SAF-7531141535-110-S1

Advanced

W Band Scalar Feed Horn Antenna, 15 dBi Gain

Description:

Model SAF-7531141535-110-S1 is a W-band scalar feed horn antenna that operates from 75 to 110 GHz. The antenna offers a 15 dBi nominal gain, 35 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.

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

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	75 GHz	92.5 GHz	110 GHz
Gain		15 dBi	
3 dB Beamwidth, E-plane		35°	
3 dB Beamwidth, H-plane		35°	
Side Lobes, E-plane		-25 dB	
Side Lobes, 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	2.00" (L) x 0.75 (Ø)
Outline	AF-CW15-110

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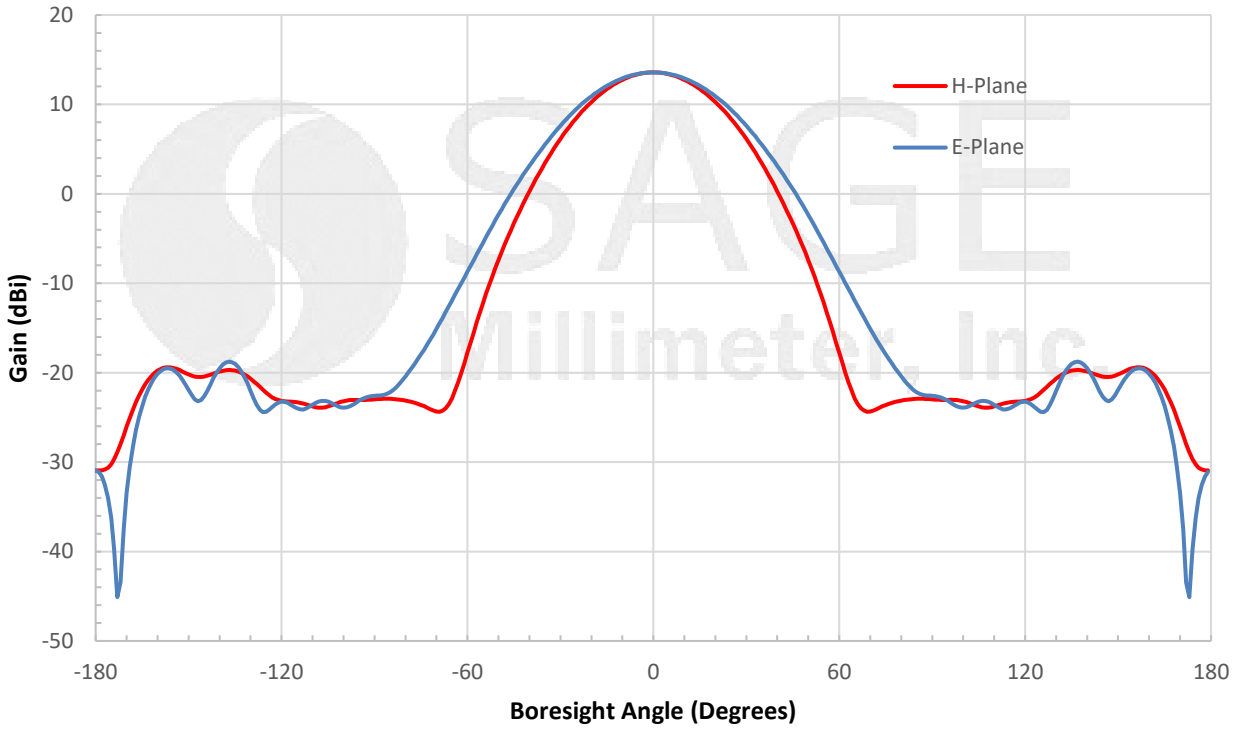
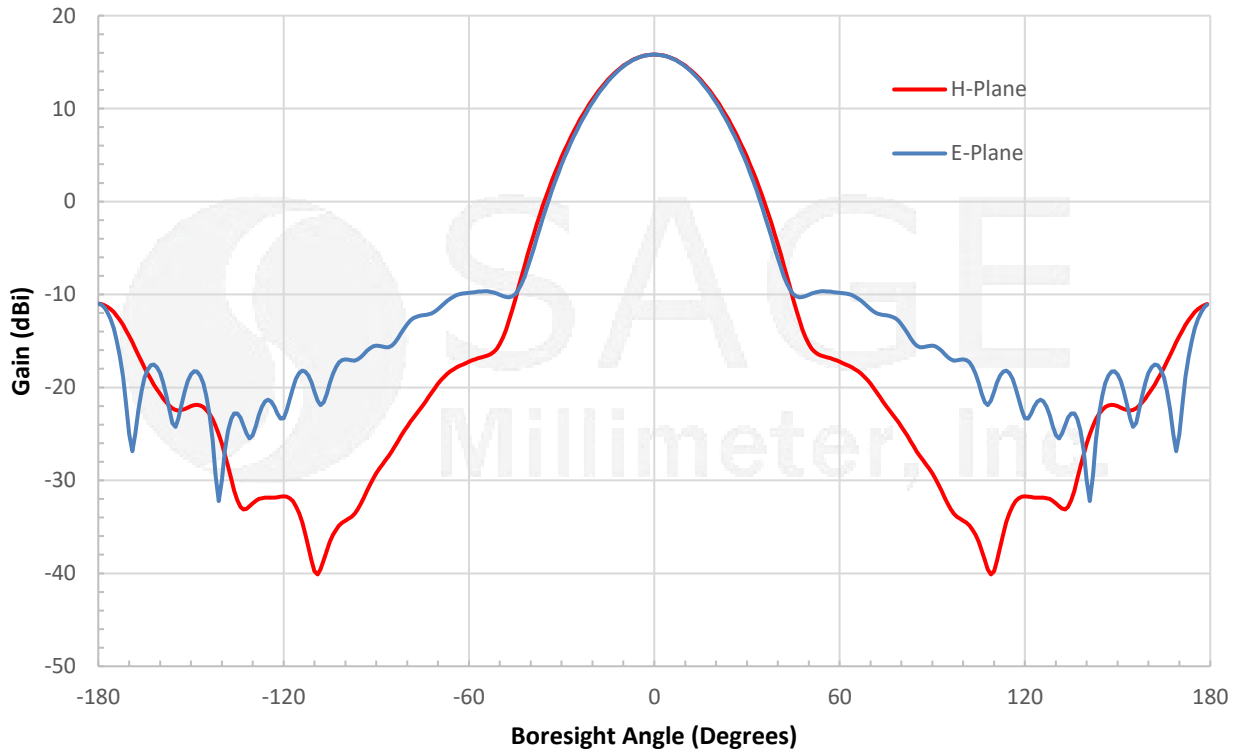
W Band Scalar Feed Horn Antenna, 15 dBi Gain

Simulated Antenna Patterns @ 75 GHz



Simulated Antenna Patterns @ 93 GHz



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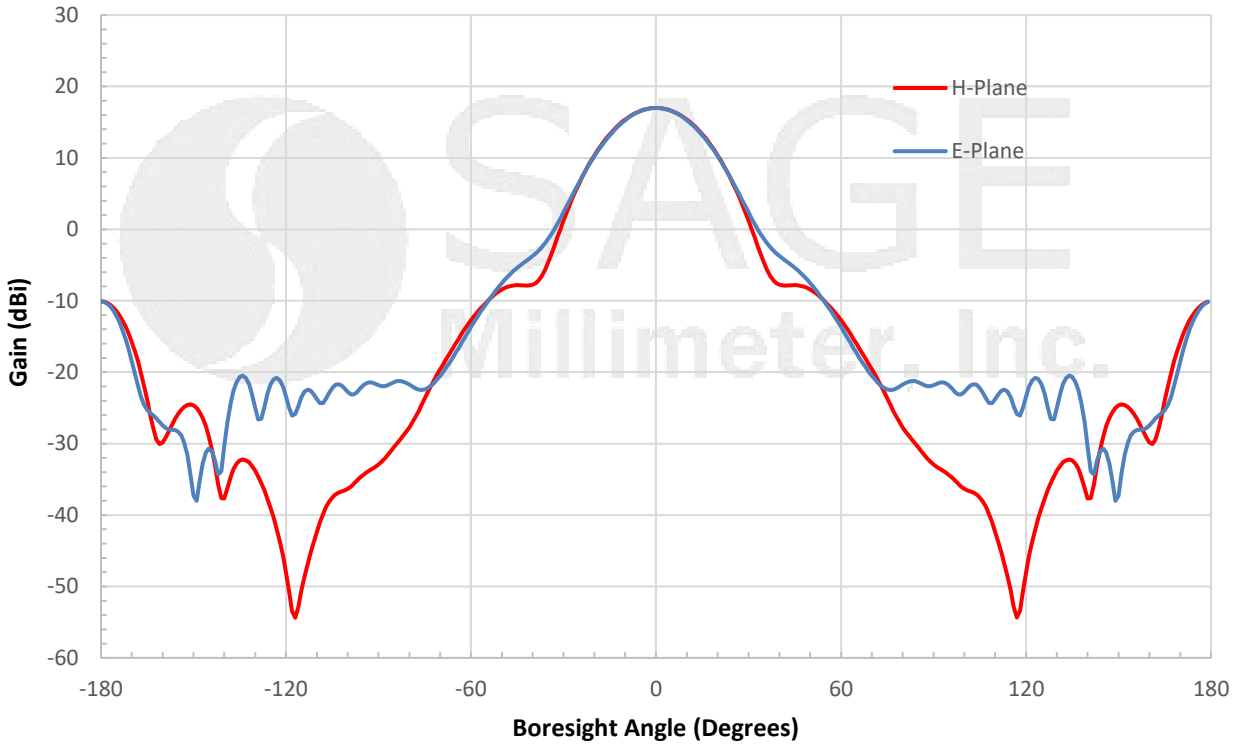
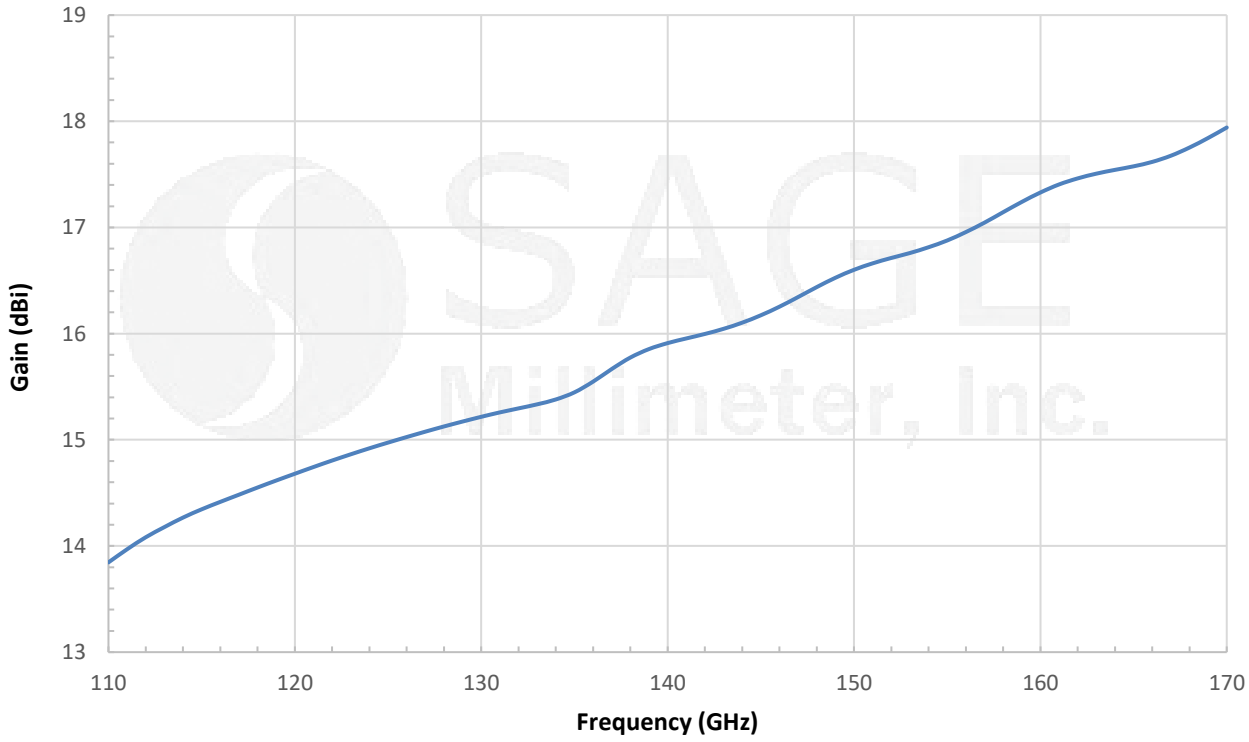
W Band Scalar Feed Horn Antenna, 15 dBi Gain

Simulated Antenna Patterns @ 110 GHz



Simulated Gain vs. Frequency



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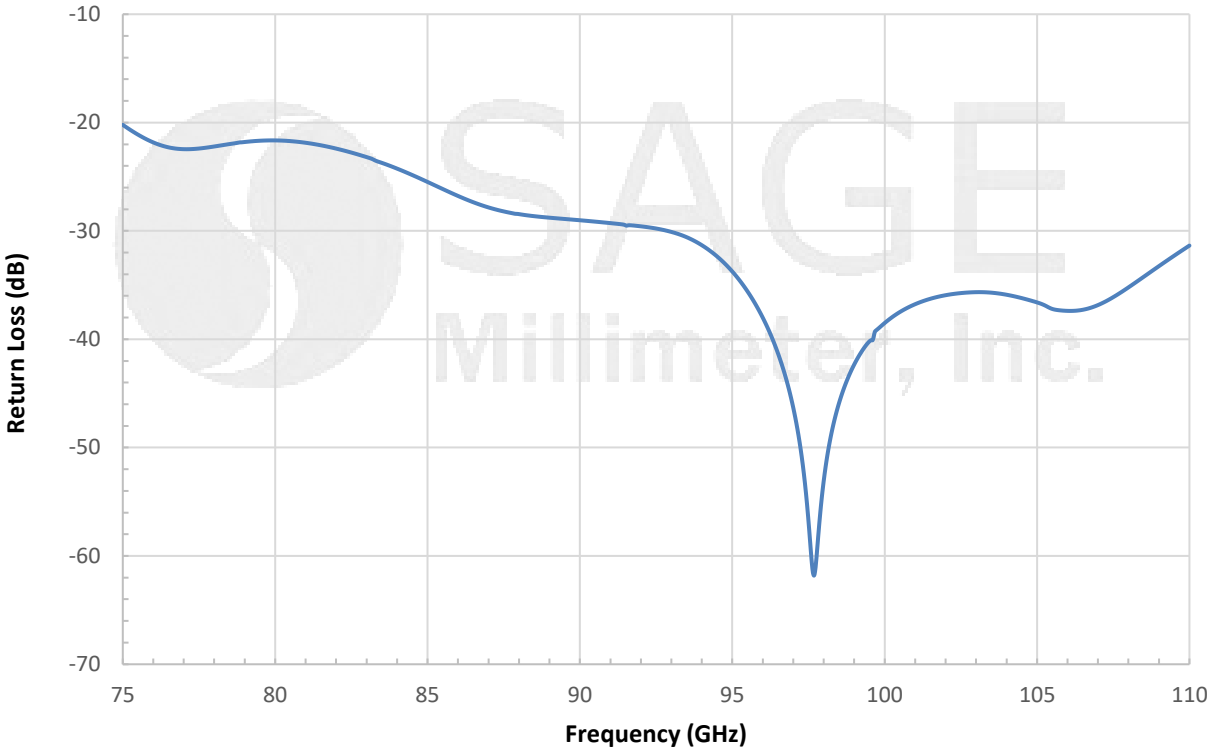
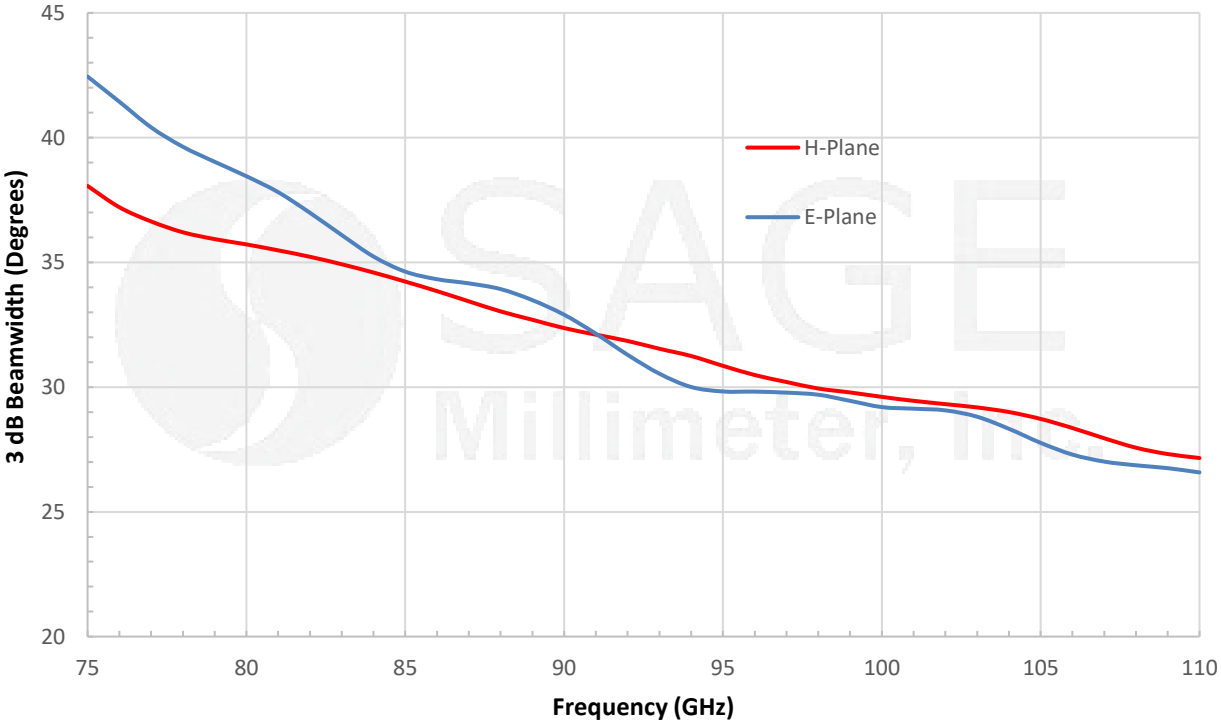
Simulated Return Loss vs. Frequency



Simulated 3 dB Beamwidth vs. Frequency



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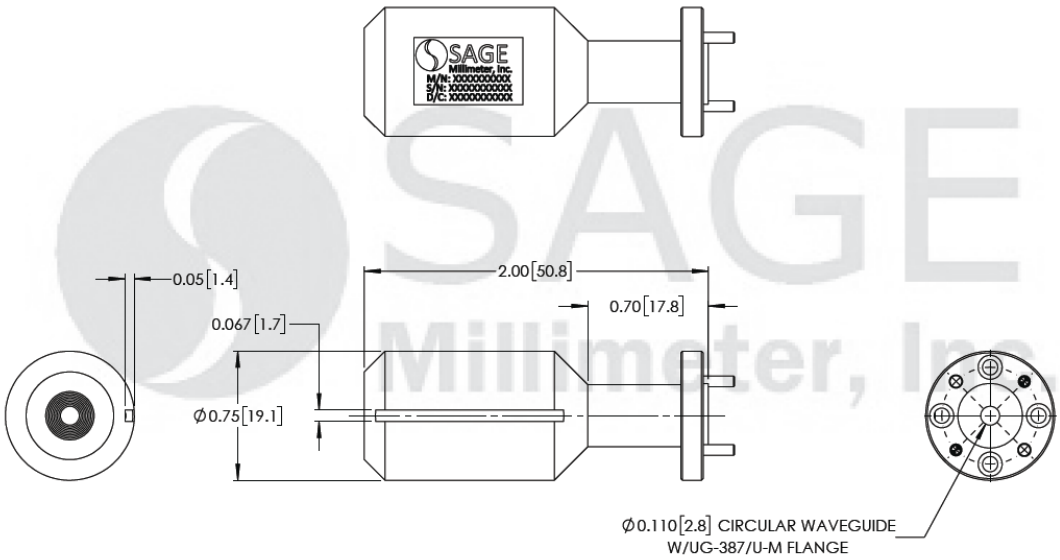
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- All data presented is simulated. Actual data may vary slightly.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

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