



## W Band Scalar Feed Horn Antenna, 87 to 100 GHz, 17 dBi Gain

### Description:

**Model SAF-8731041725-094-S1** is a W-band scalar feed horn antenna that operates from 87 to 100 GHz. The antenna offers a 17 dBi nominal gain, 25 degree typical half power beamwidth, and -28.5 dB typical side lobe level. The scalar feed horn is equipped with a 0.094" 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	87.0 GHz	93.5 GHz	100.0 GHz
Gain		17 dBi	
3 dB Beamwidth, E-plane		25°	
3 dB Beamwidth, H-plane		25°	
Side Lobes, E-plane		-28.5 dB	
Side Lobes, H-plane		-28.5 dB	
Return Loss		20 dB	
Polarization	Linear and Circular		
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

### Mechanical Specifications:

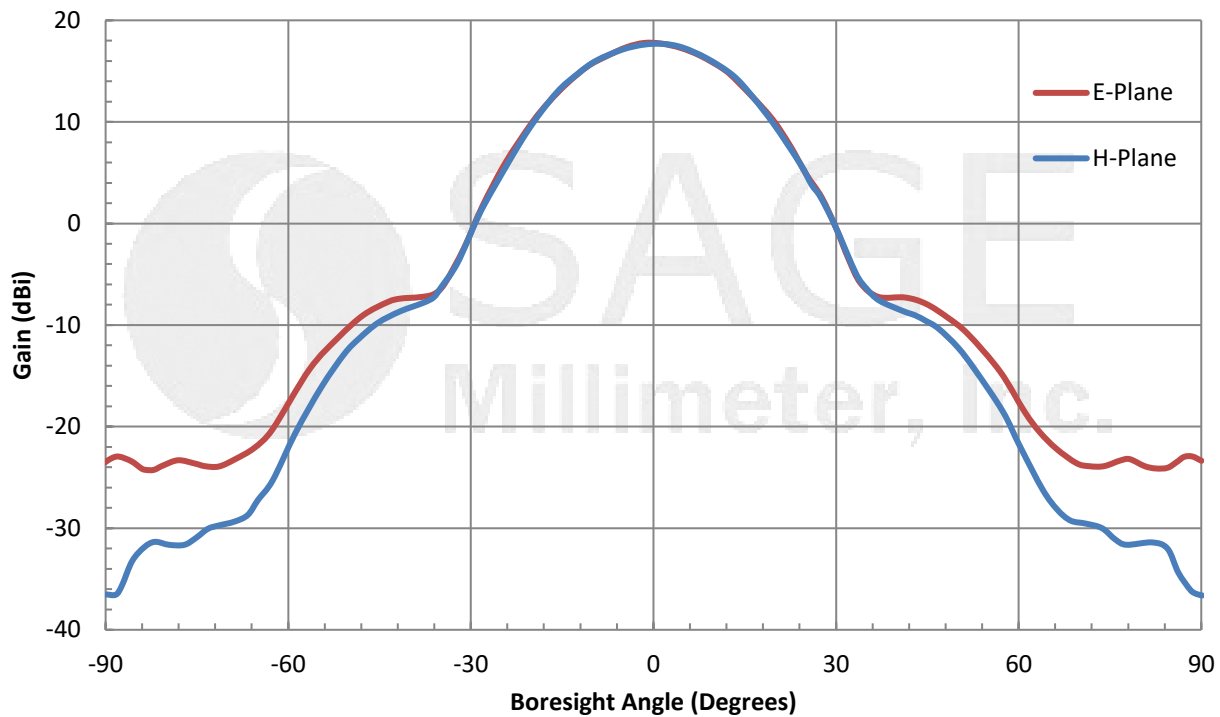
Item	Specification
Antenna Port	0.094" Diameter Circular Waveguide
Flange Type	UG-387/U-M
Material	Aluminum
Finish	Gold Plated
Weight	1.5 Oz
Size	1.5" (L) X 0.60" (Ø)
Outline	AF-CW17-094



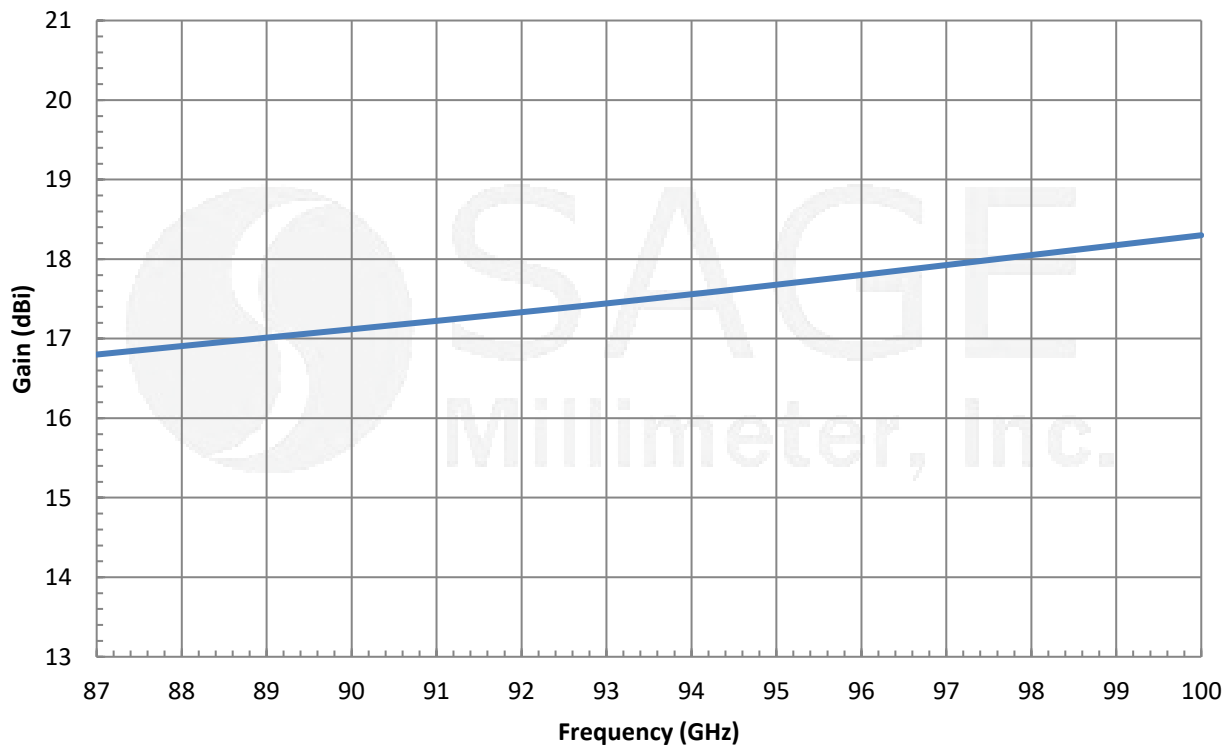


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### Typical Antenna Patterns @ 93.5 GHz



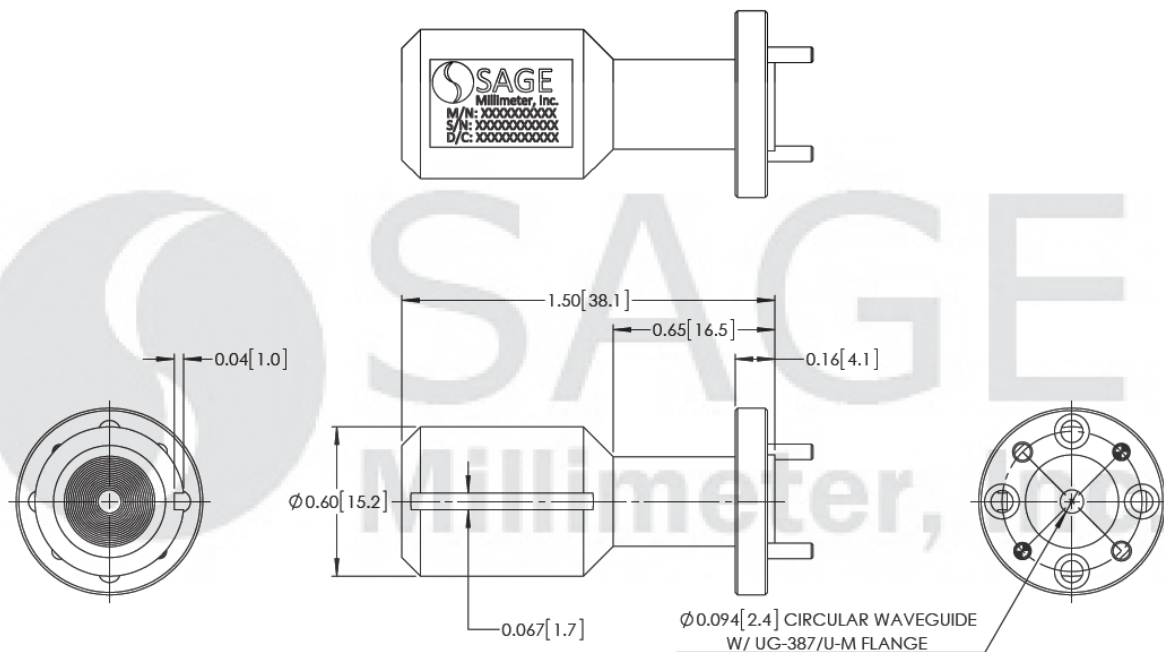
### Typical Gain vs. Frequency





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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.

