

## SAC-2309-250-S2

### Ka Band Conical Horn Antenna, 23 dBi Gain

**SAC-2309-250-S2** is a Ka-band conical horn antenna that operates from 33 to 38.5 GHz. The antenna offers 23 dBi nominal gain and a typical half power beamwidth of 11 degrees on the E-plane and 13 degrees on the H-plane. The horn also offers typical sidelobes of -20 dB on the E-plane and -28 dB on the H-plane. The conical horn can support linear and circular polarization. The input of this antenna is a 0.250" diameter circular waveguide with UG-599/U-M flange.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency*	33 GHz		38.5 GHz
Gain		23 dBi	
3 dB Beamwidth, E-plane		11°	
3 dB Beamwidth, H-plane		13°	
Sidelobes, E-plane		-20 dB	
Sidelobes, H-plane		23 dB	
Return Loss		23 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40°C		+85°C

\*Note: Can operate from 31 to 40 GHz if the dominant mode is maintained.

#### Mechanical Specifications:

Item	Specification
Antenna Port	0.250" Diameter Circular Waveguide
Flange Type	UG-599/U-M Flange
Material	Aluminum
Finish	Gold Plated
Weight	1.42 Oz
Size	4.00" (L) X 2.09" (Ø)
Outline	AC-CA2-250

#### ECCN

EAR99

#### FEATURES

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

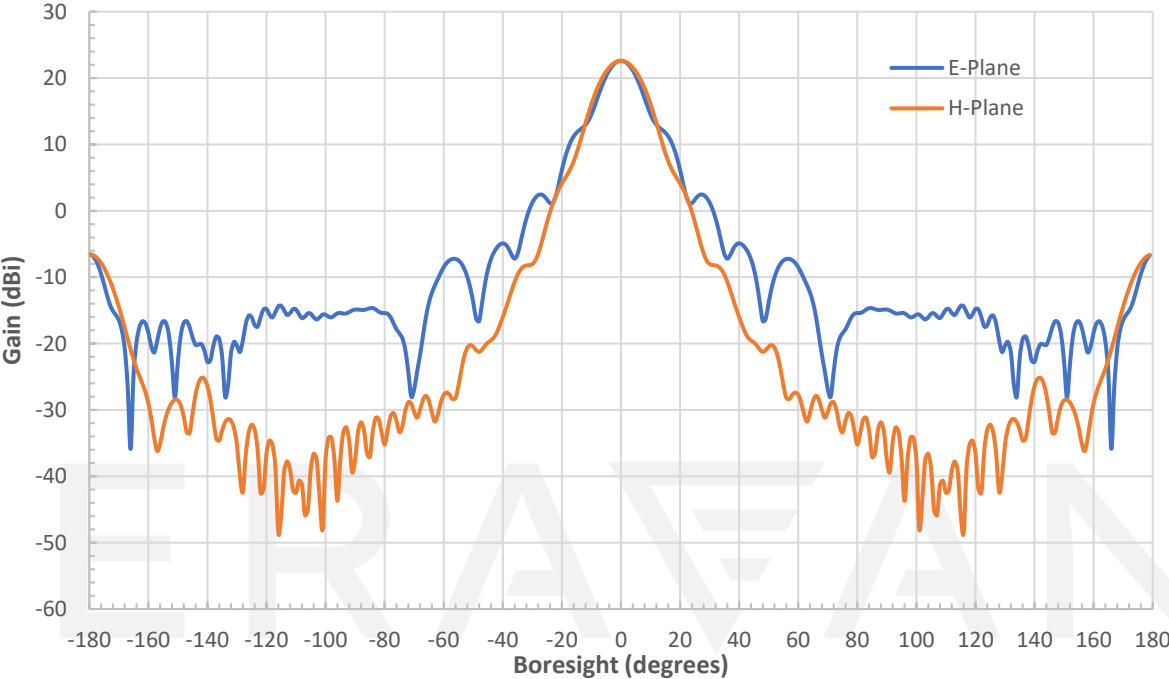
#### APPLICATIONS

- Antenna Ranges
- Feed Horns
- System Setups

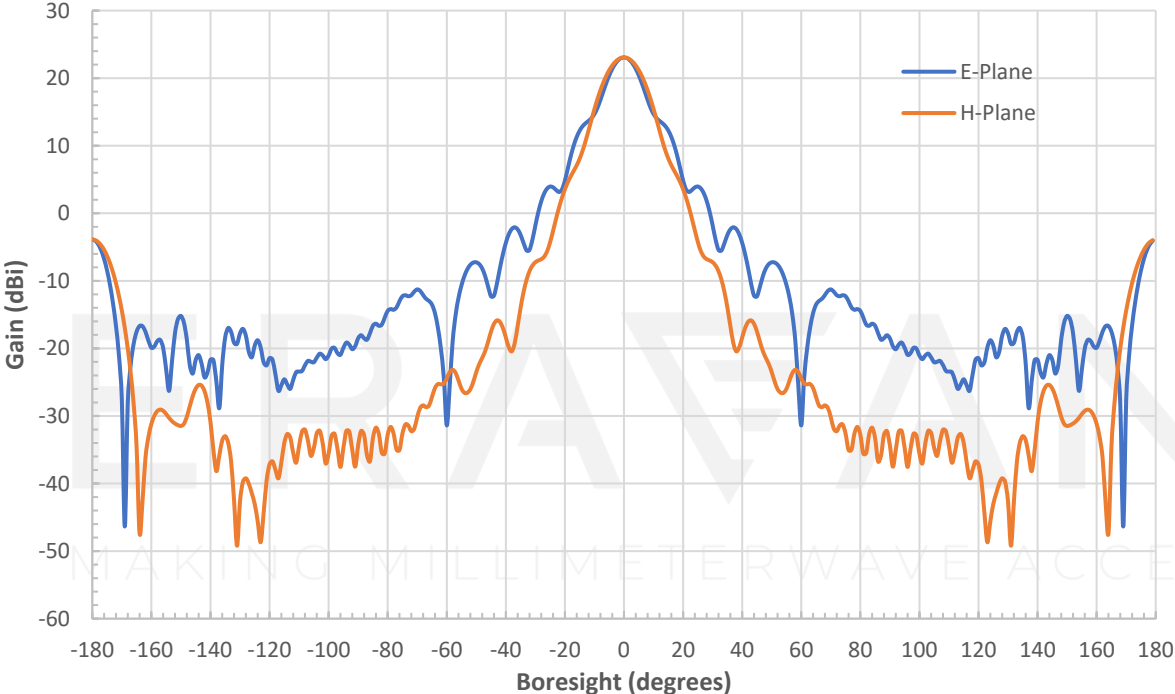
#### SUPPLEMENTAL DETAILS



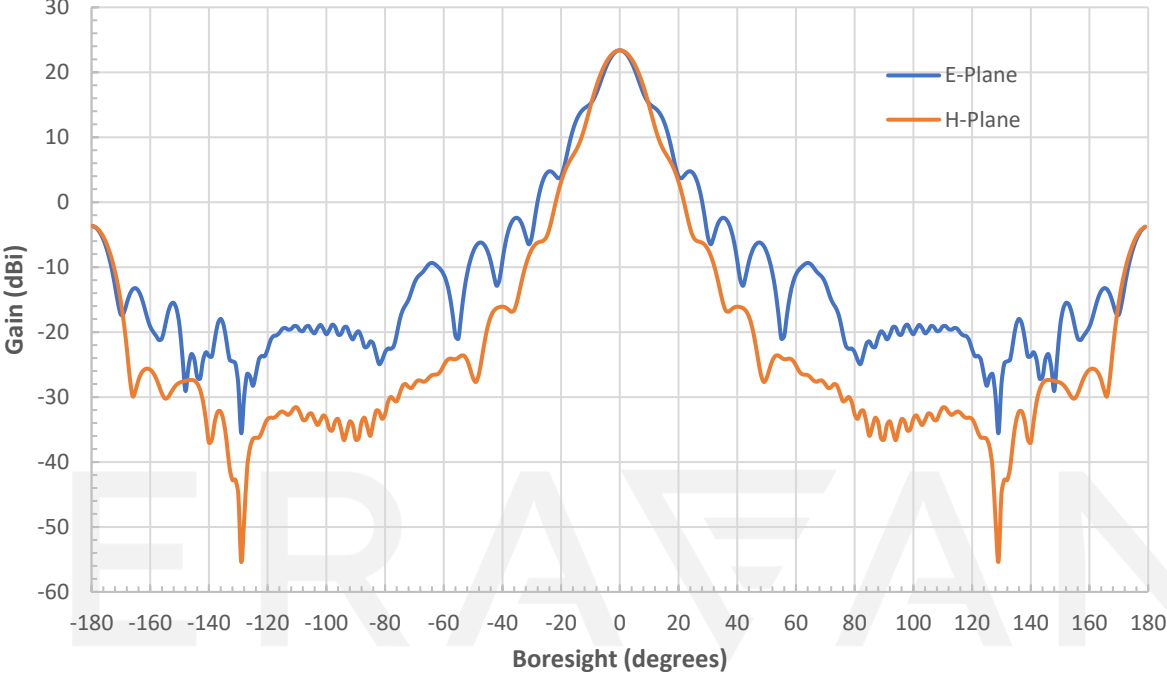
Simulated Antenna Patterns @ 33 GHz



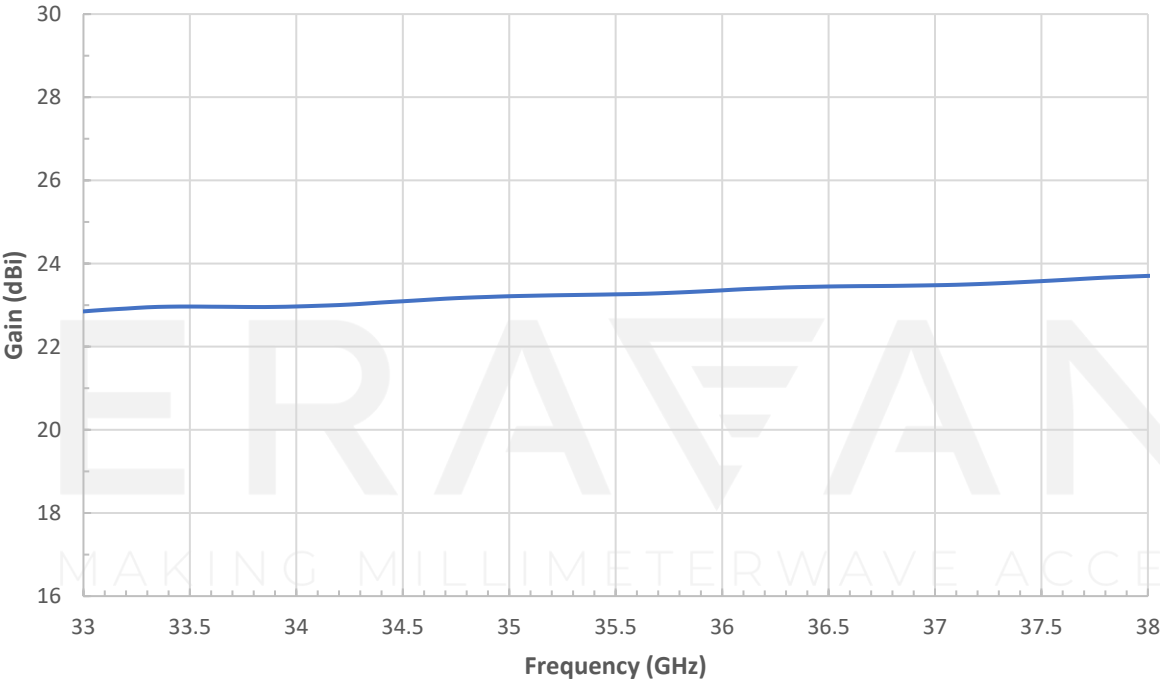
Simulated Antenna Patterns @ 35.5 GHz



Simulated Antenna Patterns @ 38 GHz

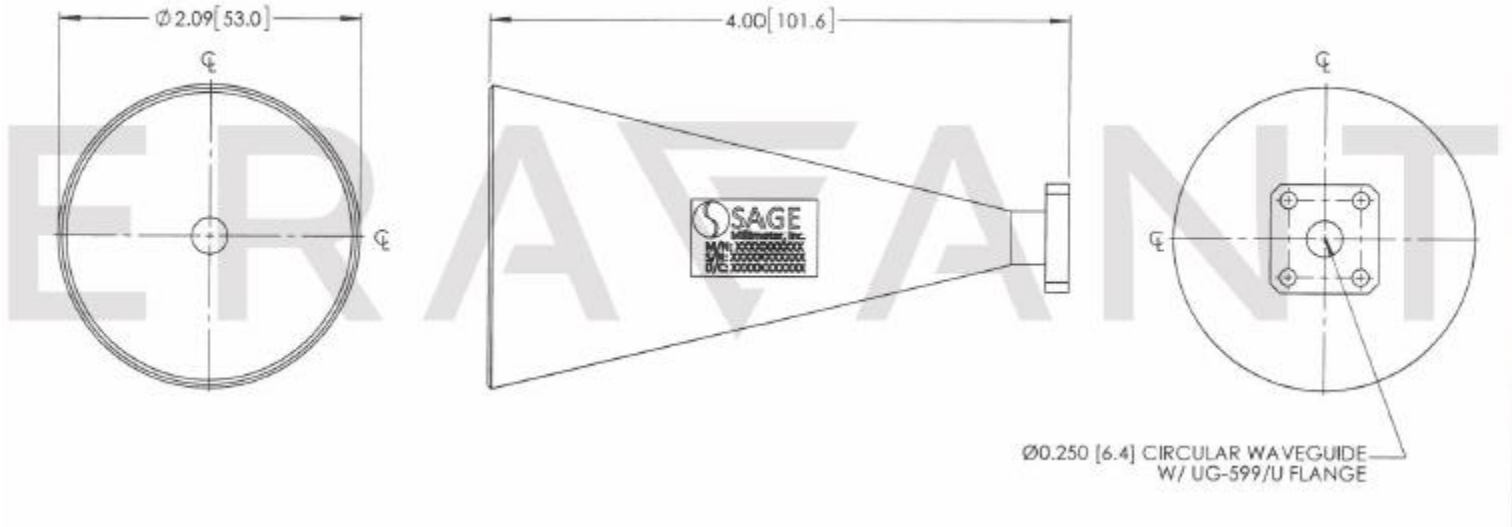


Simulated Gain vs. Frequency



## SAC-2309-250-S2

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



**NOTE:**

- This antenna is a mature product. The reasons for only providing simulated data can be found in the following blog [here](#).
- 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.
- For 1 mm connectors proper torque should be applied:  $4.0 \pm 0.15$  inch-pounds ( $0.45 \pm 0.02$  Nm). Torque wrench model SCH-06004-S1 is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied:  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm). Torque wrench model [SCH-08008-S1](#) is highly recommended.