

SAF-7531141340-110-S1

W-Band Scalar Feed Horn Antenna, 13 dBi Gain

SAF-7531141340-110-S1 is a W-band scalar feed horn antenna that operates from 75 to 110 GHz. The antenna offers a 13 dBi nominal gain, 40 degree typical half power beamwidth, and -25 dB typical side lobe level. The scalar feed horn is equipped with a 0.110" diameter circular waveguide that supports both linear and circular polarization. A rectangular waveguide port configuration that only supports linear polarization is available under a different model number.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	75 GHz	92.5 GHz	110 GHz
Gain		13 dBi	
3 dB Beamwidth, E-Plane		40°	
3 dB Beamwidth, H-Plane		40°	
Sidelobes, E-Plane		-25 dB	
Sidelobes, H-Plane		-25 dB	
Return Loss		20 dB	
Polarization	Linear and Circular		
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	0.110" Diameter Circular Waveguide
Flange Type	UG-387/U-M
Material	Brass
Finish	Gold Plated
Weight	1.8 Oz
Size	0.75" (L) x 0.75 (Ø)
Outline	AF-CW13-110

ECCN

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FEATURES

- Circular Waveguide Interface
- Precisely Machined
- Low Side Lobe Level
- High Return Loss
- Linear and Circular Polarization

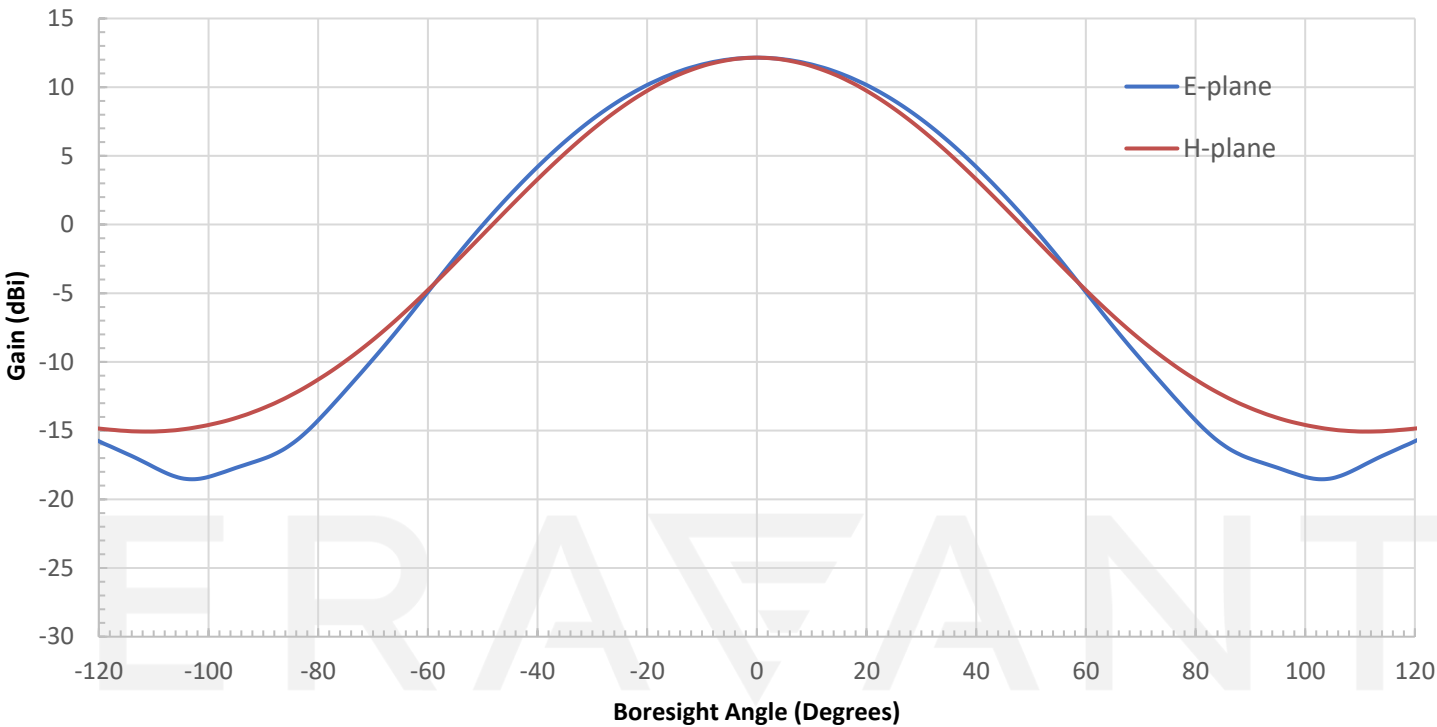
APPLICATIONS

- Feed Horn for Gaussian Optical Antennas
- Feed Horn for Cassegrain Antennas
- Rapid System Setups
- Engineering Setups

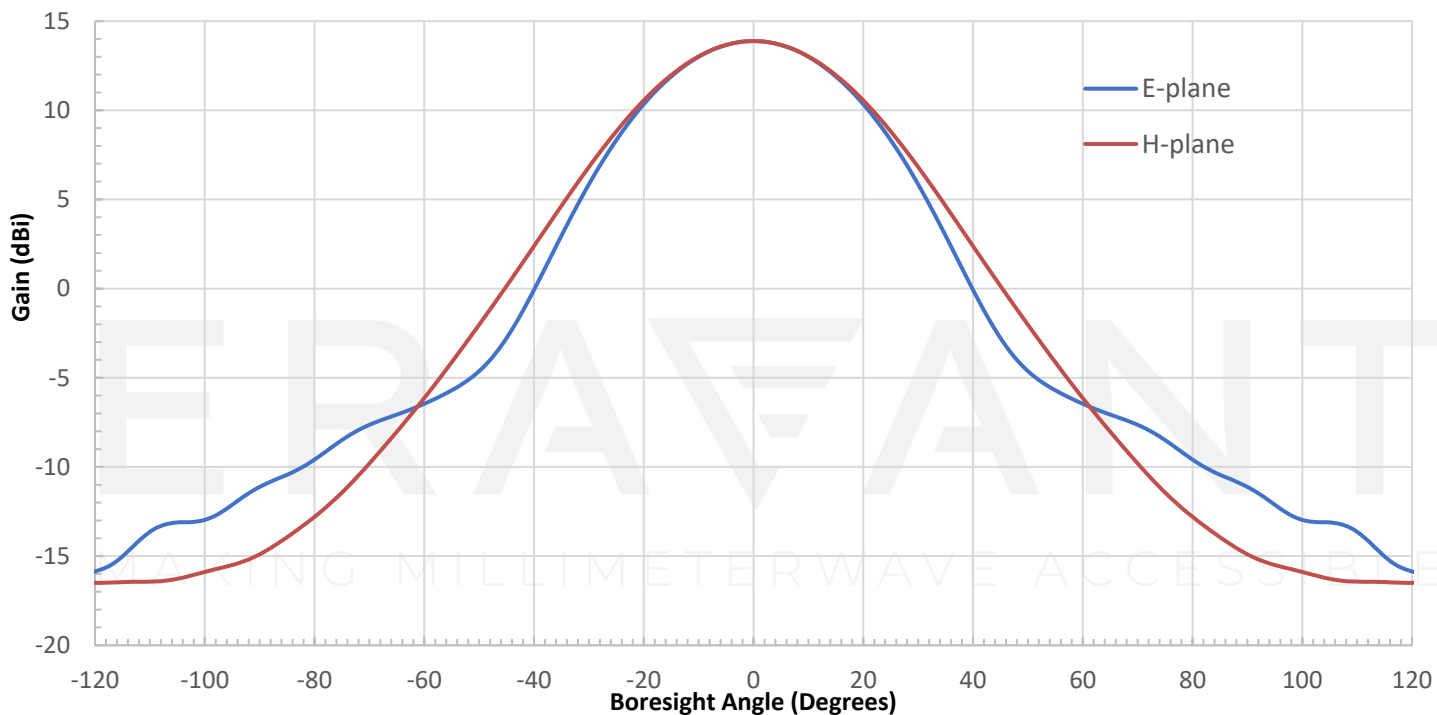
SUPPLEMENTAL DETAILS



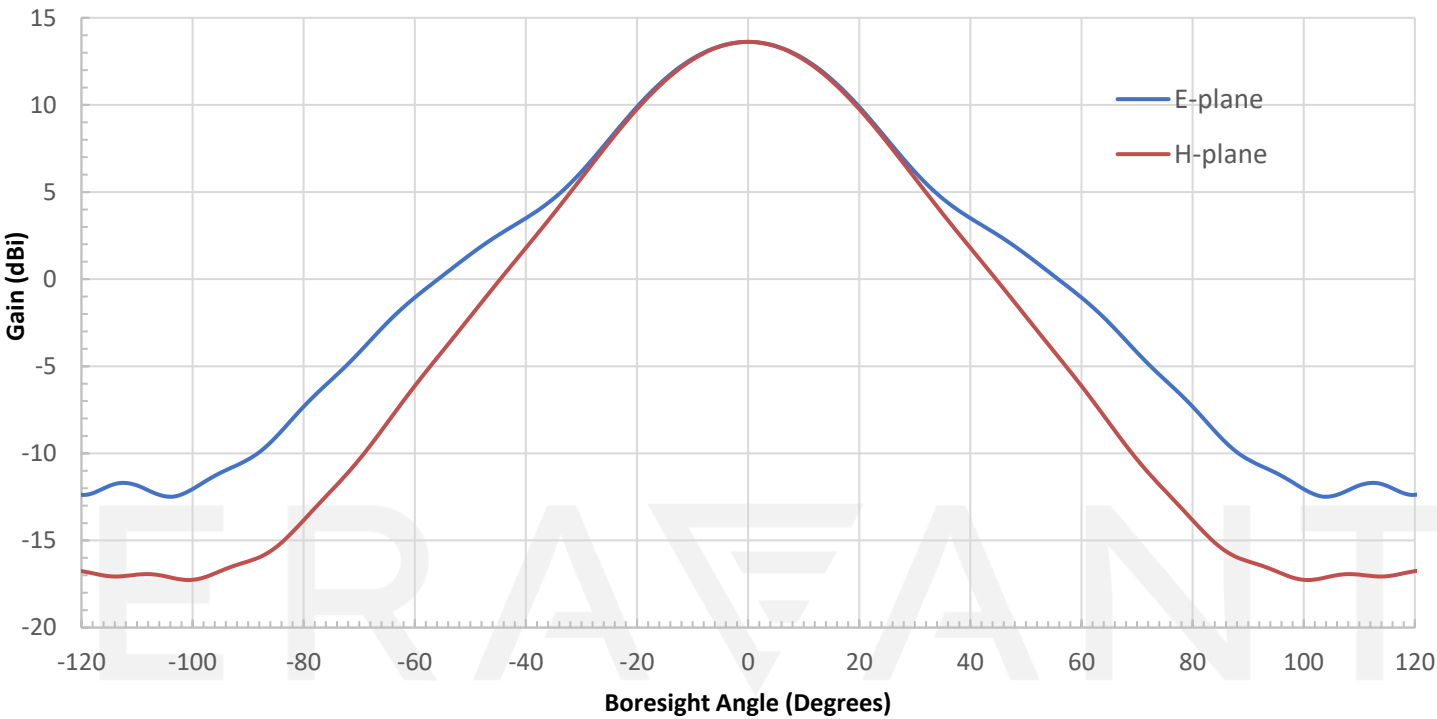
Simulated Antenna Patterns @ 75 GHz



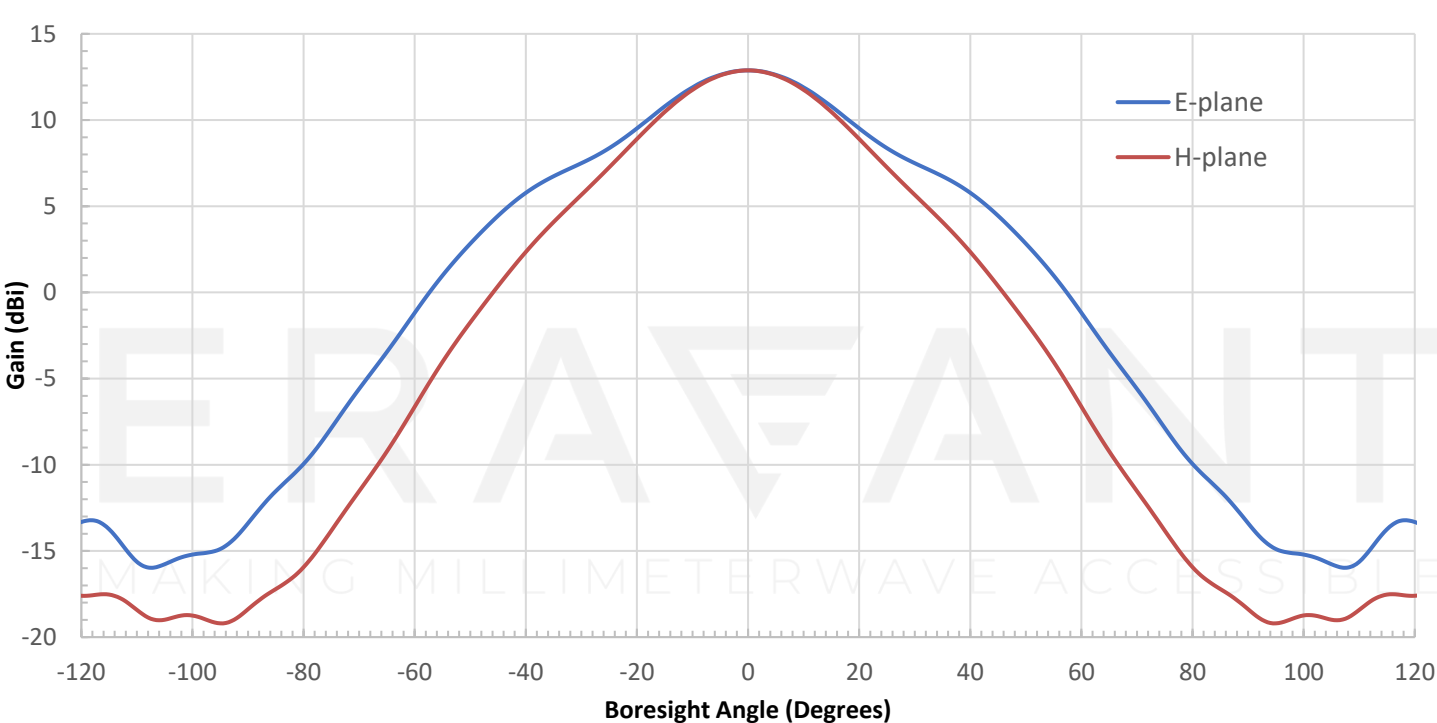
Simulated Antenna Patterns @ 90 GHz



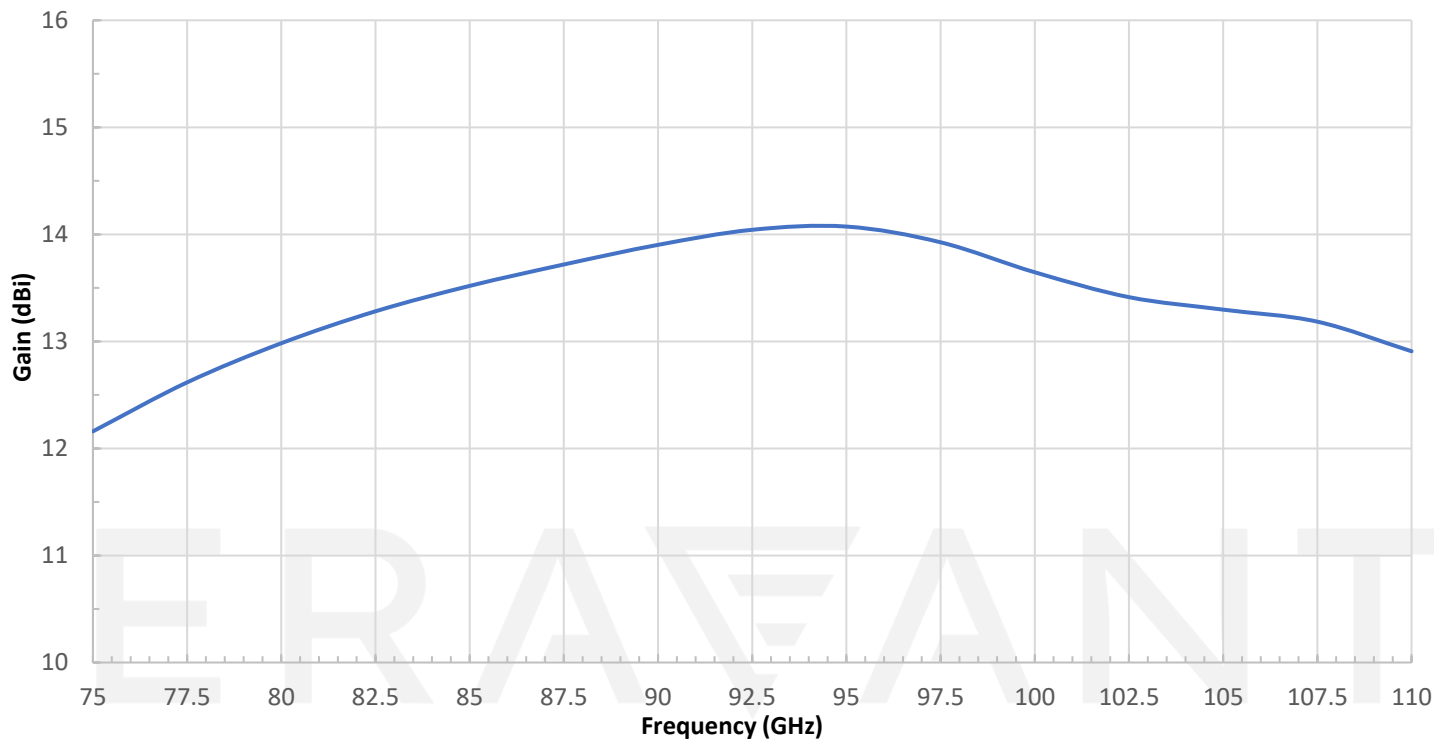
Simulated Antenna Patterns @ 100 GHz



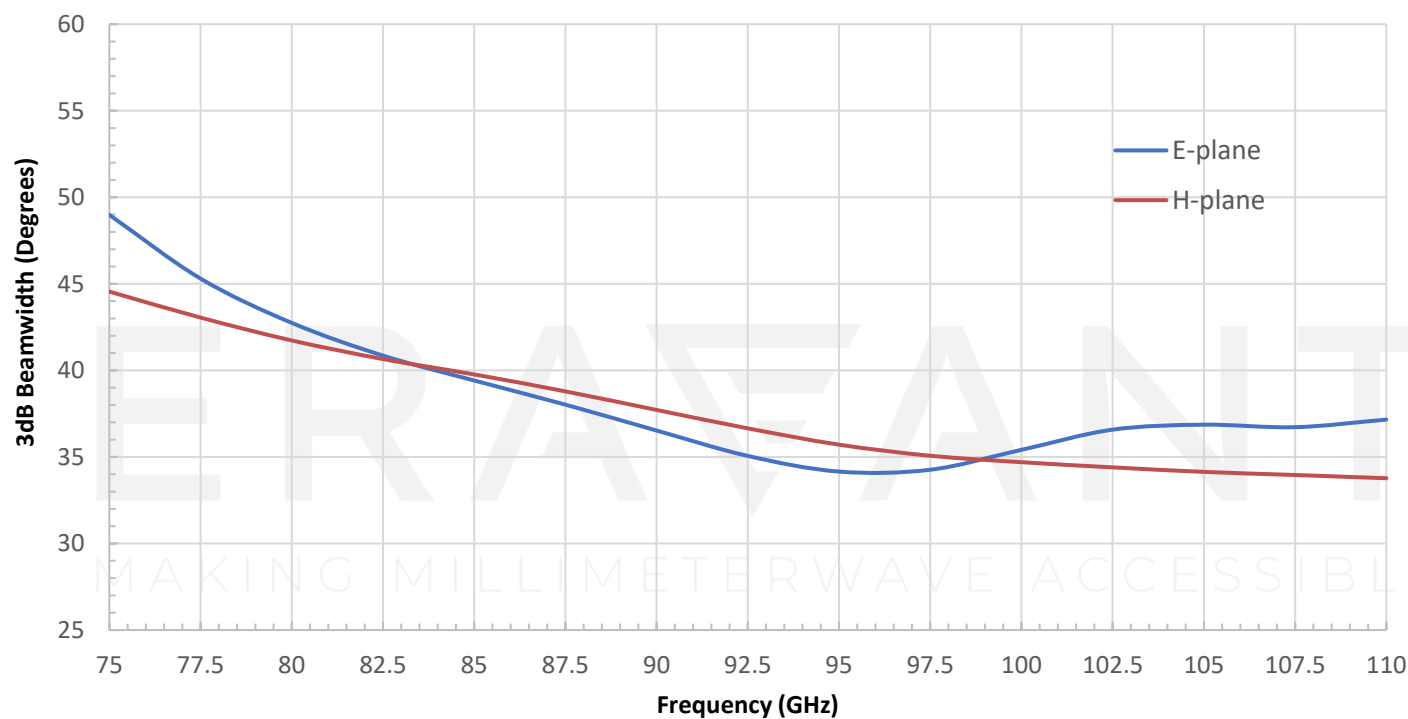
Simulated Antenna Patterns @ 110 GHz



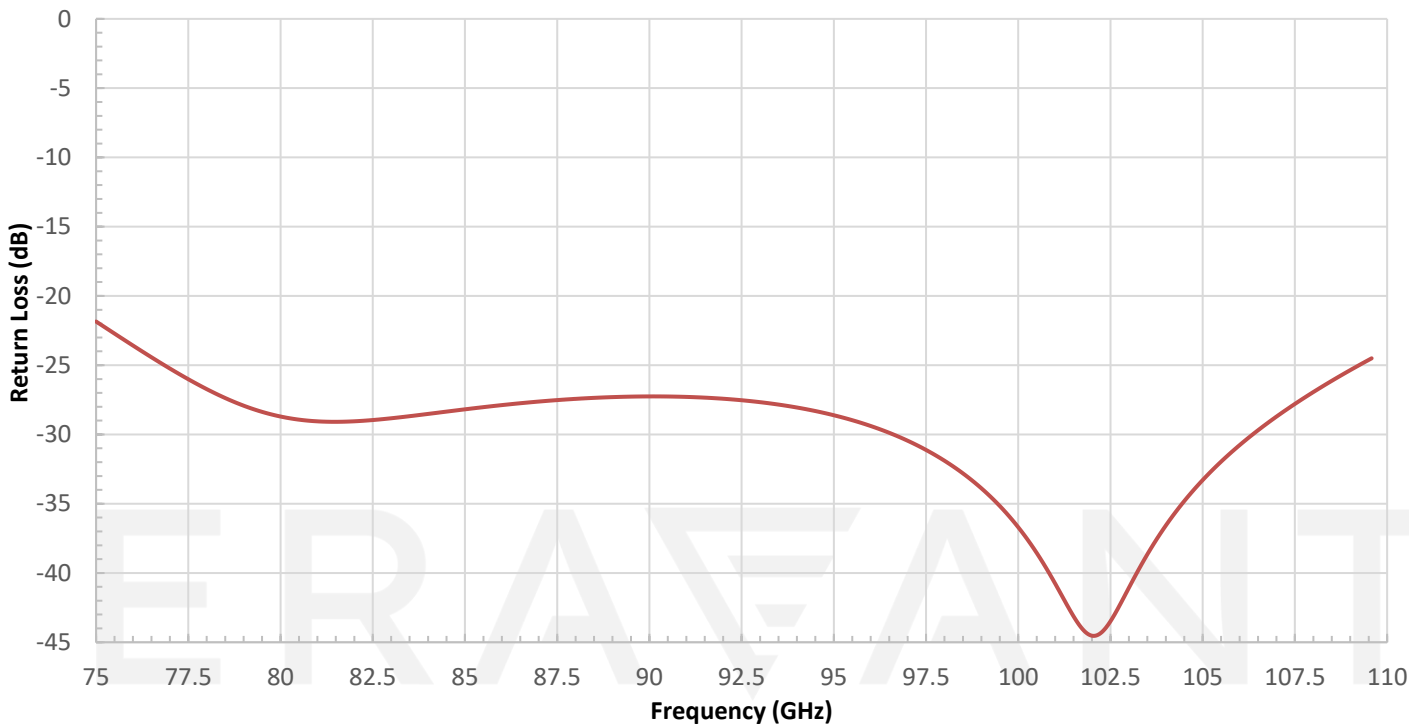
Simulated Gain vs. Frequency



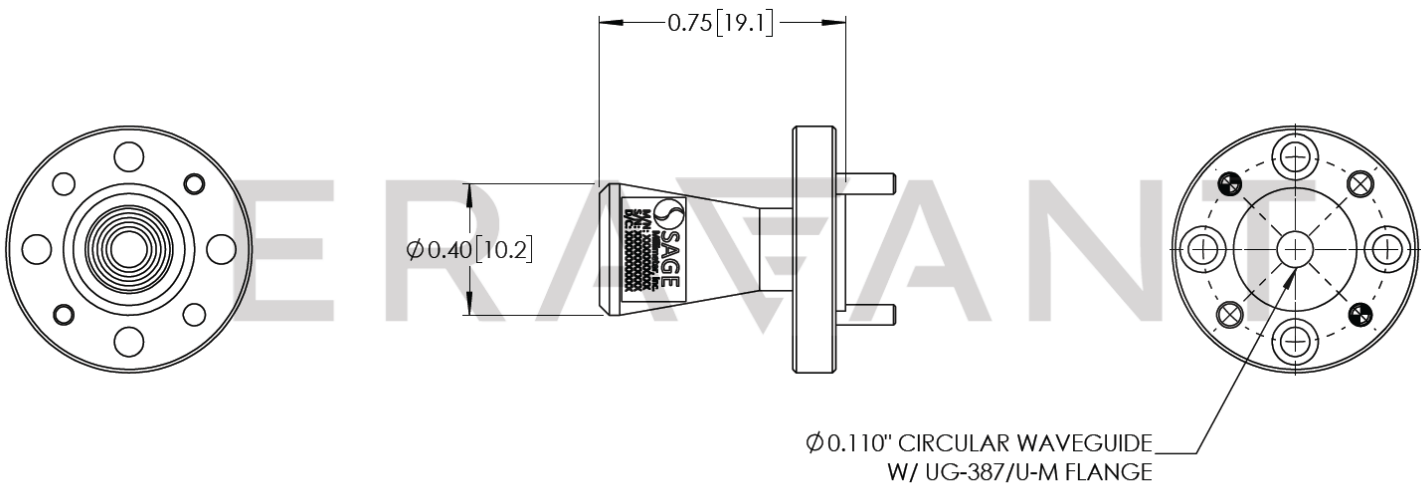
Simulated E and H Plane 3dB Beamwidth vs. Frequency



Simulated Return Loss vs. Frequency



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



NOTE:

- 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.

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