SAY-7138634212-110-S1-WR

Rev 1.0

W-Band Cassegrain Antenna, 71 to 86 GHz, 9” Dish, 42 dBi Gain, Weather Resistant

Description:

Model SAY-7138634212-110-S1-WR is a W-band Cassegrain antenna that offers a nominal gain of 42 dBi and a typical half power beamwidth of 1.3 degrees from 71 to 86 GHz. The aluminum reflector offers a light-weight and rugged mechanical structure. The antenna body is treated with a chem film conversion coating for corrosion resistance, while an integrated radome provides dust and weather protection. A corrugated scalar feed horn is used to provide optimal feed efficiency, low side lobes, high cross-pol rejection, and uniform illumination. The antenna supports both linear and circular polarized waveforms and is designed and manufactured for indoor and outdoor applications. The antenna port is a Ø 0.110” circular waveguide with UG-387/U-M anti-cocking flange. Other port configurations, such as a WR-10 or WR-12 waveguide port, are available under different model numbers.

Features:

- Radome for Dust and Weather Protection
- Linear and Circular Polarization
- Low Side Lobe Levels
- High Cross-polarization Rejection

Applications:

- Radar and Communication Systems
- EW Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	71 GHz		86 GHz
Gain		42 dBi	
3 dB Beamwidth		1.3°	
Sidelobes		-18 dB	
Return Loss		15 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Parameter	Specification
Antenna Port	Ø 0.110” Circular Waveguide with UG-387/U-M Anti-Cocking Flange
Reflector Diameter	9”
Radome Material	HDPE
Reflector Material	Aluminum
Finish	Chem Film
Weight	3.5 lbs.
Outline	AY-CW40-09-A-WR

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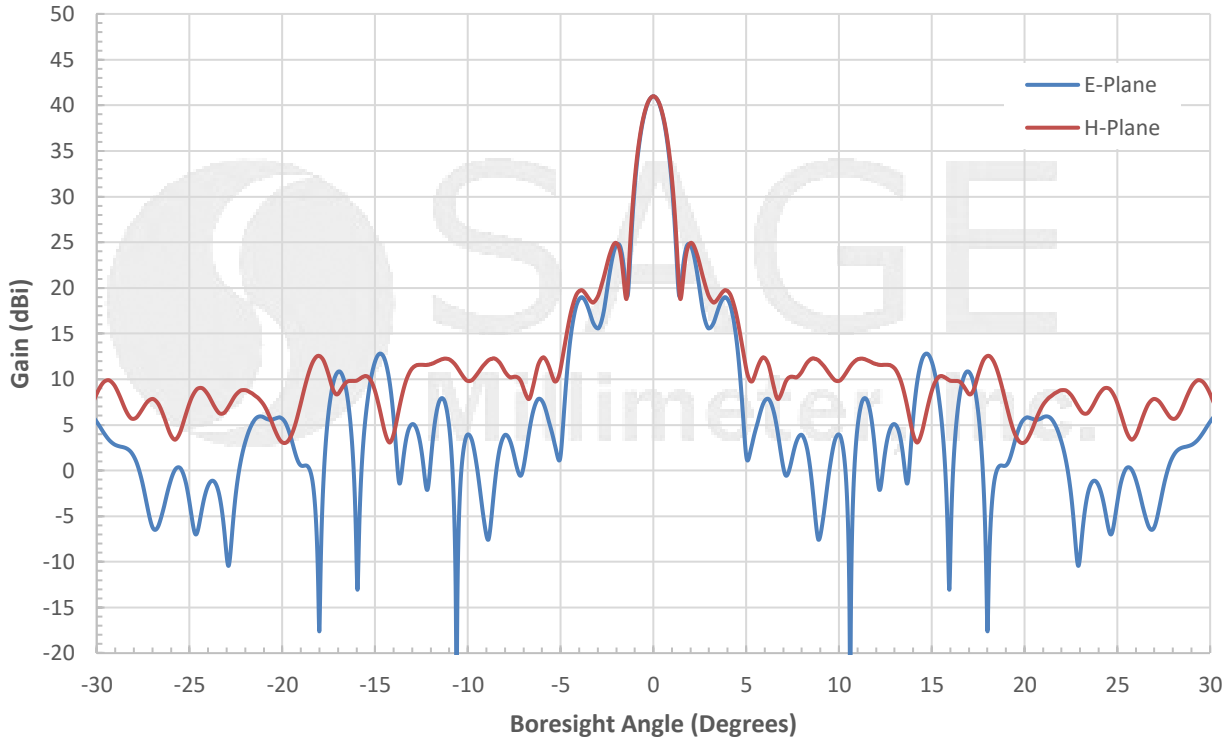
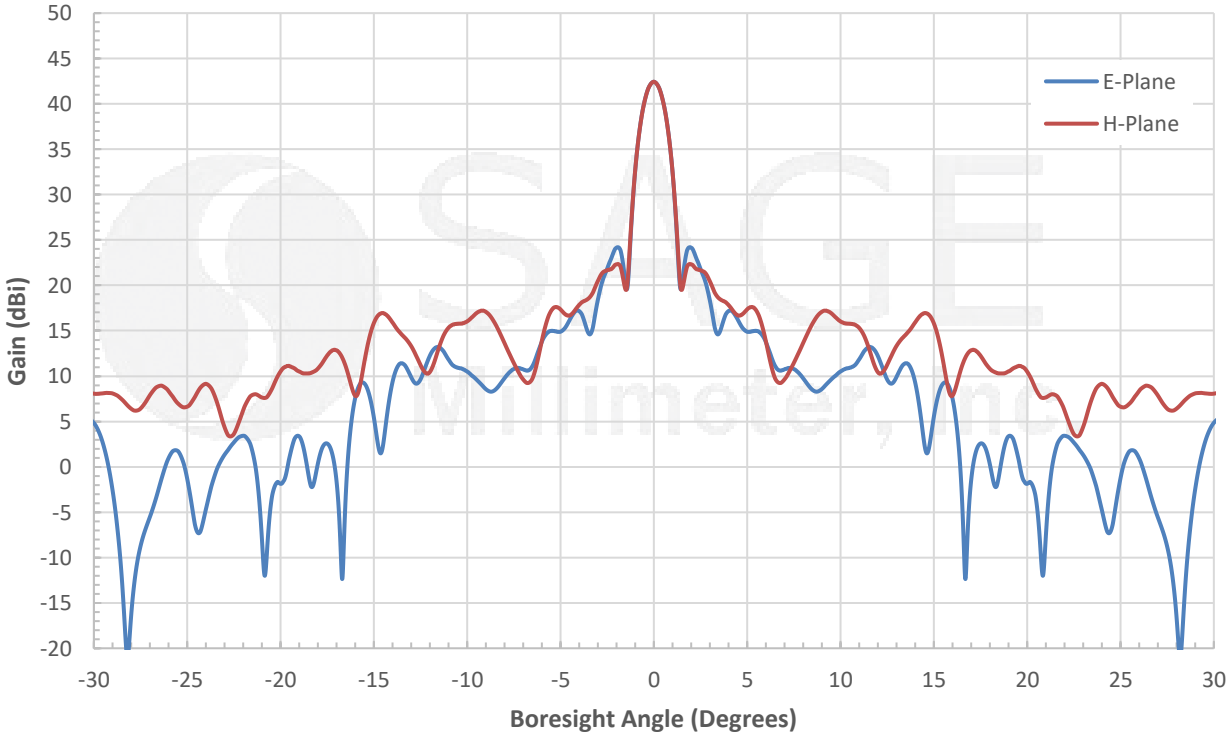
Simulated Antenna Patterns @ 71 GHz



Simulated Antenna Patterns @ 78.5 GHz



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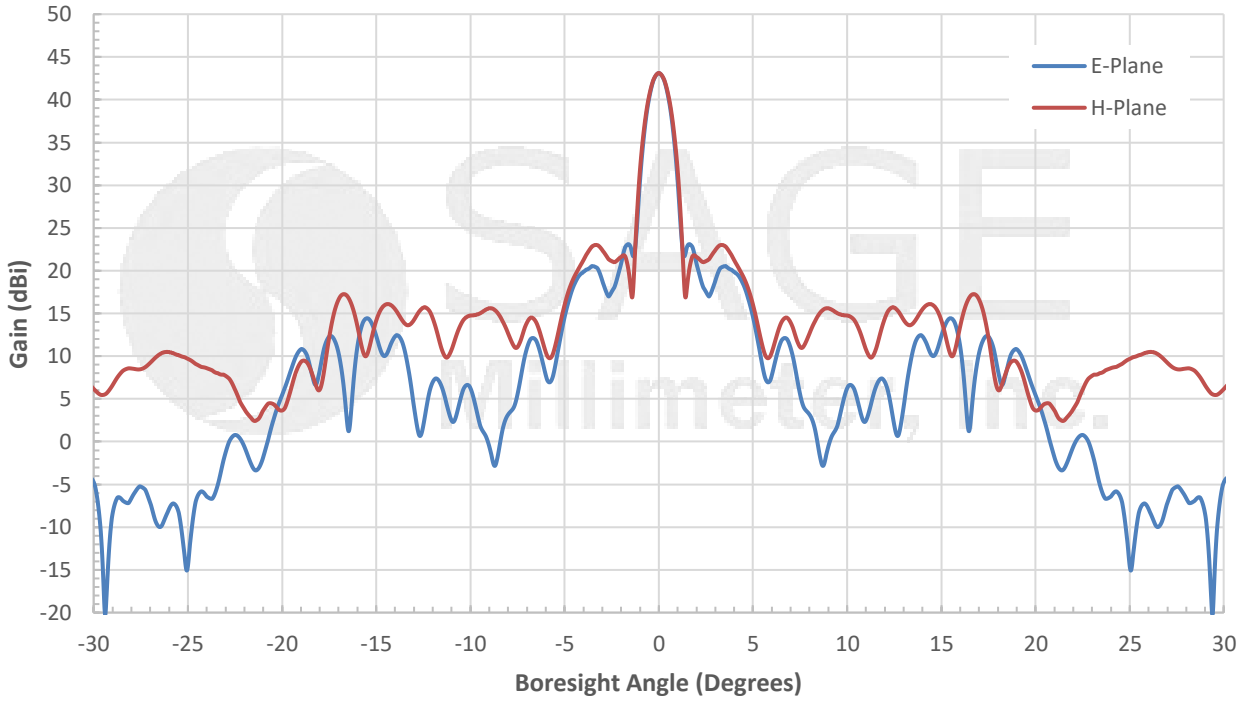
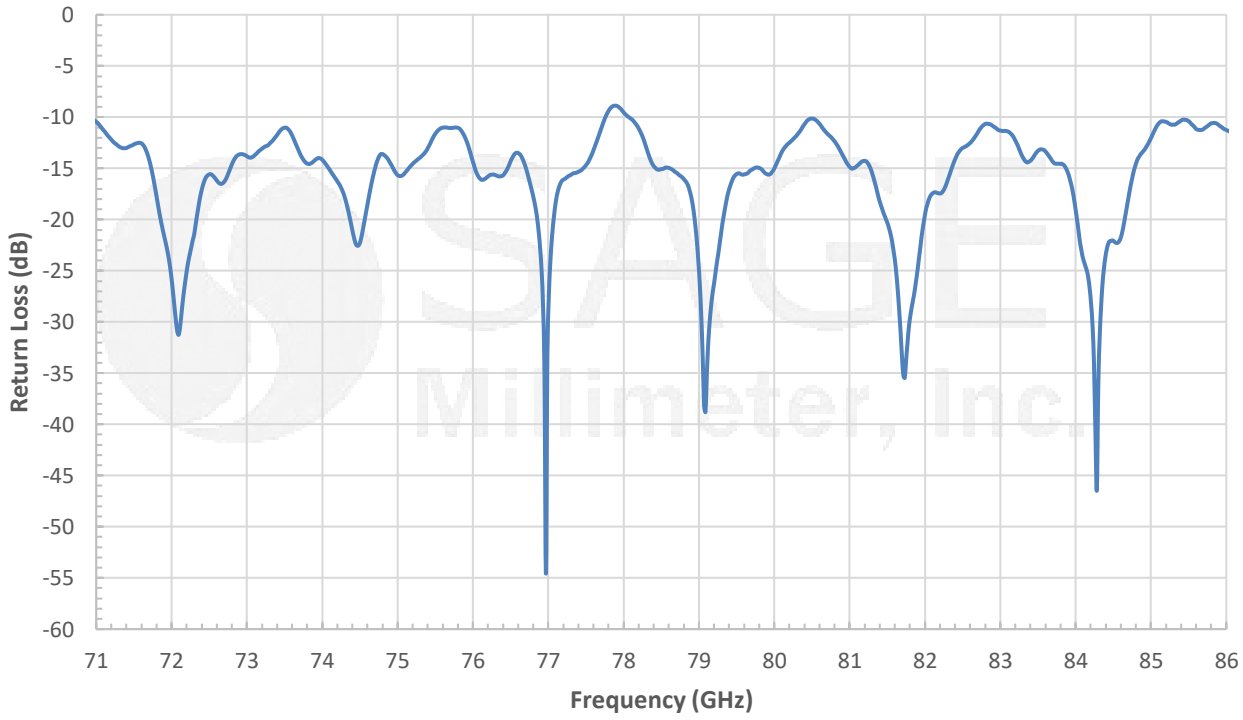
W-Band Cassegrain Antenna, 71 to 86 GHz, 9” Dish, 42 dBi Gain, Weather Resistant

Simulated Antenna Patterns @ 86 GHz



Typical Return Loss vs Frequency



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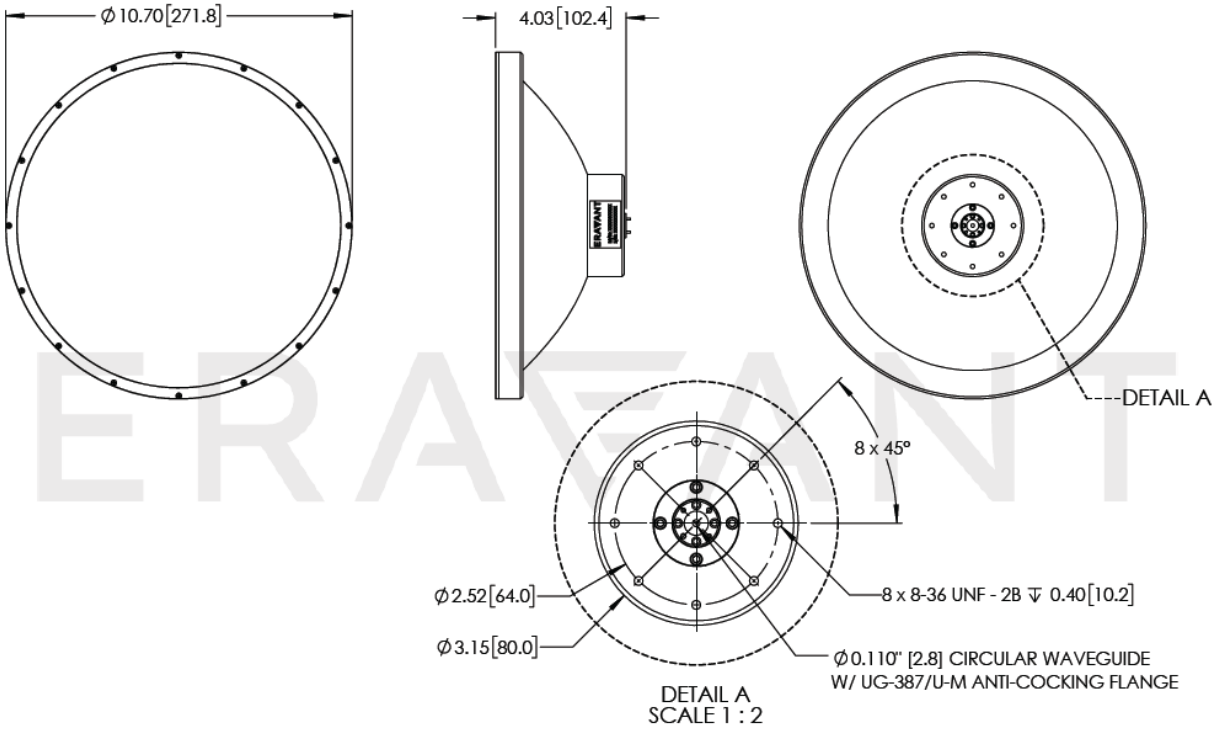
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- Antenna pattern data presented is simulated. Actual data may vary, slightly.
- Return loss data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25 °C case temperature.
- Eravant reserves the right to change the information presented without notice.

Caution:

- Any foreign objects in the antenna or waveguide will cause performance degradation and possible device damage.

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