



E-Band Omnidirectional Antenna, 360 Degrees

Description:

Model SAO-6039030230-12-S1 is a WR-12 omnidirectional antenna that operates between 60 and 90 GHz. This vertically polarized antenna offers 360 degrees azimuth coverage with ± 3 dB angular gain flatness. The antenna features a half power beamwidth of 30 degrees in the vertical direction and typical 2 dBi gain across the entire frequency range.



Features:

- 360° Azimuth Coverage
- 30° Vertical 3 dB Beamwidth
- Vertically Polarized

Applications:

- Communication Links
- EW Systems
- Indoor Local Area Networks

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|---------|------------|---------|
| Frequency Range | 60 GHz | | 90 GHz |
| Gain | | 2 dBi | |
| Gain Variation | | ± 3 dB | |
| Azimuth | | 360° | |
| 3 dB Beamwidth, Vertical | | 30° | |
| Return Loss | | 9 dB | |
| Specification Temperature | | +25°C | |
| Operating Temperature | -40°C | | +85°C |

Mechanical Specifications:

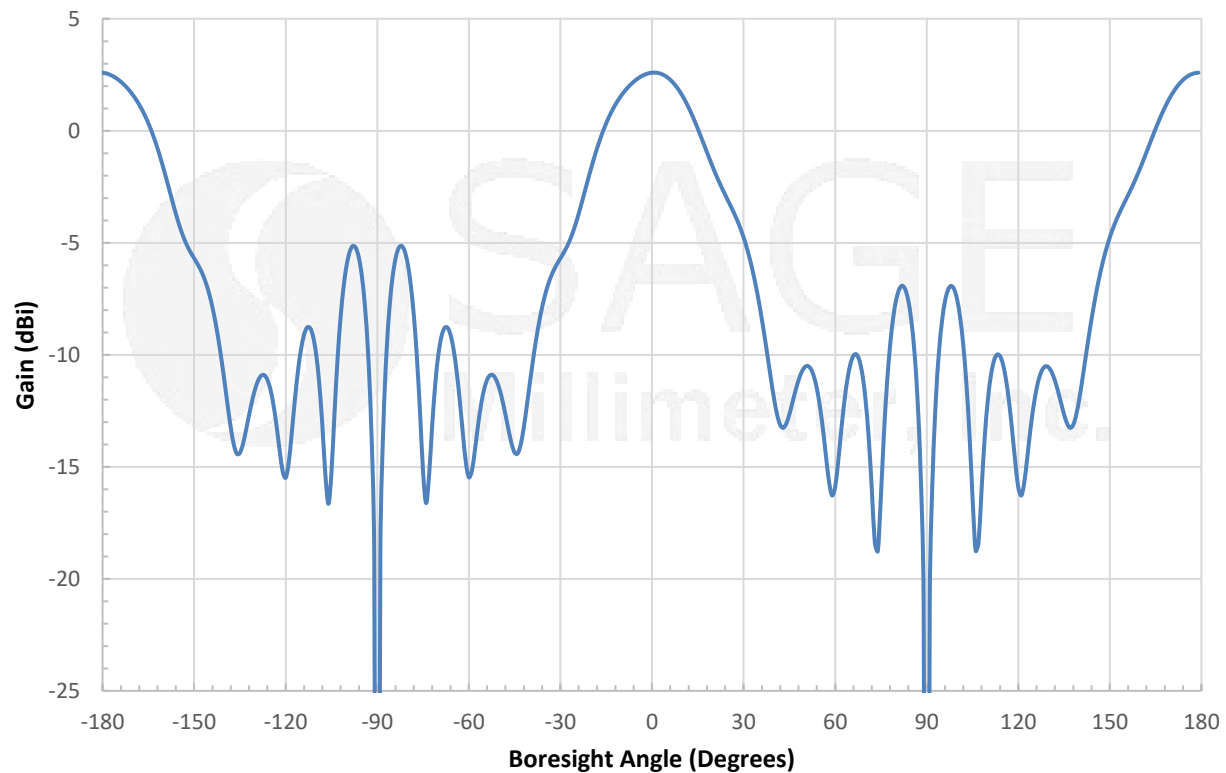
| Parameter | Connector |
|---------------|--------------------------------------|
| Input | WR-12 Waveguide with UG-387/U Flange |
| Body Material | Aluminum |
| Finish | Gold Plated |
| Weight | 0.2 Oz |
| Size | 0.51" (H) x 0.87" (ϕ) |
| Outline | AO-E02-030 |



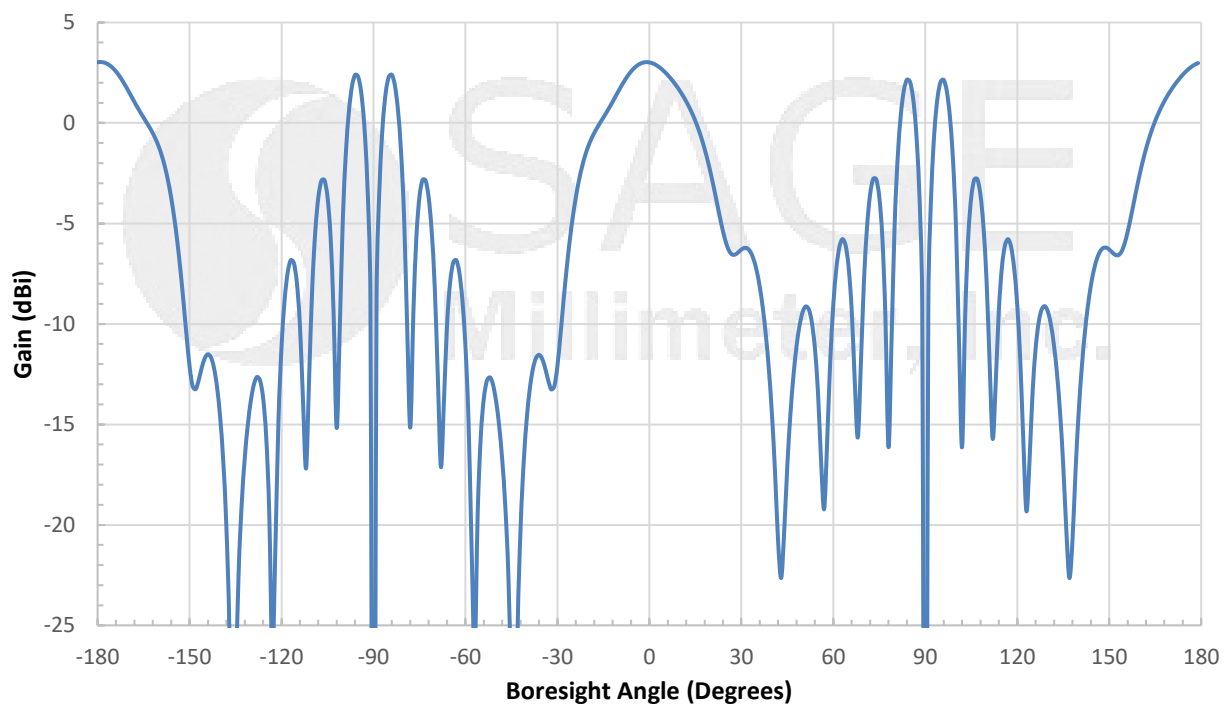


E-Band Omnidirectional Antenna, 360 Degrees

Simulated E-Plane Antenna Pattern @ 60 GHz



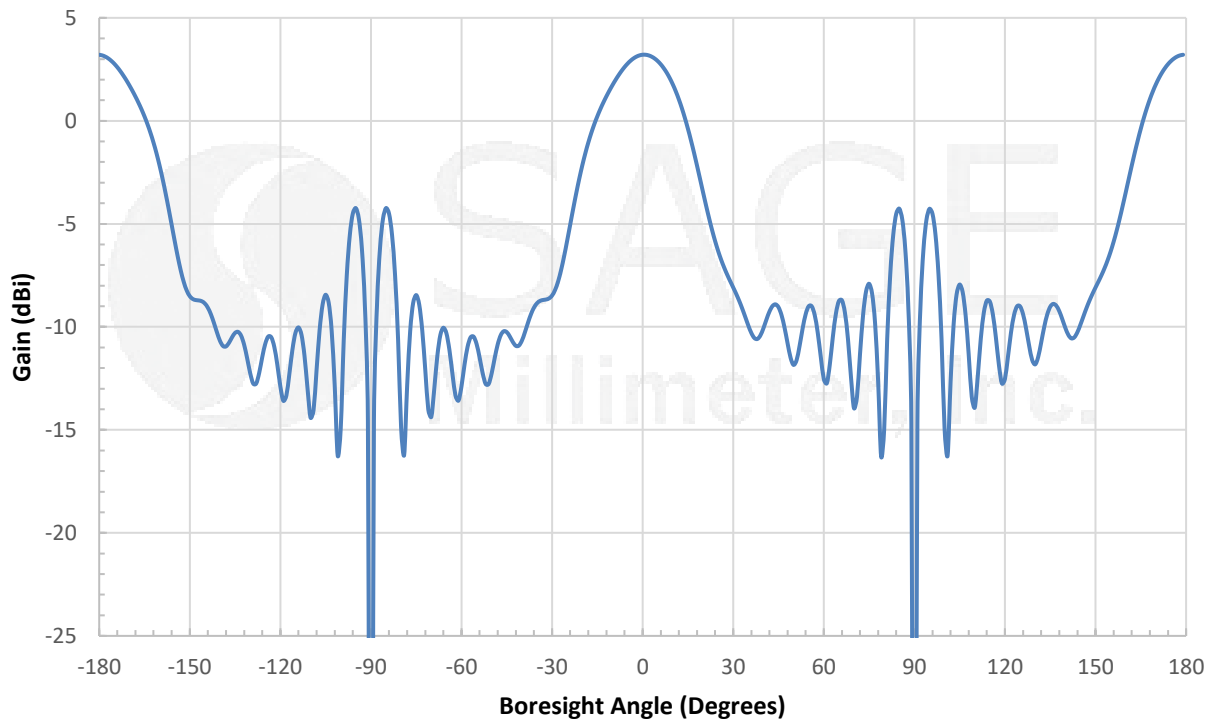
Simulated E-Plane Antenna Pattern @ 75 GHz



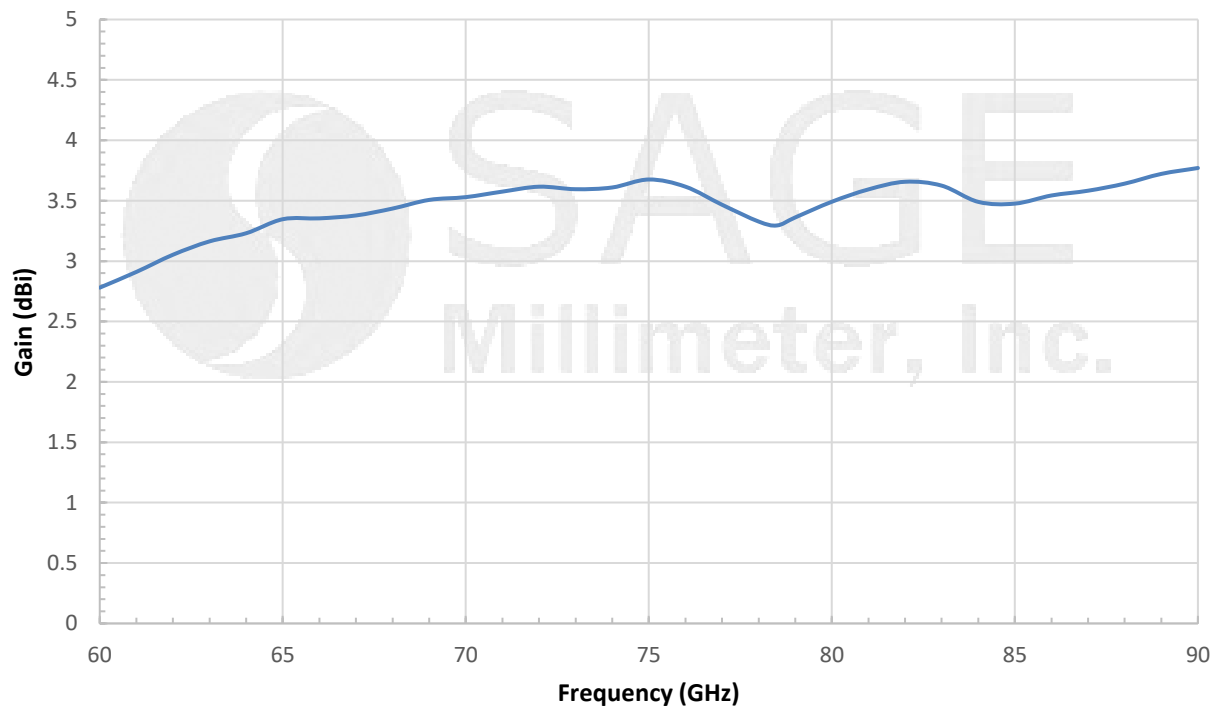


E-Band Omnidirectional Antenna, 360 Degrees

Simulated E-Plane Antenna Pattern @ 90 GHz



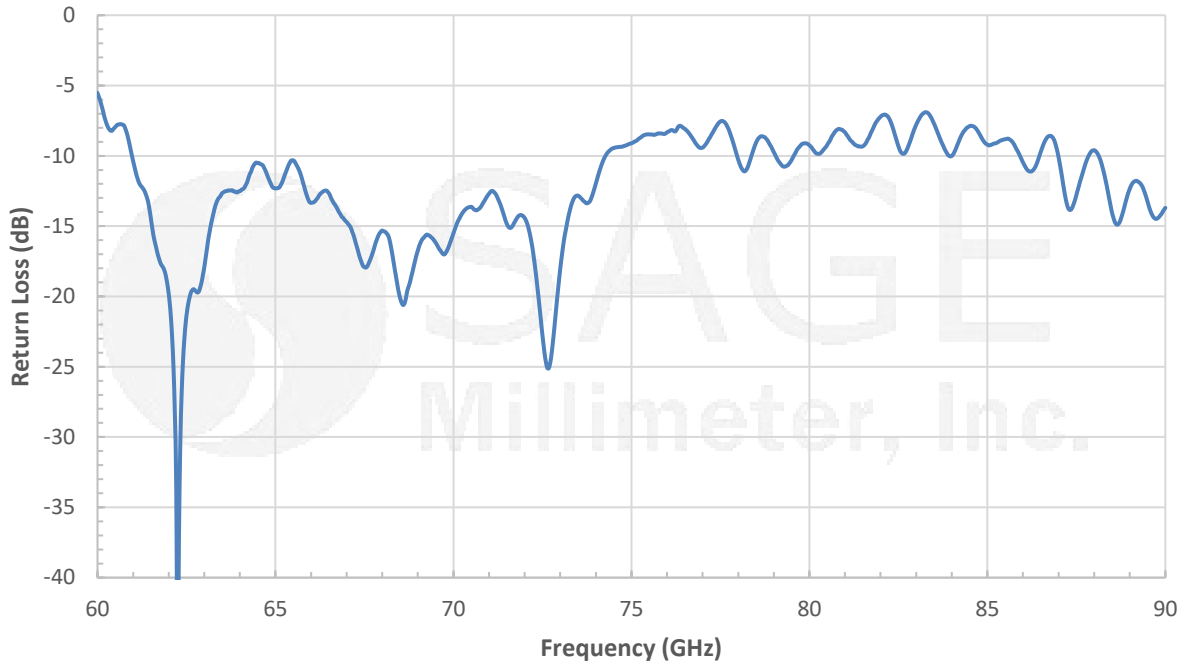
Simulated Gain vs. Frequency



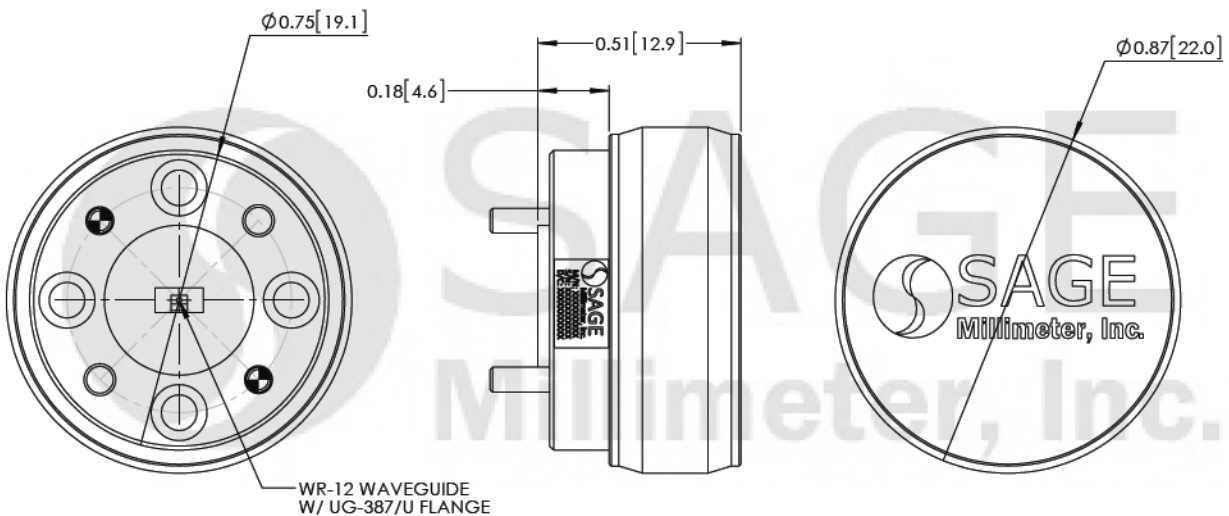


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Measured Return Loss vs. Frequency



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



Note:

- Return Loss data is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C room temperature.
- Antenna Pattern data presented is simulated. The actual data may vary.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Foreign objects in the waveguide will affect device performance and may damage the antenna.

