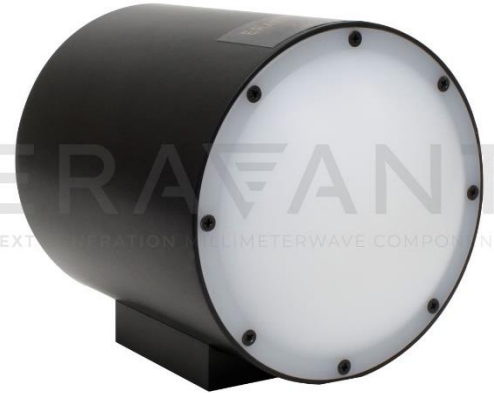


SAG-7138634002-12-S1

E-Band Gaussian Optics Antenna, 71 to 86 GHz, 40 dBi Gain, 6"

SAG-7138634002-12-S1 is a 6" E-Band Gaussian antenna that operates from 71 to 86 GHz. The Gaussian antenna delivers a 40 dBi nominal gain and 1.8-degree typical half-power beamwidth at 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 sidelobe levels. This model is equipped with a standard WR-12 waveguide with UG-387/U flange as its input port. By removing the mode transition, model **SWT-12110-SB**, the input port becomes a $\varnothing 0.110$ " circular waveguide, which can support both linear and circular polarized waveforms.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	71 GHz		86 GHz
Gain		40 dBi	
3 dB Beamwidth		1.8°	
Sidelobes		-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-12 Waveguide with UG-387/U Flange
Material	Aluminum
Finish	Black Anodized
Lens Diameter	6.0"
Outline	AG-RE40

ECCN

EAR99

FEATURES

- Center Fed
- Low Sidelobes
- Low Cross Polarization

APPLICATIONS

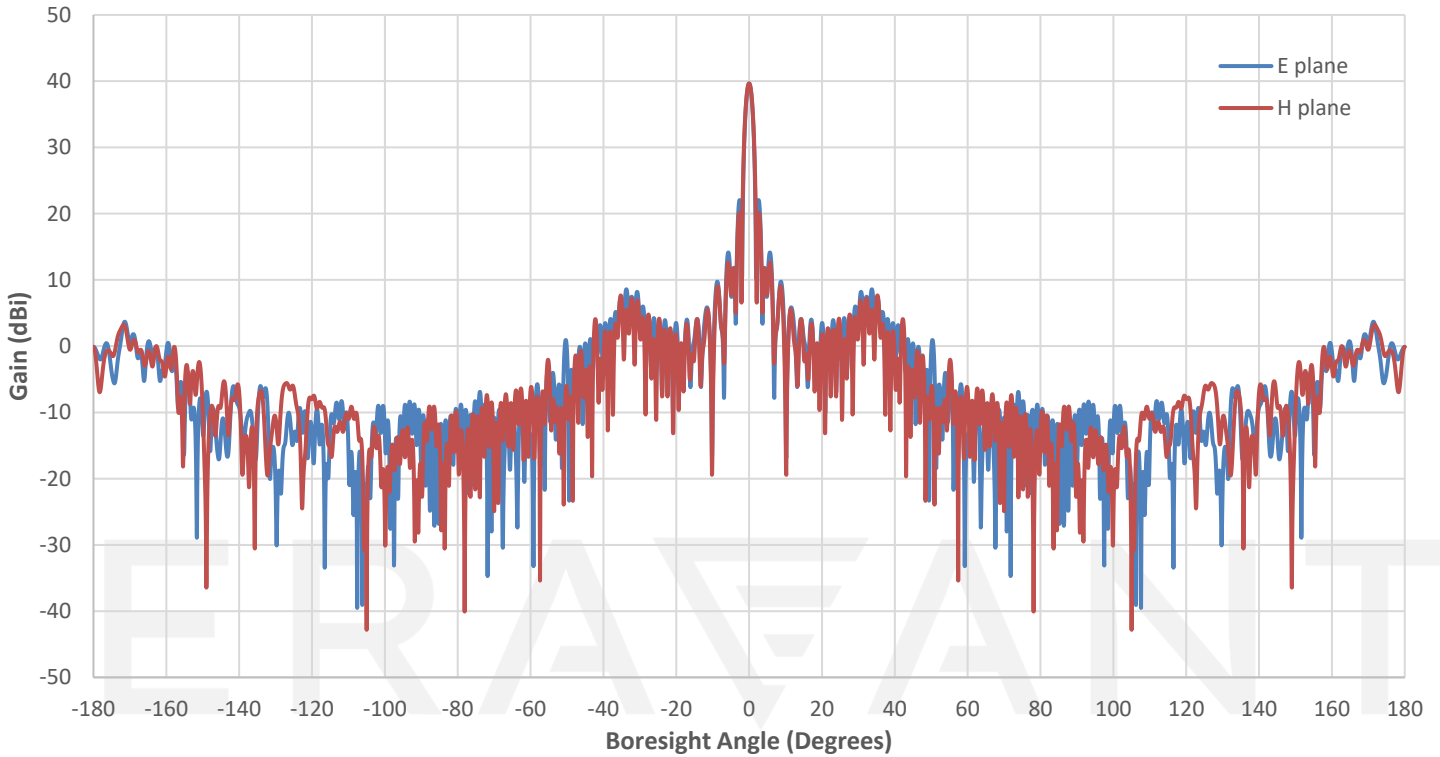
- Radar Systems
- Communication Systems
- Plasma Systems

SUPPLEMENTAL DETAILS

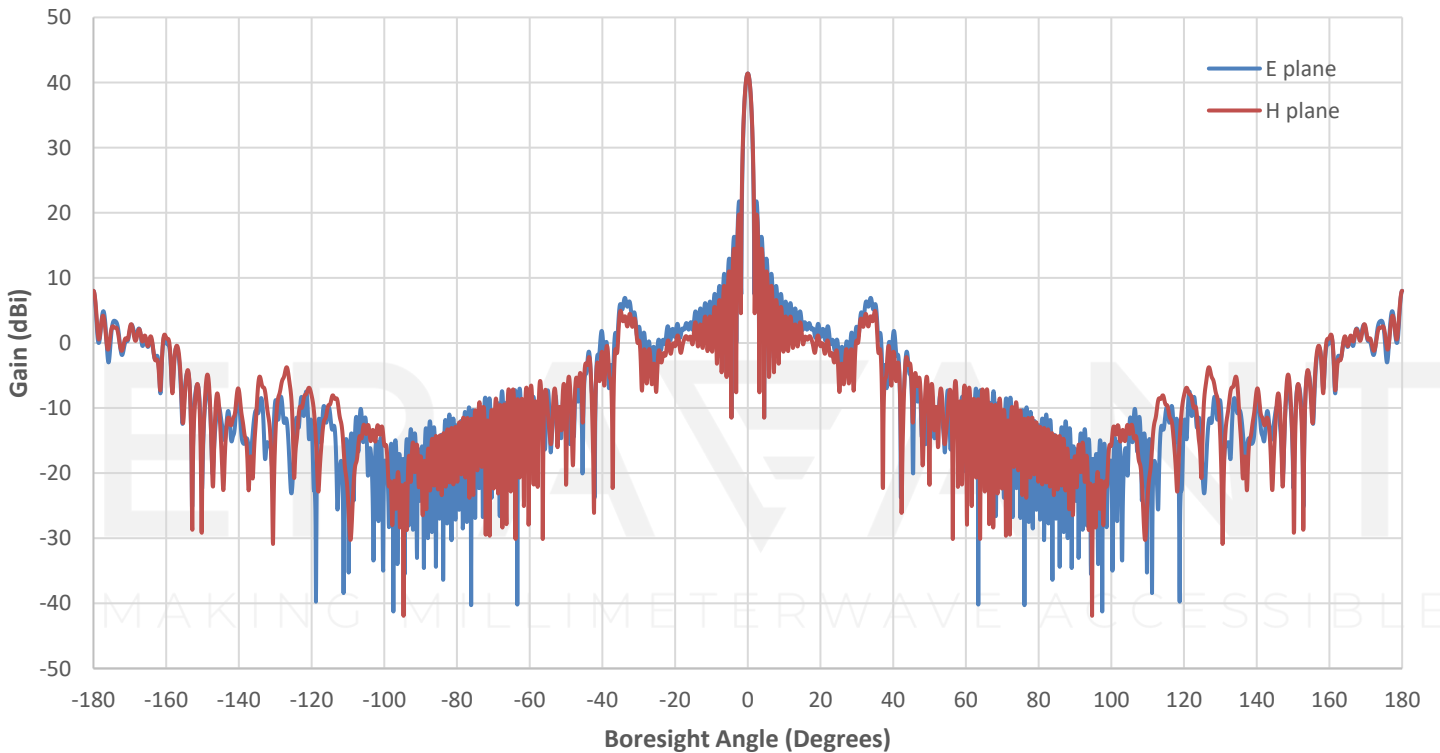


SAG-7138634002-12-S1

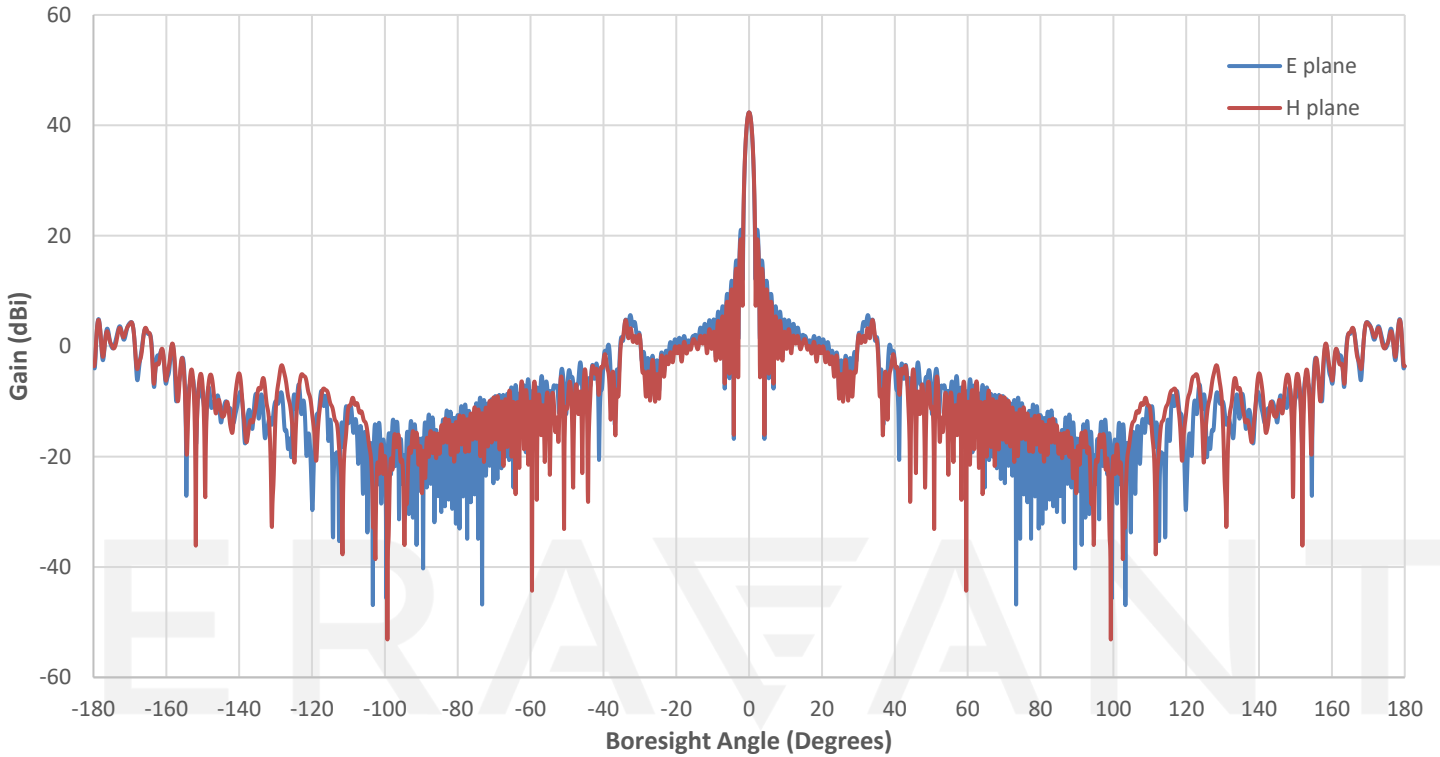
Simulated Pattern at 71 GHz



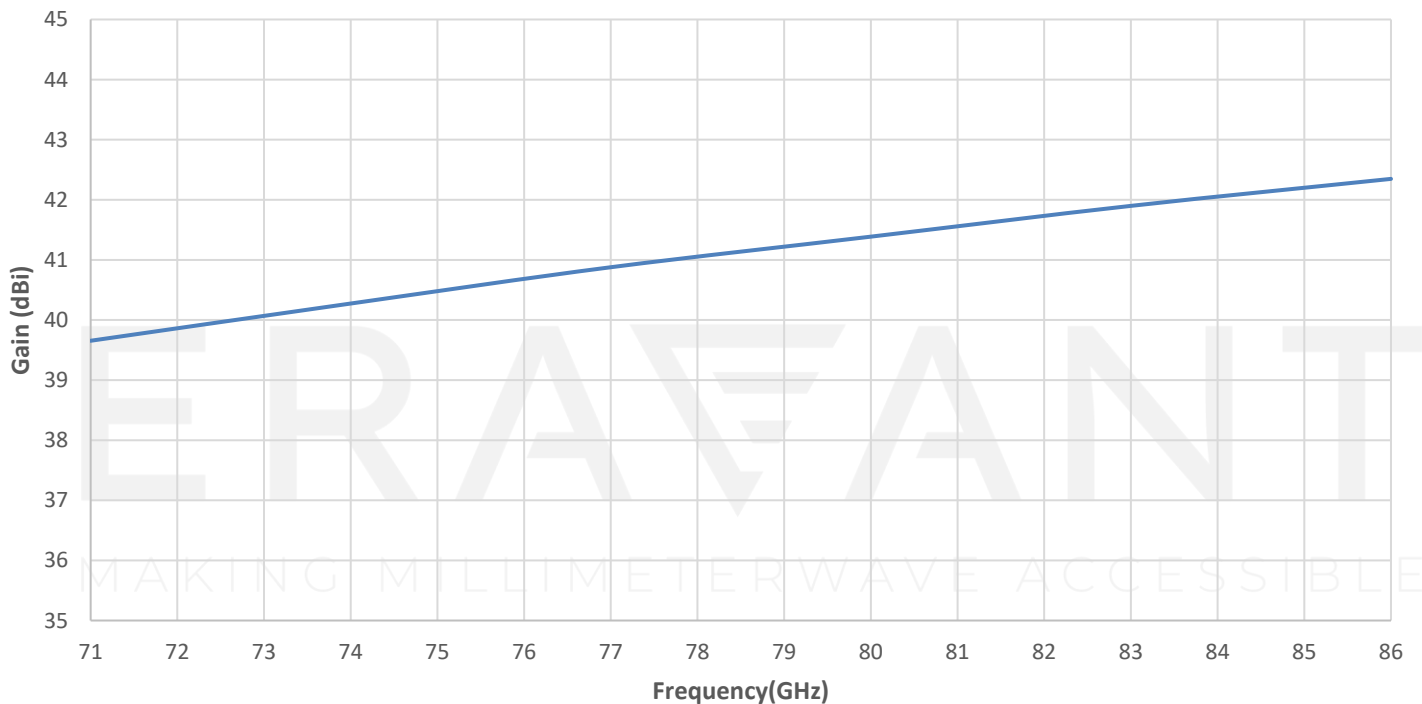
Simulated Pattern at 80 GHz



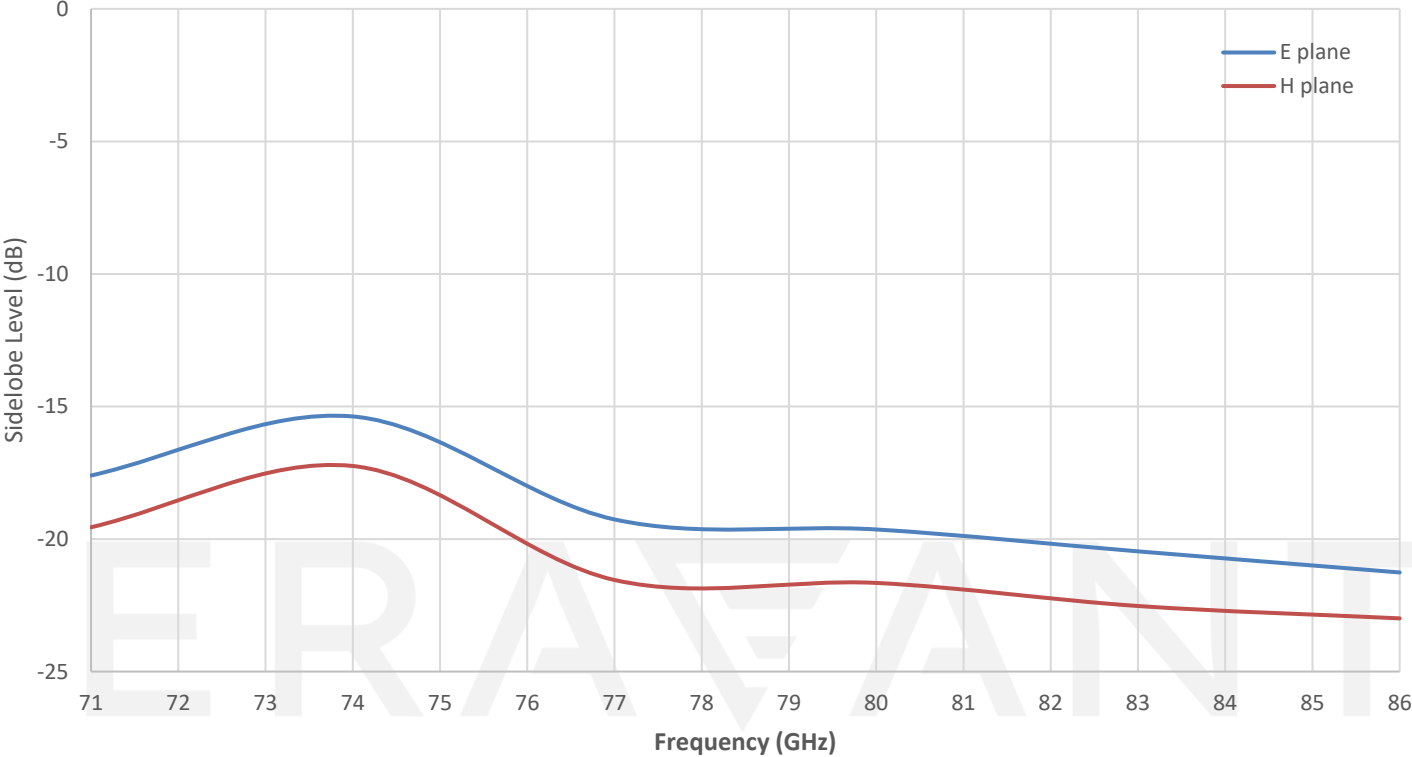
Simulated Pattern at 86 GHz



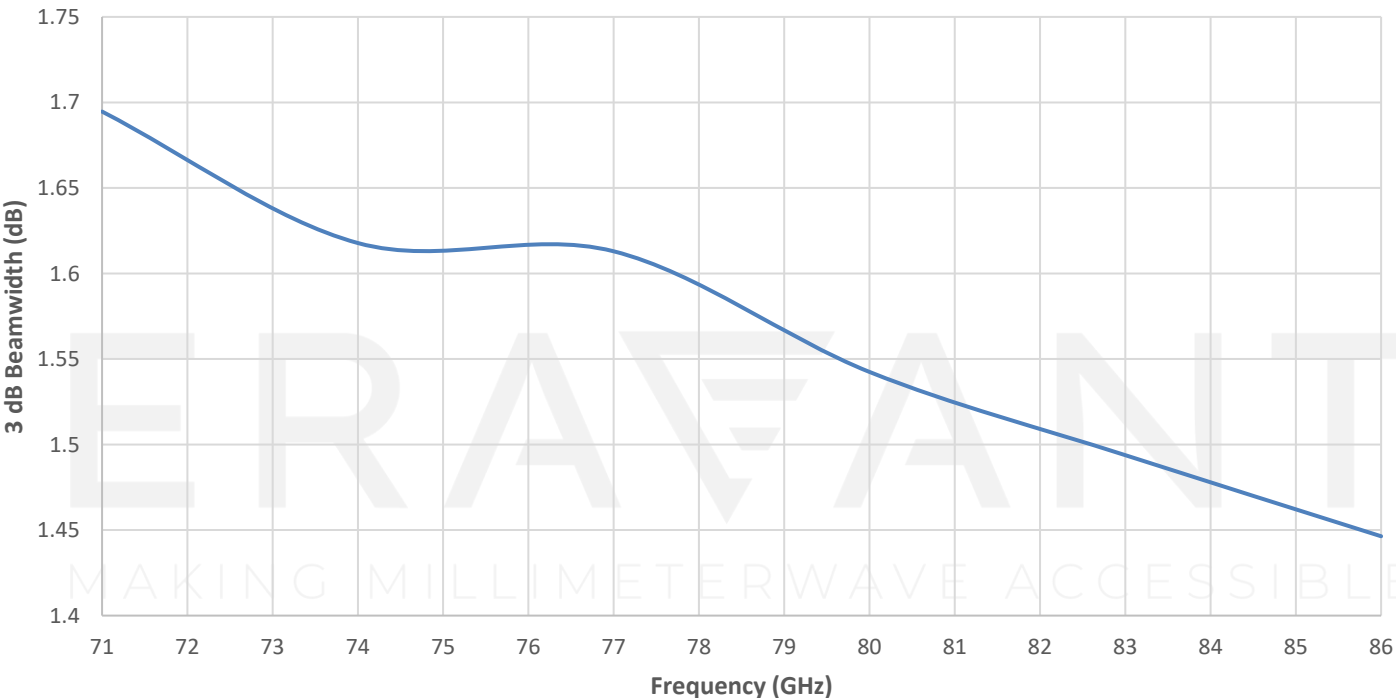
Simulated Gain vs Frequency



Simulated Sidelobe level vs Frequency

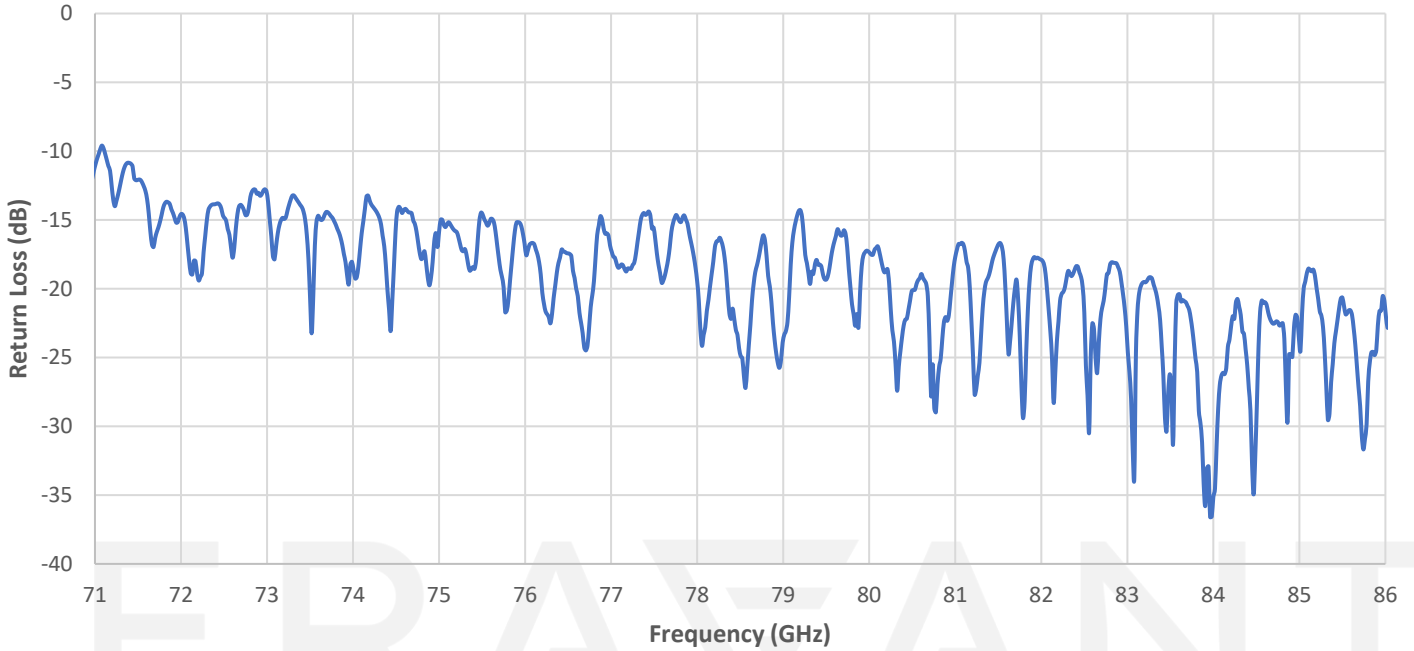


Simulated 3 dB Beamwidth vs Frequency

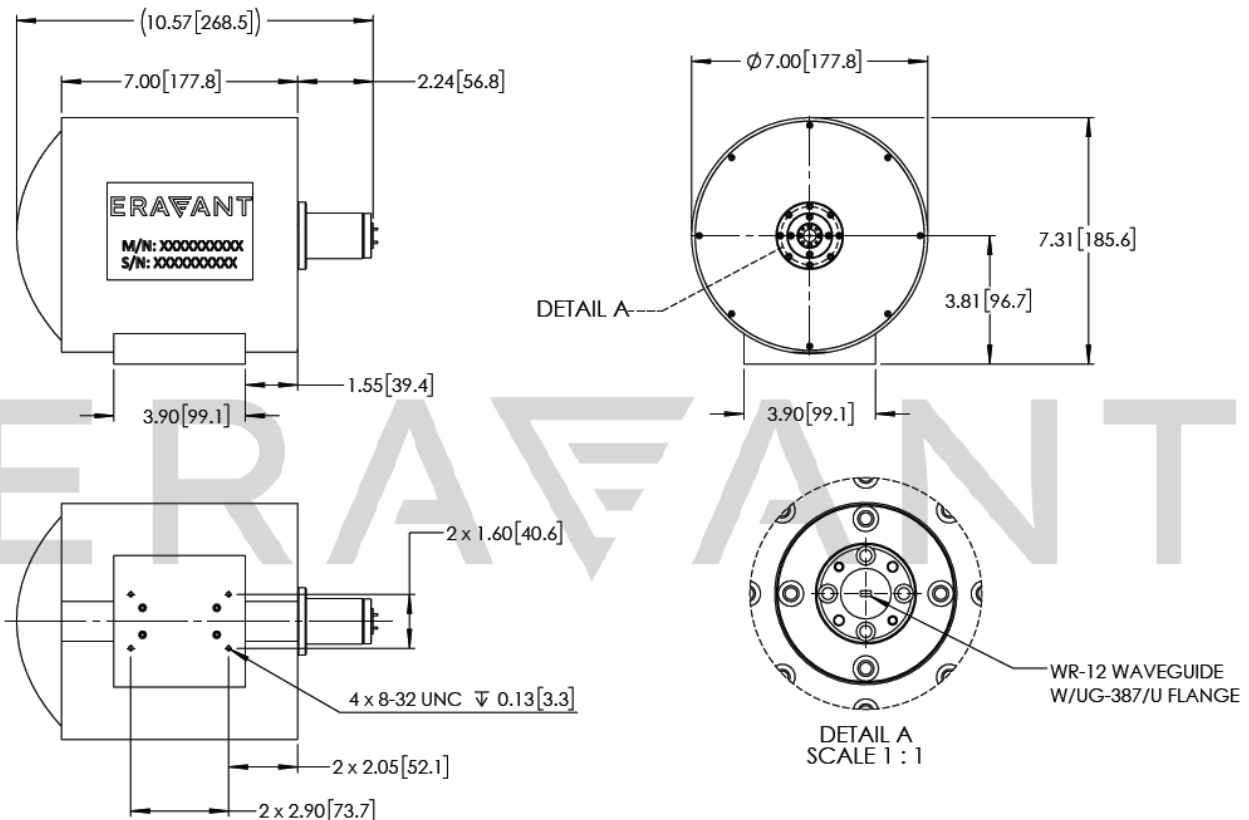


SAG-7138634002-12-S1

Measured Return Loss vs Frequency



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



Note:

- All antenna pattern and gain data presented is simulated. Actual data may vary, slightly.
- Eravant reserves the right to change the information presented without notice.

Caution:

- Foreign objects in the waveguide will affect device performance and may damage the antenna.

