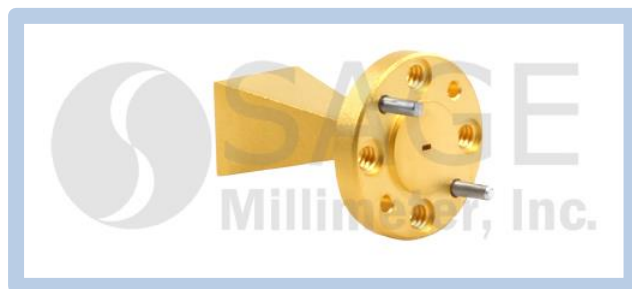


## WR-06 Pyramidal Horn Antenna, 23 dBi Gain

### Description:

**Model SAR-2309-06-S2-WP** is a D-band pyramidal horn antenna that operates from 110 to 170 GHz. The antenna offers 23 dBi nominal gain and a typical half power beamwidth of 11 degrees on the E-plane and 12 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-06 waveguide with UG-387/U-M flange.



### Features:

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

### Applications:

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

### Electrical Specifications:

| Parameter                 | Minimum | Typical | Maximum |
|---------------------------|---------|---------|---------|
| Frequency                 | 110 GHz |         | 170 GHz |
| Gain                      |         | 23 dBi  |         |
| Polarization              |         | Linear  |         |
| 3 dB Beamwidth, E-Plane   |         | 11°     |         |
| 3 dB Beamwidth, H-Plane   |         | 12°     |         |
| Sidelobes, E-Plane        |         | -14 dB  |         |
| Sidelobes, H-Plane        |         | -30 dB  |         |
| Return Loss               |         | 23 dB   |         |
| Specification Temperature |         | +25 °C  |         |
| Operation Temperature     | -40 °C  |         | +85 °C  |

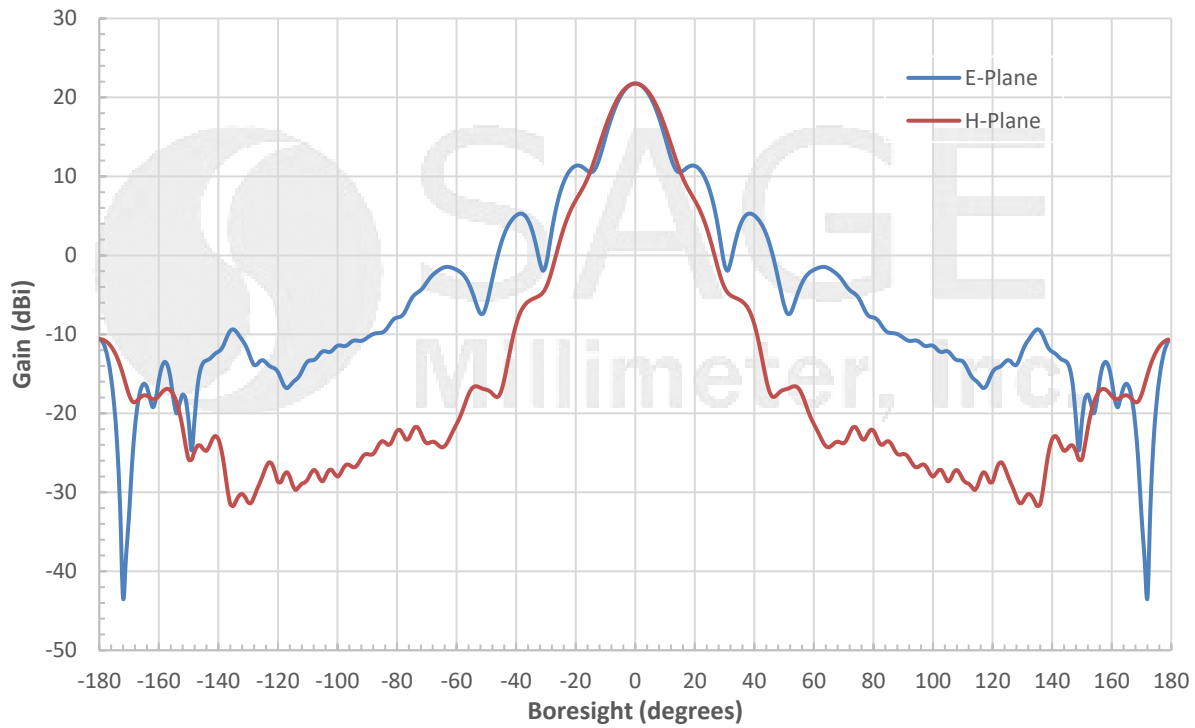
### Mechanical Specifications:

| Item         | Specification                    |
|--------------|----------------------------------|
| Antenna Port | WR-06 Waveguide                  |
| Flange Type  | UG-387/U-M Flange                |
| Size         | 1.20" (L) X 0.59" (W) X 0.49"(H) |
| Material     | Brass                            |
| Finish       | Gold Plated                      |
| Weight       | 0.4 Oz                           |
| Outline      | AR-D2                            |

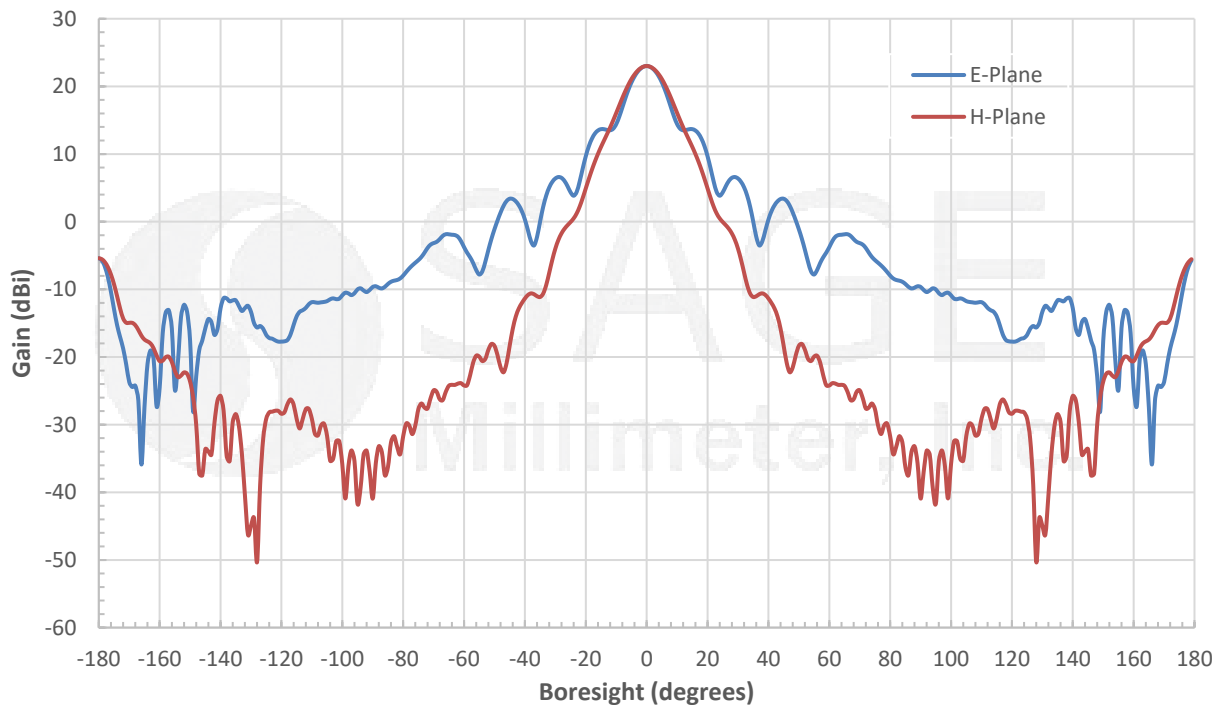


## WR-06 Pyramidal Horn Antenna, 23 dBi Gain

Simulated Antenna Patterns @ 110 GHz



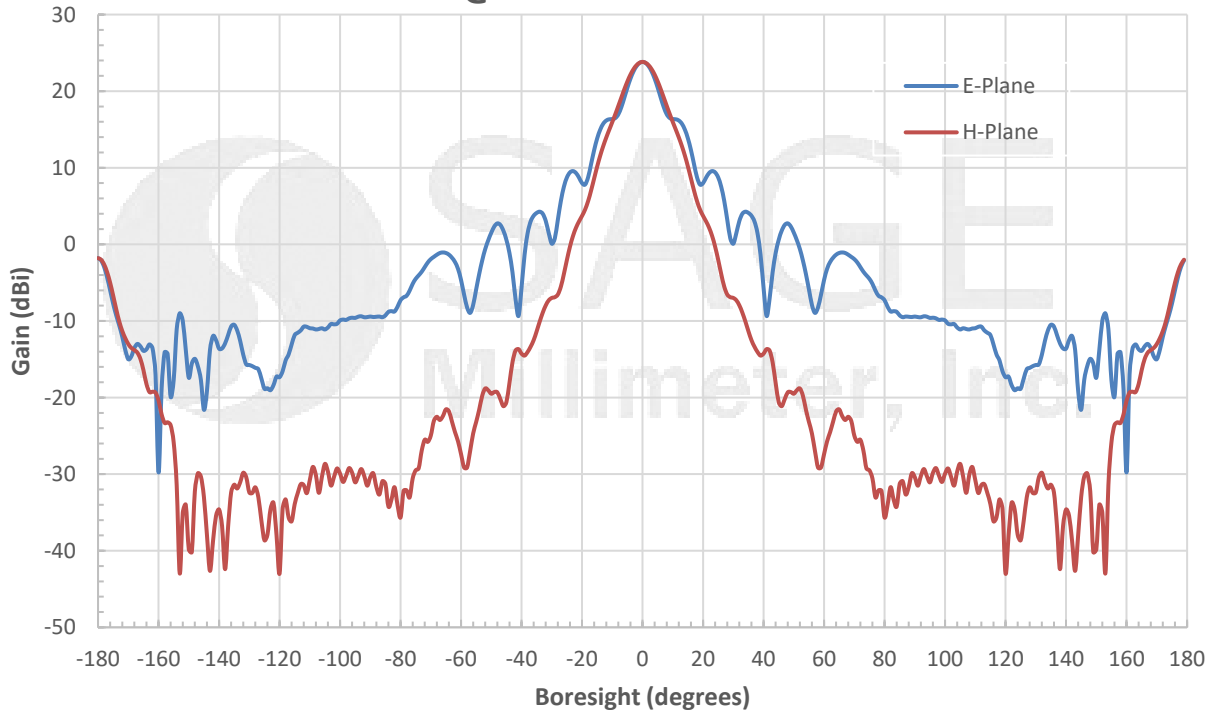
Simulated Antenna Patterns @ 140 GHz



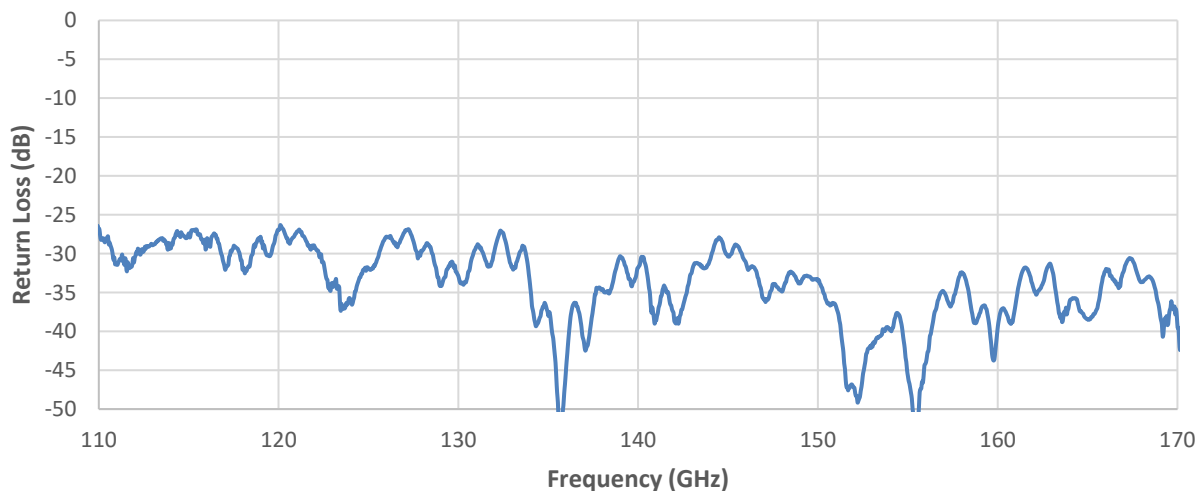


## WR-06 Pyramidal Horn Antenna, 23 dBi Gain

Simulated Antenna Patterns @ 170 GHz

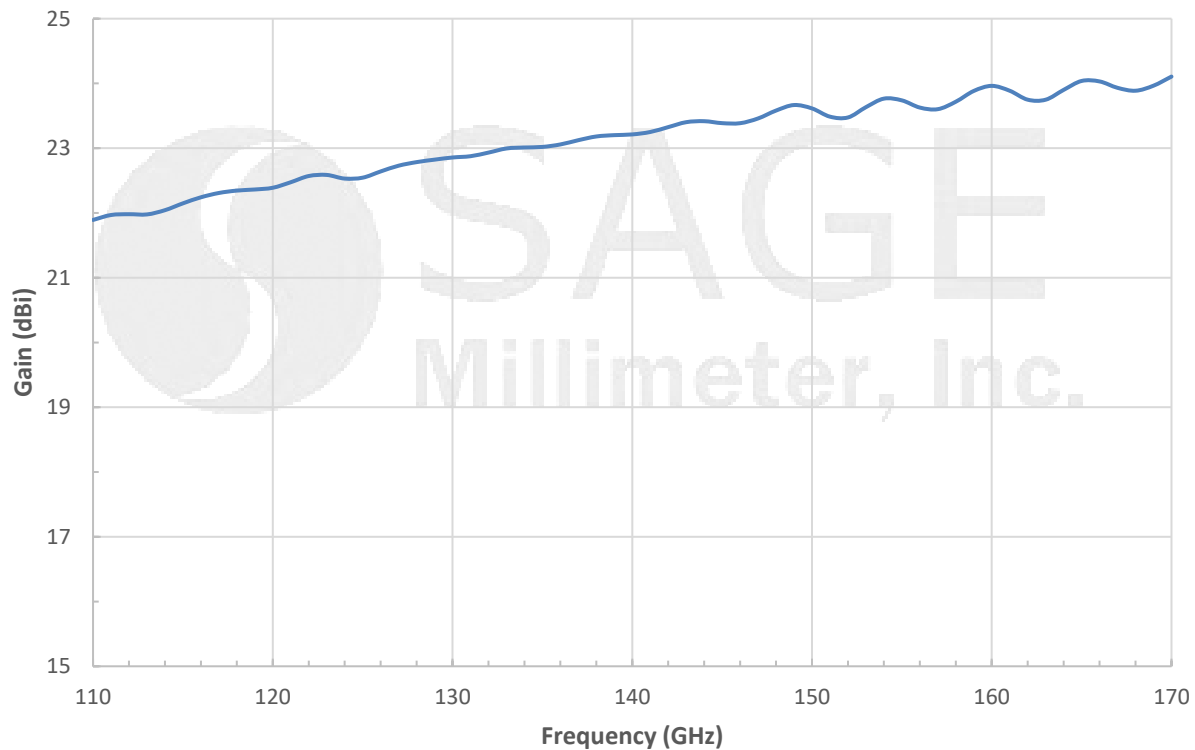


Measured Return Loss vs Frequency

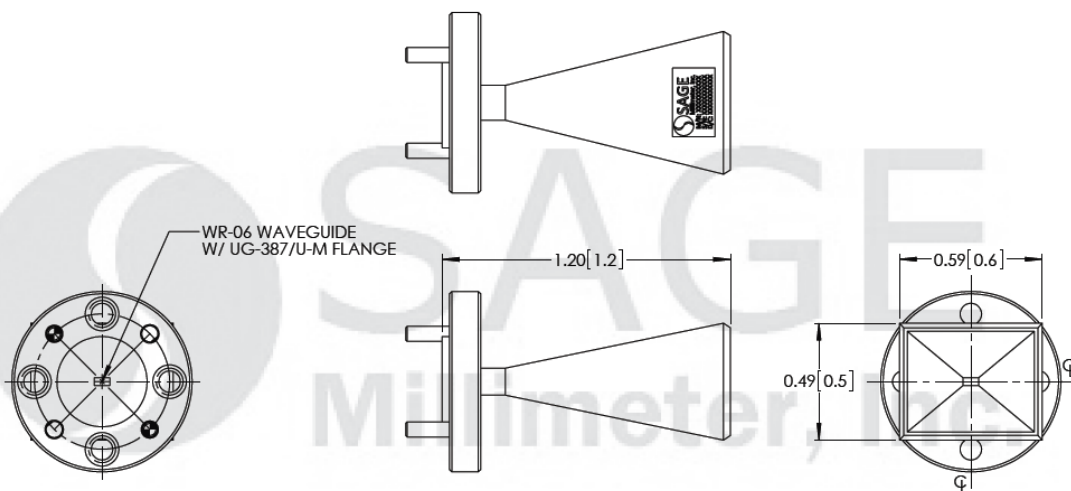


## WR-06 Pyramidal Horn Antenna, 23 dBi Gain

Simulated Gain vs. Frequency



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



www.eravant.com | 501 Amapola Avenue, Torrance, CA 90501  
 Phone: 424-757-0168 | Fax: 424-757-0188 | Email: support@eravant.com



## WR-06 Pyramidal Horn Antenna, 23 dBi Gain

### 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 possible device damage.

