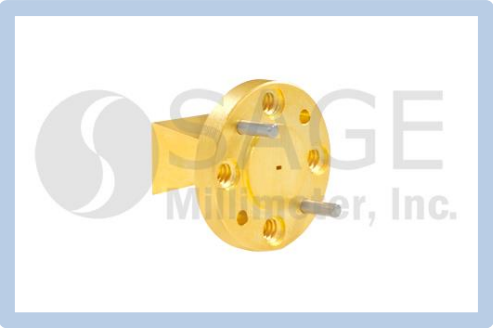
SAR-2013-03-S2

Rev 1.3

WR-03 Pyramidal Horn Antenna, 20 dBi Gain

Description:



Model SAR-2013-03-S2 is a pyramidal horn antenna that operates from 220 GHz to 325 GHz. The antenna offers 20 dBi nominal gain and a typical half power beamwidth of 13 degrees on the E-plane and 13 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-03 waveguide with UG-387/U anti-cocking 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	220 GHz		325 GHz
Gain		20 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		13°	
3 dB Beamwidth, H-Plane		13°	
Sidelobes, E-Plane		-12 dB	
Sidelobes, H-Plane		-25 dB	
Return Loss		22 dB	
Specification Temperature		+25 °C	
Operation Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-03 Waveguide
Flange Type	UG-387/U Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	0.6 Oz
Size	0.65” (L) X 0.75” (Ø)
Outline	AR-031-A

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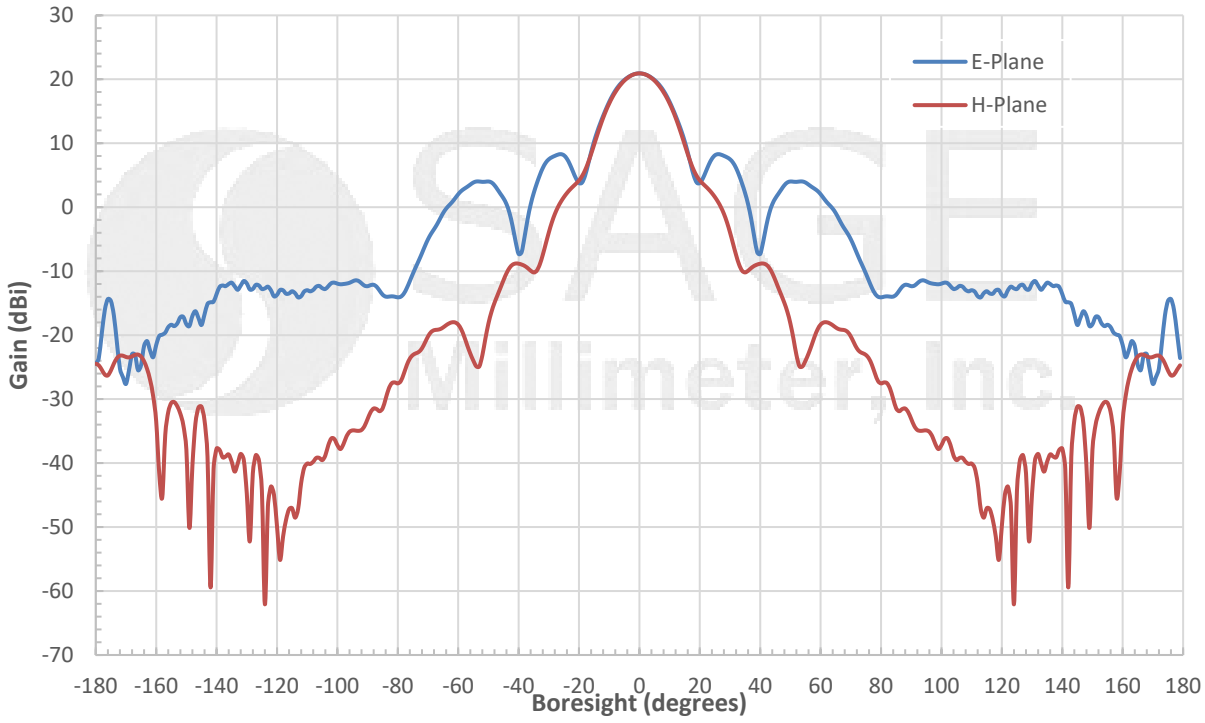
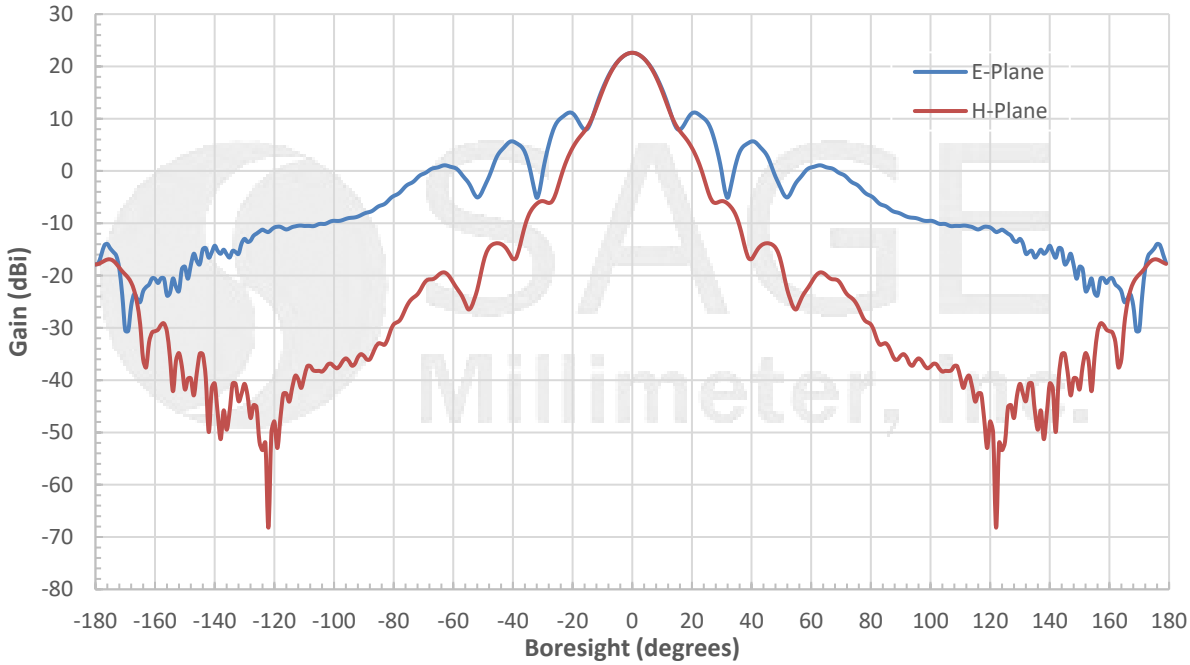
WR-03 Pyramidal Horn Antenna, 20 dBi Gain

Simulated Antenna Patterns @ 220 GHz



Simulated Antenna Patterns @ 275 GHz



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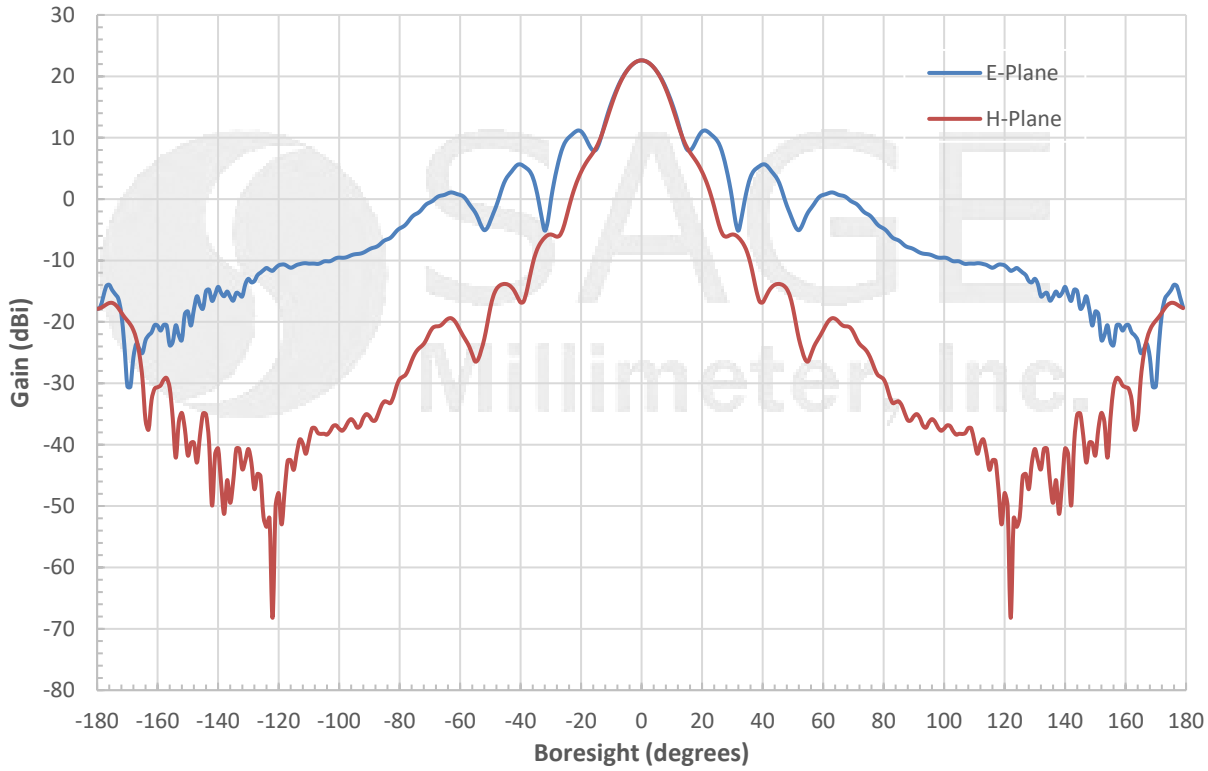
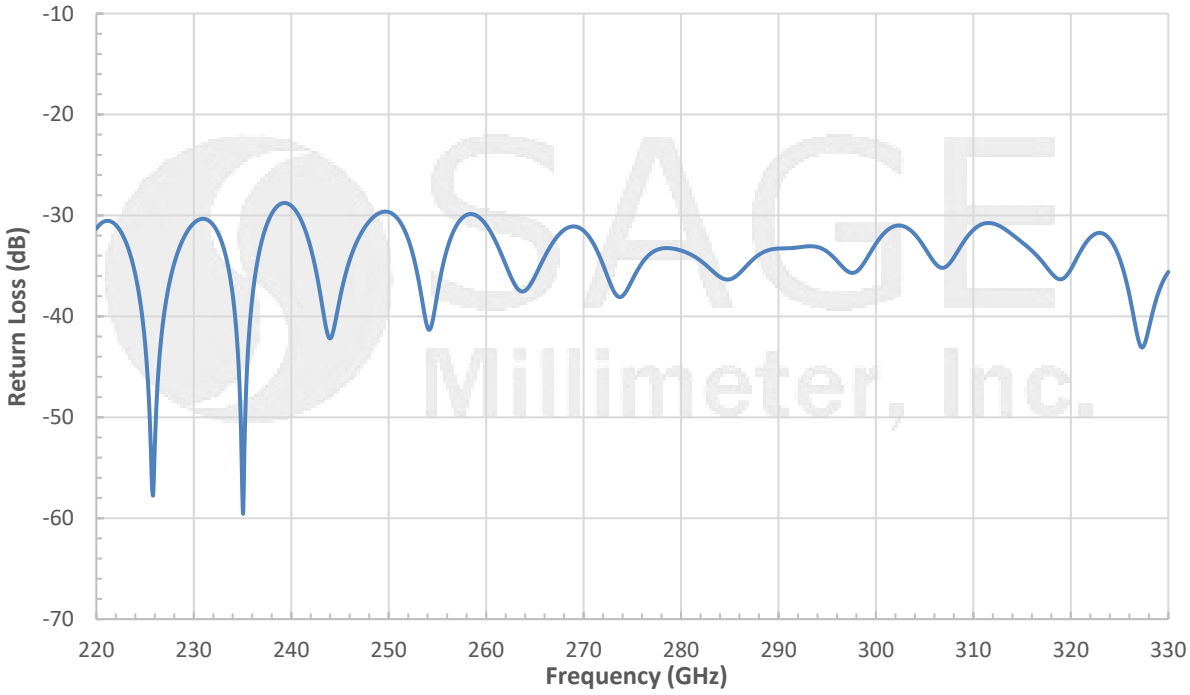
WR-03 Pyramidal Horn Antenna, 20 dBi Gain

Simulated Antenna Patterns @ 325 GHz



Simulated Return Loss vs. Frequency



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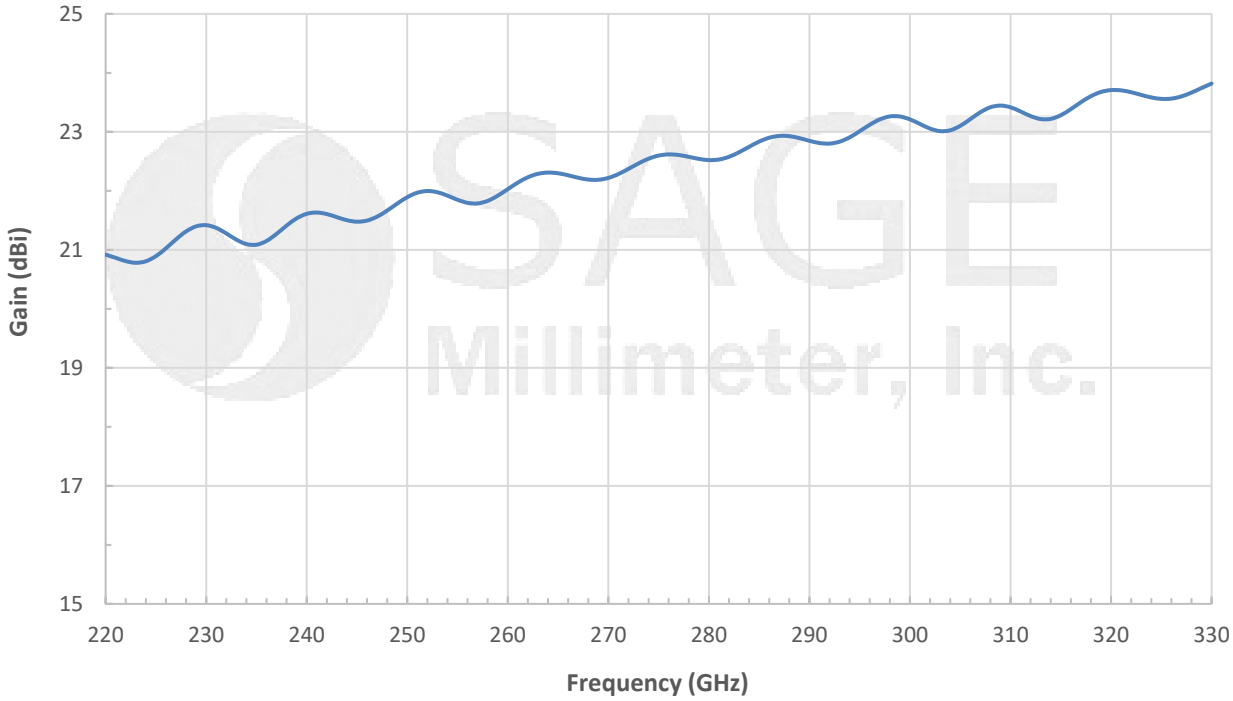
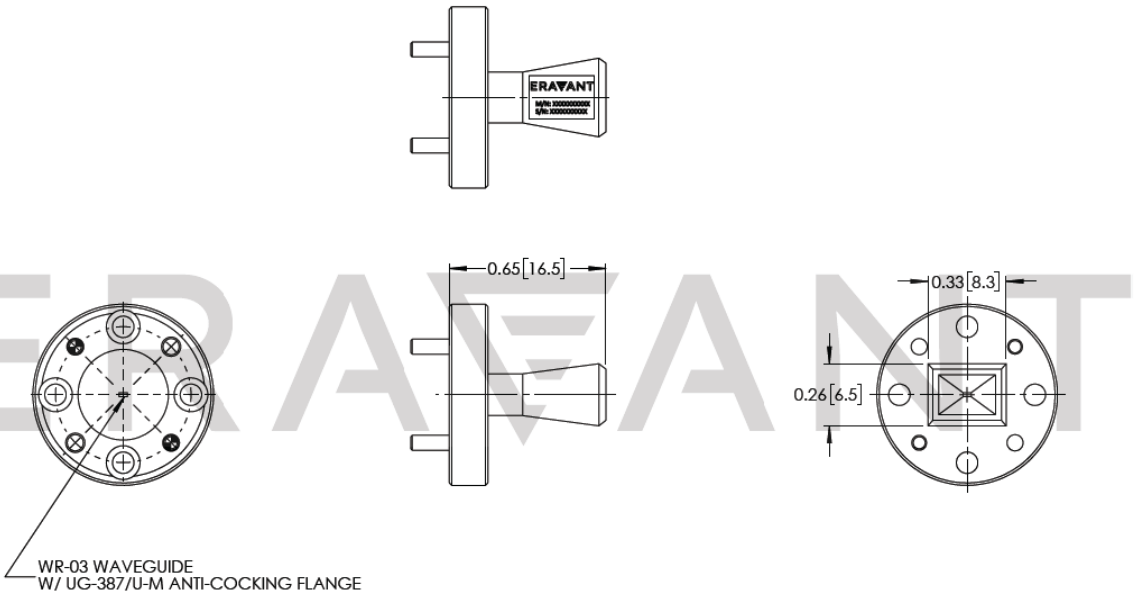
Simulated Gain vs. Frequency



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 antenna will cause performance degradation and possible device damage.

SAGE Millimeter, Inc.

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