



## Ka Band Cassegrain Antenna, 33 to 40 GHz, 50 dBi, 48" Dish, Weather Resistant

### Description:

**Model SAY-3334035006-250-S1-WR** is a weather resistant Cassegrain antenna that offers a nominal gain of 50 dBi and a half power beamwidth of 0.6 degrees across the frequency range of 33 to 40 GHz. The main reflector is fabricated with fiber glass to offer a light weight and rugged mechanical structure, and has a polyamide epoxy paint for protection in all environments. The corrugated horn is used to provide the best feed efficiency and the most uniform illumination. The input port is a 0.250" diameter circular waveguide with a UG-599/U-M flange, and is equipped with an o-ring to seal the connection between the RF ports. The antenna can support both linear and circular polarized waveforms and is designed and manufactured for indoor and outdoor applications. By adding a mode transition, SAGE Millimeter model **SWT-28250-SB**, the input port becomes a standard WR-28 waveguide that can only support linear polarized waveforms.



### Features:

- Telescope to aid alignment
- Rugged Configuration and Low Profile
- Low Loss and High Gain
- High Return Loss
- Linear and Circular Polarization
- Weather Resistant

### Applications:

- 5G Systems
- Communication Systems
- Radar Systems
- EW Systems

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	33 GHz		40 GHz
Gain		50 dBi	
3 dB Beamwidth		0.6°	
Polarization	Linear and Circular		
Sidelobes		-20 dB	
Return Loss		15 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

Item	Specification
RF Connector	0.250" Diameter Circular Waveguide with UG-599/U-M Flange
RF Connector Material	Brass
RF Connector Finish	Gold Plated
Reflector Material	Fiberglass
Reflector Finish	Polyamide Epoxy Paint
Weight	35 lbs.
Reflector Diameter	48"
Outline	AY-CA50-48-250-WR

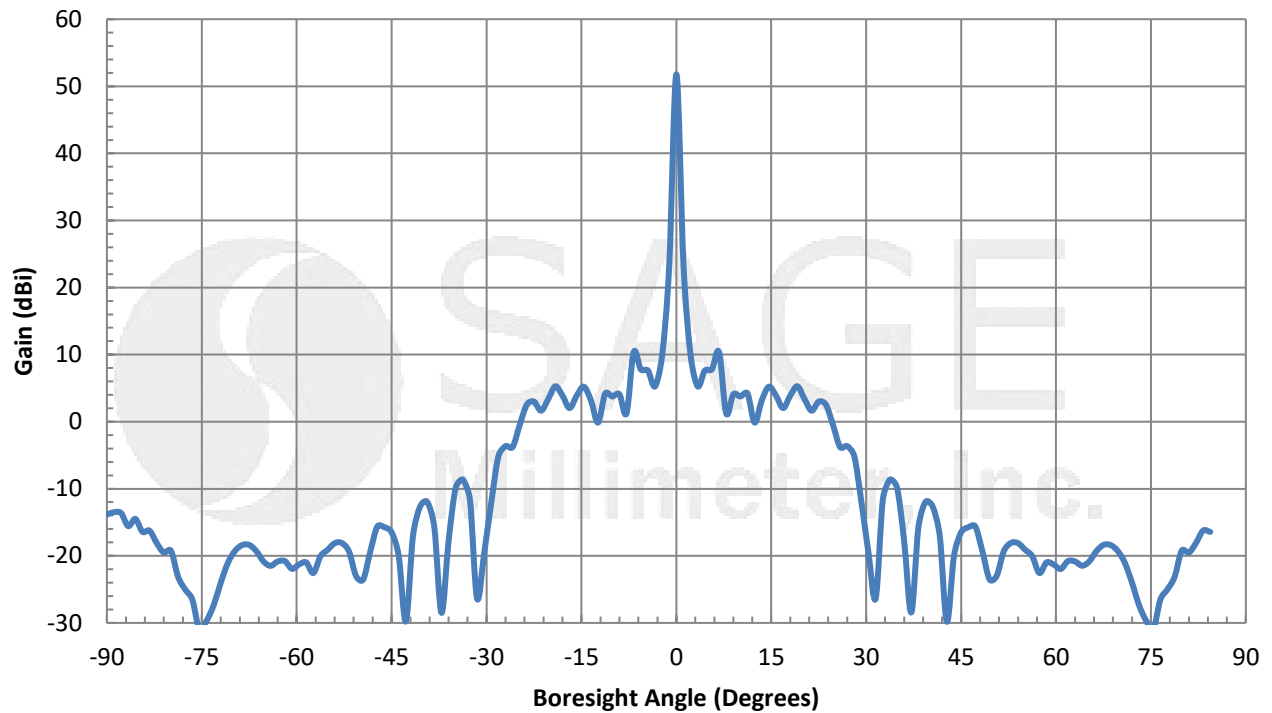


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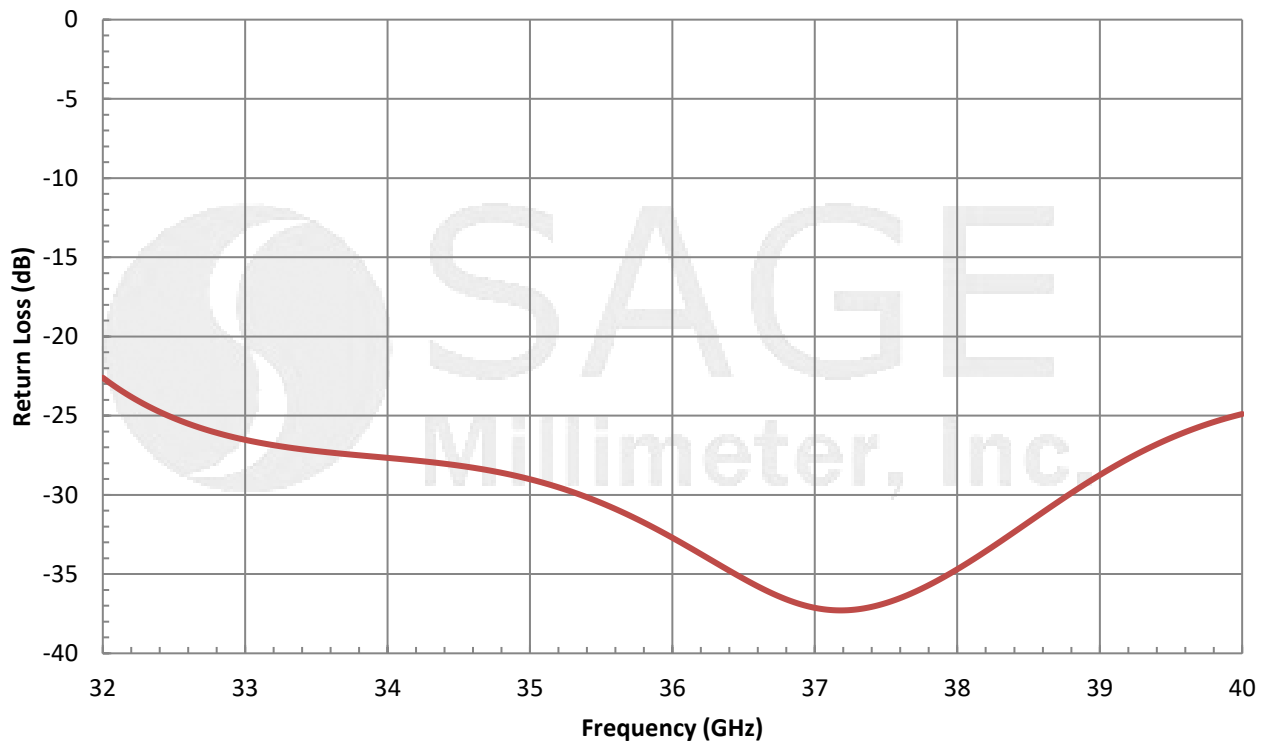


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### Simulated Antenna Pattern @ 36 GHz

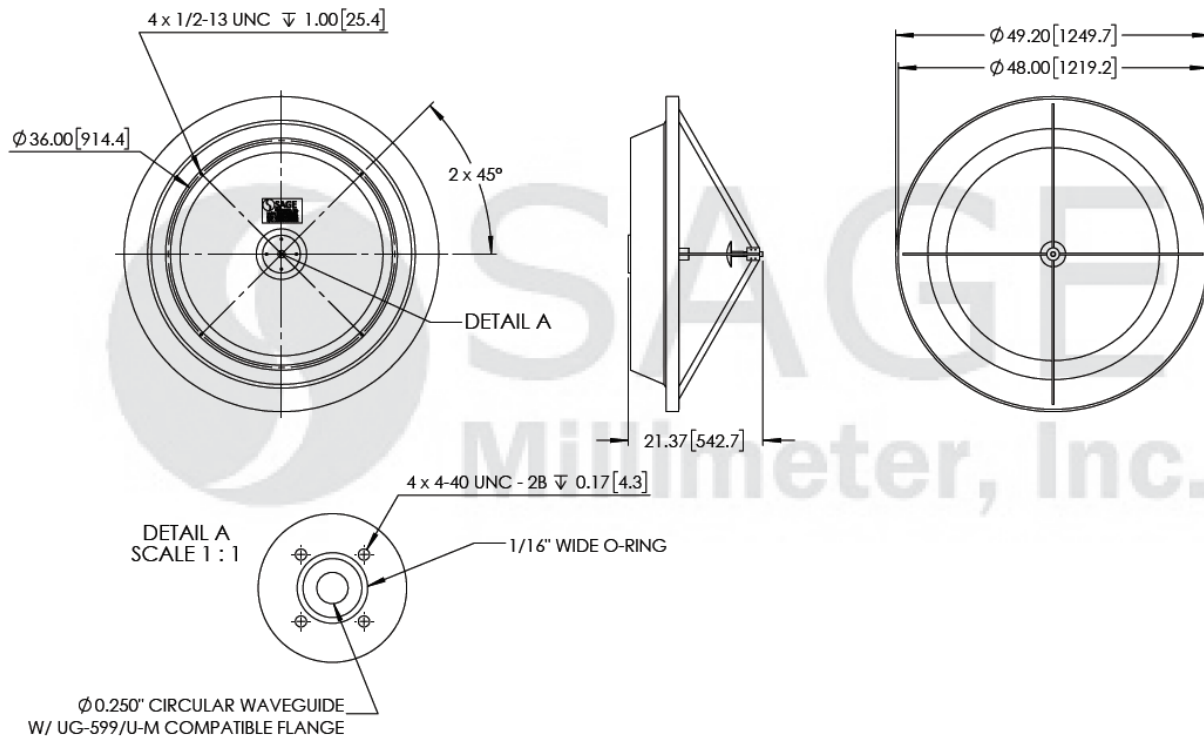


### Typical Return Loss vs. Frequency



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



**Note:**

- All data presented is simulated. Actual data may vary, slightly.
- The aiming scope is provided to assist the antenna's directional alignment.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

**Caution:**

- Any mechanical impact will damage the antenna.
- Water or condensation on the antenna will change its electrical performance. All specifications apply only to indoor use and dry environment.
- Any foreign objects in the waveguide will degrade the performance of the antenna or damage the antenna.

