SAR-2013-22-S2

WR-22 Pyramidal Horn Antenna, 20 dBi Gain

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.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	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/Anti-Cocking Flange
Material	Aluminum
Finish	Gold Plated
Weight	1.7 Oz
Size	2.00” (L) X 1.35” (W) X 1.07”(H)
Outline	AR-Q1-A

ECCN

EAR99

FEATURES

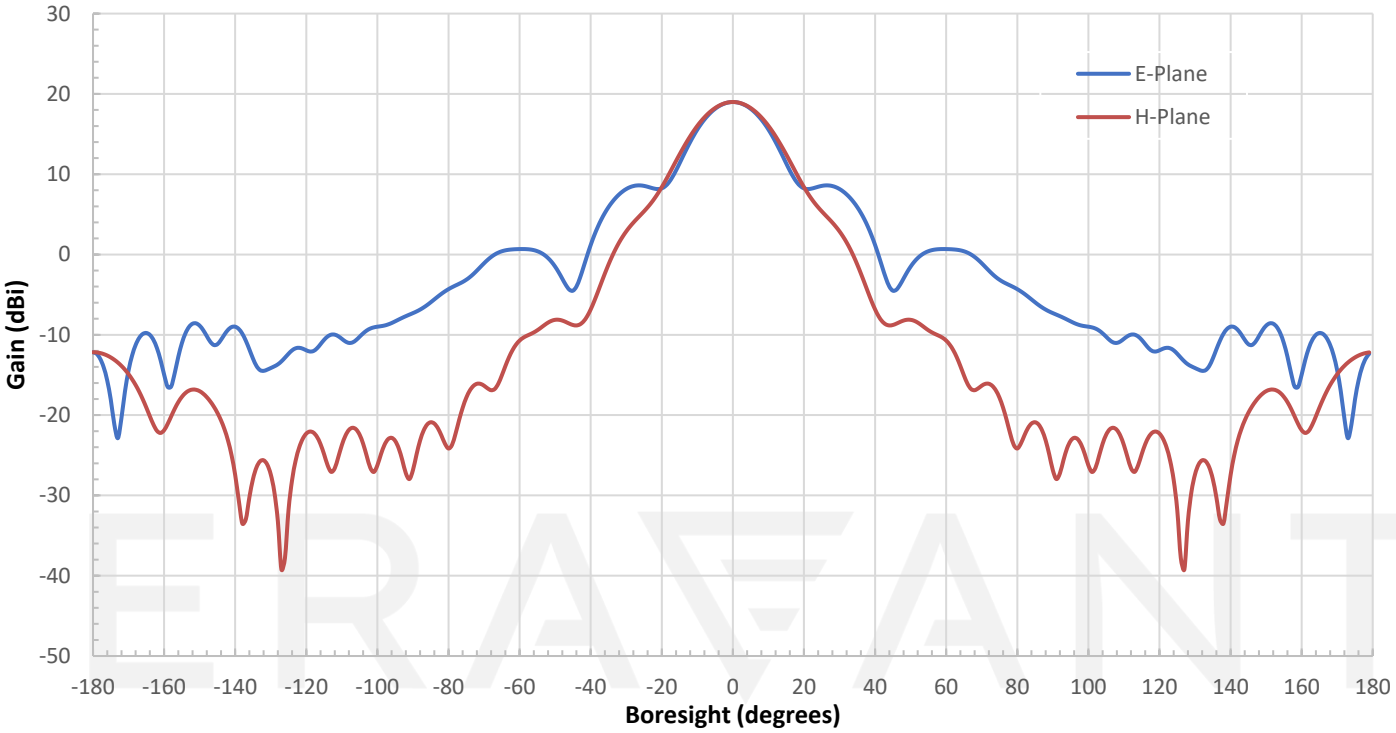
- Rectangular Waveguide Interface
- Precisely Machined and Gold Plated
- Linear Polarization
- High Return Loss

APPLICATIONS

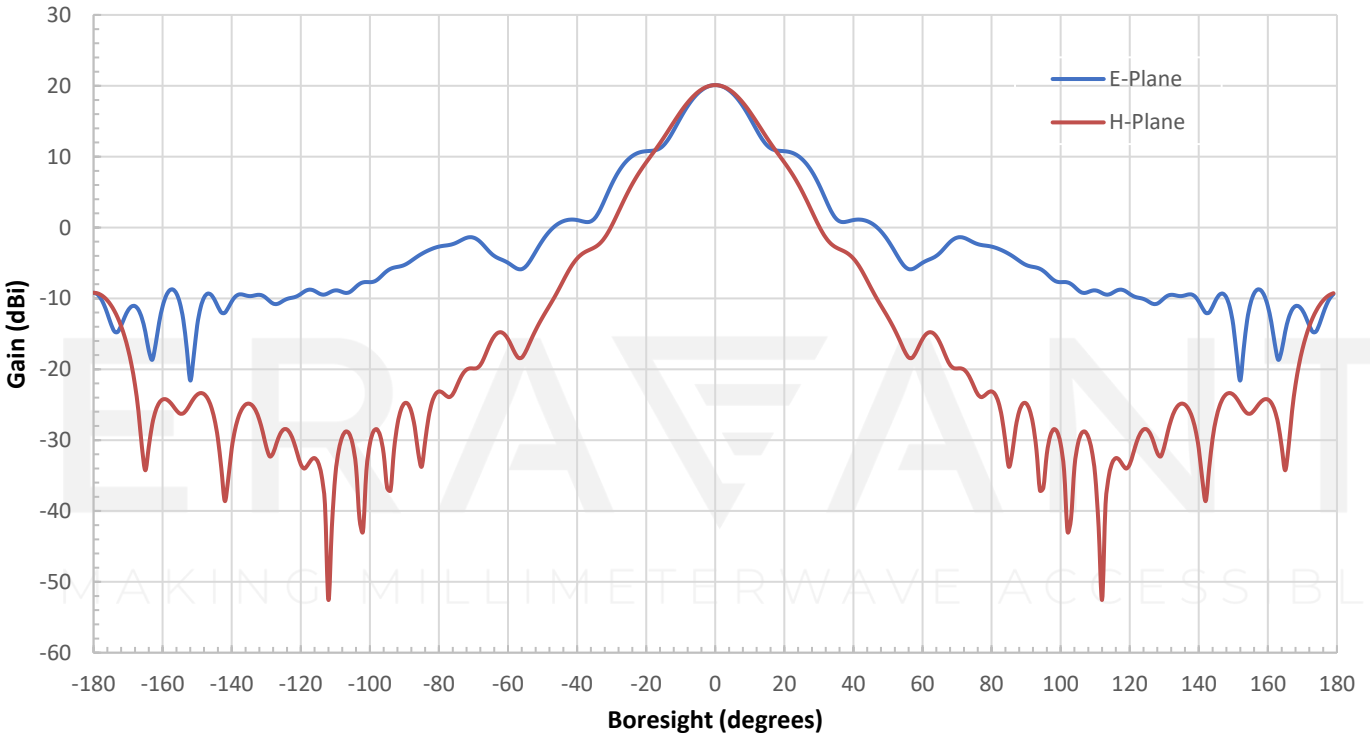
- Antenna Ranges
- Antenna Gain Measurements
- System Setups

SUPPLEMENTAL DETAILS

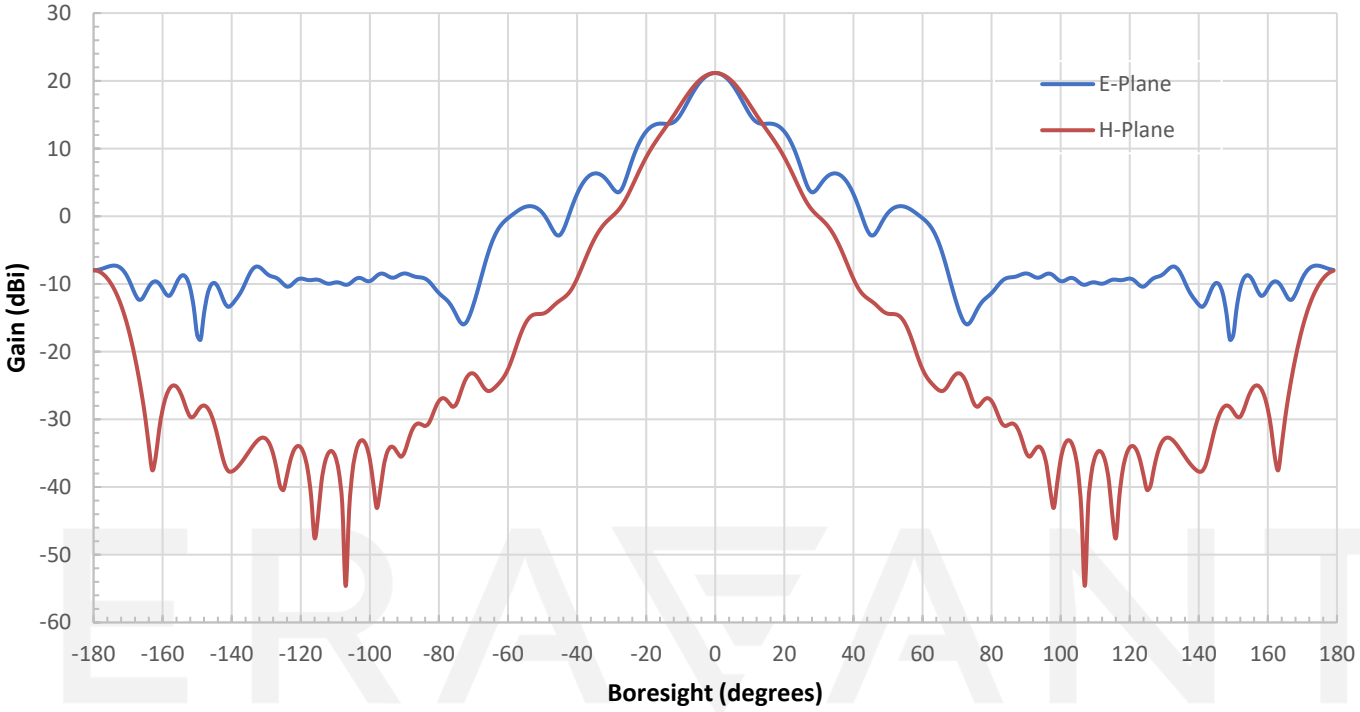
Simulated Antenna Patterns @ 33 GHz



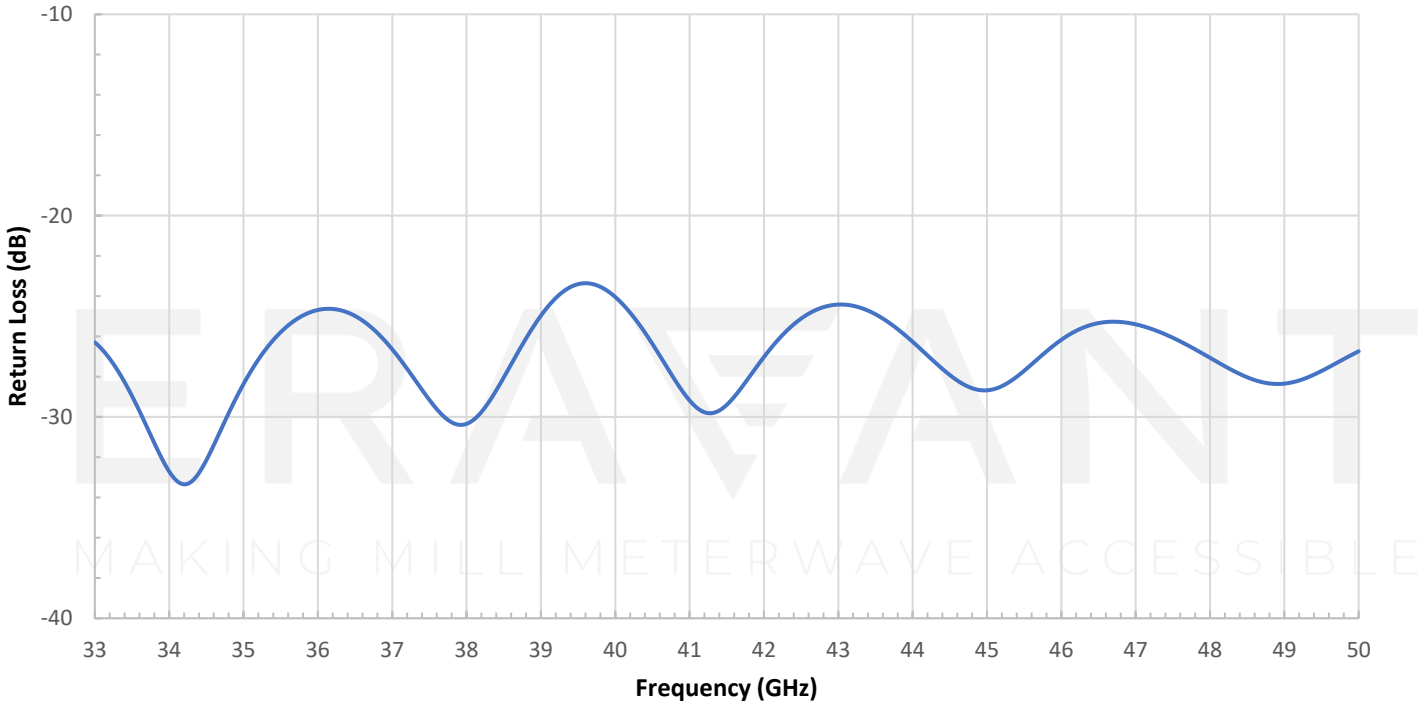
Simulated Antenna Patterns @ 41.5 GHz



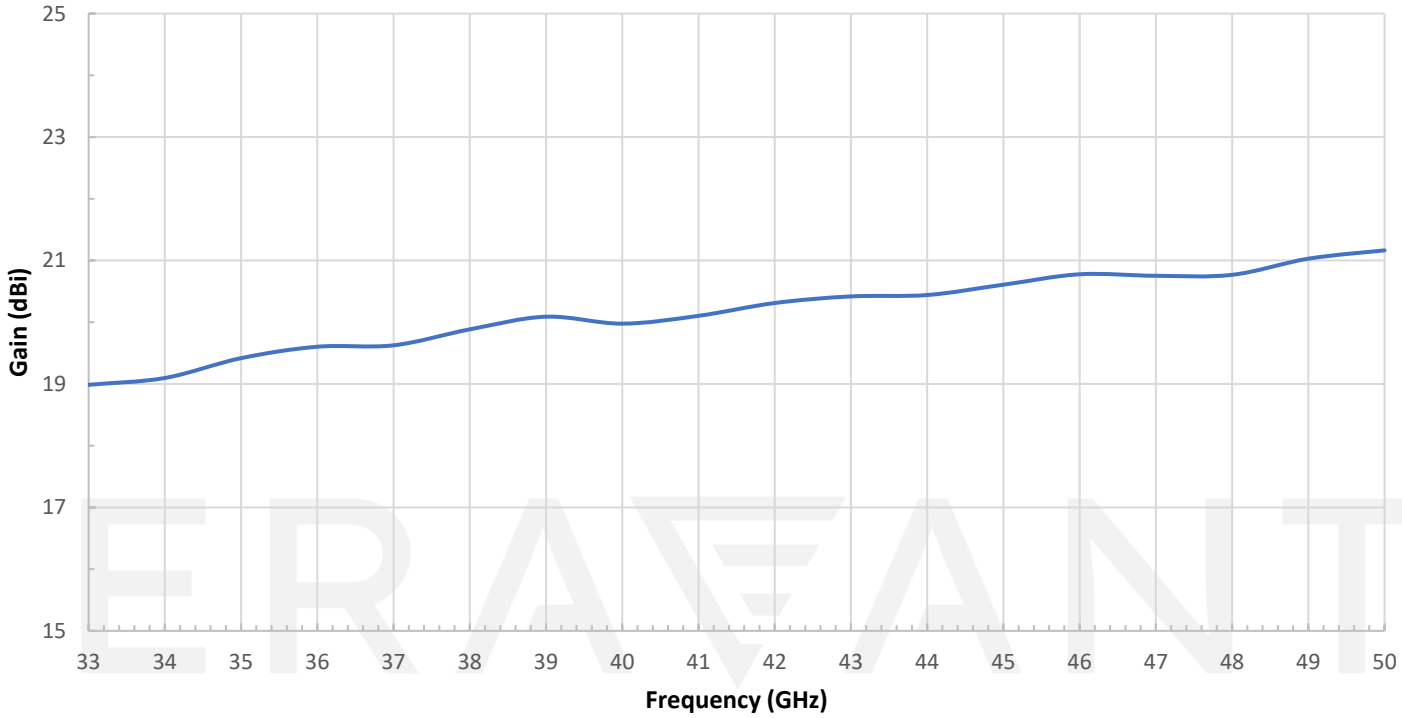
Simulated Antenna Patterns @ 50 GHz



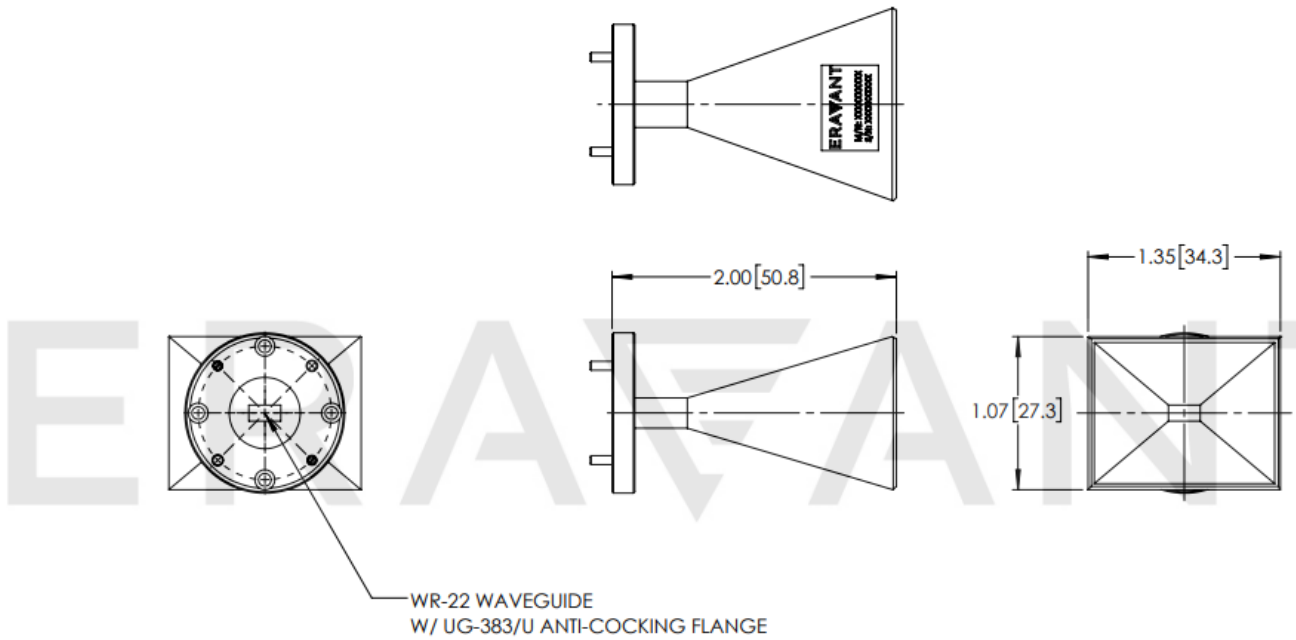
Simulated Return Loss vs. Frequency



Simulated Gain vs. Frequency



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:

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the antenna will cause performance degradation and possible device damage.

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