

## SAR-2309-28KF-E2 & SAR-2309-28KM-E2

### WR-28 Pyramidal Horn Antenna, 23 dBi Gain with 2.92 mm Coax Input

**SAR-2309-28KF-E2 & SAR-2309-28KM-E2** are Ka-band pyramidal horn antennas with end launch (180°) 2.92 mm coax connectors to cover the frequency range of 26.5 GHz to 40 GHz. The antennas offer 23 dBi nominal gain and a typical half power beamwidth of 10 degrees on the E-plane and 11 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-2309-28KF-R2 and SAR-2309-28KM-R2



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	26.5 GHz		40 GHz
Gain		23 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		10°	
3 dB Beamwidth, H-Plane		11°	
Side Lobes, E-Plane		-12 dB	
Side Lobes, H-Plane		-33 dB	
Return Loss		20 dB	
Power Handling			50 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: SAR-2309-28KF-E2
Antenna Port (M)	2.92 mm Male for Model Number: SAR-2309-28KM-E2
Material	Aluminum
Connector Material	Stainless Steel
Finish	Gold Plated
Weight	1.5 Oz
Outline	AR-AC2-E

#### ECCN

EAR99

#### FEATURES

- Inline Configuration
- Linear Polarization
- DC Short Circuit at Input

#### APPLICATIONS

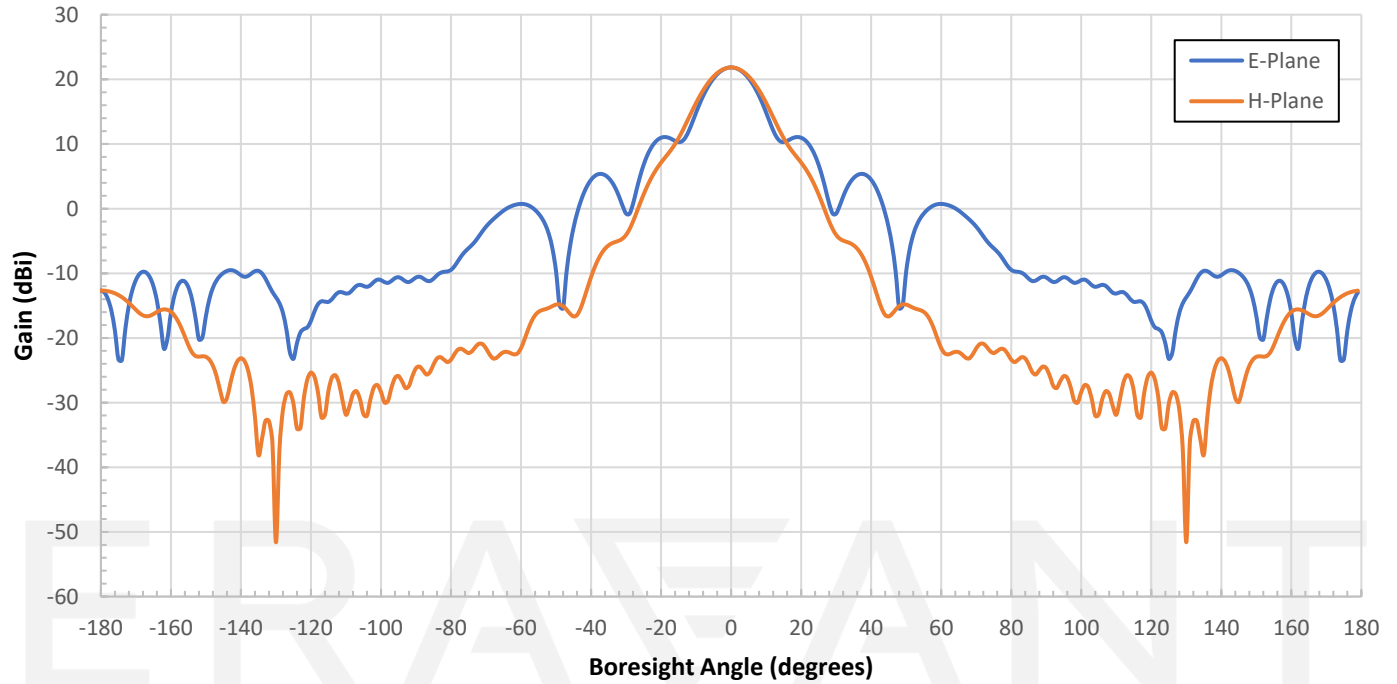
- Antenna Ranges
- Antenna Gain Measurements
- System Setups

#### SUPPLEMENTAL DETAILS

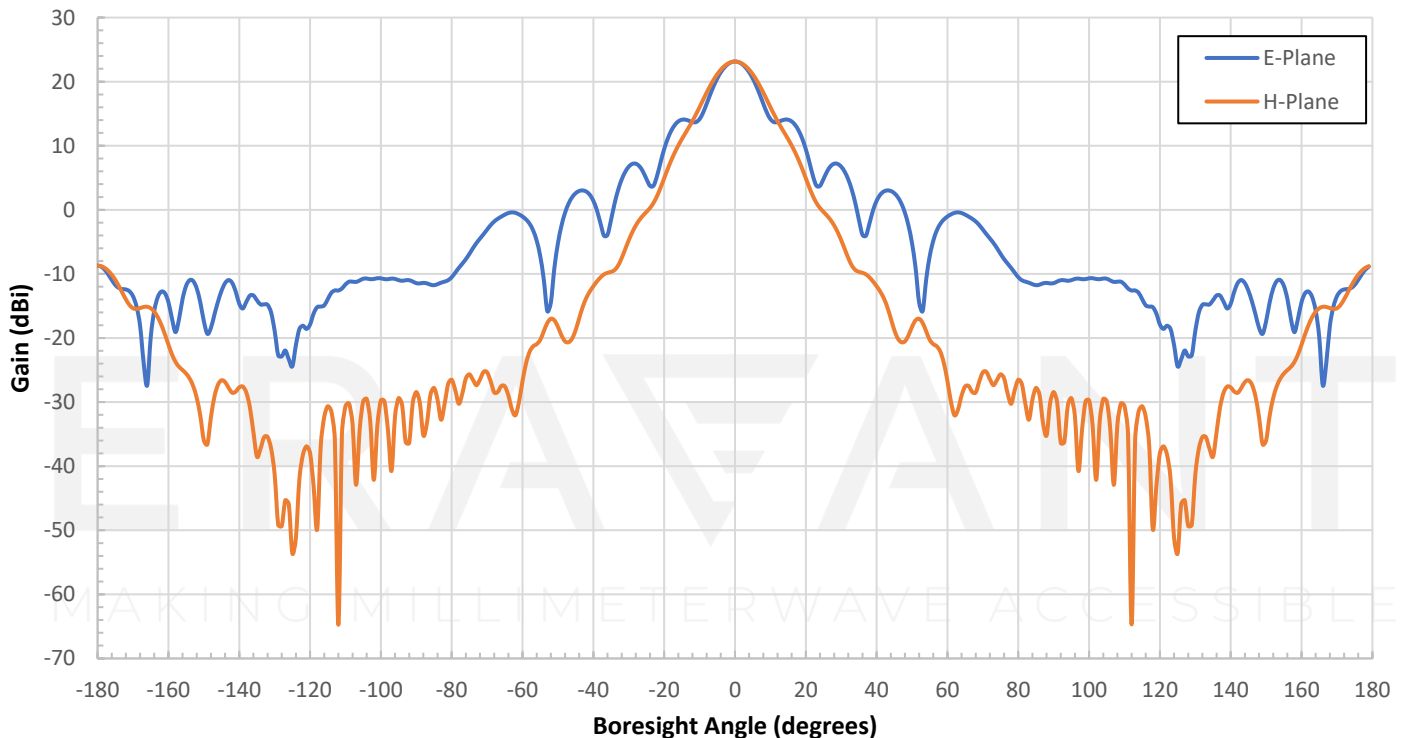


## SAR-2309-28KF-E2 & SAR-2309-28KM-E2

### Simulated Antenna Patterns @ 26.5 GHz

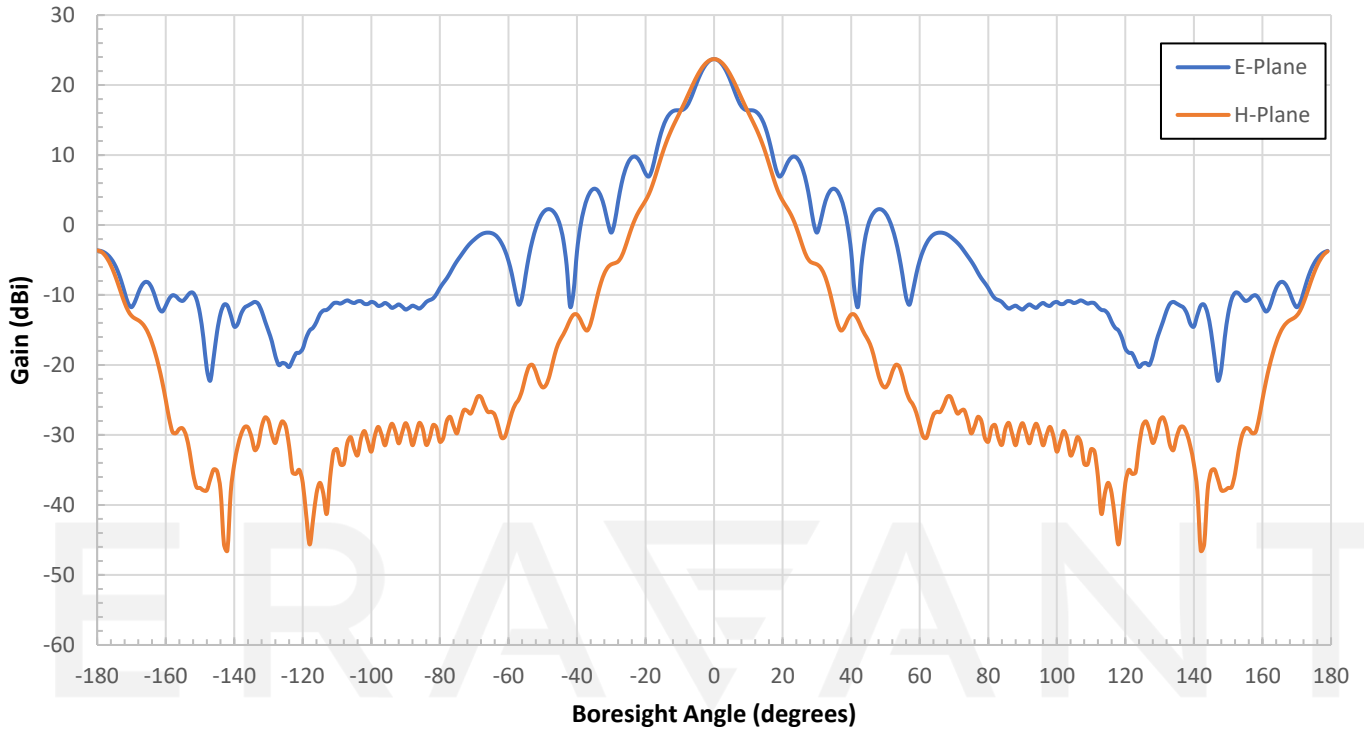


### Simulated Antenna Patterns @ 33.5 GHz

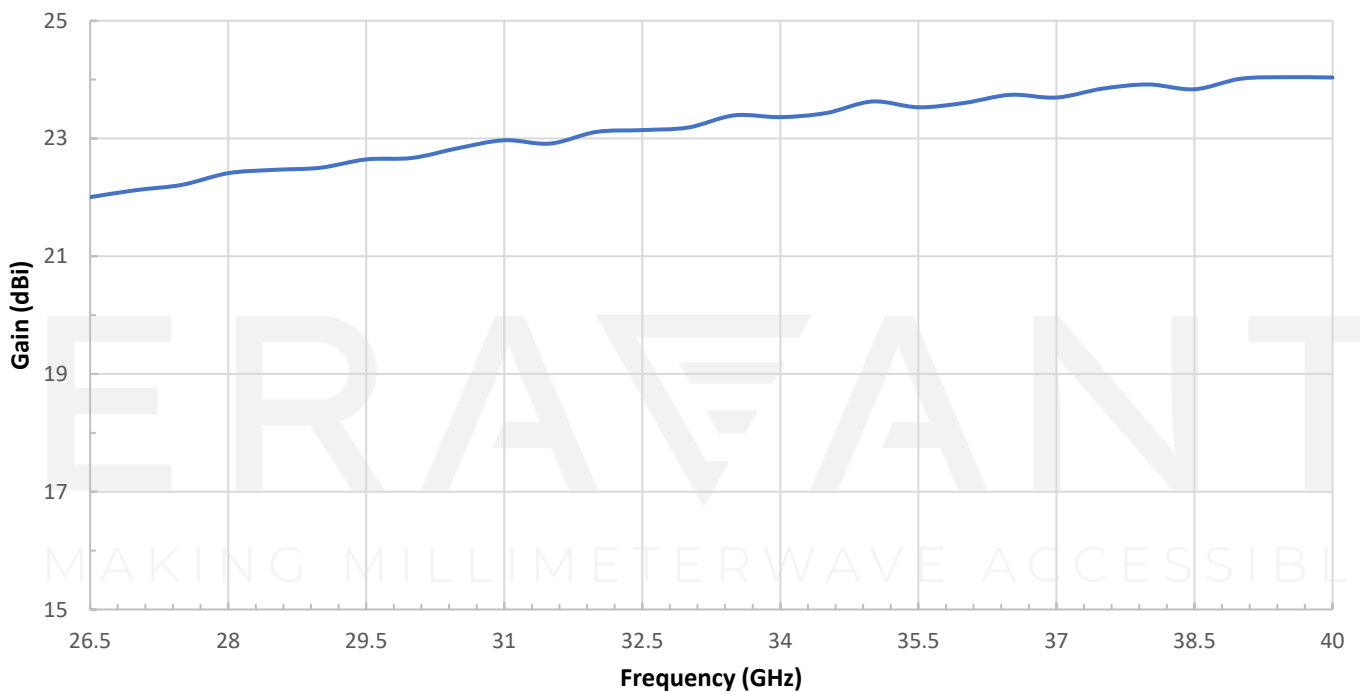


## SAR-2309-28KF-E2 & SAR-2309-28KM-E2

### Simulated Antenna Patterns @ 40 GHz

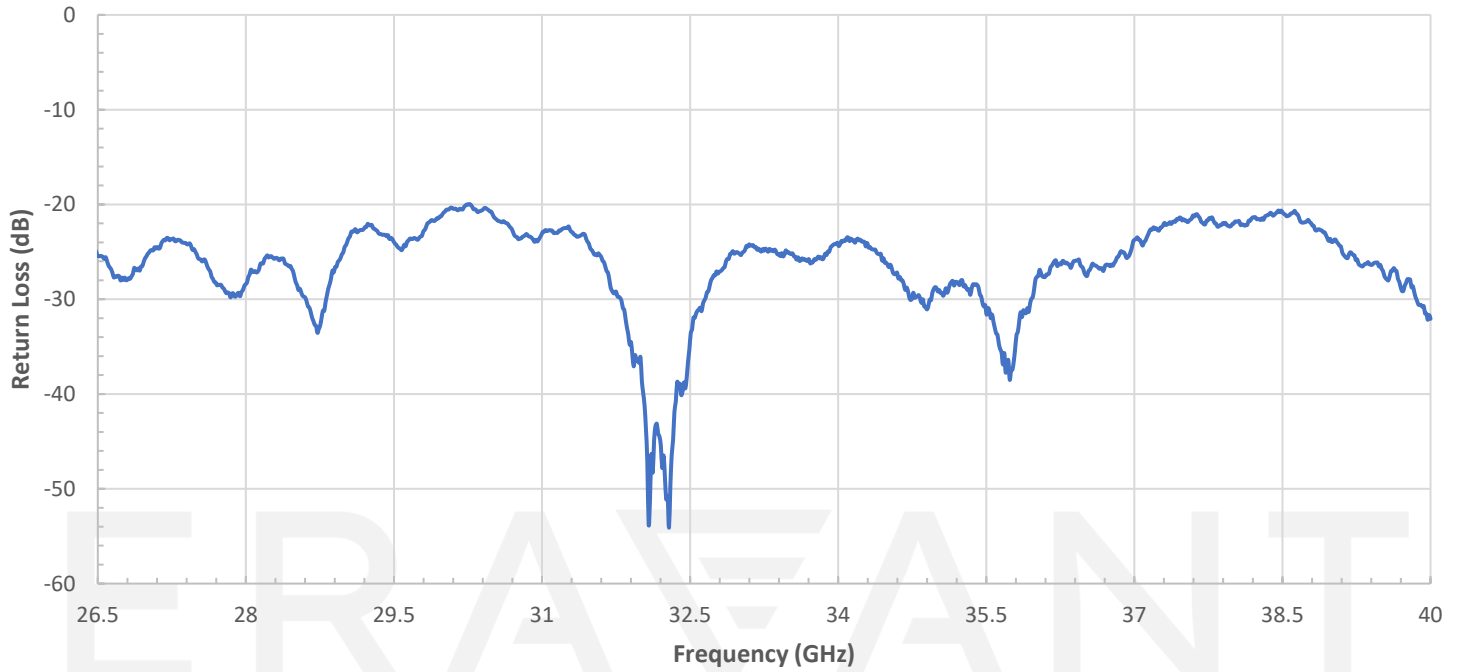


### Simulated Gain vs. Frequency

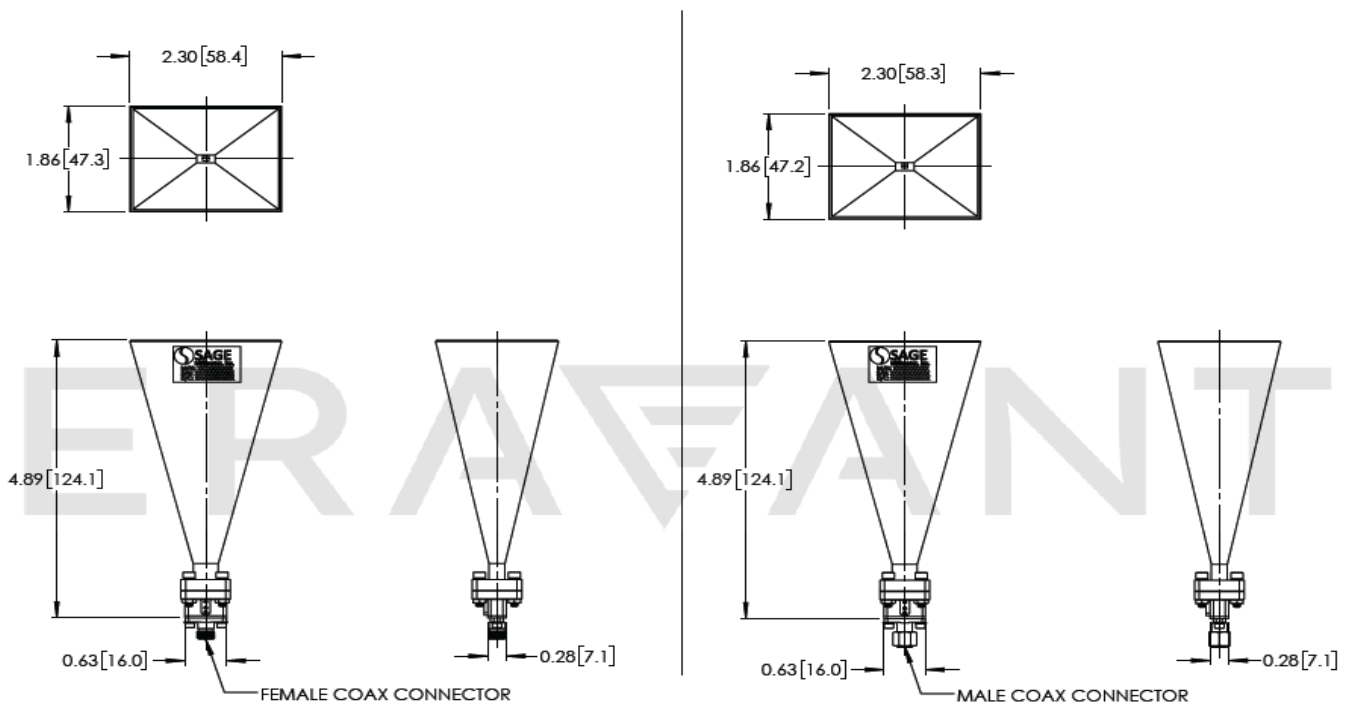


## SAR-2309-28KF-E2 & SAR-2309-28KM-E2

### Measured Return loss vs Frequency



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



**NOTE:**

- Test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is 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,  $8.0 \pm 0.4$  inch-pounds ( $0.90 \pm 0.02$  Nm) should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**

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