

Ka-Band Spot-Focusing Lens Antenna, 12" Focal Length

SAQ-303120-315-S1 is a Ka-band spot-focusing lens antenna that delivers a typical peak to first null spot size of 3.1" at the focal length of 12", and a typical return loss of 15 dB across the full WR-28 waveguide operating bandwidth. The antenna is equipped with a Ø0.315" circular waveguide and UG-599/U-M flange as its antenna port. It supports both linear and circular polarized waveforms. The mode transition to convert the antenna port to WR-28 can be purchased separately under model **SWT-28315-SB**.



Electrical Specifications:

| Parameter | | Minimum | Typical | Maximum |
|---------------------------|----------------|---------------------|----------|----------|
| Frequency Range | | 26.0 GHz | 29.5 GHz | 33.0 GHz |
| Focal Length | | | 12" | |
| Peak to First Null | Spot Size | | 3.1" | |
| | Power Captured | | 83% | |
| 10 dB Below Peak | Spot Size | | 2.18" | |
| | Power Captured | | 78.9% | |
| 3 dB Below Peak | Spot Size | | 1.3" | |
| | Power Captured | | 47% | |
| Polarization | | Linear and Circular | | |
| Return Loss | | | 15 dB | |
| Specification Temperature | | | +25°C | |
| Operating Temperature | | -40°C | | +85°C |

Mechanical Specifications:

| Item | Specification |
|---------------|--|
| Antenna Port | Ø 0.315" Circular Waveguide with UG-599/U-M Flange |
| Lens Diameter | 3.84" |
| Lens Material | HDPE |
| Horn Material | Aluminum |
| Finish | Chem Film |
| Weight | 0.8 lbs. |
| Outline | AQ-CA-3.84-C315-2 |

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FEATURES

- Rugged Mechanical Configuration
- High Efficiency and Low Loss

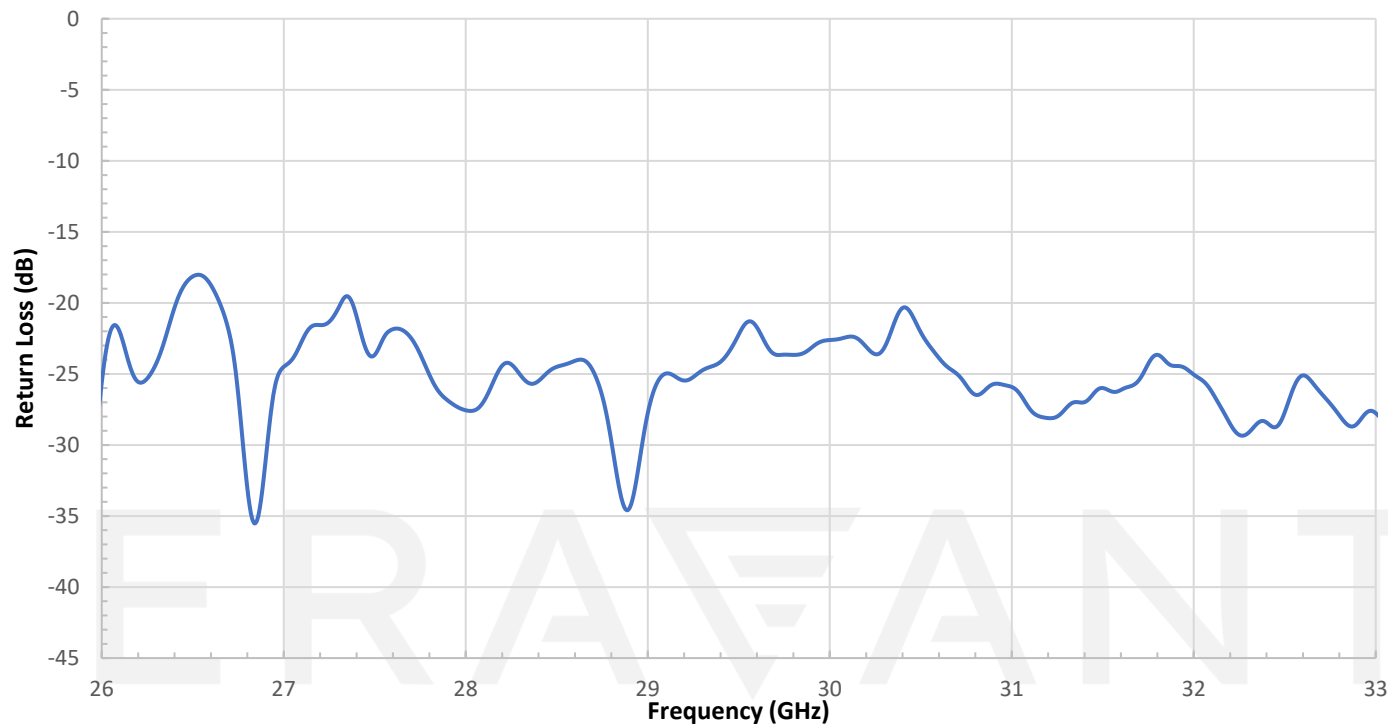
APPLICATIONS

- Scientific Instruments
- Material Research Instruments

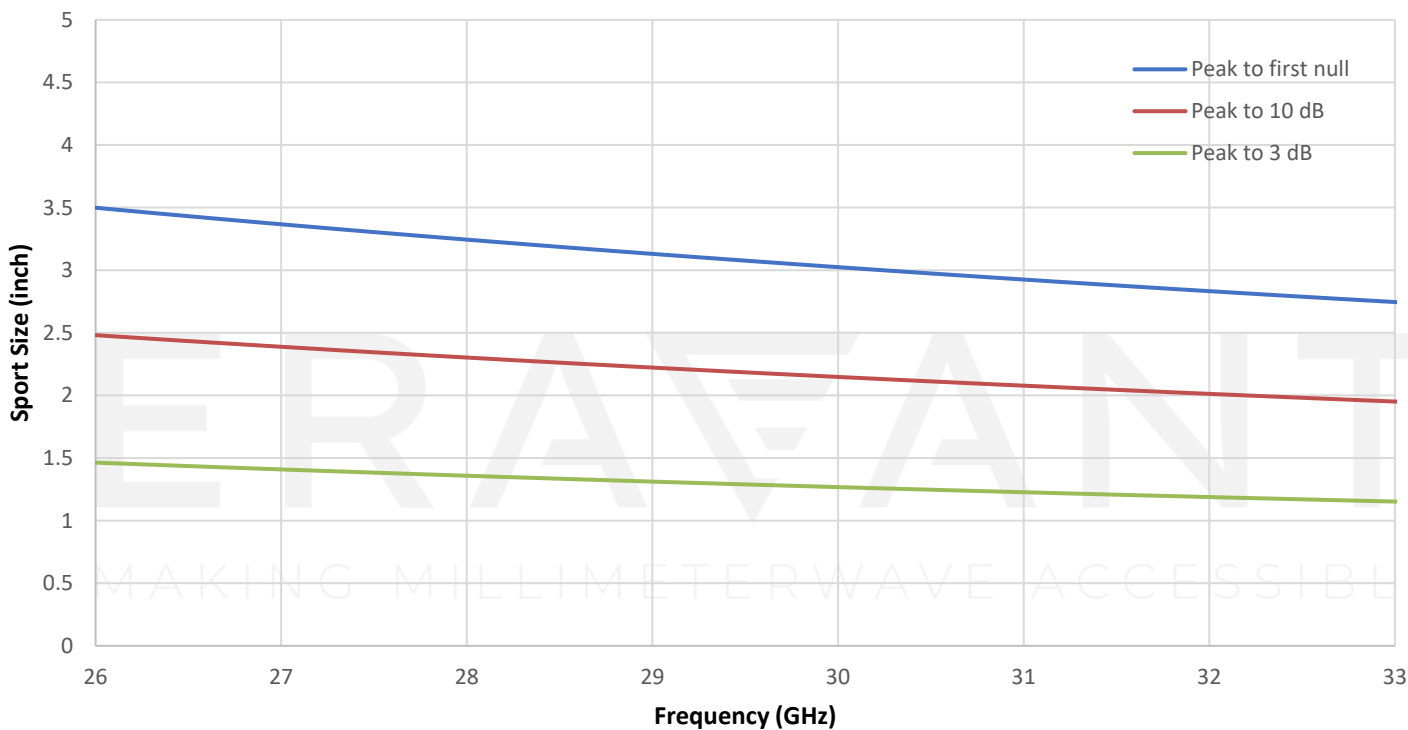
SUPPLEMENTAL DETAILS



Measured Return Loss Vs Frequency



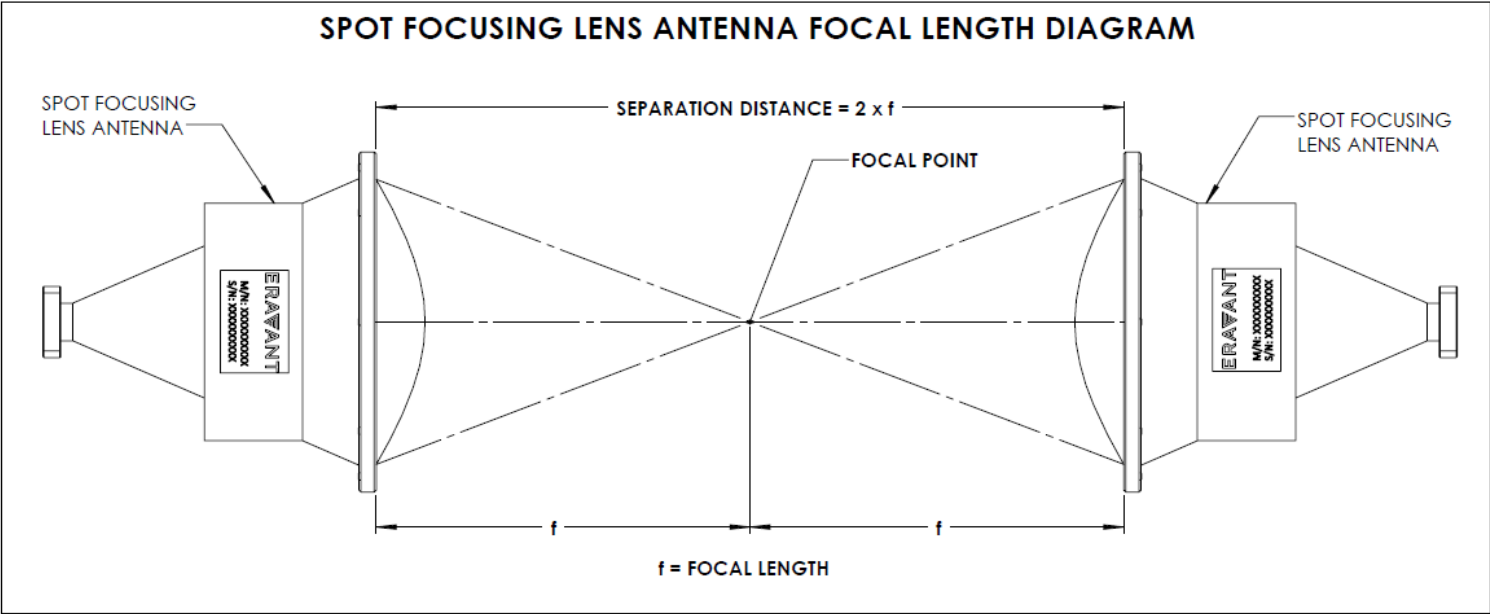
Theoretical Spot Size vs Frequency



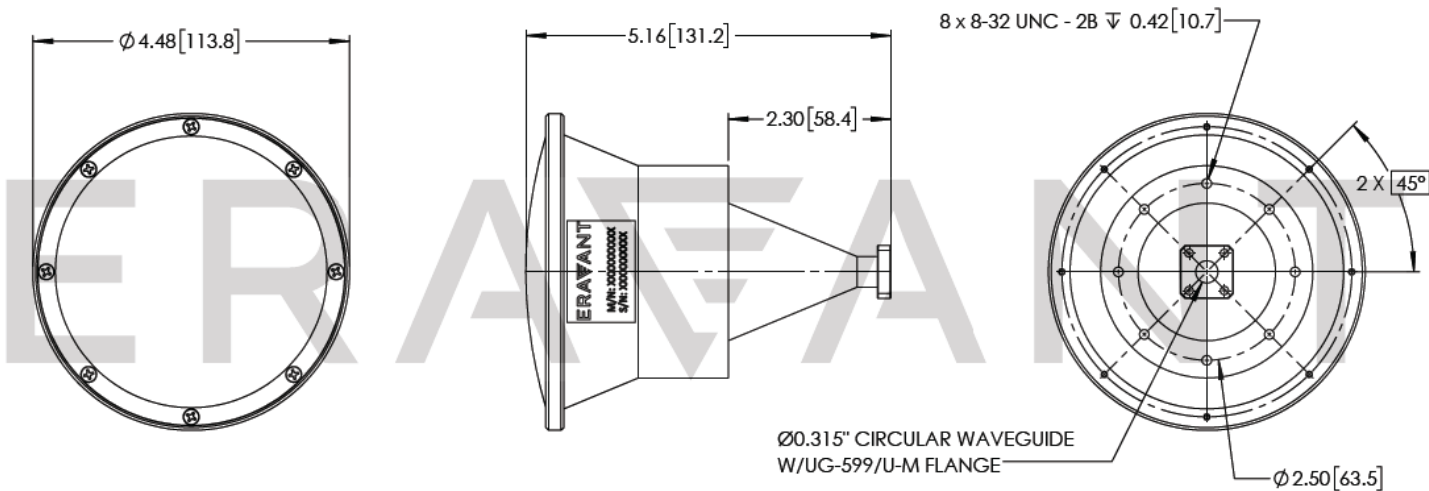
SAQ-303120-315-S1

Focal Length Diagram:

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



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



NOTE:

- Spot-focusing lens antennas are recommended to be purchased as a set of two.
- Spot size data presented is simulated. Actual data may vary unit to unit.
- 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.

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