SAR-2507-19VM-R2

Rev 1.1

WR-19 Pyramidal Horn Antenna, 25 dBi Gain with 1.85 mm Coax Input

Description:

Model SAR-2507-19VM-R2 is a U-band pyramidal horn antenna with a right angle (90°) 1.85 mm (M) coax connector to cover the frequency range of 40 GHz to 60 GHz. The antenna offers 25 dBi nominal gain and a typical half power beamwidth of 9 degrees on the E-plane and 10 degrees on the H-plane. The antenna supports linear polarized waveforms. The model with a 1.85 mm (F) connector is offered under model number SAR-2507-19VF-R2.

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	40 GHz		60 GHz
Gain		25 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		9°	
3 dB Beamwidth, H-Plane		10°	
Sidelobes, E-Plane		-14 dB	
Sidelobes, H-Plane		-30 dB	
Return Loss		18 dB	
Power Handling			40 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
Antenna Port	1.85 mm Male
Material	Brass
Finish	Gold Plated
Weight	5.1 Oz
Size	5.80” (L) X 1.94” (W) X 1.57” (H)
Outline	AR-UC3-R

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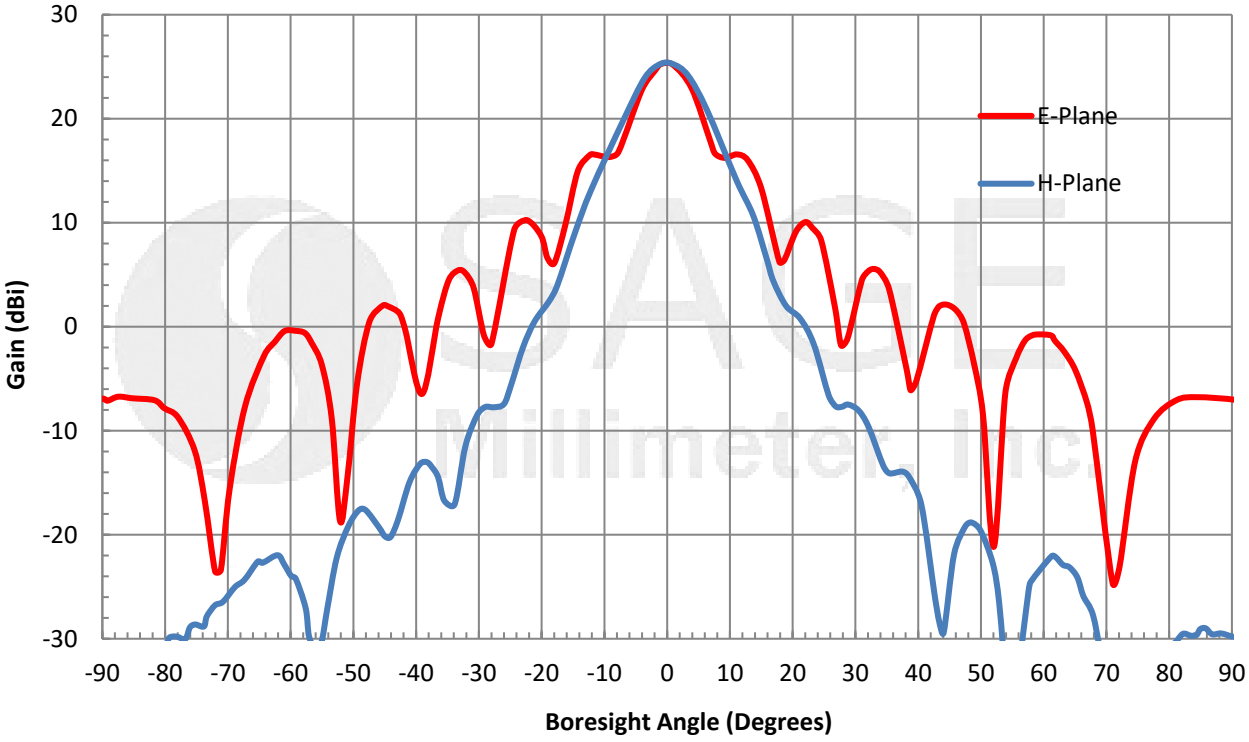
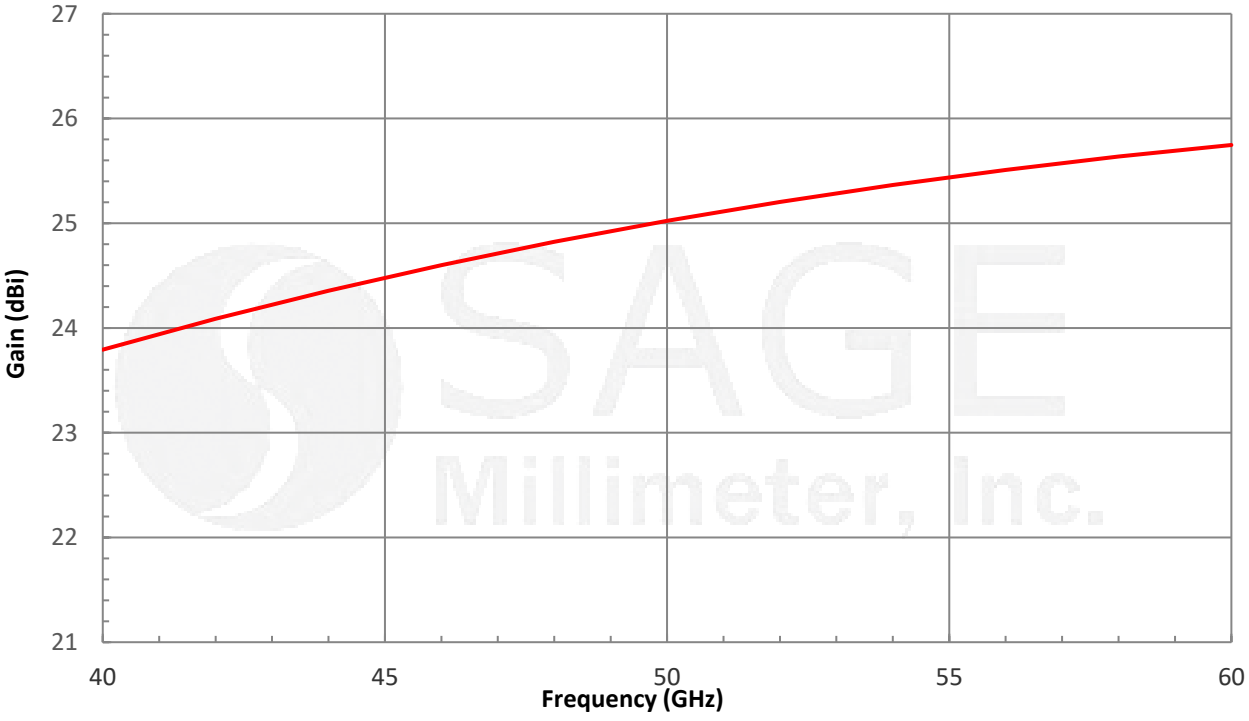
Typical Antenna Pattern @ 50 GHz



Typical Gain vs. Frequency



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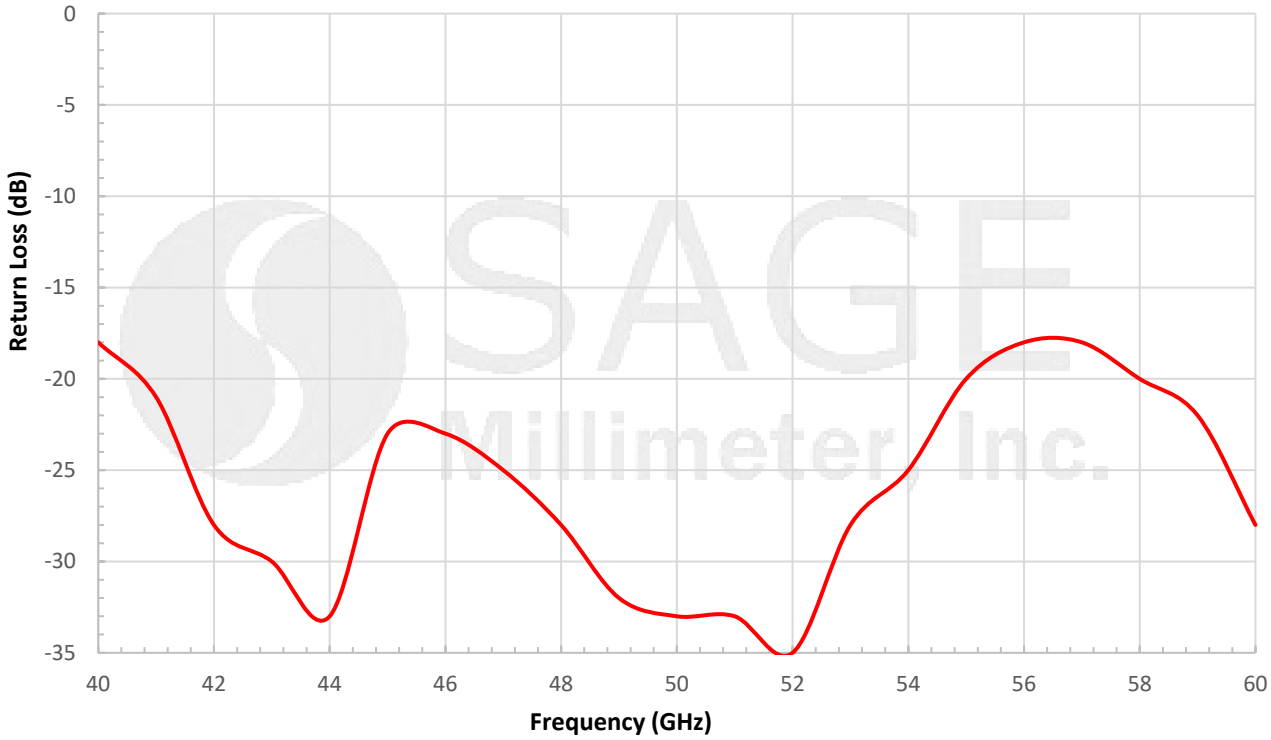
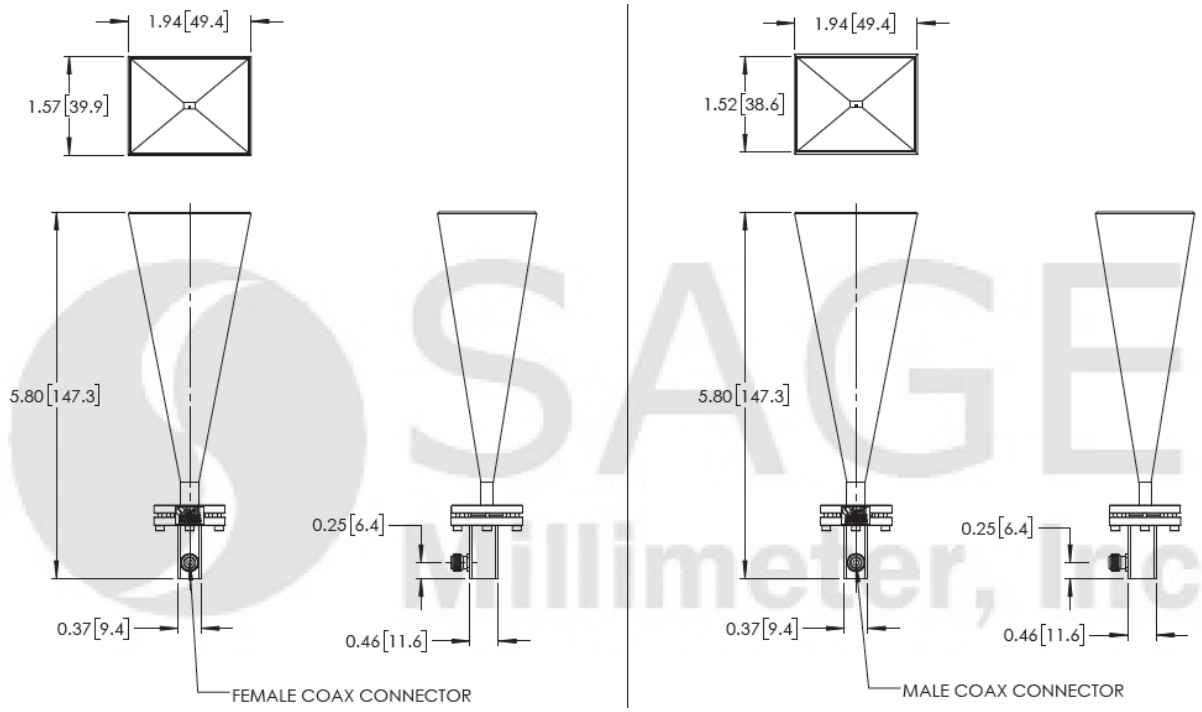
Typical Return Loss vs. Frequency



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 horn antenna will cause performance degradation and possible device damage.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**

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