



Q-Band Spot-Focusing Lens Antenna, 40.1 GHz

Description:

Model SAQ-403085-219-S1 is a Q-band spot-focusing lens antenna that delivers a nominal 3 dB spot size of 1" at a focal length of 8.5" at the frequency of 40.1 GHz. The antenna employs a low loss lens to offer excellent aperture efficiency at 40.1 GHz. The lens antenna is equipped with a 0.219" diameter circular waveguide and UG-383/U-M flange as its input port. It supports both linear and circular polarized waveforms.



Features:

- Ridged Mechanical Configurations
- High Efficiency and Low loss
- Low Sidelobe Levels

Applications:

- Material Research Instruments
- Scientific Instruments

Electrical Specifications:

Parameter		Minimum	Typical	Maximum
Frequency			40.1 GHz	
Frequency Bandwidth			±500 MHz	
Focal Length			8.5"	
Peak to First Null	Spot Size		2.40"	
	Power Captured		83.8%	
10 dB Below Peak	Spot Size		1.70"	
	Power Captured		78.9%	
3 dB Below Peak	Spot Size		1.00"	
	Power Captured		47.4%	
Polarization		Linear and Circular		
Return Loss			14 dB	
Specification Temperature			+25 °C	
Operating Temperature		-40 °C		+85 °C

Mechanical Specifications:

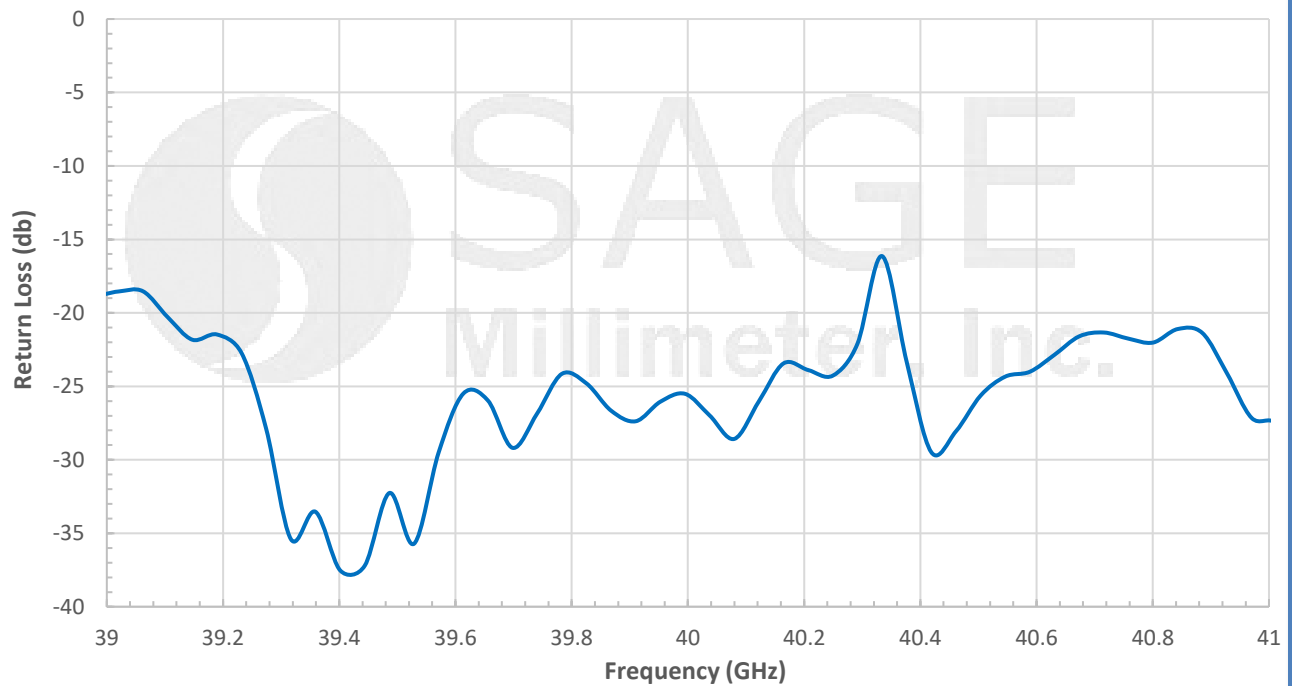
Item	Specification
Antenna Port	0.219" Dia Circular Waveguide with UG-383/U-M Flange
Horn Material	Aluminum
Finish	Chem Film
Weight	0.5 Lbs
Lens Diameter	2.56"
Dimensions	3.44" (L) x 3.08" (Ø)
Outline	AQ-CQ-2.56-C219



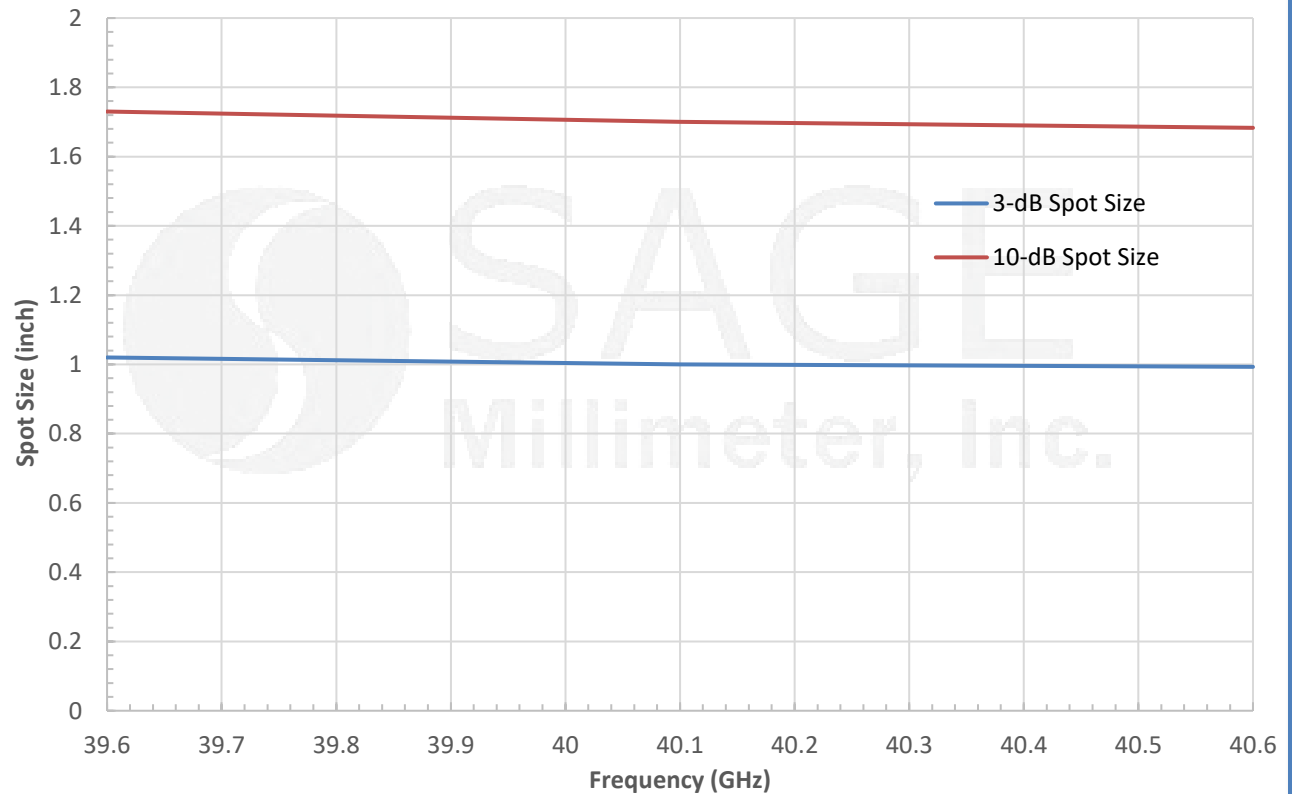


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Measured Return Loss vs. Frequency

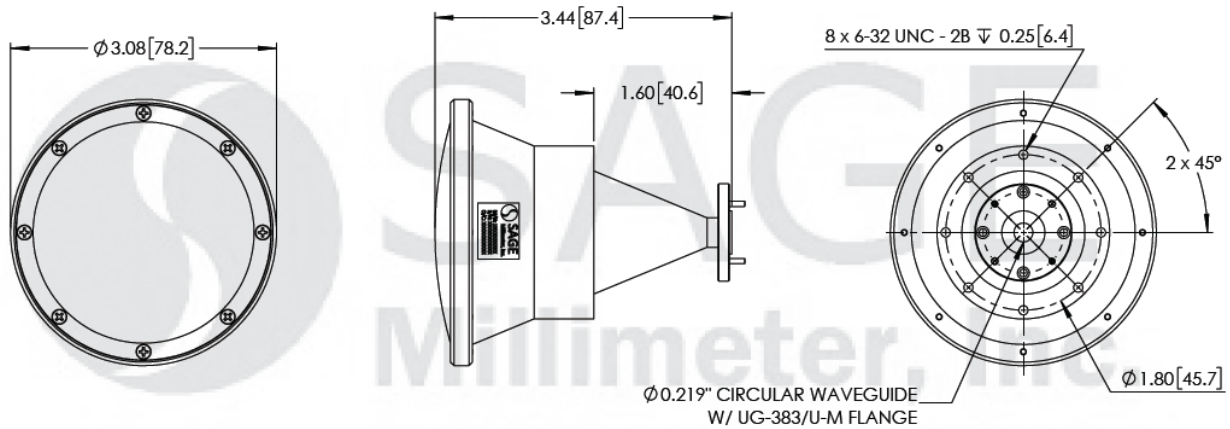


Theoretical Spot Size vs. Frequency



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



Note:

- Return Loss data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- Spot Size data presented is simulated. Actual data may vary unit to unit.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Foreign objects in the waveguide will affect the antenna performance and may damage the antenna.

