

WR-12 Pyramidal Horn Antenna, 20 dBi Gain with 1mm Coax Input

Description:

Model SAR-2013-121M-E2 is an E-band pyramidal horn antenna with a end launch (180°) 1 mm (M) coax connector to cover the frequency range of 60 GHz to 90 GHz. The antenna offers 20 dBi nominal gain and a typical half power beamwidth of 14 degrees on the E-plane and 15 degrees on the H-plane. The antenna supports linear polarized waveforms. The model with 1 mm (F) connector is offered under model number SAR-2013-121F-E2.



Features:

- Inline Configuration
- Linear Polarization
- DC Short Circuit at Input

Applications:

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	60 GHz		90 GHz
Gain		20 dBi	
Polarization	Linear		
3 dB Beamwidth, E-Plane		14°	
3 dB Beamwidth, H-Plane		15°	
Sidelobes, E-Plane		-14 dB	
Sidelobes, H-Plane		-30 dB	
Return Loss		15 dB	
Power Handling			10 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

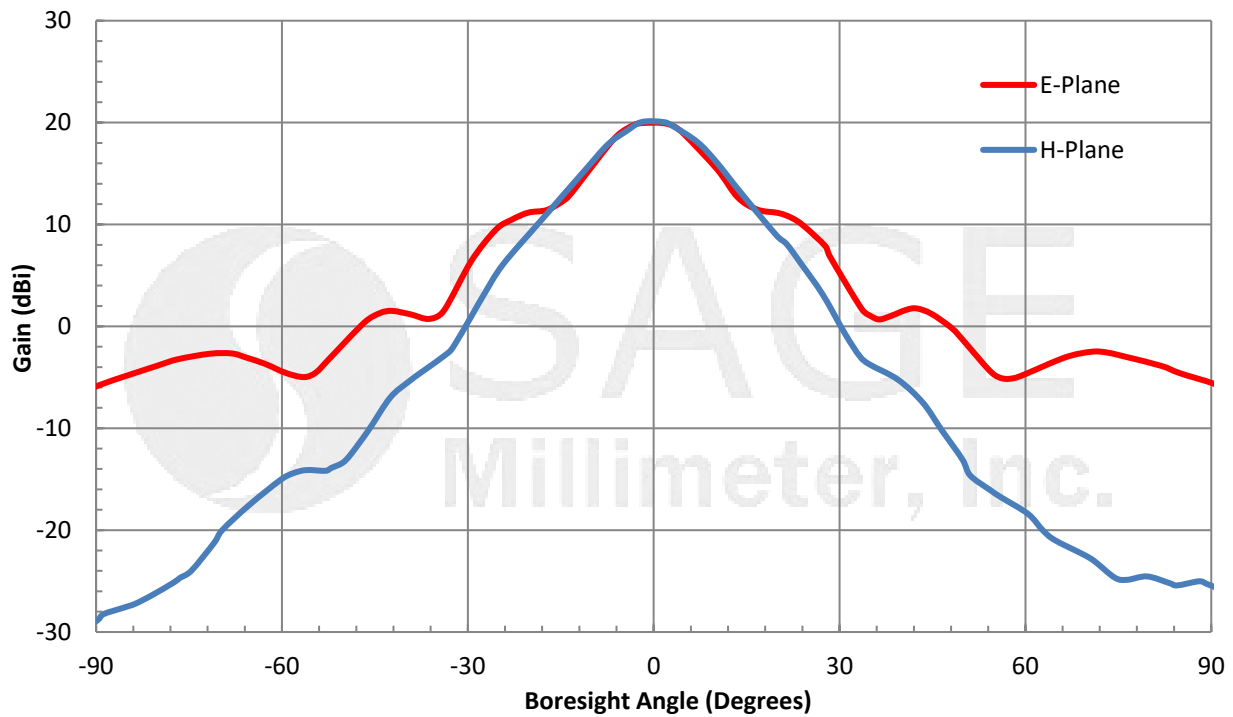
Item	Specification
Antenna Port	1 mm Male
Material	Brass
Finish	Gold Plated
Weight	1 Oz
Size	1.41" (L) X 0.79" (W) X 0.64"(H)
Outline	AR-EC1-E



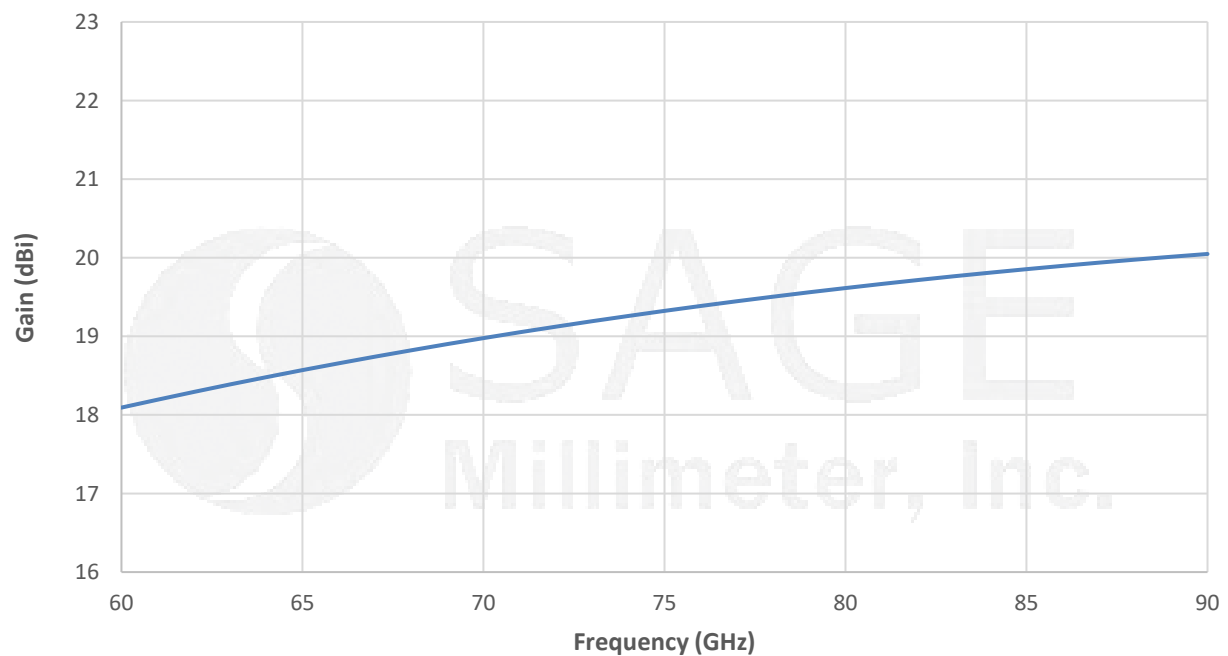


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Typical Antenna Pattern @ 75 GHz

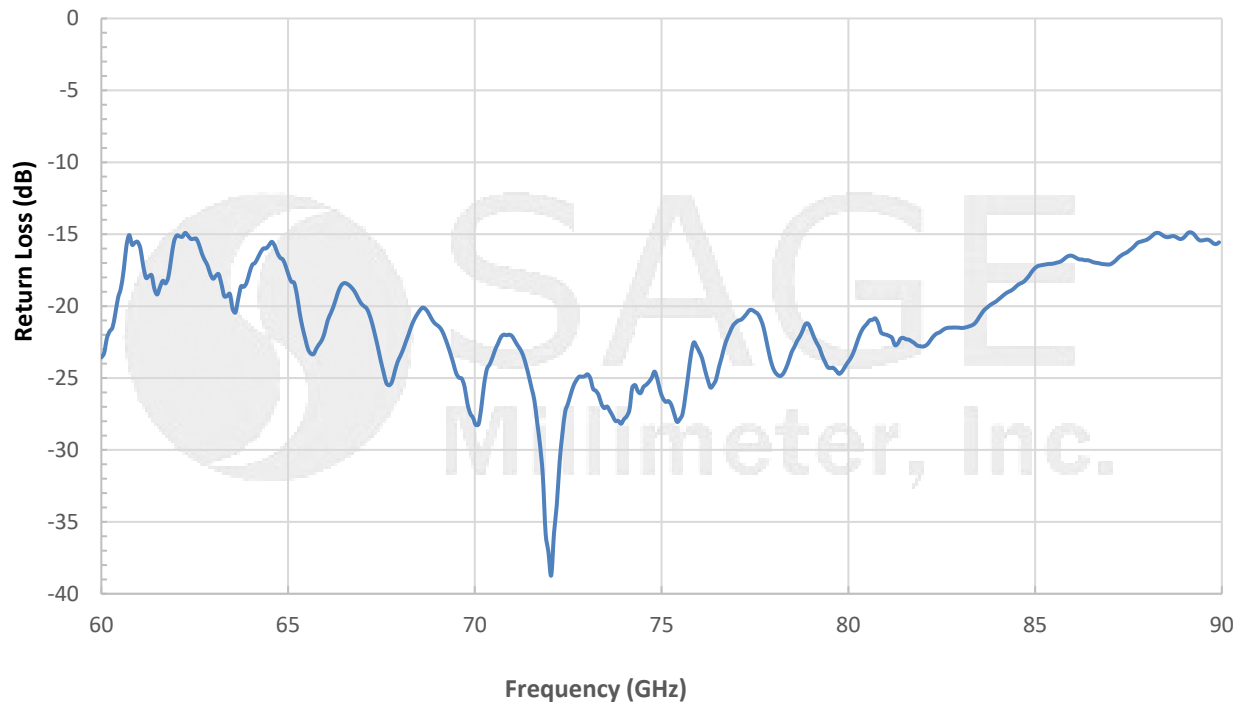


Typical Gain vs. Frequency

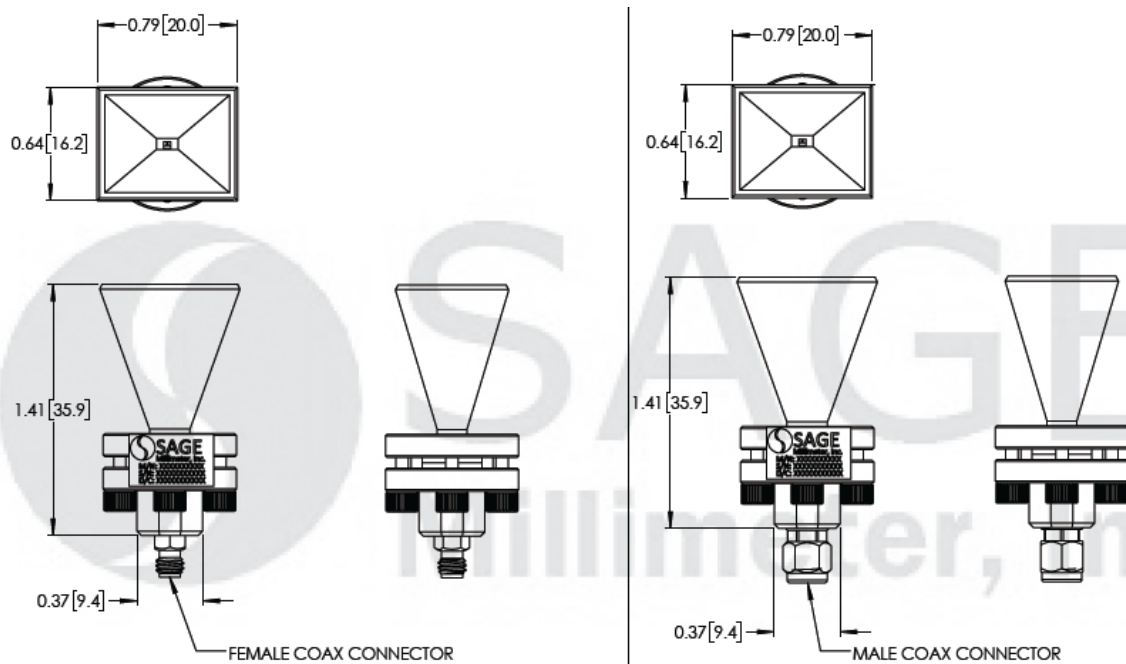


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Typical Return Loss vs. Frequency



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



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Note:

- This antenna is a mature product. The reasons for only providing simulated data can be found in the following blog [here](#).
- All testing was performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

Caution:

- Any foreign objects in the waveguide will cause performance degradation and possible device damage.
- Proper torque, 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm), should be used. **Eravant torque wrench, model SCH-06004-S1, is highly recommended.**

