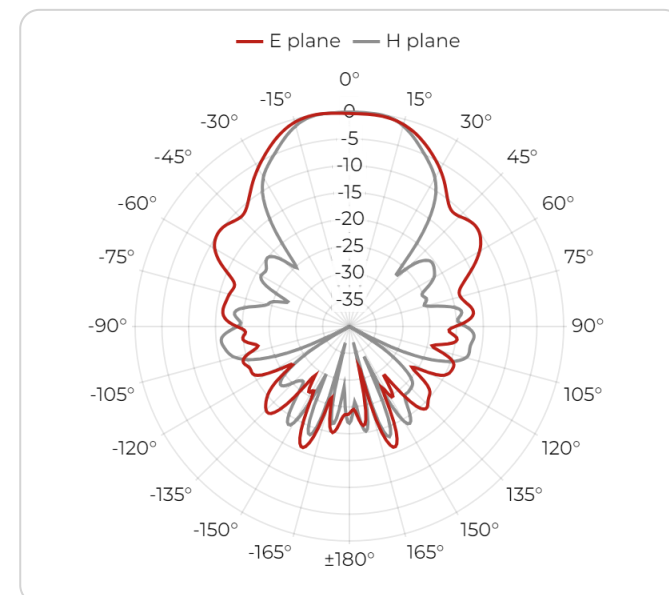
Port B, 3 GHz



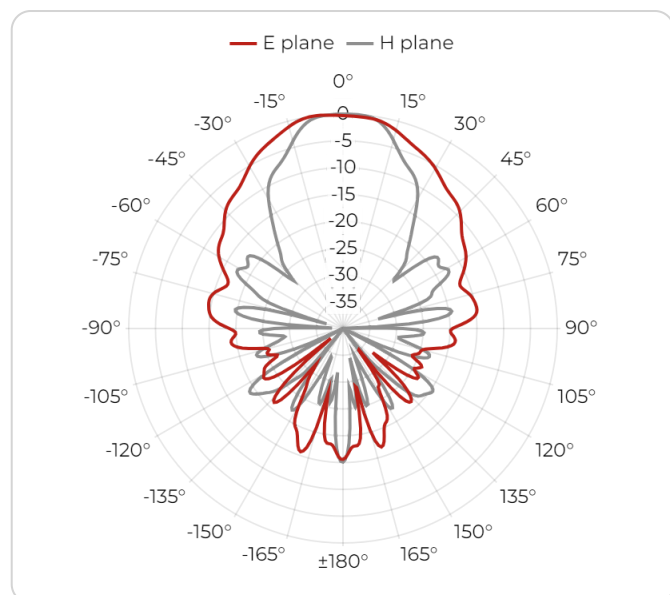
Port B, 4 GHz



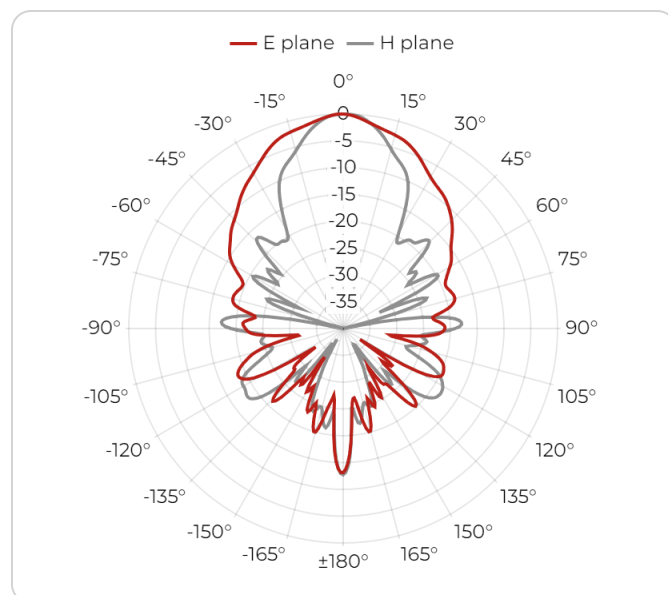
Port B, 5 GHz



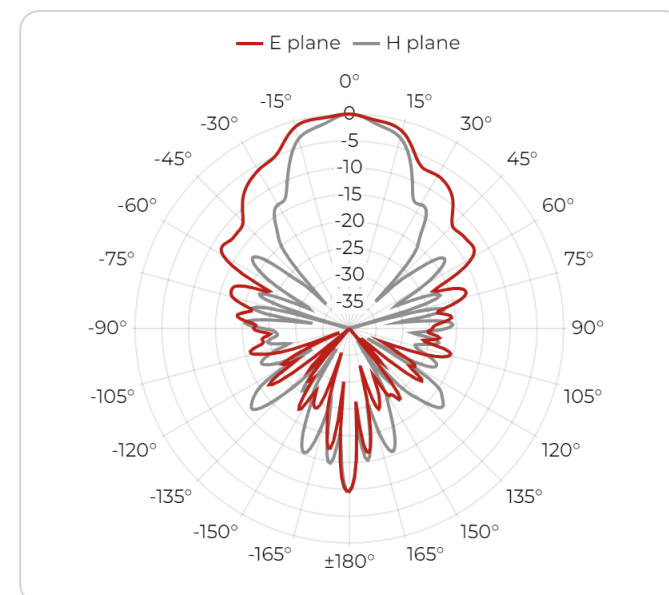
Port B, 6 GHz



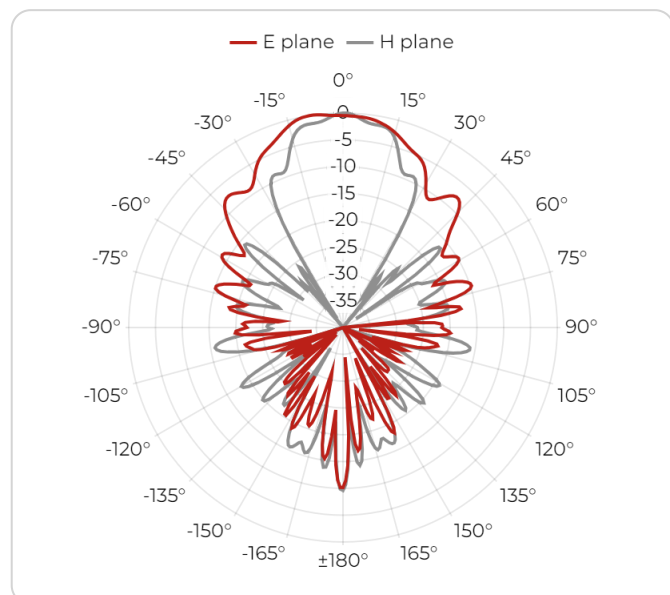
Port B, 7 GHz



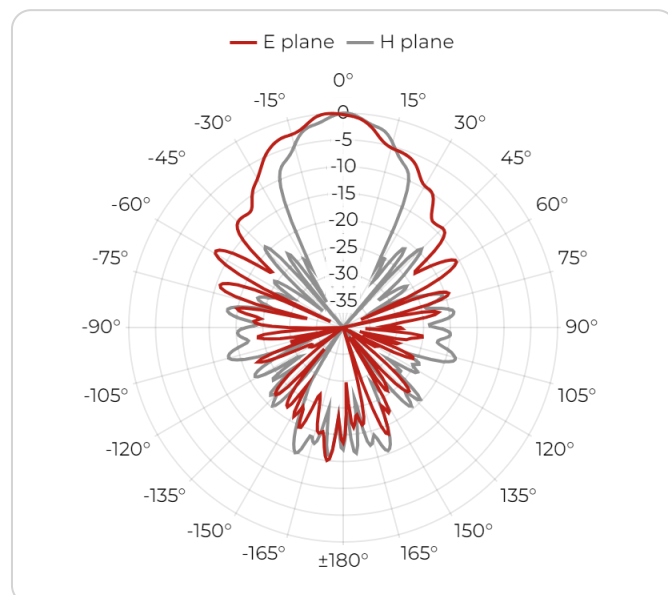
Port B, 8 GHz



Port B, 9 GHz



Port B, 10 GHz



## Packaging and Accessories

### What's in a box

- QRH18R Antenna
- Antenna specific mount adapter with ¼ inch inner thread
- Factory calibration certificate
- Full calibration report of each antenna
- QR code accessing online portal
- Calibration test dataset (available online)

### Accessories

- Standard mounting flange

### Optional Accessories

- [AHS22-10 Antenna Fixture](#)

### Custom services

- Custom mounting solutions
- Custom calibration data

## Manufacturer Information

### About Datasheet

Product information available also online at  
<https://www.rfspin.com/product/grh18r/>

*Data and specifications subject to change without notice.*

*Datasheet revision 02-2024.*

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