



WR-34 Pyramidal Horn Antenna, 20 dBi Gain

Description:

Model SAR-2013-34-S2 is a pyramidal horn antenna that operates from 22 GHz to 33 GHz. The antenna offers 20 dBi nominal gain and a typical half power beamwidth of 14 degrees on the E-plane and 16 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-34 waveguide with UG-1530/U 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 | 22 GHz | | 33 GHz |
| Gain | | 20 dBi | |
| Polarization | | Linear | |
| 3 dB Beamwidth, E-Plane | | 14° | |
| 3 dB Beamwidth, H-Plane | | 16° | |
| 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:

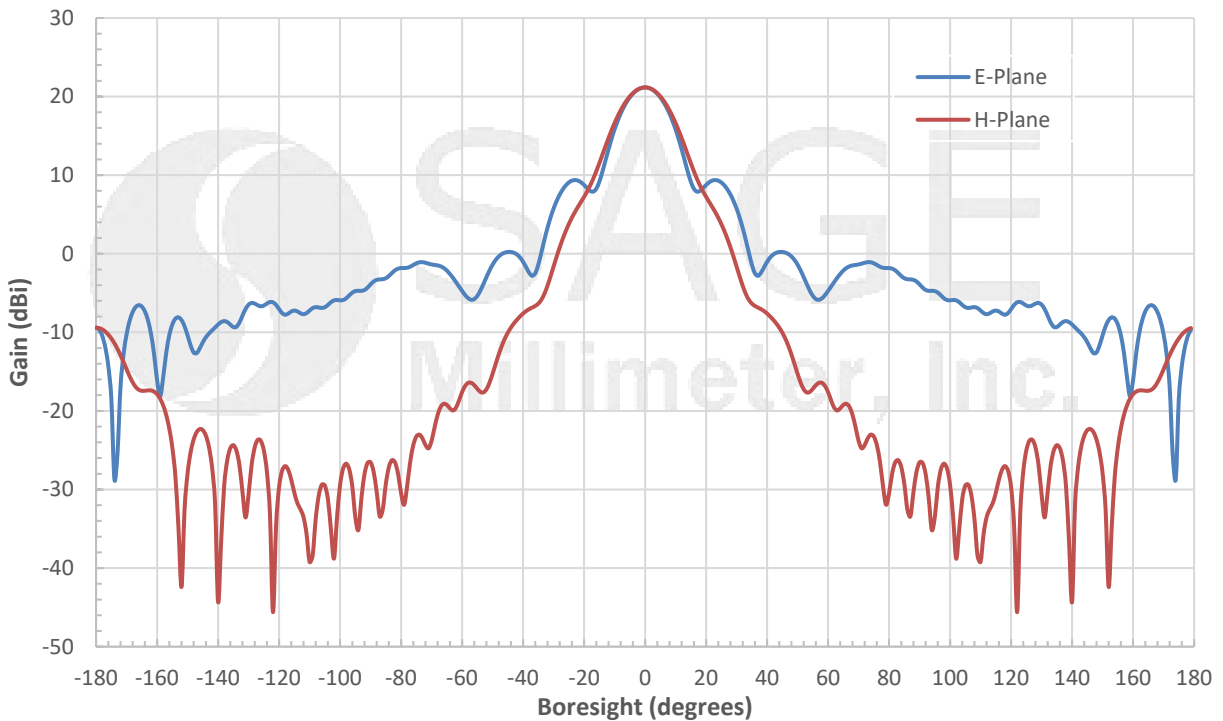
| Item | Specification |
|--------------|----------------------------------|
| Antenna Port | WR-34 Waveguide |
| Flange Type | UG-1530/U Flange |
| Size | 4.35" (L) X 2.51" (W) X 1.91"(H) |
| Material | Aluminum |
| Finish | Gold Plated |
| Weight | 0.8 Oz |
| Outline | AR-31 |



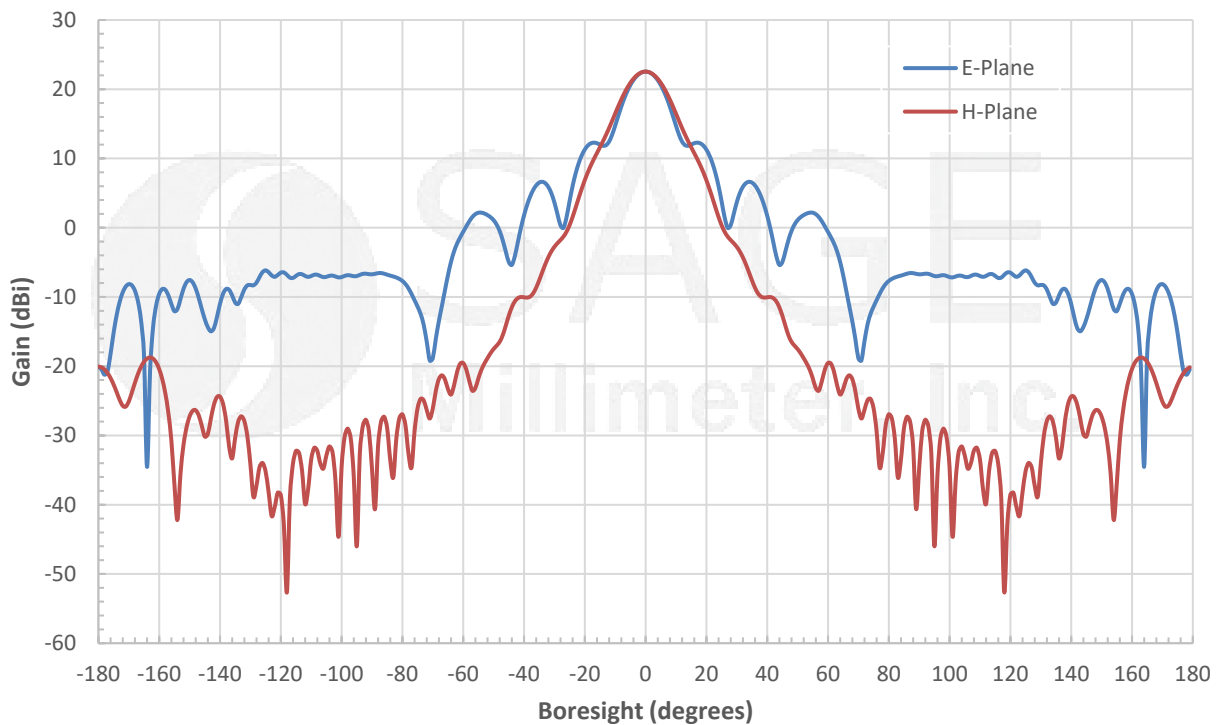


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Simulated Antenna Patterns @ 22 GHz



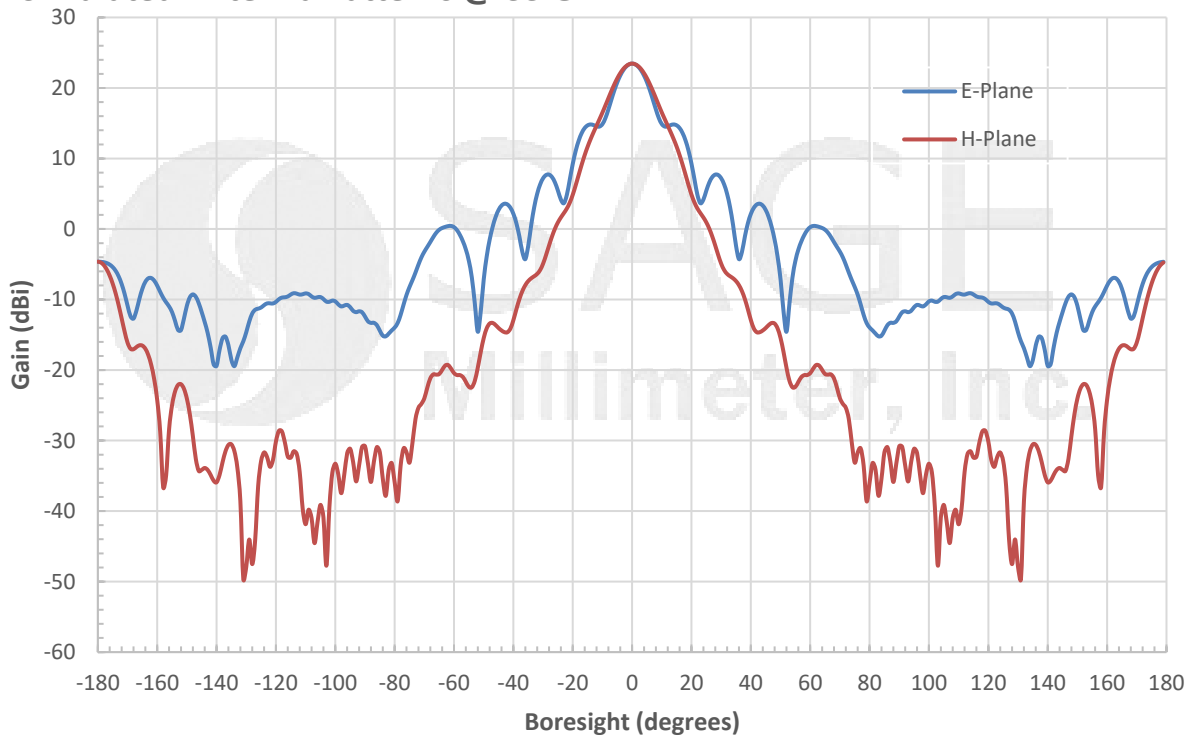
Simulated Antenna Patterns @ 27.5 GHz



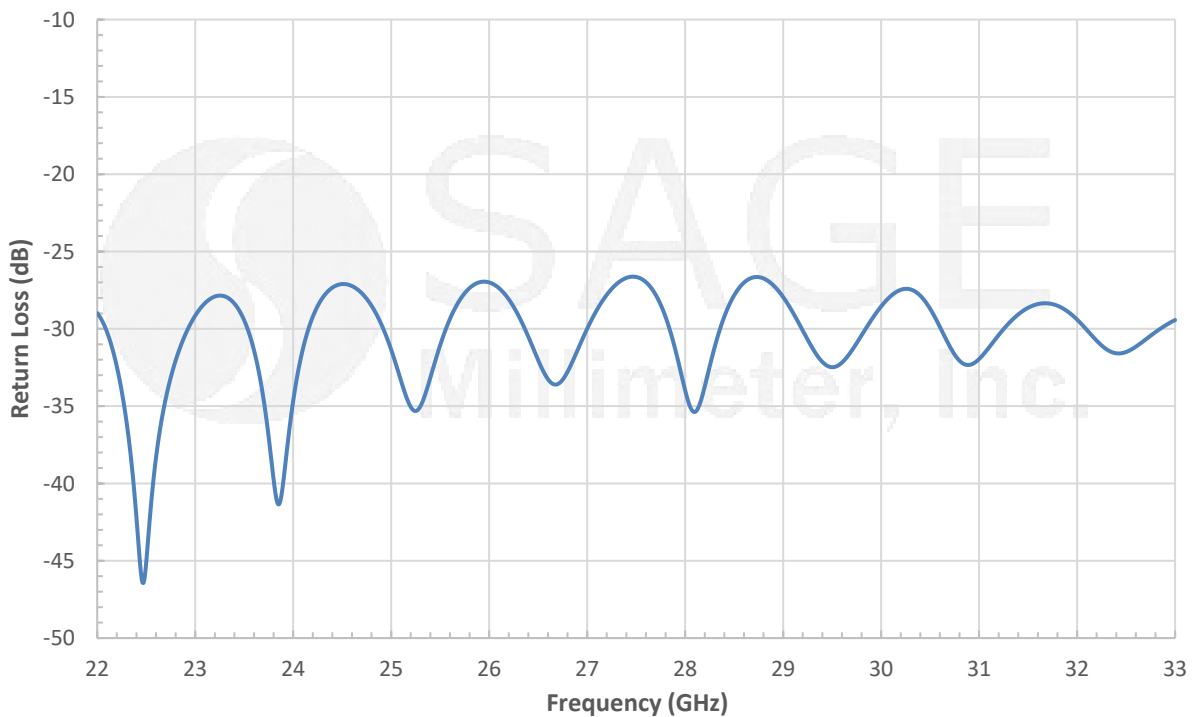


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Simulated Antenna Patterns @ 33 GHz

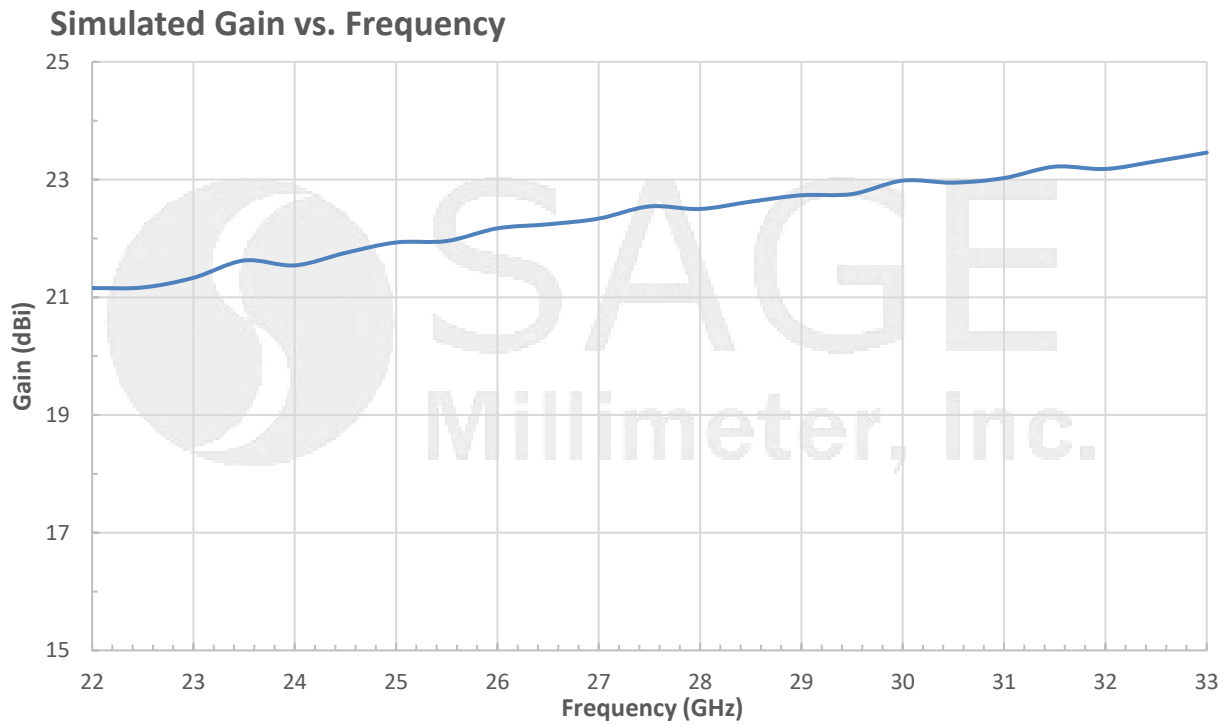


Simulated Return Loss vs. Frequency

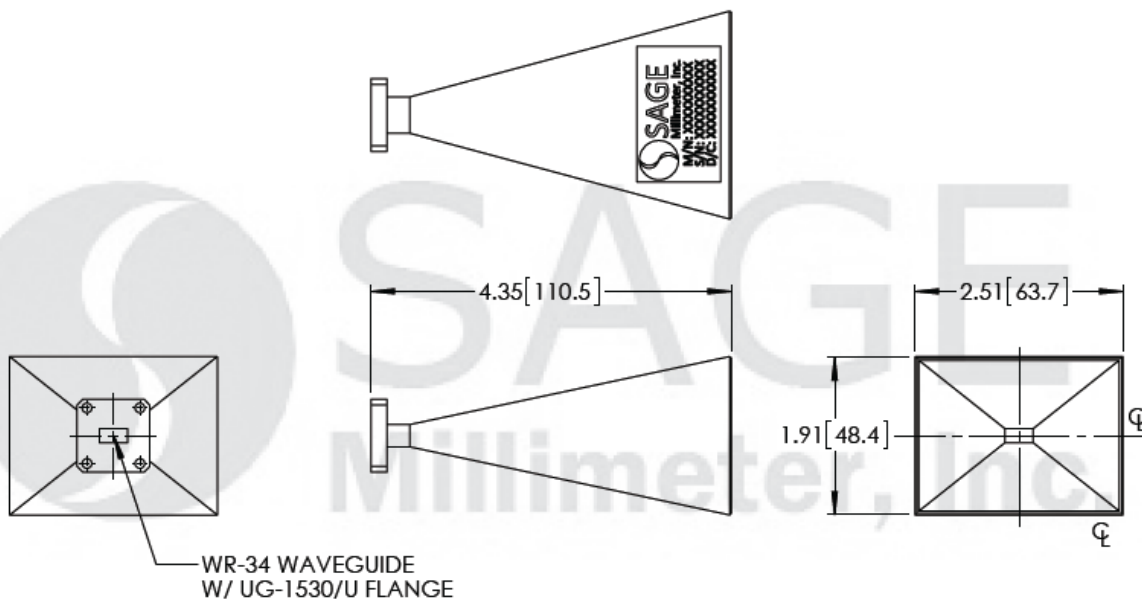




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Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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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.

