SAR-2013-28KF-E2 & SAR-2013-28KM-E2

Rev. 1.1

WR-28 Pyramidal Horn Antenna, 20 dBi Gain with 2.92 mm Coax Input

Description:

Model SAR-2013-28KF-E2 is a Ka-band pyramidal horn antenna with a end launch (180°) 2.92 mm (F) coax connector to cover the frequency range of 26.5 GHz to 40 GHz. The antenna offers 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 antenna supports linear polarized waveforms. The model with 2.92 mm (M) connector is offered under model number SAR-2013-28KM-E2.

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	26.5 GHz		40 GHz
Gain	18.5 dBi	20 dBi	21 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		19 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-2013-28KF-E2
Antenna Port (M)	2.92 mm Male for Model Number : SAR-2013-28KM-E2
Size	3.16” (L) X 1.67” (W) X 1.32”(H) For Model Number : SAR-2013-28KF-E2
Size	3.29” (L) X 1.67” (W) X 1.32”(H) For Model Number : SAR-2013-28KM-E2
Material	Aluminum
Finish	Gold Plated
Connector Material	Stainless Steel
Weight	0.8 Oz
Outline	AR-AC1-E

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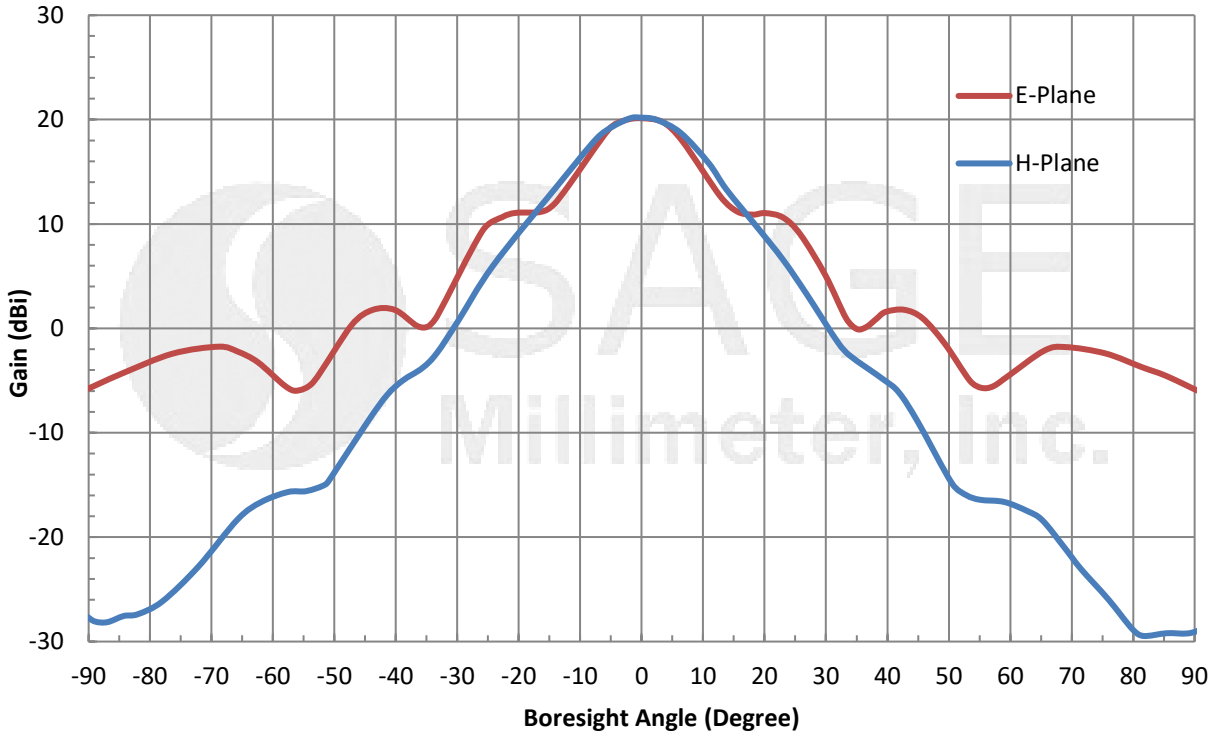
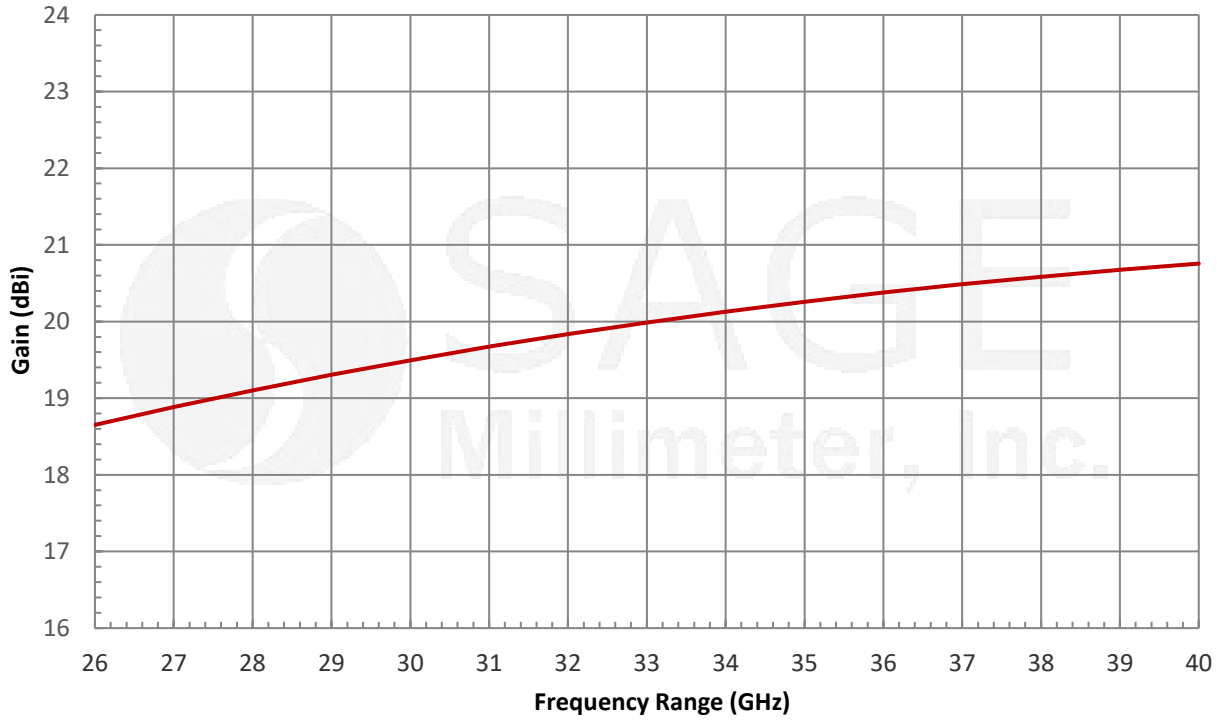
Typical Antenna Pattern @ 33.25 GHz



Typical Gain vs. Frequency



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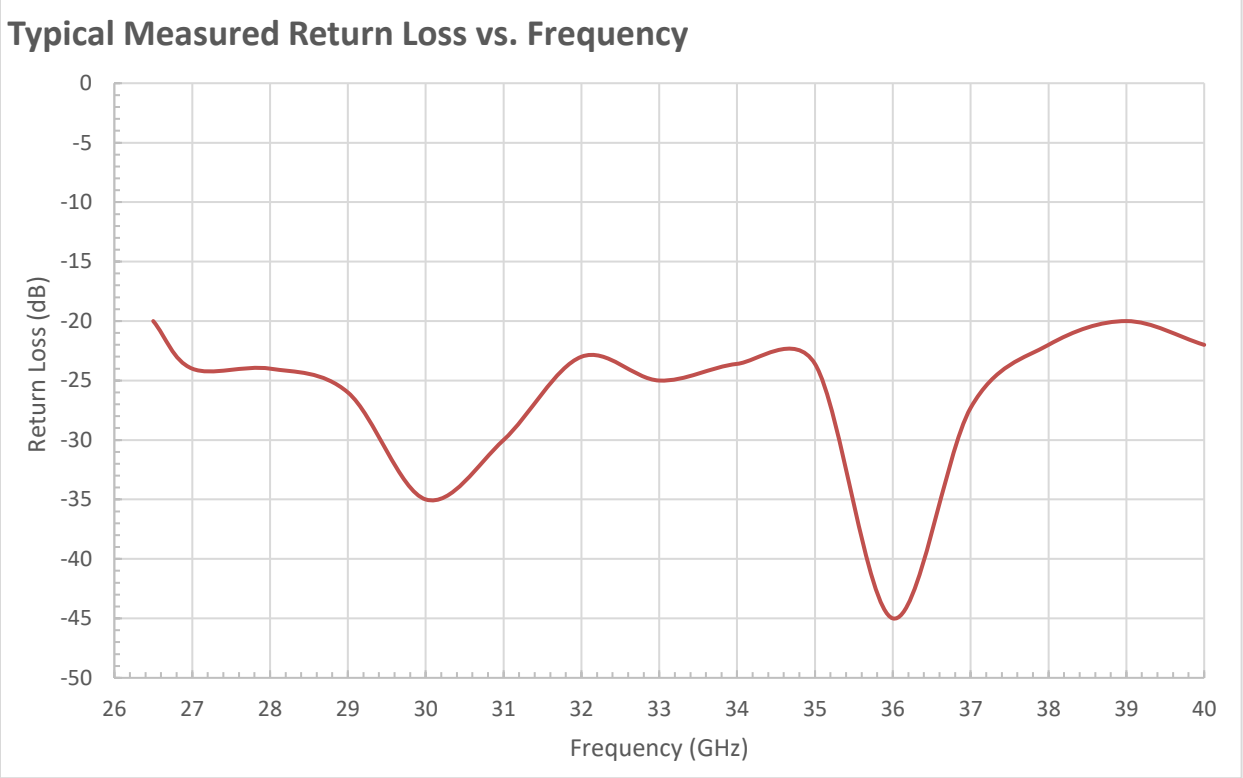
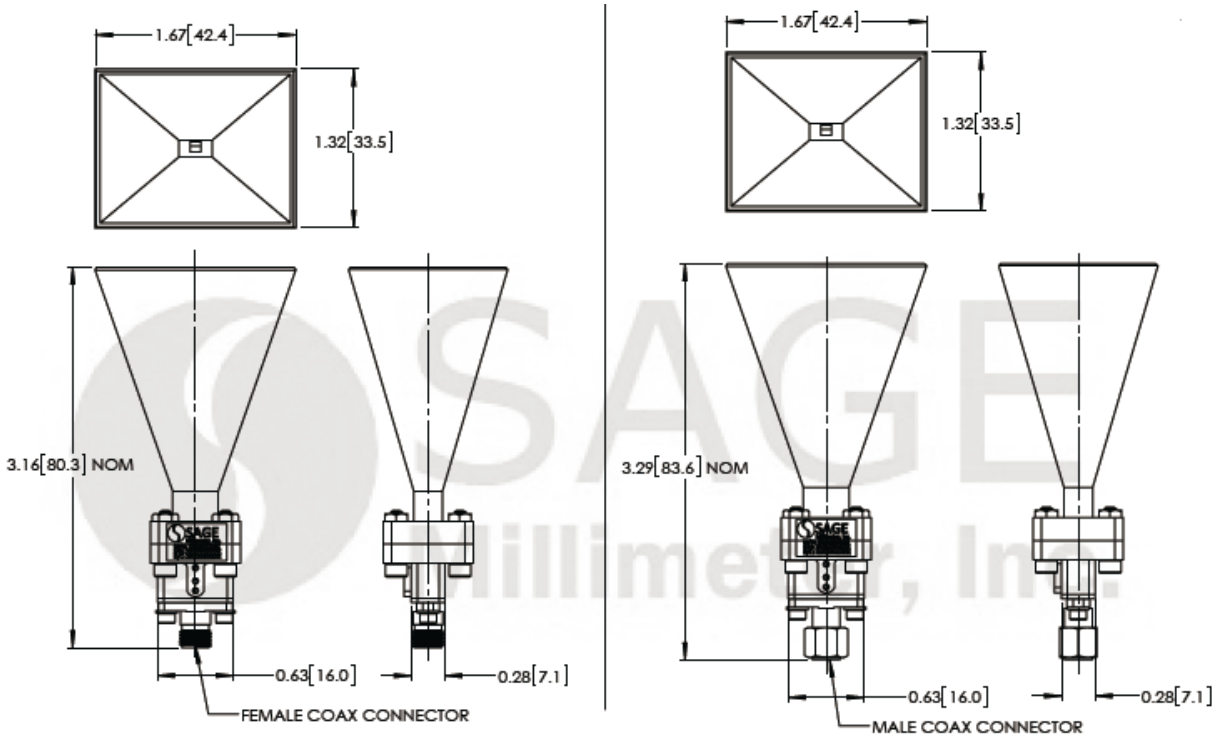


Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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Note:

- The antenna patterns presented are simulated. Actual data may vary.
- The return loss data presented 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 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. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

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