



WR-19 Scalar Feed Horn Antenna, 40 to 60 GHz, 15 dBi

Description:

Model SAF-4036031535-219-S1 is a U-band scalar feed horn antenna that operates from 40 to 60 GHz. The antenna offers a 15 dBi nominal gain, 35 degree typical half power beamwidth, and -25 dB typical side lobe level. The antenna is equipped with a 0.219" 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 numbers.



Features:

- 40 to 60 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	40 GHz	50 GHz	60 GHz
Gain		15 dBi	
3 dB Beamwidth, E-plane		35°	
3 dB Beamwidth, H-plane		35°	
Side Lobe, E-Plane		-25 dB	
Side Lobe, H-Plane		-25 dB	
Return Loss		20 dB	
Polarization	Linear and Circular		
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

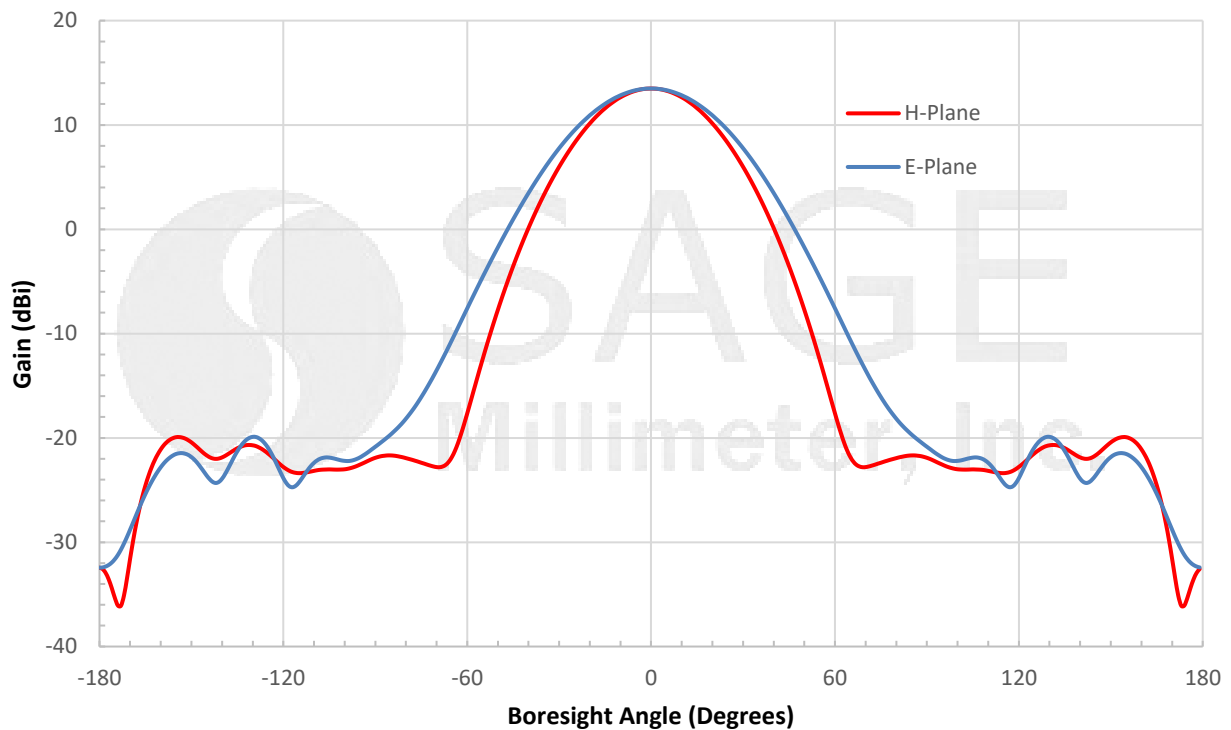
Item	Specification
Horizontal and Vertical Ports	0.219" Dia Circular Waveguide with UG-383/U-M Flange
Material	Brass
Finish	Gold Plated
Weight	7.8 oz
Size	2.50" (L) x 1.125" (Ø)
Outline	AF-CU15-219



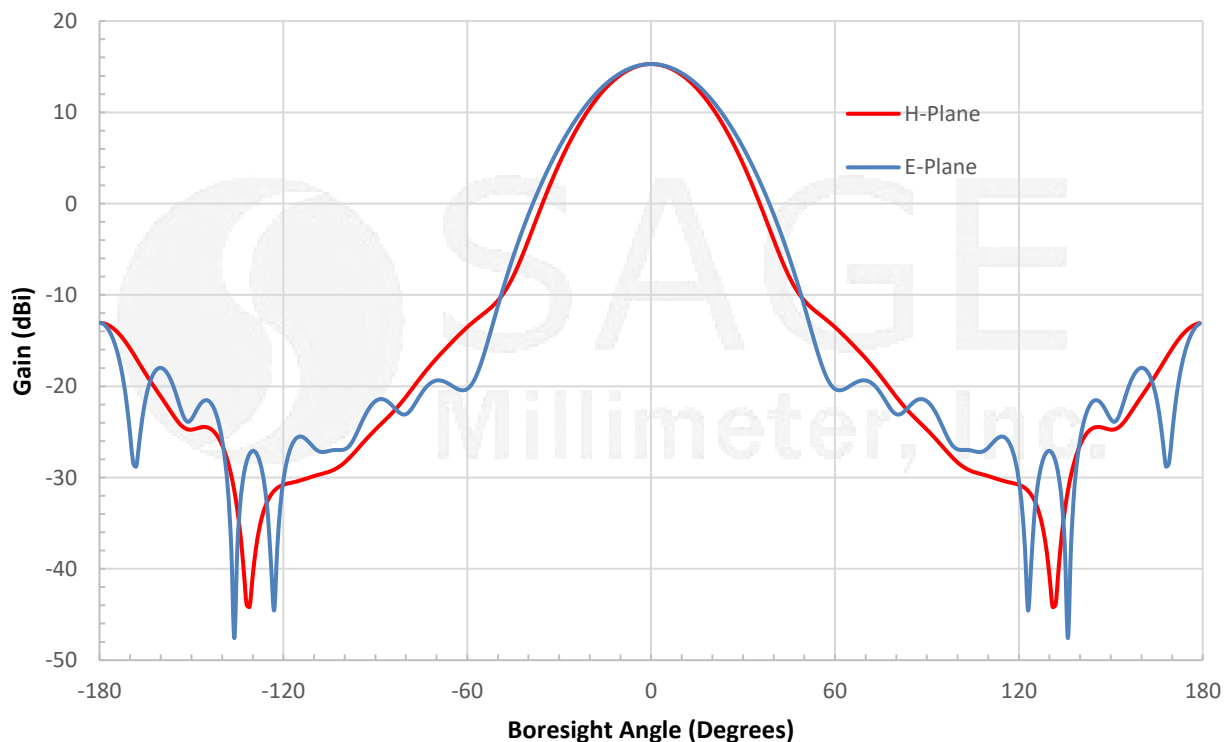


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Simulated Antenna Patterns @ 40 GHz



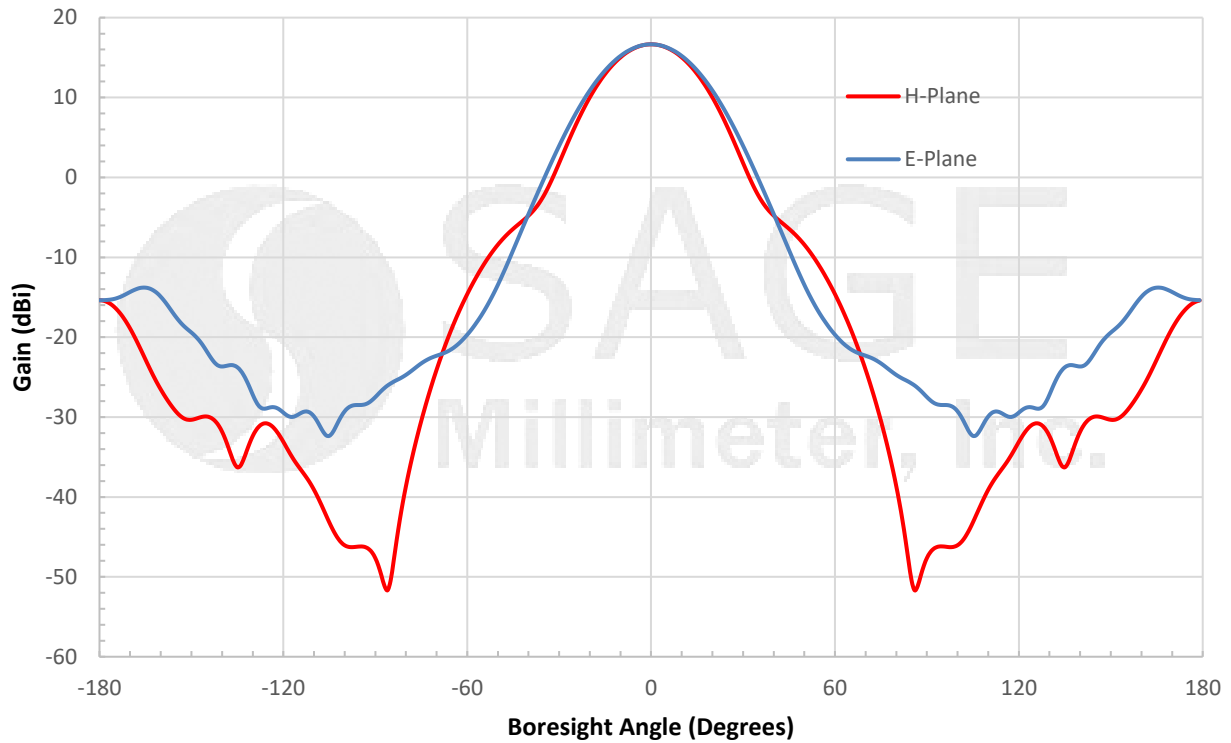
Simulated Antenna Patterns @ 50 GHz



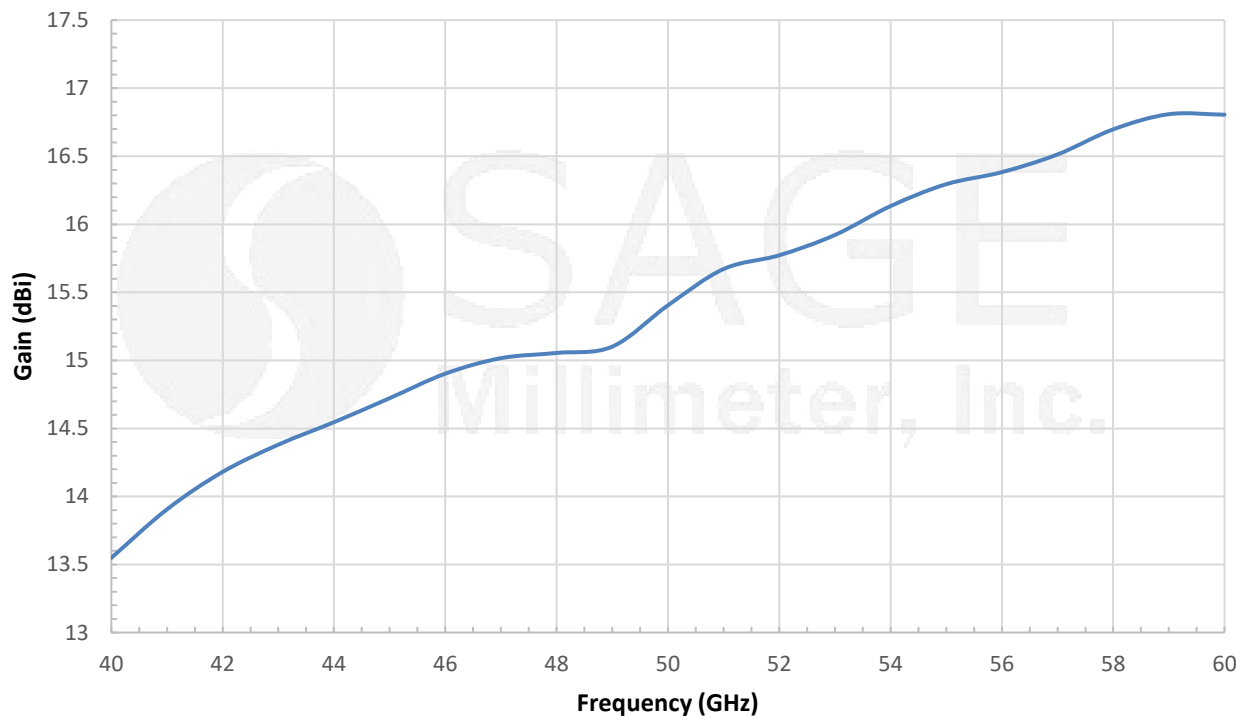


WR-19 Scalar Feed Horn Antenna, 40 to 60 GHz, 15 dBi

Simulated Antenna Patterns @ 60 GHz



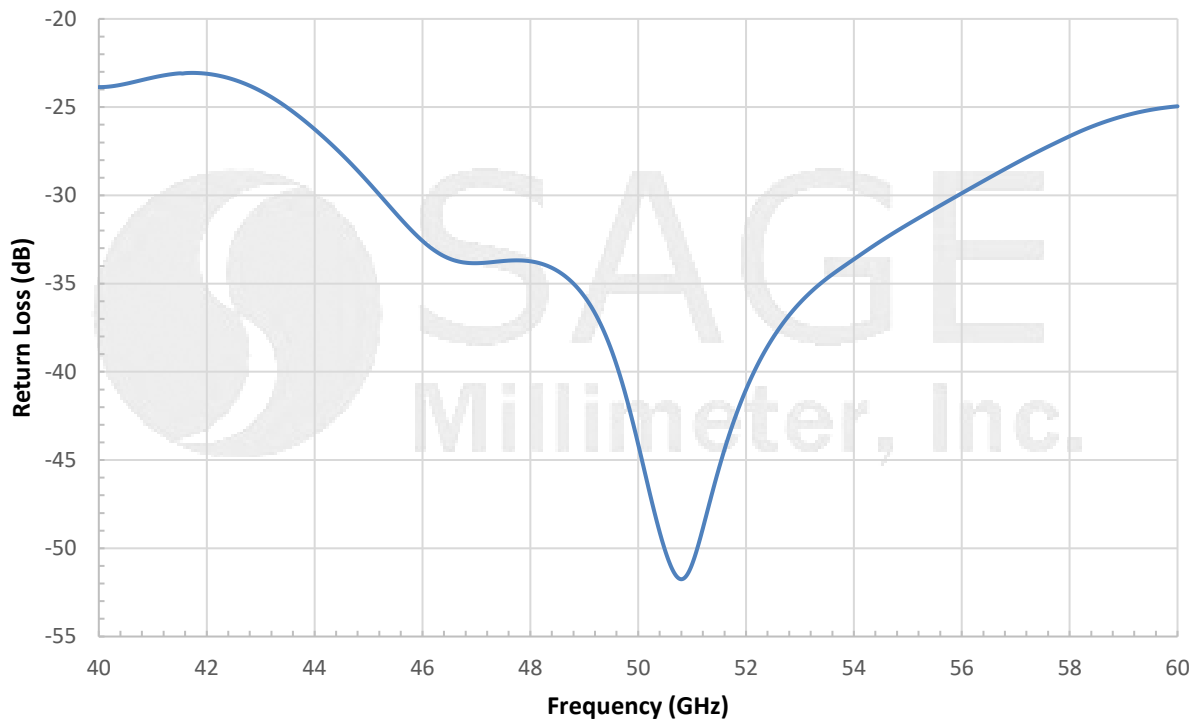
Simulated Gain vs. Frequency



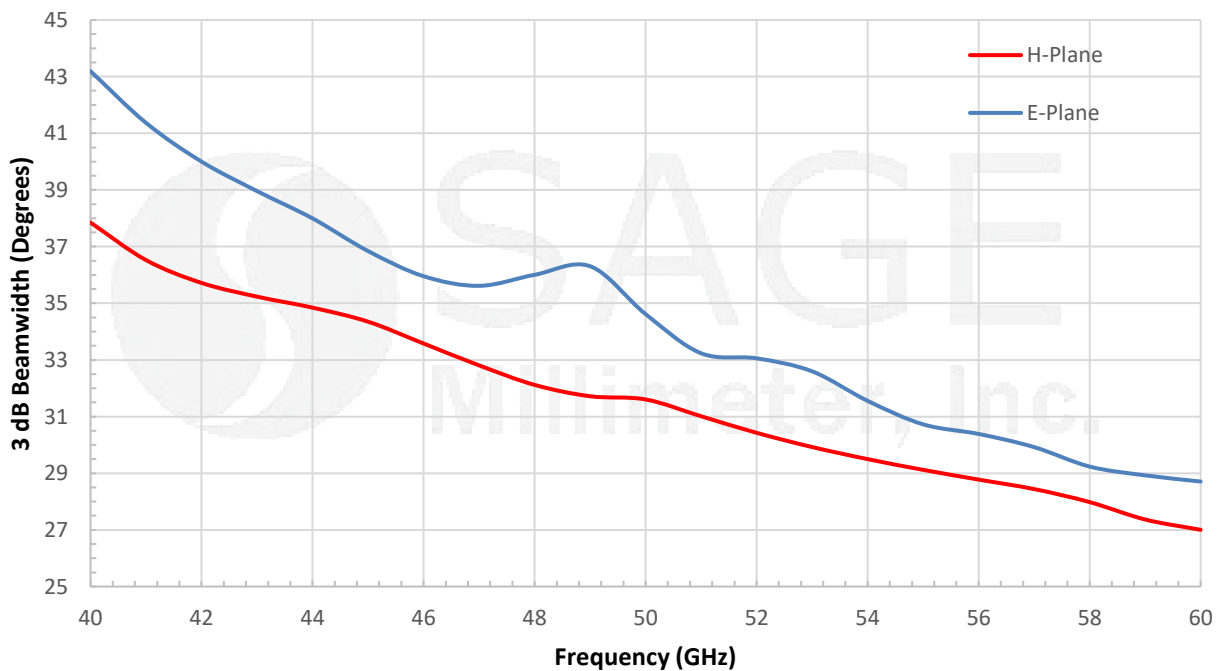


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Simulated Return Loss vs. Frequency



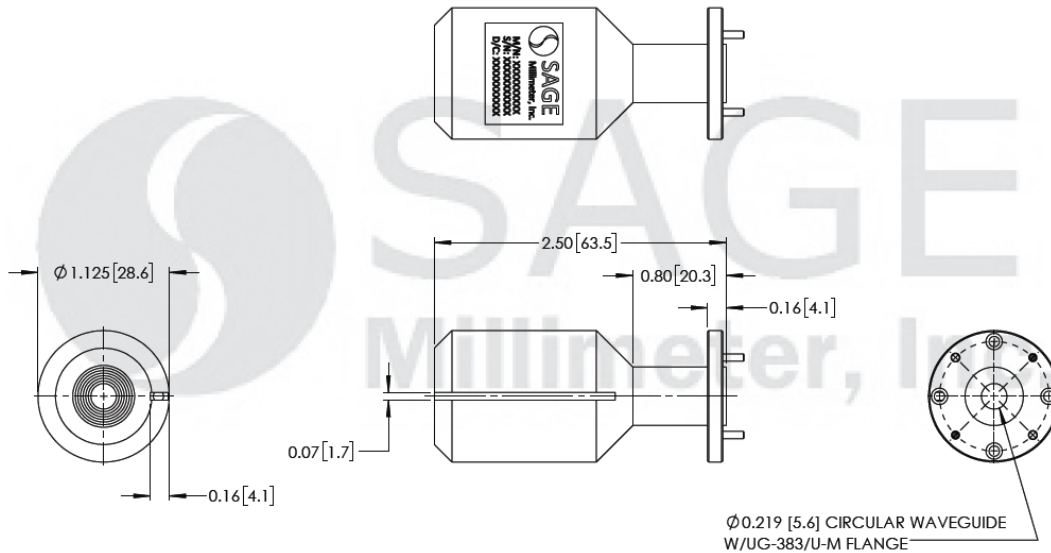
Simulated 3 dB Beamwidth vs. Frequency





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



Note:

- All data are simulated. Actual data may vary.
- 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.

