

SAR-2013-12-S2

WR-12 Pyramidal Horn Antenna, 20 dBi Gain

SAR-2013-12-S2 is an E-band pyramidal horn antenna that operates from 60 GHz to 90 GHz. The antenna offers 20 dBi nominal gain and a typical half power beamwidth of 14 degrees on the E-plane and 15 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-12 waveguide with UG-387/U anti-cocking flange.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	60 GHz		90 GHz
Gain	18.5 dBi	20 dBi	21 dBi
Polarization		Linear	
3 dB Beamwidth, E-Plane		14°	
3 dB Beamwidth, H-Plane		15°	
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-12 Waveguide
Flange Type	UG-387/U Anti-Cocking Flange
Size	1.00" (L) X 0.79" (W) X 0.64" (H)
Material	Brass
Finish	Gold Plated
Weight	0.6 Oz
Outline	AR-E1-A

ECCN

EAR99

FEATURES

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

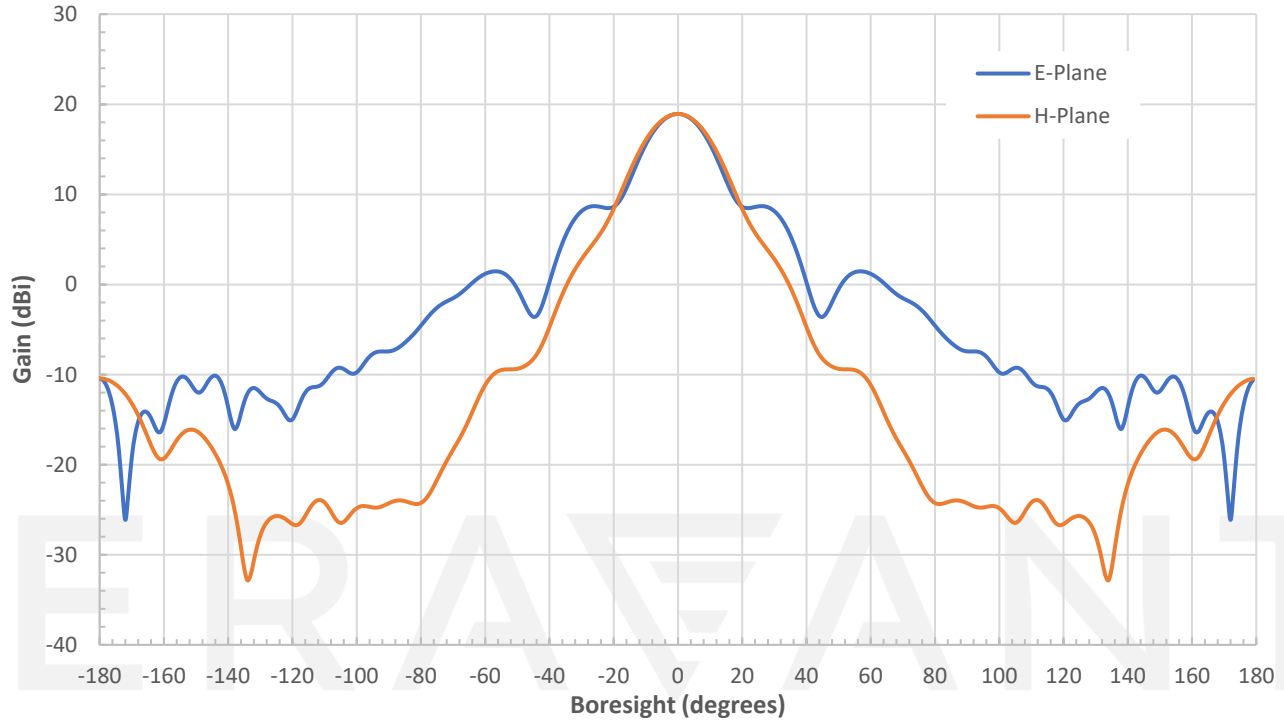
APPLICATIONS

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

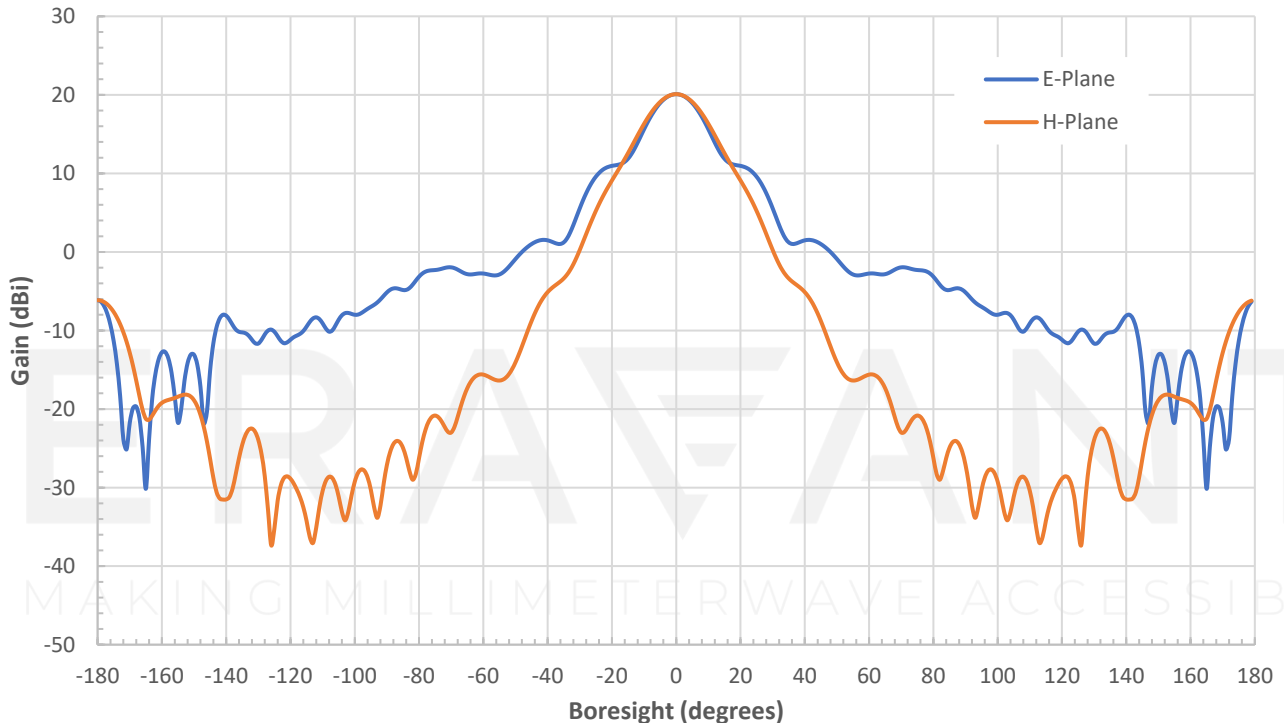
SUPPLEMENTAL DETAILS



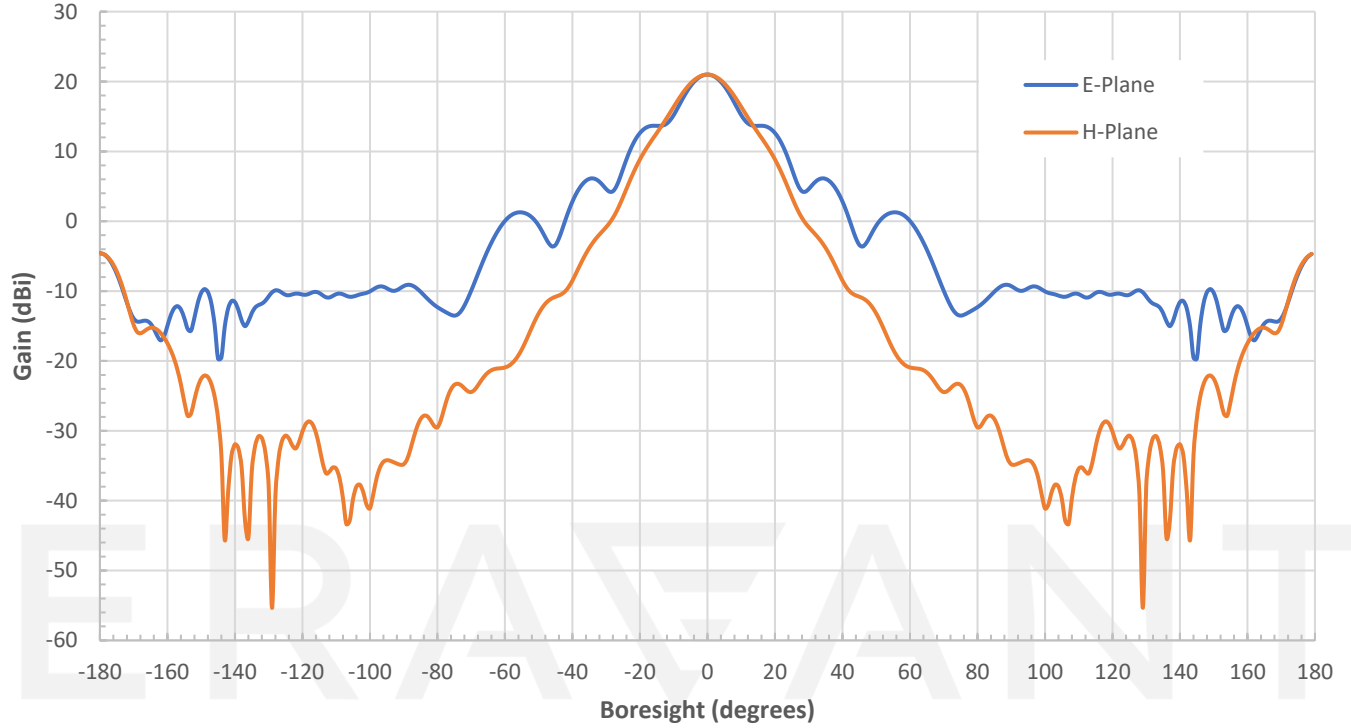
Simulated Antenna Patterns @ 60 GHz



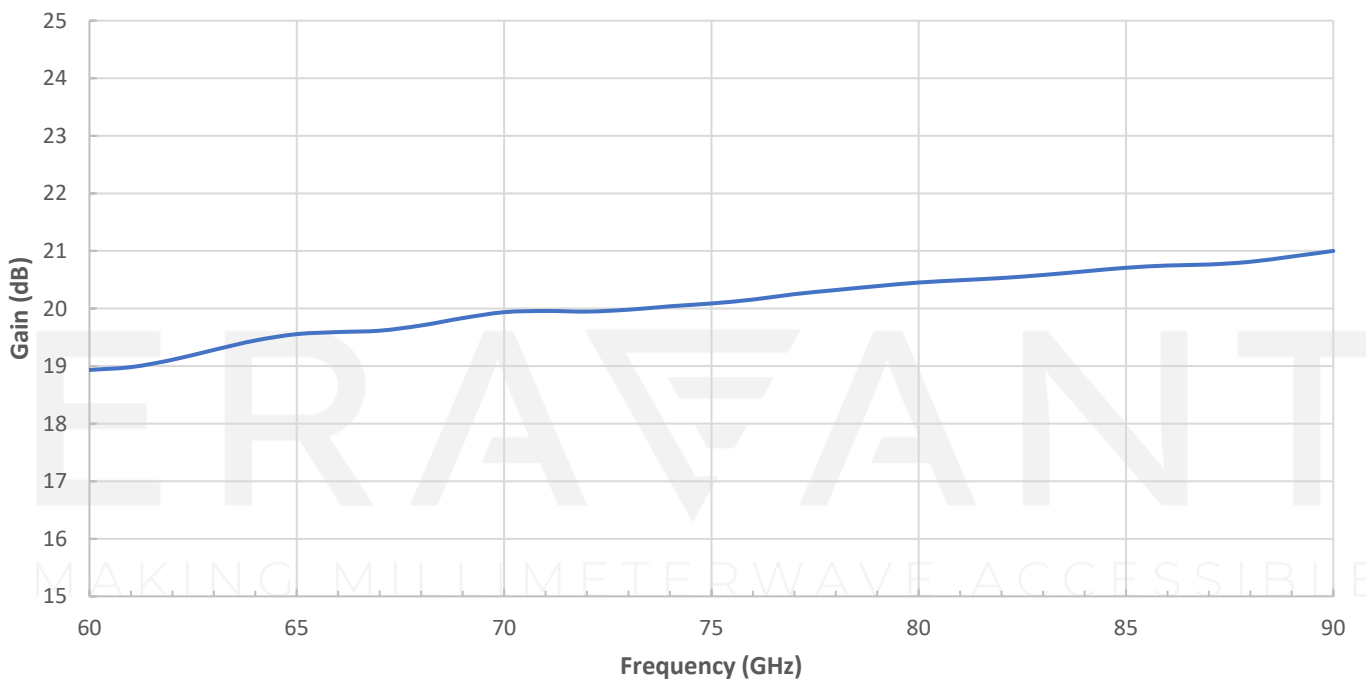
Simulated Antenna Patterns @ 75 GHz



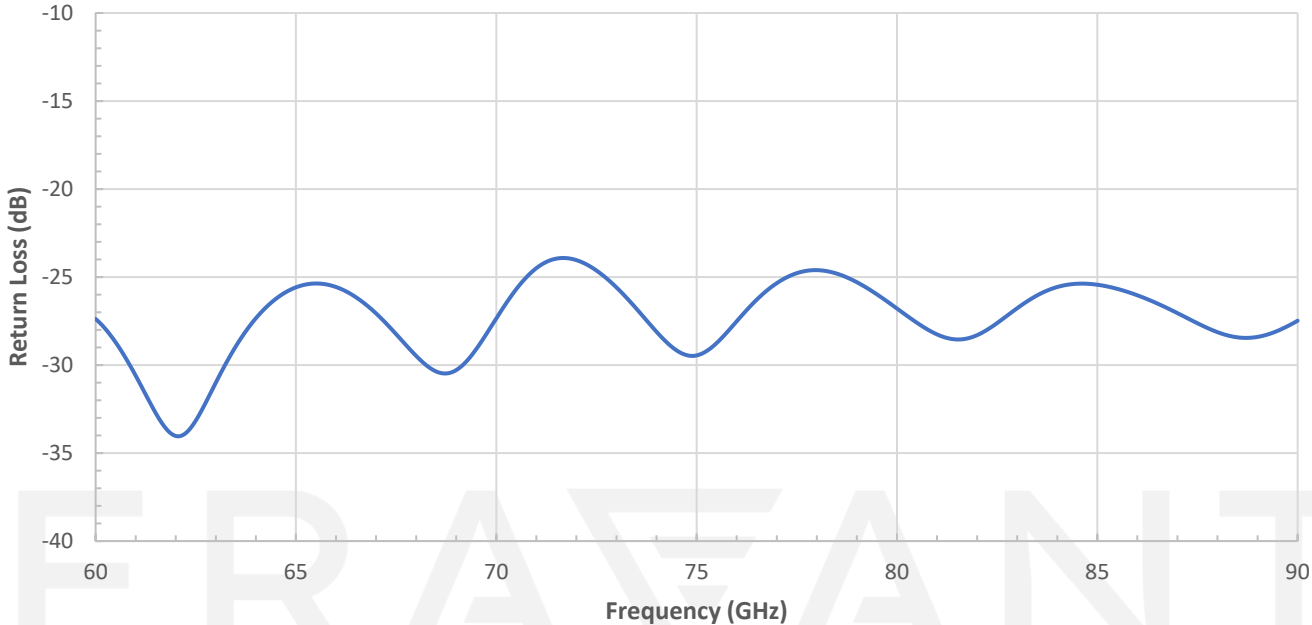
Simulated Antenna Patterns @ 90 GHz



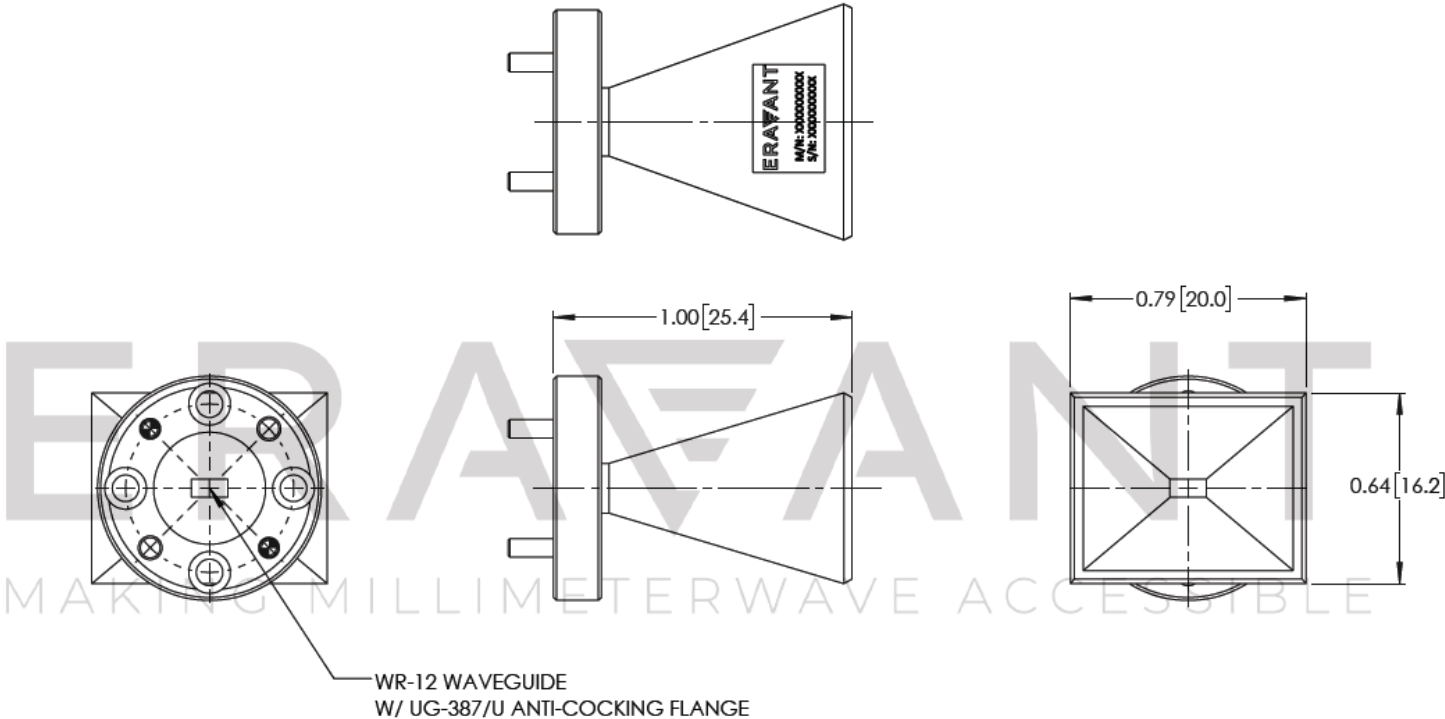
Simulated Gain vs. Frequency



Simulated Return Loss vs. Frequency



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



NOTE:

- This antenna is a mature product. The 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 waveguide will cause performance degradation and possible device damage.

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