

Q Band Cassegrain Antenna, 37 to 43 GHz, 42 dBi, 18" Dish

Description:

Model SAY-3734334201-22-S1 is a Cassegrain antenna that offers a nominal gain of 42 dBi and a typical half power beamwidth of 1.3 degrees across the frequency range of 37 to 43 GHz. The main reflector is fabricated with fiber glass to offer a light weight and rugged mechanical structure. The corrugated horn is used to provide the best feed efficiency and the most uniform illumination. The input port is a WR-22 waveguide with a UG-383/U flange to support the linear polarized waveform. The antenna is designed and manufactured for indoor and outdoor applications. The model with circular waveguide 0.219" diameter is offered under model number **SAY-3734334201-219-S1** to support both circular and linear polarized waveforms.



Features:

- Rugged Configuration and Low Profile
- Low Loss and High Gain
- High Return Loss

Applications:

- Communication Systems
- Radar Systems
- EW Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	37 GHz		43 GHz
Gain		42 dBi	
3 dB Beamwidth		1.3°	
Side Lobes		-15 dB	
Return Loss		14 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

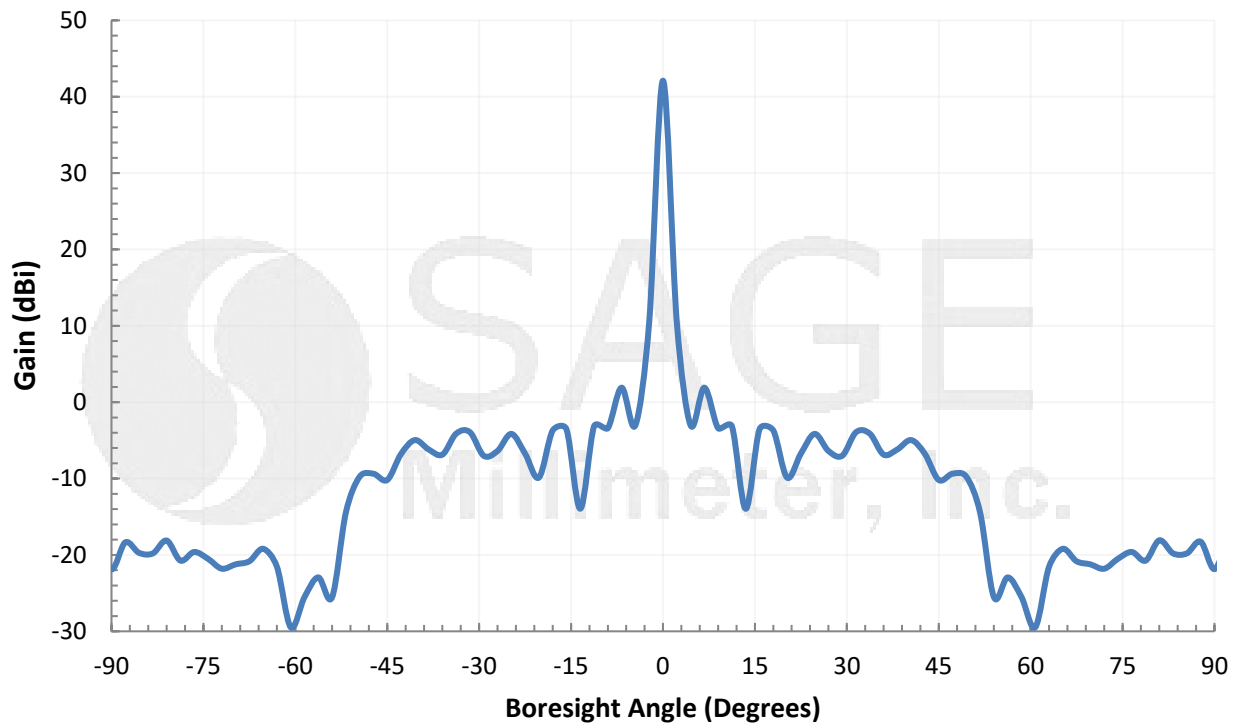
Item	Specification
RF Connector	WR-22 Waveguide with UG-383/U Flange
RF Connector Material	Brass
RF Connector Finish	Gold Plated
Reflector Material	Fiber Glass
Reflector Finish	Polyamide Epoxy Paint
Weight	8 lbs.
Reflector Diameter	18.0"
Outline	AY-RQ42-18



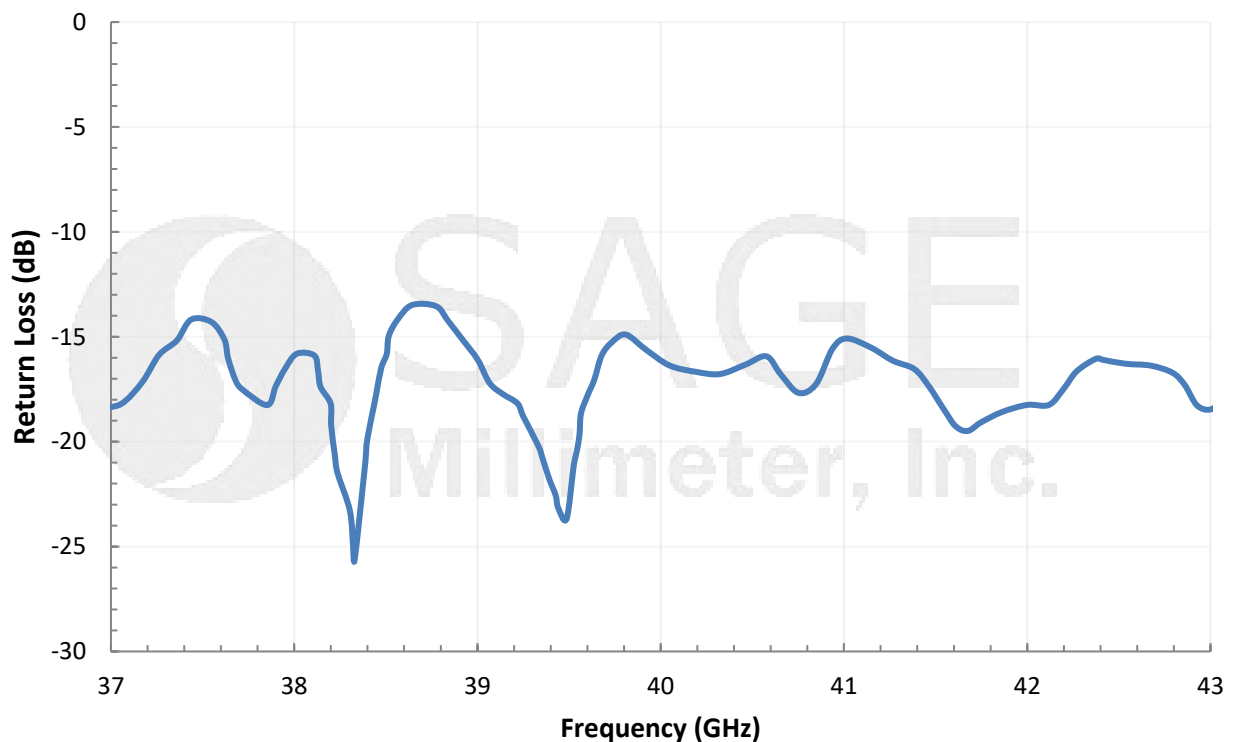


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Simulated Antenna Pattern @ 40 GHz

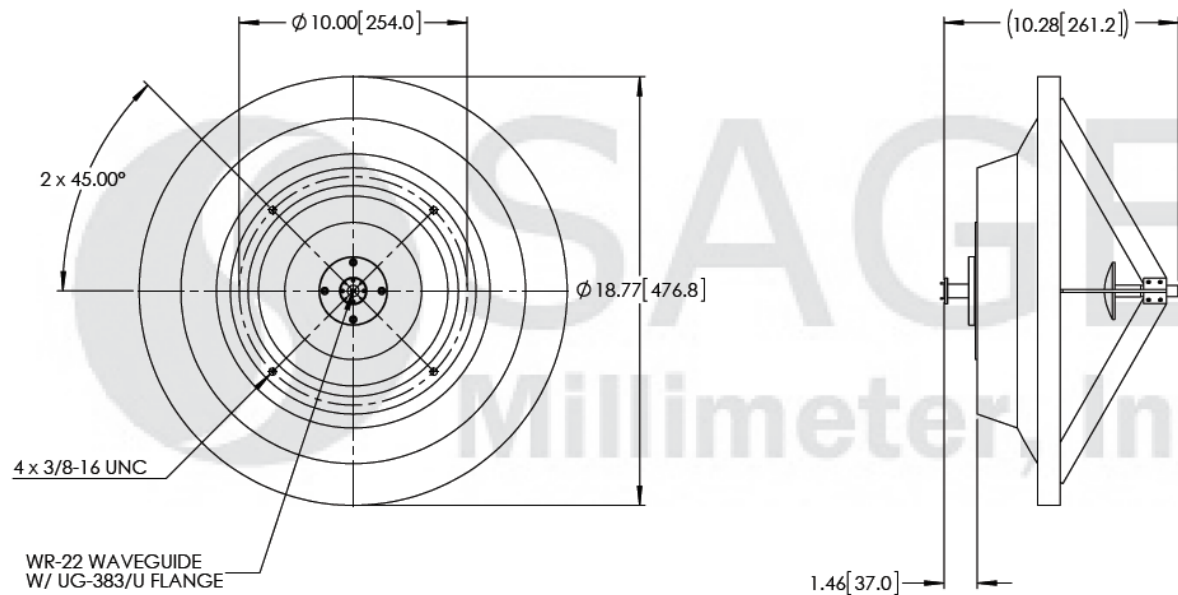


Typical Return Loss vs. Frequency



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



Note:

- The aiming scope is provided to assist the antenna's directional alignment.
- Antenna Pattern is simulated. Actual data may vary.
- The return loss data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under $+25^\circ\text{C}$ room temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Any mechanical impact will damage the antenna.
- Any foreign objects in the waveguide will degrade the performance of the antenna or damage the antenna.

