



## Dual-Ridged Horn Antenna, 14 to 110 GHz

### Description:

**Model SAV-1431141535-1F-U5** is a dual-ridged broadband horn antenna that operates from 14 to 110 GHz. The antenna offers a typical gain of 15 dBi and a typical 3 dB beamwidth of 35° on both the E-plane and H-plane, respectively. The antenna supports linear polarized waveforms. The antenna features a compact design and provides two M2 holes and a mounting fixture and plate for flexible mounting capacity. The RF port is equipped with a female 1 mm connector.



### Features:

- Broadband Operation
- Coaxial Connector for RF Input
- Linear Polarization
- Good Impedance Match

### Applications:

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	14 GHz		110 GHz
Gain		15 dBi	
Polarization	Linear		
E-Plane 3 dB Beamwidth		35°	
H-Plane 3 dB Beamwidth		35°	
E-Plane Sidelobe Levels		-10 dB	
H-Plane Sidelobe Levels		-15 dB	
Return Loss		10 dB	
Cross Polarization	23 dB	28 dB	
Power Handling			4 W (CW)
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

### Mechanical Specifications:

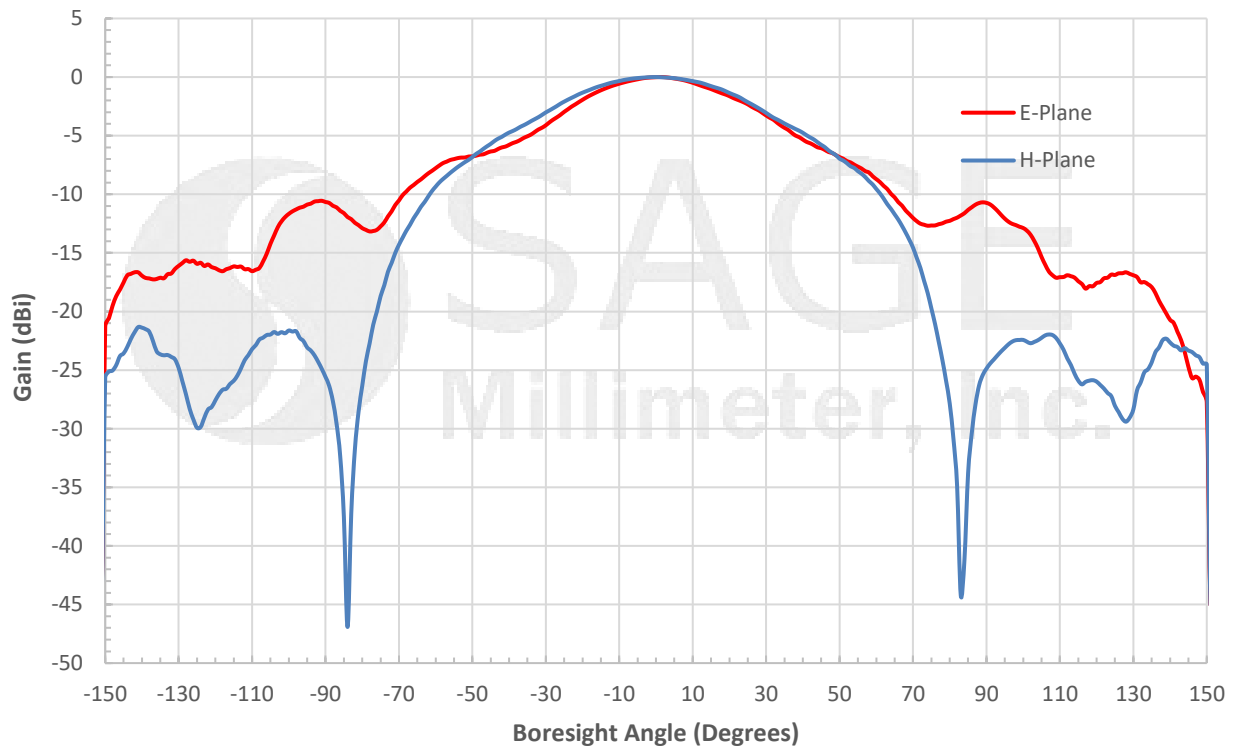
Item	Specification
Antenna Port	1 mm (F)
Mounting	2x M2 holes, Mounting Fixture and Plate
Material	Aluminum
Antenna Finish	Gold Plated
Weight	0.8 Oz
Size	1.25" (L) X 0.73" (W) X 0.61" (H)
Outline	AV-C15-DR-RS2



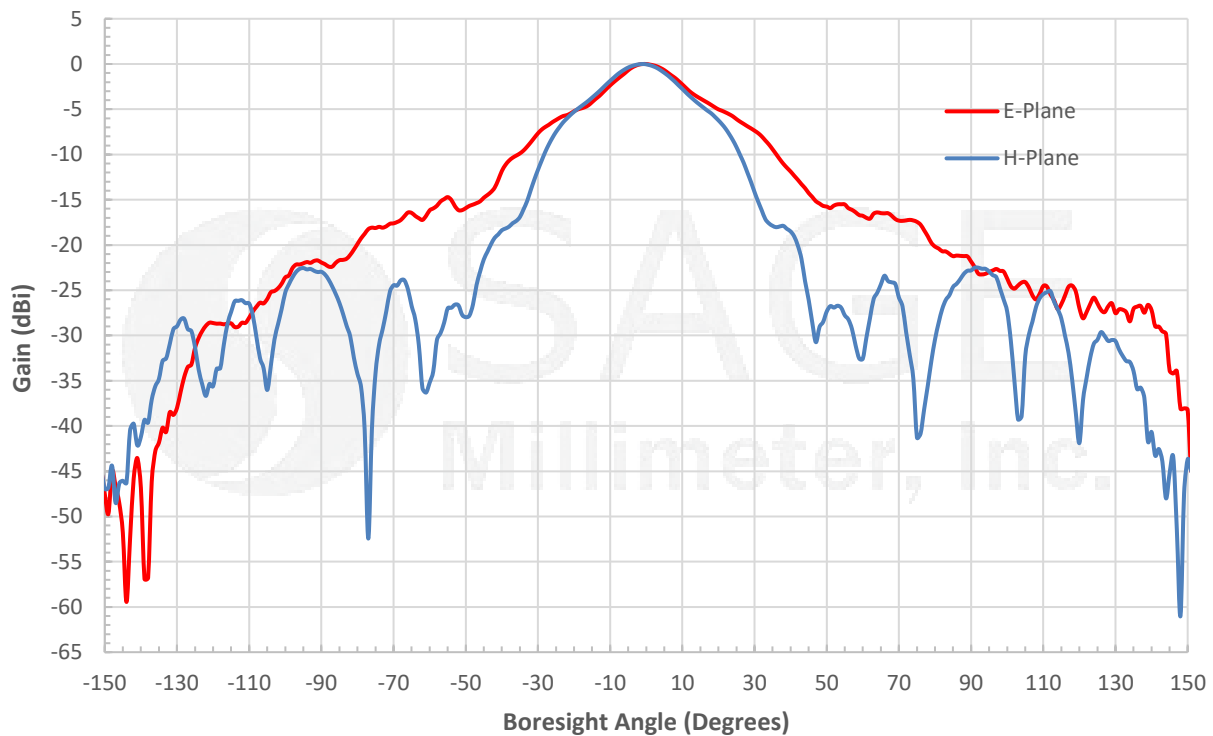


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### Typical Antenna Pattern @ 14 GHz



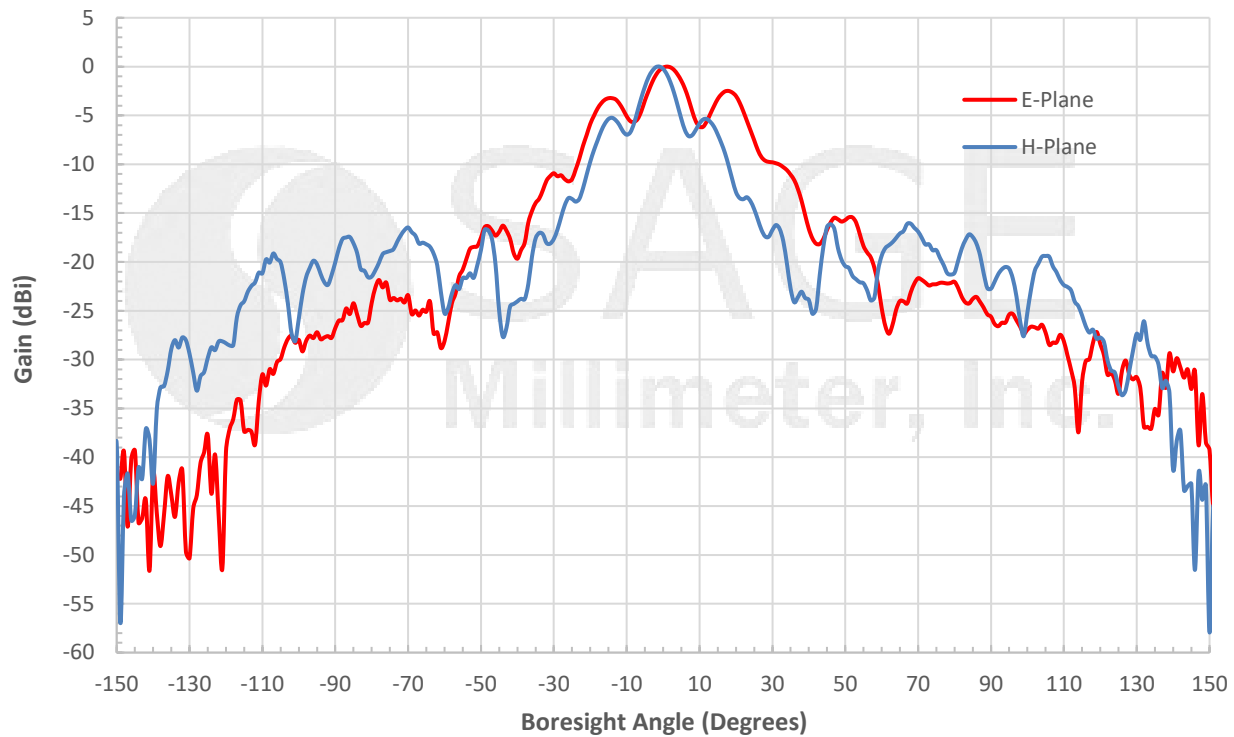
### Typical Antenna Pattern @ 62 GHz



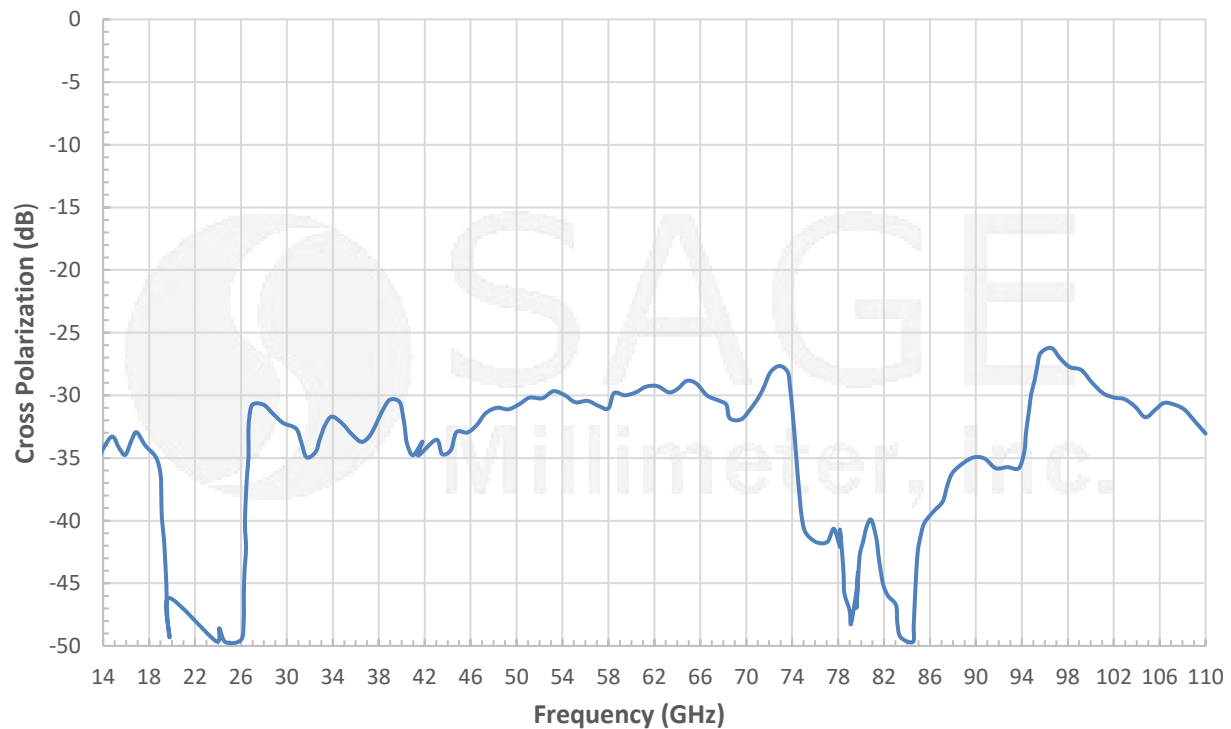


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### Typical Antenna Pattern @ 110 GHz



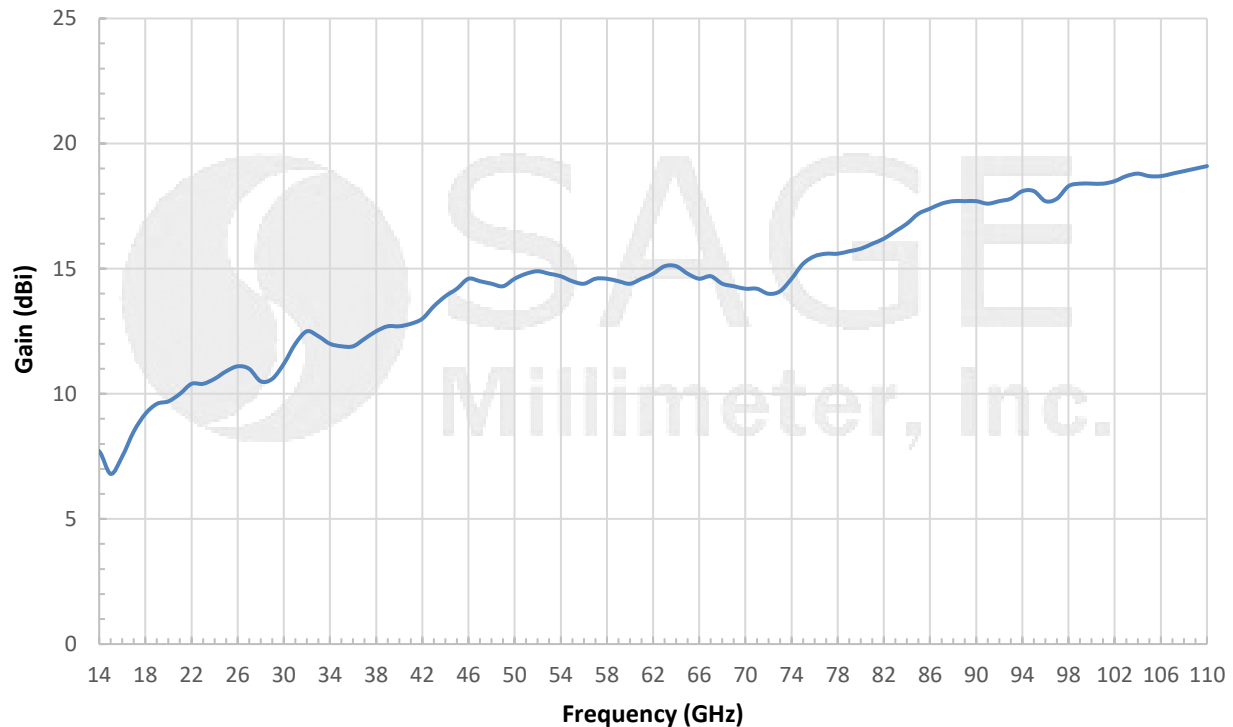
### Typical Cross Polarization vs Frequency



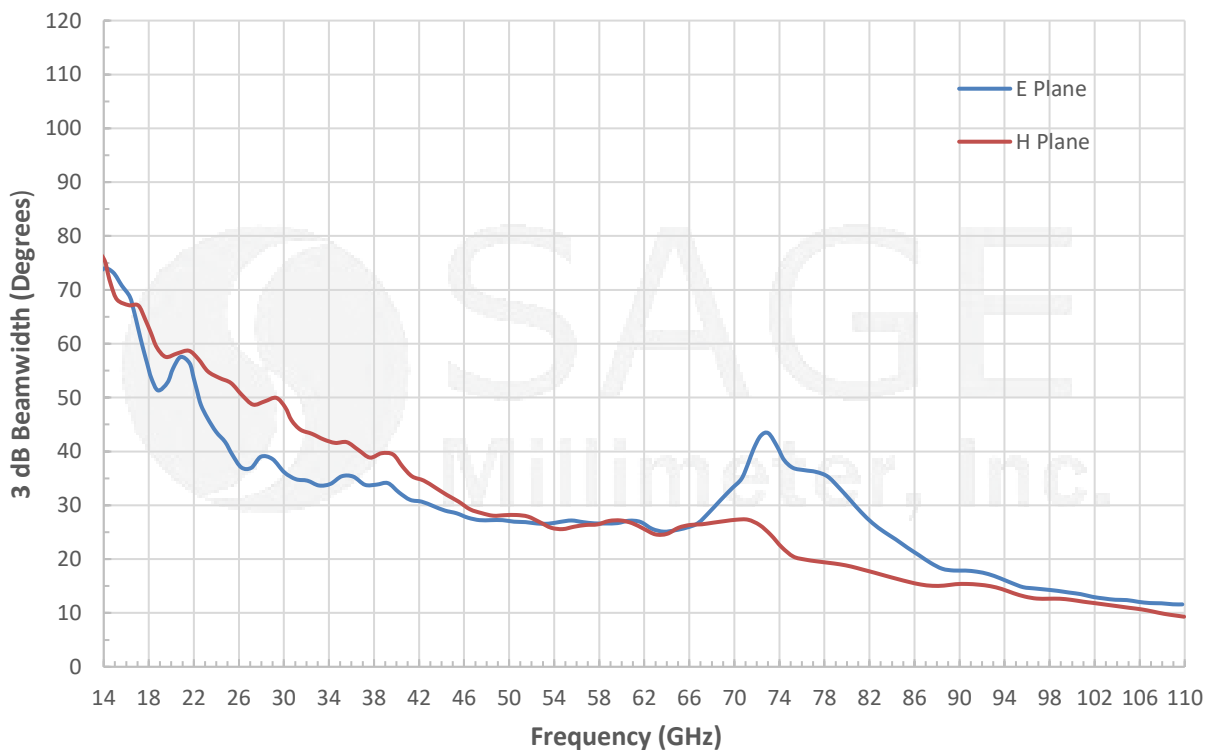


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### Typical Gain vs. Frequency



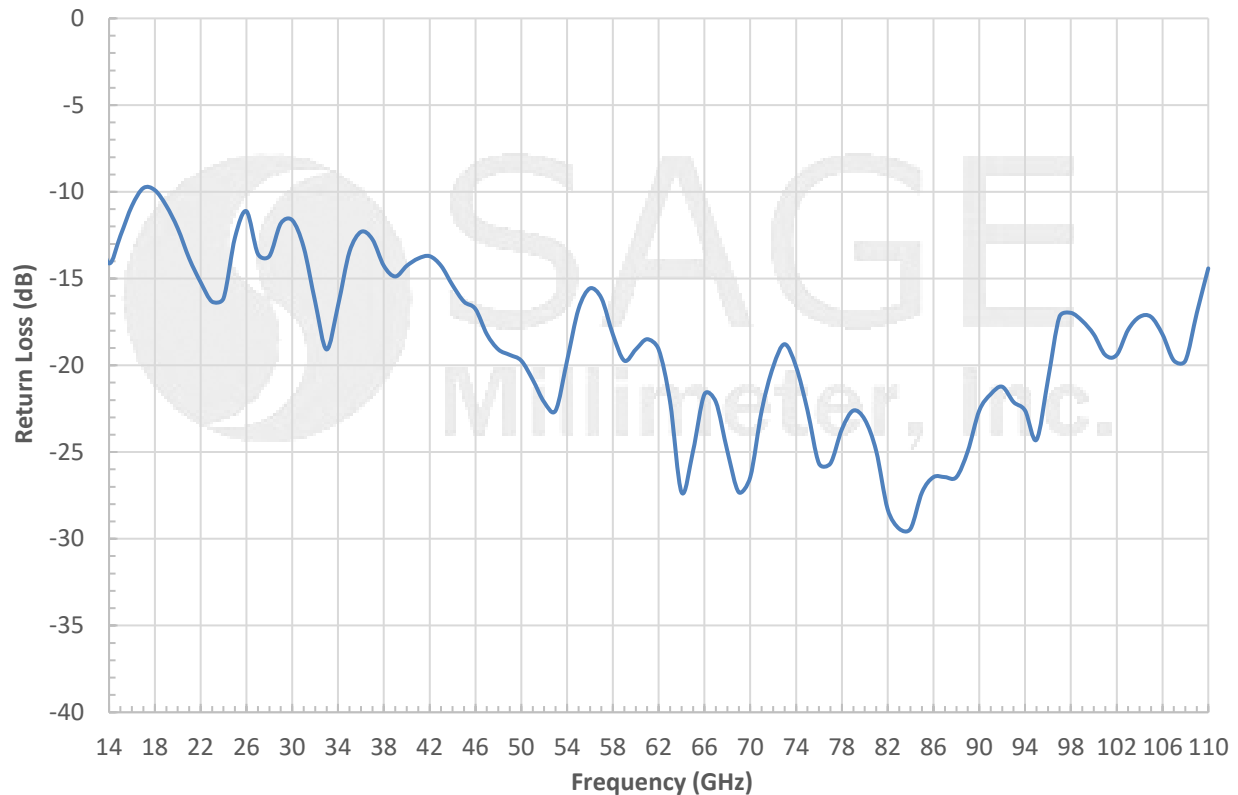
### Typical 3 dB Beamwidth vs Frequency



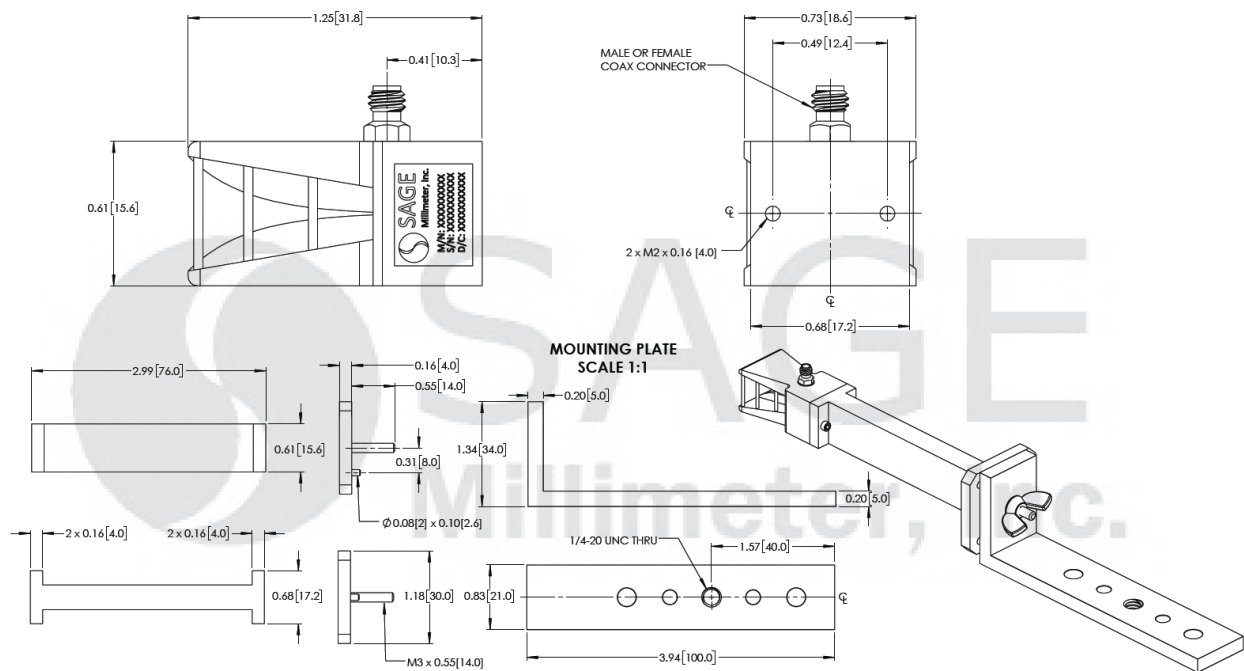


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### Typical Return Loss vs. Frequency



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



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### Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25 °C room temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

### Caution:

- Any foreign objects in the structure will cause performance degradation and possible device damage.
- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

