

## K Band Conical Horn Antenna, 20 dBi Gain

### Description:

**Model SAC-2012-328-S2-WP** is a K-band conical horn antenna that operates from 24 to 26.5 GHz. The antenna offers 20 dBi nominal gain and a typical half power beamwidth of 16 degrees on the E-plane and 20 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 0.328" diameter circular waveguide with UG-595/U-M flange.



### Features:

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

### Applications:

- Antenna Ranges
- Feed Horns
- System Setups

### Electrical Specifications:

| Parameter                 | Minimum  | Typical | Maximum  |
|---------------------------|----------|---------|----------|
| Frequency*                | 24.0 GHz |         | 26.5 GHz |
| Gain                      |          | 20 dBi  |          |
| 3 dB Beam width, E-plane  |          | 16°     |          |
| 3 dB Beam width, H-plane  |          | 20°     |          |
| Sidelobes, E-plane        |          | -20 dB  |          |
| Sidelobes, H-plane        |          | -28 dB  |          |
| Return Loss               |          | 23 dB   |          |
| Specification Temperature |          | +25 °C  |          |
| Operating Temperature     | -40 °C   |         | +85 °C   |

\*Note: Can operate from 23.0 to 26.5 GHz if the dominant mode is maintained.

### Mechanical Specifications:

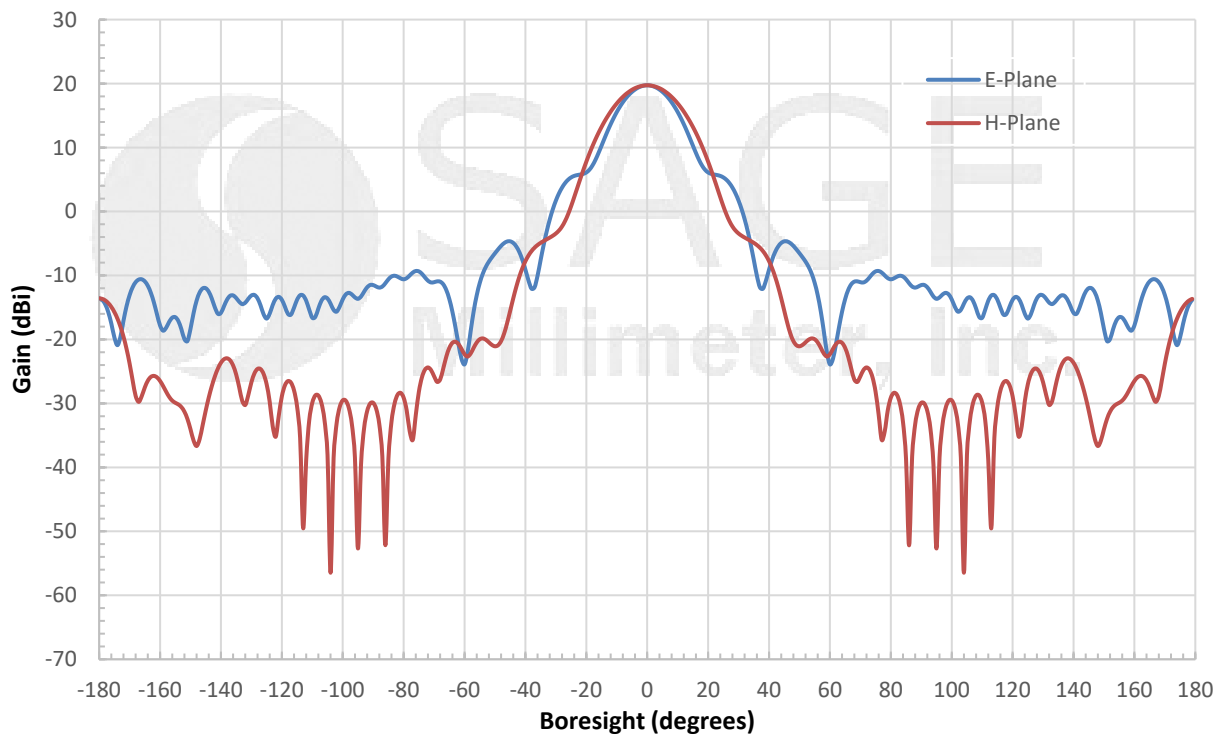
| Item         | Specification                               |
|--------------|---------------------------------------------|
| Antenna Port | 0.328" Diameter Circular Waveguide          |
| Flange Type  | UG-595/U-M Flange                           |
| Material     | Aluminum                                    |
| Finish       | Inside: Silver Plated; Outside: Black Paint |
| Weight       | 3.8 Oz                                      |
| Size         | 3.60" (L) X 1.86" (Ø)                       |
| Outline      | AC-CK1-328                                  |



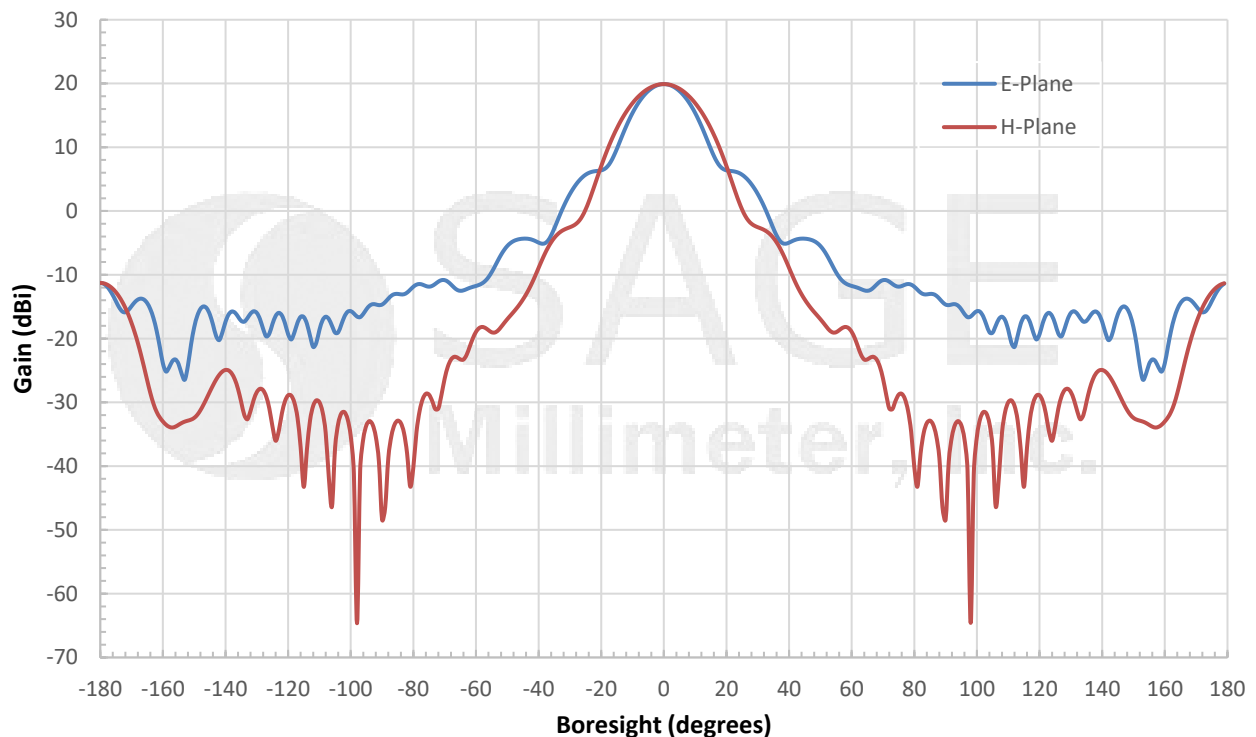
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## K Band Conical Horn Antenna, 20 dBi Gain

### Simulated Antenna Patterns @ 24 GHz

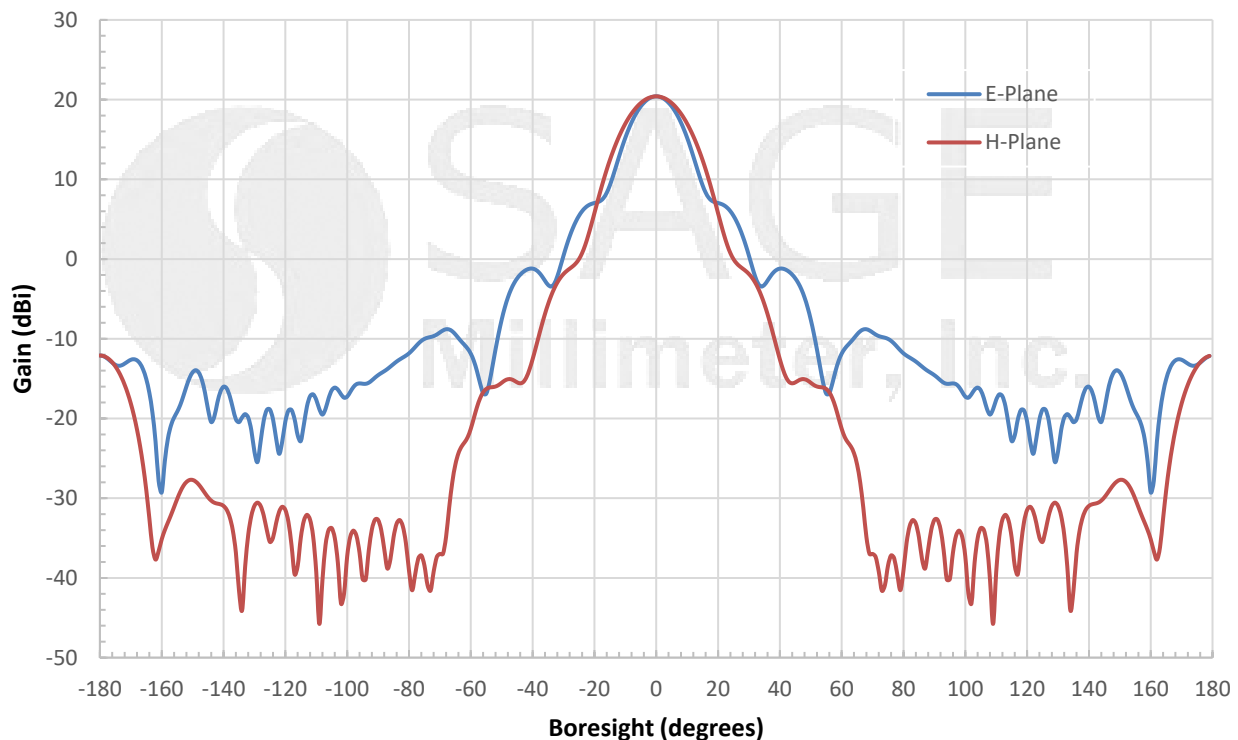


### Simulated Antenna Patterns @ 25.25 GHz

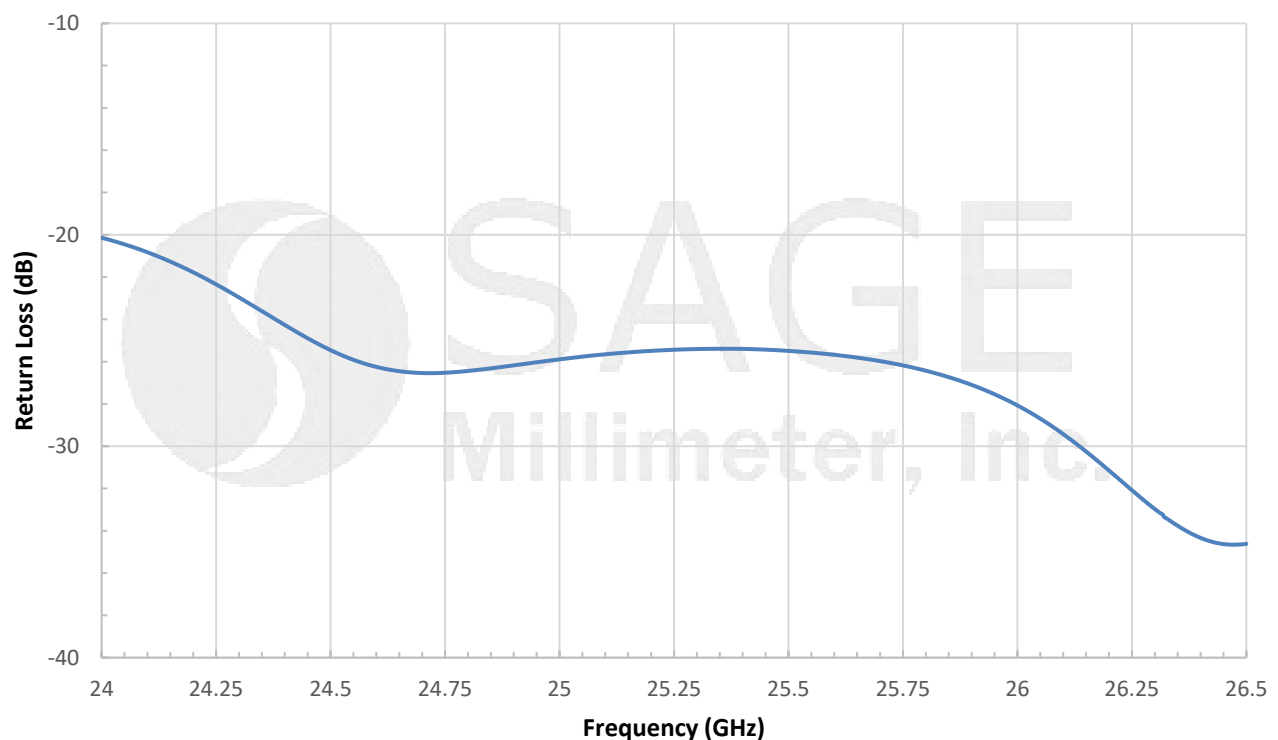


## K Band Conical Horn Antenna, 20 dBi Gain

Simulated Antenna Patterns @ 26.5 GHz

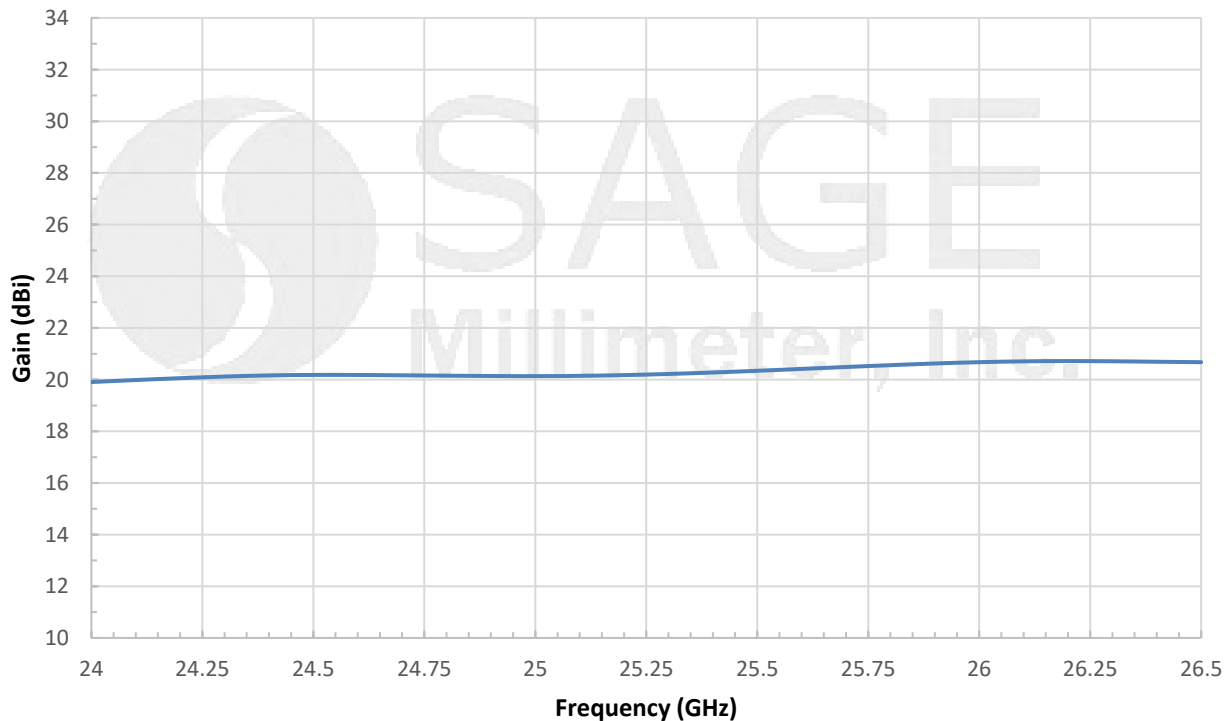


Simulated Return Loss vs. Frequency

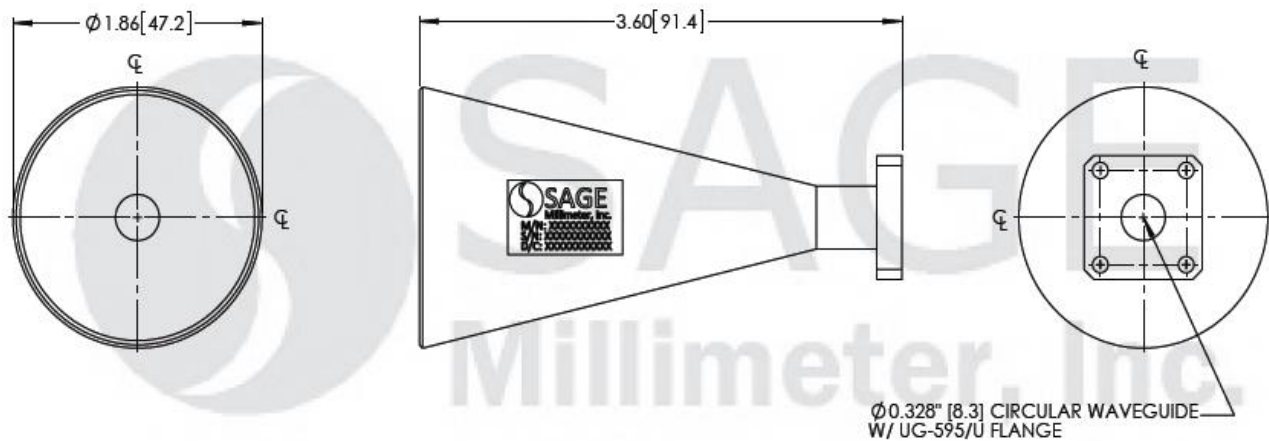


## K Band Conical Horn Antenna, 20 dBi Gain

## Simulated Gain vs. Frequency



**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.



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