

SAG-6838634501-125-S1

E-Band Gaussian Optics Antenna, 68 to 86 GHz, 12"

SAG-6838634501-125-S1 is a 12" E-Band Gaussian antenna that operates from 68 to 86 GHz. The Gaussian antenna delivers a 45 dBi nominal gain and 1.0 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 sidelobes levels. This model is equipped with a 0.125" diameter circular waveguide and UG-387/U-M flange as its input port. By adding a mode transition, Eravant model number SWT-12125-SB, the input port becomes WR-12 waveguide, which can only support linear polarized waveforms.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	68 GHz	77	86 GHz
Gain		45 dBi	
3 dB Beamwidth		1.0°	
Sidelobes		-25 dB	
Polarization	Linear and Circular		
Return Loss		15 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
Antenna Port	0.125" Dia Circular Waveguide with UG-387/U-M Flange
Housing Material	Aluminum
Housing Finish	Black Anodized
Weight	19.5 lbs
Lens Diameter	12"
Dimensions	13.00" (Ø) x 16.17" (L)
Outline	AG-CE45-125

ECCN

EAR99

FEATURES

- Center Fed
- Low Sidelobes
- Low Cross Polarization

APPLICATIONS

- Radar Systems
- Communication Systems
- Plasma Systems

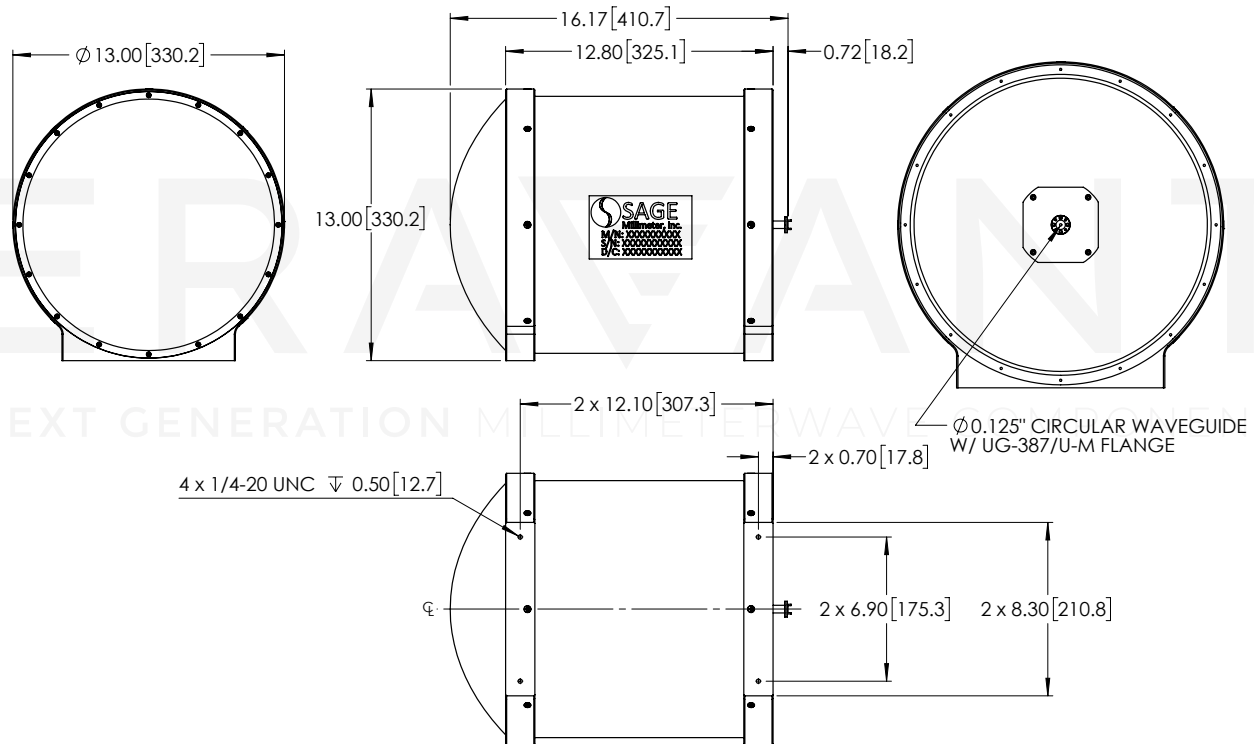
SUPPLEMENTAL DETAILS



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Mechanical Outline:

Unless otherwise specified, all dimensions are in inches [millimeters]



NOTE:

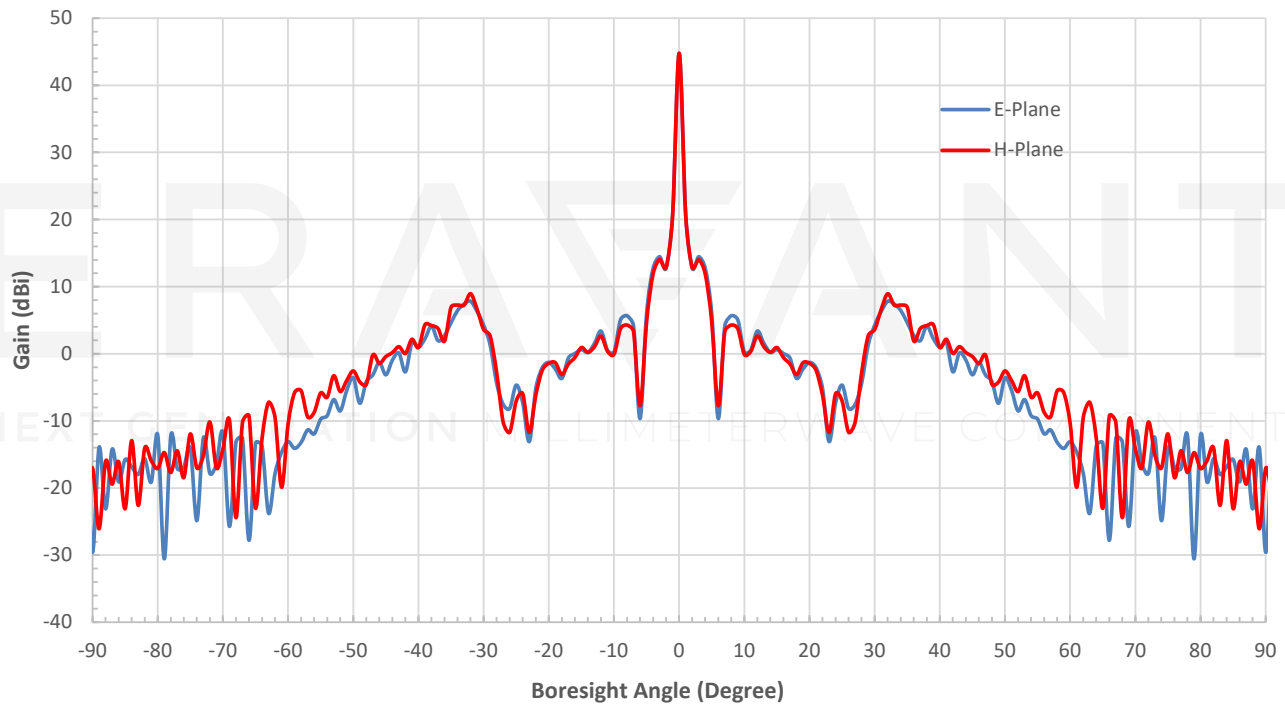
- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

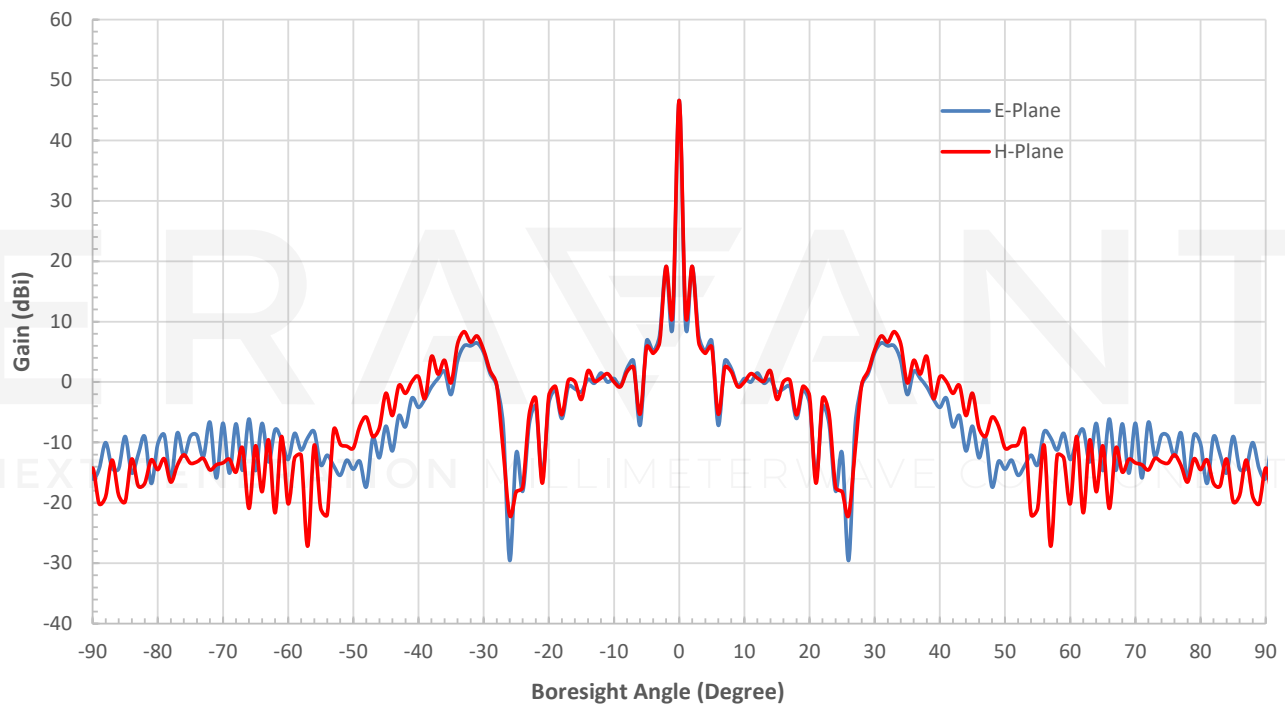
- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the antenna will cause performance degradation and possible device damage.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model [SCH-06004-S1](#) is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model [SCH-08008-S1](#) is highly recommended.

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Typical Antenna Pattern @ 68 GHz

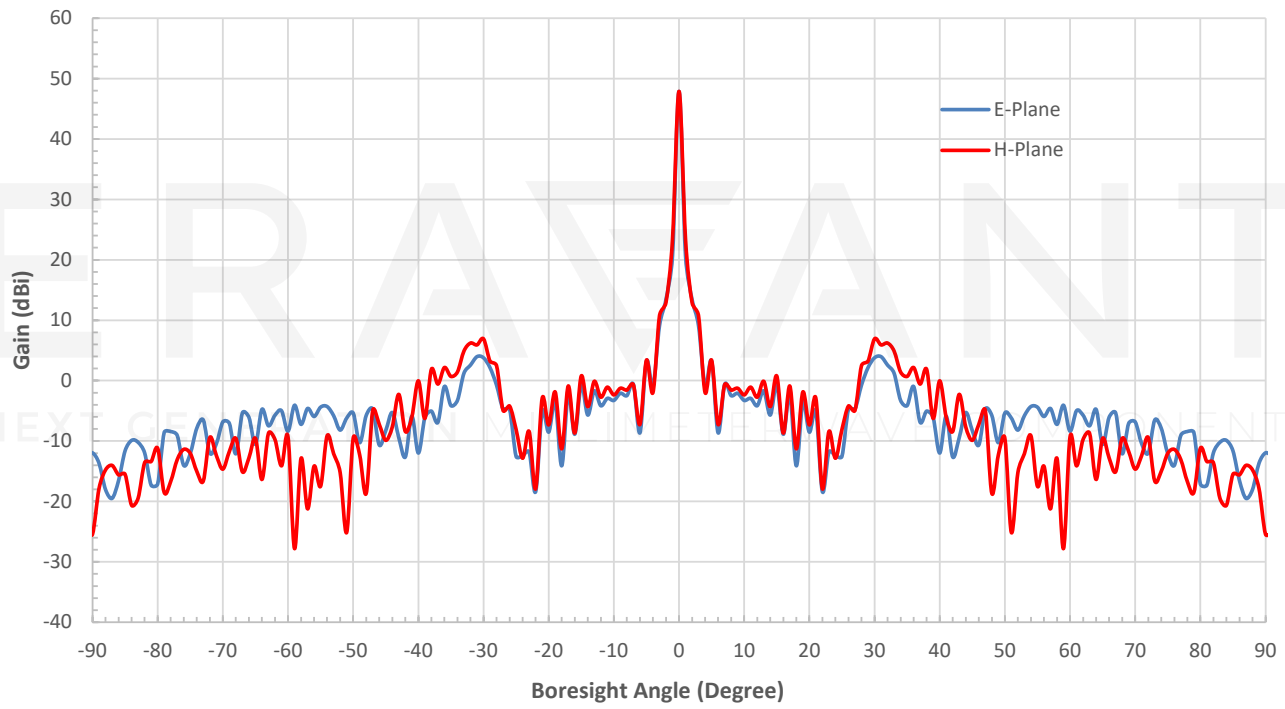


Typical Antenna Pattern @ 77 GHz

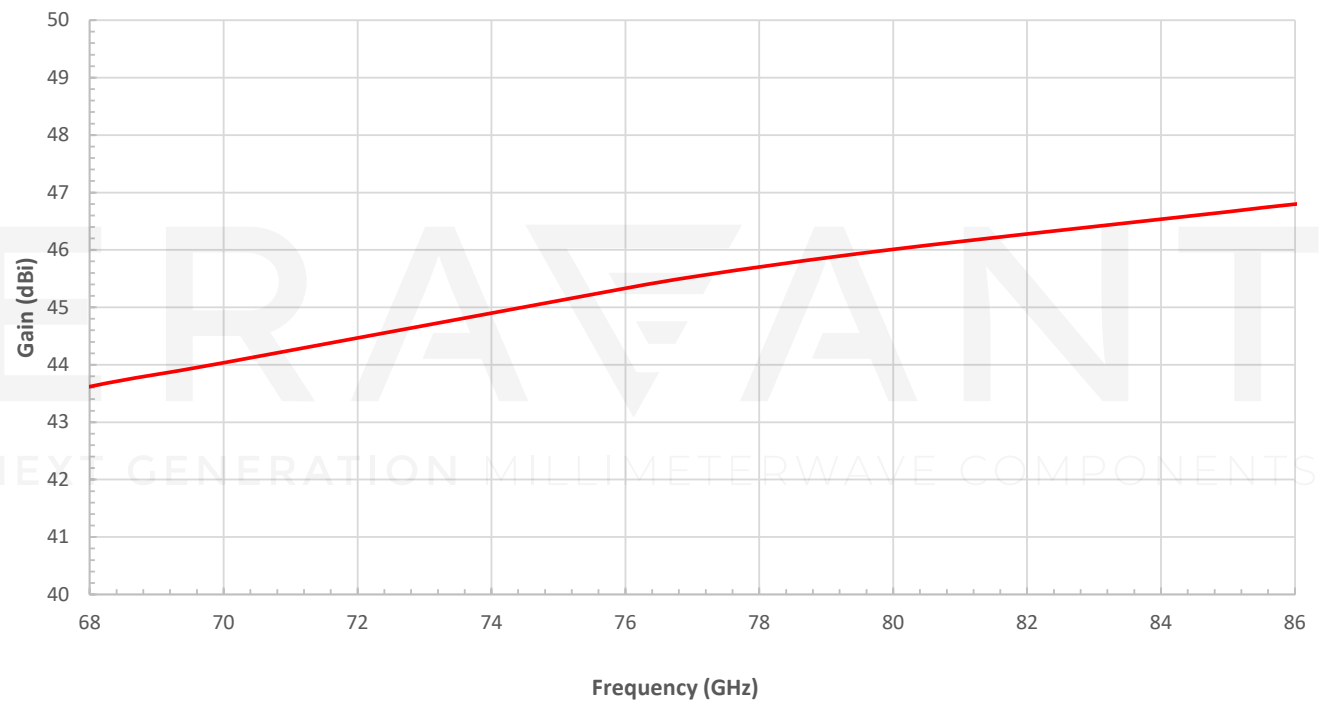


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Typical Antenna Pattern @ 86 GHz



Typical Gain vs. Frequency



Typical Return Loss Vs Frequency

