# SAC-2507-12-S2-WP

## E Band Conical Horn Antenna, 25 dBi Gain, WR-12 Waveguide

**SAC-2507-12-S2-WP** is an E-band conical horn antenna with a WR-12 rectangular waveguide interface that operates from 68 to 77 GHz. The antenna offers 25 dB 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 sidelobes of -18 dB on the E-plane and -28 dB on the H-plane. The conical horn can support linear polarization. The RF connector of this antenna is a WR-12 waveguide with UG-387/U 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 | WR-12 Waveguide |
| Flange Type | UG-387/U Flange |
| Material | Brass |
| Finish | Gold Plated |
| Weight | 0.80 Oz |
| Size | 3.20” (L) X 1.34” (Ø) |
| Outline | AC-RE3-125 |

### FEATURES

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

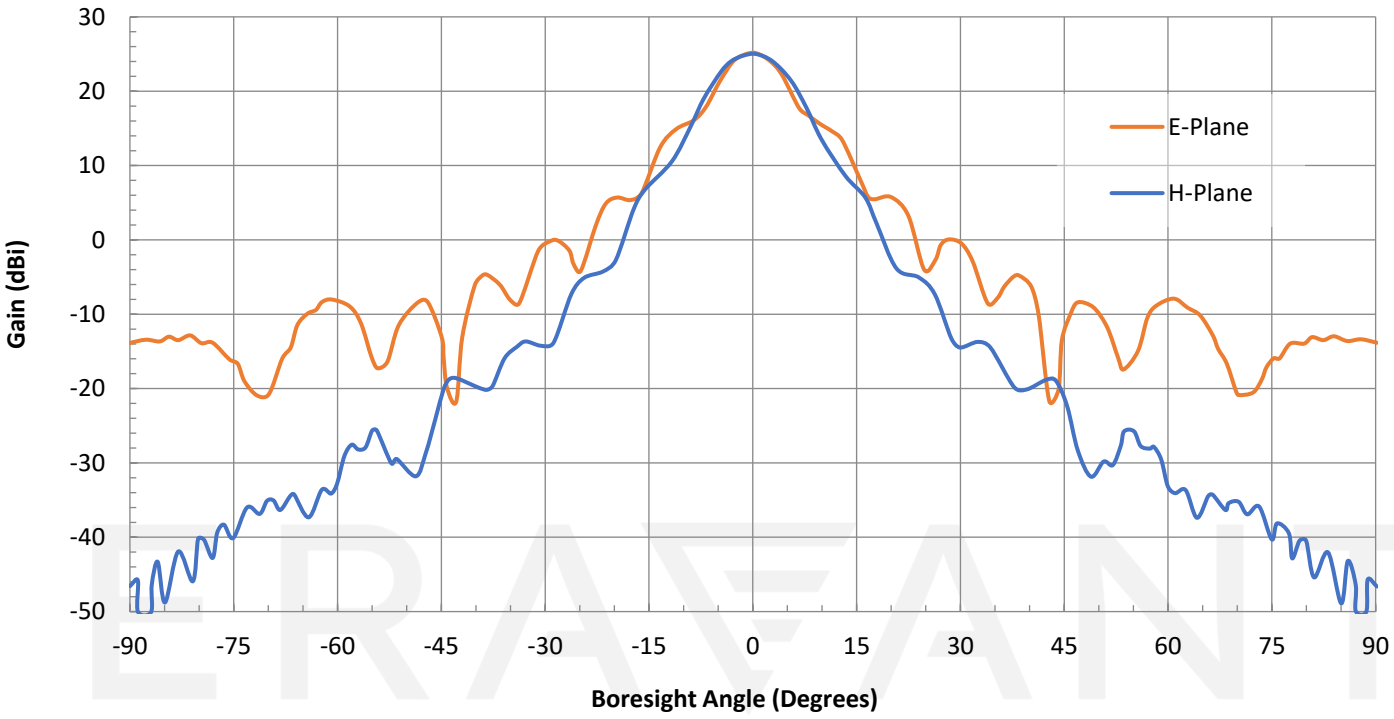
### APPLICATIONS

- Antenna Ranges
- Feed Horns
- System Setups

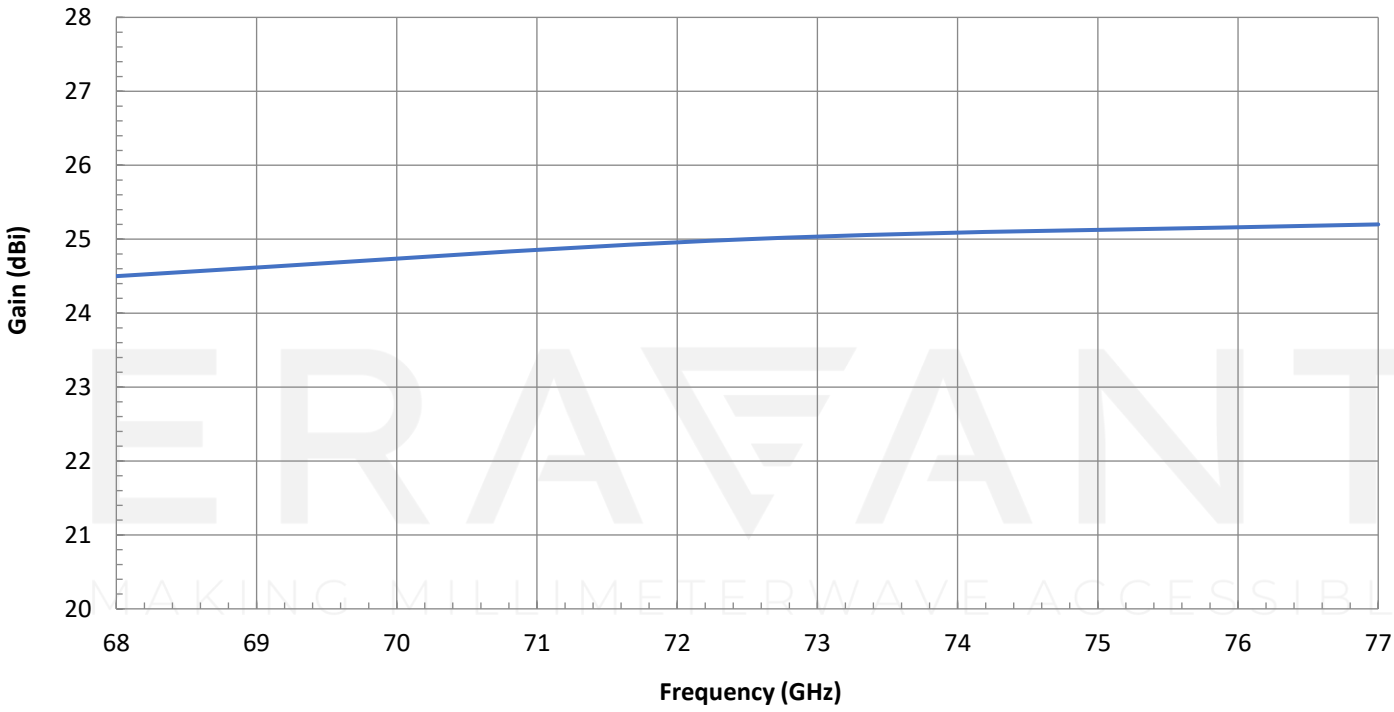
MAKING MILLIMETERWAVE ACCESSIBLE


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## Typical Antenna Pattern @ 72.5 GHz



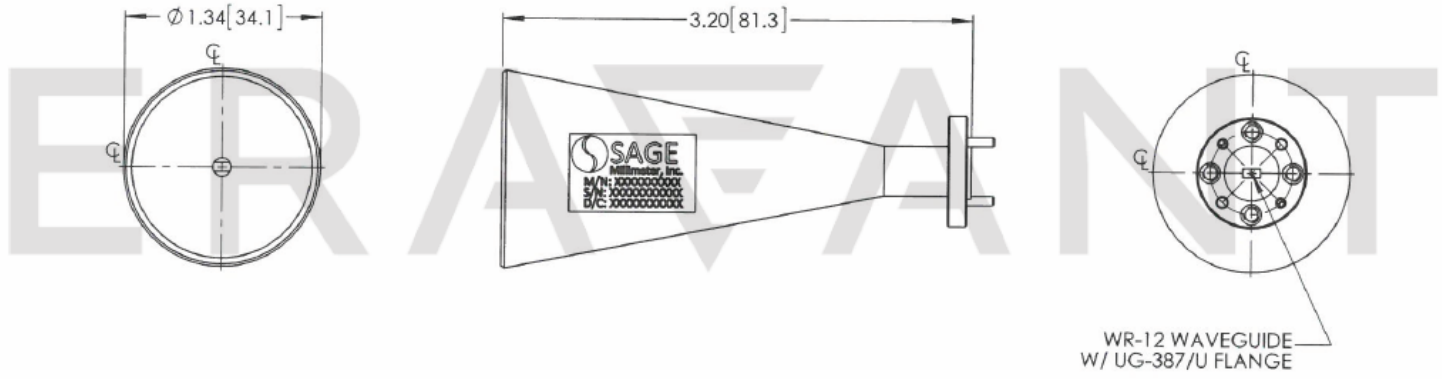

## Typical Gain vs. Frequency





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


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