



Ka Band Gaussian Optics Antenna, 12" Diameter, 25 to 30 GHz

Description:

Model SAG-2533033502-315-S1 is a 12" Ka-Band Gaussian antenna that operates from 25 to 30 GHz. The Gaussian antenna delivers a 35 dBi nominal gain and 2 degree half power beamwidth. The antenna supports both linear and circular 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 0.315" diameter circular waveguide and UG-599/U flange as its input port. By adding a mode transition, SAGE Millimeter model number **SWT-28315-SB**, the input port becomes a standard WR-28 waveguide, which can only support linear 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		35 dBi	
3 dB Beamwidth		2°	
Sidelobes		-25 dB	
Cross Polarization		-20 dB	
Polarization	Linear and Circular		
Return Loss		13 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	0.315" Dia Circular Waveguide with UG-599/U Flange
Lens Diameter	12"
Housing Material	Aluminum
Housing Finish	Black Anodized
Weight	19.5 lbs
Size	13.00" (Ø) x 17.45" (L)
Outline	AG-CA35-315

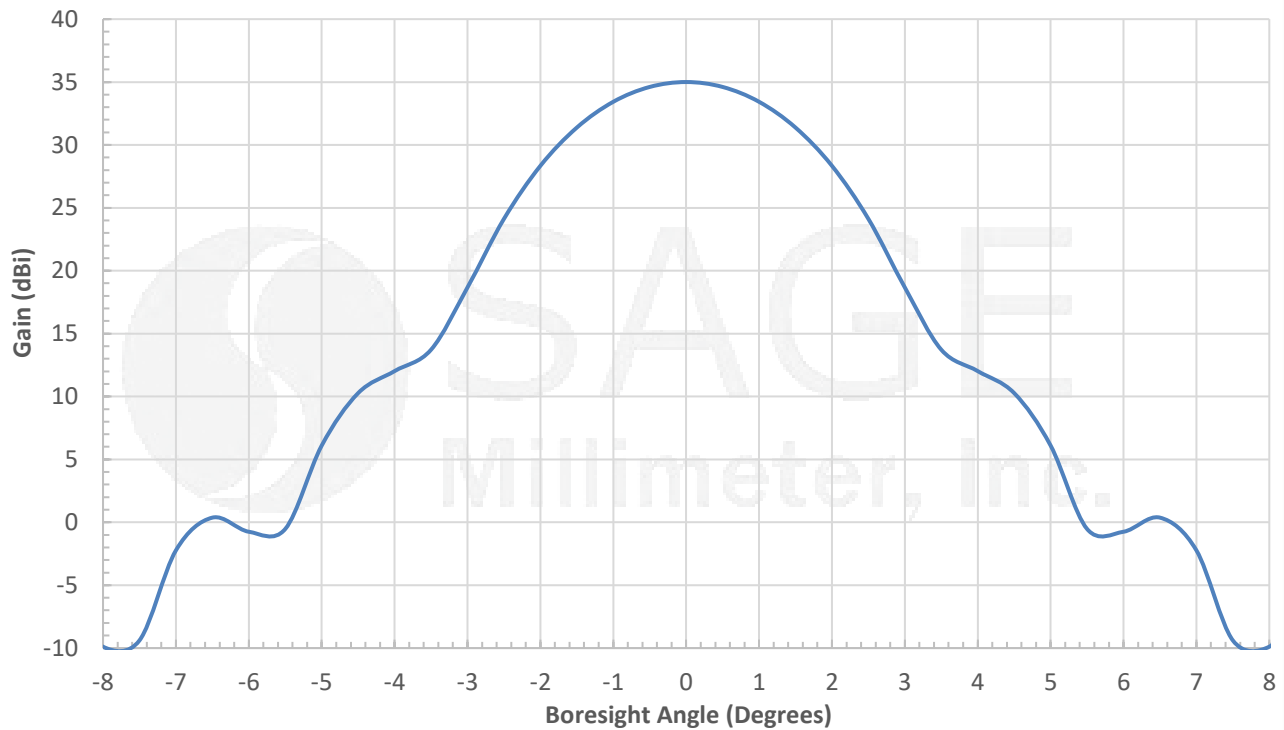


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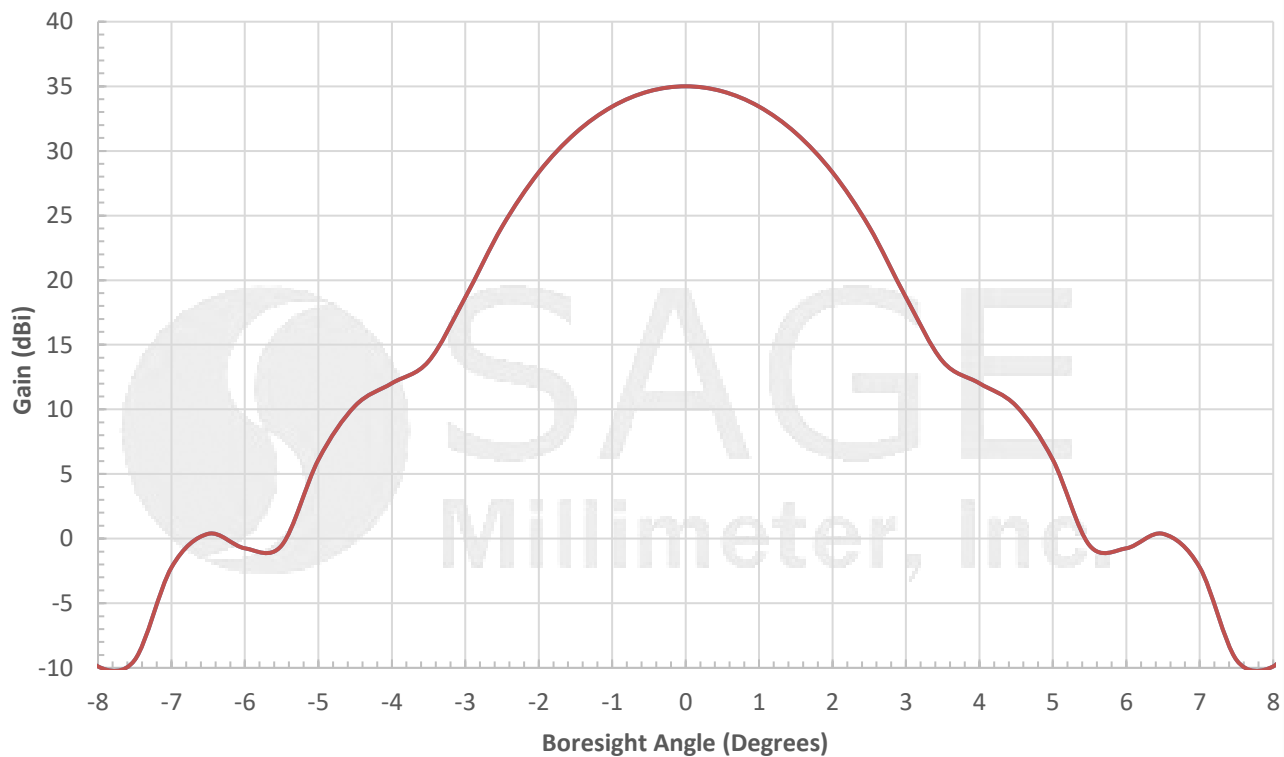


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Simulated H-Plane Antenna Pattern @ 27.5 GHz



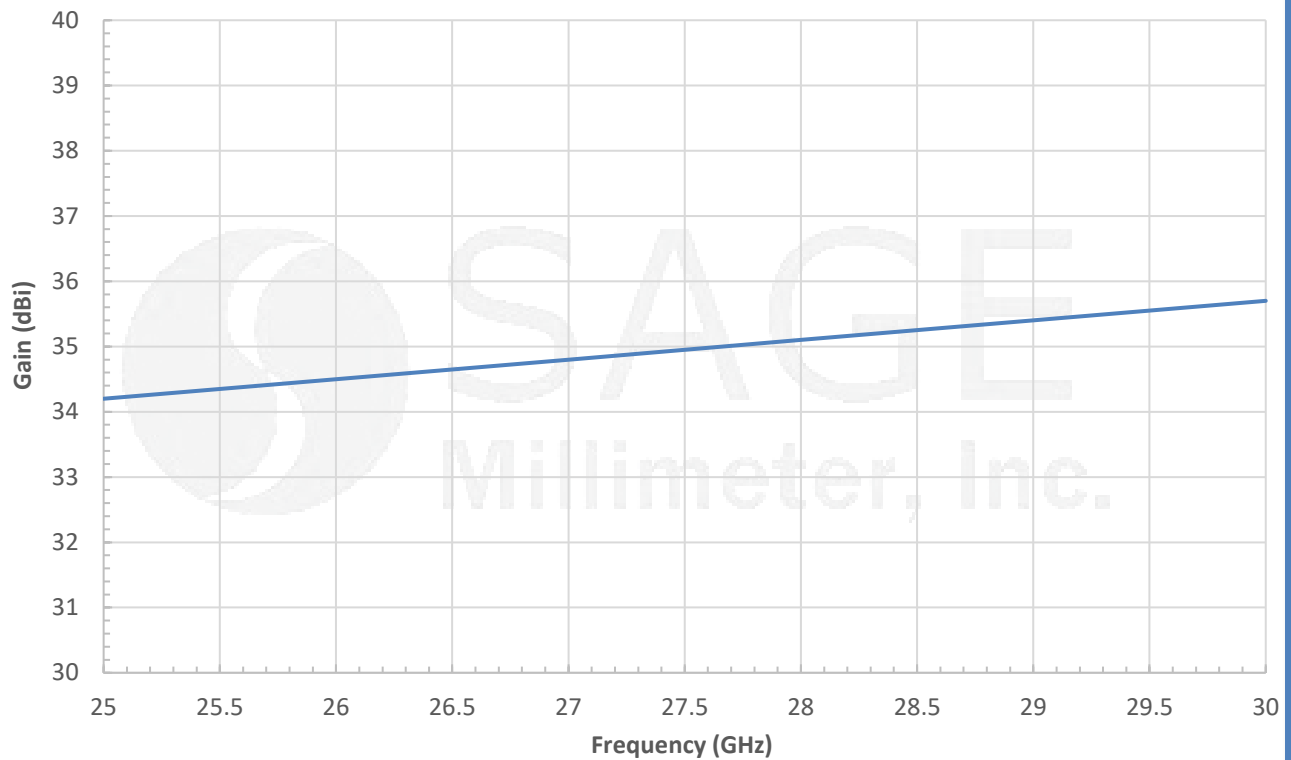
Simulated E-Plane Antenna Pattern @ 27.5 GHz



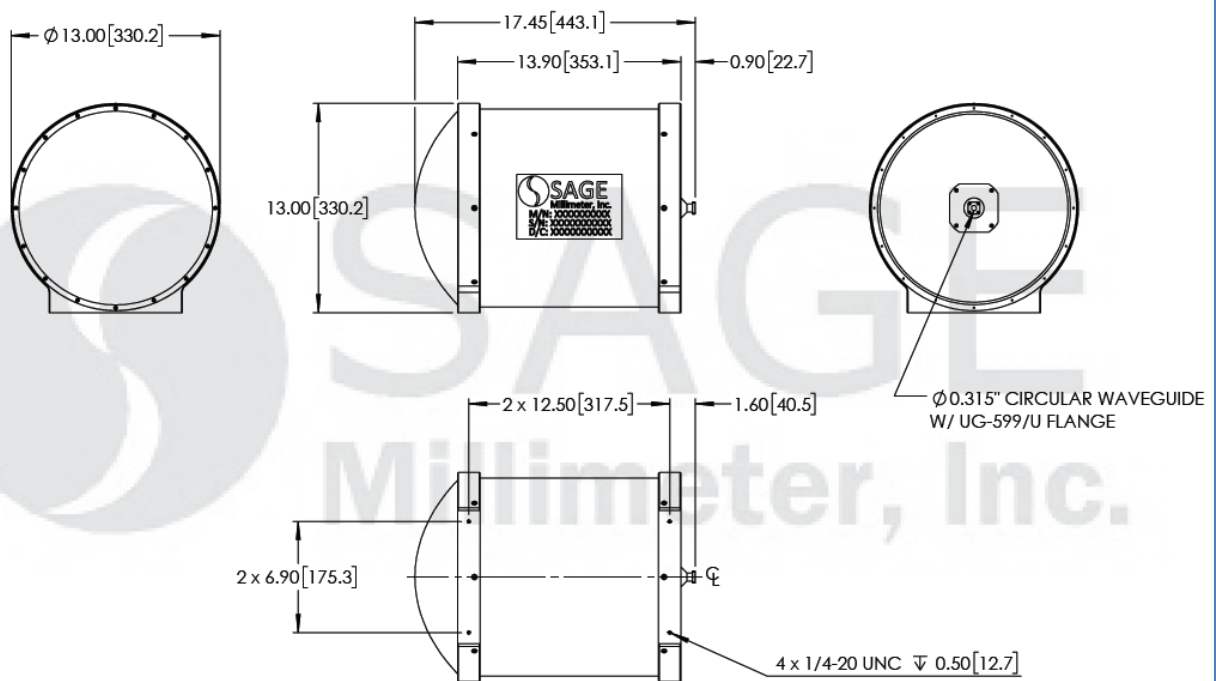


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Simulated Gain vs. Frequency



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



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Note:

- All data presented is simulated. Actual data may vary, slightly.
- 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.

