SAL-7138633004-125-S1

Rev 1.0

E-Band Lens Corrected Antenna, 71 to 86 GHz

Description:

Model SAL-7138633004-125-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 sidelobe levels. The lens corrected antenna is equipped with a 0.125" diameter circular waveguide and UG-387/U-M flange as its input port. It supports both linear and circular polarized waveforms.

Features:

- Center Fed
- Low Sidelobes
- Linear and Circular Polarized Waveforms

Applications:

- Radar Systems
- Communication Systems
- Sensor Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	71 GHz	78.5 GHz	86 GHz
Gain		30 dBi	
3 dB Beamwidth, E-Plane		4.3˚	
3 dB Beamwidth, H-Plane		5.3˚	
Sidelobes, E-Plane		-13 dB	
Sidelobes, H-Plane		-22 dB	
Return Loss		25 dB	
Polarization	Linear and Circular		
Specification Temperature		+25˚C	
Operation Temperature	-40˚C		+85˚C

Mechanical Specifications:

Parameter	Connector
Antenna Port	0.125"Diameter Circular Waveguide with UG-387/U-M Flange
Lens Diameter	2.10"
Dimensions	2.60" (Ø) x 2.91" (L)
Horn Material	Aluminum
Finish	Gold Plated
Weight	2.1 Oz
Outline	AL-CE30-125

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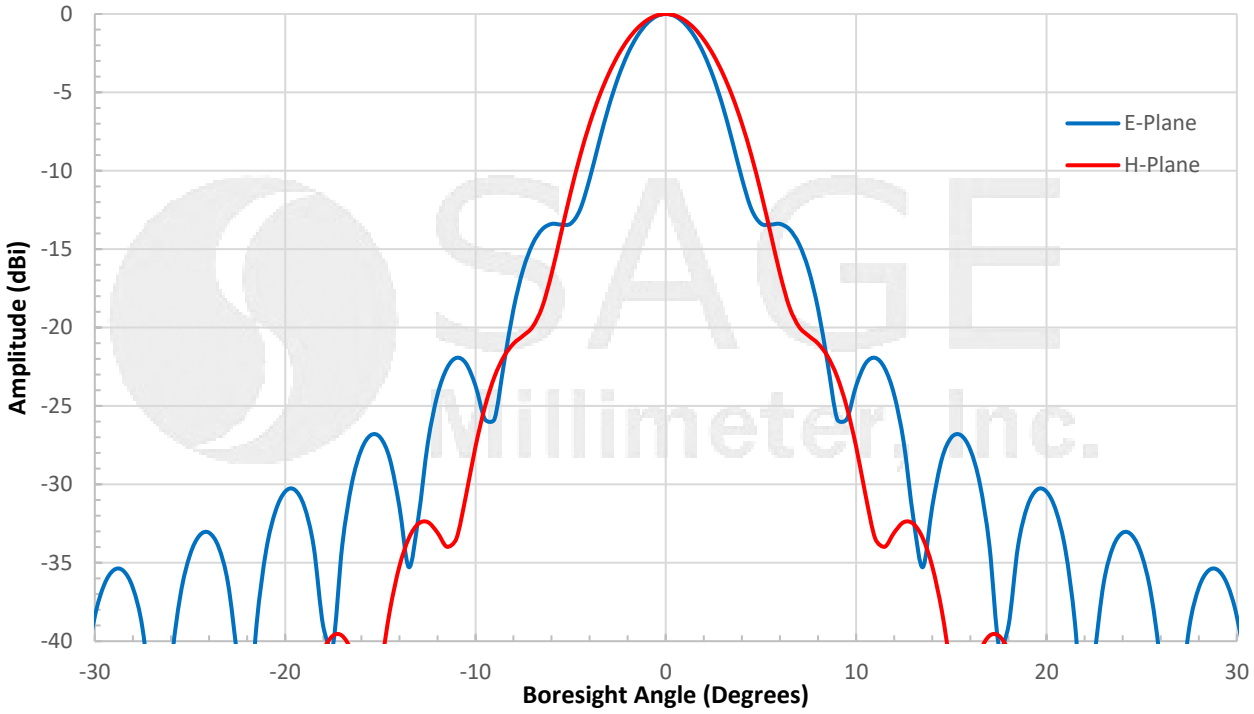
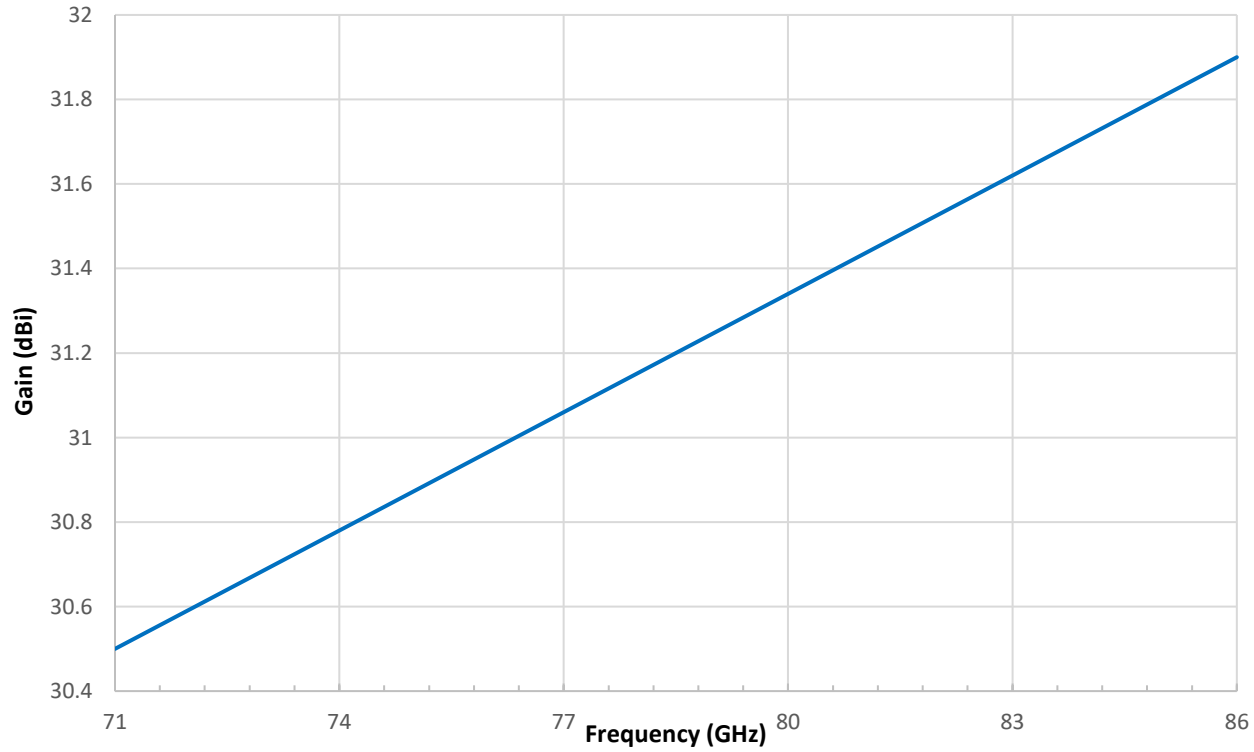
E-Band Lens Corrected Antenna, 71 to 86 GHz

Simulated Antenna Pattern @ 78.5 GHz



Simulated Gain vs. Frequency



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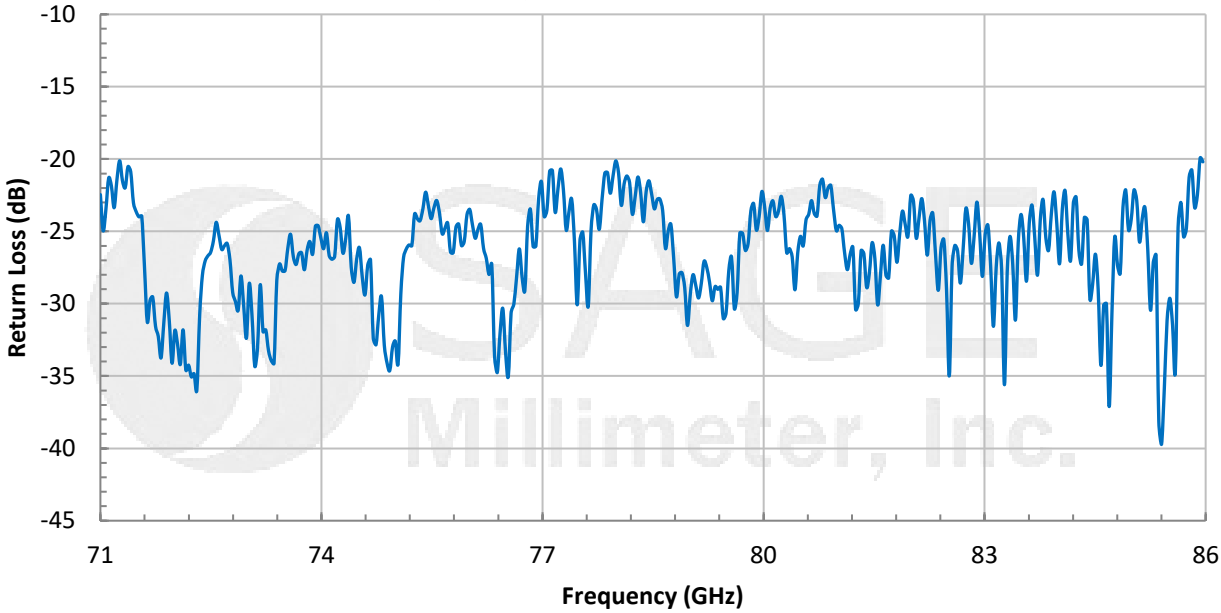
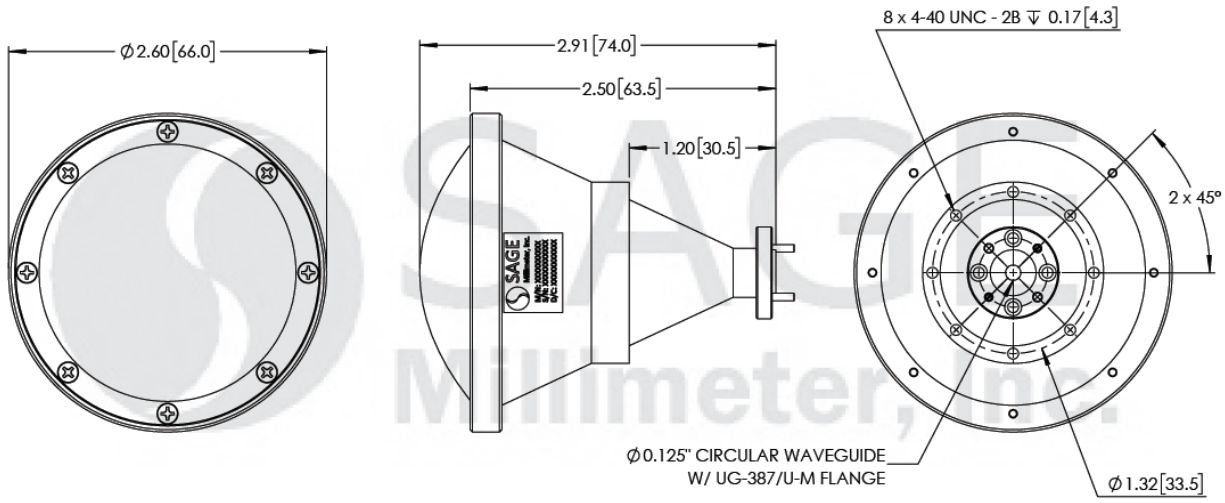
Measured Return Loss vs. Frequency



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



Note:

- Return Loss data presented is collected from a sample lot. Actual data may vary slightly from unit to unit.
- Antenna Pattern and Gain data presented is simulated. Through a high precision machining process, actual performance will be close to the simulation.
- 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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