SAG-8831043702-094-S1

W Band Gaussian Lens Antenna, 88 to 100 GHz, 37 dBi

SAG-8831043702-094-S1 is a 4.0” (Ø) W-band Gaussian antenna that operates from 88 to 100 GHz. The Gaussian antenna delivers a 37 dBi nominal gain and 2.2 degrees 3 dB Beamwidth at center frequency. 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. The antenna port is a 0.094” diameter circular waveguide with UG-387/U-M anti-cocking flange. By adding a mode transition, Eravant model number **SWT-10094-SB**, the antenna port becomes a standard WR-10 waveguide, which can only support linear polarized waveforms.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	88 GHz		100 GHz
Gain		37 dBi	
3 dB Beamwidth		2.2˚	
Sidelobes		-25 dB	
Cross Polarization		-20 dB	
Return Loss		18 dB	
Polarization	Linear and Circular		
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	Ø0.094” Waveguide with UG-387/U-M Flange
Lens Diameter	4.0”
Body Material	Aluminum
Lens Material	HDPE
Body Finish	Black Anodized
Weight	2.7 lbs.
Outline	AG-CW37-094

ECCN

EAR99

FEATURES

- Center Fed
- Low Sidelobes
- Low Cross Polarization

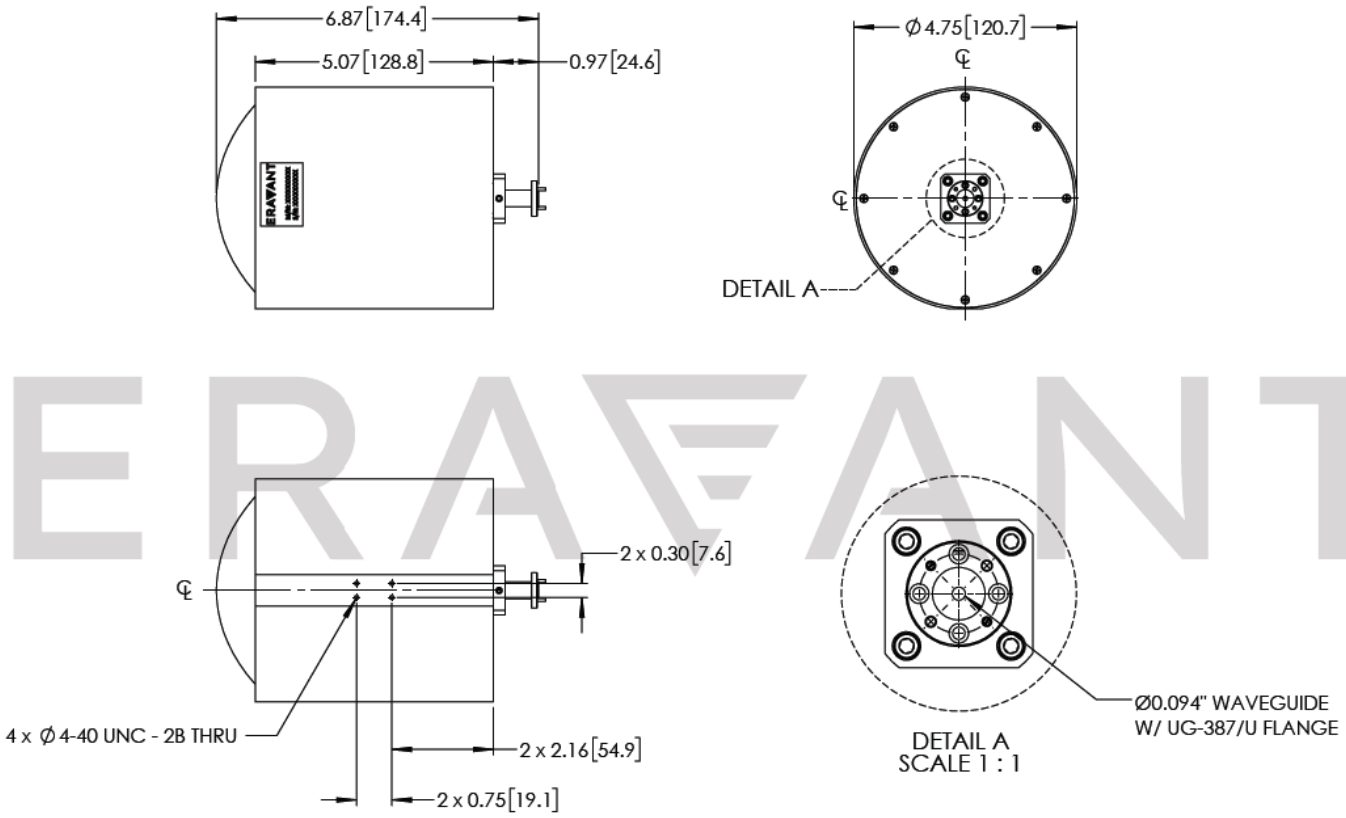
APPLICATIONS

- Radar Systems
- Communication Systems

SUPPLEMENTAL DETAILS

Mechanical Outline:

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



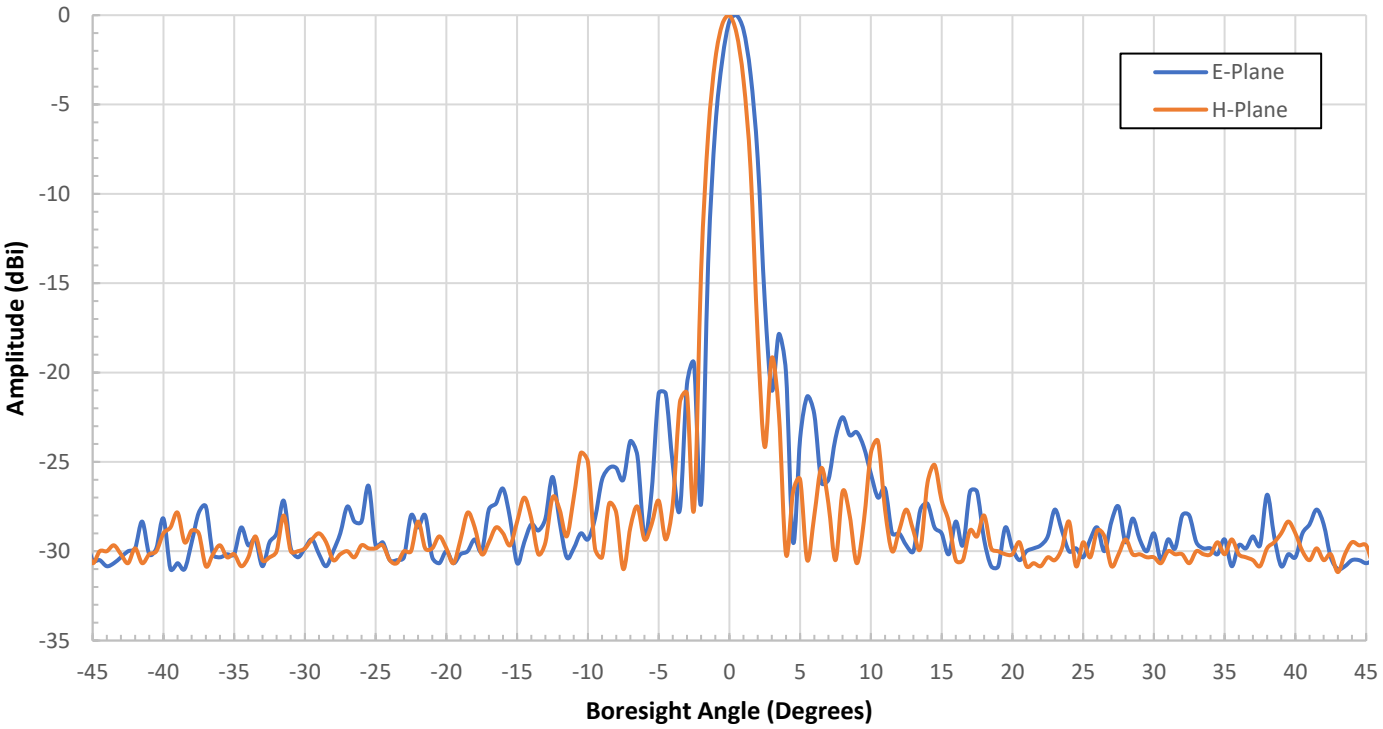
NOTE:

- 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.

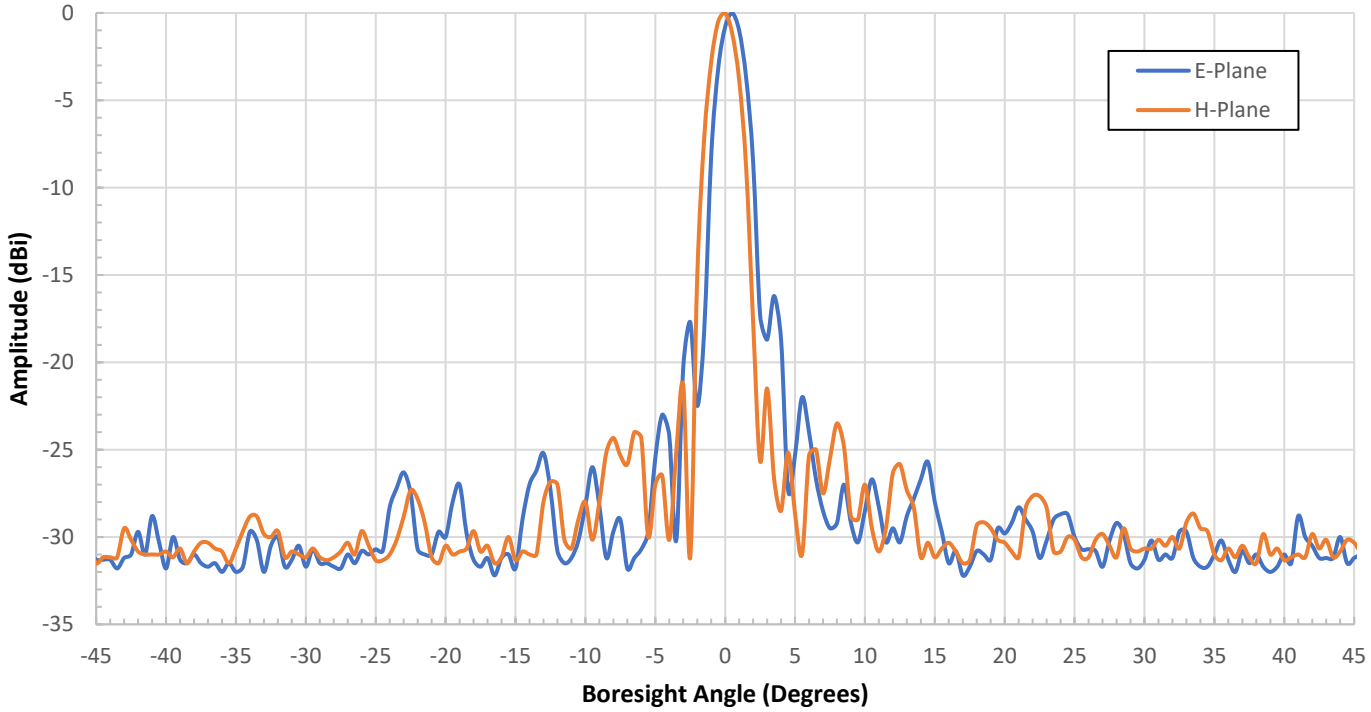
CAUTION:

- 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

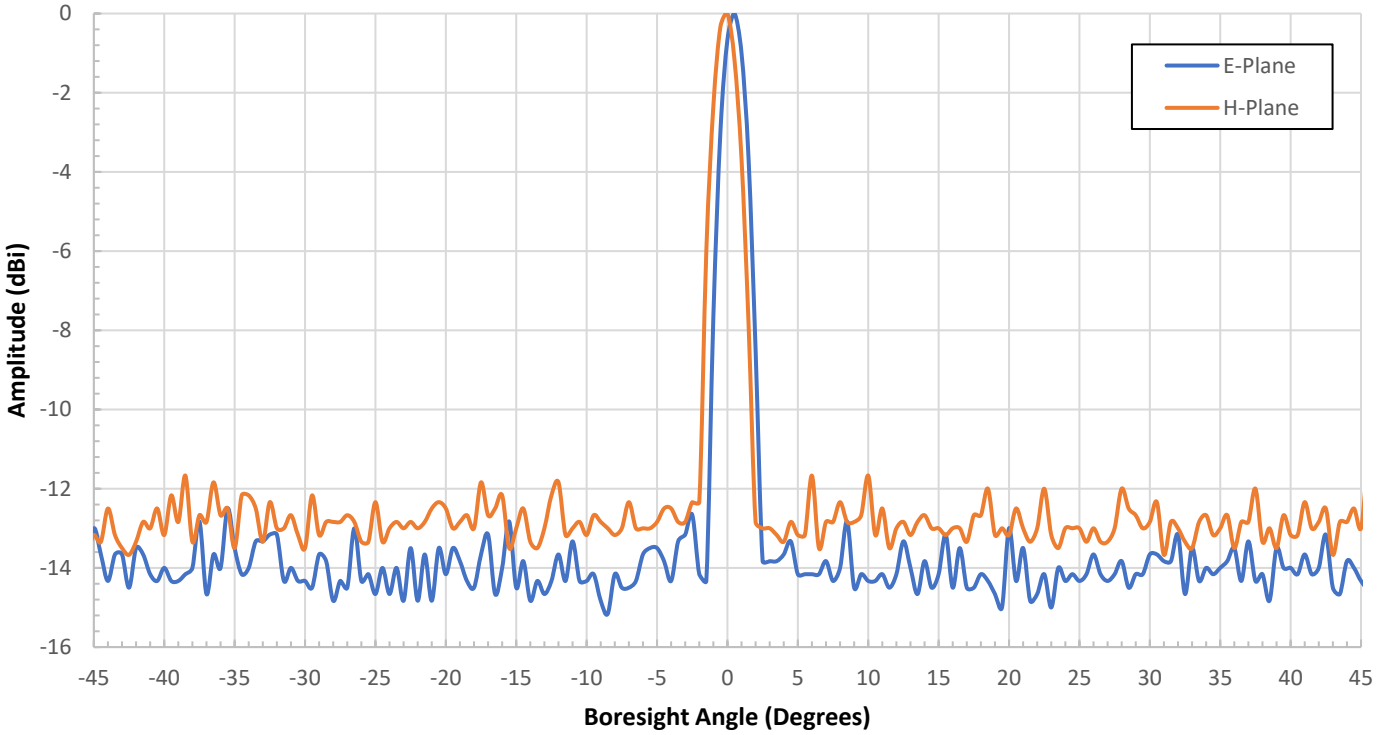
Typical Measured Antenna Patterns @ 88 GHz



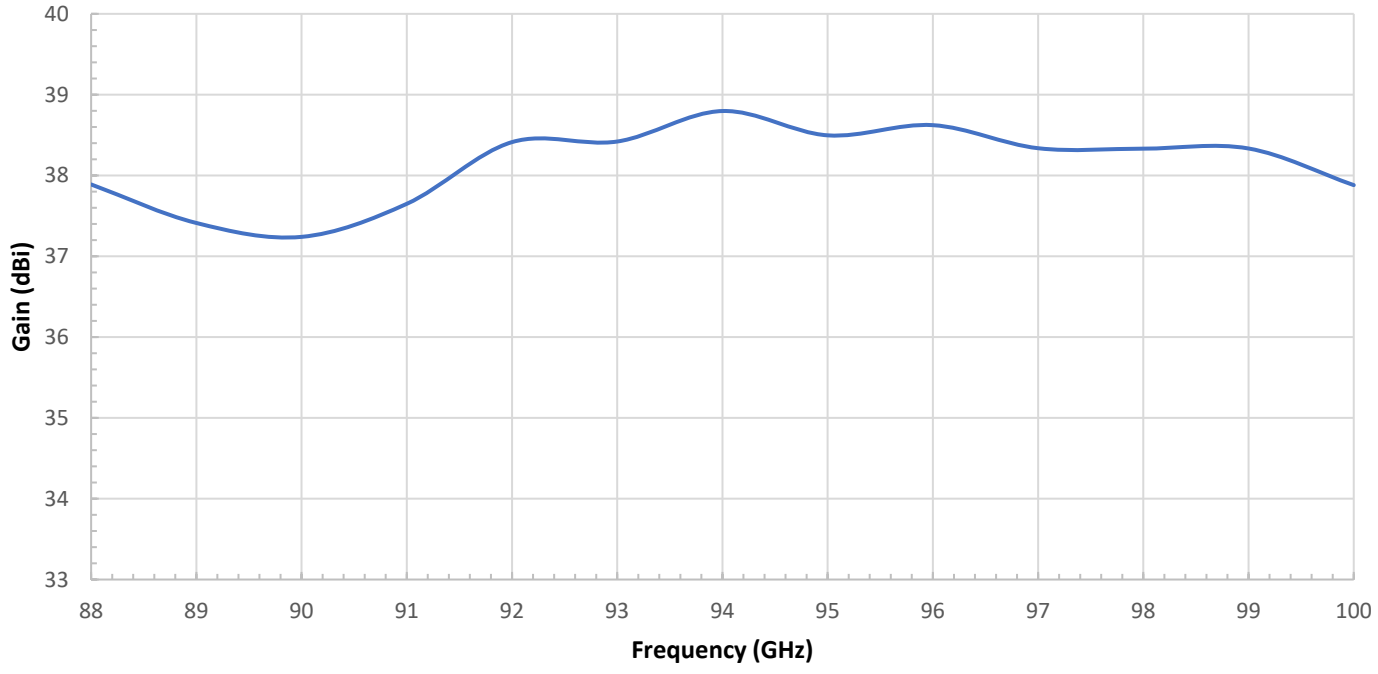
Typical Measured Antenna Patterns @ 94 GHz



Typical Measured Antenna Patterns @ 100 GHz



Typical Measured Gain vs Frequency



Typical Measured Return Loss vs Frequency