



WR-12 Probe Antenna, 6.5 dBi Gain with 1 mm Coax Input

Description:

Model SAP-121M-R2 is an E-band probe antenna with a right angle (90°) 1 mm (M) coax connector to cover the frequency range of 60 GHz to 90 GHz. The antenna offers 6.5 dBi nominal gain and 115 degrees typical half power beamwidth on the E-plane and 60 degrees typical half power beamwidth on the H-plane. The antenna supports linear polarized waveforms. The model with 1 mm female connector is offered under model number SAP-121F-R2.



Features:

- In line Configuration
- Linear Polarization

Applications:

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	60 GHz		90 GHz
Gain		6.5 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		115°	
3 dB Beamwidth, H-Plane		60°	
Sidelobes, E-Plane		-10 dB	
Sidelobes, H-Plane		-14 dB	
Return Loss		15 dB	
Power Handling			10 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

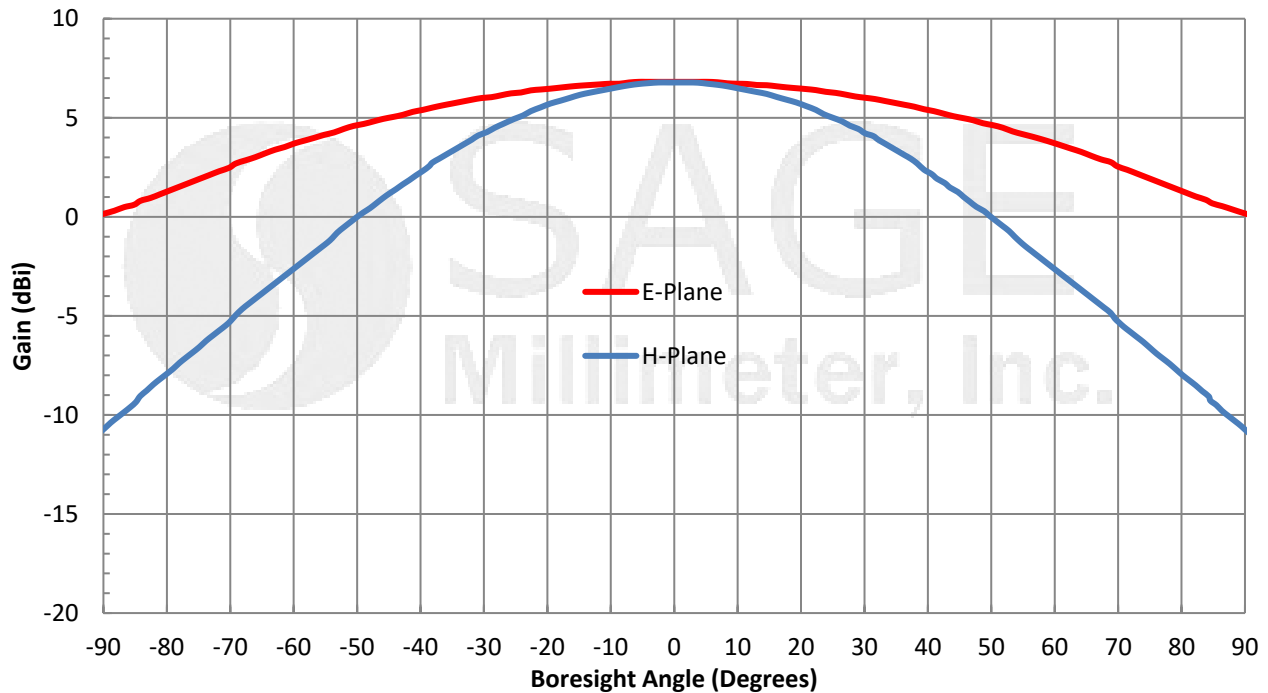
Item	Specification
Antenna Port (M)	1 mm Male Connector
Material	Brass
Connector Material	Stainless Steel
Finish	Gold Plated
Weight	0.8 Oz
Size	2.20" (L) x 0.75 (Ø)
Outline	AP-REC-R



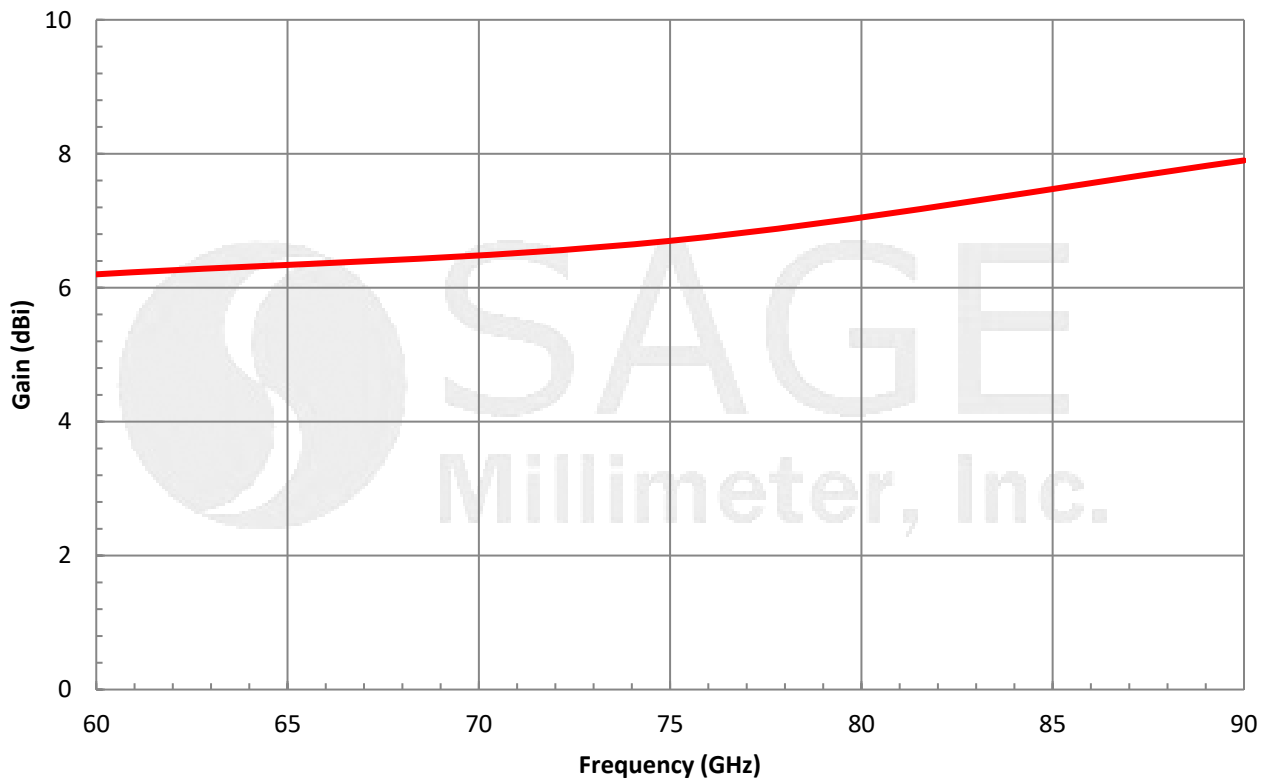


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Typical Antenna Pattern @ 75 GHz



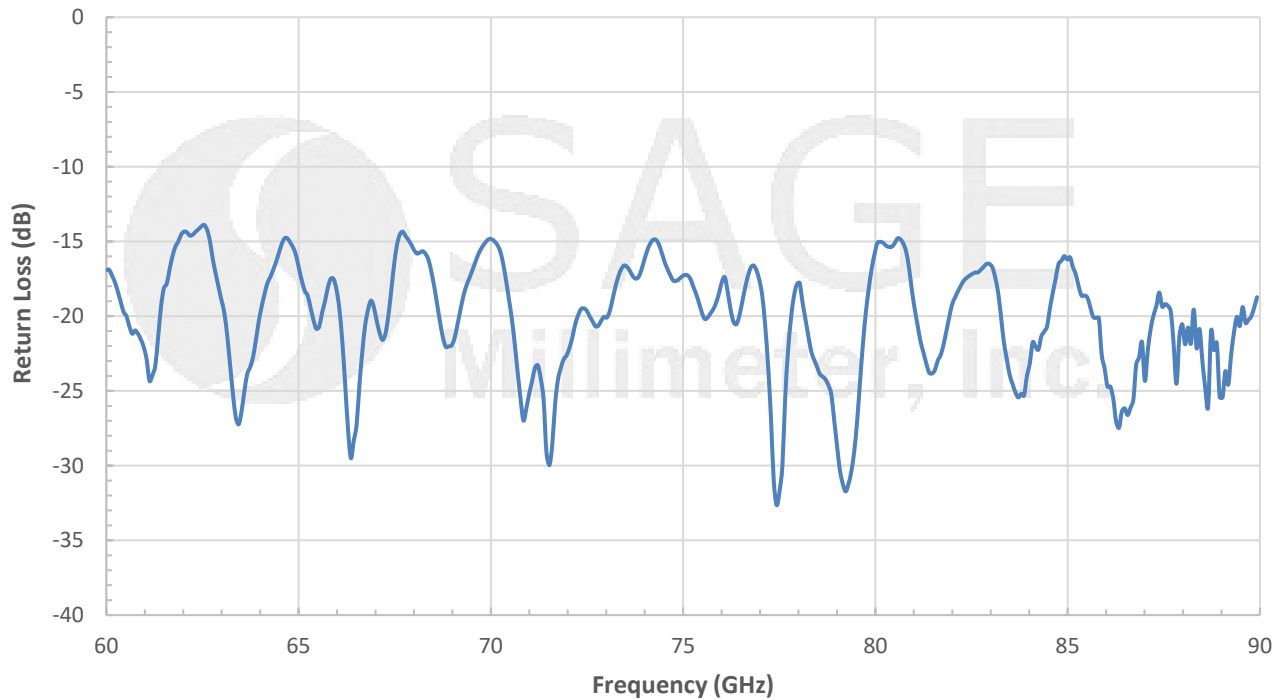
Typical Gain vs. Frequency



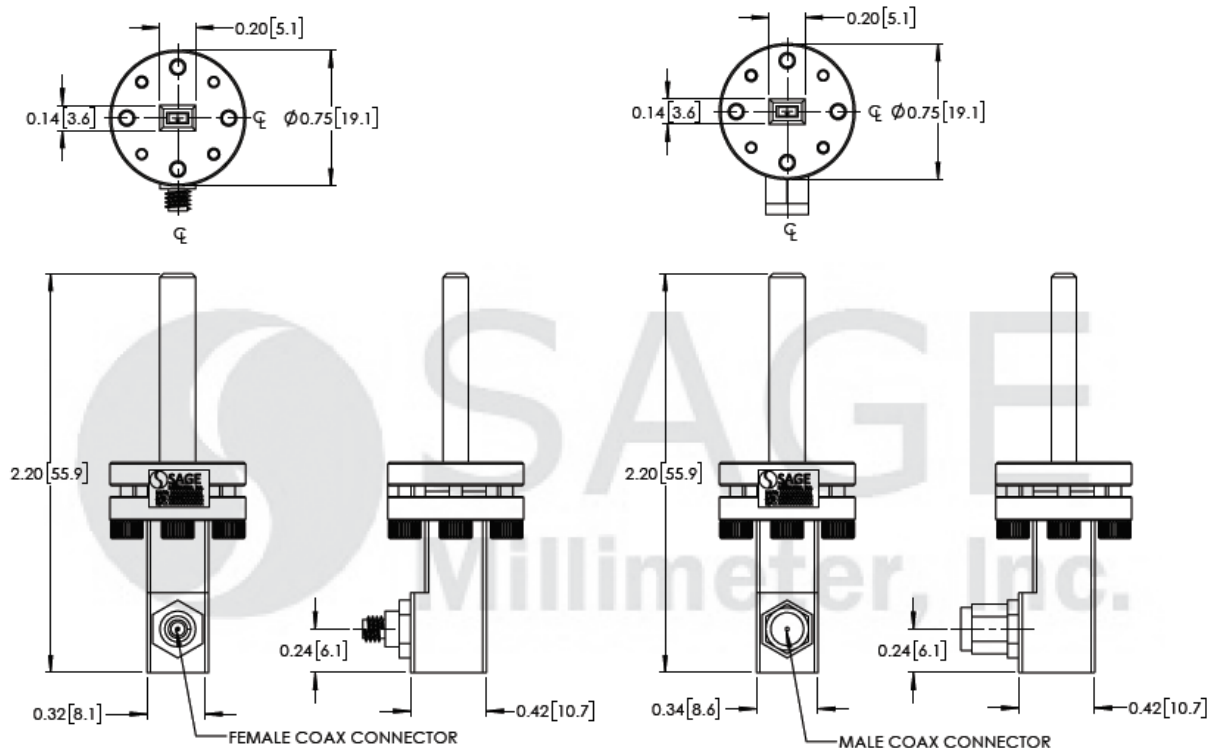


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Typical Return Loss vs. Frequency



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.**

