



E-Band Lens Corrected Antenna, 71 to 86 GHz

Description:

Model SAL-7138633004-12-S1 is an E-band lens corrected antenna that operates from 71 to 86 GHz. At a center frequency of 78.5 GHz, the antenna delivers 30 dBi nominal gain, 4.3 degrees typical half power beamwidth on the E-plane, and 5.3 degrees typical half power beamwidth on the H-plane. The antenna employs a low loss lens to offer excellent aperture efficiency and low side lobe levels. The lens corrected antenna is equipped with a WR-12 rectangular waveguide and UG-387/U flange as its input port. It supports linear polarized waveforms.



Features:

- Center Fed
- Low Side Lobes
- Linear Polarized Waveforms

Applications:

- Radar Systems
- Communication Systems
- Sensor Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	71 GHz		86 GHz
Gain		30 dBi	
3 dB Beamwidth, E-Plane		4.3°	
3 dB Beamwidth, H-Plane		5.3°	
Side Lobes, E-Plane		-13 dB	
Side Lobes, H-Plane		-22 dB	
Return Loss		25 dB	
Polarization		Linear	
Specification Temperature		+25°C	
Operation Temperature	-40°C		+85°C

Mechanical Specifications:

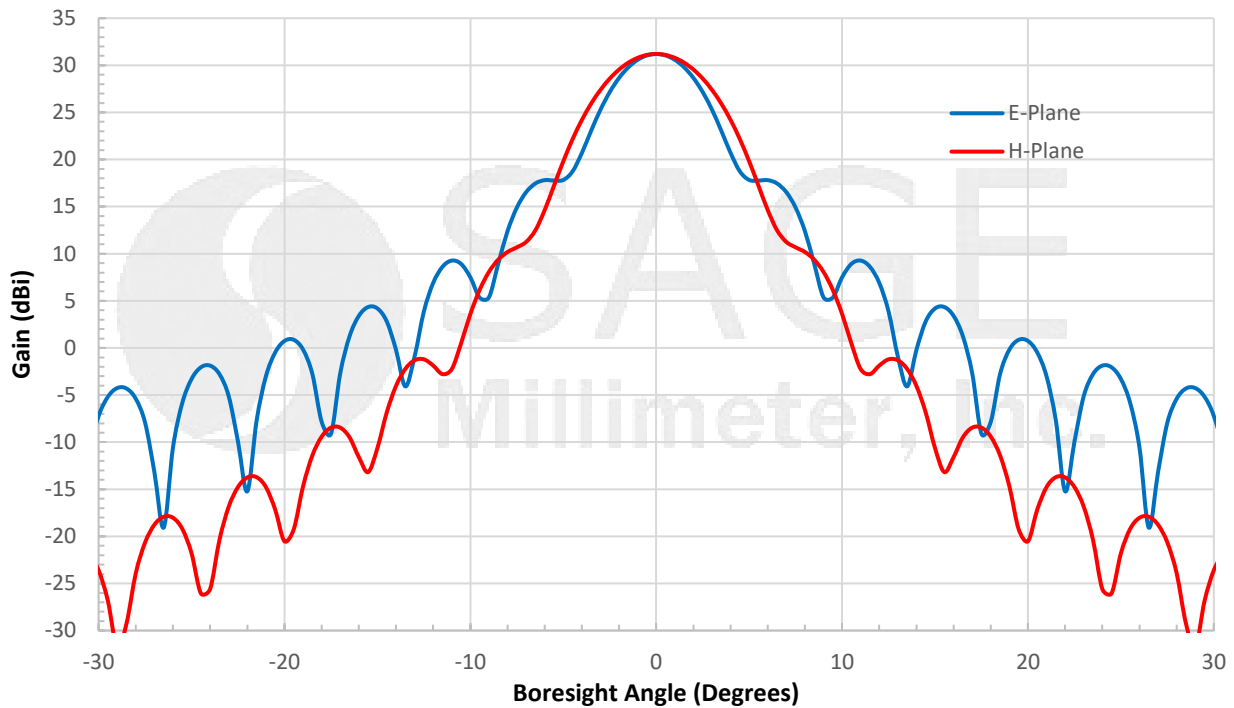
Parameter	Connector
Antenna Port	WR-12 Waveguide with UG-387/U Flange
Dimensions	2.60" (Ø) x 3.91" (L)
Lens Diameter	2.10"
Mounting	8 x 4-40 Threaded Holes
Horn Material	Aluminum
Finish	Gold Plated
Weight	2.5 Oz
Outline	AL-RE30-125



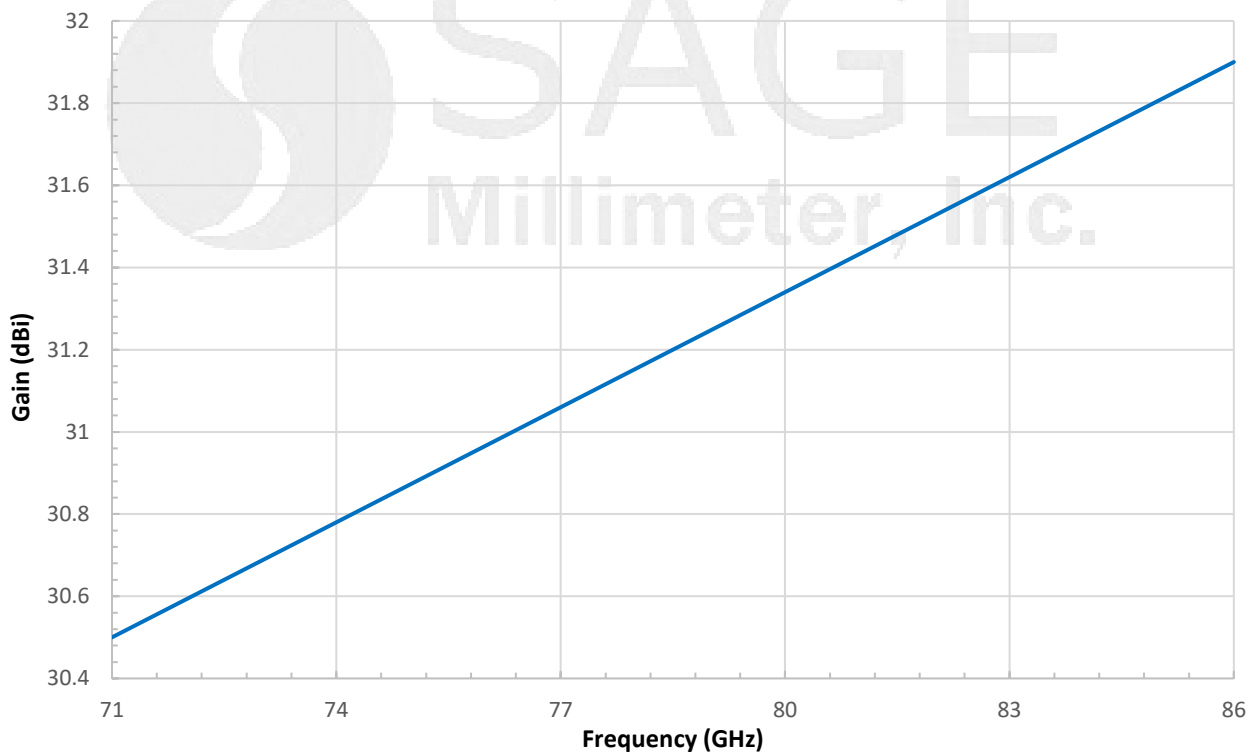


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Simulated Antenna Pattern @ 78.5 GHz



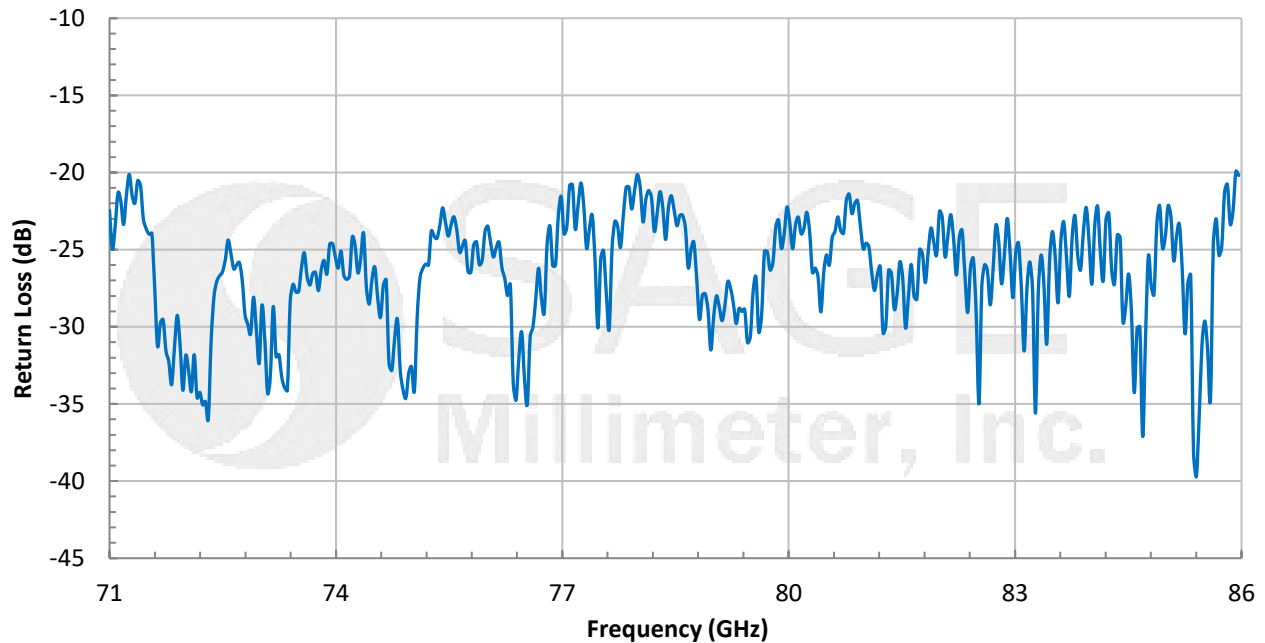
Simulated Gain vs. Frequency



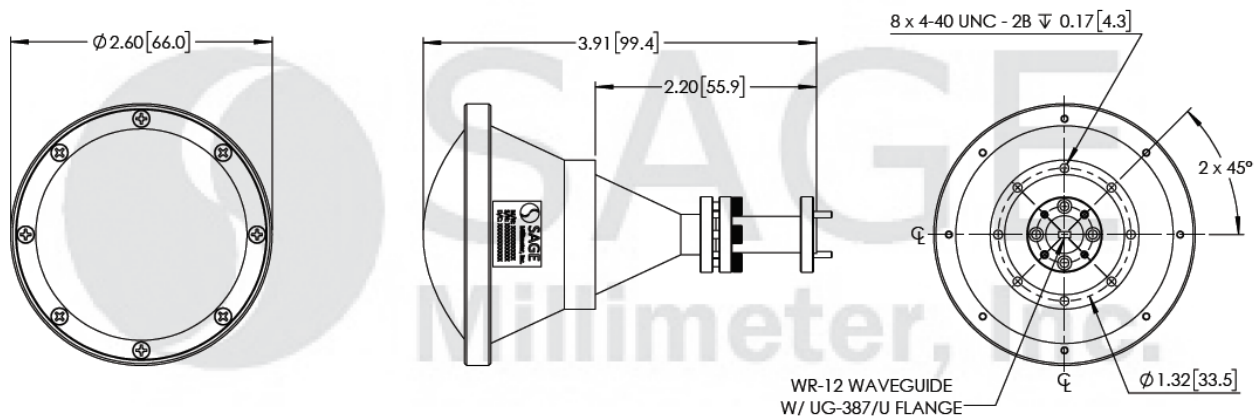


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Typical Return Loss vs. Frequency



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



Note:

- Pattern and Gain data are simulated. Actual data may vary, slightly.
- Return loss data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C room temperature.
- SAGE Millimeter, Inc. 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.



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