SAG-1442244501-059-S1

G-Band Gaussian Optics Antenna, 140 to 220 GHz, 6” Lens

SAG-1442244501-059-S1 is a 6.0” (Ø) G-band Gaussian antenna that operates from 140 to 220 GHz. The Gaussian antenna delivers a 45 dBi nominal gain and 1 degree half power beamwidth. The antenna supports linear and circular polarized waveforms and employs a corrugated feed horn to offer excellent aperture efficiency, high cross polarization rejection, and low sidelobe levels. This model is equipped with a standard 0.059” diameter circular waveguide and UG-387/U-M anti-cocking flange as its input port. By adding a mode transition, Eravant model number **SWT-05059-SB**, the input port becomes a standard WR-05 waveguide, which can only support linear polarized waveforms.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	140 GHz		220 GHz
Gain		45 dBi	
3 dB Beamwidth		1˚	
Sidelobes		-25 dB	
Return Loss		15 dB	
Polarization		Linear and Circular	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	Ø 0.059” Circular Waveguide w/ UG-387/U-M Anti-Cocking Flange
Lens Diameter	6”
Lens Material	HDPE
Body Material	Aluminum
Body Finish	Black Anodized
Weight	7.5 lbs.
Outline	AG-CG45-059-A

ECCN

EAR99

FEATURES

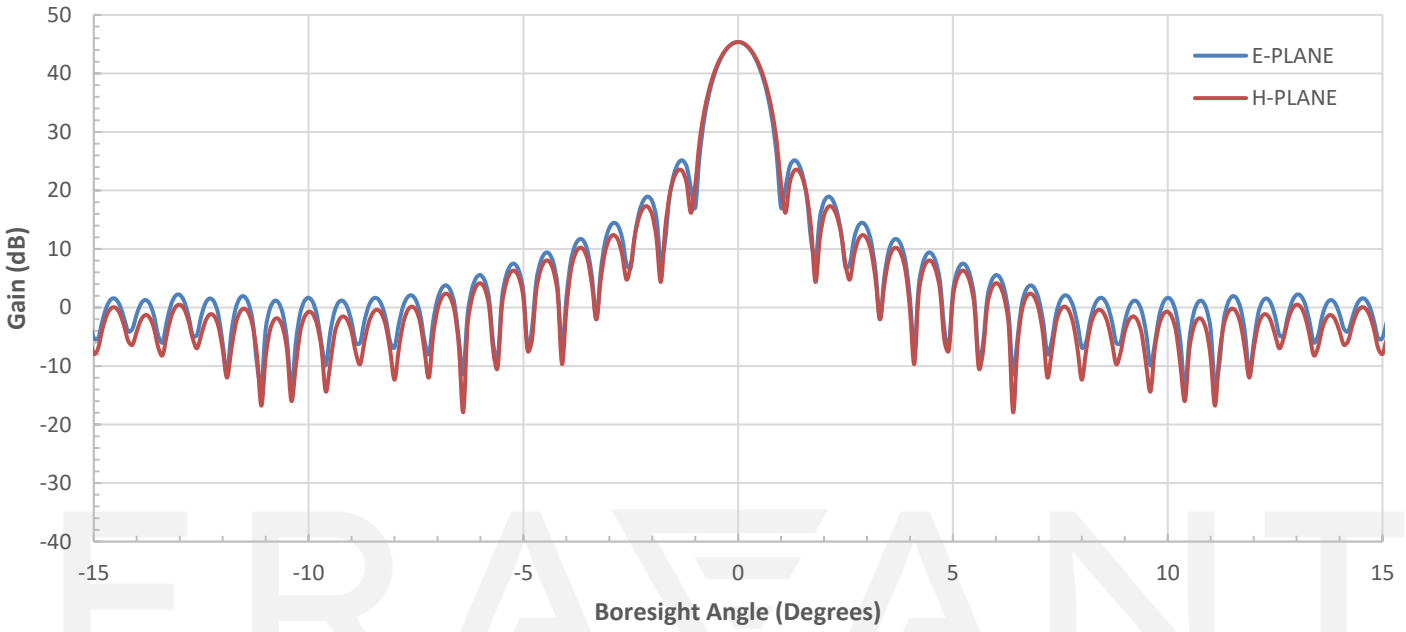
- Center Fed
- Low Sidelobes
- Low Cross Polarization

APPLICATIONS

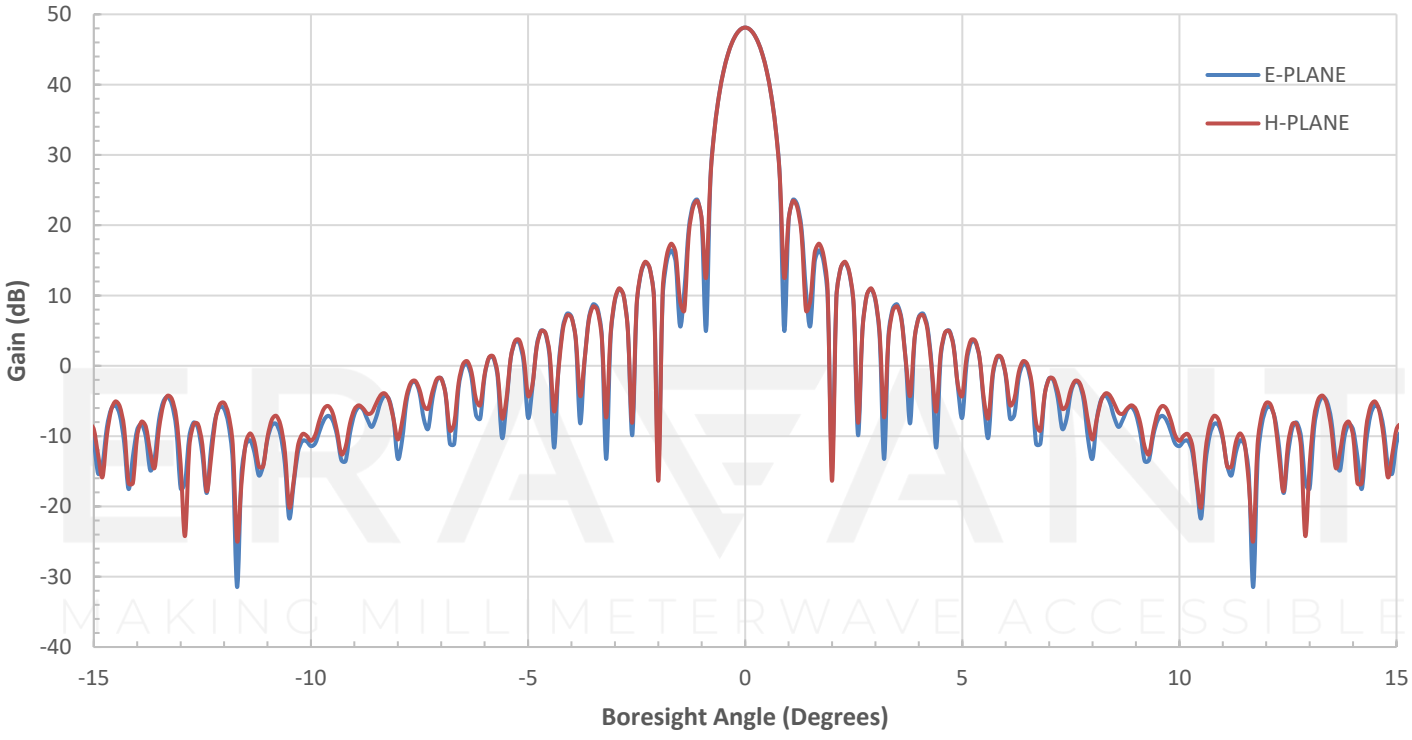
- 6G R&D Test Lab
- 6G Communication Systems

SUPPLEMENTAL DETAILS

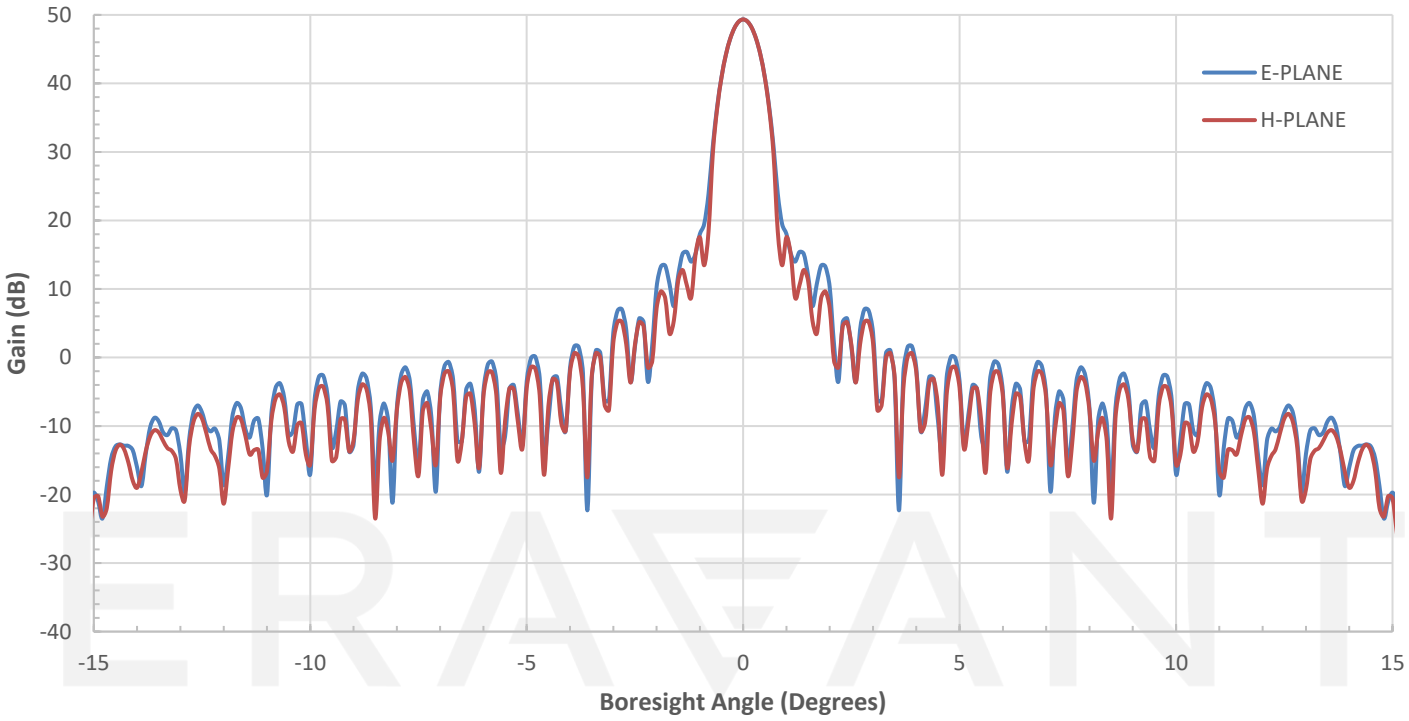
Simulated Antenna Patterns @ 140 GHz



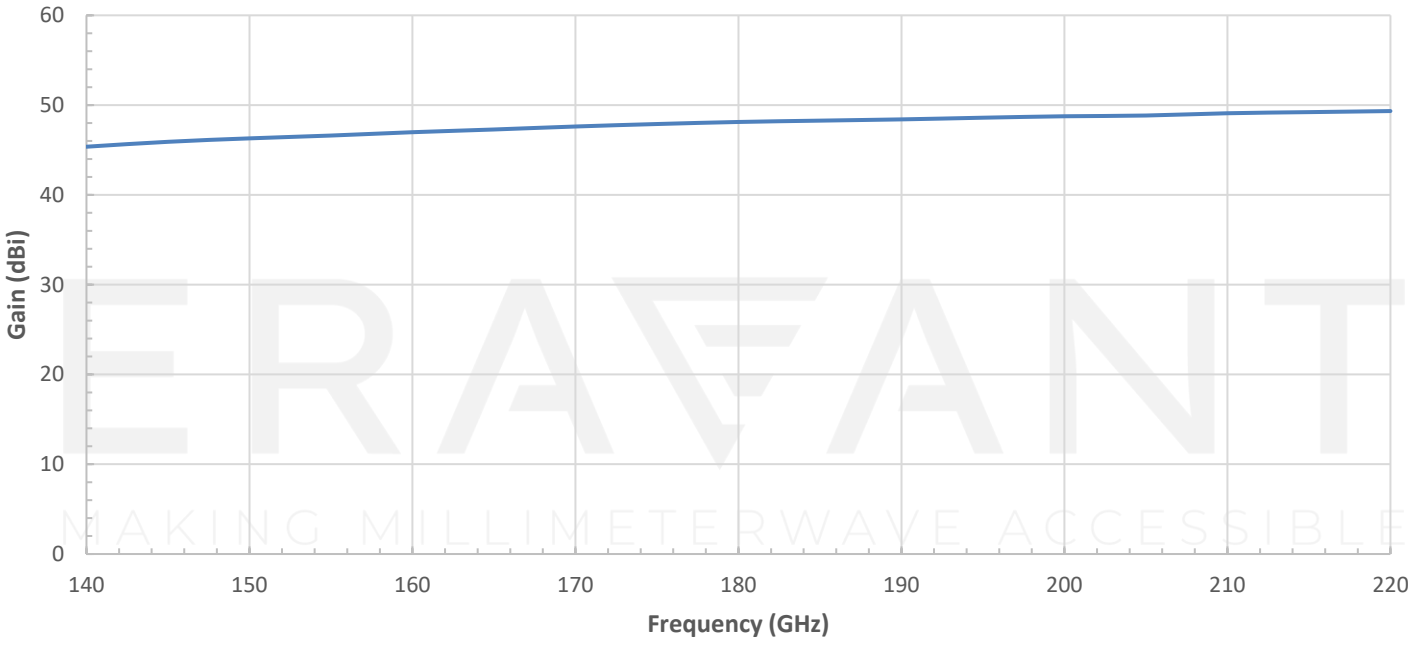
Simulated Antenna Patterns @ 180 GHz



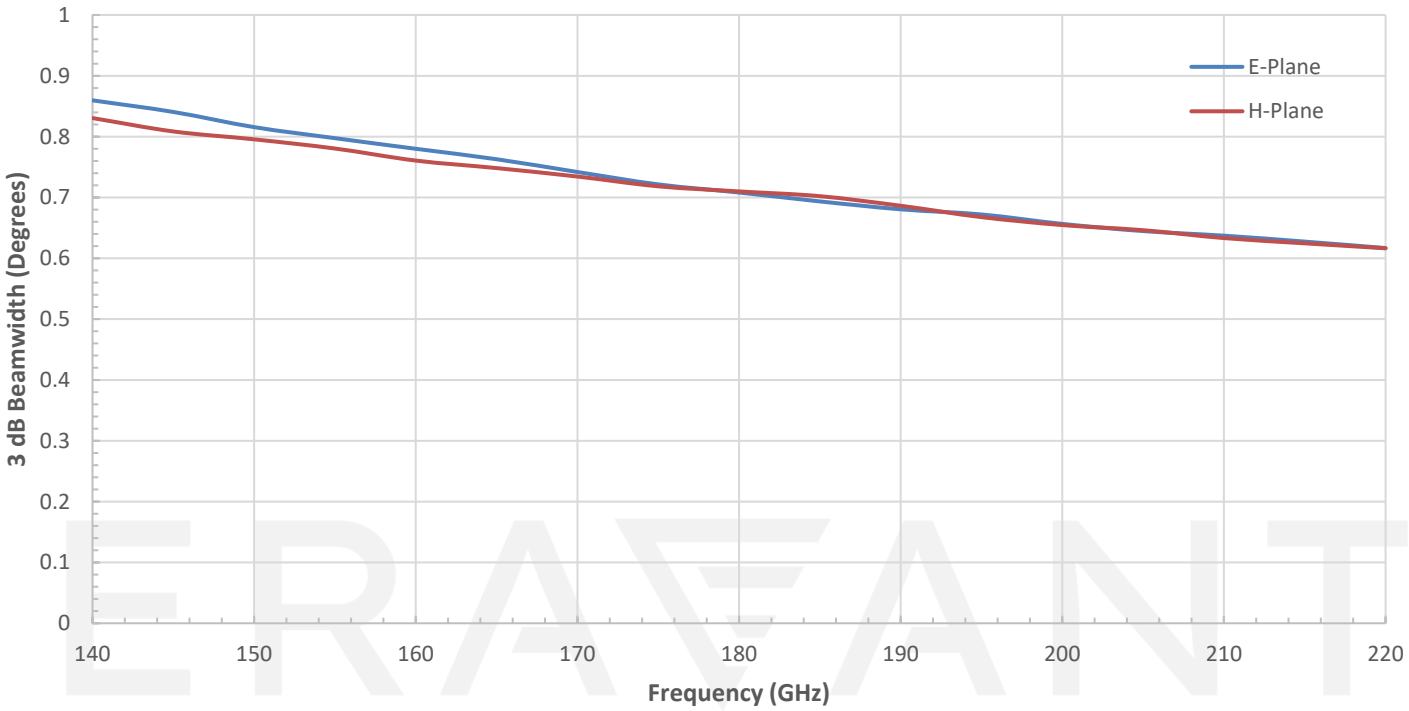
Simulated Antenna Patterns @ 220 GHz



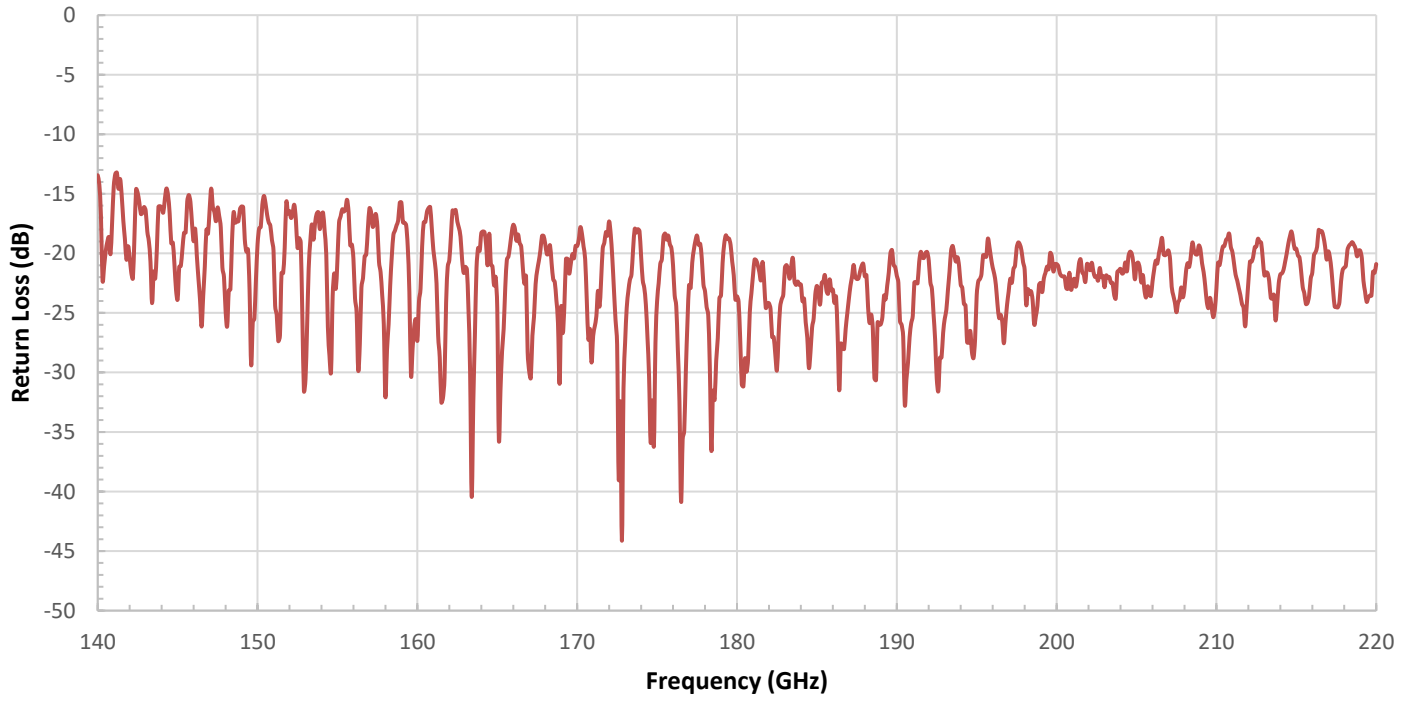
Simulated Gain vs Frequency



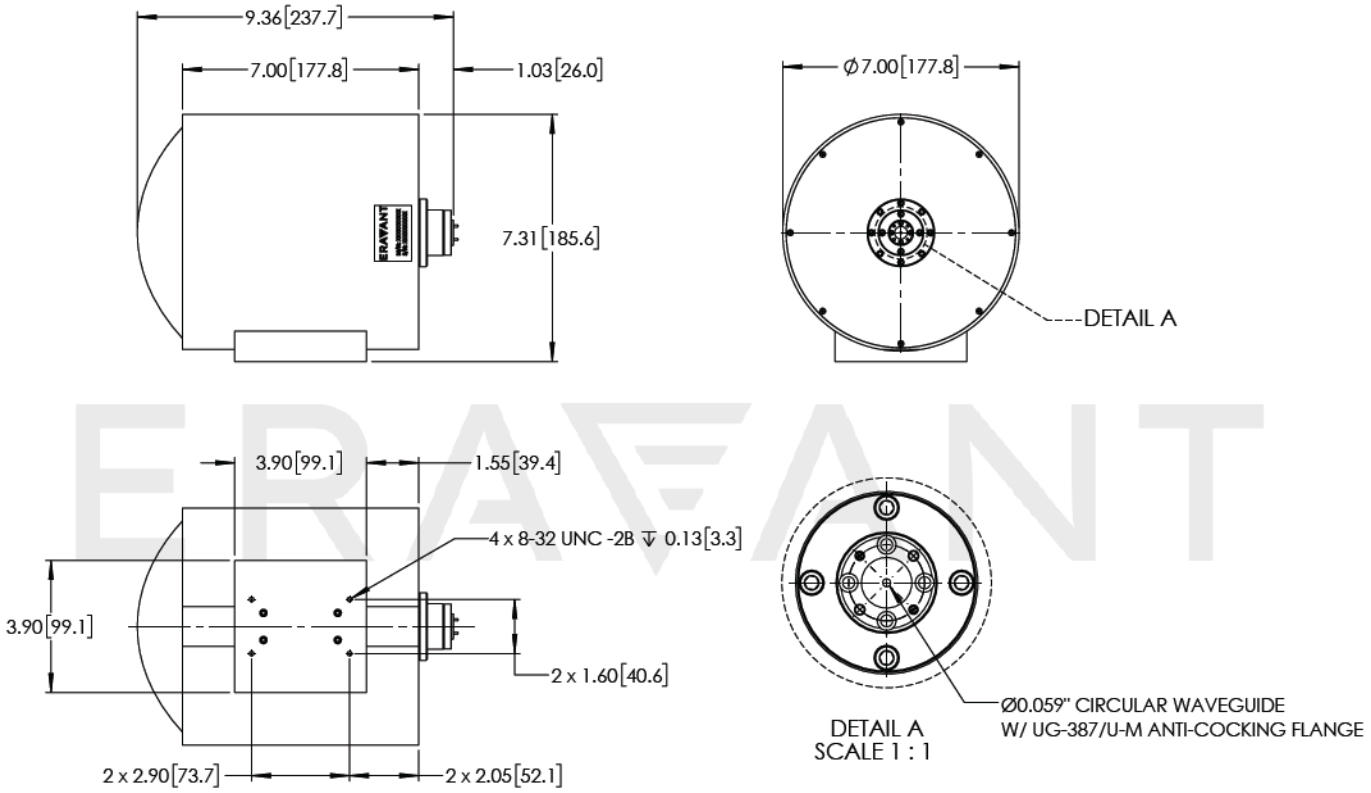
Simulated 3 dB Beamwidth vs Frequency



Typical Measured Return Loss vs Frequency



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:

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