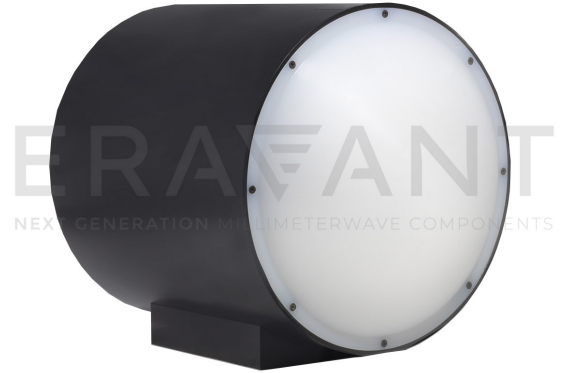


## SAG-8831044002-10-S1

### W-Band Gaussian Optics Antenna, 88 to 100 GHz, 40 dBi

**SAG-8831044002-10-S1** is a 6.0" W-Band Gaussian antenna that operates from 88 to 100 GHz. The Gaussian antenna delivers a 40 dBi nominal gain and 1.5 degree half power beamwidth at the center frequency. The antenna supports linear 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 WR-10 waveguide and UG-387/U-M anti-cocking flange as its input port. By removing the mode transition, Eravant model number SWT-10094-SB, the input port becomes 0.094" diameter circular waveguide, which can support linear and circular polarized waveforms.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	88 GHz		100 GHz
Gain		40 dBi	
3 dB Beamwidth		1.5°	
Sidelobes		-25 dB	
Cross Polarization		-20 dB	
Polarization		Linear	
Return Loss		15 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

#### Mechanical Specifications:

Item	Specification
Antenna Port	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Housing Material	Aluminum
Housing Finish	Black Anodized
Weight	7.25 lbs
Lens Diameter	6.0"
Dimensions	7.31" (H) x 10.30" (L)
Outline	AG-RW40-A

#### ECCN

EAR99

#### FEATURES

- Center Fed
- Low Sidelobes
- Low Cross Polarization

#### APPLICATIONS

- Radar Systems
- Communication Systems
- Plasma Systems

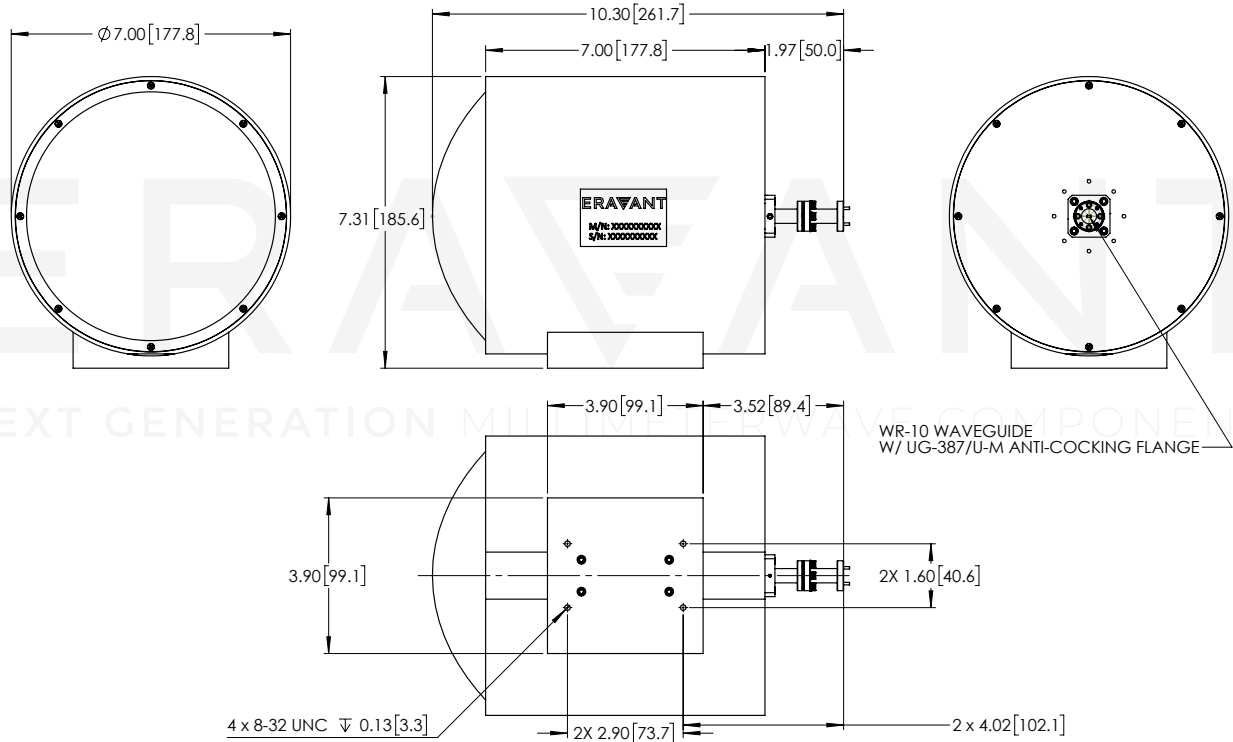
#### SUPPLEMENTAL DETAILS



**SAG-88831044002-10-S1**

## Mechanical Outline:

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



**NOTE:**

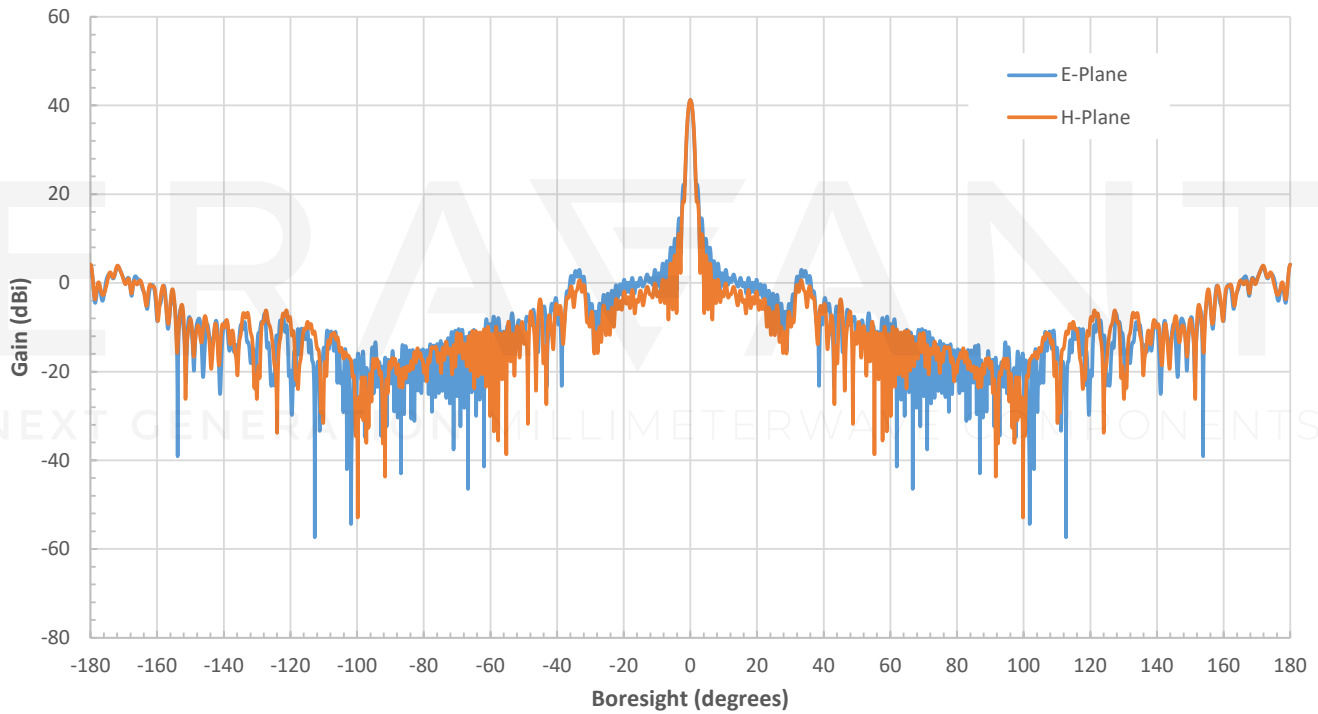
- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right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

**CAUTION:**

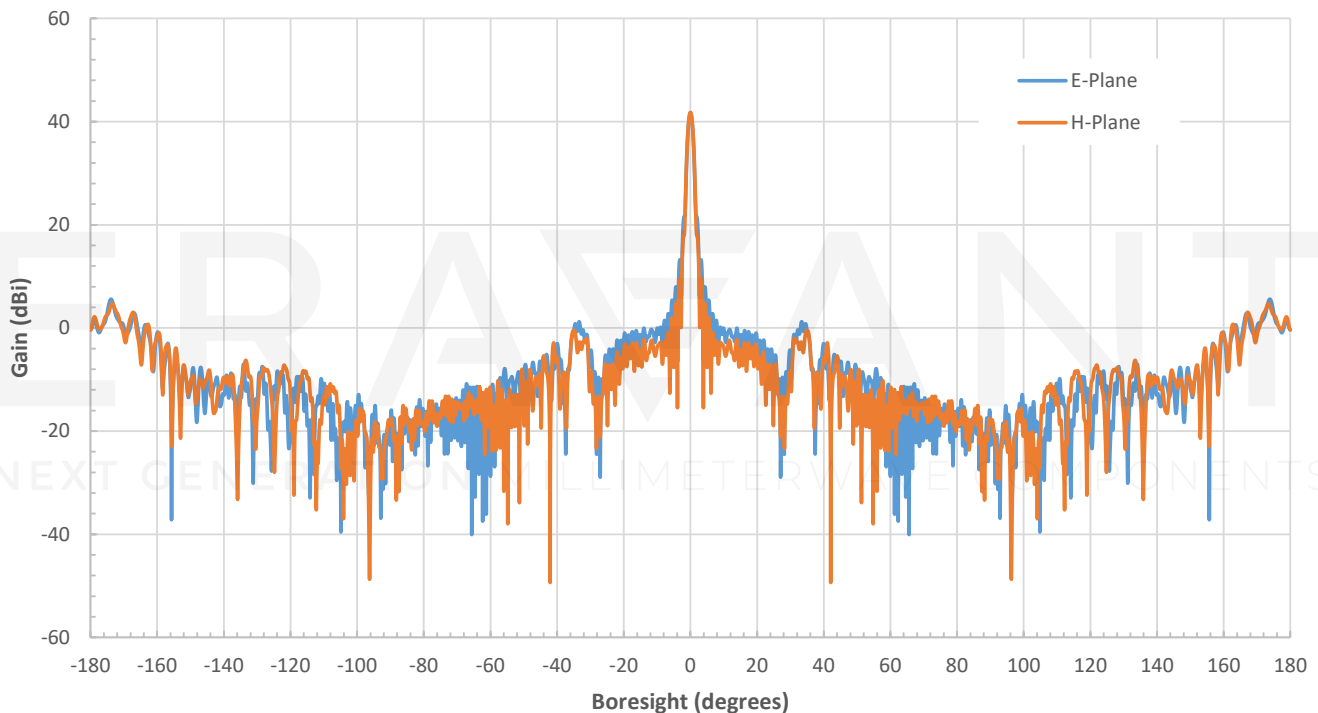
- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the antenna will cause performance degradation and possible device damage.
- For 1 mm connectors proper torque should be applied:  $4.0 \pm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

## SAG-88831044002-10-S1

Simulated Antenna Patterns @ 88 GHz

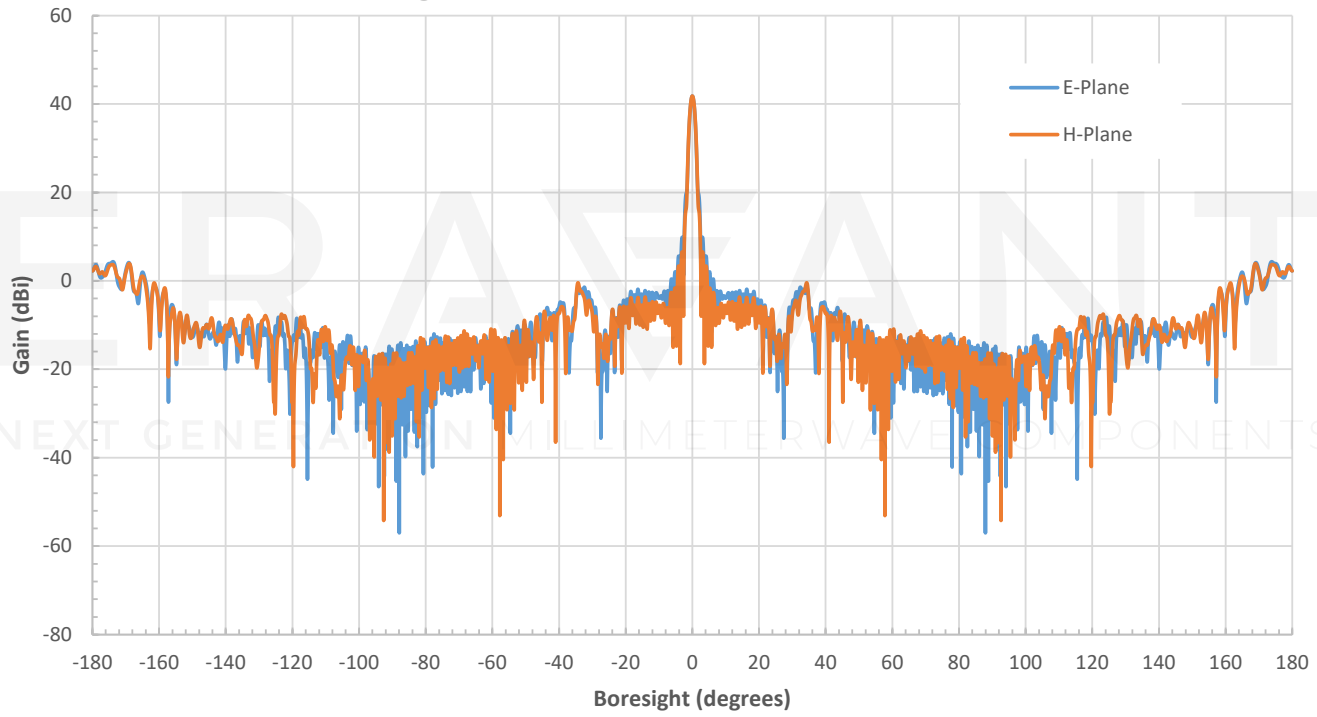


Simulated Antenna Patterns @ 94 GHz

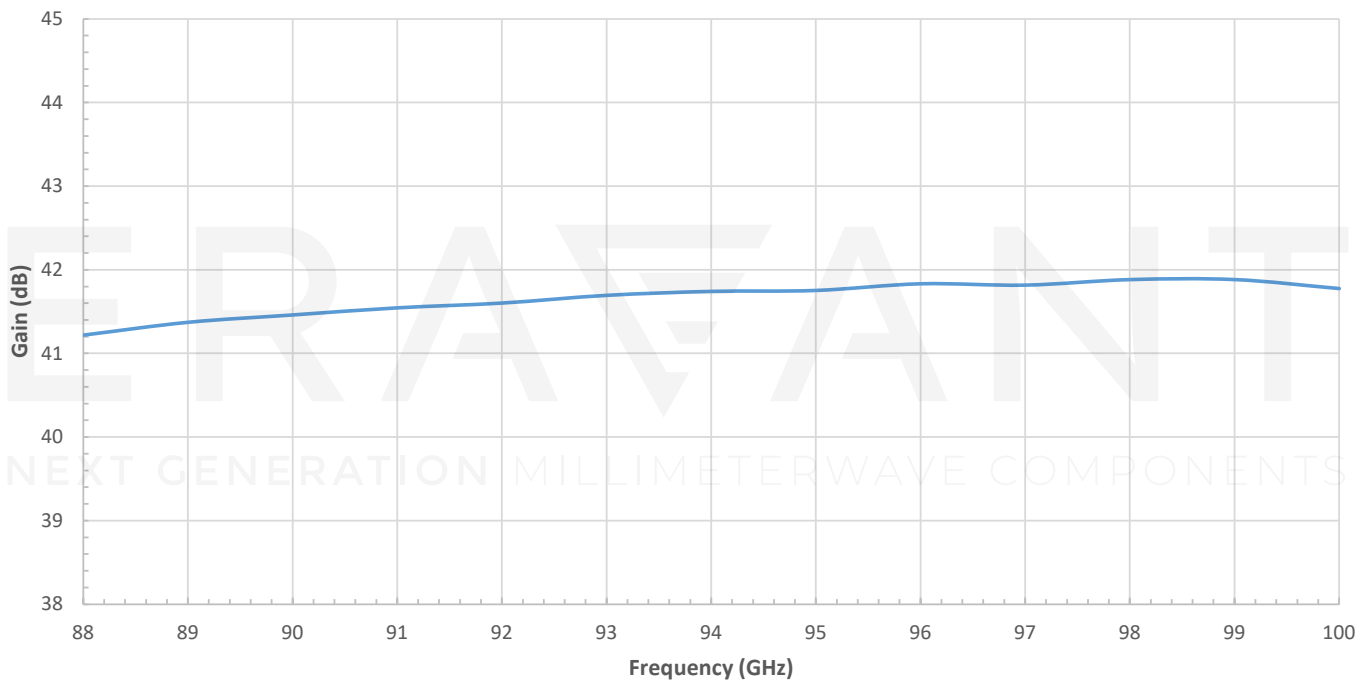


## SAG-88831044002-10-S1

### Simulated Antenna Patterns @ 100 GHz



### Simulated Gain vs. Frequency



Typical Return Loss Vs. Frequency

