

SAR-2309-06-S2

WR-06 Pyramidal Horn Antenna, 23 dBi Gain

SAR-2309-06-S2 is a D-band pyramidal horn antenna that operates from 110 to 170 GHz. The antenna offers 23 dBi nominal gain and a typical half power beamwidth of 11 degrees on the E-plane and 12 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-06 waveguide with UG-387/U-M anti-cocking flange.



Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|---------|---------|---------|
| Frequency | 110 GHz | | 170 GHz |
| Gain | | 23 dBi | |
| Polarization | | Linear | |
| 3 dB Beamwidth, E-Plane | | 11° | |
| 3 dB Beamwidth, H-Plane | | 12° | |
| Sidelobes, E-Plane | | -14 dB | |
| Sidelobes, H-Plane | | -30 dB | |
| Return Loss | | 23 dB | |
| Specification Temperature | | +25°C | |
| Operating Temperature | -40°C | | +85°C |

Mechanical Specifications:

| Item | Specification |
|----------|---|
| RF Ports | WR-06 Waveguide with UG-387/U-M Anti-Cocking Flange |
| Size | 1.20" (L) X 0.59" (W) X 0.49" (H) |
| Material | Brass |
| Finish | Gold Plated |
| Weight | 0.4 Oz |
| Outline | AR-D2-A |

ECCN

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FEATURES

- Rectangular Waveguide Interface
- Precisely Machine and Gold Plated
- Linear Polarization
- High Return Loss

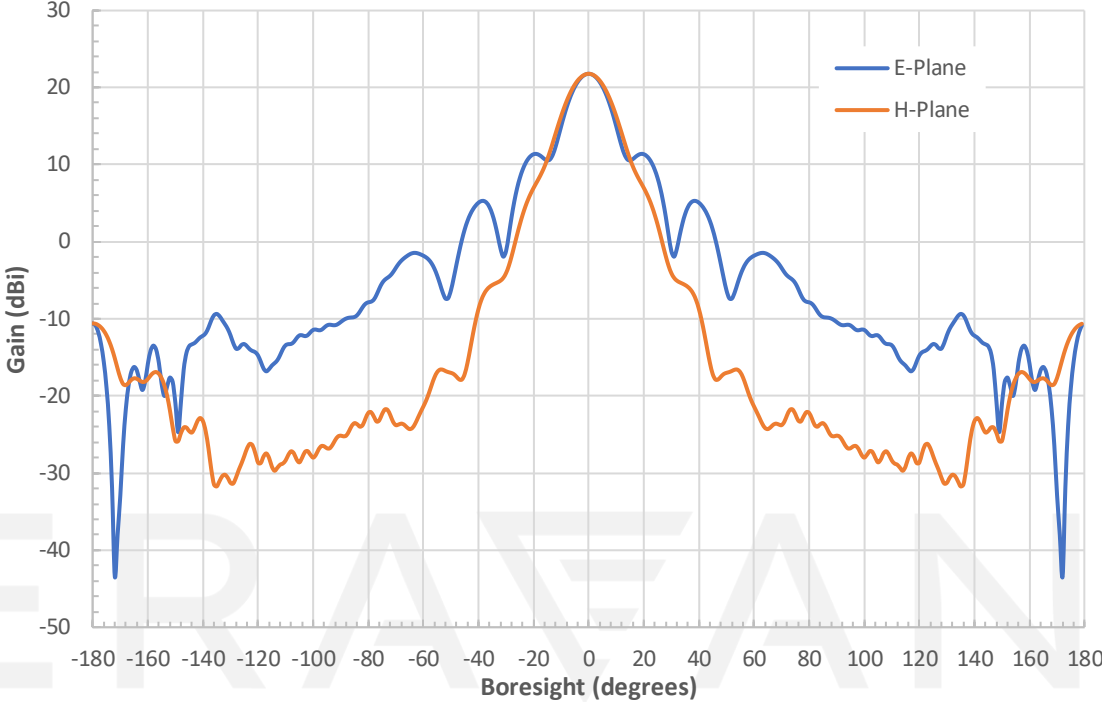
APPLICATIONS

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

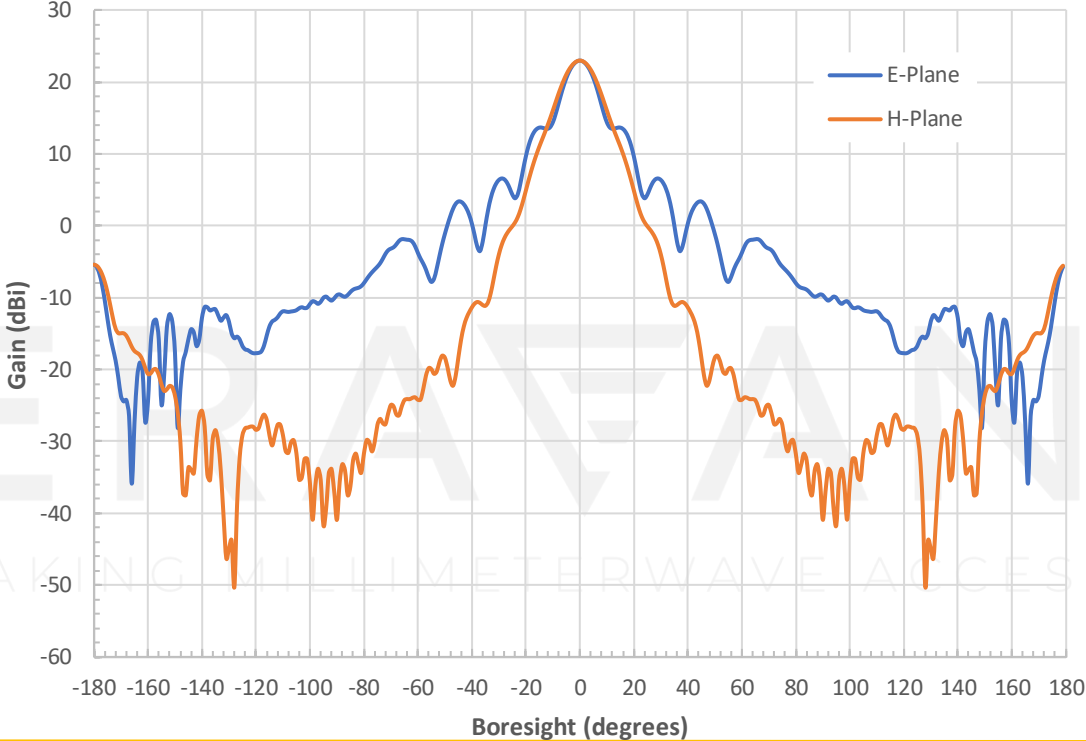
SUPPLEMENTAL DETAILS



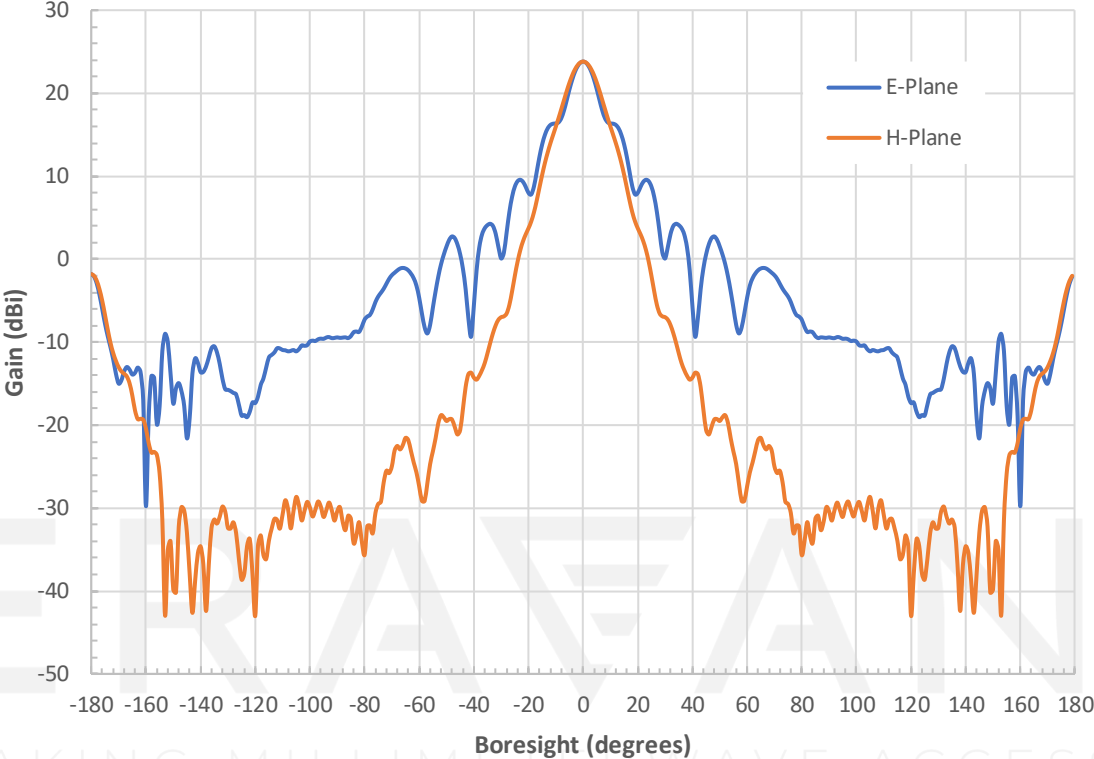
Simulated Antenna Patterns @ 110 GHz



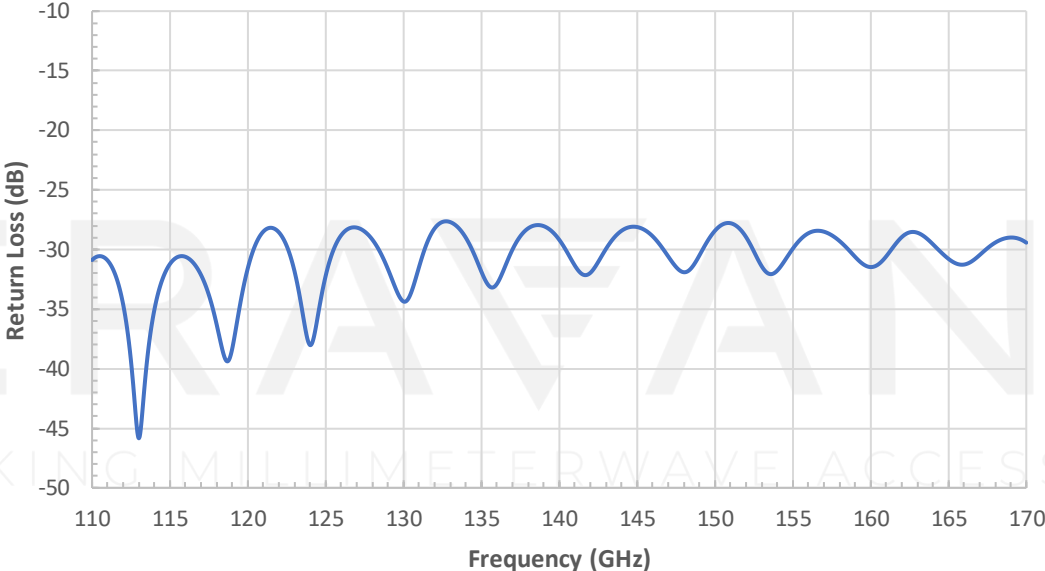
Simulated Antenna Patterns @ 140 GHz



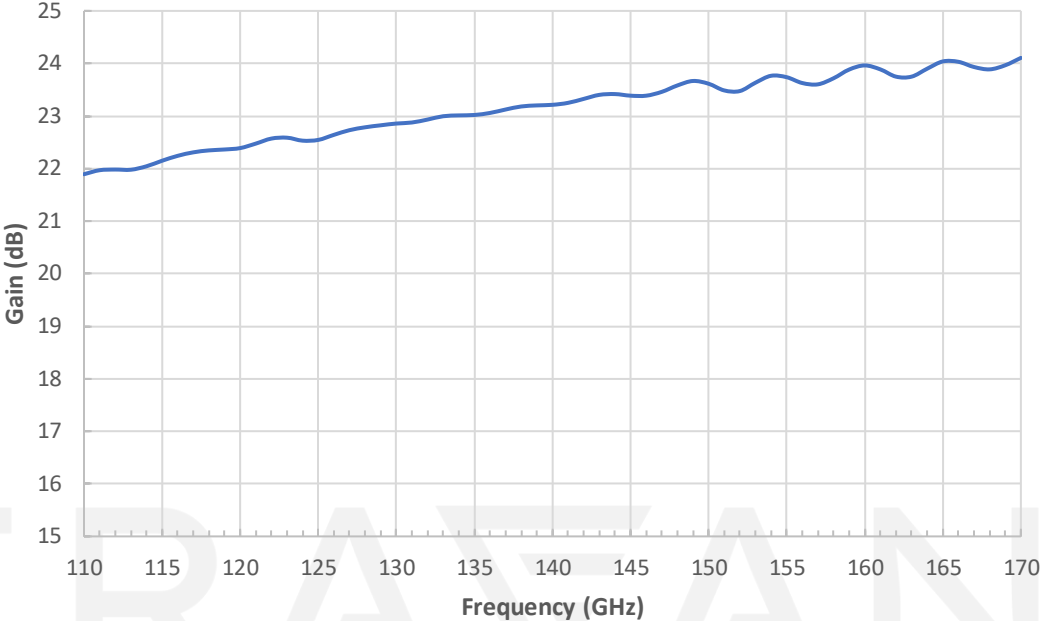
Simulated Antenna Patterns @ 170 GHz



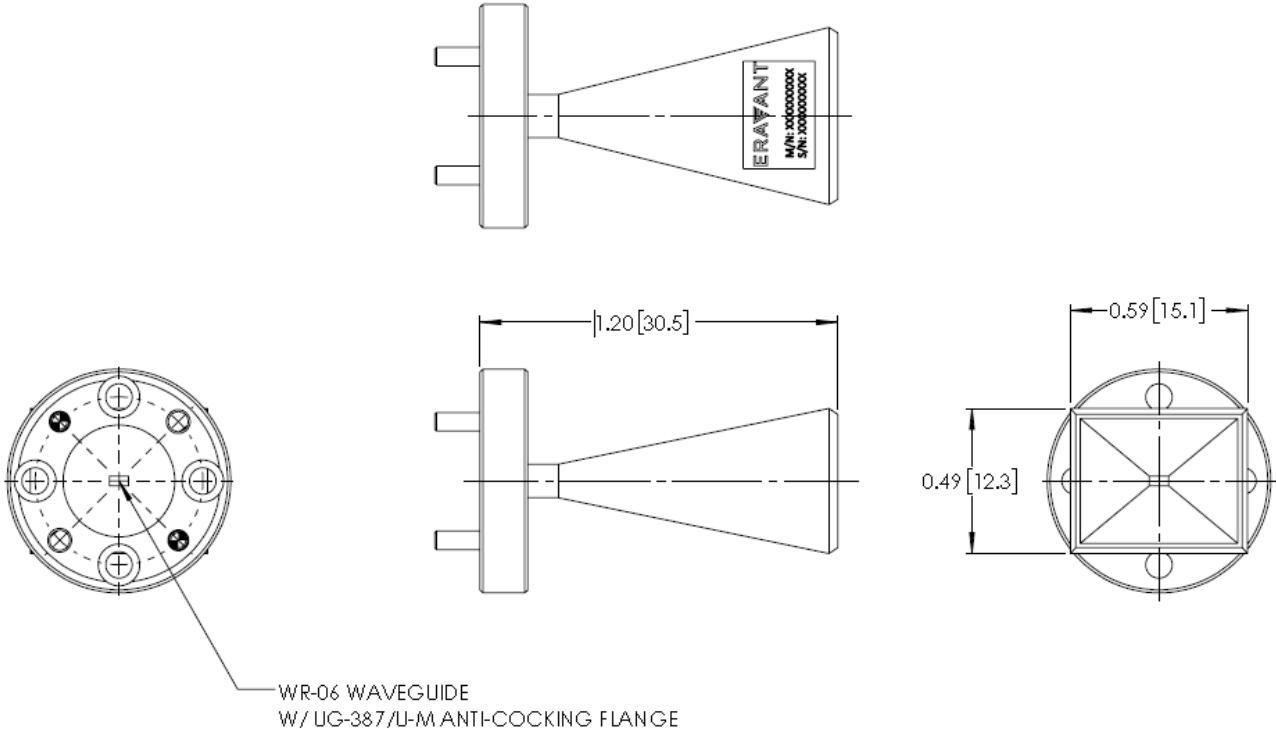
Simulated Return Loss vs. Frequency



Simulated Gain vs. Frequency



Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



NOTE:

- This antenna is a mature product. The reasons for only providing simulated data can be found in the following blog [here](#).
- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the antenna will cause performance degradation and possible device damage.

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