



Ka-Band Lens Corrected Antenna

Description:

Model SAL-2733232510-315-S1 is a Ka-band lens corrected antenna that operates from 27 to 32 GHz. At a center frequency of 29.5 GHz, the antenna delivers 25 dBi nominal gain, 8 degrees typical half power beamwidth on the E-plane, and 11 degrees typical half power beamwidth on the H-plane. The antenna employs a low loss lens to offer excellent aperture efficiency and low sidelobe levels. The lens corrected antenna is equipped with a 0.315" diameter circular waveguide and UG-599/U-M flange as its input port. It supports both linear and circular polarized waveforms.



Features:

- Center Fed
- Low Sidelobes
- Low Cross Polarization

Applications:

- Radar Systems
- Communication Systems
- Sensor Systems

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---------------------------|---------------------|----------|----------|
| Frequency | 27.0 GHz | 29.5 GHz | 32.0 GHz |
| Gain | | 25 dBi | |
| 3 dB Beamwidth, E-Plane | | 8° | |
| 3 dB Beamwidth, H-Plane | | 11° | |
| Sidelobes, E-Plane | | -16 dB | |
| Sidelobes, H-Plane | | -27 dB | |
| Polarization | Linear and Circular | | |
| Return Loss | | -25 dB | |
| Specification Temperature | | +25°C | |
| Operating Temperature | -45°C | | +85°C |

Mechanical Specifications:

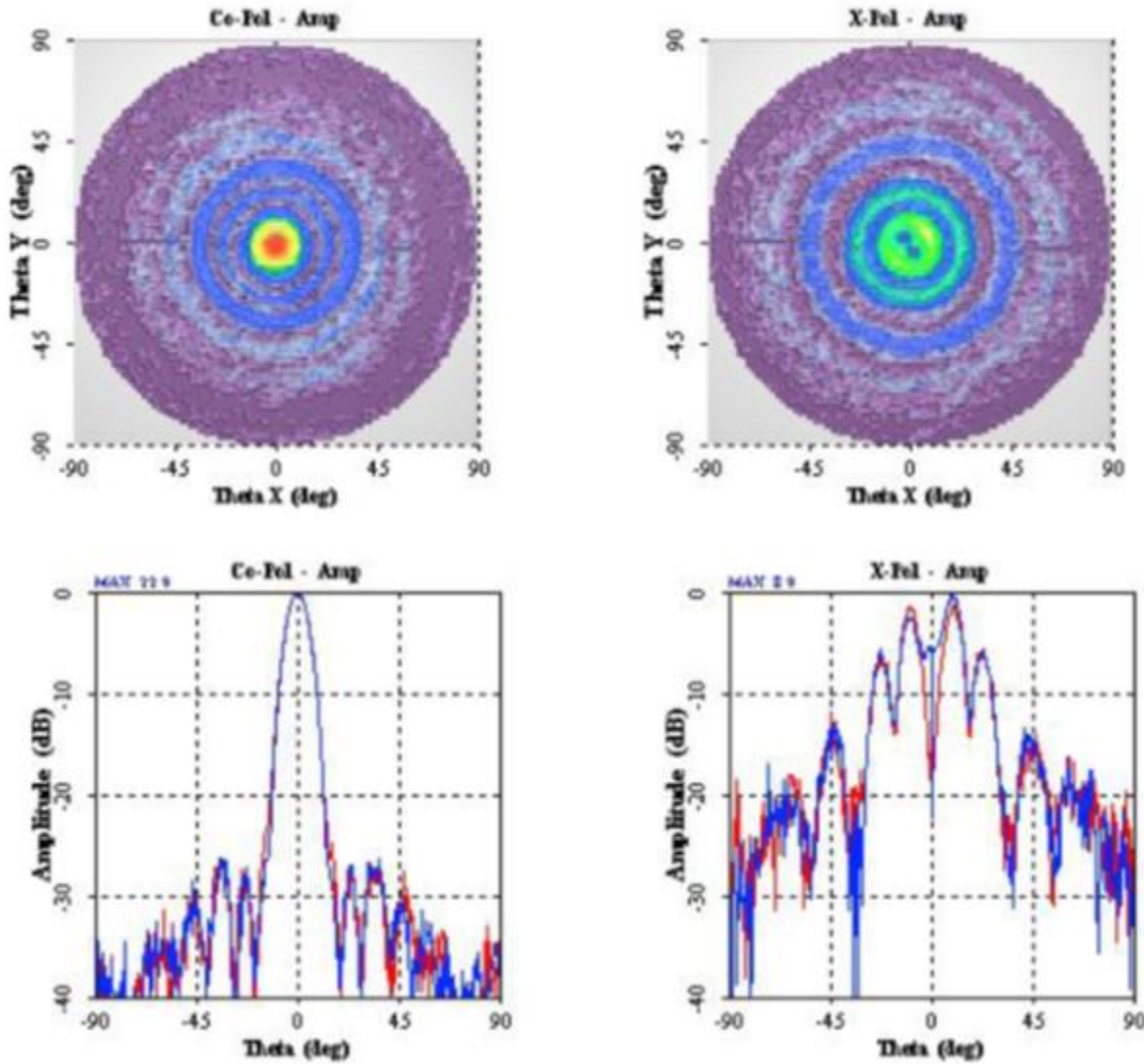
| Item | Specification |
|---------------|--|
| Antenna Port | 0.315" Dia Circular Waveguide with UG-599/U-M Flange |
| Lens Diameter | 2.80" |
| Dimensions | 2.98" (∅) x 2.84" (L) |
| Material | Aluminum |
| Finish | Chem Film |
| Weight | 2.8 Oz |
| Outline | AL-CA3-315 |





Ka-Band Lens Corrected Antenna

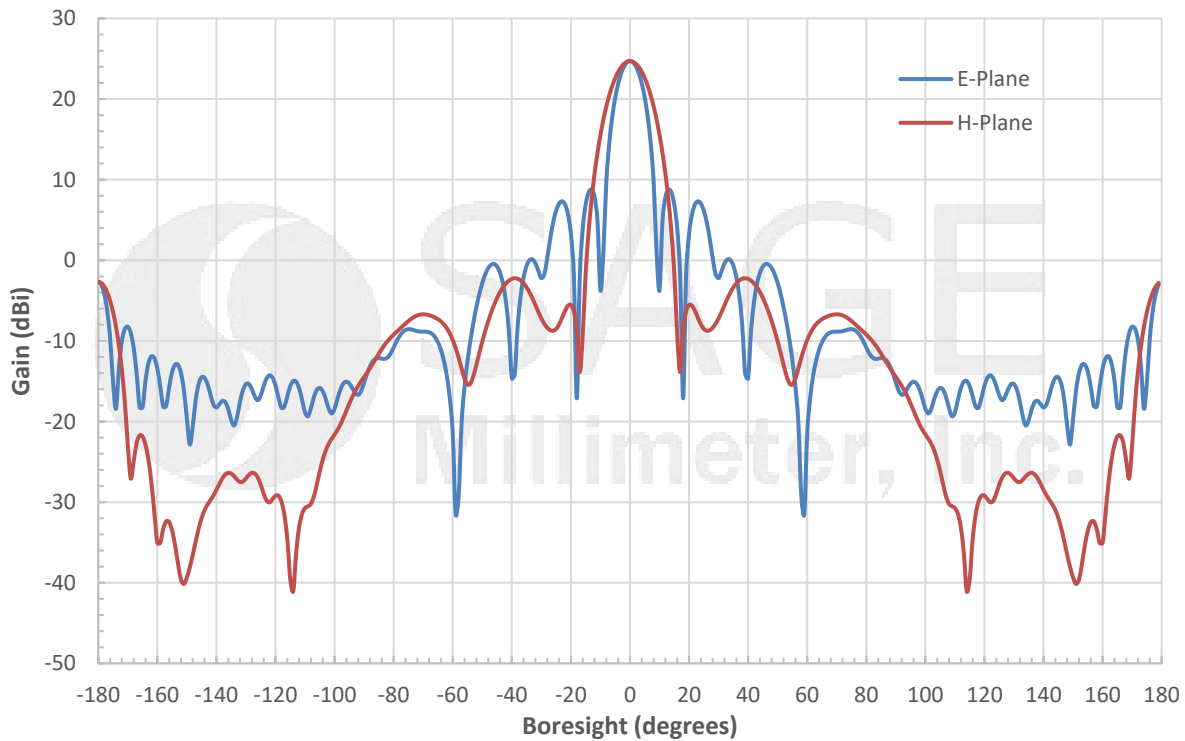
Typical Measured Far Field Patterns @ 27 GHz



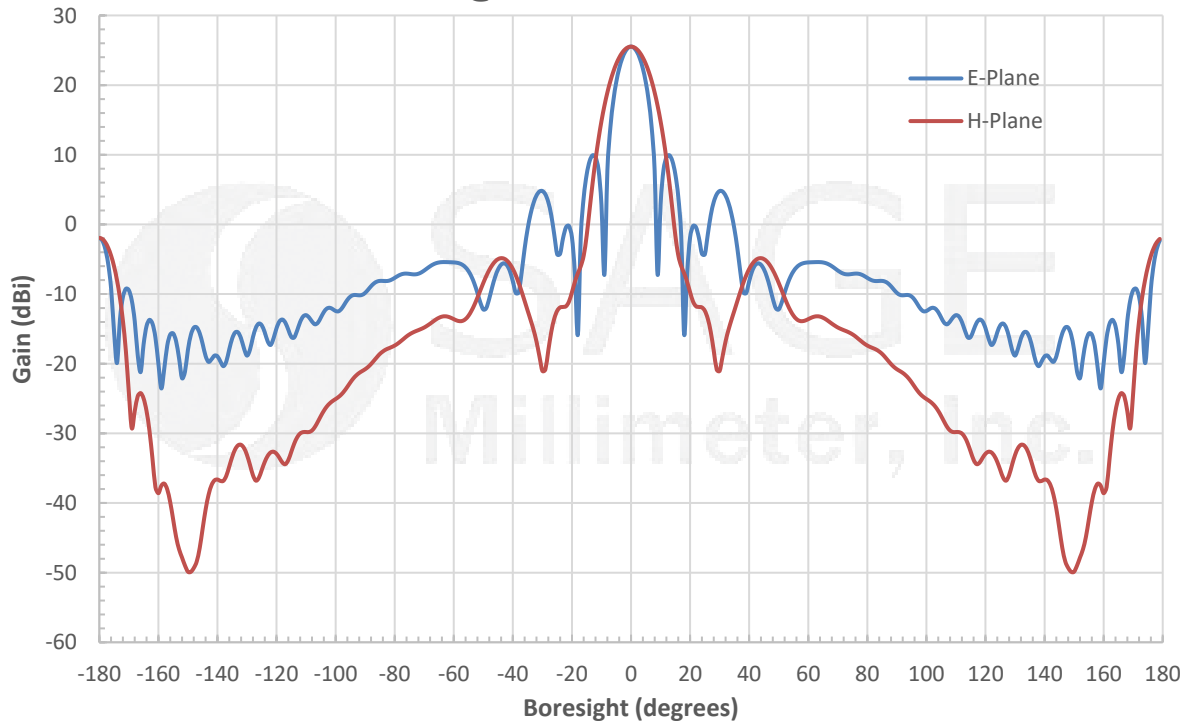


Ka-Band Lens Corrected Antenna

Simulated Antenna Patterns @ 27 GHz



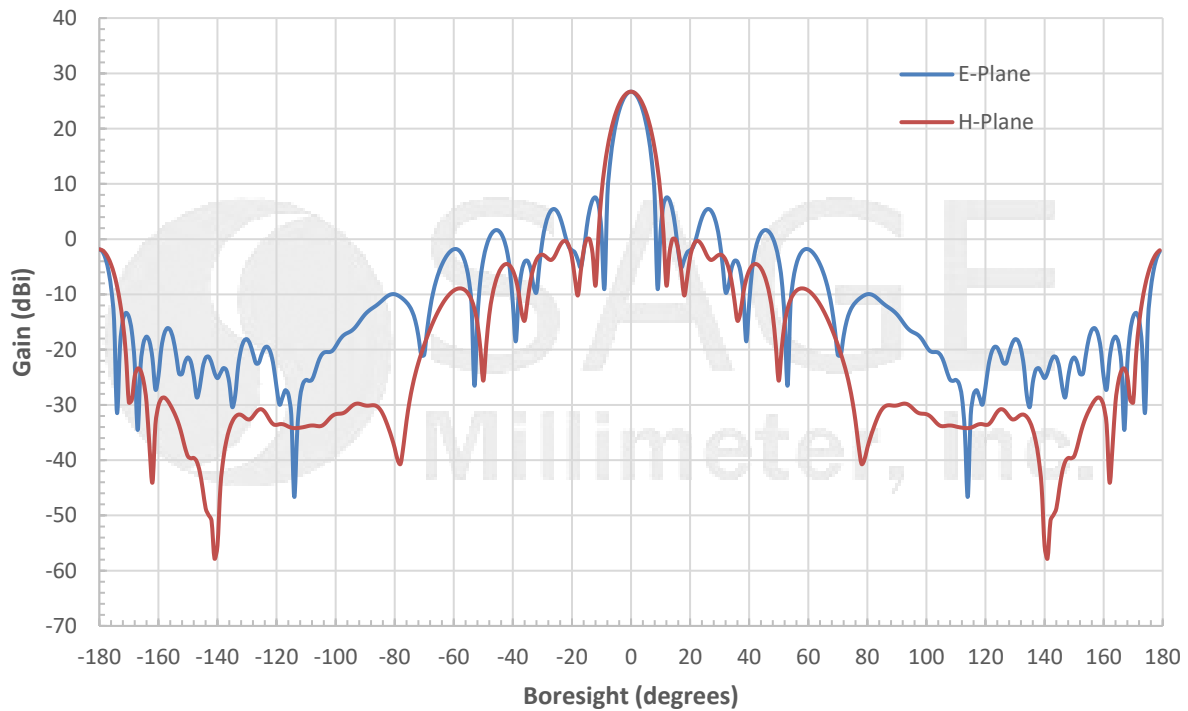
Simulated Antenna Patterns @ 29.5 GHz



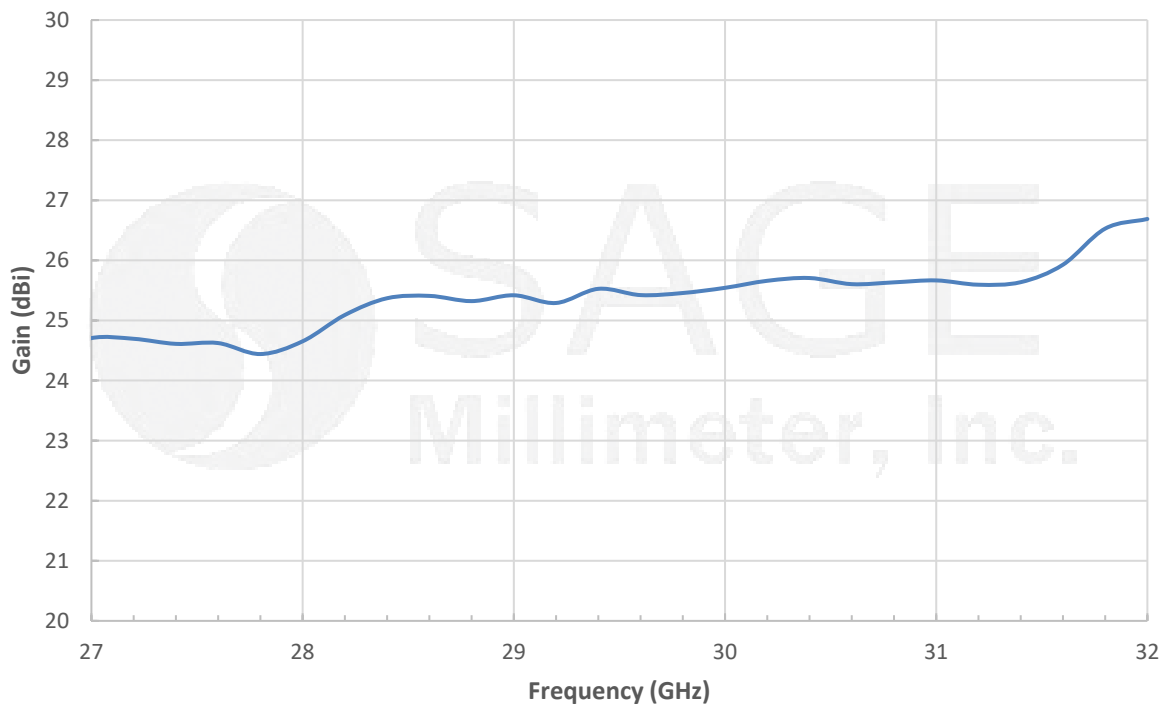


Ka-Band Lens Corrected Antenna

Simulated Antenna Patterns @ 32 GHz



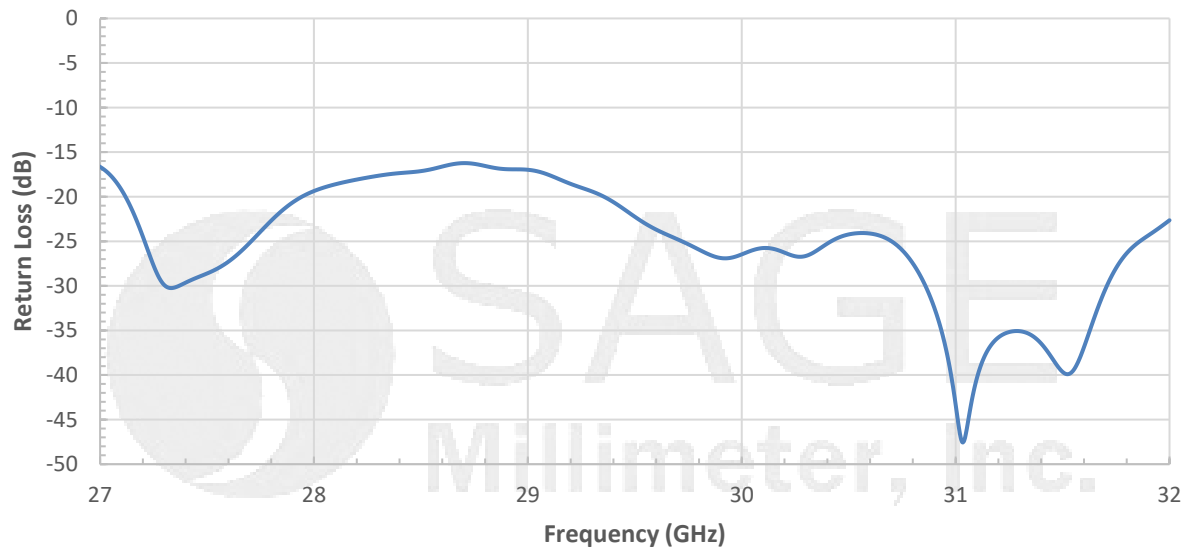
Simulated Gain vs. Frequency



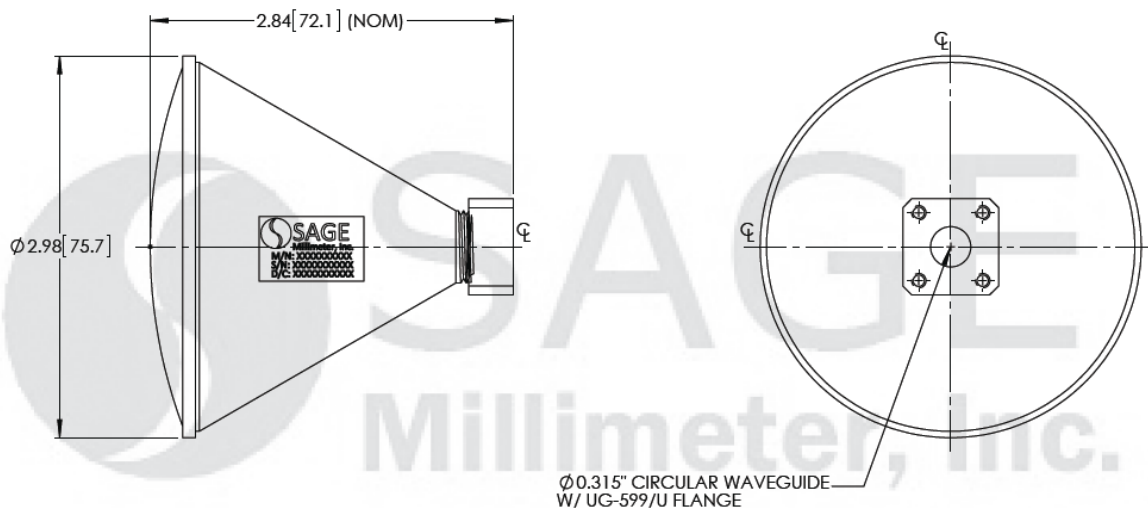


Ka-Band Lens Corrected Antenna

Simulated Return Loss vs. Frequency



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



Note:

- Measured far field patterns are collected from a sample lot. Actual data may vary unit to unit.
- All other data presented are simulated. Actual data may vary unit to unit, slightly.
- Eravant 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.

