



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:

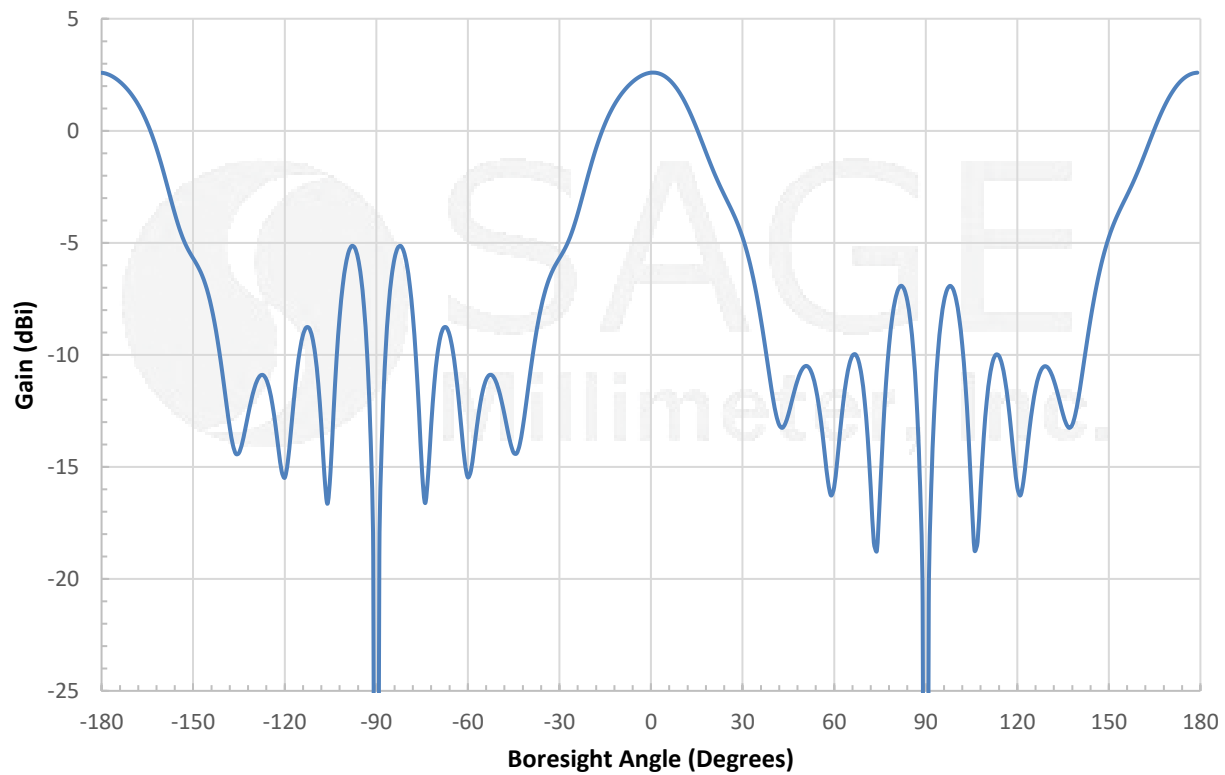
Parameter	Connector
Input	WR-12 Waveguide with UG-387/U Flange
Body Material	Aluminum
Finish	Gold Plated
Weight	0.2 Oz
Size	0.51" (H) x 0.87" (ϕ)
Outline	AO-E02-030



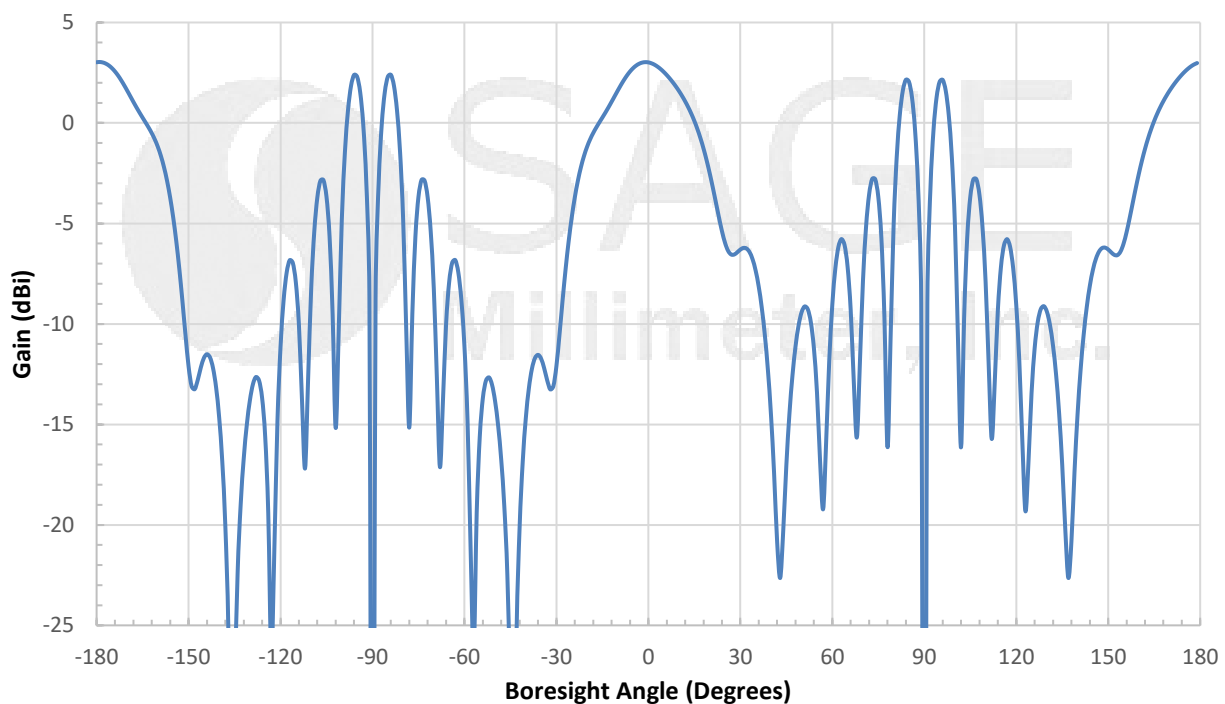


E-Band Omnidirectional Antenna, 360 Degrees

Simulated E-Plane Antenna Pattern @ 60 GHz



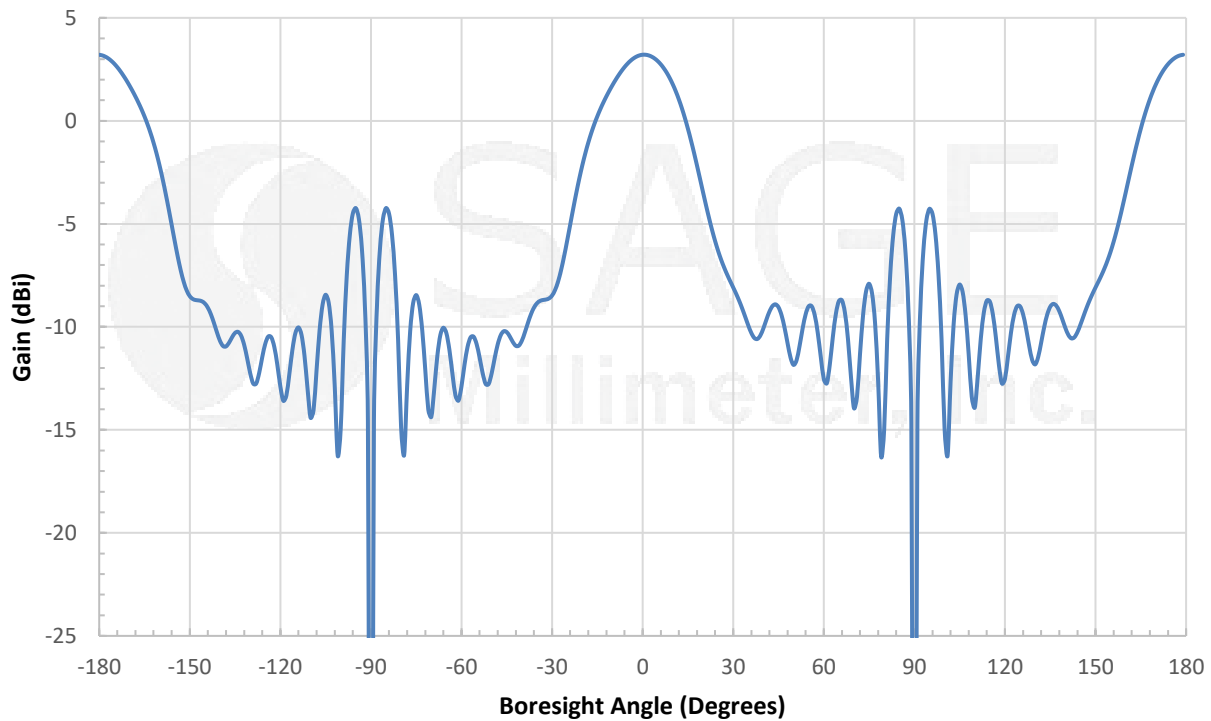
Simulated E-Plane Antenna Pattern @ 75 GHz



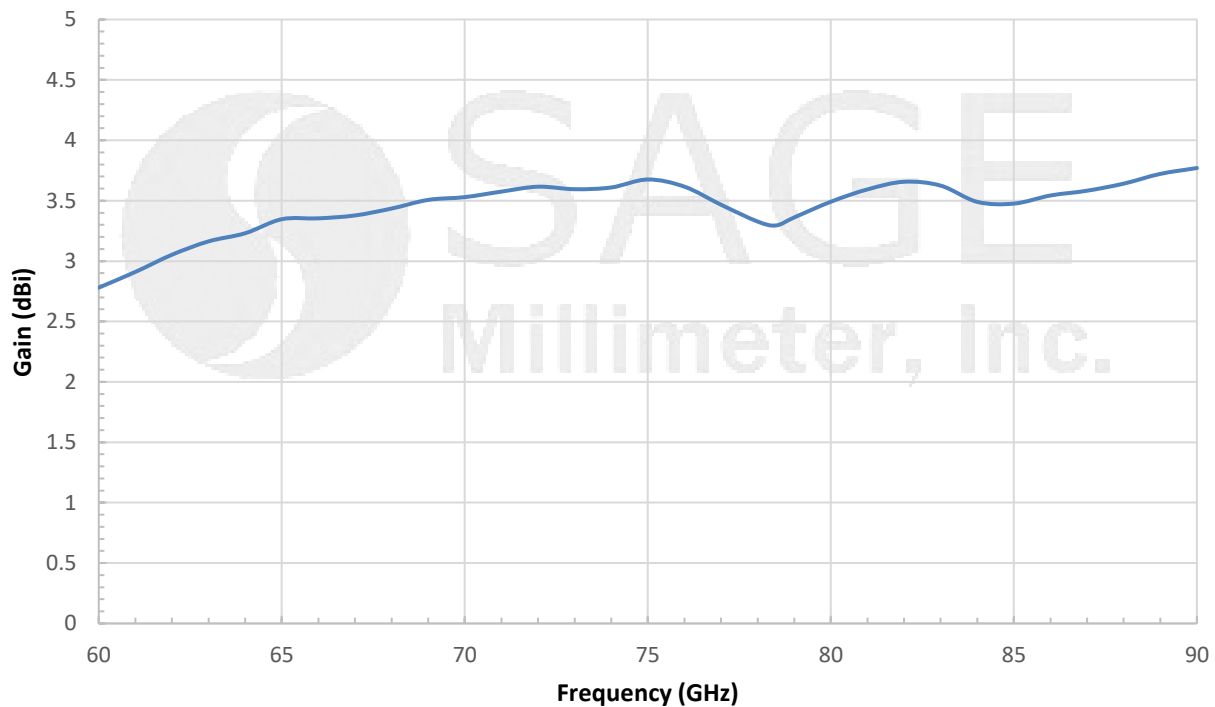


E-Band Omnidirectional Antenna, 360 Degrees

Simulated E-Plane Antenna Pattern @ 90 GHz



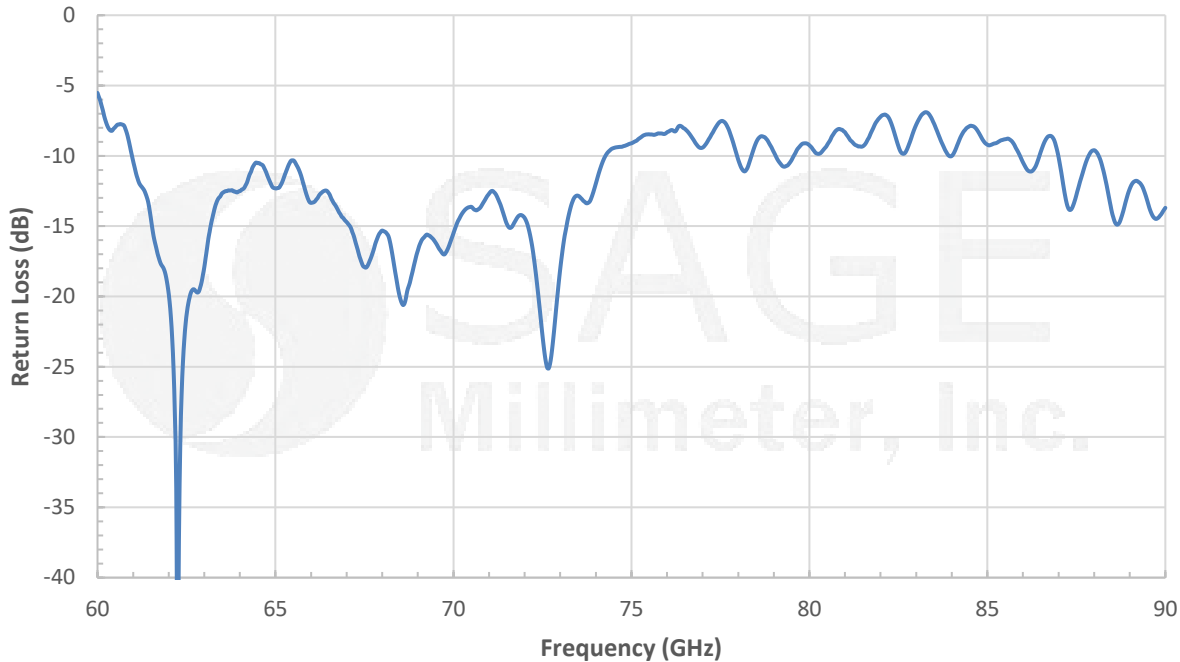
Simulated Gain vs. Frequency



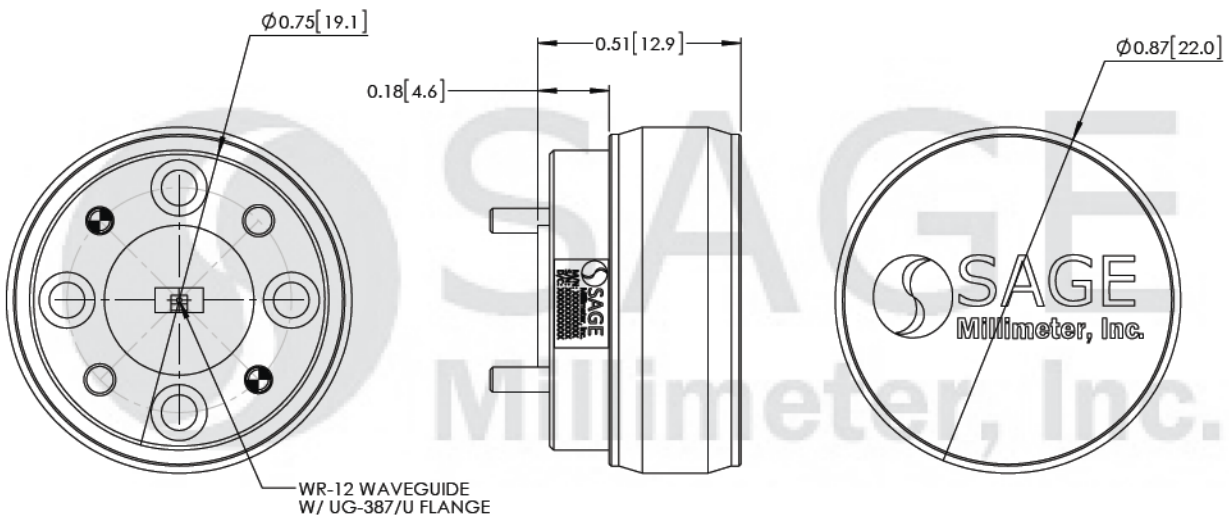


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Measured Return Loss vs. Frequency



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.

