SAF-1141741340-075-S1

D-Band Scalar Feed Horn Antenna, 110 to 170 GHz, 13 dBi

SAF-1141741340-075-S1 is a D-band scalar feed horn antenna that covers the frequency range of 110 to 170 GHz. At center frequency, the horn antenna exhibits 13 dBi nominal gain and a typical half power beamwidth of 40 degrees. The antenna has a typical return loss of 20 dB, and -25 dB nominal side lobes on the E-Plane and H-Plane. The antenna is equipped with a Ø 0.075” circular waveguide with a UG-387/U-M anti-cocking flange.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	110 GHz		170 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	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	Ø 0.075” Circular Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	0.32 Oz
Outline	AF-CD13-075-A

ECCN

EAR99

FEATURES

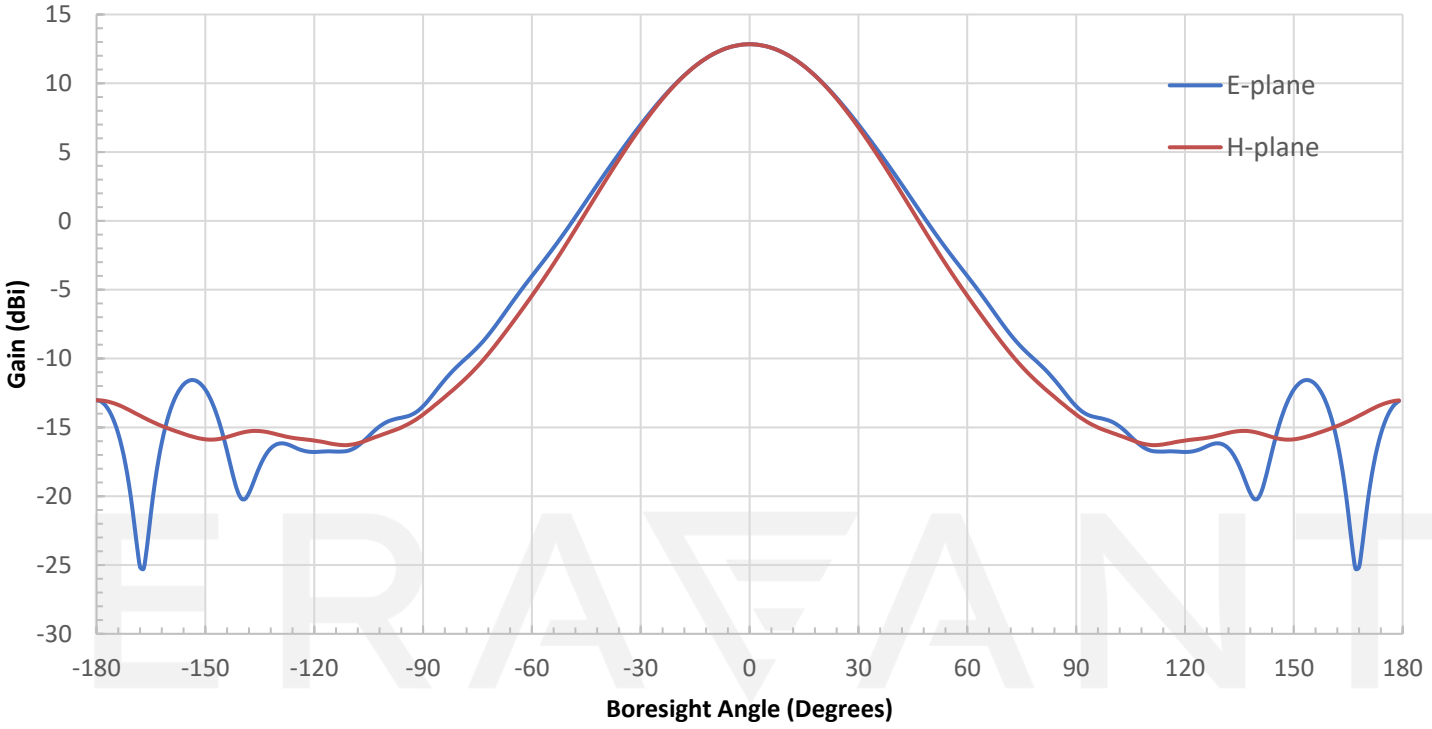
- 110 to 170 GHz Operations
- Linear and Circular Polarization
- High Return Loss
- Low Side Lobe Levels

APPLICATIONS

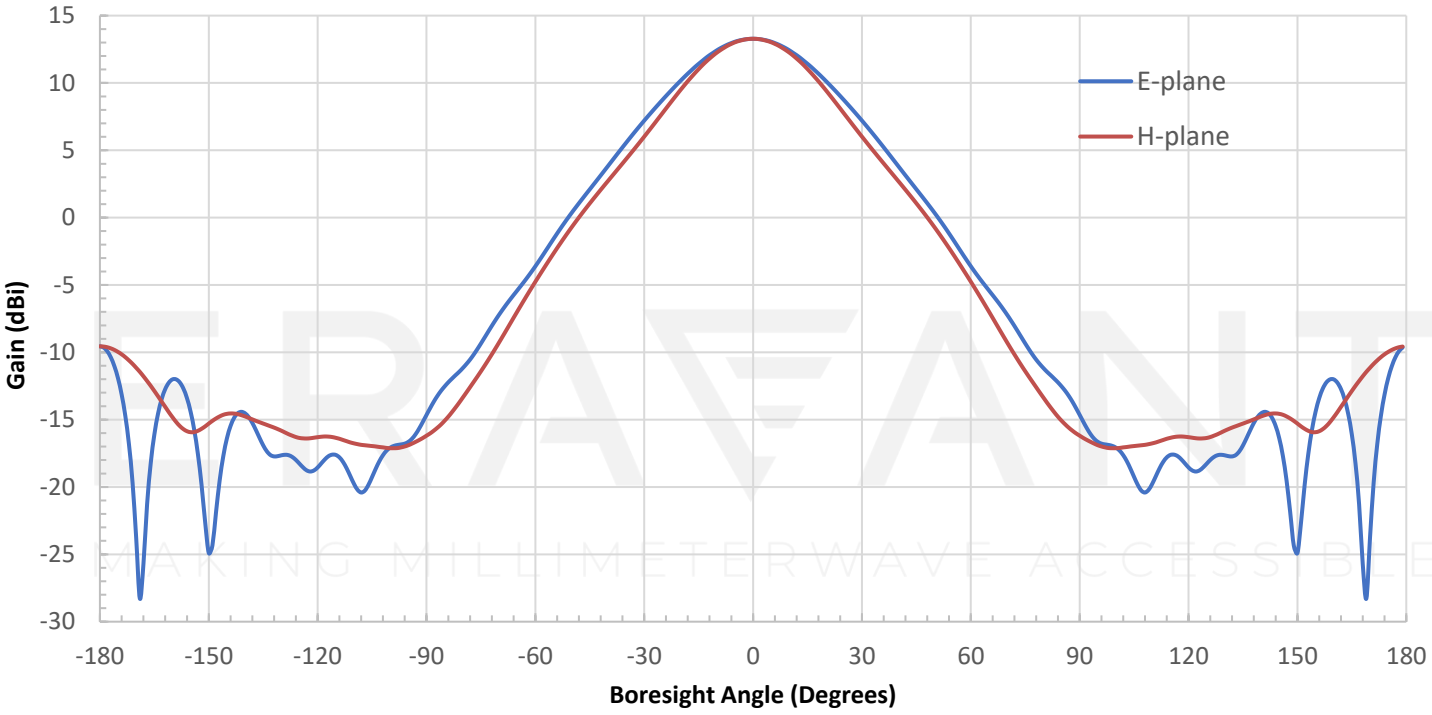
- Feed Horn for Gaussian Optical Antennas
- Feed Horn for Cassegrain Antennas
- Rapid System Setups
- Engineering Setups

SUPPLEMENTAL DETAILS

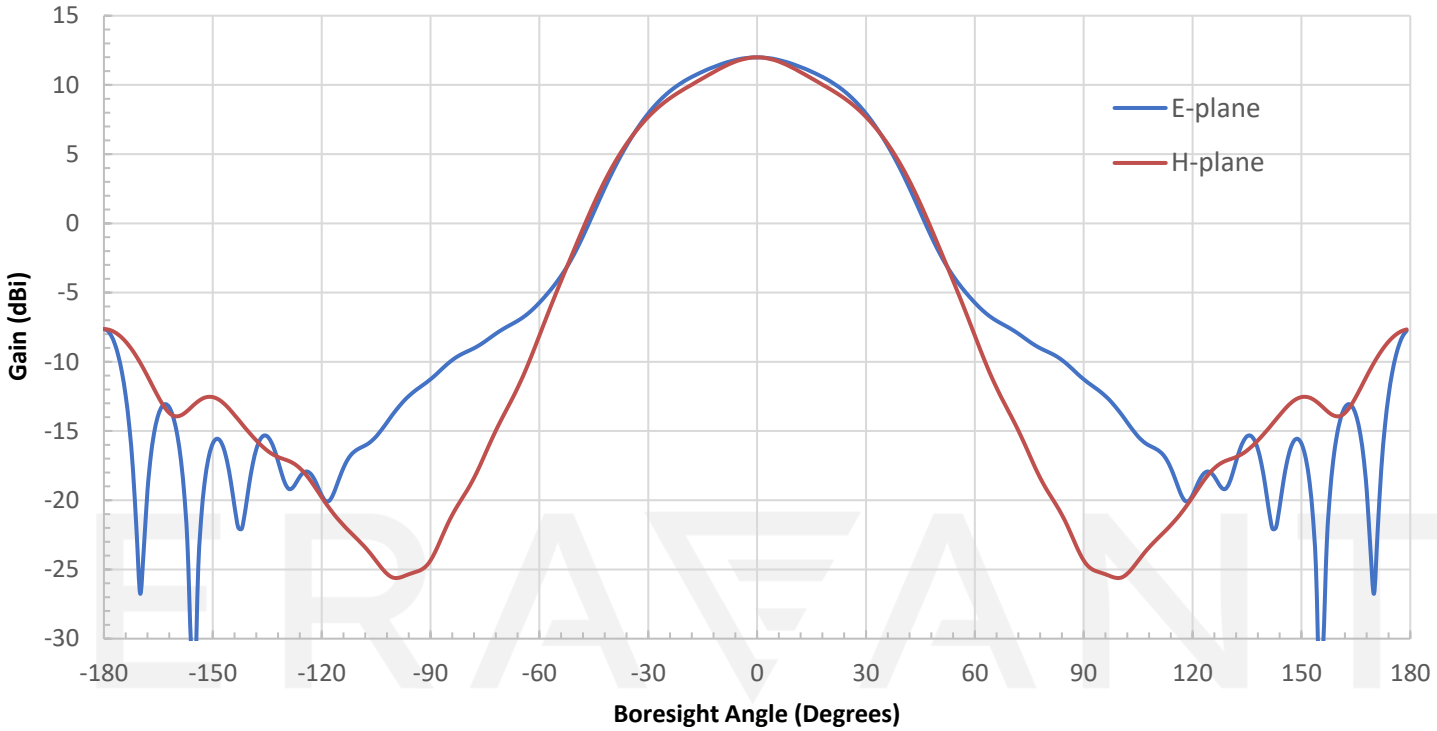
Simulated Antenna Patterns @ 110 GHz



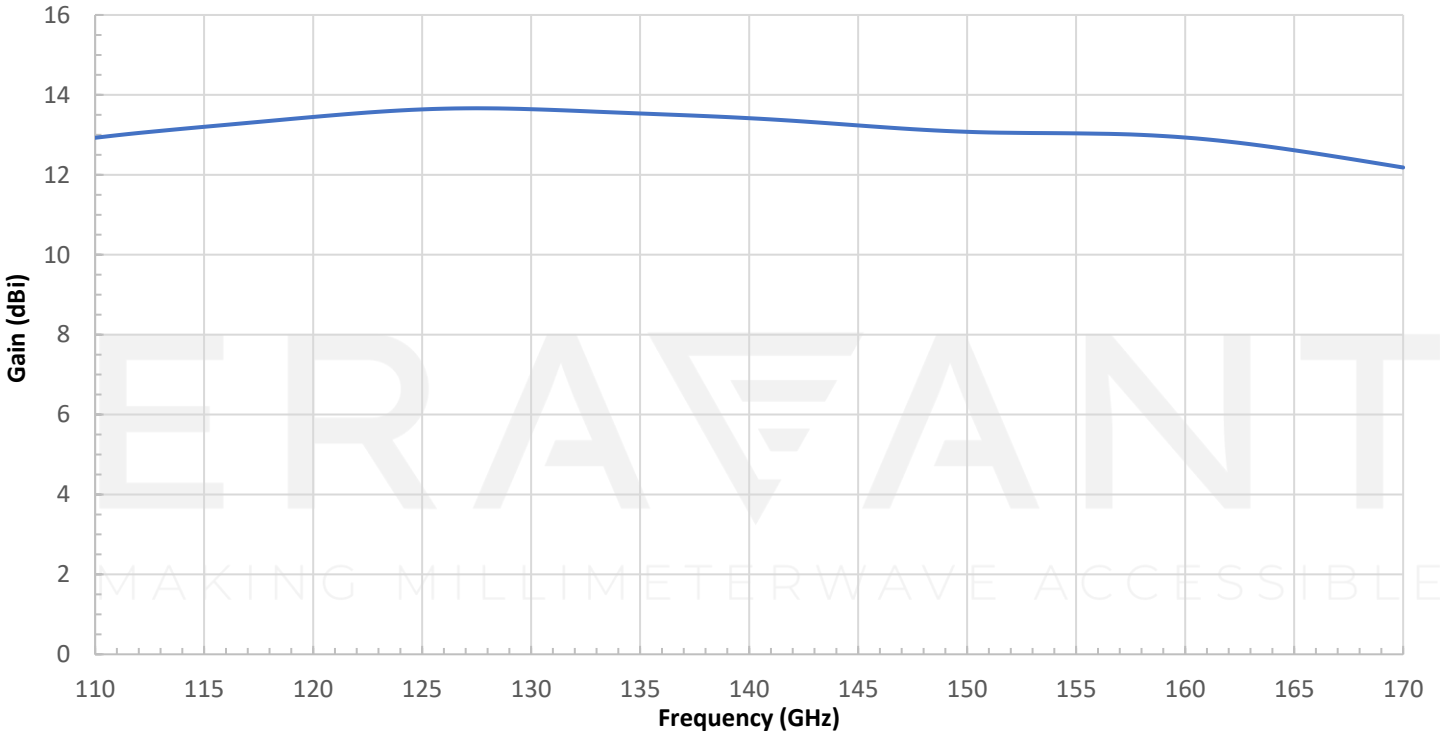
Simulated Antenna Patterns @ 140 GHz



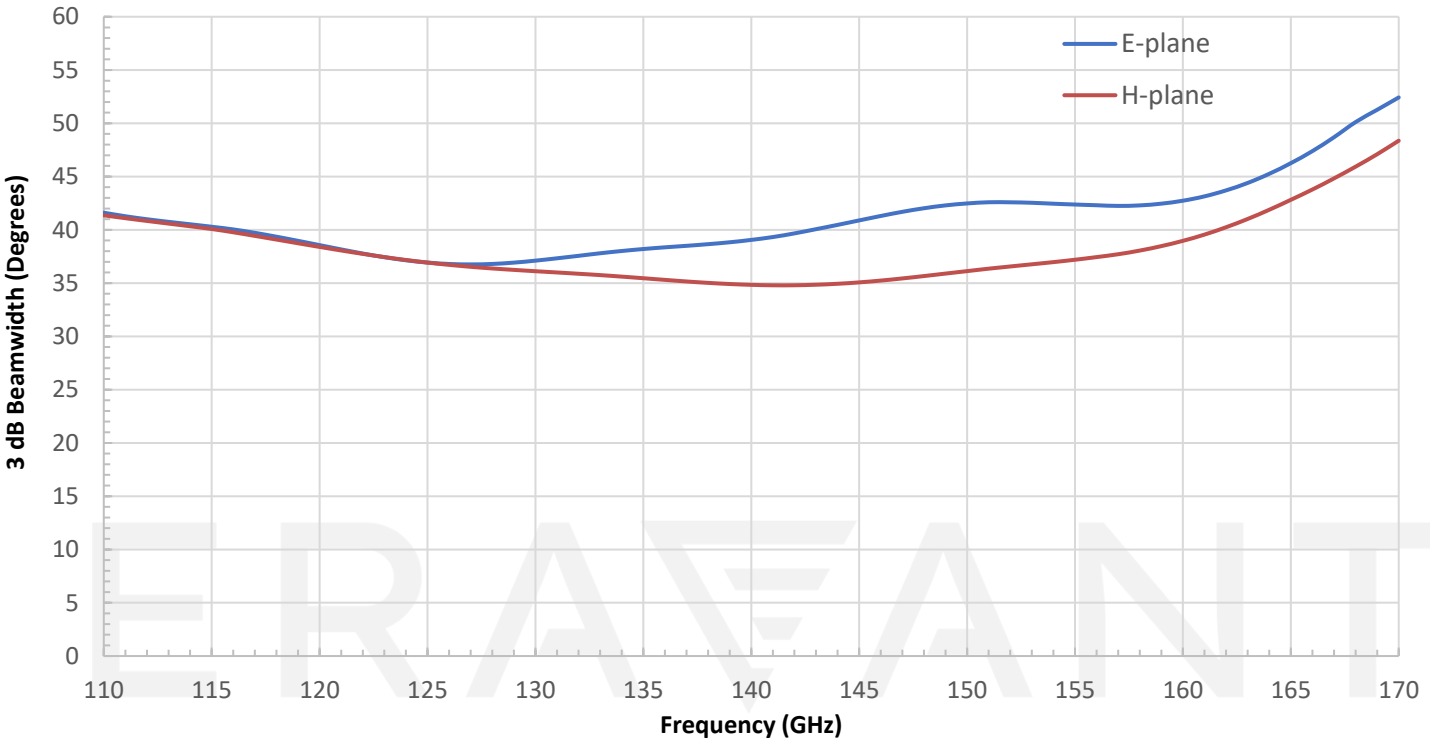
Simulated Antenna Patterns @ 170 GHz



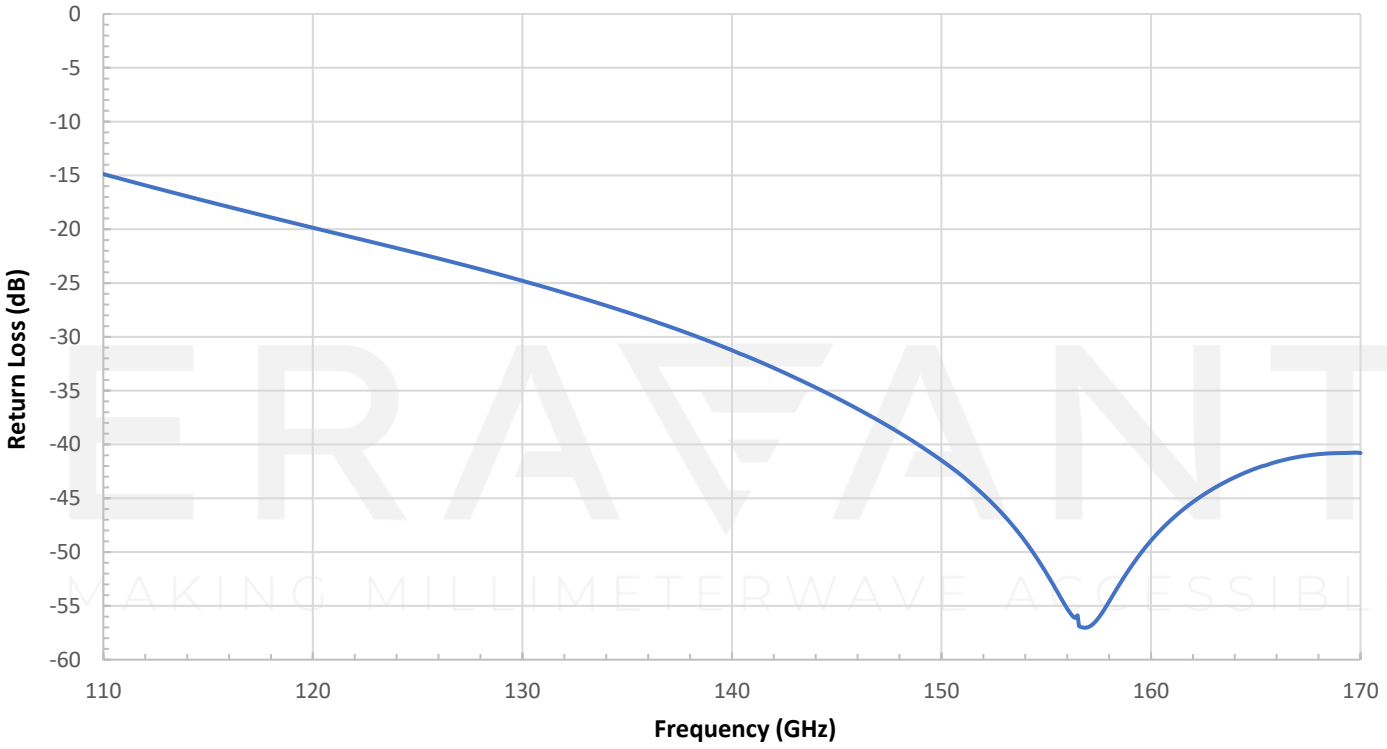
Simulated Gain vs. Frequency



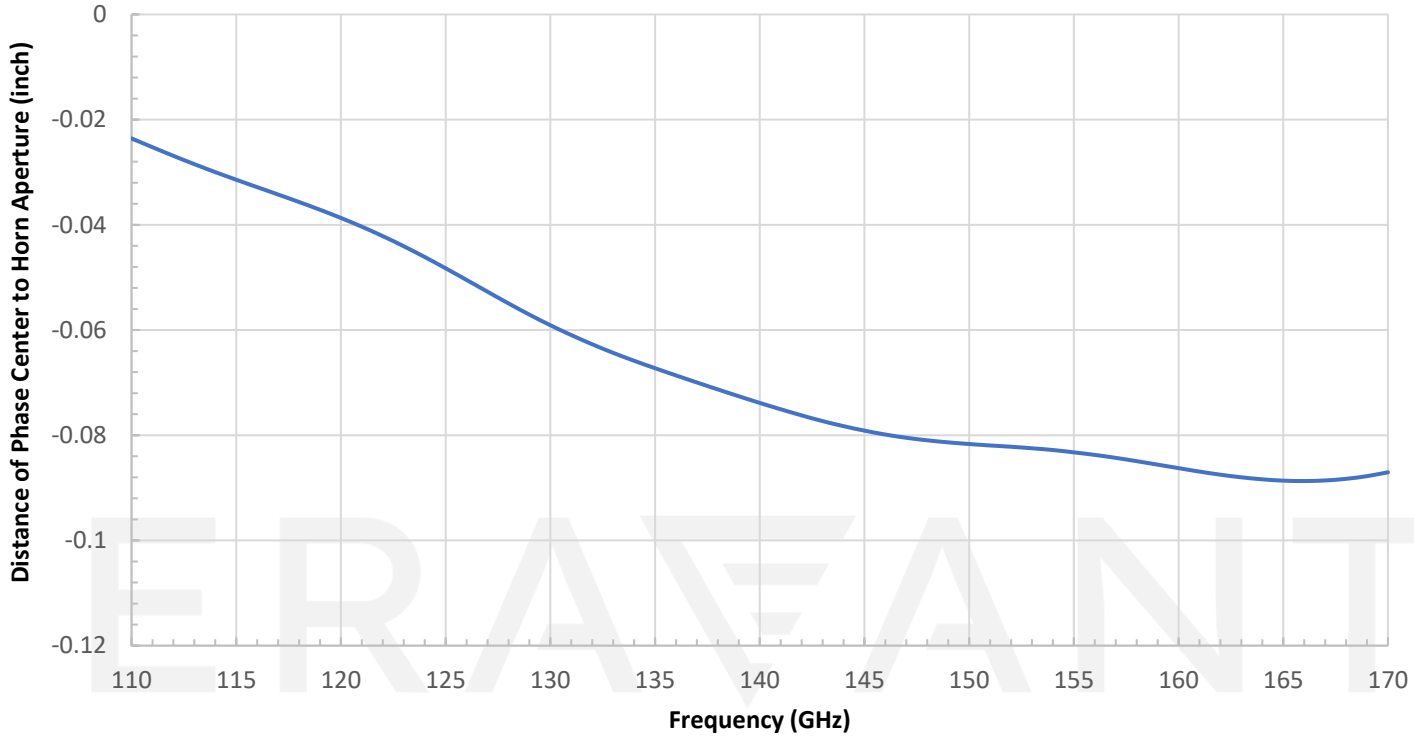
Simulated 3 dB Beamwidth vs. Frequency



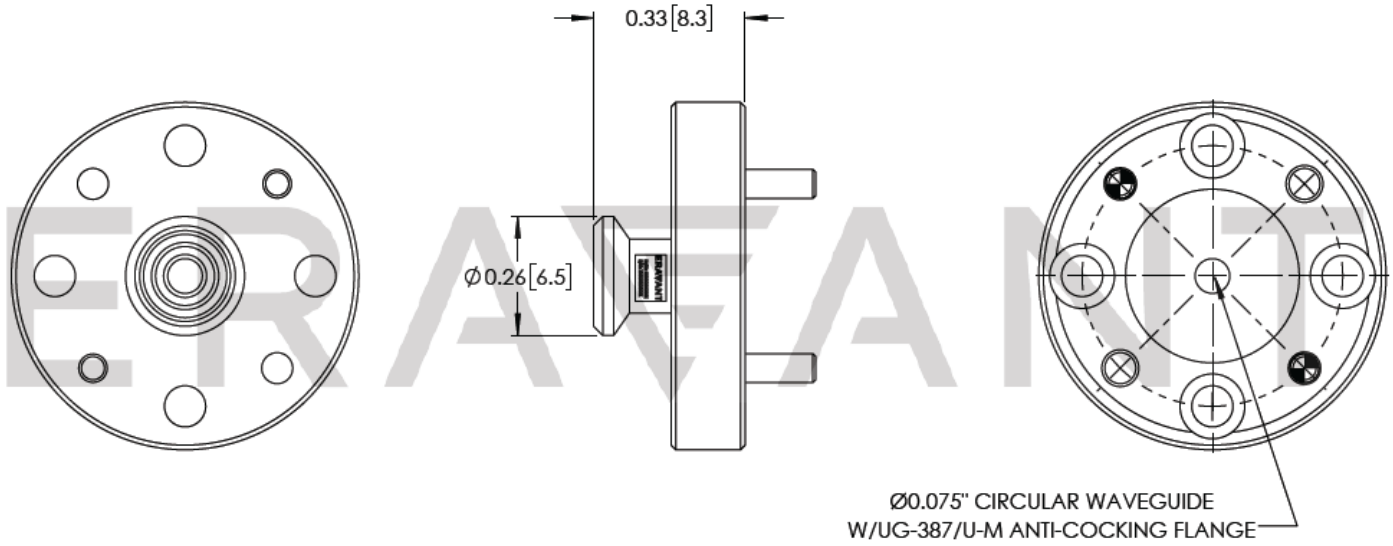
Simulated Return Loss vs. Frequency



Simulated Phase Center 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.

MAKING MILLIMETERWAVE ACCESSIBLE