



W Band Scalar Feed Horn Antenna, 17 dBi Gain

Description:

Model SAF-7531141725-110-S1 is a W-band scalar feed horn antenna that operates from 75 to 110 GHz. The antenna offers a 17 dBi nominal gain, 25 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		17 dBi	
3 dB Beamwidth, E-plane		25°	
3 dB Beamwidth, H-plane		25°	
Side Lobes, E-plane		-25 dB	
Side Lobes, H-plane		-25 dB	
Return Loss		15 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-CW17-110

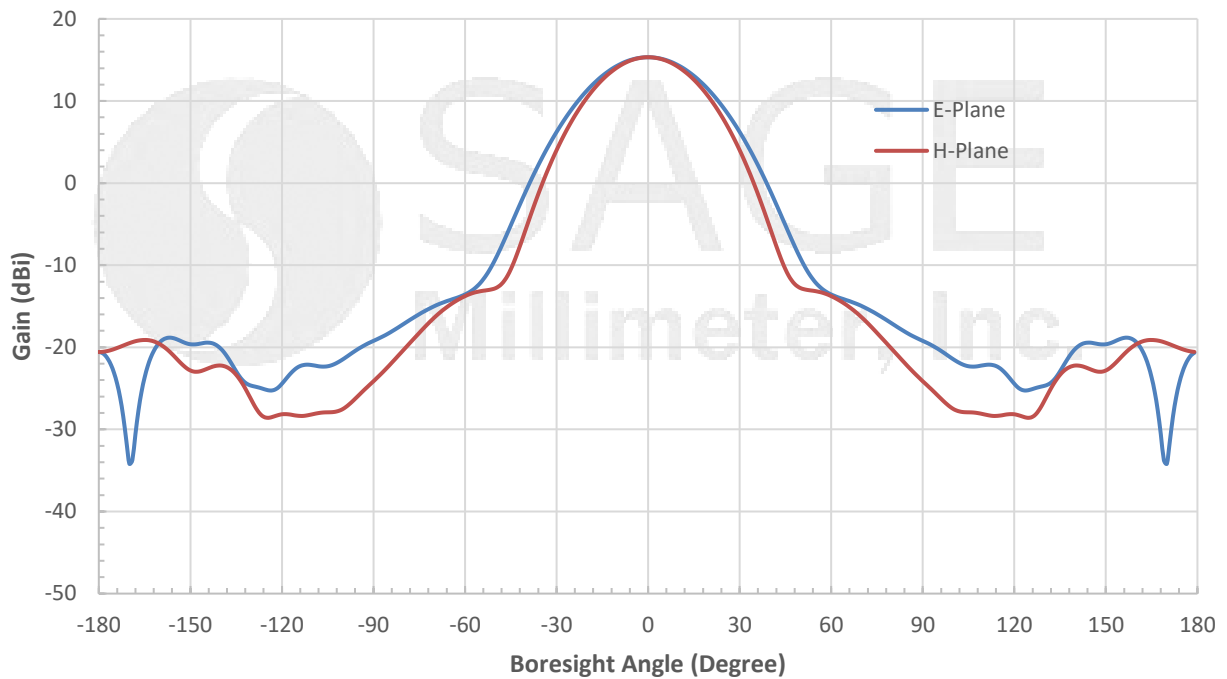


www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
 Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

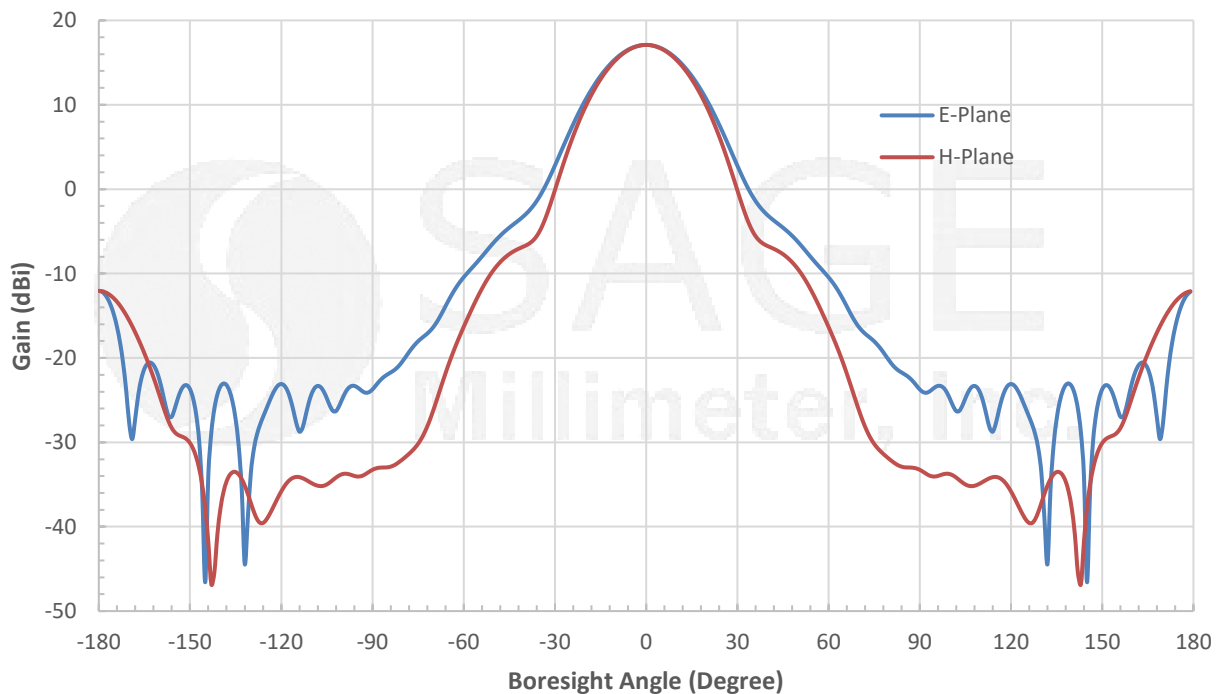


W Band Scalar Feed Horn Antenna, 17 dBi Gain

Simulated Antenna Patterns @ 75 GHz



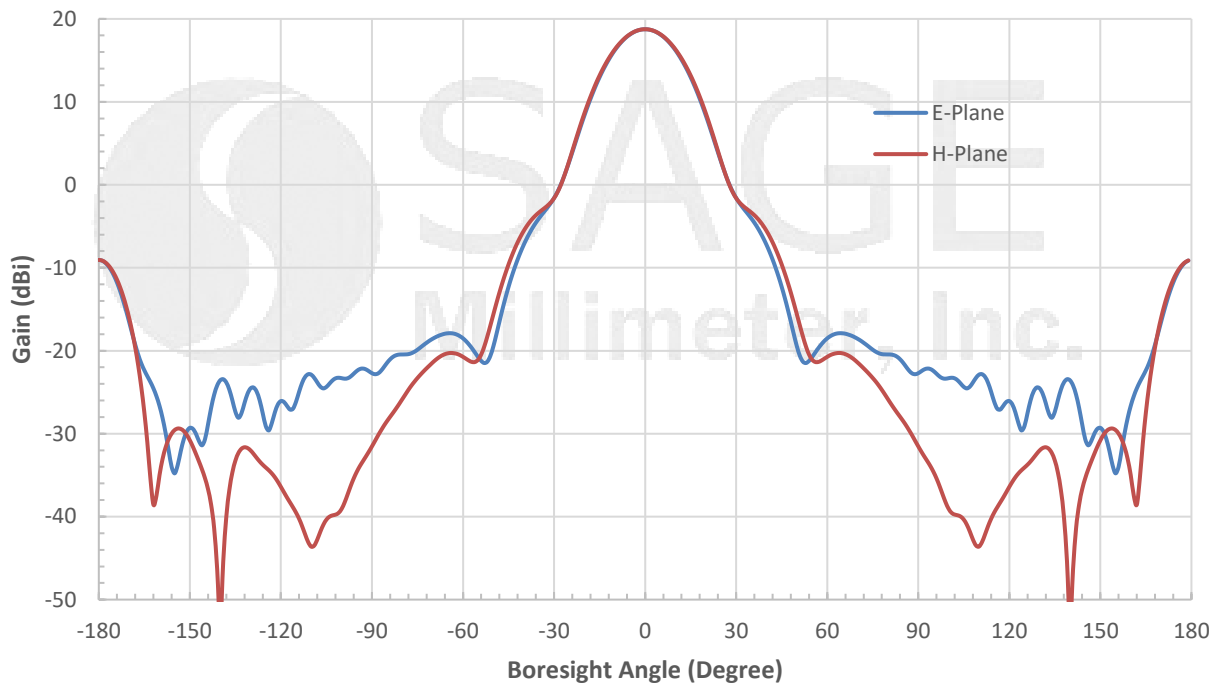
Simulated Antenna Patterns @ 92 GHz



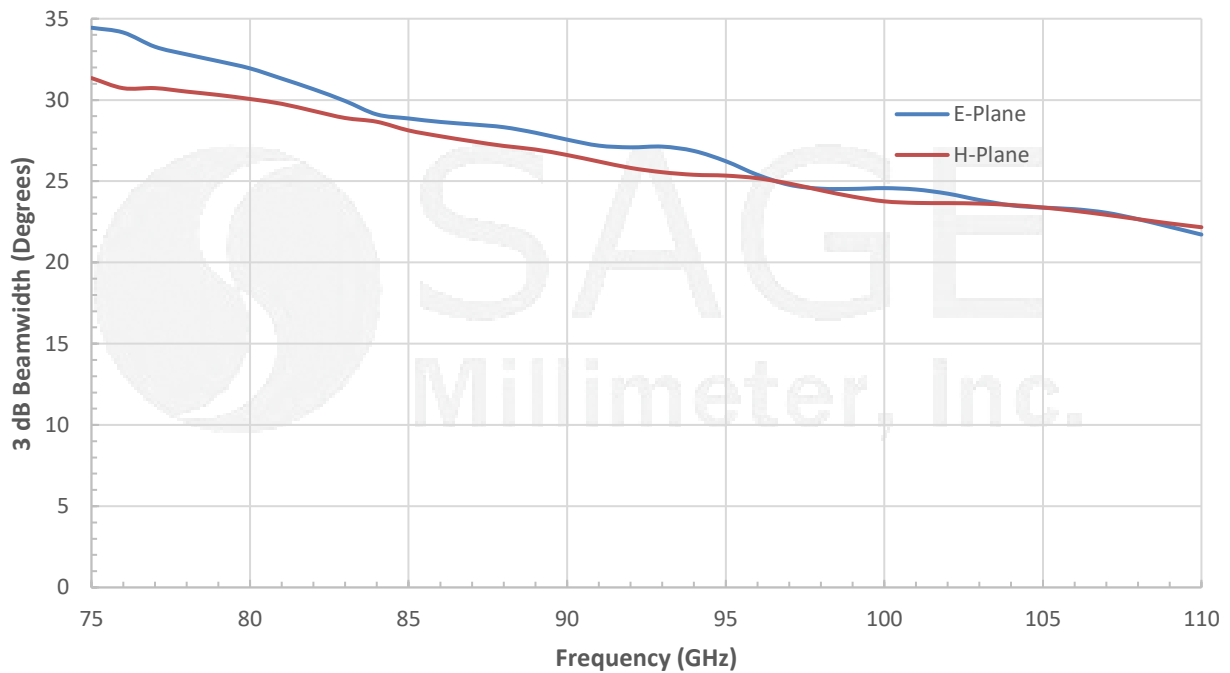


W Band Scalar Feed Horn Antenna, 17 dBi Gain

Simulated Antenna Patterns @ 110 GHz



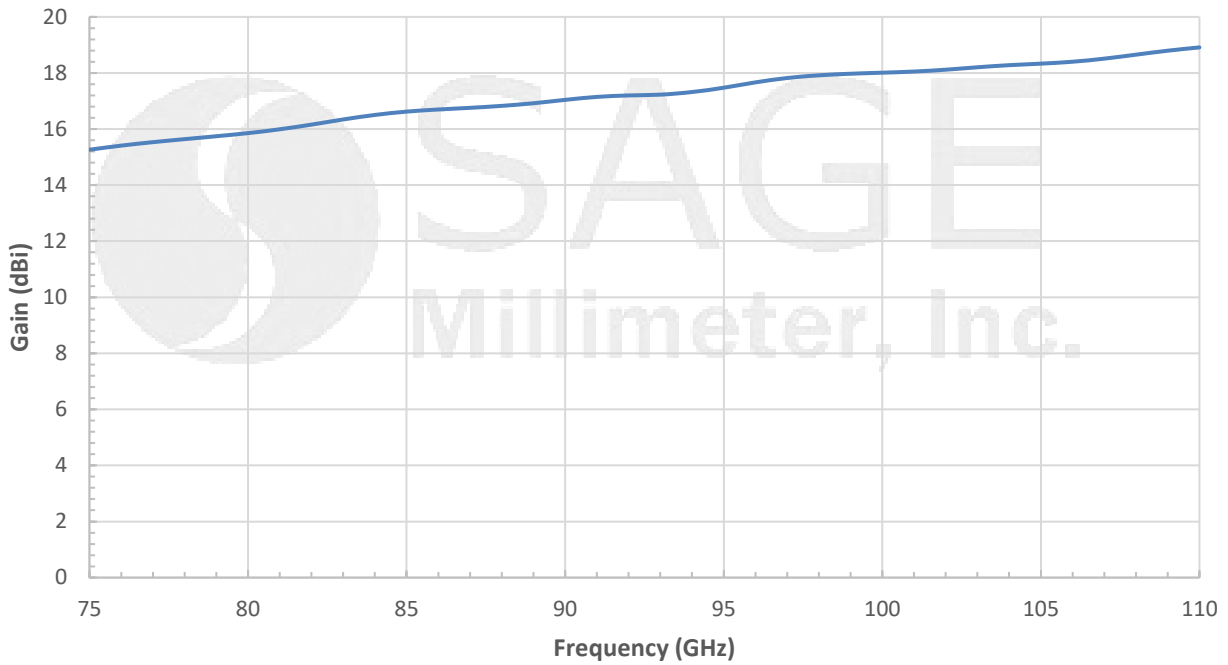
Simulated 3dB Beamwidth vs. Frequency



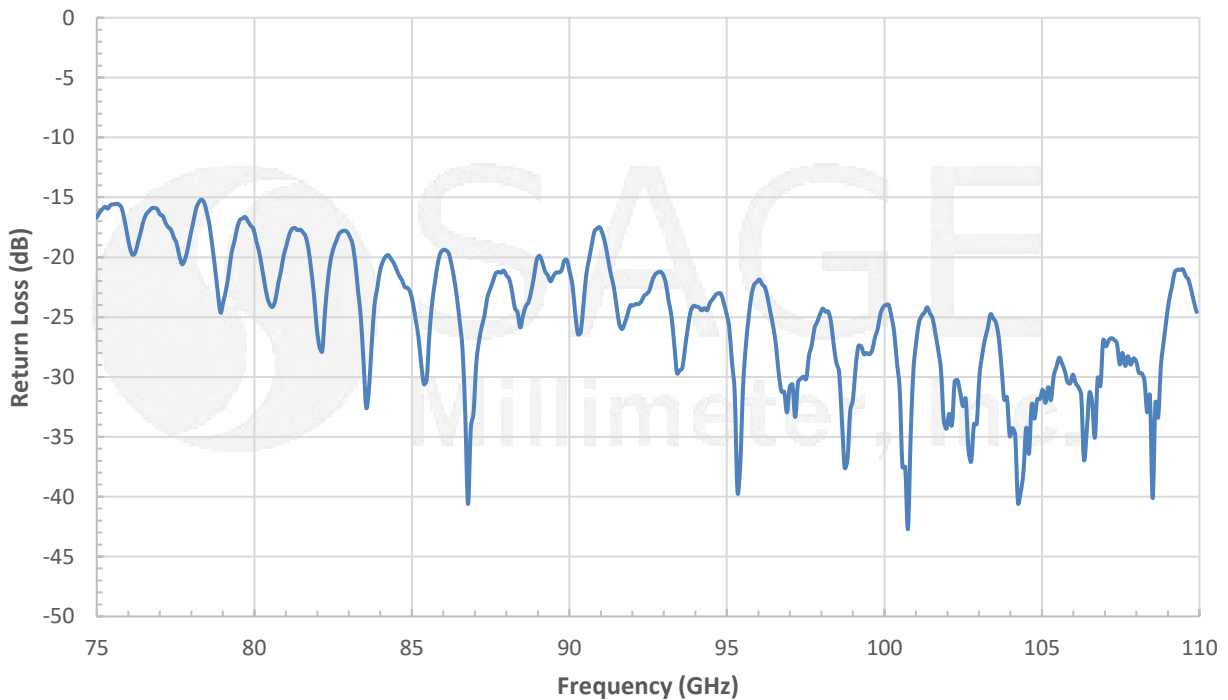


W Band Scalar Feed Horn Antenna, 17 dBi Gain

Simulated Gain vs. Frequency

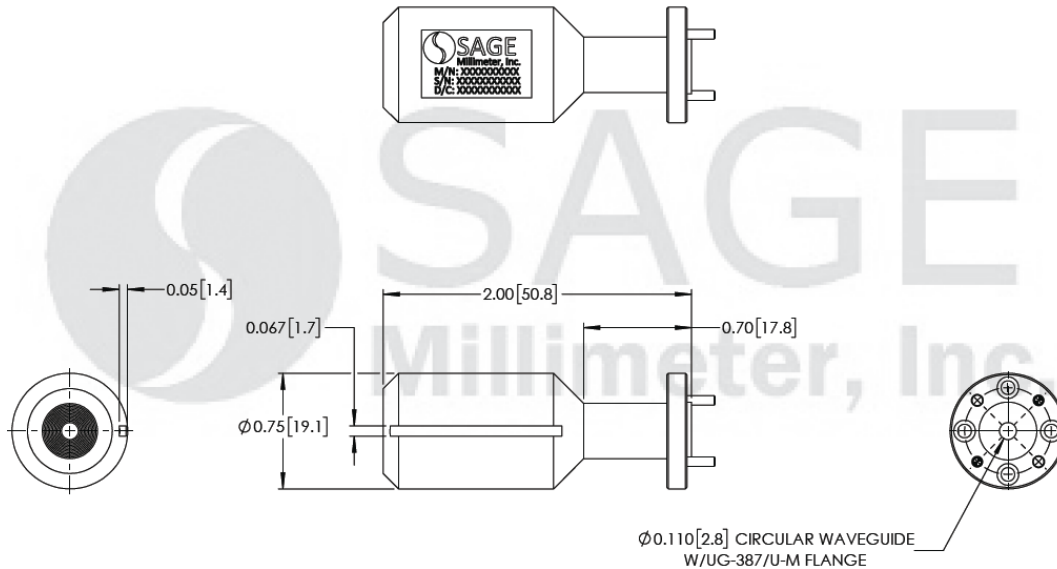


Typical Return Loss vs Frequency



W Band Scalar Feed Horn Antenna, 17 dBi Gain

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

**Note:**

- Antenna patterns, 3 dB Beamwidth, and Gain data presented are simulated. Actual data may vary unit to unit, slightly.
- Return loss data presented is taken from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C case 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.

