SAF-6039031340-141-S1-2

Rev 1.0

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

Description:

Model SAF-6039031340-141-S1-2 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.

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

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	60 GHz		90 GHz
Gain		13 dBi	
3 dB Beamwidth, E-plane		40°	
3 dB Beamwidth, H-plane		40°	
Side Lobes, E-Plane		-25 dB	
Side Lobes, 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	0.41 oz.
Outline	AF-CE13-141-2

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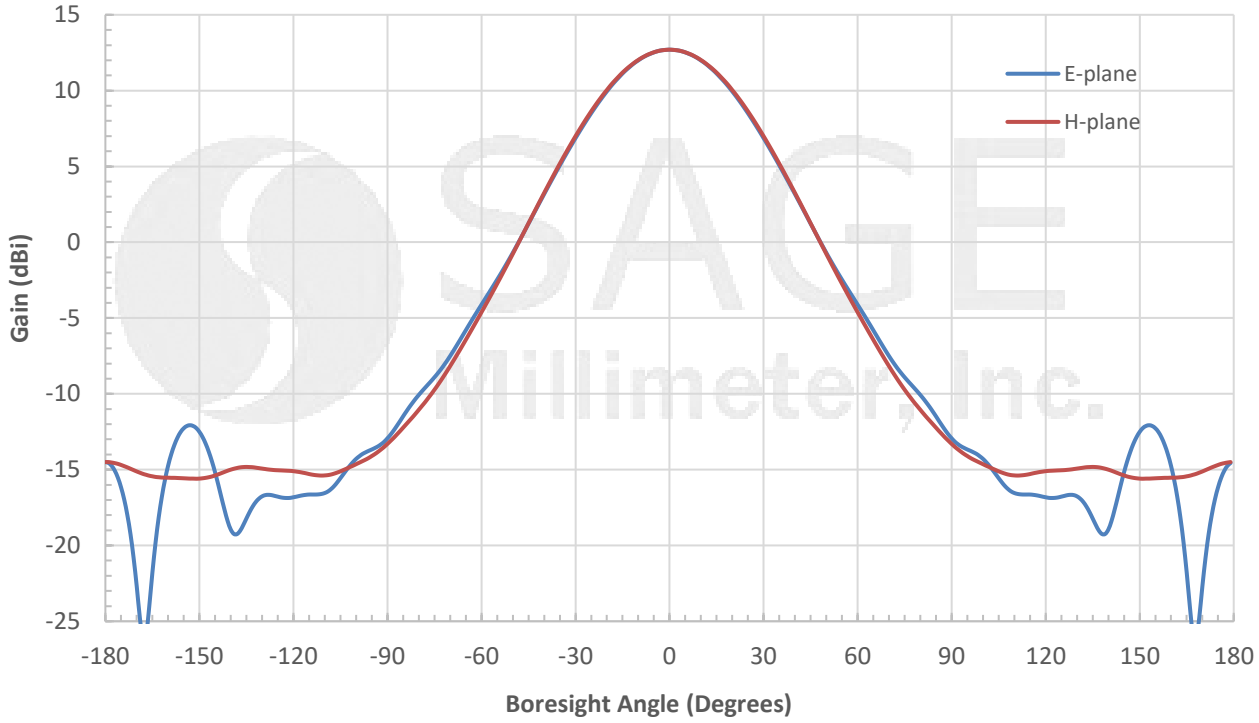
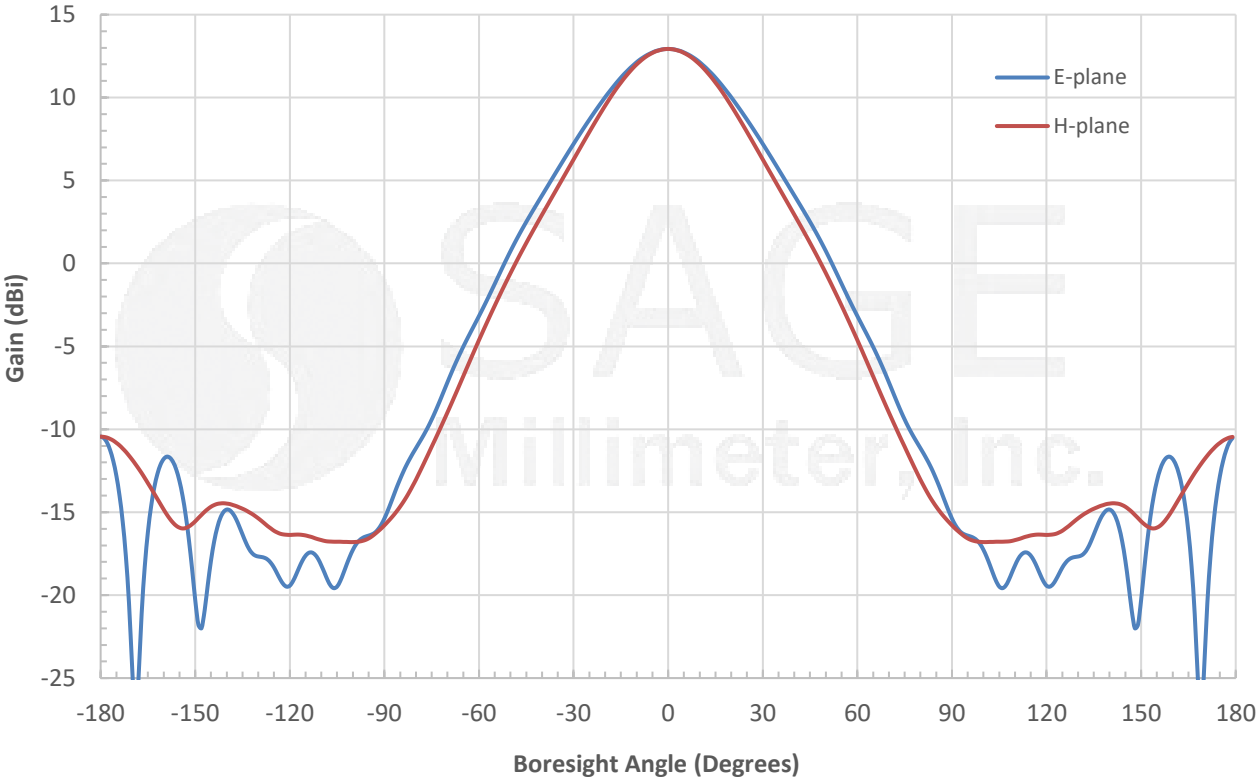
WR-12 Scalar Feed Horn Antenna, 60 to 90 GHz, 13 dBi

Simulated Antenna Patterns @ 60 GHz



Simulated Antenna Patterns @ 75 GHz



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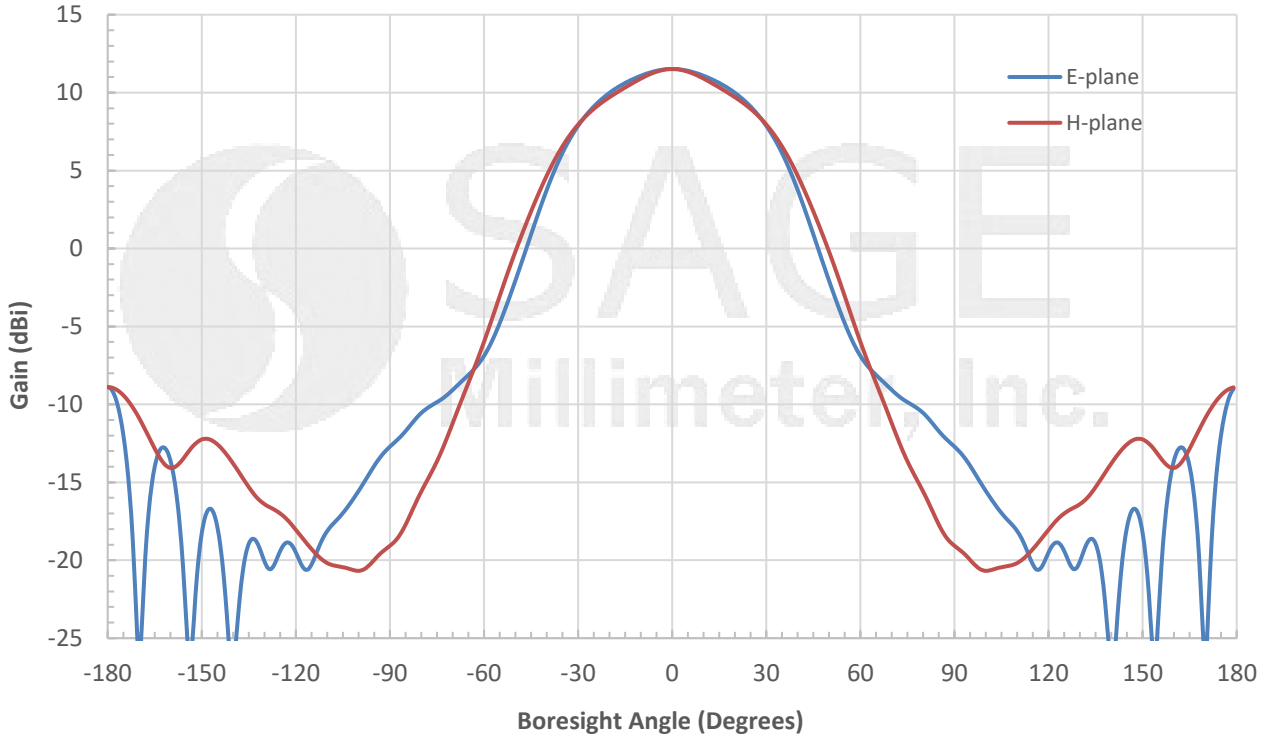
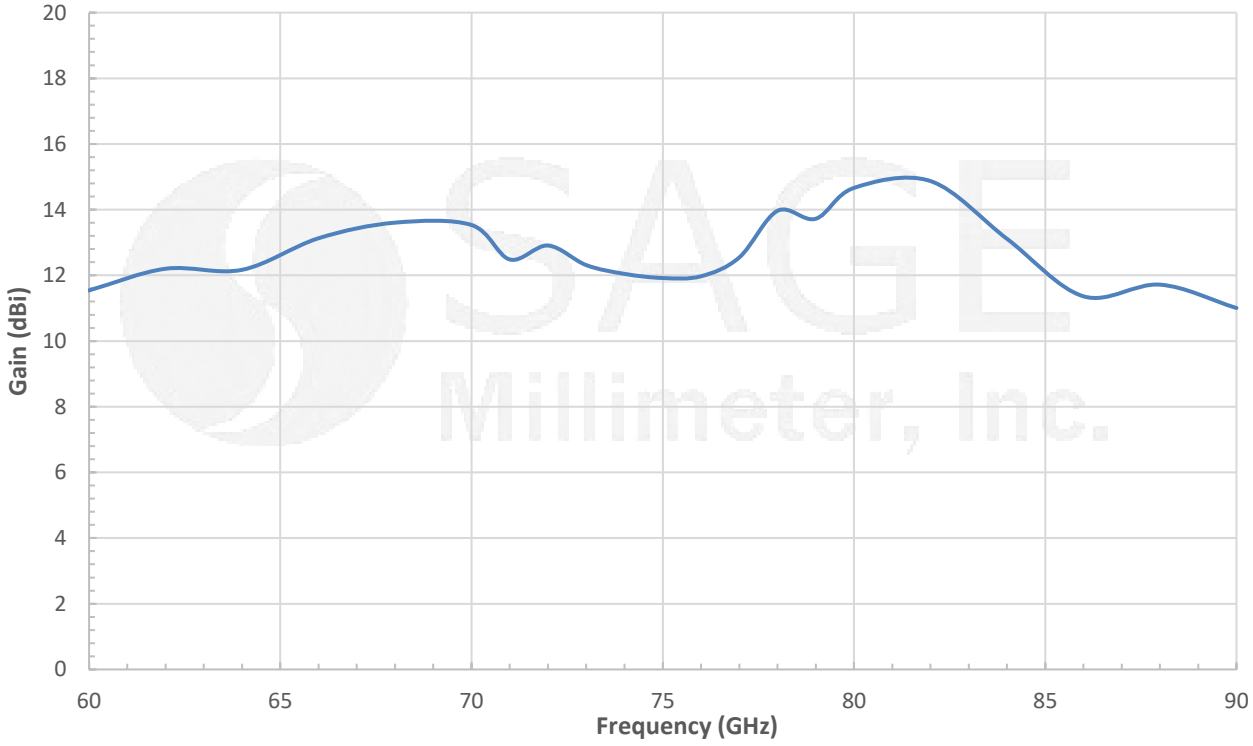
WR-12 Scalar Feed Horn Antenna, 60 to 90 GHz, 13 dBi

Simulated Antenna Patterns @ 90 GHz



Measured Gain vs. Frequency



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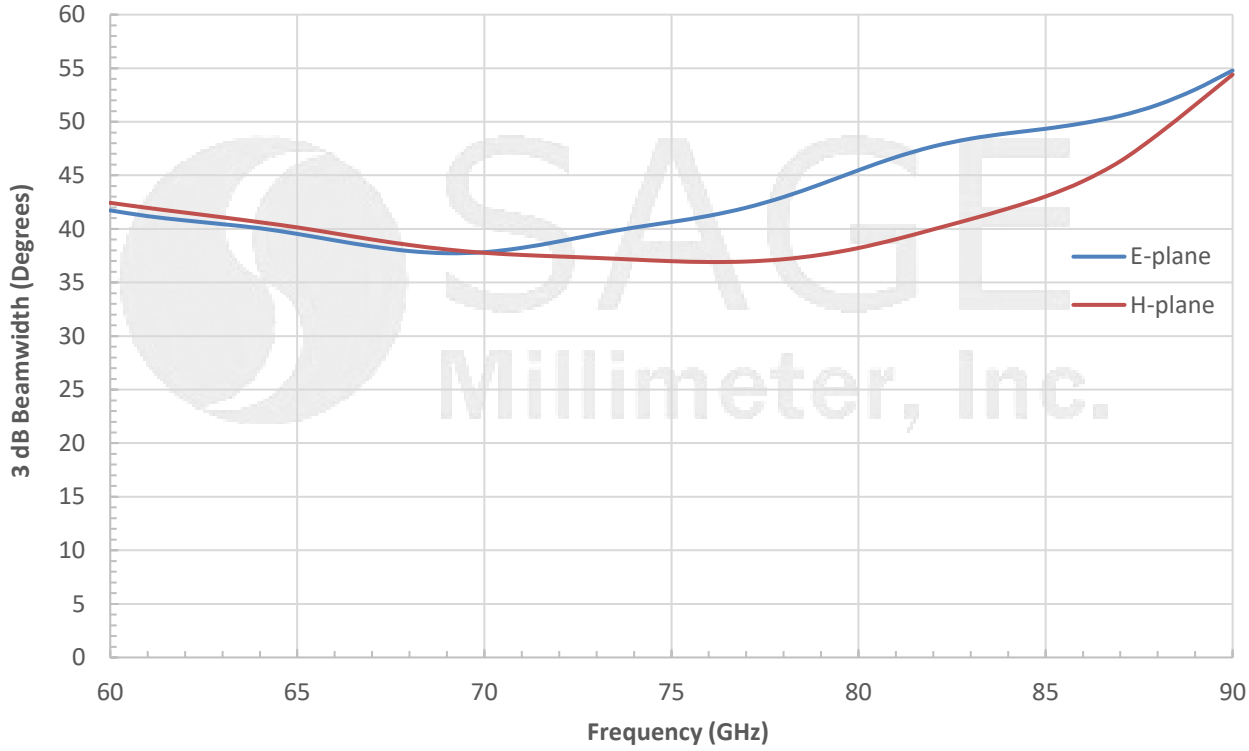
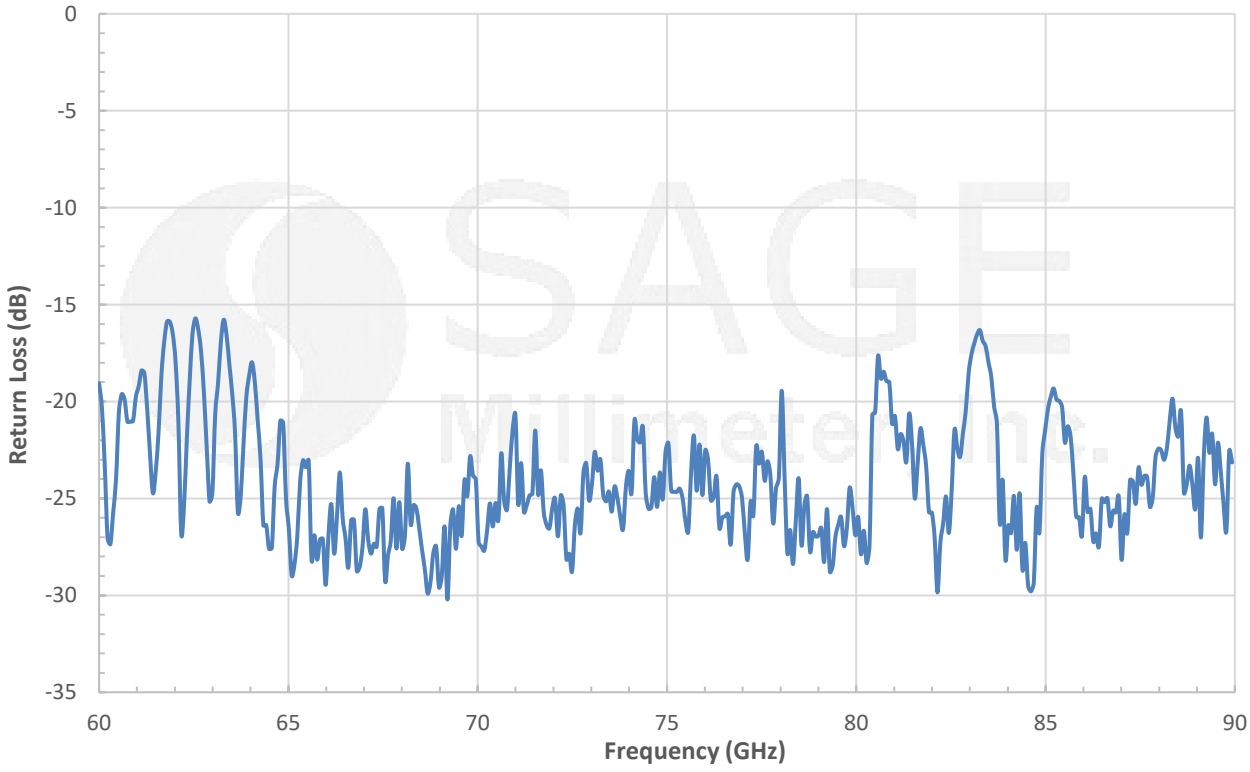
Simulated 3 dB Beamwidth vs. Frequency



Typical Return Loss vs. Frequency



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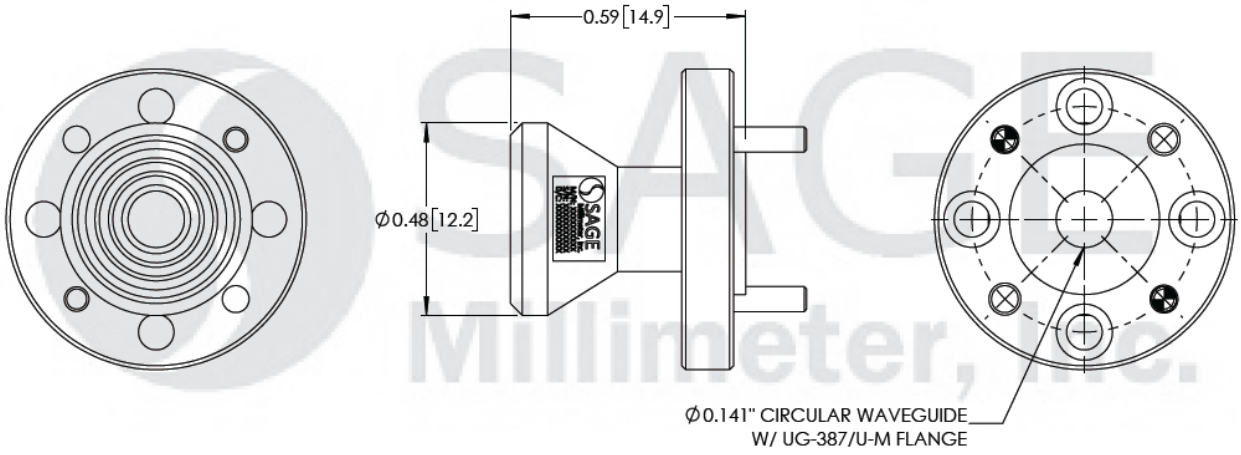
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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.
- All testing was performed under +25 ˚C room temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Any foreign objects in the antenna will cause performance degradation and possible device damage.

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