SAR-1532-22-S2

Rev 1.2

WR-22 Pyramidal Horn Antenna, 15 dBi Gain

Description:

Model SAR-1532-22-S2 is a Q-band pyramidal horn antenna that operates from 33 GHz to 50 GHz. The antenna offers a nominal 15 dBi gain and a typical half power beamwidth of 32 degrees on the E-plane and 32 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-22 waveguide with UG-383/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	33 GHz		50 GHz
Gain		15 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		32°	
3 dB Beamwidth, H-Plane		32°	
Sidelobes, E-Plane		-13 dB	
Sidelobes, H-Plane		-20 dB	
Return Loss		20 dB	
Specification Temperature		+25 °C	
Operation Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-22 Waveguide with UG-383/U Anti-Cocking Flange
Size	1.18” (L) X 0.70” (W) X 0.56” (H)
Material	Brass
Finish	Gold Plated
Weight	1.0 Oz
Outline	AR-Q15-A

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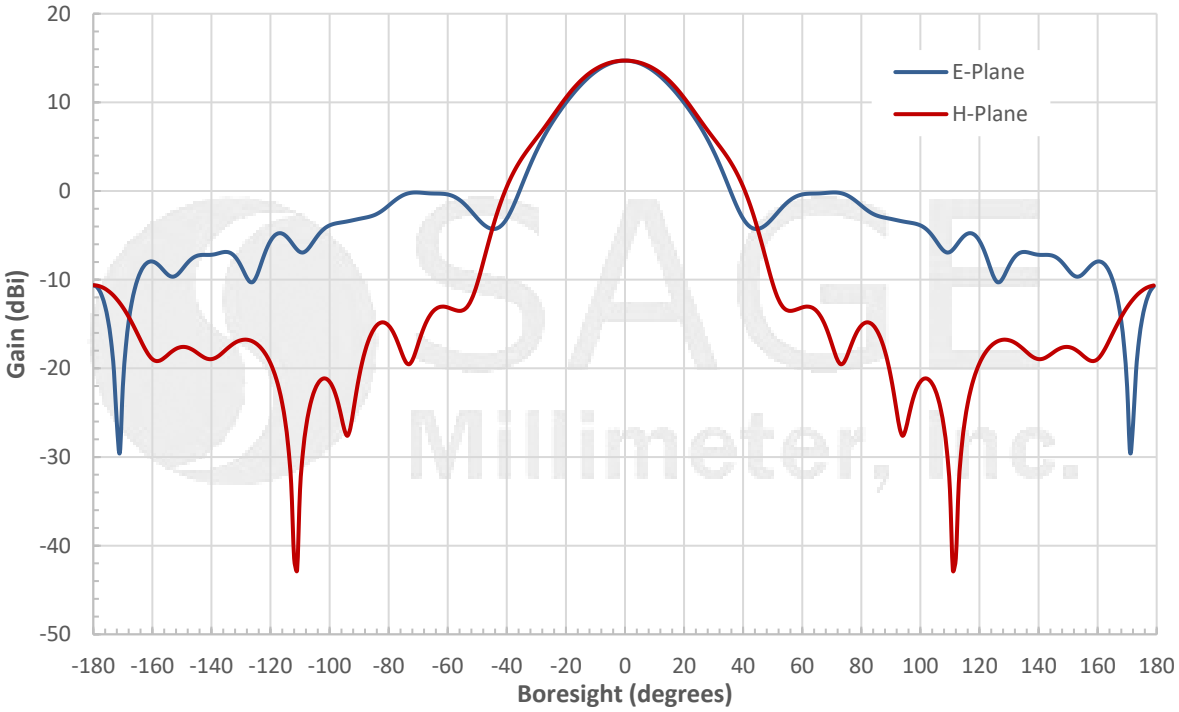
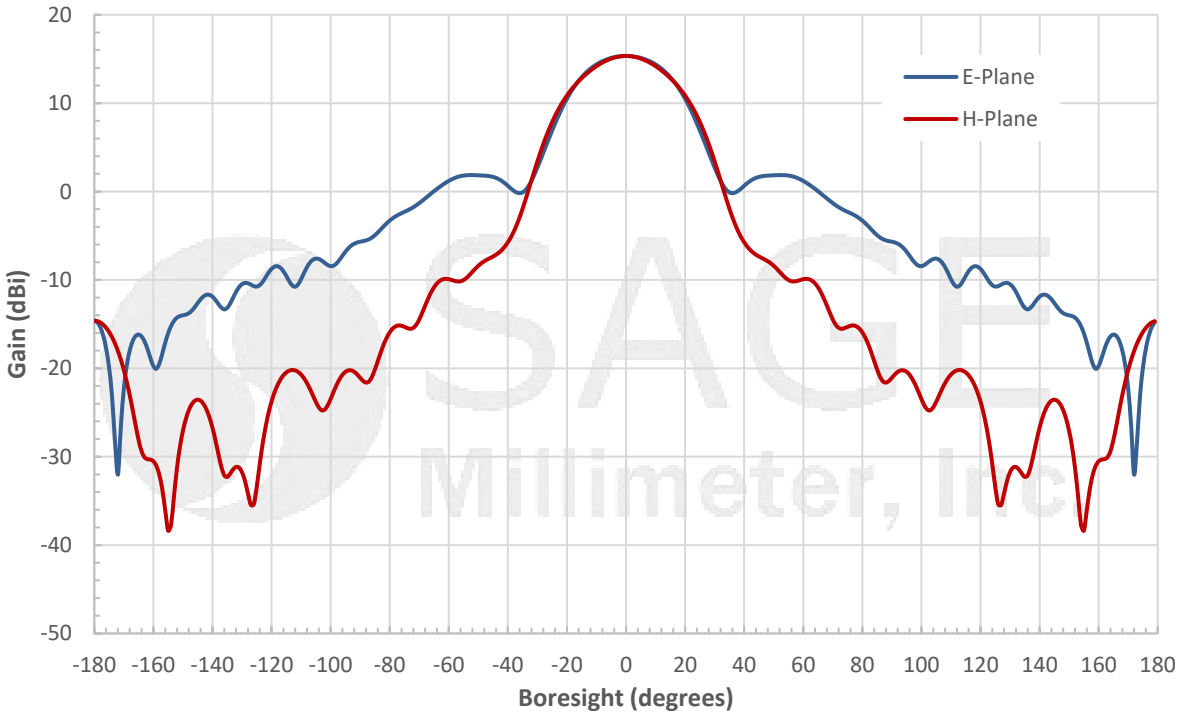
WR-22 Pyramidal Horn Antenna, 15 dBi Gain

Simulated Antenna Patterns @ 33 GHz



Simulated Antenna Patterns @ 41.5 GHz



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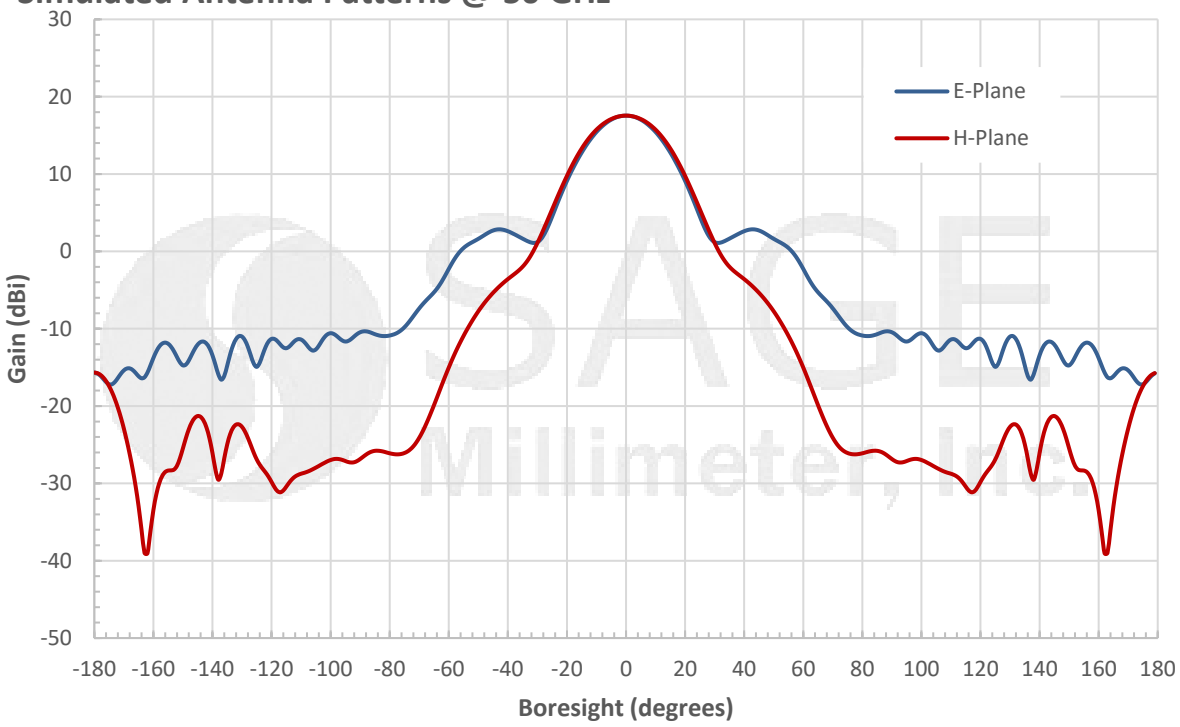
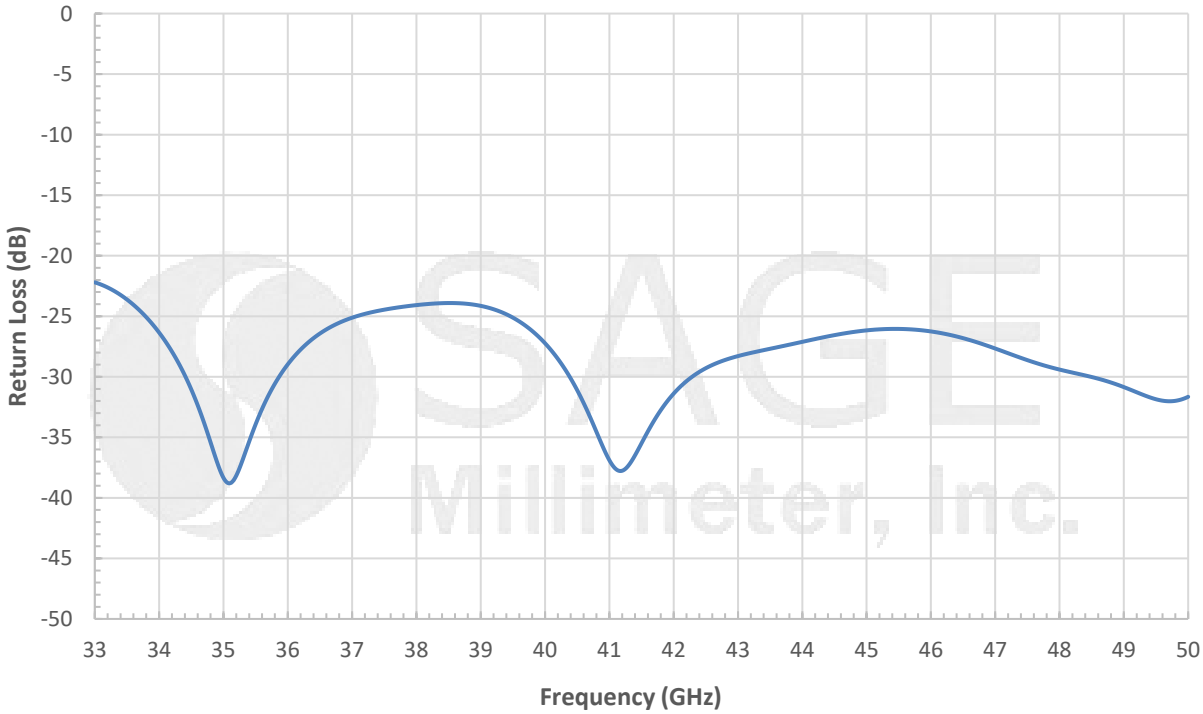
WR-22 Pyramidal Horn Antenna, 15 dBi Gain

Simulated Antenna Patterns @ 50 GHz



Simulated Return Loss vs Frequency



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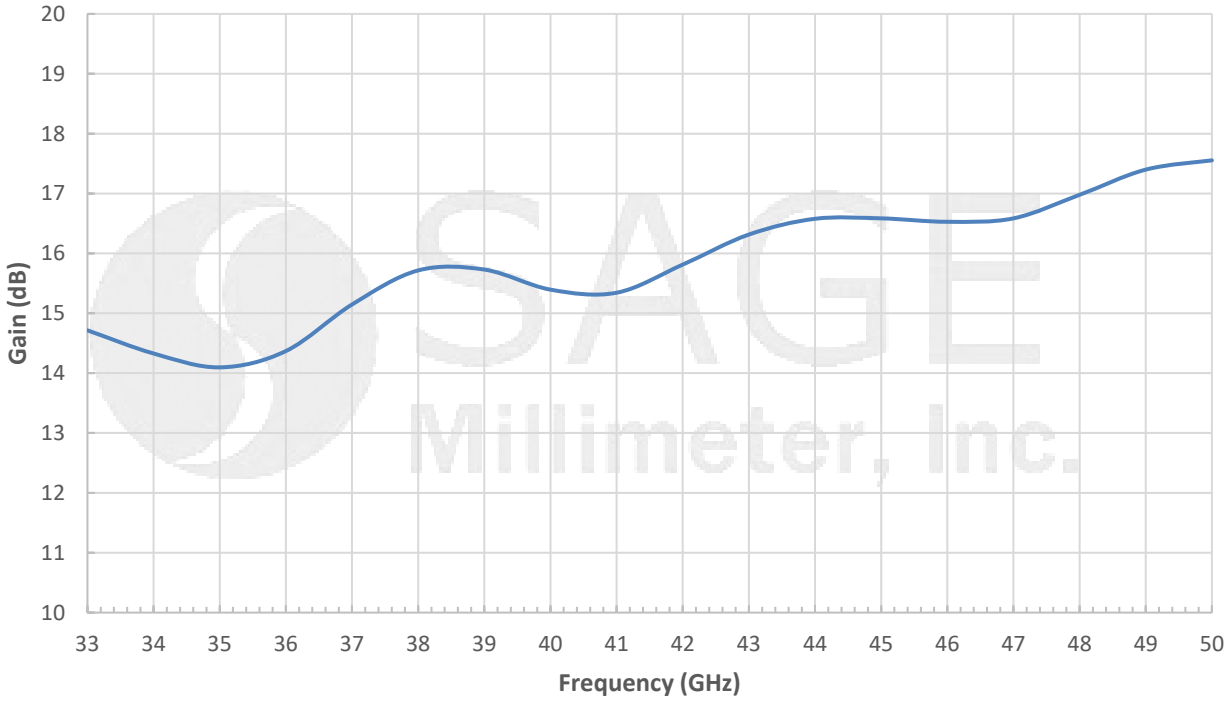
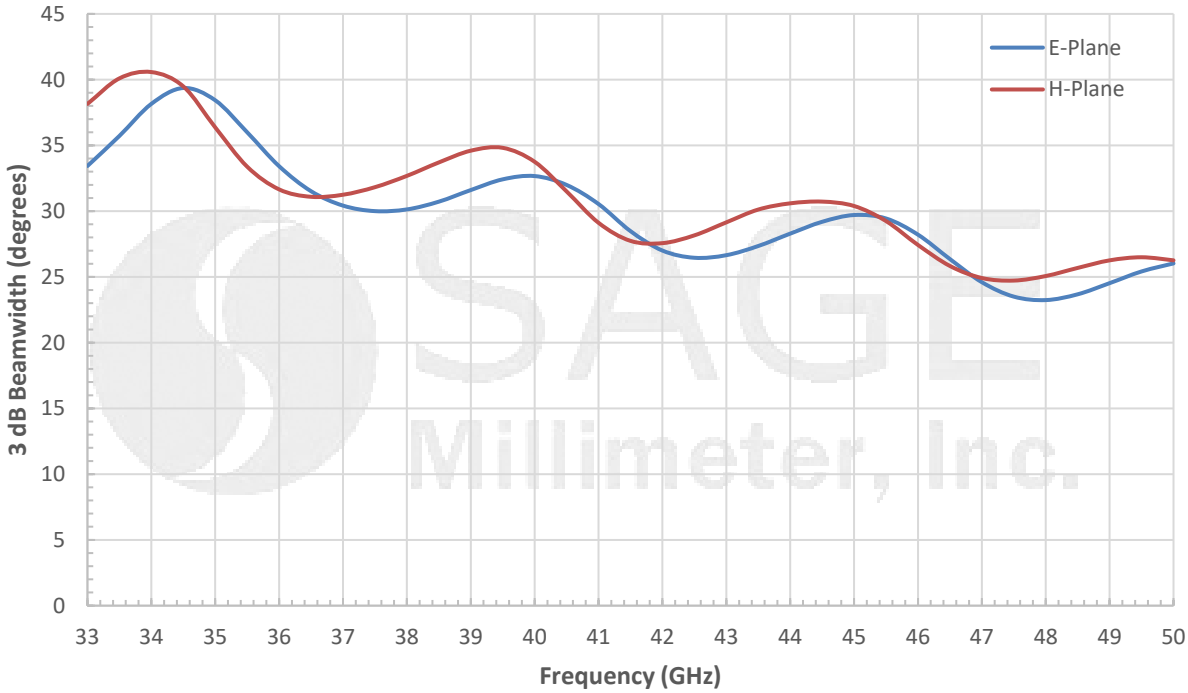
Simulated Gain vs. Frequency



Simulated 3 dB Beamwidth vs Frequency



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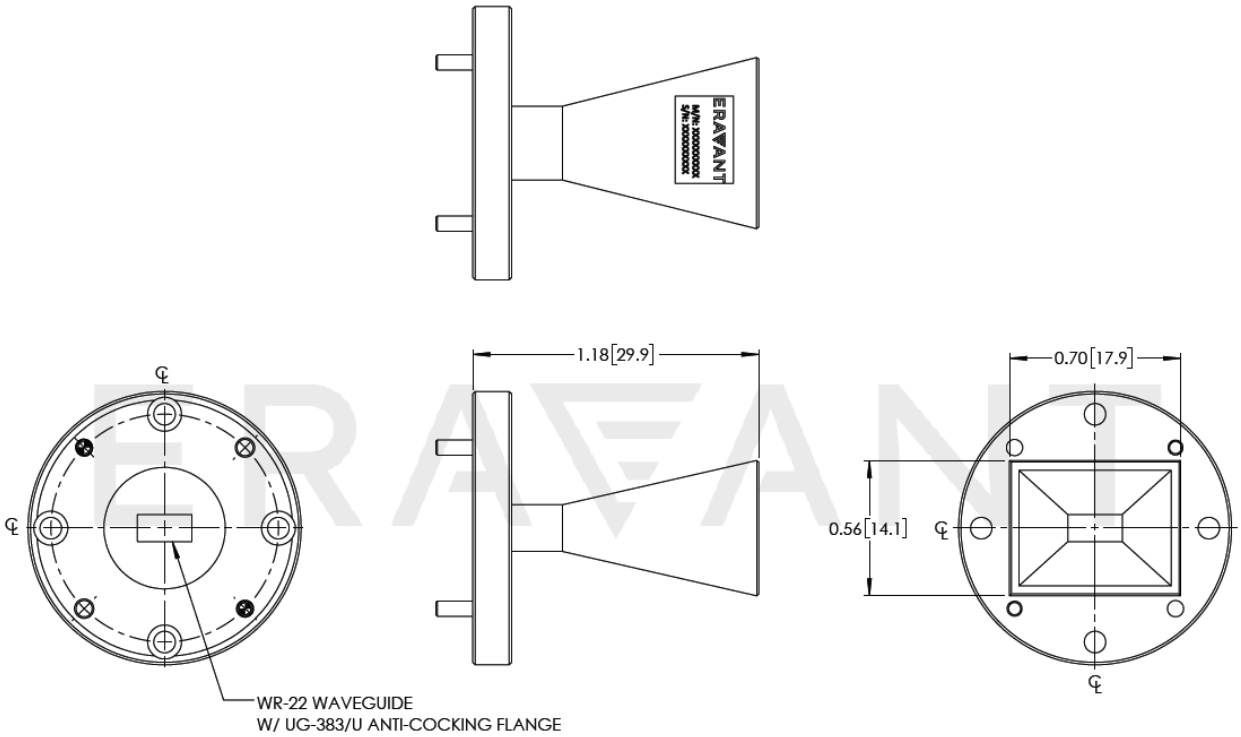
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



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 antenna will cause performance degradation and possible device damage.

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