

SAR-2507-05-S2

WR-05 Pyramidal Horn Antenna, 25 dBi Gain

SAR-2507-05-S2 is a pyramidal horn antenna that operates from 140 GHz to 220 GHz. The antenna offers 25 dBi nominal gain and a typical half power beamwidth of 8 degrees on the E-plane and 9 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 Range	140 GHz		220 GHz
Gain		25 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		8°	
3 dB Beamwidth, H-Plane		9°	
Sidelobes, E-Plane		-10 dB	
Sidelobes, H-Plane		-25 dB	
Return Loss		20 dB	
Specification Temperature		+25° C	
Operation 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	0.7 Oz
Outline	AR-G3-A

ECCN

EAR99

FEATURES

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

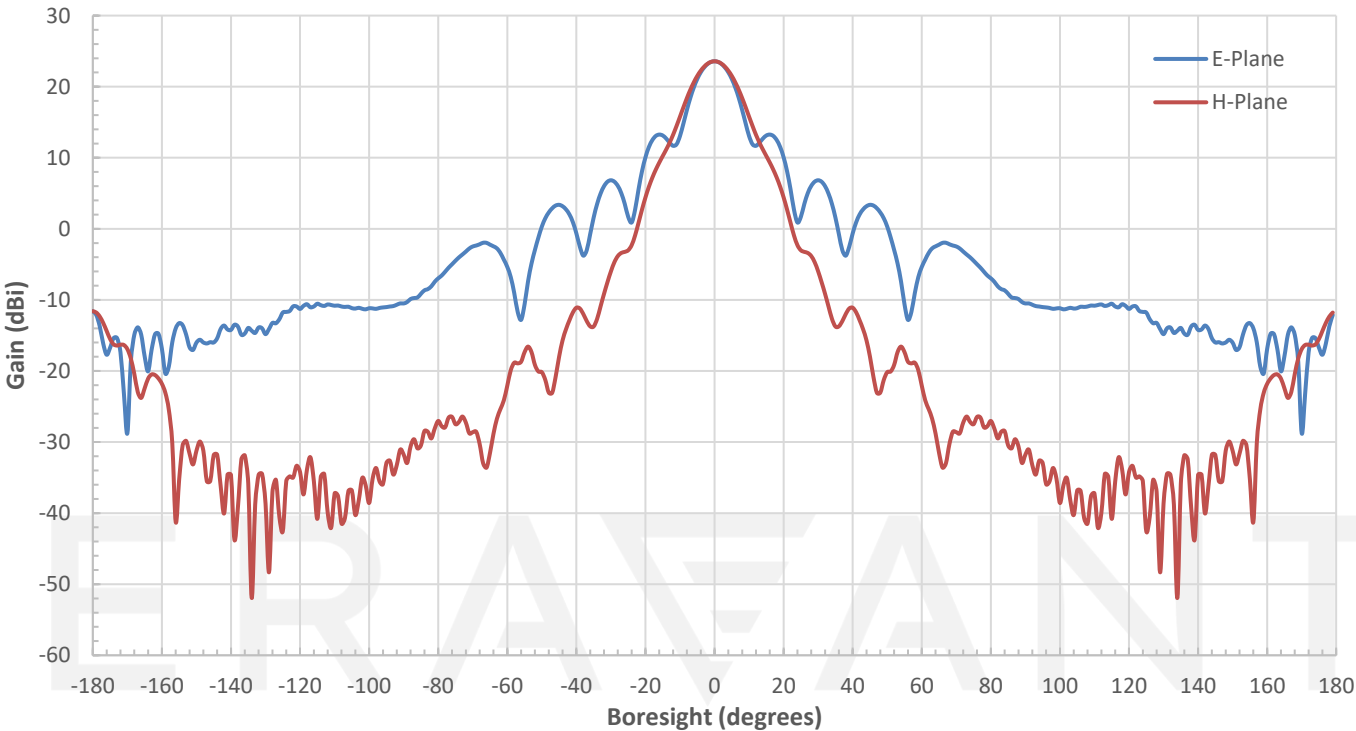
APPLICATIONS

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

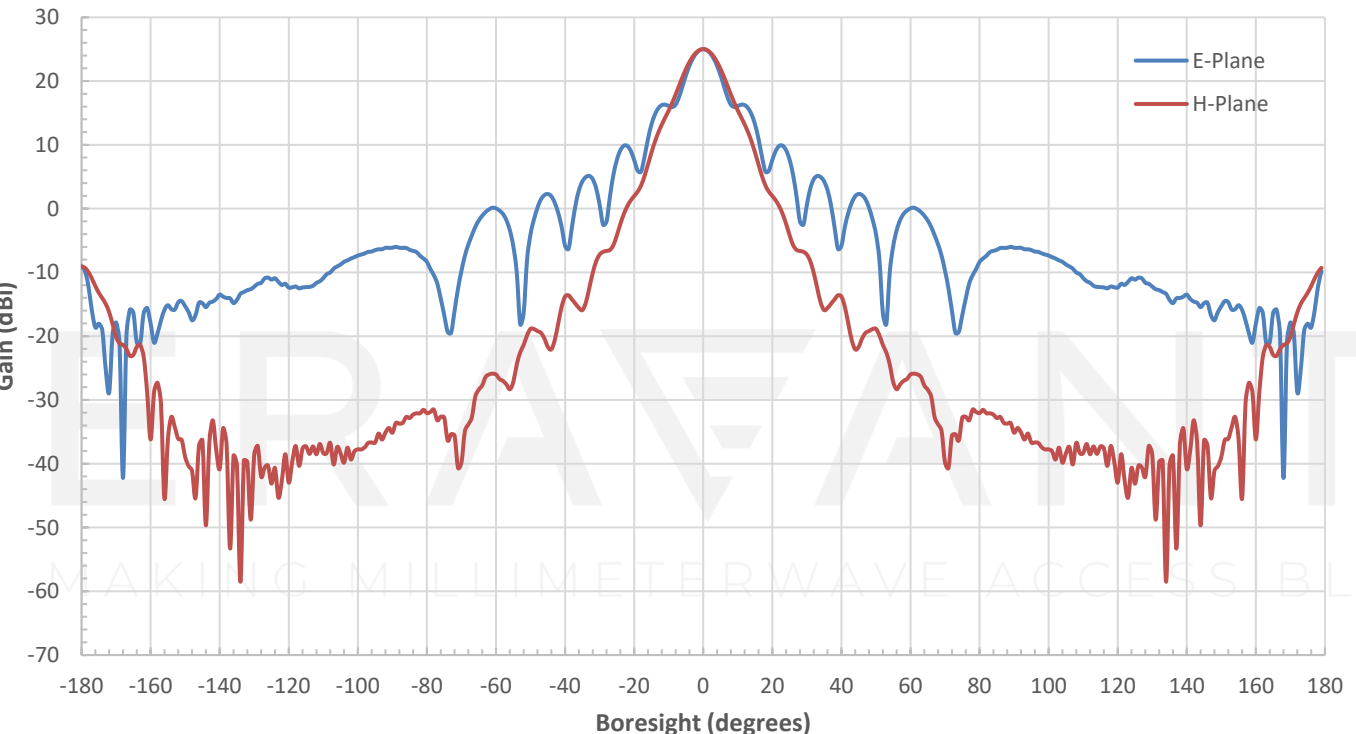
SUPPLEMENTAL DETAILS



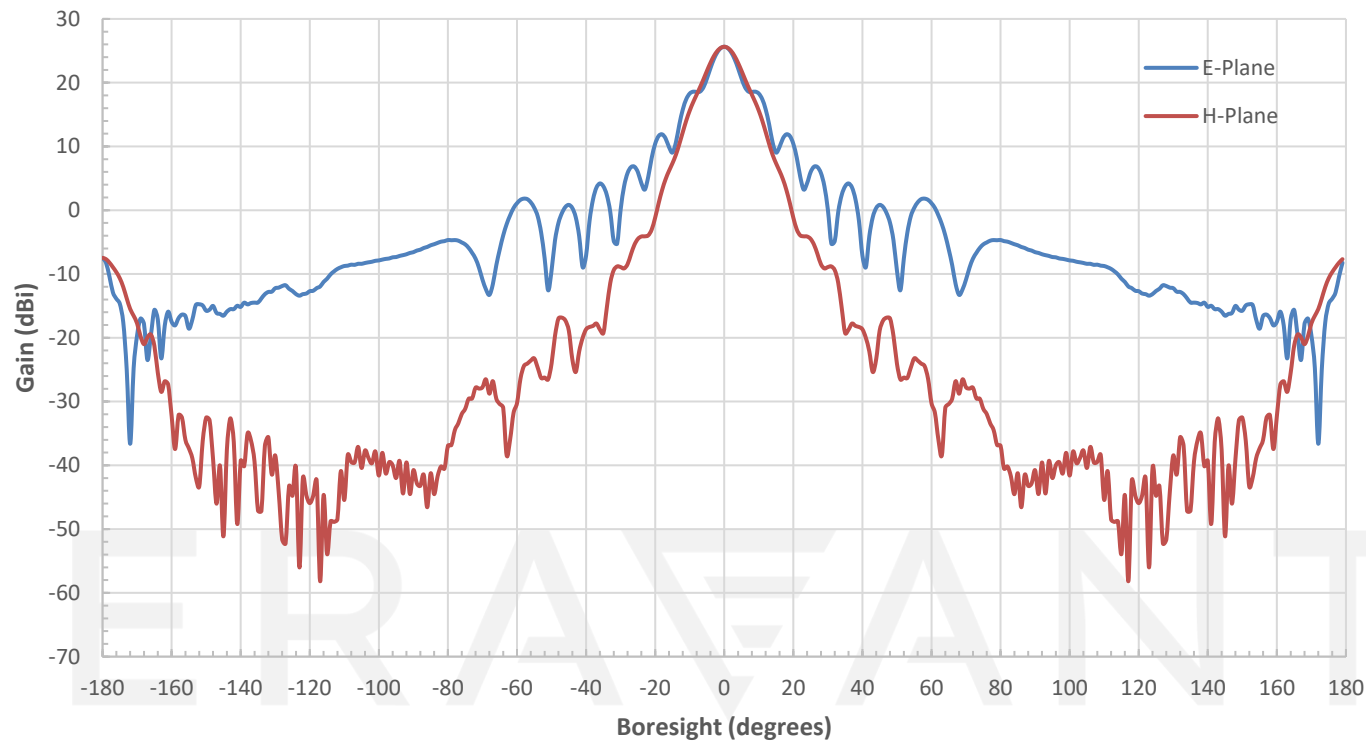
Simulated Antenna Patterns @ 140 GHz



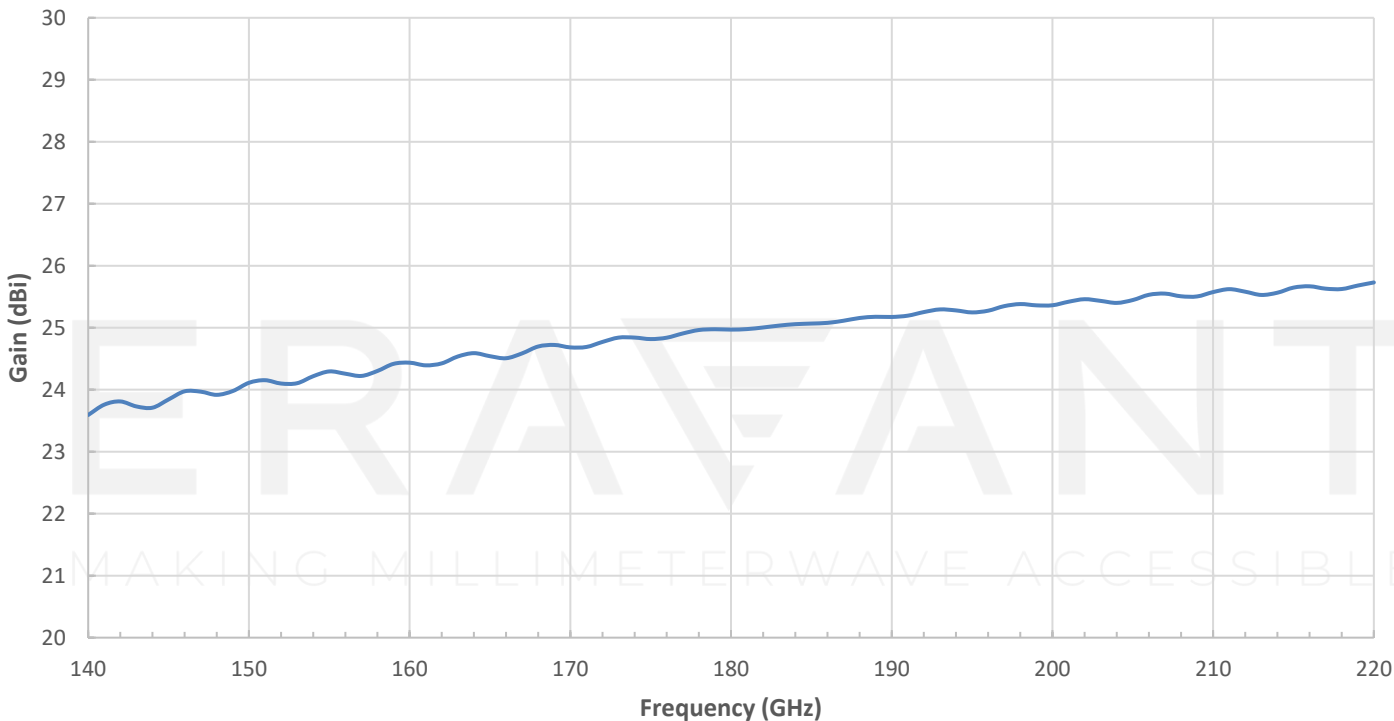
Simulated Antenna Patterns @ 180 GHz



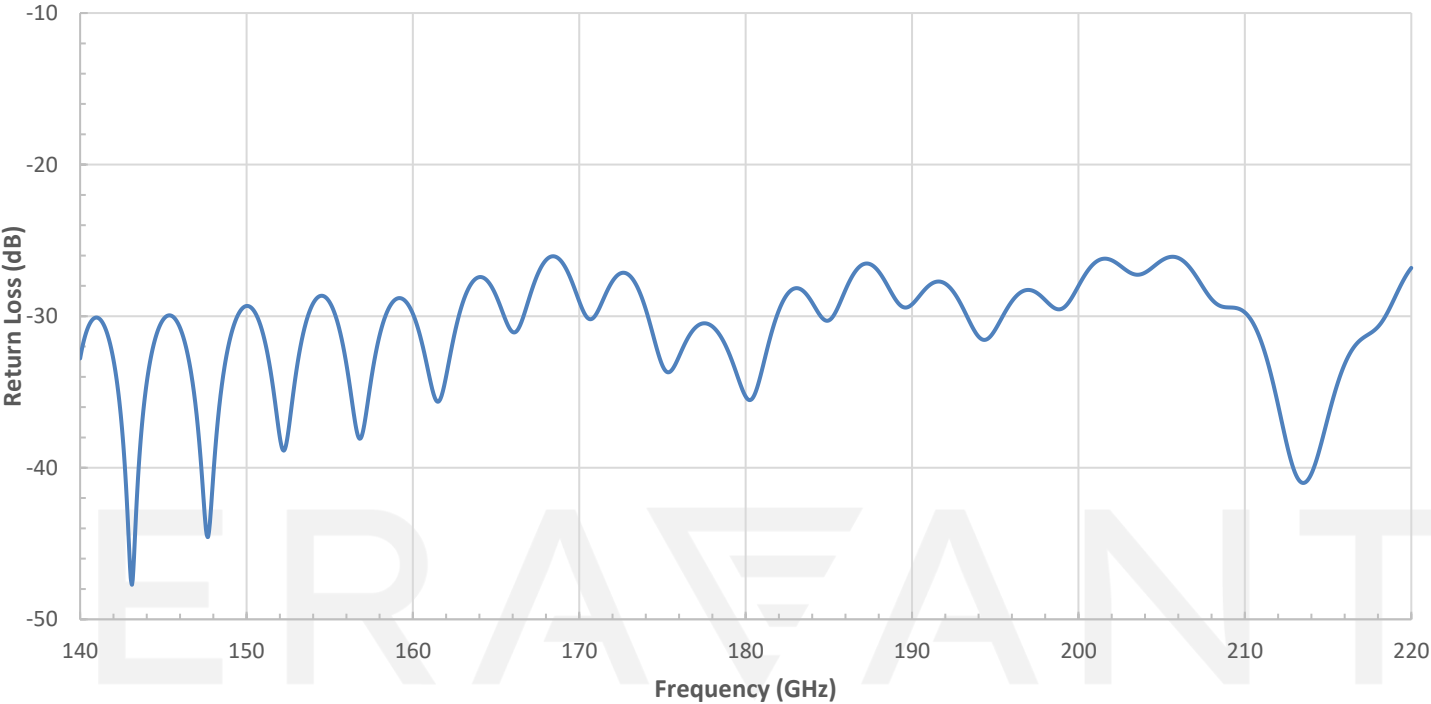
Simulated Antenna Patterns @ 220 GHz



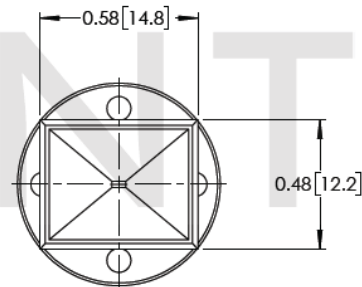
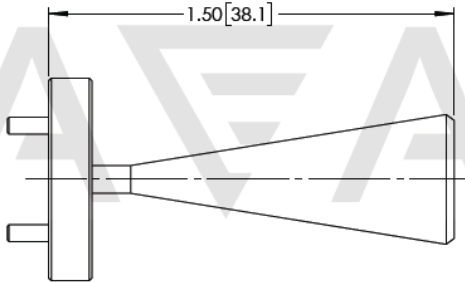
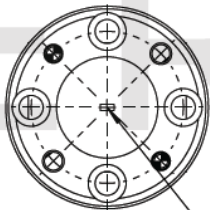
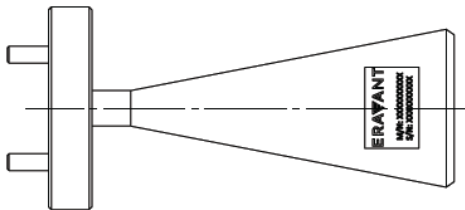
Simulated Gain vs. Frequency



Simulated Return Loss vs. Frequency



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



WR-05 WAVEGUIDE
W/ UG-387/U-M ANTI-COCKING FLANGE

NOTE:

- This antenna is a mature product. The reasons for only providing simulated data can be found in the following blog [here](#).
- Data provided is simulated, actual measured data may slightly vary.
- 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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