



WR-22 Pyramidal Horn Antenna, 20 dBi Gain

Description:

Model SAR-2013-22-S2 is a Q-band pyramidal horn antenna that operates from 33 GHz to 50 GHz. The antenna offers a nominal 20 dBi gain and a typical half power beamwidth of 15 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-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	18.5 dBi	20 dBi	21 dBi
Polarization	Linear		
3 dB Beamwidth, E-Plane		15°	
3 dB Beamwidth, H-Plane		16°	
Sidelobes, E-Plane		-14 dB	
Sidelobes, H-Plane		-30 dB	
Return Loss		23 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

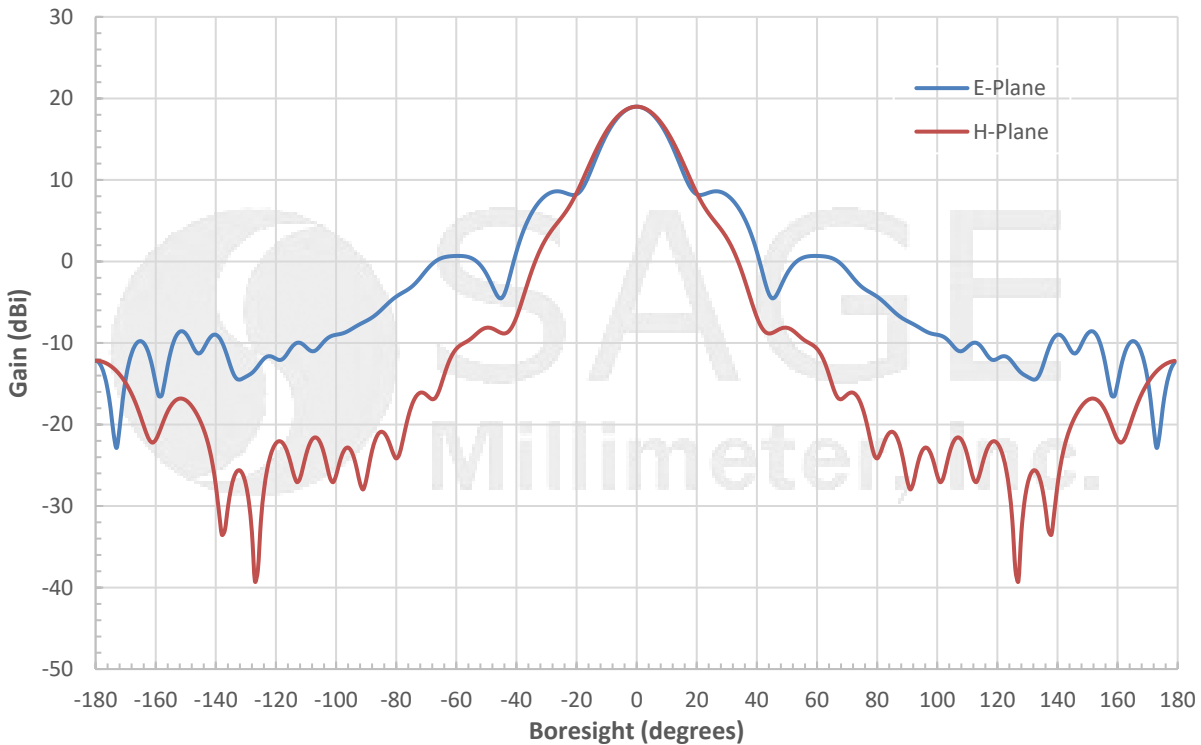
Item	Specification
Antenna Port	WR-22 Waveguide with UG-383/U Anti-Cocking Flange
Size	2.00" (L) X 1.35" (W) X 1.07" (H)
Material	Aluminum
Finish	Gold Plated
Weight	1.7 Oz
Outline	AR-Q1-A



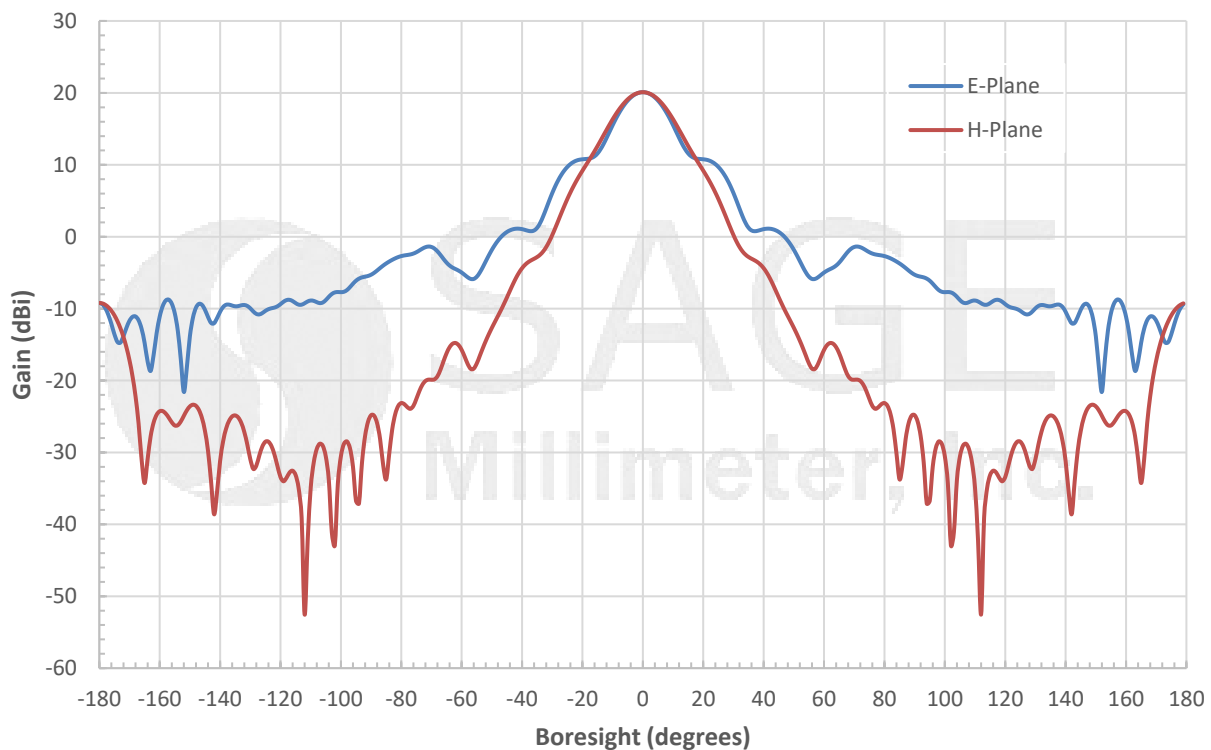


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Simulated Antenna Patterns @ 33 GHz



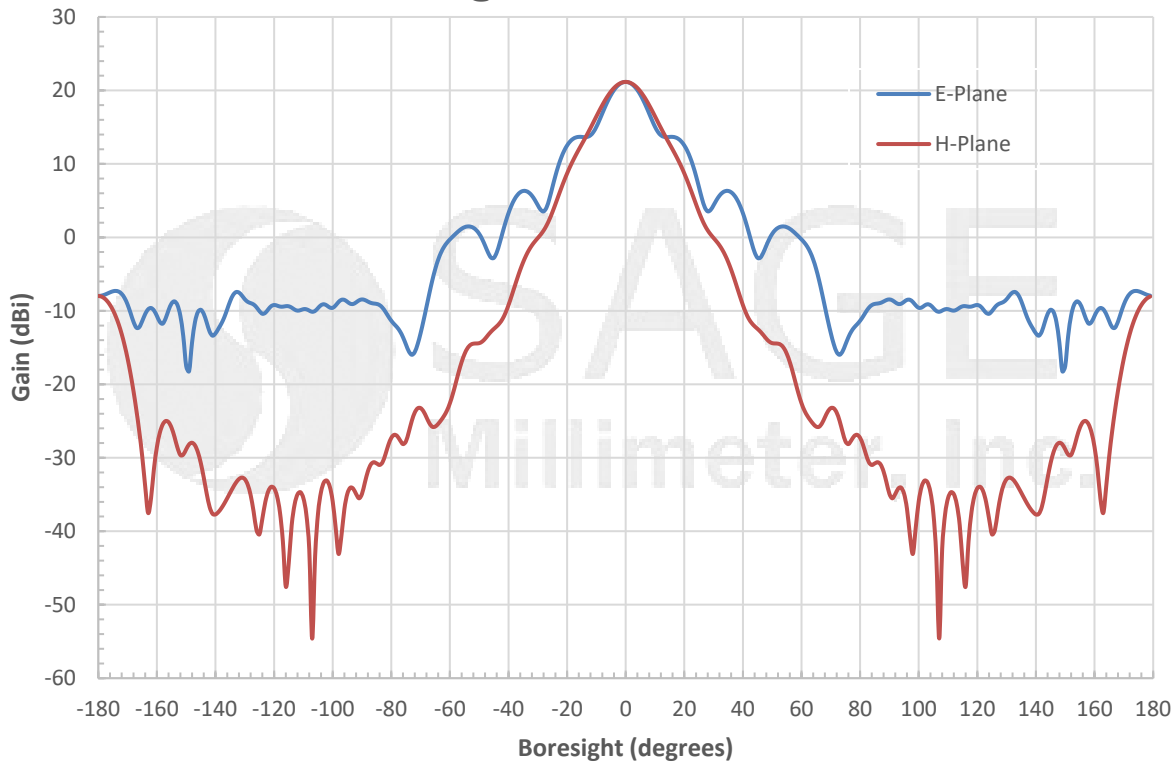
Simulated Antenna Patterns @ 41.5 GHz



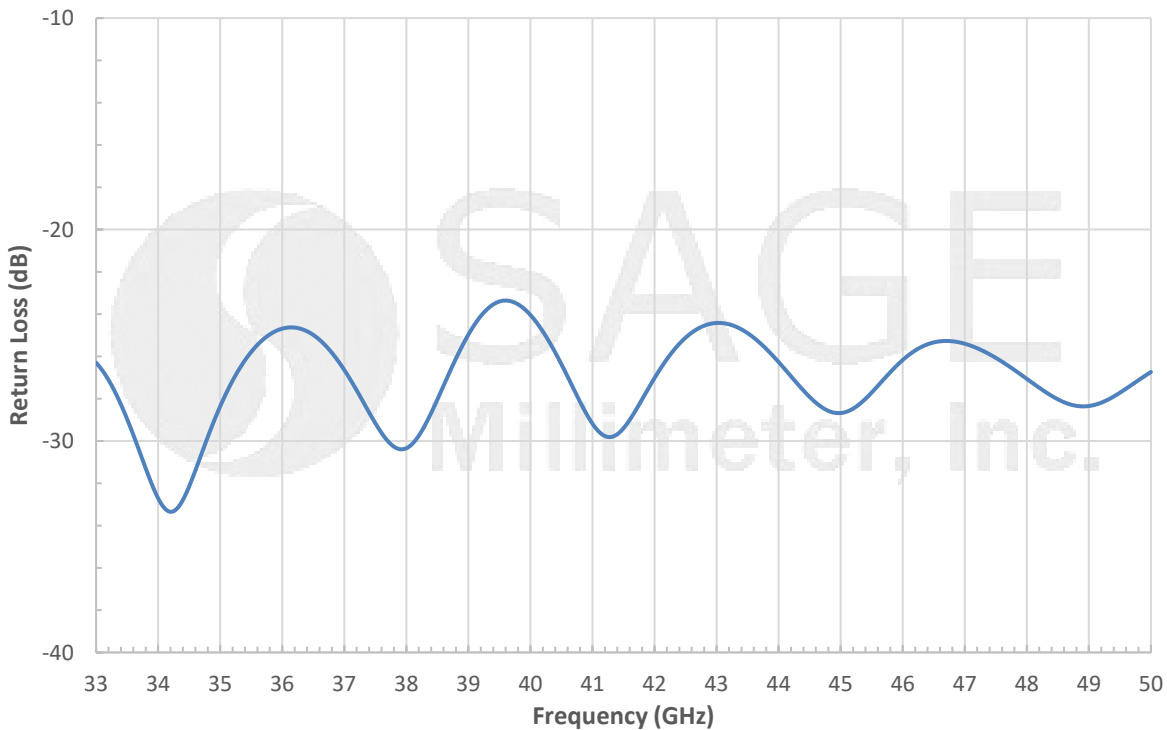


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Simulated Antenna Patterns @ 50 GHz



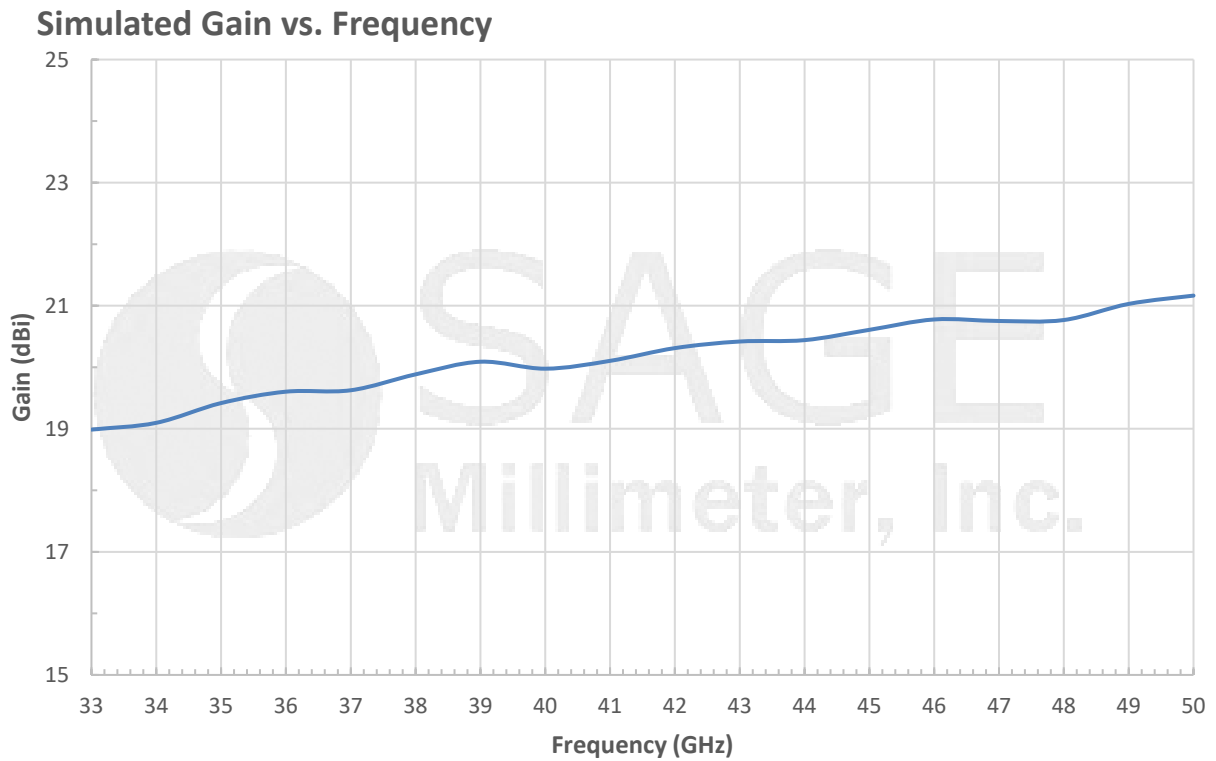
Simulated Return Loss vs. Frequency



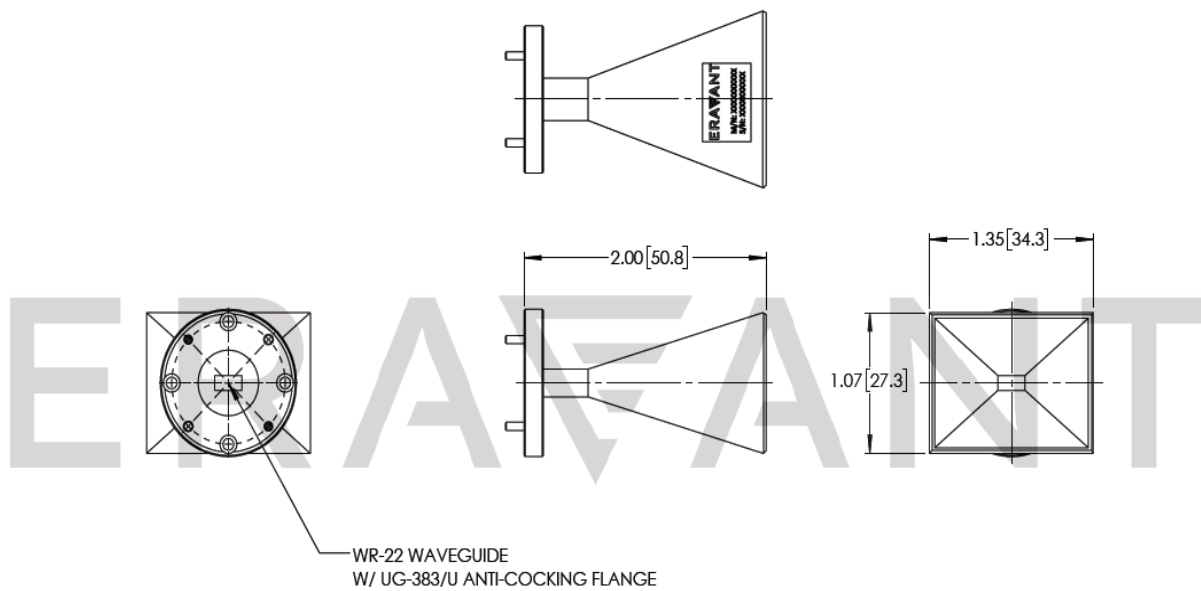
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Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])





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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 antenna will cause performance degradation and possible device damage.

