



Ka Band Gaussian Optics Antenna, 6" Diameter, 25 to 30 GHz

Description:

Model SAG-2533033005-28-S1 is a 6" Ka-Band Gaussian antenna that operates from 25 to 30 GHz. The Gaussian antenna delivers a 30 dBi nominal gain and 5.0 degree half power beamwidth. The antenna supports linear polarized waveforms and employs a corrugated feed horn to offer excellent aperture efficiency, high cross polarization rejections, and low sidelobe levels. This model is equipped with a standard WR-28 waveguide and UG-599/U flange as its input port. By removing the mode transition, SAGE Millimeter model number SWT-28315-SB, the input port becomes 0.315" diameter circular waveguide, which can support both linear and circular polarized waveforms.



Features:

- Center Fed
- Low Sidelobes
- Low Cross Polarization

Applications:

- Radar Systems
- Communication Systems
- Plasma Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	25 GHz		30 GHz
Gain		30 dBi	
3 dB Beamwidth		5.0°	
Sidelobes		-25 dB	
Cross Polarization		-20 dB	
Polarization		Linear	
Return Loss		15 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

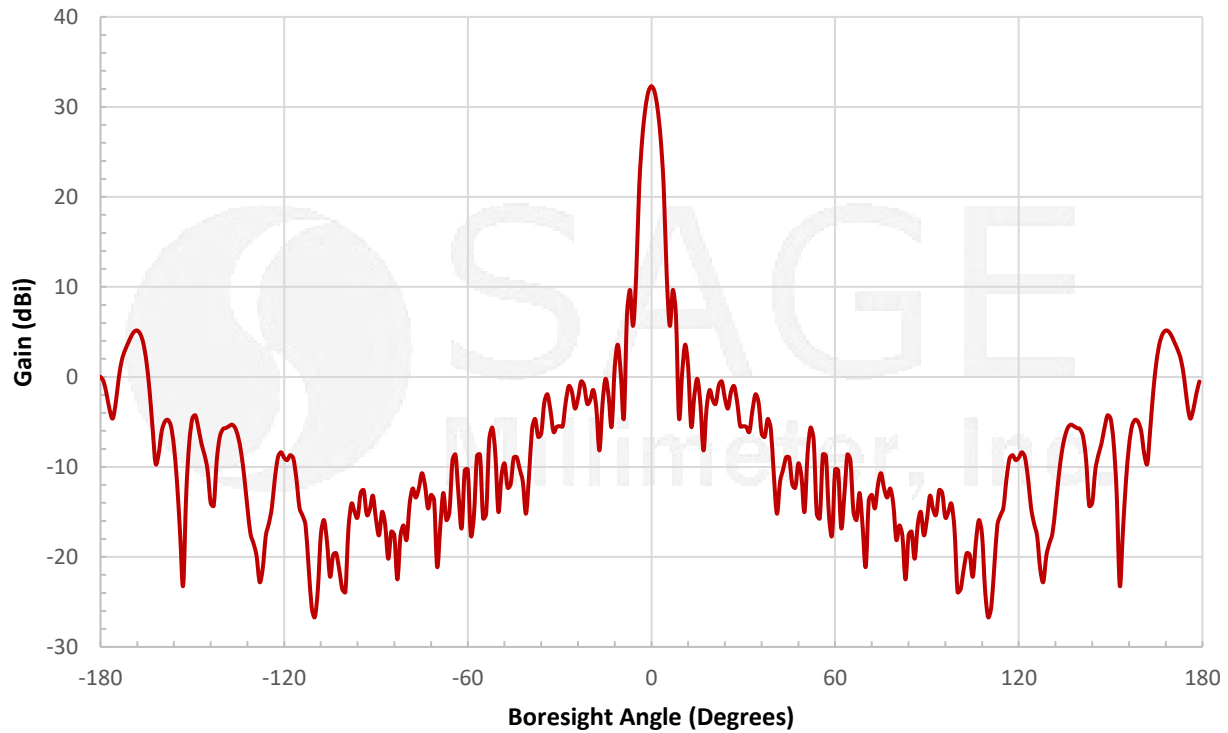
Item	Specification
Antenna Port	WR-28 Waveguide with UG-599/U Flange
Housing Material	Aluminum
Housing Finish	Black Anodized
Weight	7.5 lbs
Lens Diameter	6.0"
Size	7.00" (Ø) x 11.81" (L)
Outline	AG-RA30



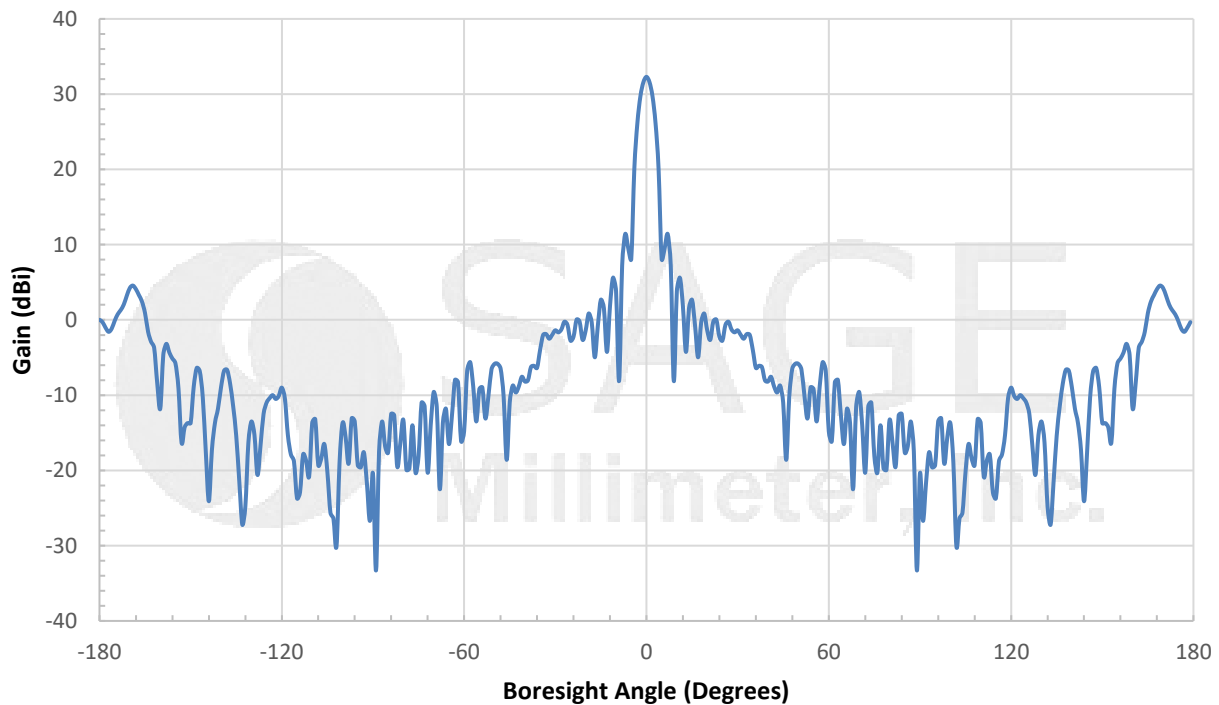


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Simulated H-Plane Antenna Pattern @ 27.5 GHz



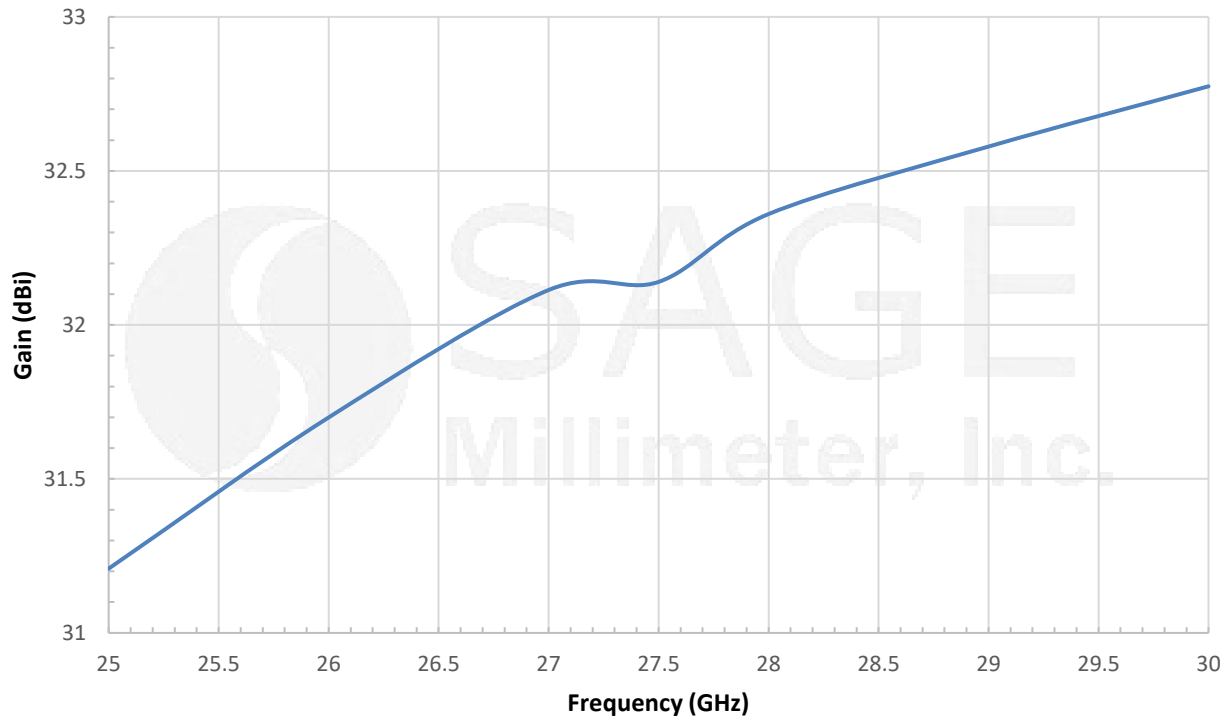
Simulated E-Plane Antenna Pattern @ 27.5 GHz



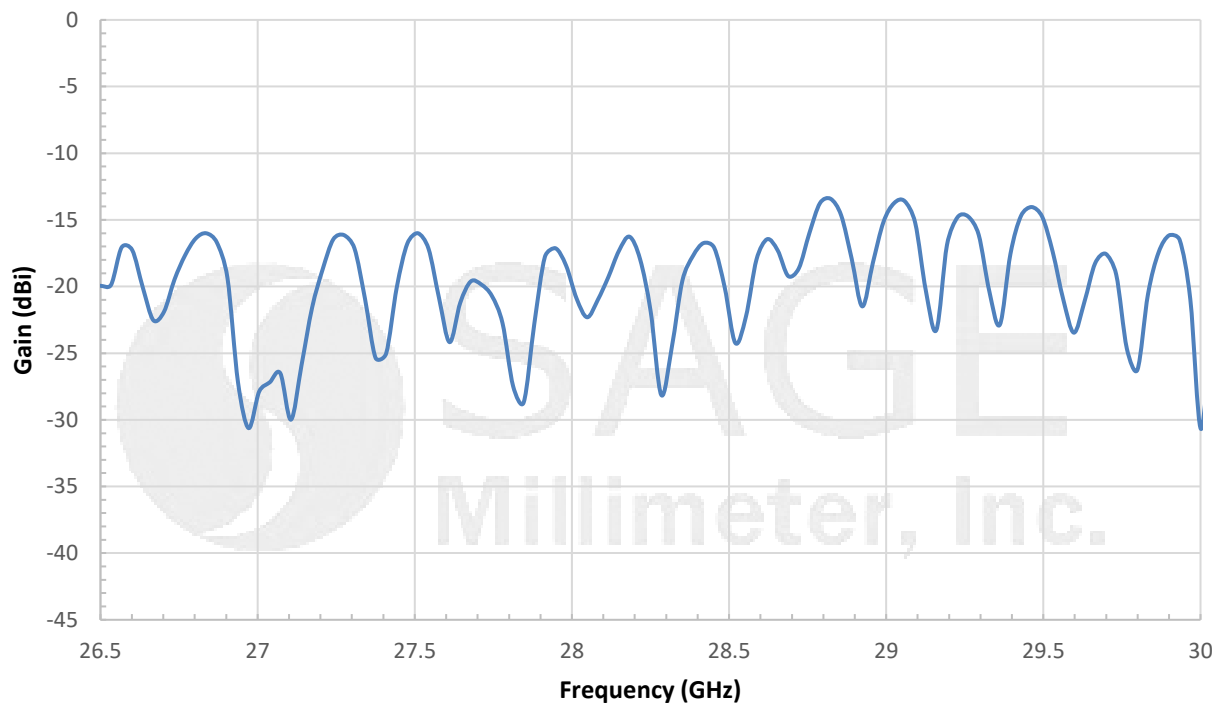


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Simulated Gain vs. Frequency

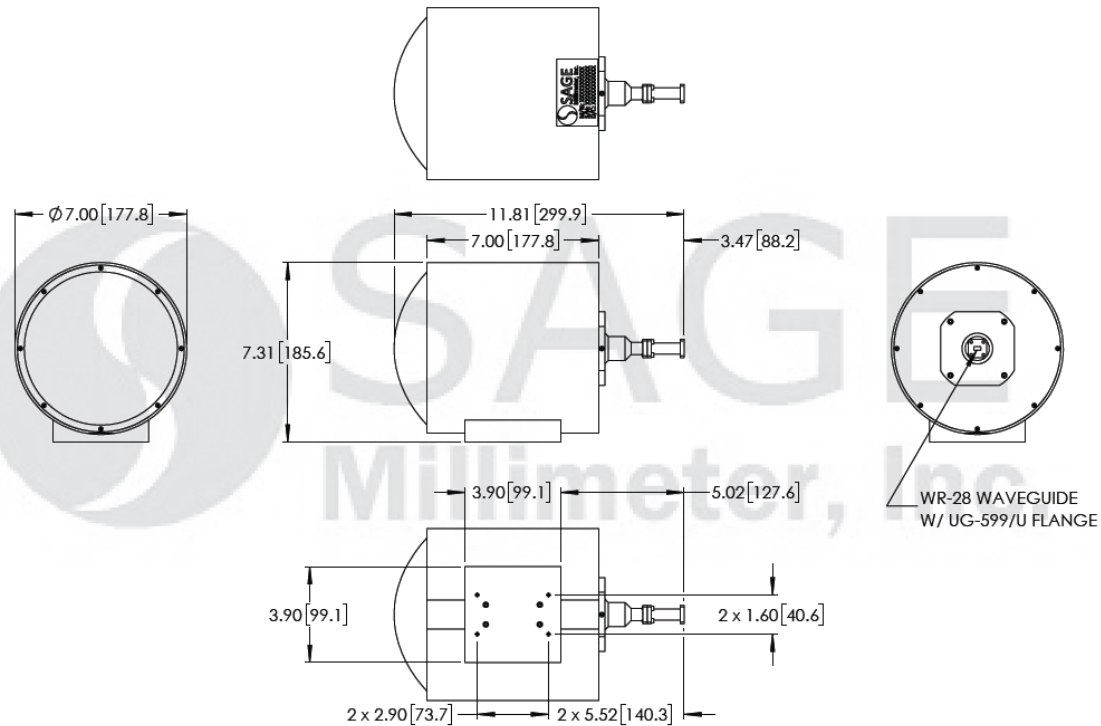


Measured Return Loss vs. Frequency



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



Note:

- Antenna patterns and Gain are simulated. Actual data may vary.
- Return Loss data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C room temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- The operation frequency of the antenna can be extended to a wider range with small performance degradation at the edges of the band.

Caution:

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

