SAF-6039031340-141-S1

WR-12 Scalar Feed Horn Antenna, 60 to 90 GHz, 13 dBi

SAF-6039031340-141-S1 is a WR-12 scalar feed horn antenna that covers the frequency range of 60 to 90 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 return loss of 20 dB, and -25 dB side lobes on the E-Plane and H-Plane. The antenna is equipped with a Ø 0.141” circular waveguide with a UG-387/U-M flange.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	60 GHz		90 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 0.141” Circular Waveguide with UG-387/U-M Flange
Material	Brass
Finish	Gold Plated
Weight	0.45 Oz
Outline	AF-CE13-141

ECCN

EAR99

FEATURES

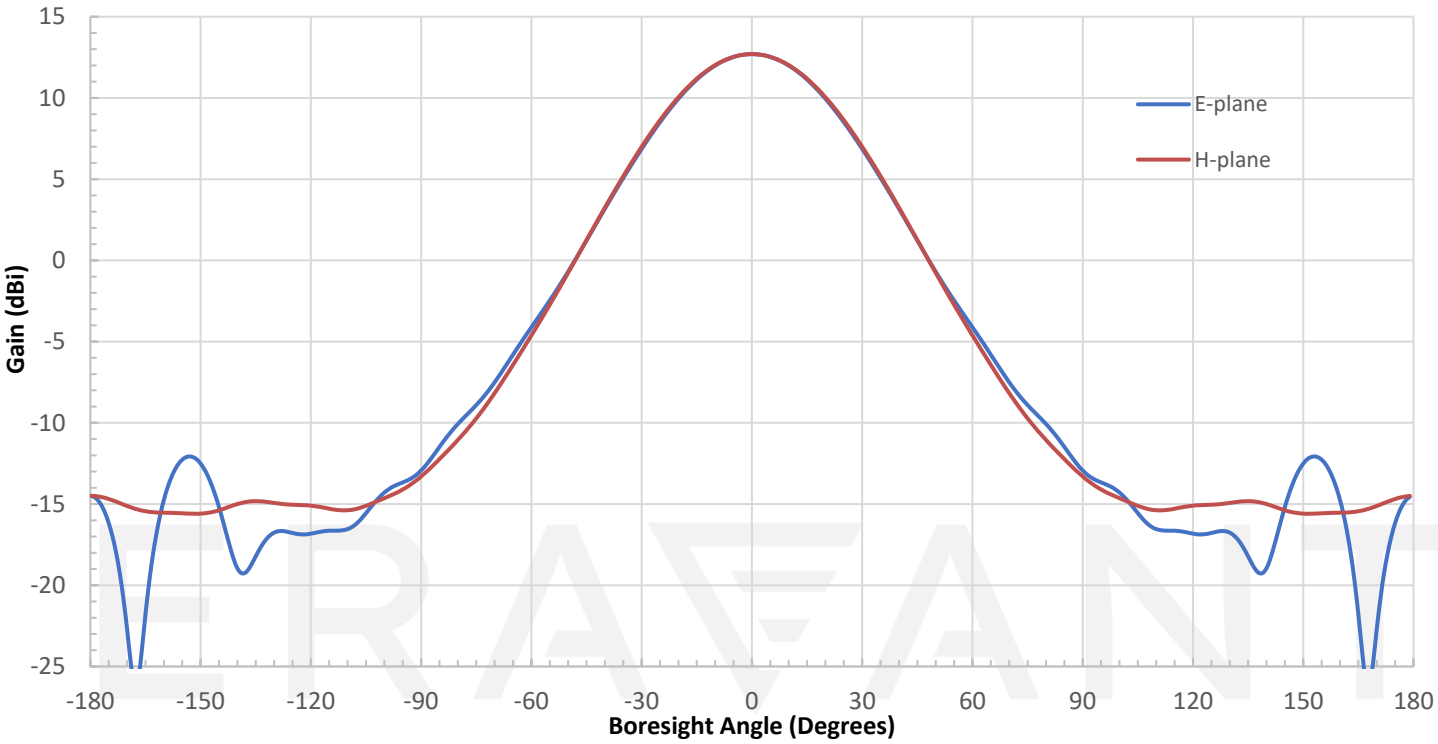
- 60 to 90 GHz Operations
- Linear and Circular Polarization
- High Return Loss
- Low Side Lobe Levels

APPLICATIONS

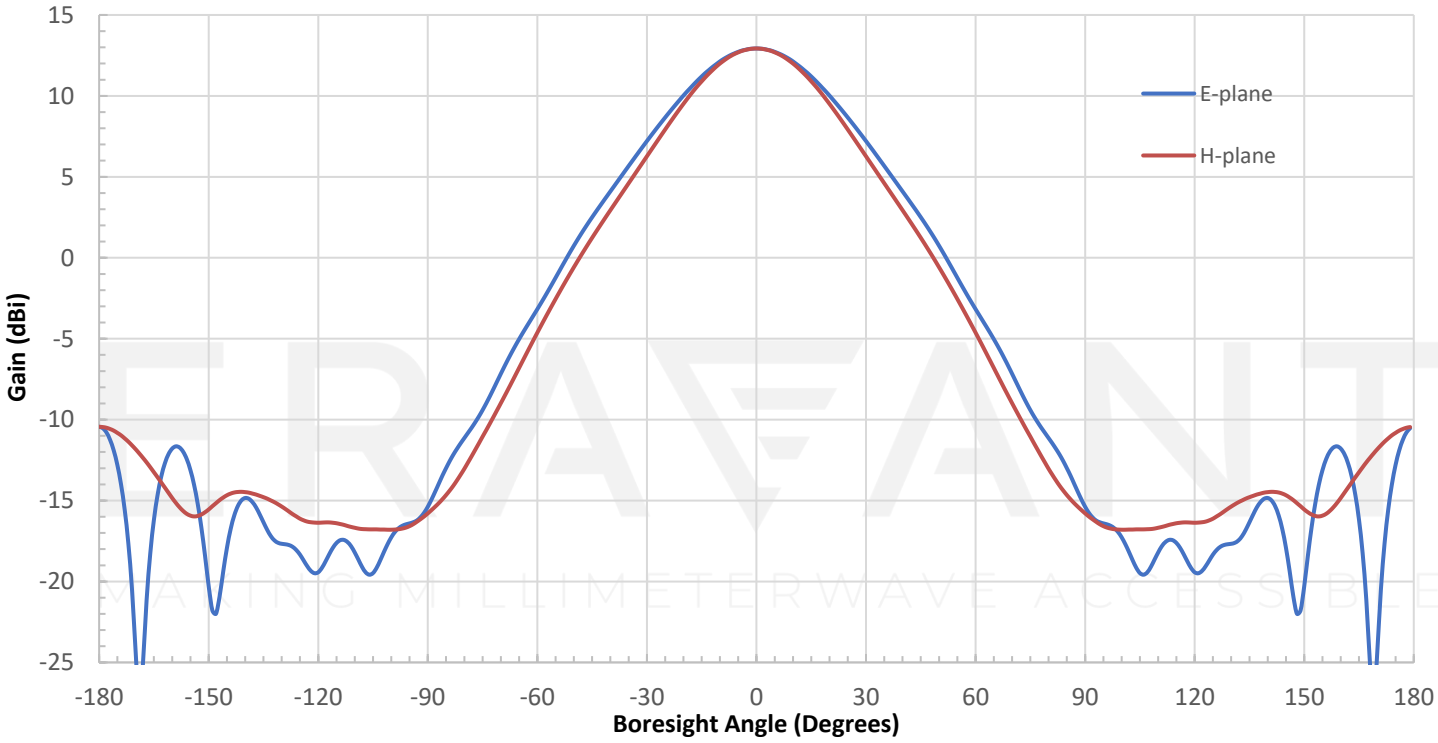
- Feed Horn for Gaussian Optical Antennas
- Feed Horn for Cassegrain Antennas
- Rapid System Setups
- Engineering Setups

SUPPLEMENTAL DETAILS

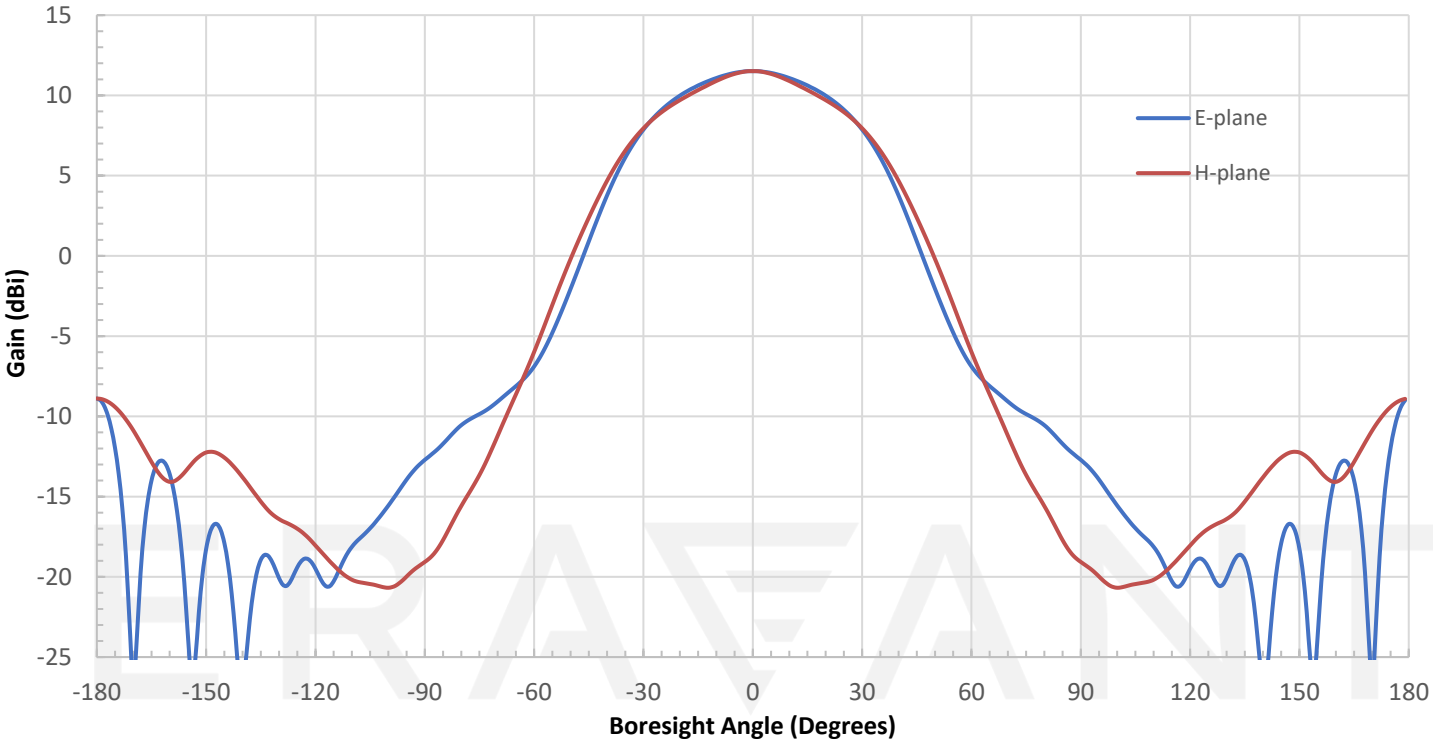
Simulated Antenna Patterns @ 60 GHz



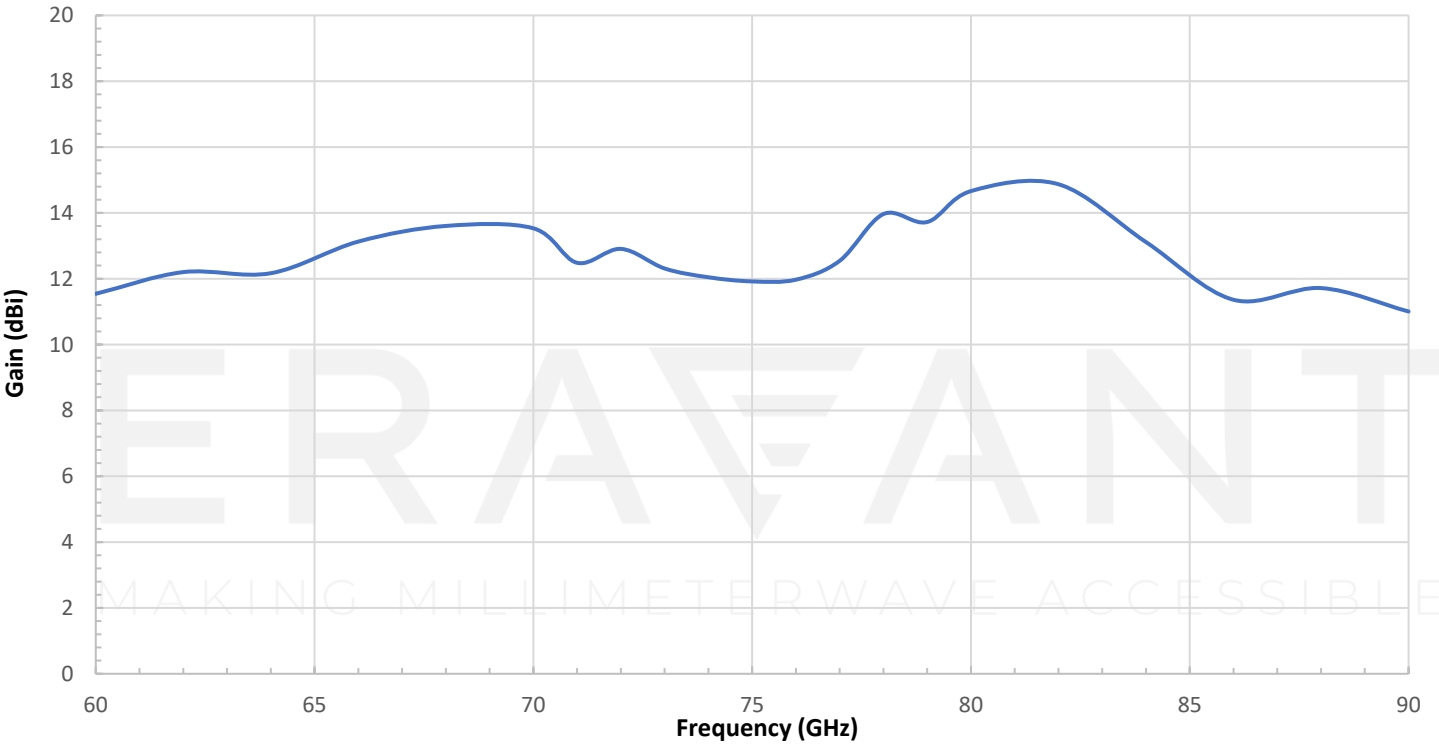
Simulated Antenna Patterns @ 75 GHz



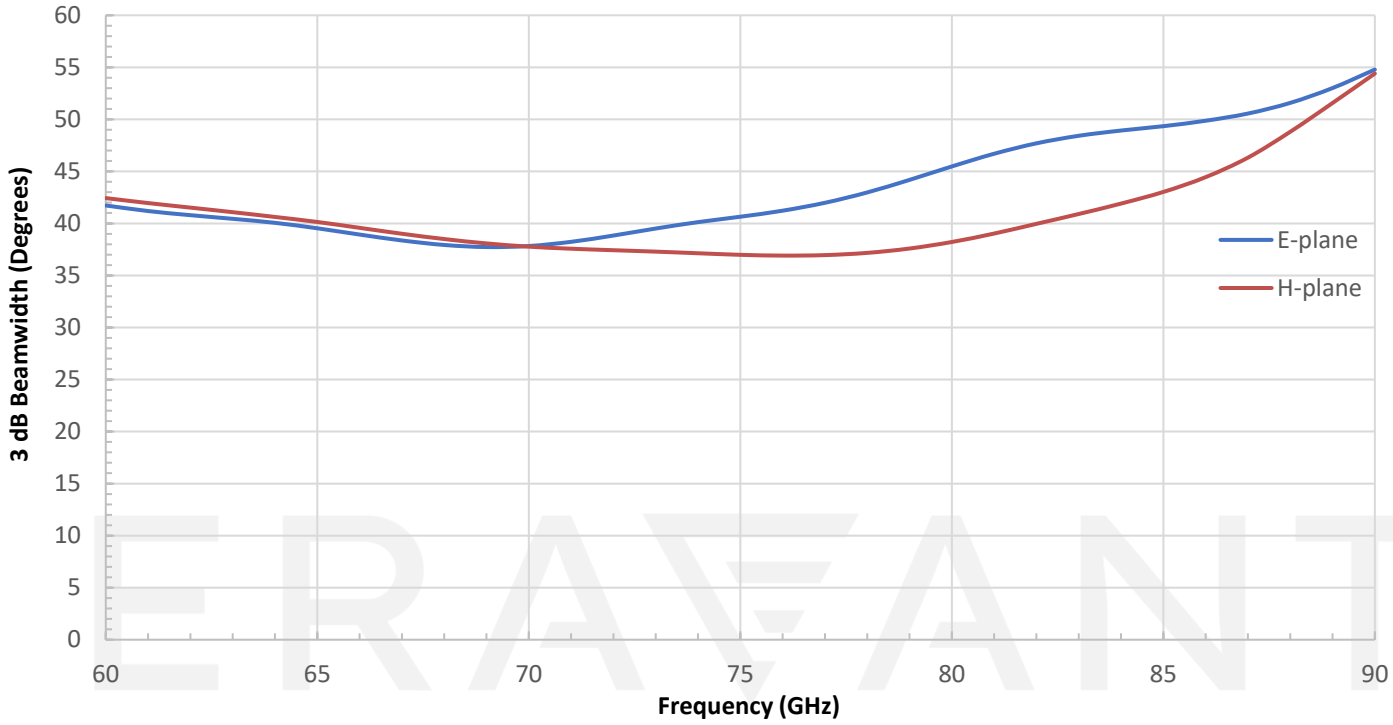
Simulated Antenna Patterns @ 90 GHz



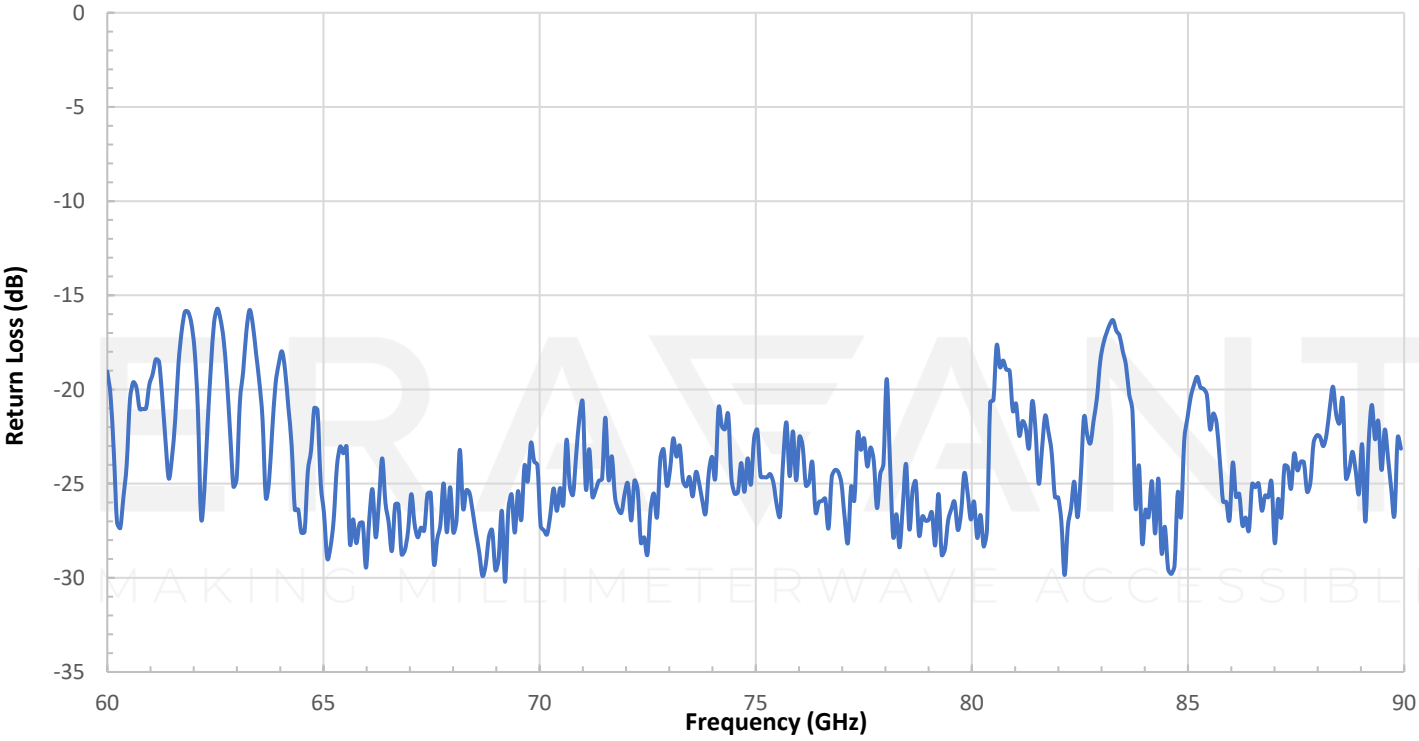
Measured Gain vs. Frequency



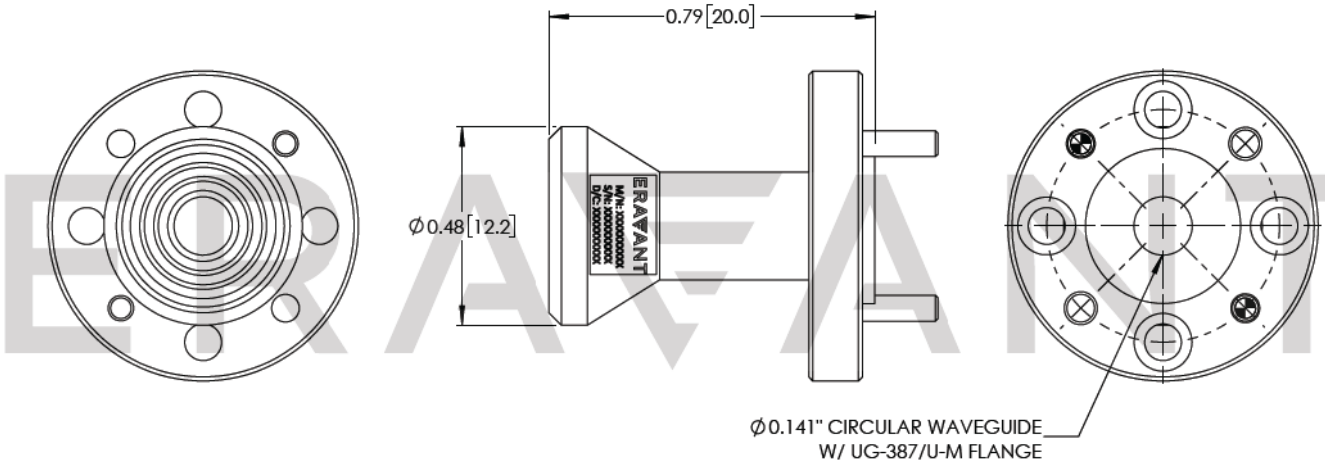
Simulated 3 dB Beamwidth vs. Frequency



Typical Return Loss vs. Frequency



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



NOTE:

- Gain and Return Loss data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- Antenna patterns and 3 dB beamwidth are simulated. Actual data may 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.