



## WR-15 Pyramidal Horn Antenna, 20 dBi Gain with 1.85 mm (V) Coax Input

### Description:

**Models SAR-2013-15VF-E2 and SAR-2013-15VM-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 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 antennas only support linear polarized waveforms. Right angle (90°) 1.85 mm coax connector configurations are available under the models **SAR-2013-15VF-R2 and SAR-2013-15VM-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		20 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		14°	
3 dB Beamwidth, H-Plane		15°	
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:

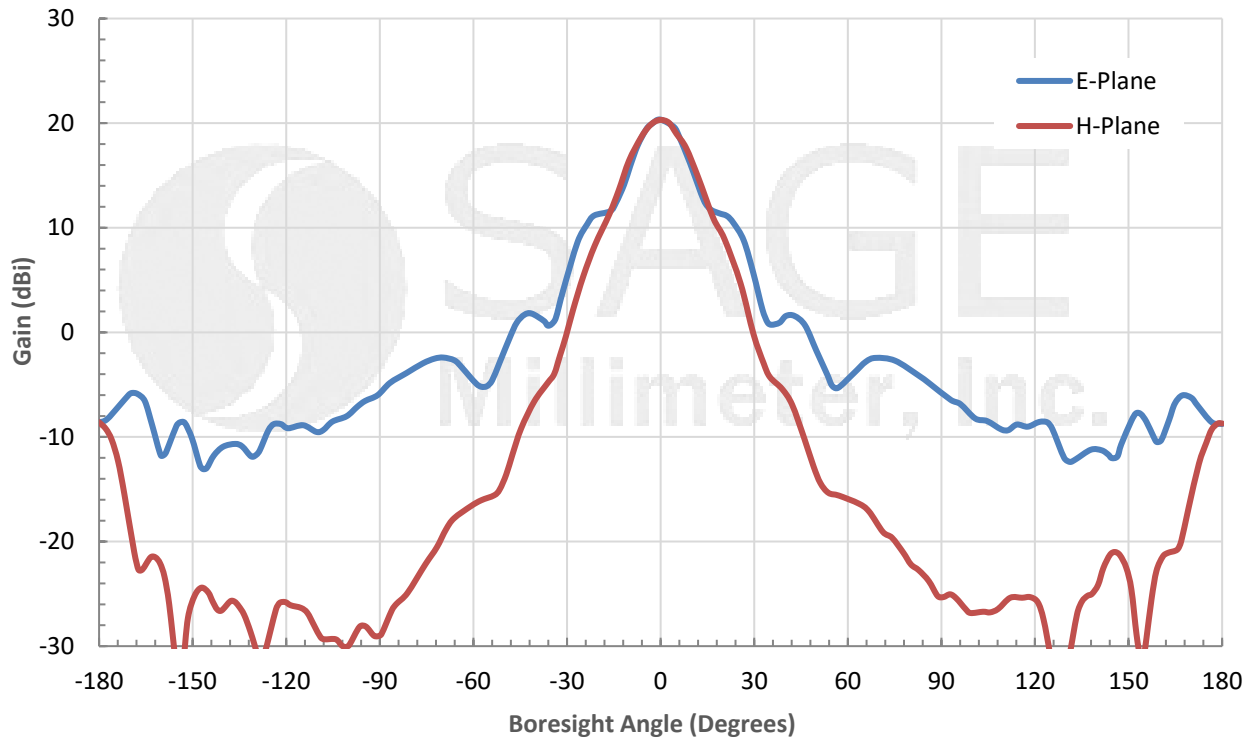
Item	Specification
Antenna Port	1.85 mm Female for Model Number: <b>SAR-2013-15VF-E2</b>
	1.85 mm Male for Model Number: <b>SAR-2013-15VM-E2</b>
Material	Brass
Finish	Gold Plated
Weight	1.8 Oz
Size	1.65" (L) X 0.93" (W) X 0.75" (H)
Outline	AR-VC1-E



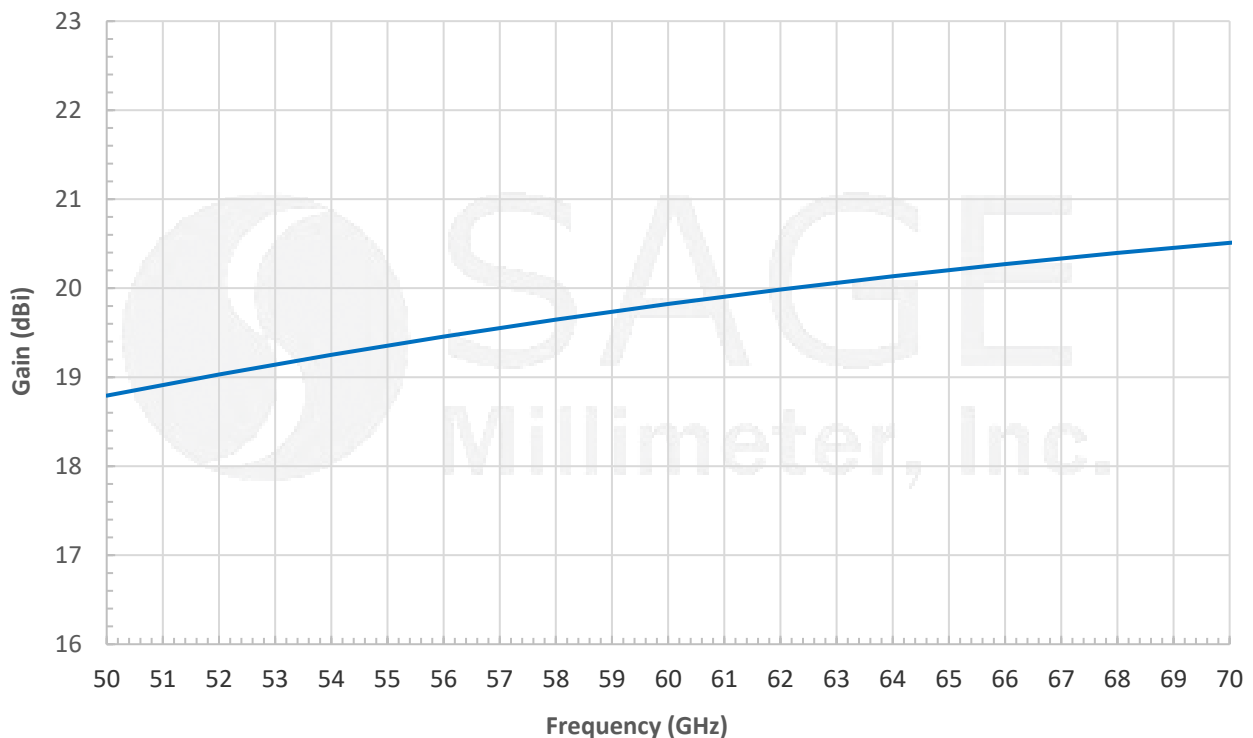


## WR-15 Pyramidal Horn Antenna, 20 dBi Gain with 1.85 mm (V) Coax Input

### Simulated Antenna Pattern @ 60 GHz



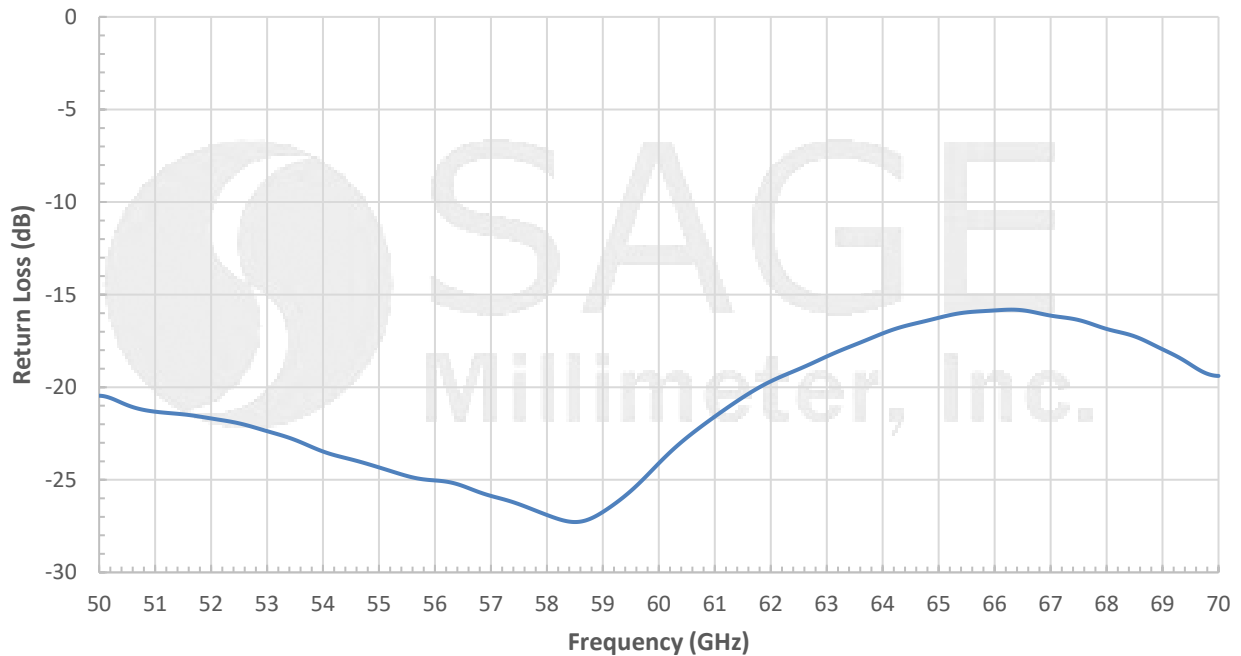
### Simulated Gain vs. Frequency



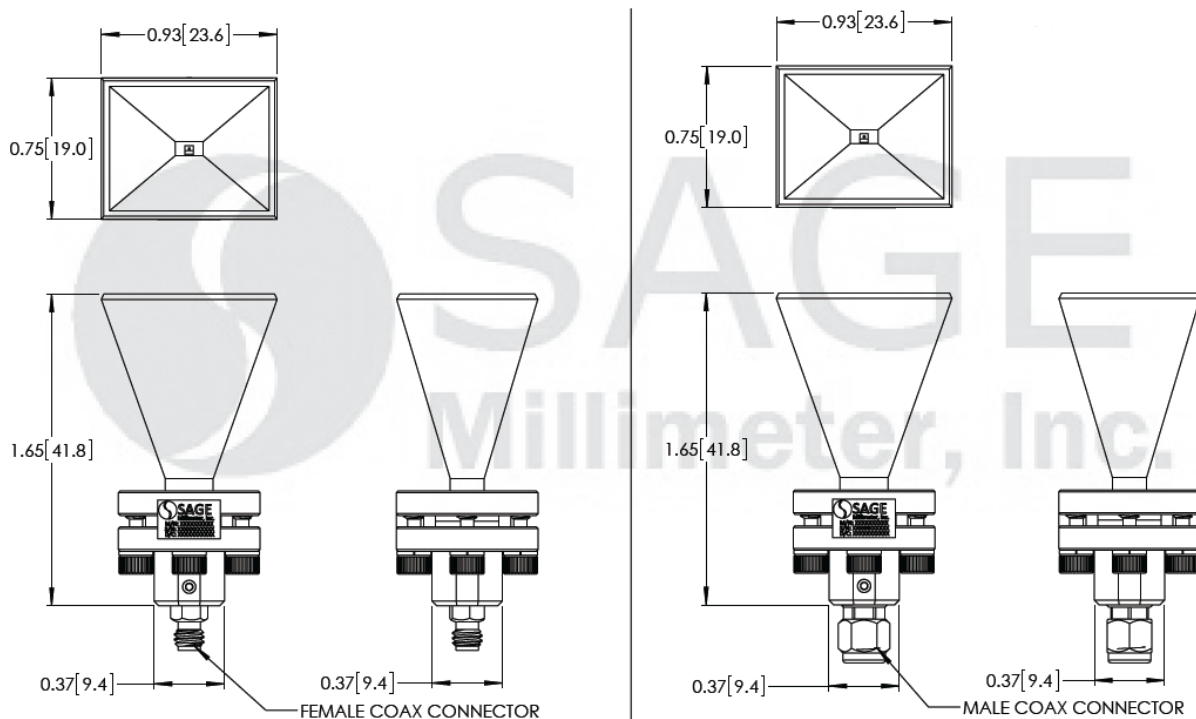


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### Typical Return Loss vs Frequency



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





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### Note:

- 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 antenna 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. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**

