SAG-1441544601-06-S1

Rev. 1.3

D Band Gaussian Optics Antenna

Description:

Model SAG-1441544601-06-S1 is a 6” D-Band Gaussian antenna that operates from 140 to 150 GHz. The Gaussian antenna delivers a 46 dBi nominal gain and 0.95 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-06 waveguide and UG-387/U-M flange as its input port. By removing the mode transition, Eravant model number SWT-06059-SB, the input port becomes a 0.059” 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	140 GHz		150 GHz
Gain		46 dBi	
3 dB Beamwidth		0.95˚	
Sidelobes		-25 dB	
Polarization		Linear	
Return Loss		15 dB	
Specification Temperature		+25 ˚C	
Operating Temperature	-40 ˚C		+85 ˚C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-06 Waveguide with UG-387/U-M Flange
Material	Aluminum
Finish	Black Anodized
Weight	7.59 lb
Lens Diameter	6.0”
Dimensions	7.31” (H) x 10.38” (L)
Outline	AG-RD46

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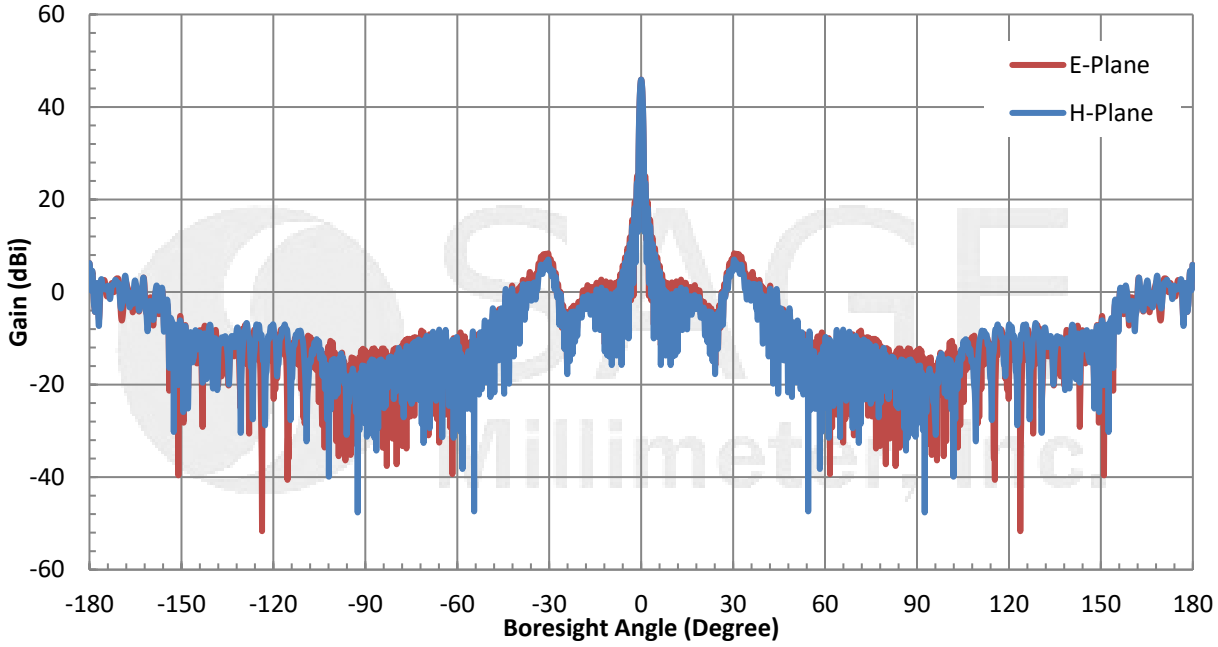
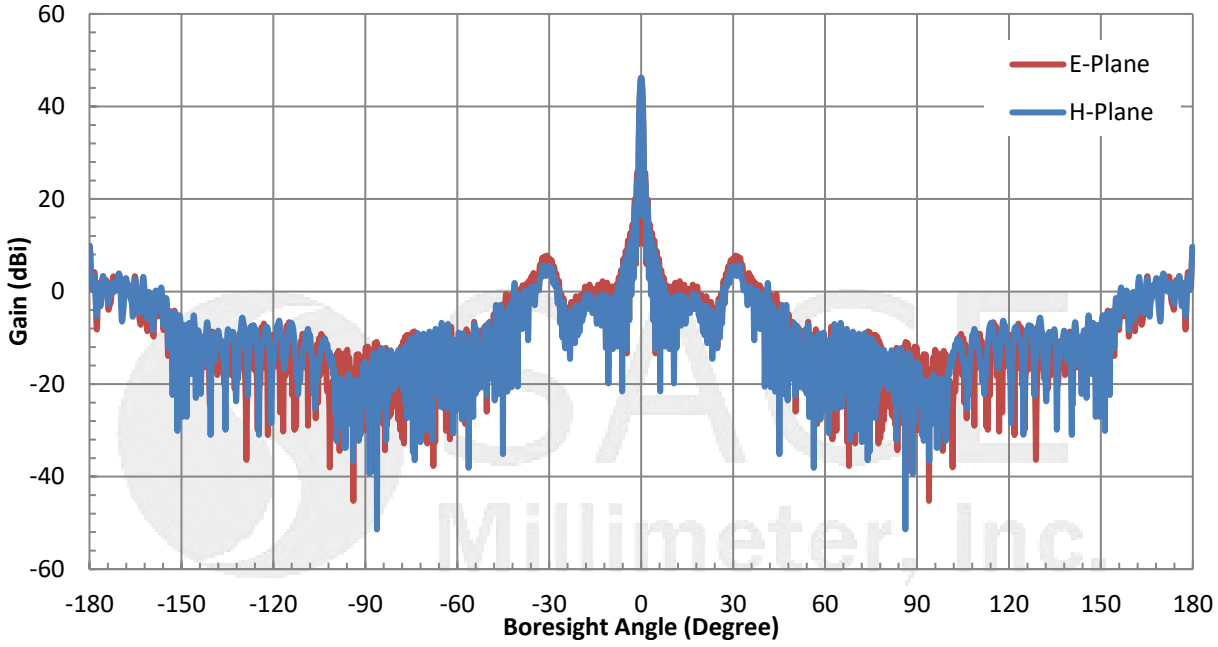
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: support@eravant.com

D Band Gaussian Optics Antenna

Simulated Antenna Pattern @ 140 GHz



Simulated Antenna Pattern @ 145 GHz



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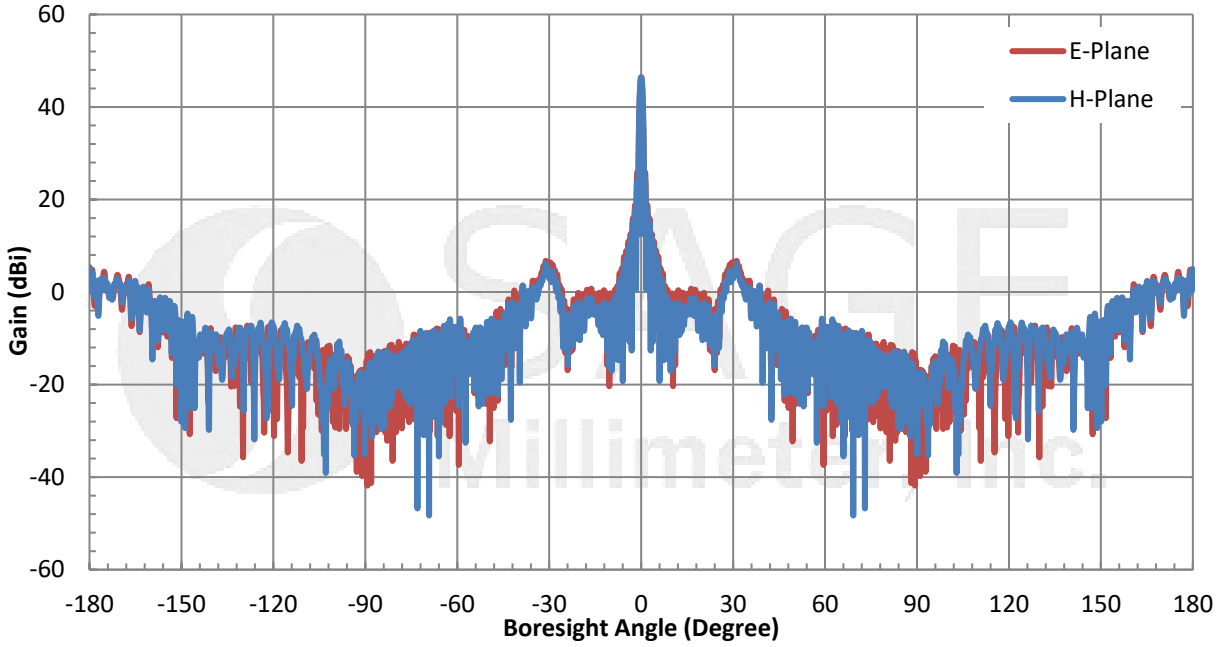
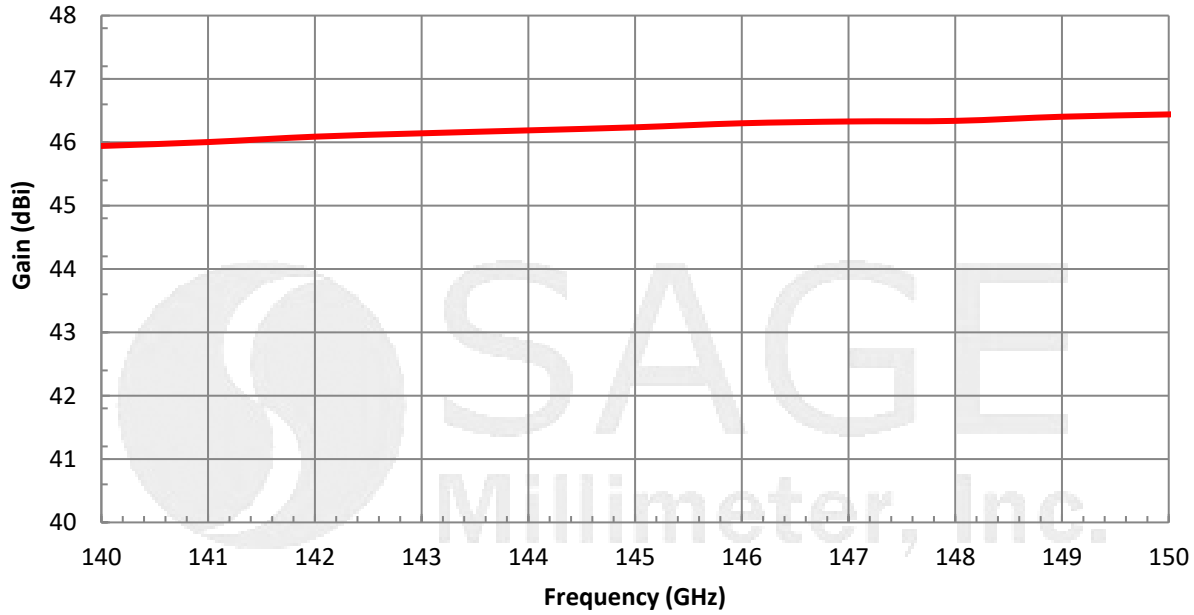
Simulated Antenna Pattern @ 150 GHz



Simulated Gain vs. Frequency



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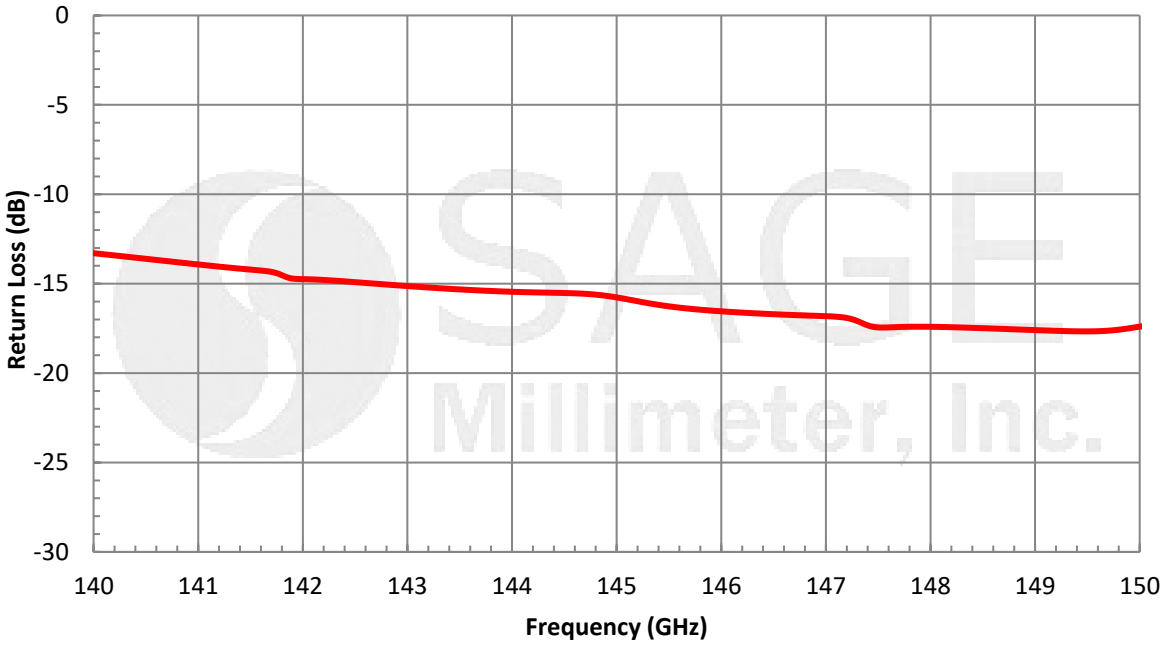
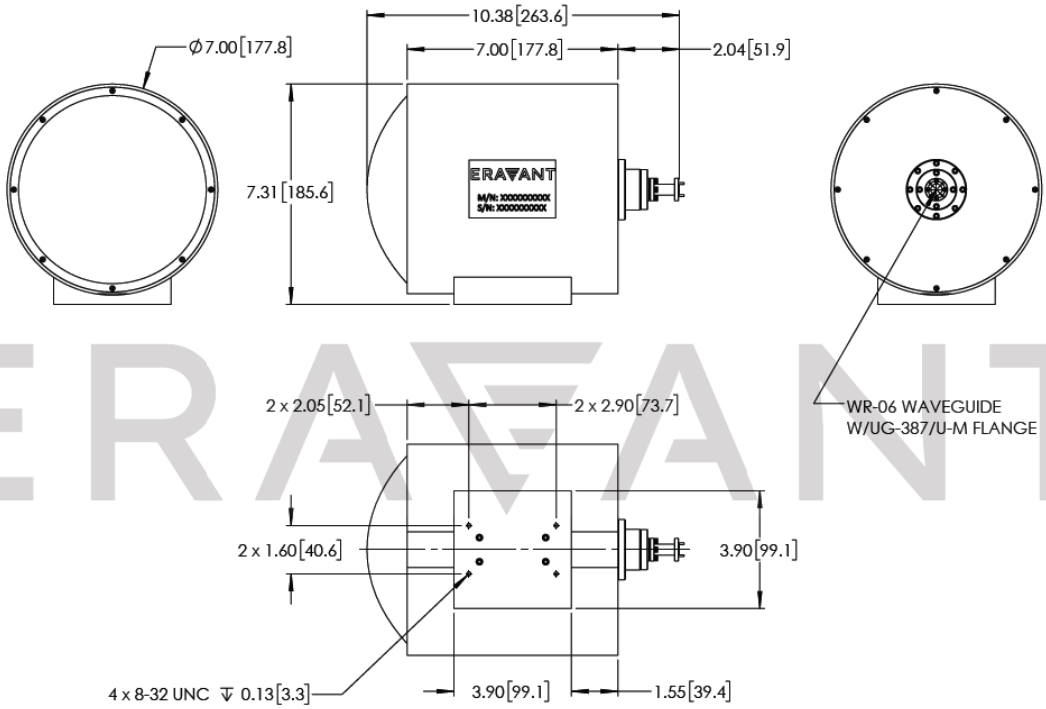
Simulated Return Loss vs. Frequency



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



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Note:

- Eravant 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:

- Any foreign objects in the waveguide will cause performance degradation and possible device damage.

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SAGE Millimeter, Inc.