



Q Band Scalar Feed Horn Antenna, 35 to 45 GHz, 17 dBi Gain

Description:

Model SAF-3534531725-219-S1 is a Q-band scalar feed horn antenna that operates from 35 to 45 GHz. The antenna offers a 17 dBi nominal gain, 25 degree typical half power beamwidth, and -28 dB typical side lobe level. The scalar feed horn 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 number.



Features:

- Circular Waveguide Interface
- Precisely Machined
- Low Side Lobe Level
- High Return Loss
- Linear and Circular Polarization

Applications:

- 5G Systems
- Feed Horn for Gaussian Optical Antennas
- Feed Horn for Cassegrain Antennas
- Rapid System Setups
- Engineering Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range*	35 GHz	40 GHz	45 GHz
Gain		17 dBi	
3 dB Beamwidth, E-plane		25°	
3 dB Beamwidth, H-plane		25°	
Side Lobes, E-plane		-28 dB	
Side Lobes, H-plane		-28 dB	
Return Loss		20 dB	
Cross Polarization	Linear and Circular		
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

*Note: The operating frequency range of the feed horn can be extended to 33 to 48 GHz with small performance degradation at band edge.

Mechanical Specifications:

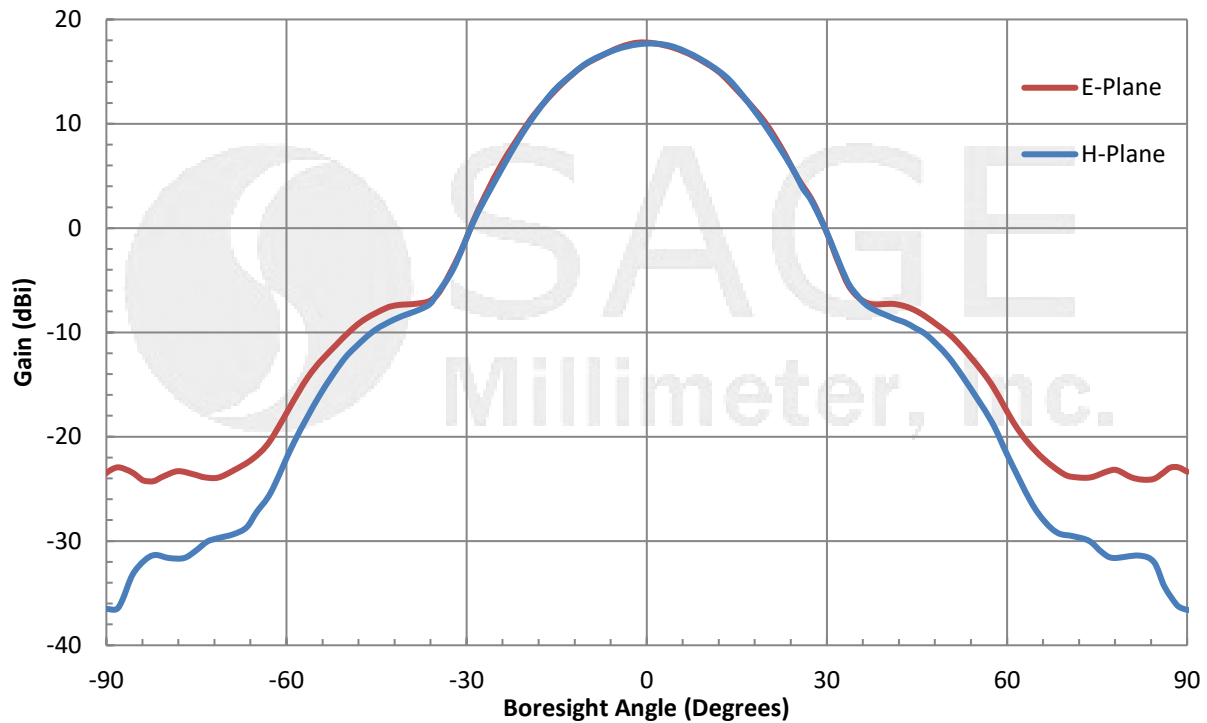
Item	Specification
Antenna Port	0.219" Diameter Circular Waveguide
Flange Type	UG-383/U-M
Material	Aluminum
Finish	Gold Plated
Weight	2.0 Oz
Size	2.50" (L) X 1.125" (Ø)
Outline	AF-CQ17-219



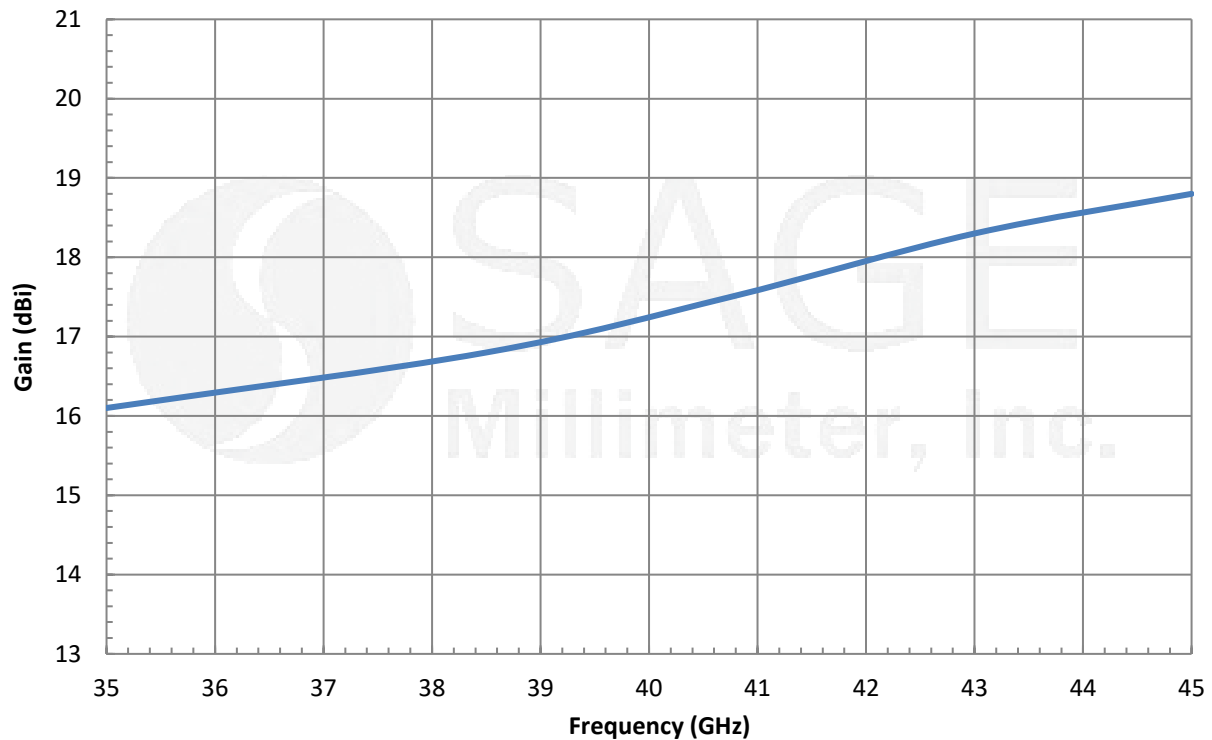


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Typical Antenna Patterns @ 40 GHz



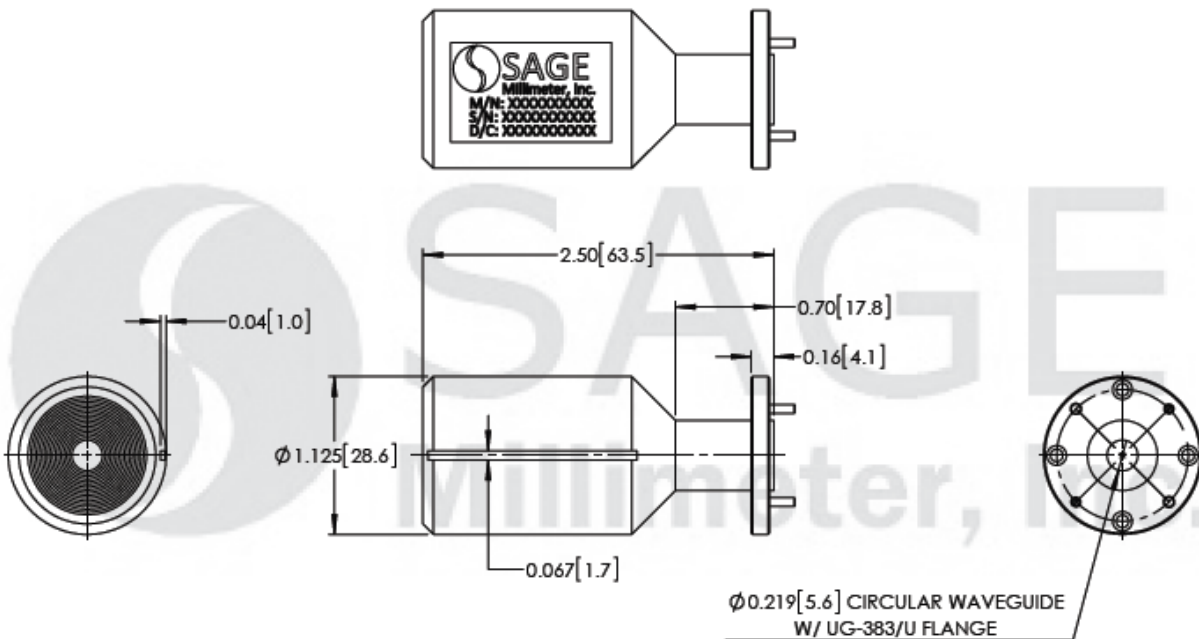
Typical Gain vs. Frequency





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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.
- 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.

