

## SAQ-184010-05-S1

### G-Band Spot Focusing Lens Antenna, 1.0" Focal Length

**SAQ-184010-05-S1** is a G-Band spot-focusing lens antenna that delivers a typical 10 dB spot size of 0.076" at the focal length of 1.0" and a typical return loss of 14 dB across the frequency range of 140 to 220 GHz. The spot-focusing lens antenna is equipped with a WR-05 waveguide with a UG-387/ U-M anti-cocking flange as its antenna port. It supports linear polarized waveforms.



#### Electrical Specifications:

Parameter		Minimum	Typical	Maximum
Frequency		140 GHz		220 GHz
Focal Length			1.0"	
Peak to First Null	Spot Size		0.107"	
	Power Captured		83.8%	
10 dB Below Peak	Spot Size		0.076"	
	Power Captured		78.9%	
3 dB Below Peak	Spot Size		0.045"	
	Power Captured		47.4%	
Polarization			Linear	
Return Loss			14 dB	
Specification Temperature			+25 °C	
Operating Temperature		-40 °C		+85 °C

#### Mechanical Specifications:

Item	Specification
Antenna Port	WR-05 Waveguide with UG-387/U-M Anti-Cocking Flange
Horn/Lens Material	Aluminum/HDPE
Lens Diameter	1.5"
Dimensions	3.80" (L) x 2.00" (ø)
Outline	AQ-RG-1.5-C059-A

#### ECCN

EAR99

#### FEATURES

- Rugged Mechanical Configuration
- High Efficiency and Low Loss

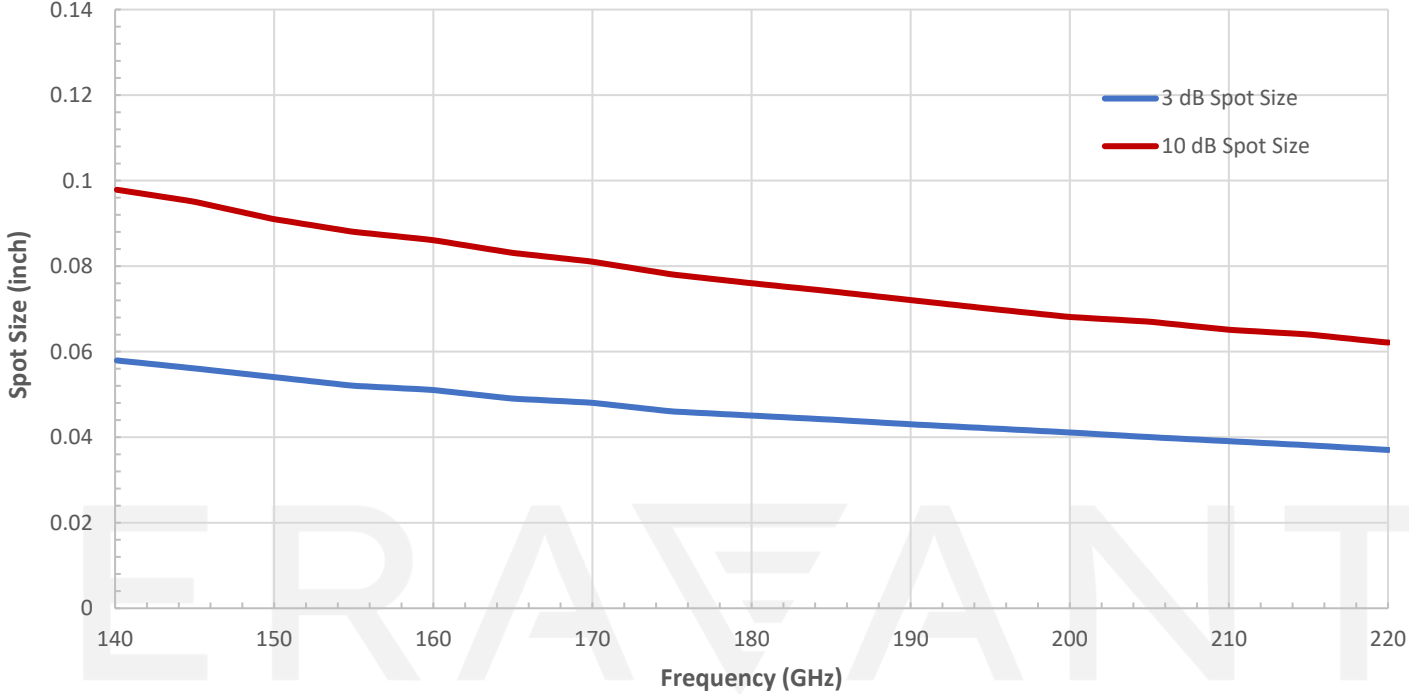
#### APPLICATIONS

- Scientific Instruments
- Material Characterization

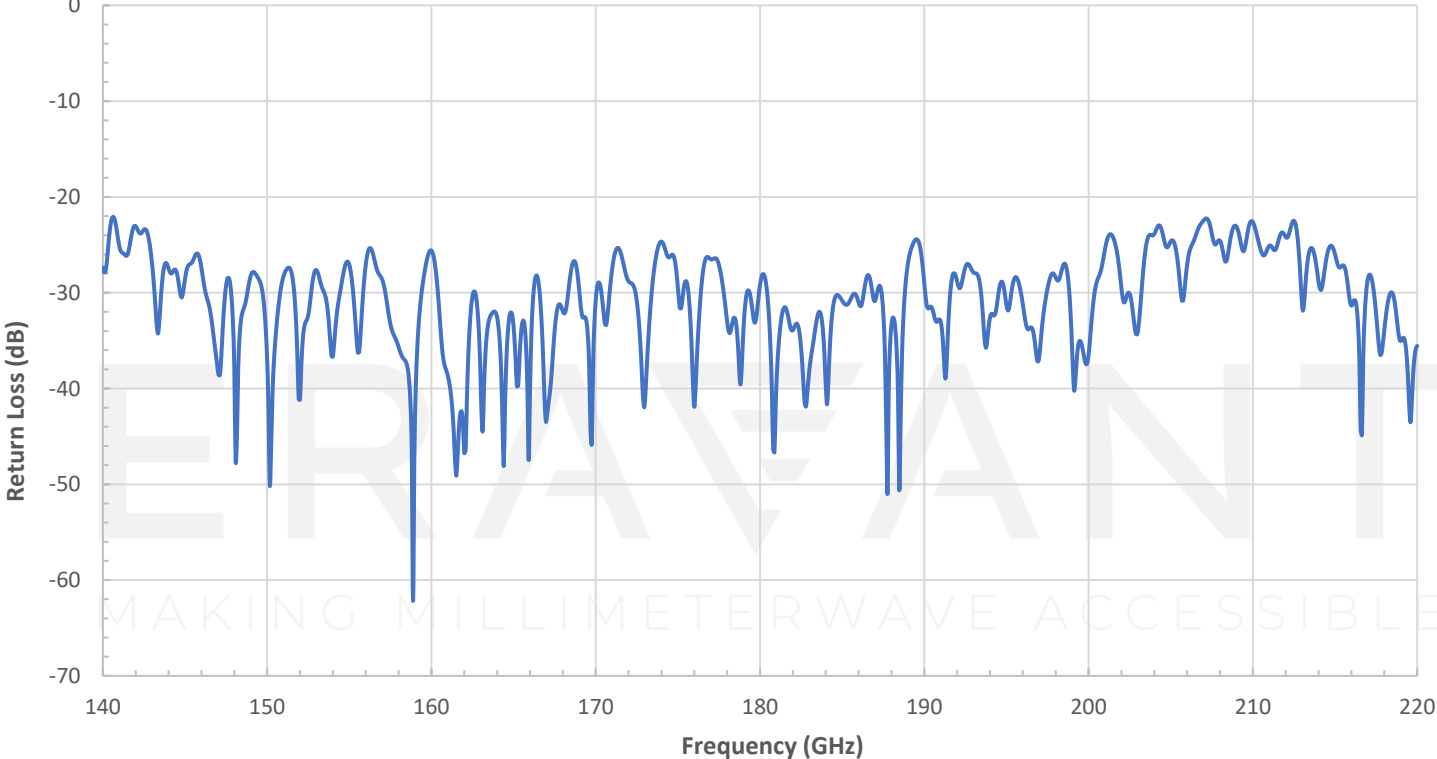
#### SUPPLEMENTAL DETAILS



Theoretical Spot Size vs Frequency

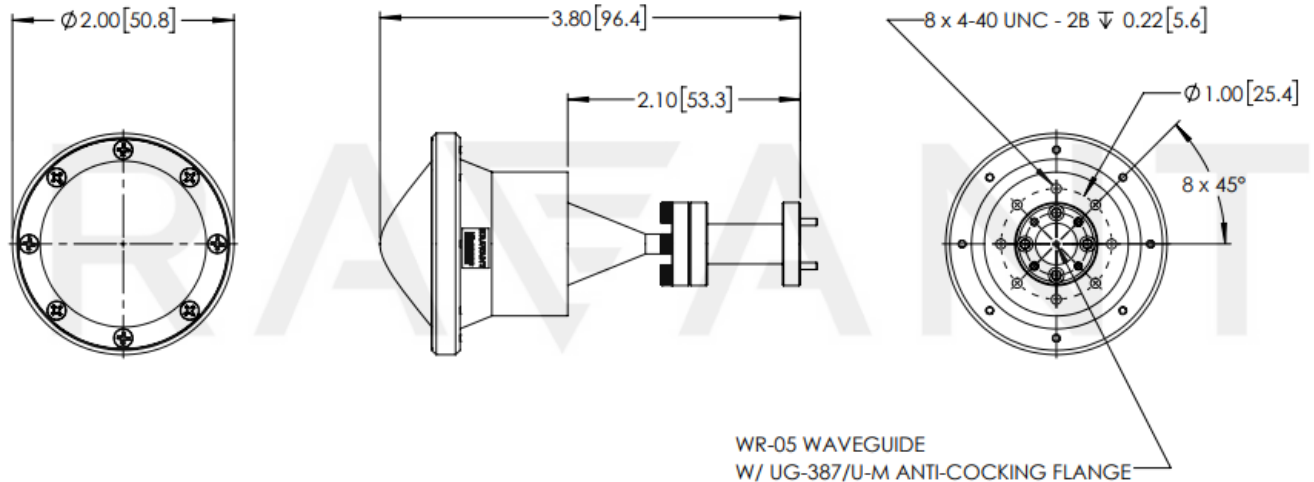


Simulated Return Loss vs. Frequency



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



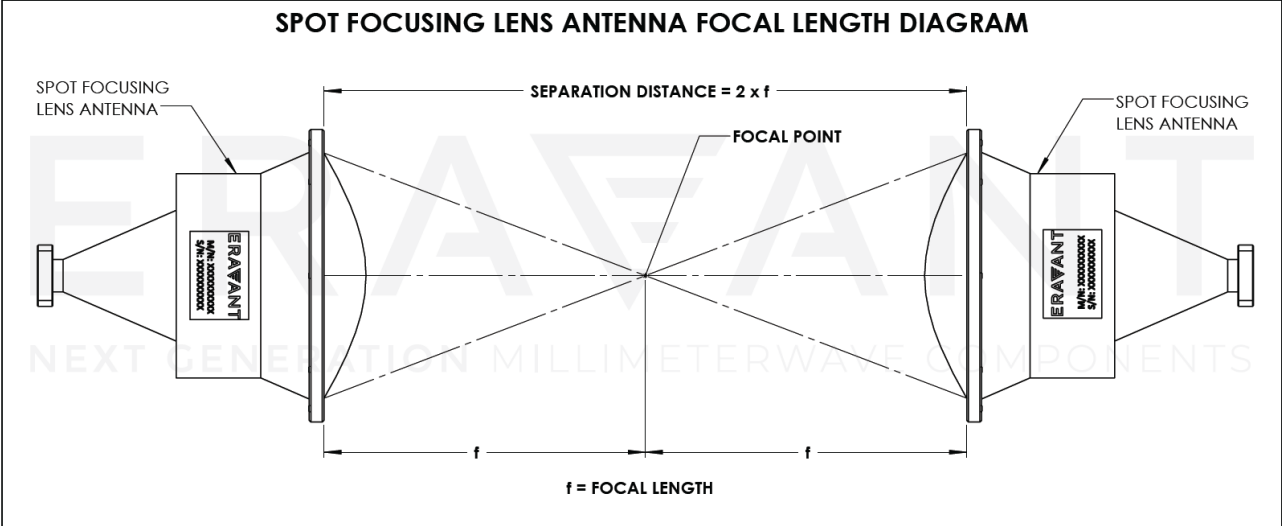
**NOTE:**

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right to change the information presented without notice.

**CAUTION:**

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the antenna will cause performance degradation and possible device damage.

**Focal Length Diagram:** Focal Length is defined in the diagram below with a pair of spot -focusing lens antennas



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