

## SAC-2507-125-S2

### E Band Conical Horn Antenna, 25 dBi Gain

**SAC-2507-125-S2** is an E-band conical horn antenna that operates from 68 to 77 GHz. The antenna offers 25 dBi nominal gain and a typical half power beamwidth of 9 degrees on the E-plane and 10 degrees on the H-plane. The horn also offers typical side lobes of -18 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 0.125" diameter circular waveguide with UG-387/U-M flange.



### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency*	68 GHz		77 GHz
Gain		25 dBi	
3 dB Beamwidth, E-plane		9°	
3 dB Beamwidth, H-plane		10°	
Sidelobes, E-plane		-18 dB	
Sidelobes, H-plane		-28 dB	
Return Loss		23 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

\*Note: Can operate from 63 to 90 GHz if the dominant mode is maintained.

### Mechanical Specifications:

Item	Specification
Antenna Port	0.125" Diameter Circular Waveguide
Flange Type	UG-387/U-M Flange
Material	Brass
Finish	Gold Plated
Weight	1.5 Oz
Size	3.20" (L) X 1.34" (Ø)
Outline	AC-CE3-125

### FEATURES

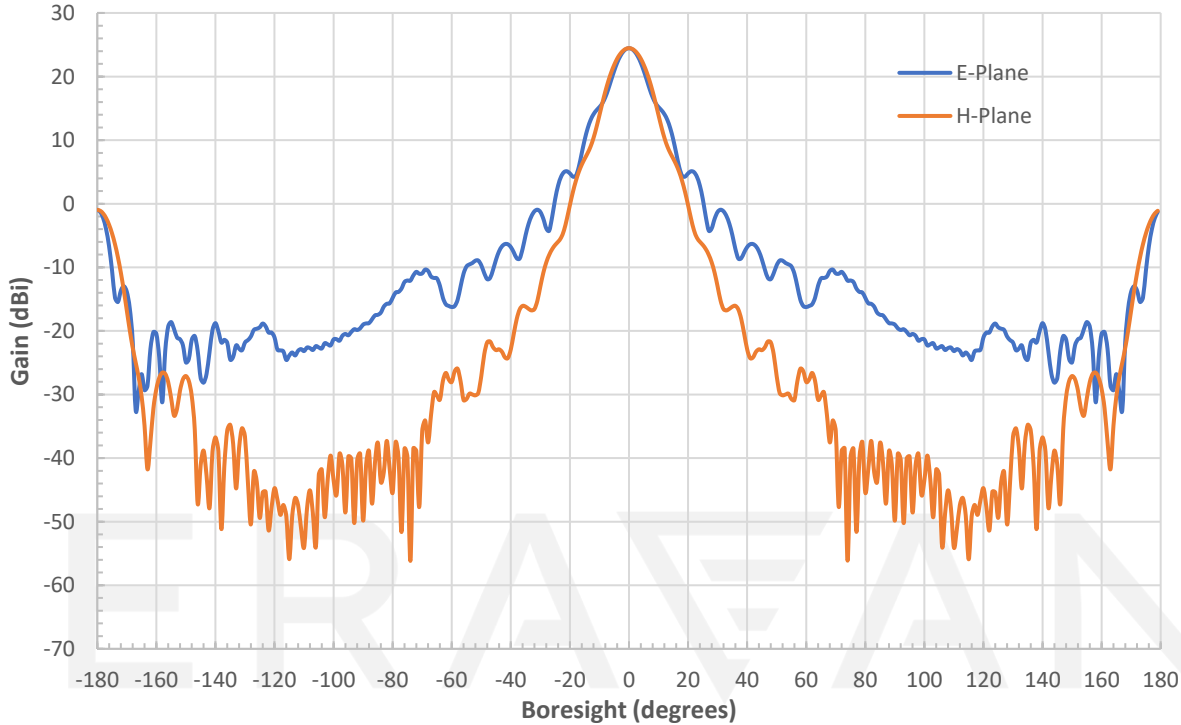
- Circular Waveguide Interface
- Precisely Machined and Gold Plated
- High Return Loss
- Linear and Circular Polarization

### APPLICATIONS

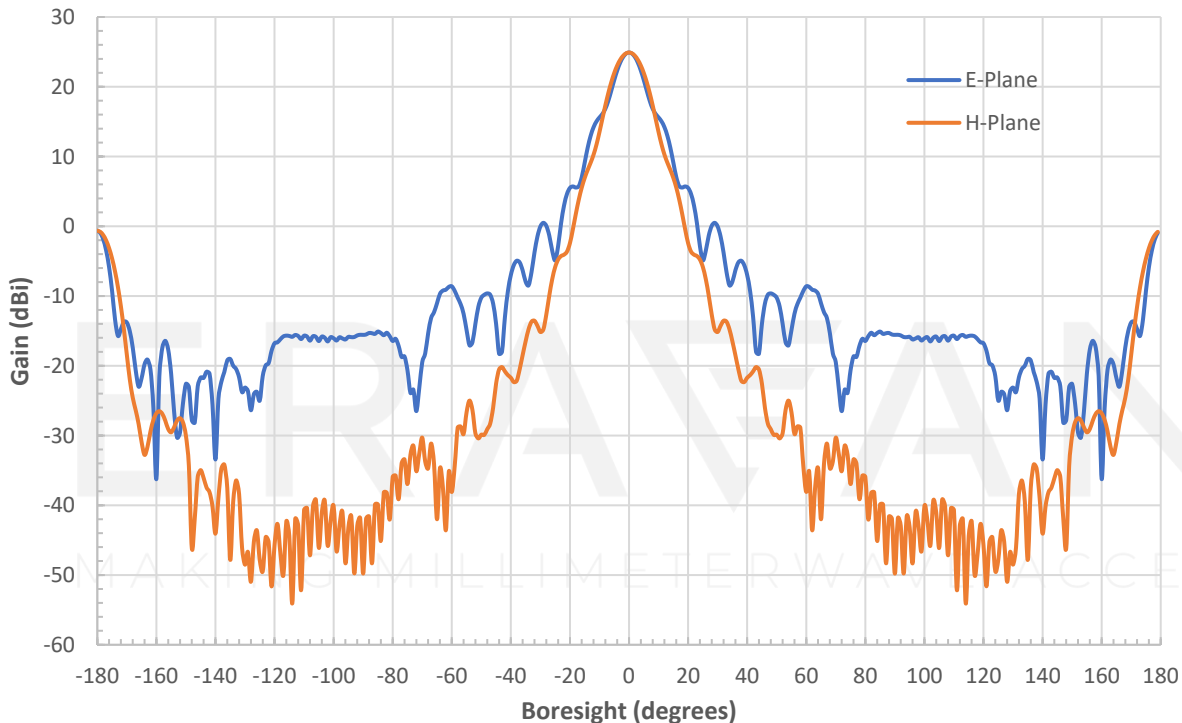
- Antenna Ranges
- Feed Horns
- System Setups



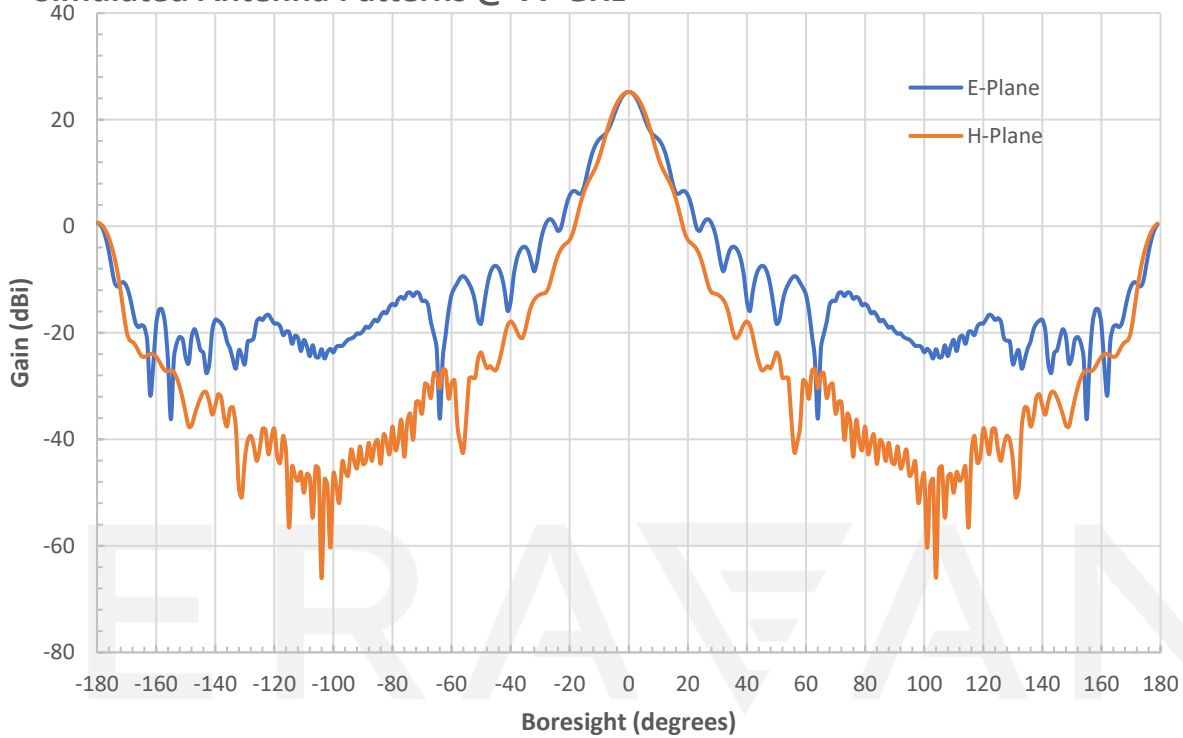
### Simulated Antenna Patterns @ 68 GHz



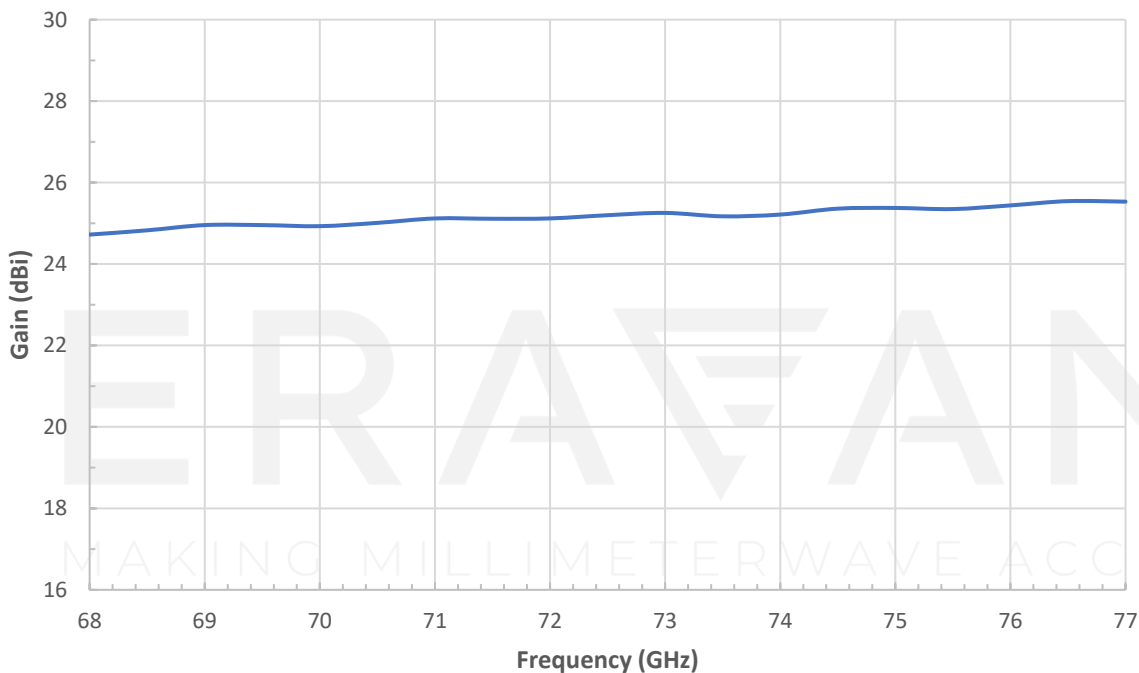
### Simulated Antenna Patterns @ 72.5 GHz



Simulated Antenna Patterns @ 77 GHz

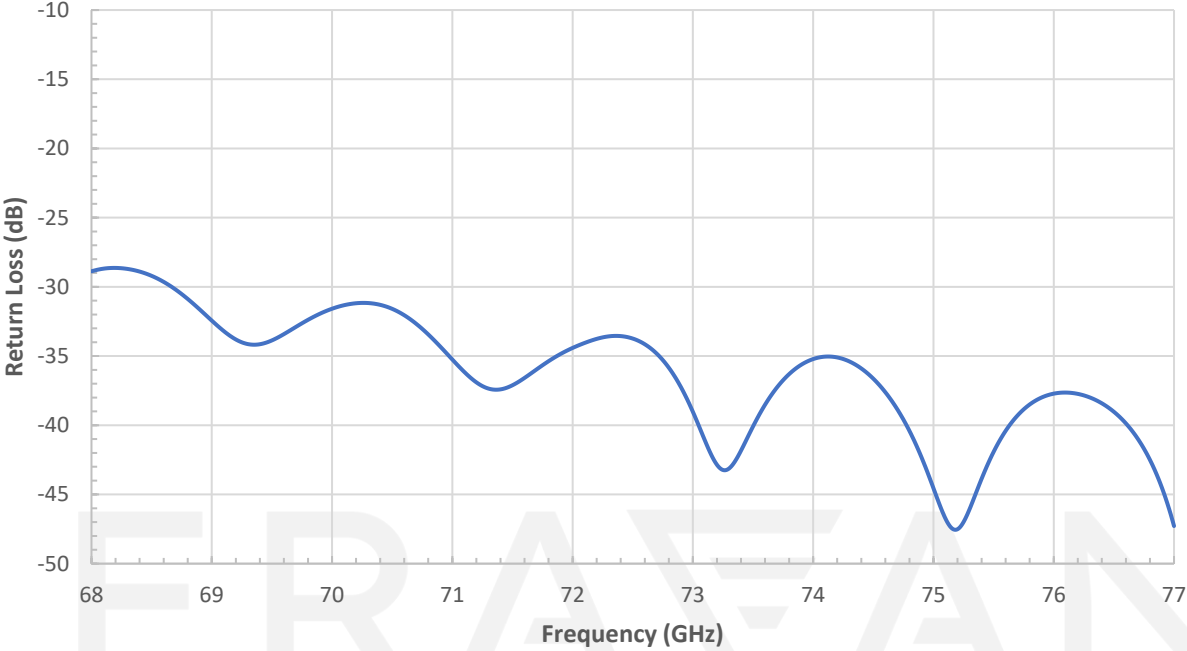


Simulated Gain vs. Frequency

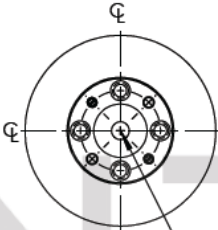
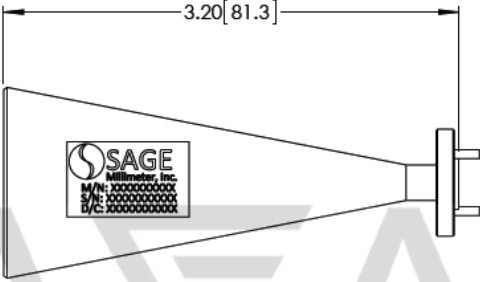
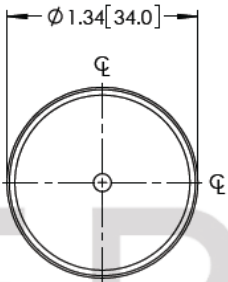


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Simulated Return Loss vs. Frequency



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



Ø0.125 [3.2] CIRCULAR WAVEGUIDE W/ UG-387/U FLANGE

**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 waveguide will cause performance degradation and may damage the device.

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