SAR-2309-15VF-E2 & SAR-2309-15VM-E2

Rev. 1.1

WR-15 Pyramidal Horn Antenna, 23 dBi Gain with 1.85 mm (V) Coax Input

Description:

Models SAR-2309-15VF-E2 and SAR-2309-15VM-E2 are V-band pyramidal horn antennas equipped with end launch (180°) 1.85 mm coax connectors to cover the frequency range of 50 GHz to 70 GHz. The antennas offer 23 dBi nominal gain and a typical half power beamwidth of 10.5 degrees on the E-plane and 12 degrees on the H-plane. The antennas only support linear polarized waveforms. Right angle (90°) 1.85 mm coax connector configurations are available under the models **SAR-2309-15VF-R2 and SAR-2309-15VM-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	50 GHz		70 GHz
Gain		23 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		10.5°	
3 dB Beamwidth, H-Plane		12°	
Sidelobes, E-Plane		-10 dB	
Sidelobes, H-Plane		-20 dB	
Return Loss		15 dB	
Power Handling			30 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
Antenna Port	1.85 mm Female for Model Number: **SAR-2309-15VF-E2**
	1.85 mm Male for Model Number: **SAR-2309-15VM-E2**
Material	Brass
Finish	Gold Plated
Weight	2.0 Oz
Size	2.85” (L) X 1.28” (W) X 1.04” (H)
Outline	AR-VC2-E

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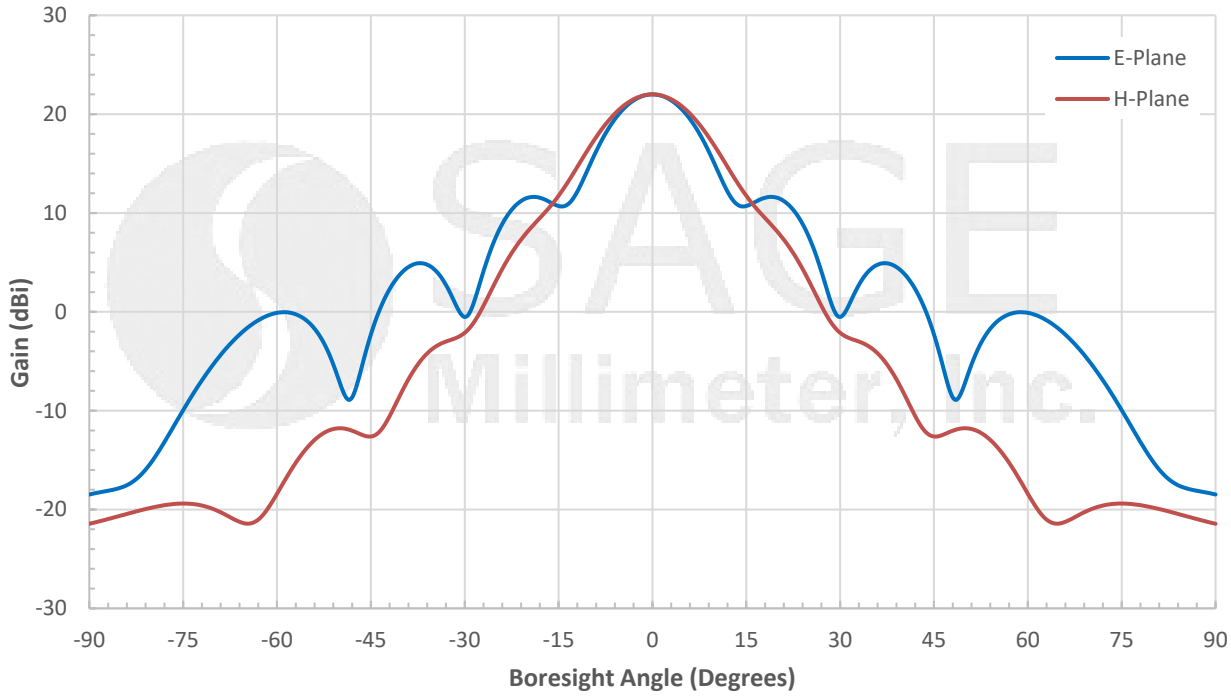
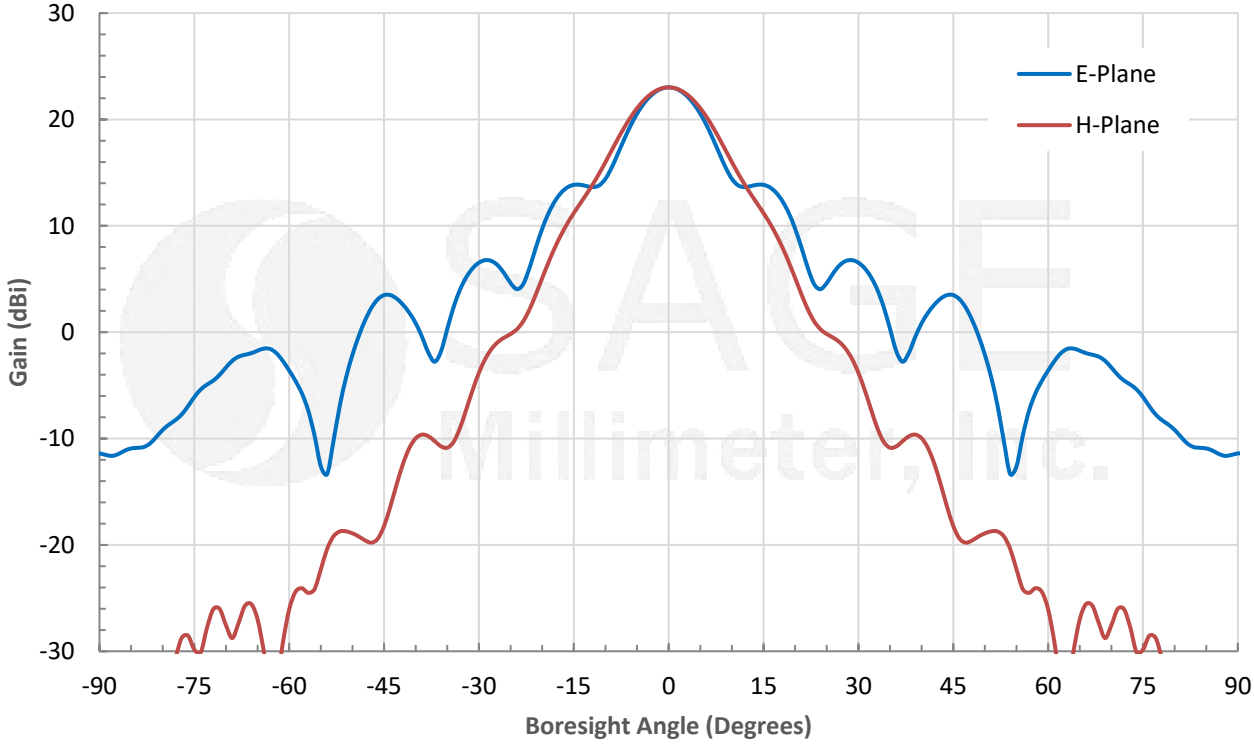
WR-15 Pyramidal Horn Antenna, 23 dBi Gain with 1.85 mm (V) Coax Input

Simulated Antenna Pattern @ 50 GHz



Simulated Antenna Pattern @ 60 GHz



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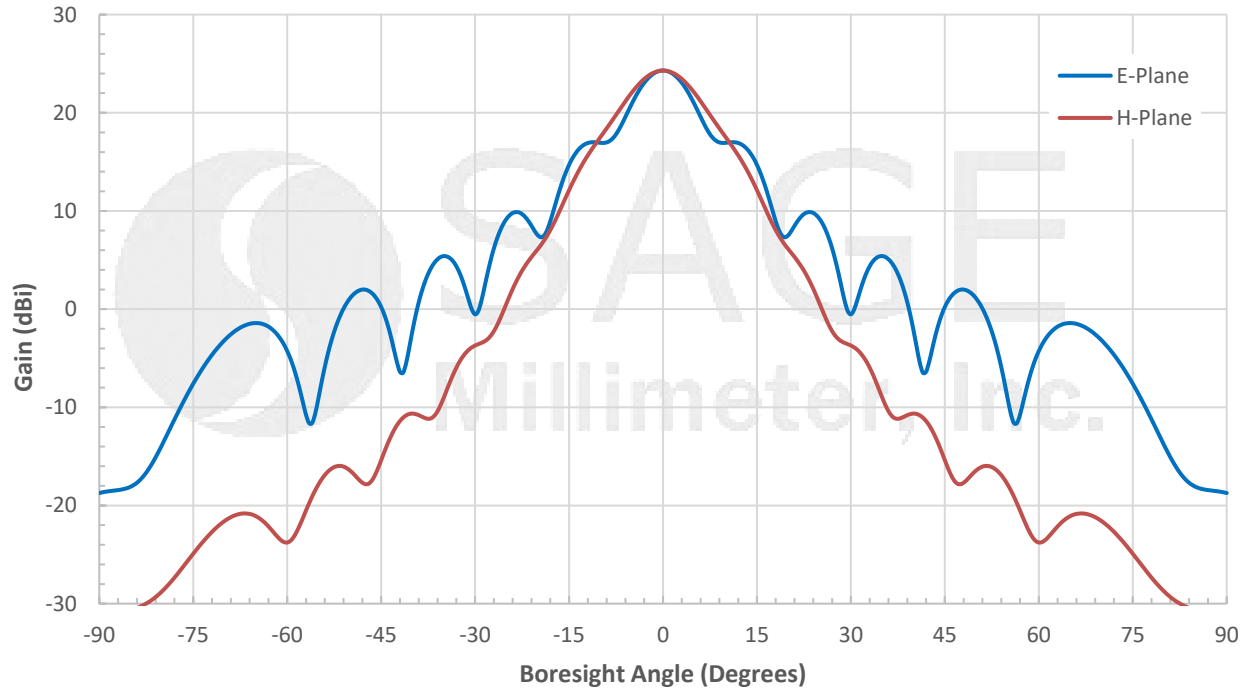
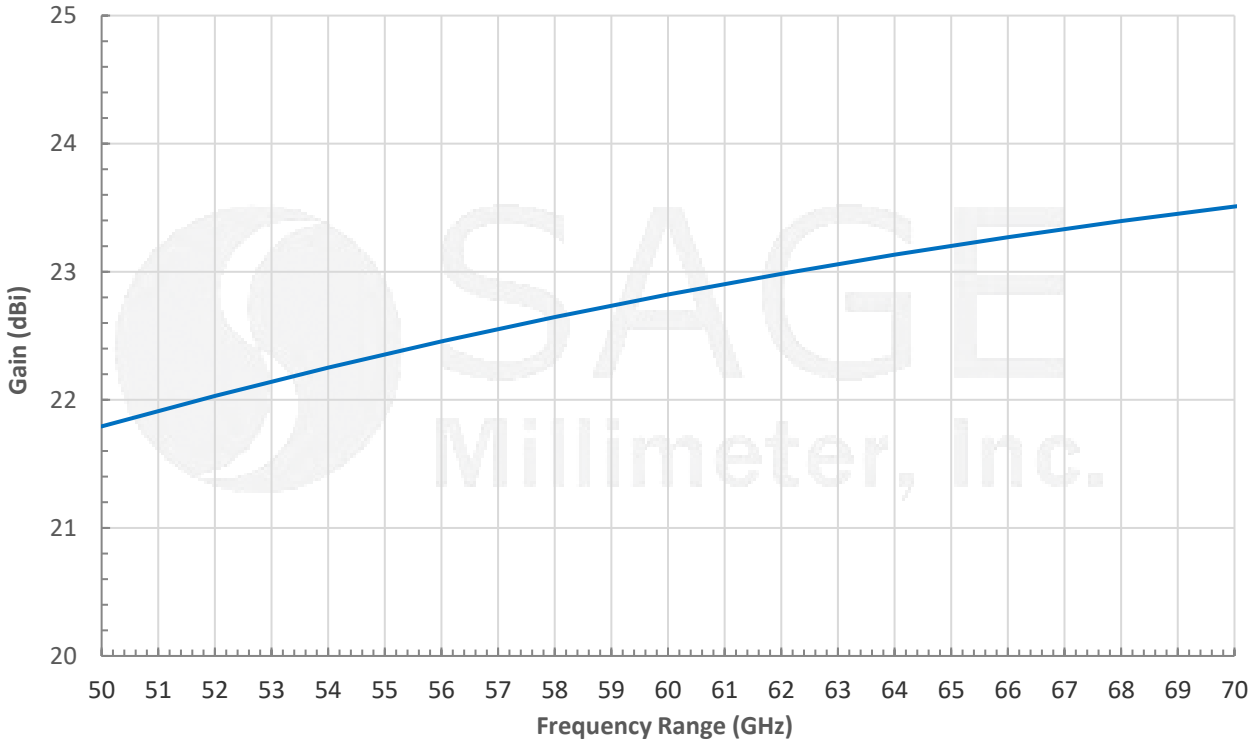
Simulated Antenna Pattern @ 70 GHz



Simulated Gain vs. Frequency



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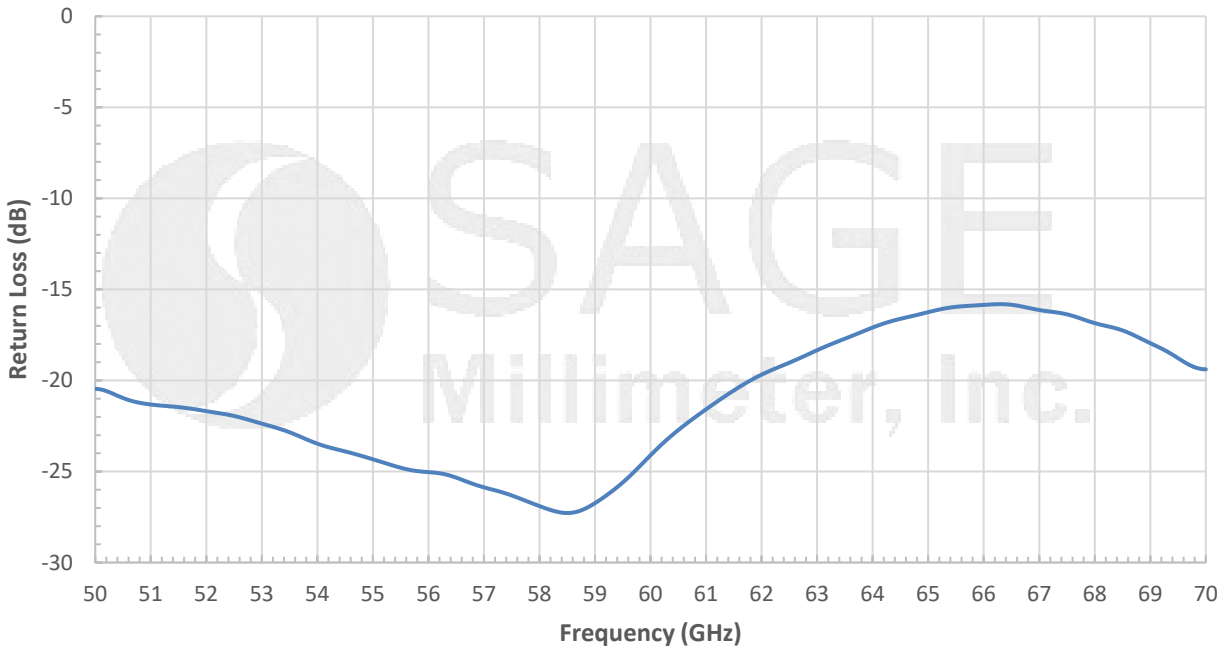
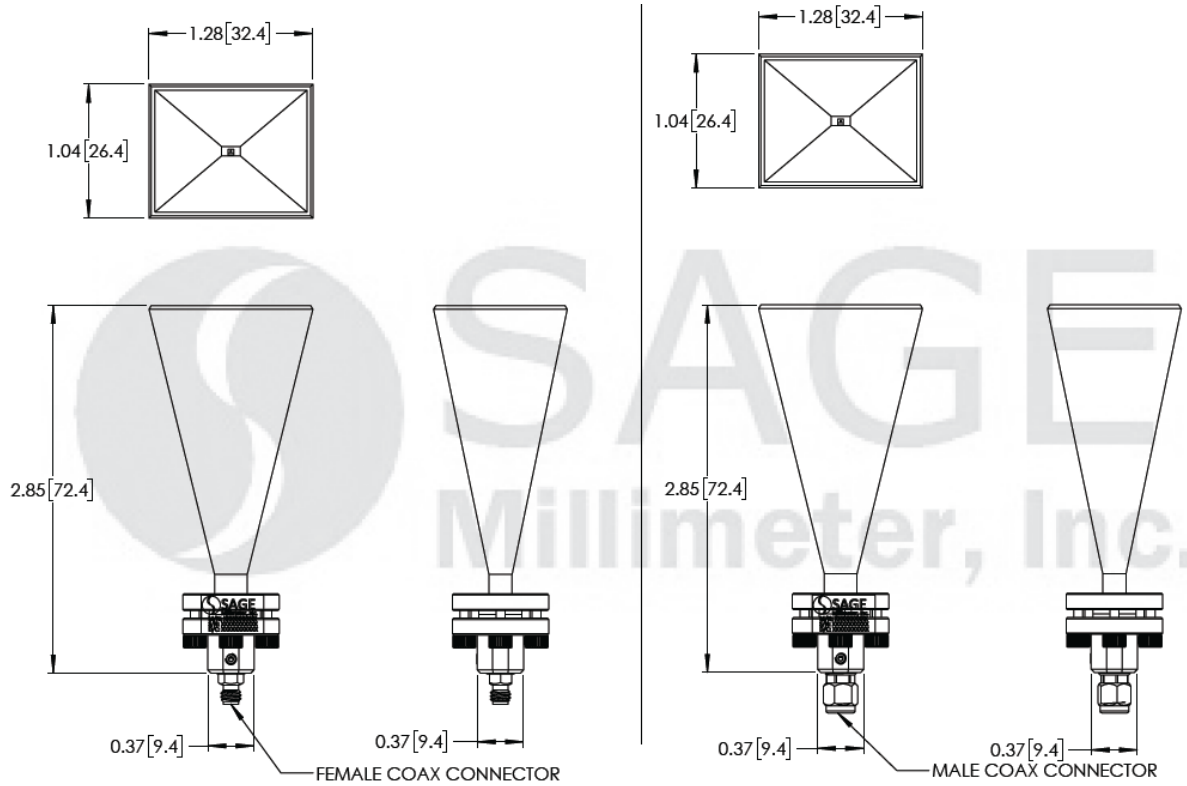
Typical Return Loss vs Frequency



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



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Note:

- The antenna patterns and gain data presented are simulated. Actual data may vary slightly.
- The return loss 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 antenna will cause performance degradation and possible device damage.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

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