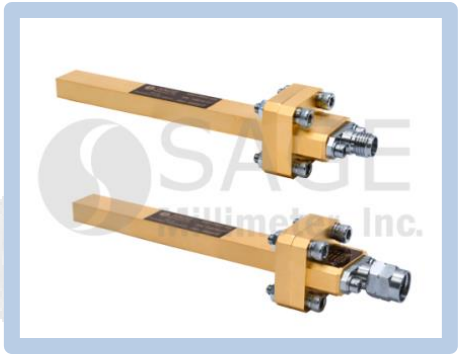
SAP-28KF-E2 and SAP-28KM-E2

Rev. 1.0

WR-28 Probe Antenna, 6.5 dBi Gain with 2.92 mm Coax Input

Description:



Model SAP-28KF-E2 and SAP-28KM-E2 are Ka-band probe 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 6.5 dBi nominal gain and 115 degrees typical half power beamwidth on the E-plane and 60 degrees typical half power beamwidth on the H-plane. The antenna supports linear polarized waveforms. The right angle (90°) versions are offered under model number SAP-28KF-R2 and SAP-28KM-R2.

Features:

- Rectangular Waveguide Interface
- Precisely Machined and Gold Plated
- Linear Polarization
- High Return Loss

Applications:

- 5G Systems
- Antenna Ranges
- Antenna Gain Measurements
- System Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	26.5 GHz		40 GHz
Gain		6.5 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		115°	
3 dB Beamwidth, H-Plane		60°	
Sidelobes, E-Plane		-10 dB	
Sidelobes, H-Plane		-14 dB	
Return Loss		15 dB	
Power Handling			40 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
Antenna Port (F)	2.92 mm Female for Model Number: SAP-28KF-E2
Antenna Port (M)	2.92 mm male for Model Number: SAP-28KM-E2
Material	Brass
Connector Material	Stainless Steel
Finish	Gold Plated
Weight	1.5 Oz
Size	3.80” (L) x 0.63 (W) x 0.28 (H)
Outline	AP-RAC-E

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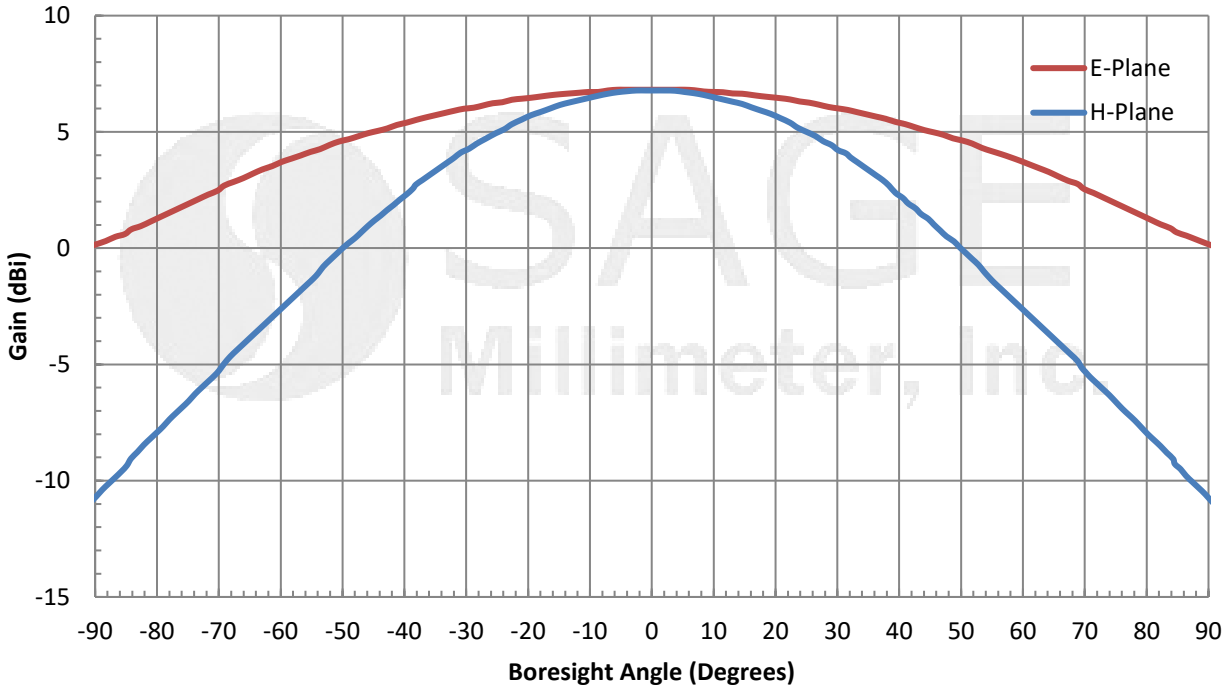
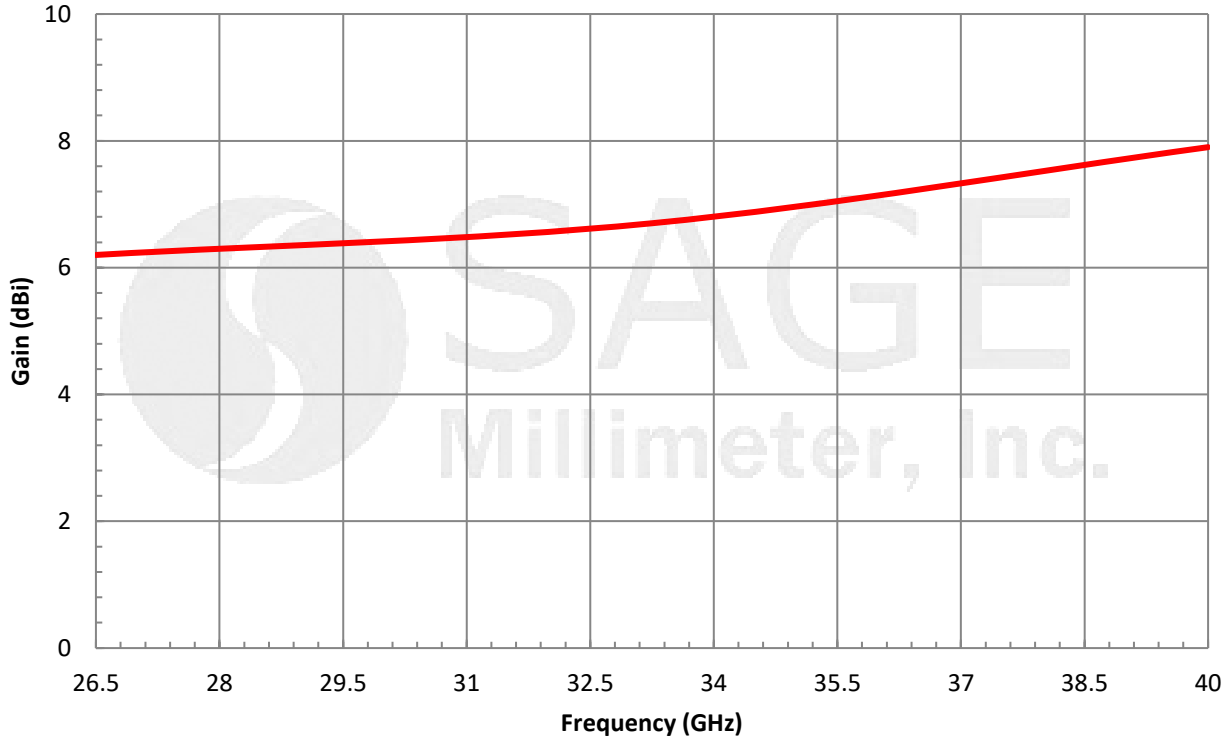
Typical Antenna Pattern @ 33.25 GHz



Typical Gain vs. Frequency



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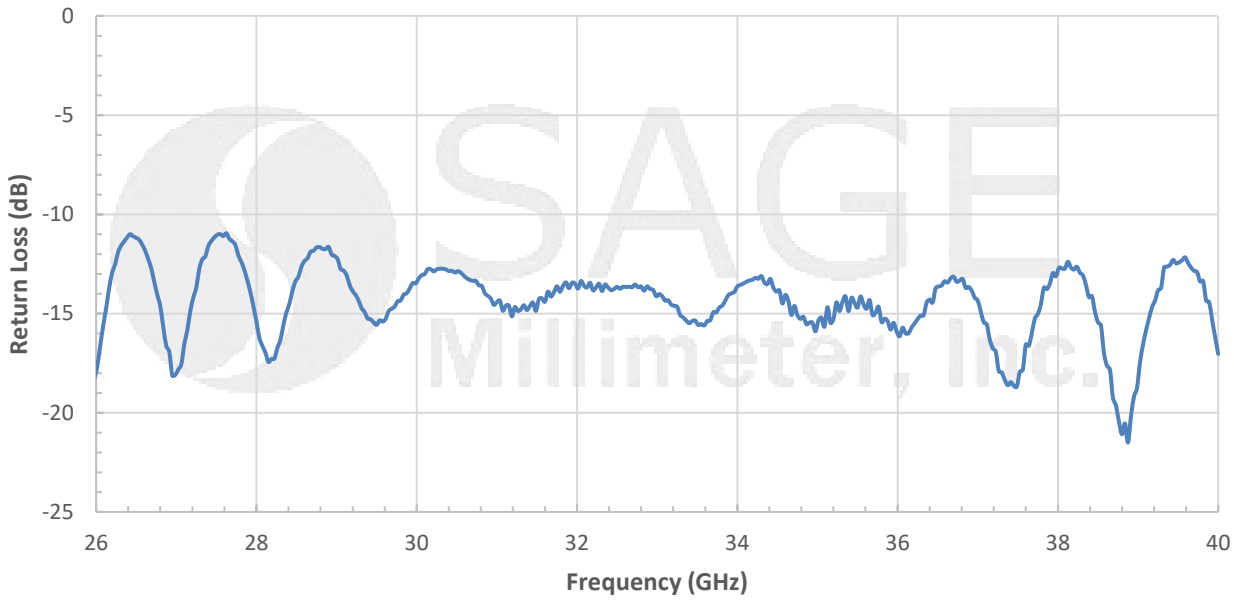
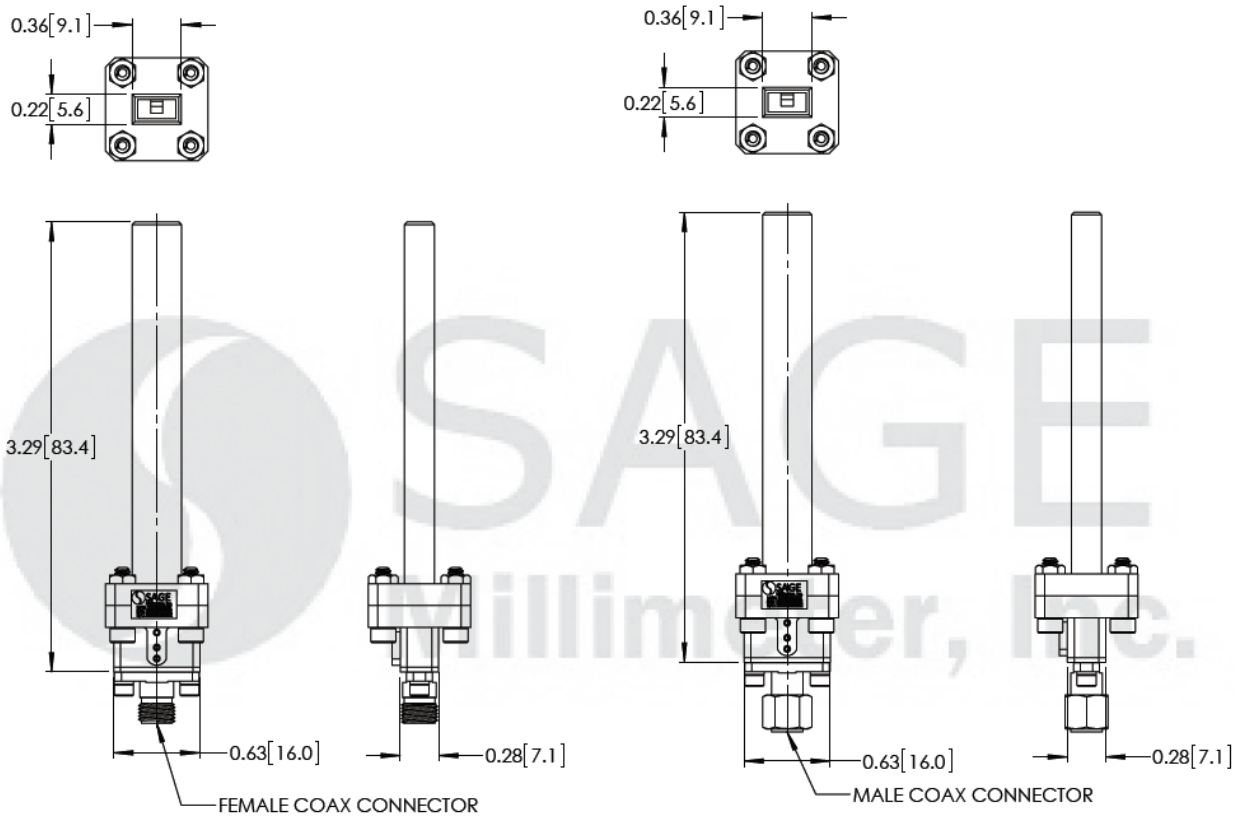
Measured Return Loss vs. Frequency



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, slightly.
- The return loss data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- 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 waveguide 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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