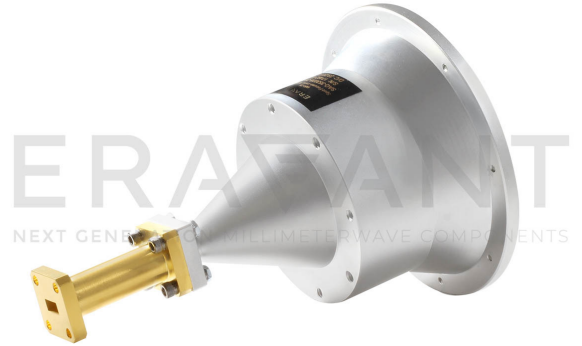


SAQ-353039-28-S1

Ka-Band Spot-Focusing Lens Antenna, 35 GHz, 3.94" Focal Length

SAQ-353039-28-S1 is a Ka-Band spot-focusing lens antenna that delivers a 3 dB spot size of 0.42" at the focal length of 3.94" (10 cm). The antenna employs a low loss lens to offer excellent aperture efficiency at 35.0 GHz. The spot-focusing lens antenna is equipped with a WR-28 waveguide with UG-599/U flange as its antenna port. It supports linear polarized waveforms.



Electrical Specifications:

Parameter		Minimum	Typical	Maximum
Frequency		34.0 GHz	35.0 GHz	36.0 GHz
Frequency Bandwidth			±500 MHz	
Focal Length			3.94"	
Peak to First Null	Spot Size		0.99"	
	Power Captured		83.8%	
10 dB Below Peak	Spot Size		0.70"	
	Power Captured		78.9%	
3 dB Below Peak	Spot Size		0.42"	
	Power Captured		47.4%	
Polarization			Linear	
Return Loss			21 dB	
Specification Temperature			+25 °C	
Operating Temperature		-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-28 Waveguide with UG-599/U Flange
Horn Material	Aluminum/HDPE
Finish	Chem Film
Weight	5.2 Oz
Lens Diameter	3.3"
Dimensions	5.52" (L) x 3.58" (Ø)
Outline	AQ-RA-3.0

ECCN

EAR99

FEATURES

- Rugged Mechanical Configurations
- High Efficiency and Low Loss

APPLICATIONS

- Scientific Instruments
- Material Research Instruments

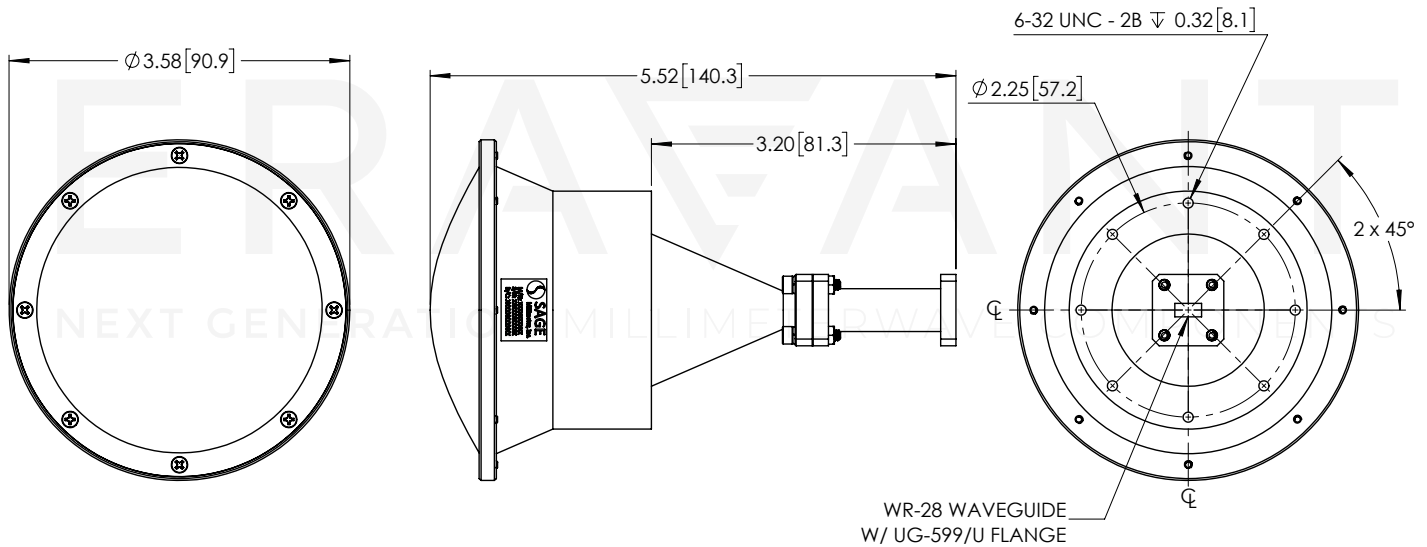
SUPPLEMENTAL DETAILS



SAQ-353039-28-S1

Mechanical Outline:

Unless otherwise specified, all dimensions are in inches [millimeters]



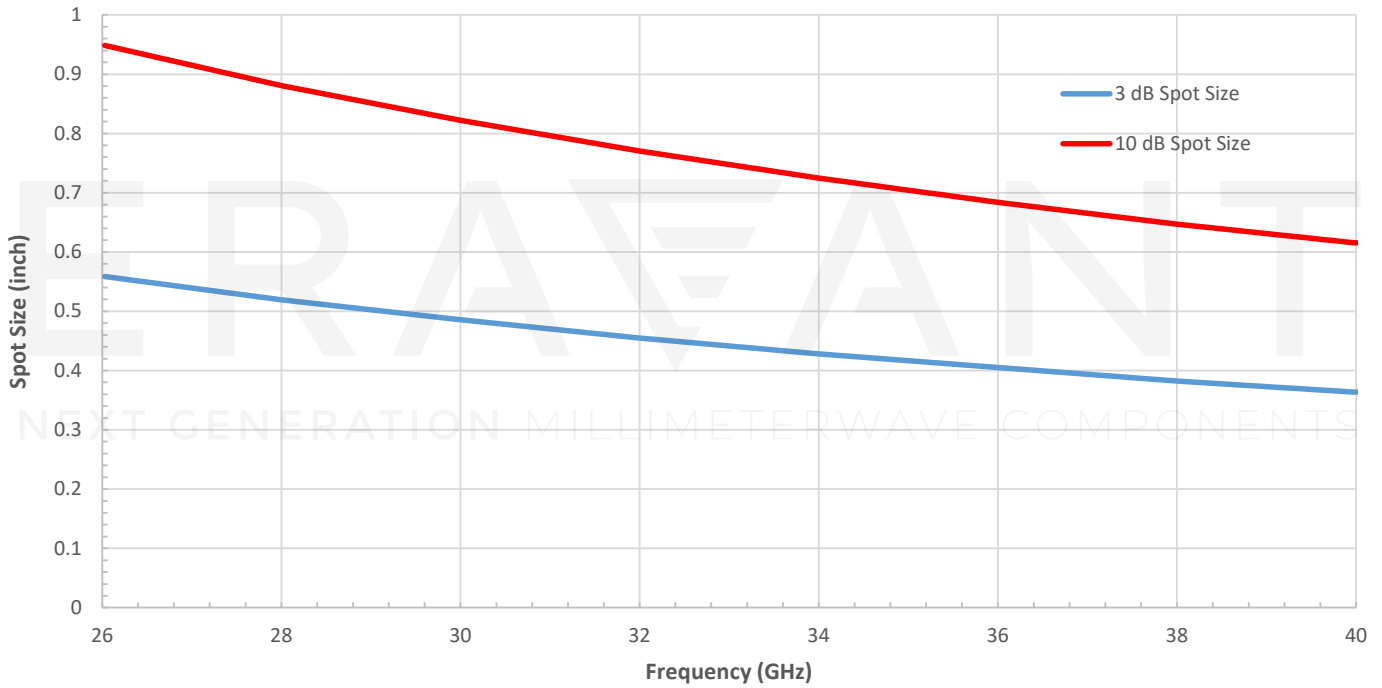
NOTE:

- 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.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model [SCH-06004-S1](#) is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model [SCH-08008-S1](#) is highly recommended.

Theoretical Spot Size vs Frequency



Focal Length Diagram:

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

