



## WR-34 Pyramidal Horn Antenna, 20 dBi Gain with 2.92 mm Coax Input

### Description:

Models SAR-2013-34KF-E2 and SAR-2013-34KM-E2 are pyramidal horn antennas with end launch (180°) 2.92 mm coax connectors to cover the frequency range of 22 GHz to 33 GHz. The antennas offer 20 dBi nominal gain and a typical half power beamwidth of 14 degrees on the E-plane and 16 degrees on the H-plane. The antennas support linear polarized waveforms. Right angle (90°) 2.92 mm coax connector configurations are available under models SAR-2013-34KF-R2 and SAR-2013-34KM-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	22 GHz		33 GHz
Gain		20 dBi	
Polarization	Linear		
3 dB Beamwidth, E-Plane		14°	
3 dB Beamwidth, H-Plane		16°	
Sidelobes, E-Plane		-14 dB	
Sidelobes, H-Plane		-30 dB	
Return Loss:		20 dB	
Power Handling			50 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-45 °C		+85 °C

### Mechanical Specifications:

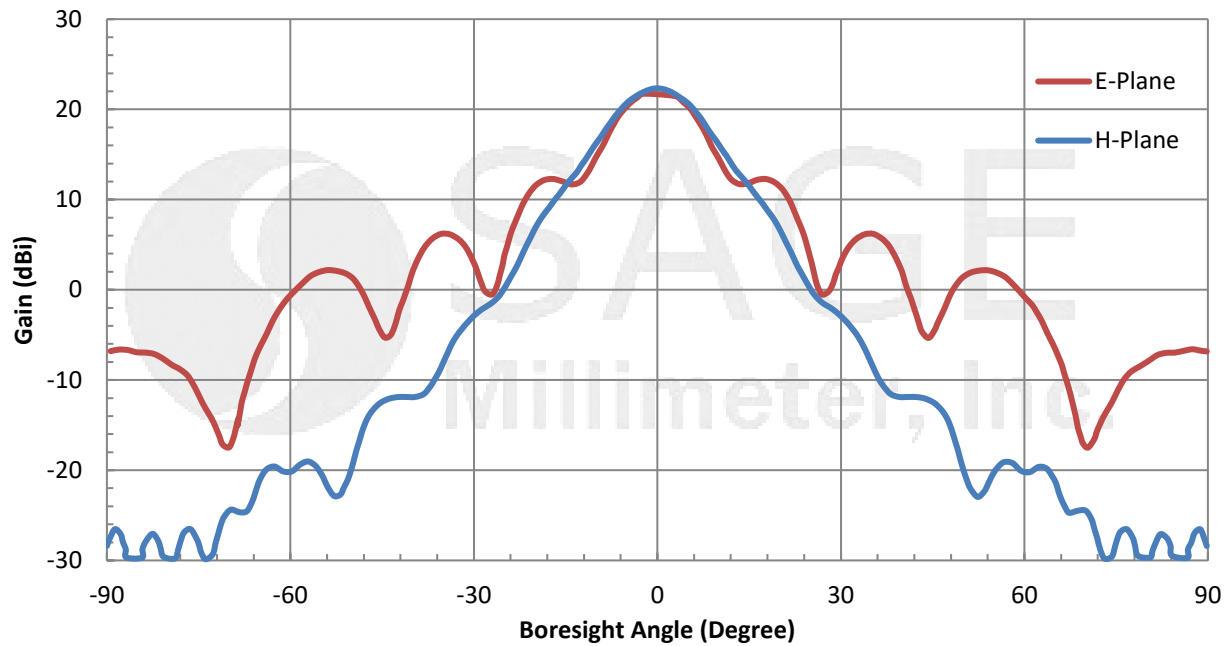
Item	Specification
Antenna Port (F)	2.92 mm Female for Model Number : SAR-2013-34KF-E2
Antenna Port (M)	2.92 mm Male for Model Number : SAR-2013-34KM-E2
Size	4.92" (L) X 2.51" (W) X 1.91" (H)
Material	Aluminum
Connector Material	Stainless Steel
Finish	Gold Plated
Weight	1.3 Oz
Outline	AR-3C1-E



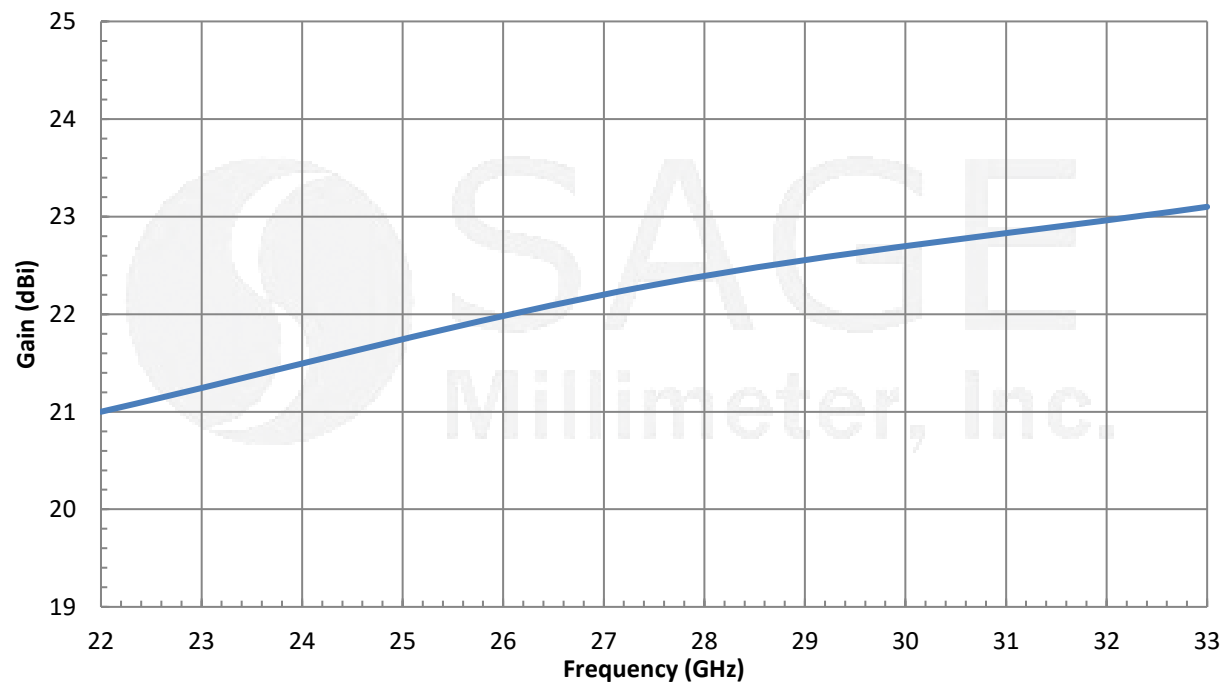


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### Typical Antenna Pattern @ 27.5 GHz



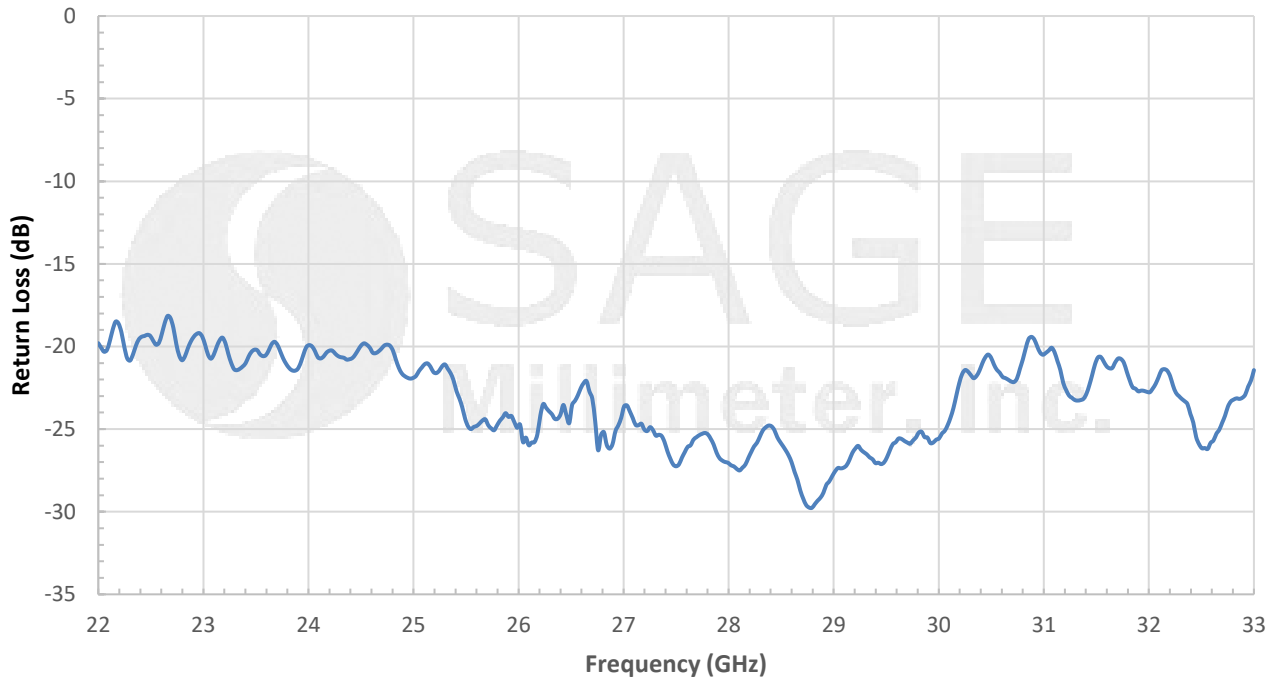
### Typical Gain vs. Frequency



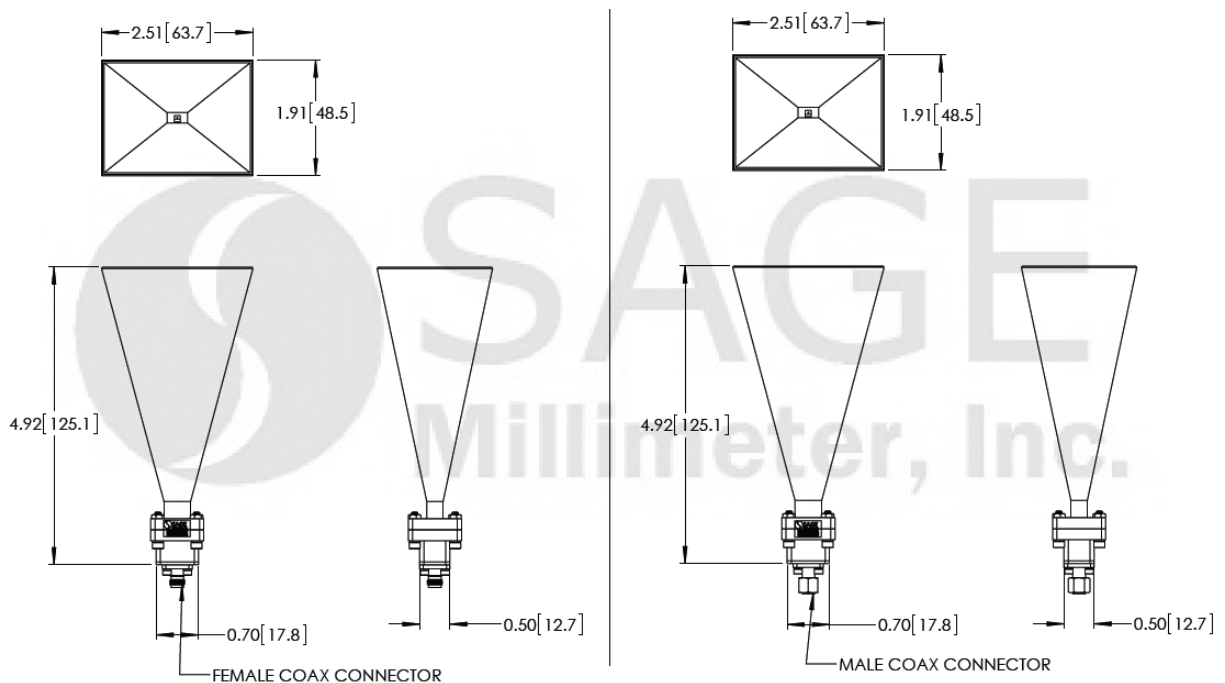


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Typical Measured Return Loss vs. Frequency



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





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### Note:

- The antenna patterns presented are simulated. Actual data may vary.
- 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,  $8.0 \pm 0.15$  inch-pounds ( $0.92 \pm 0.05$  Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

