SAR-2013-05-S2

WR-05 Pyramidal Horn Antenna, 20 dBi Gain

SAR-2013-05-S2 is a pyramidal horn antenna that operates from 140 GHz to 220 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-05 waveguide with UG-387/U-M Anti-Cocking flange.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	140 GHz		220 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	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
RF Ports	WR-05 Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	0.6 Oz
Size	1.00” (L) X 0.75” (Ø)
Outline	AR-G1-A

ECCN

EAR99

FEATURES

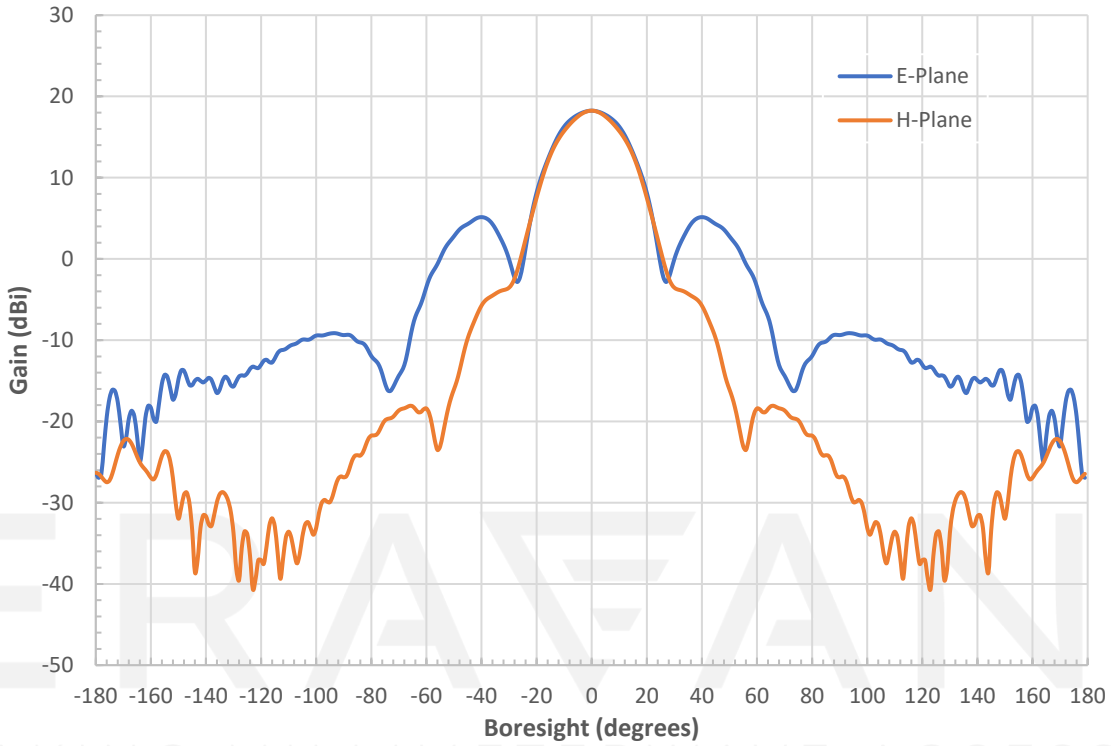
- Rectangular Waveguide Interface
- Precisely Machined and Gold Plated
- Linear Polarization
- High Return Loss

APPLICATIONS

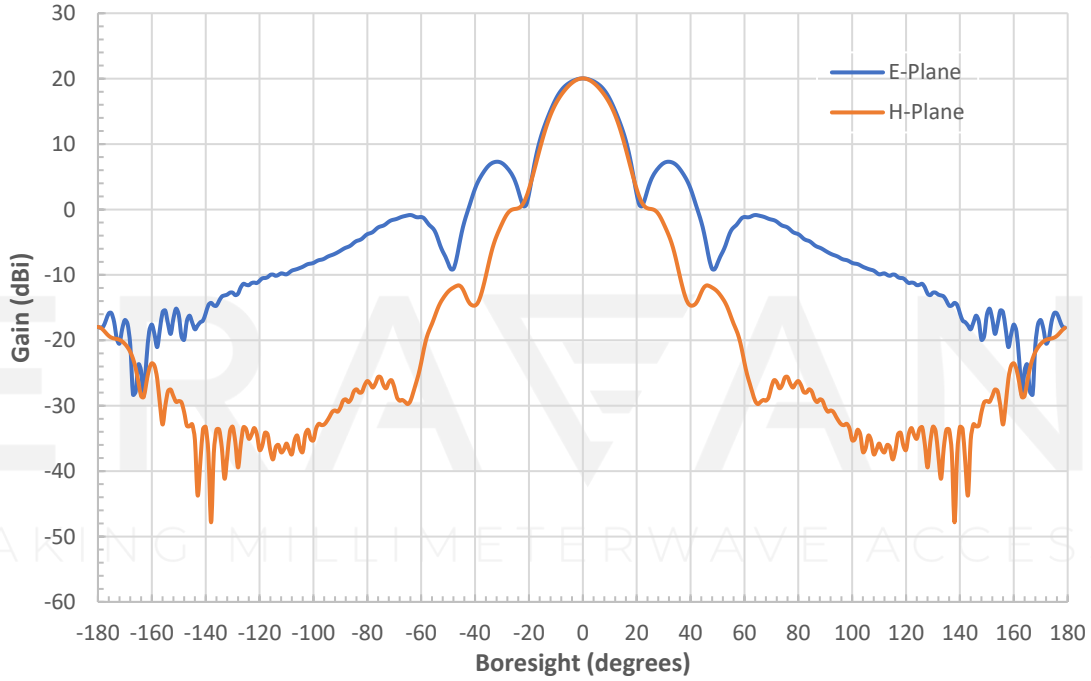
- Antenna Ranges
- Antenna Gain Measurements
- System Setups

SUPPLEMENTAL DETAILS

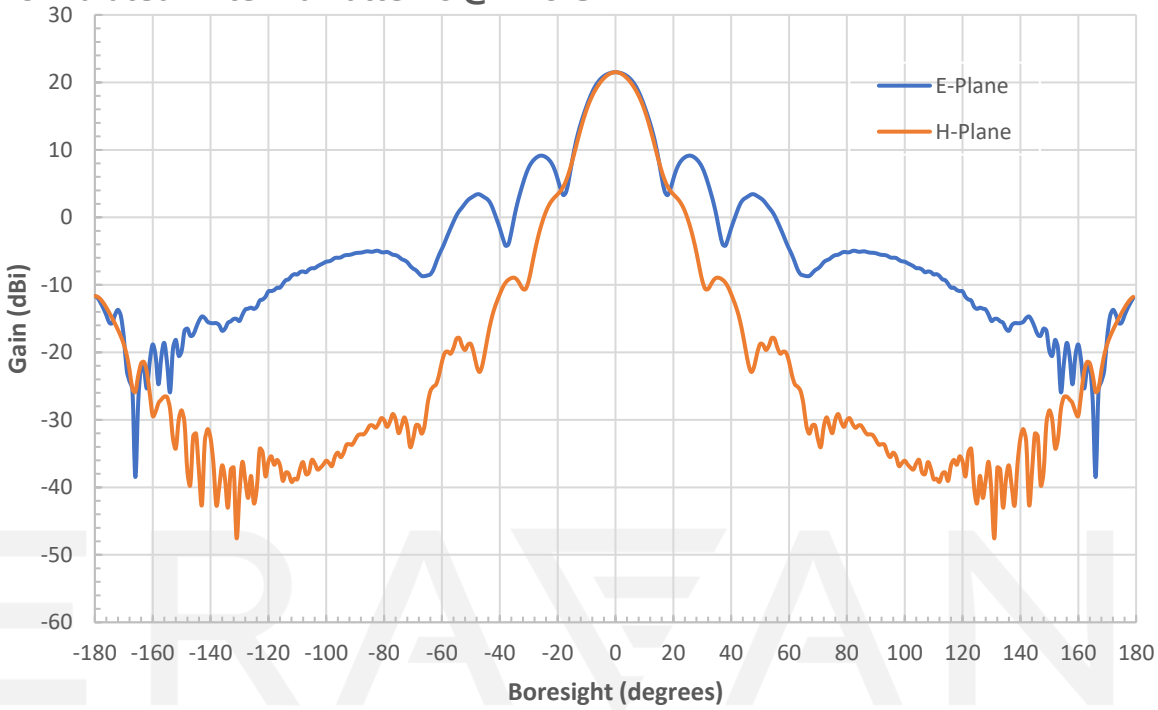
Simulated Antenna Patterns @ 140 GHz



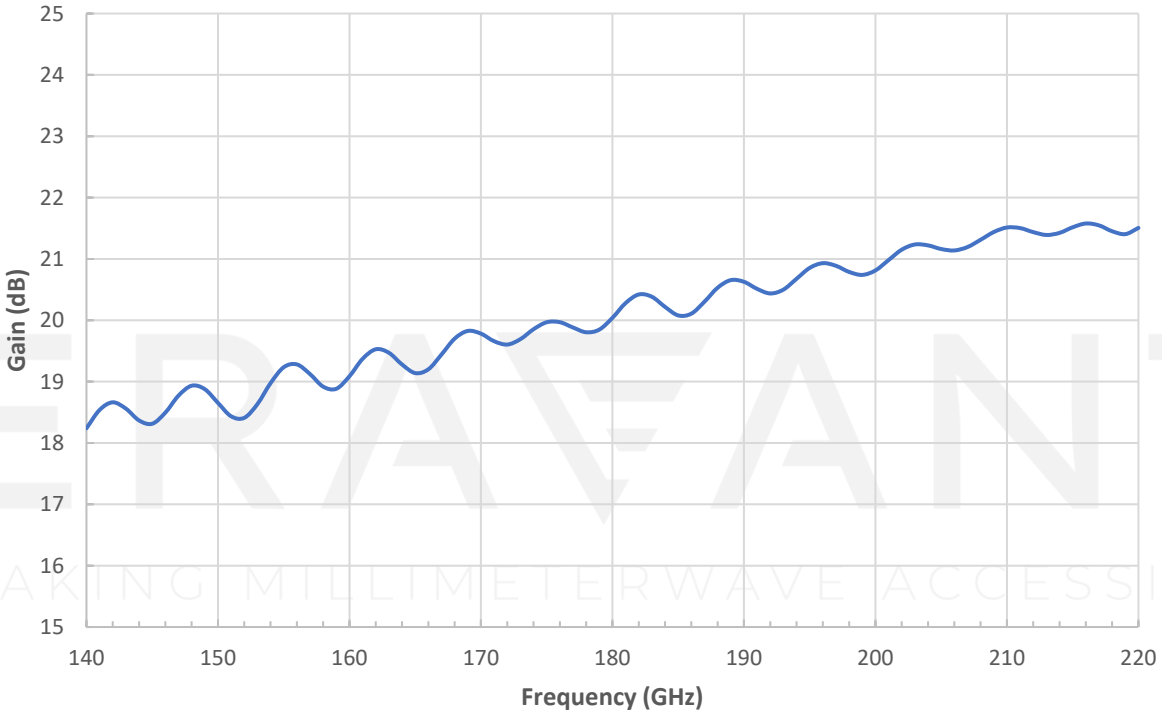
Simulated Antenna Patterns @ 180 GHz



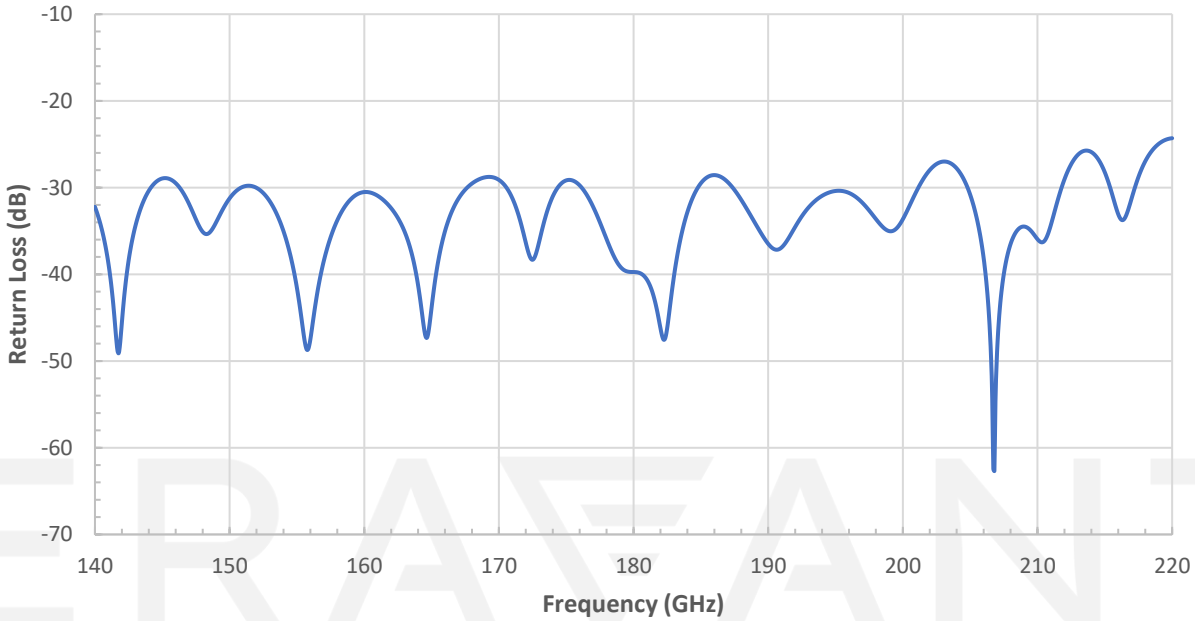
Simulated Antenna Patterns @ 220 GHz



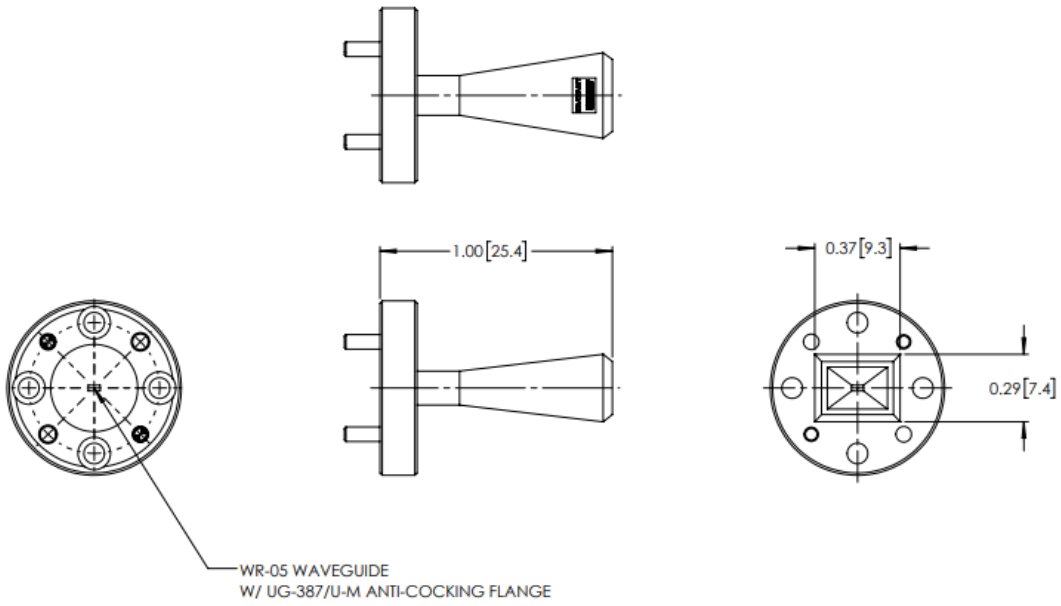
Simulated Gain vs. Frequency



Simulated Return Loss vs. Frequency



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



NOTE:

- This antenna is a mature product. The reason for only providing simulated data can be found in the following blog here.
- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- 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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