

## SAR-2507-03-S2

### WR-03 Pyramindal Horn Antenna, 25 dBi Gain

**SAR-2507-03-S2** is a WR-03 pyramidal horn antenna that operates from 220 GHz to 330 GHz. The antenna offers 25 dBi nominal gain and a typical half power beamwidth of 9 degrees on the E-plane and 10 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-03 waveguide with UG-387/U-M Anti-Cocking flange.



### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	220 GHz		330 GHz
Gain		25 dBi	
Cross-polarization		30 dB	
3 dB Beamwidth, E-plane		9°	
3 dB Beamwidth, H-plane		10°	
Sidelobes, E-plane		-14 dB	
Sidelobes, H-plane		-30 dB	
Return Loss		23 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

**\*\*Actual measured cross-polarization level shall be around 40dB TYP, 35 dB min, however, our testing service needs to be purchased to guarantee the level. Contact us for more information.**

### Mechanical Specifications:

Item	Specification
Antenna Port	WR-03 Waveguide
Flange Type	UG-387/ U-M Anti-Cocking Flange
Material	Aluminum
Finish	Gold Plated
Weight	0.1 Oz
Outline	AR-033-A

#### ECCN

EAR99

#### FEATURES

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

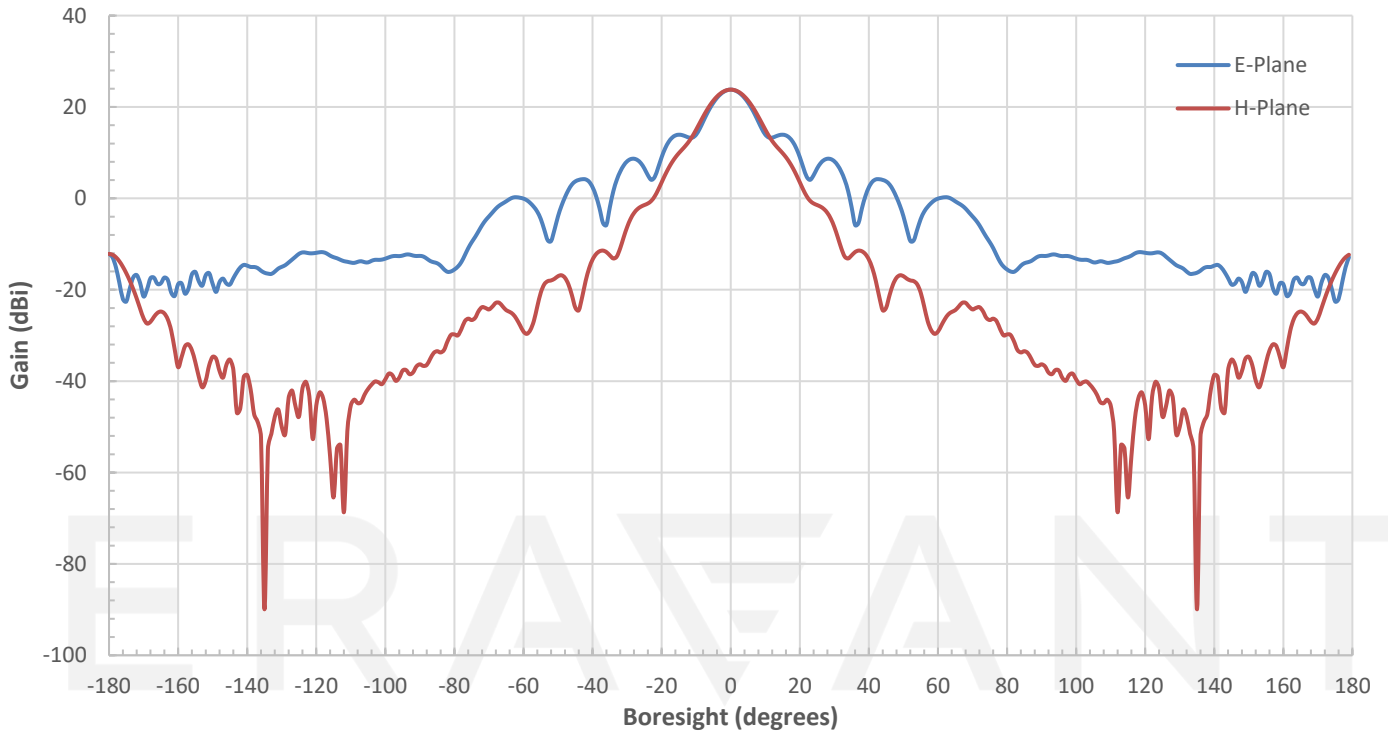
#### APPLICATIONS

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

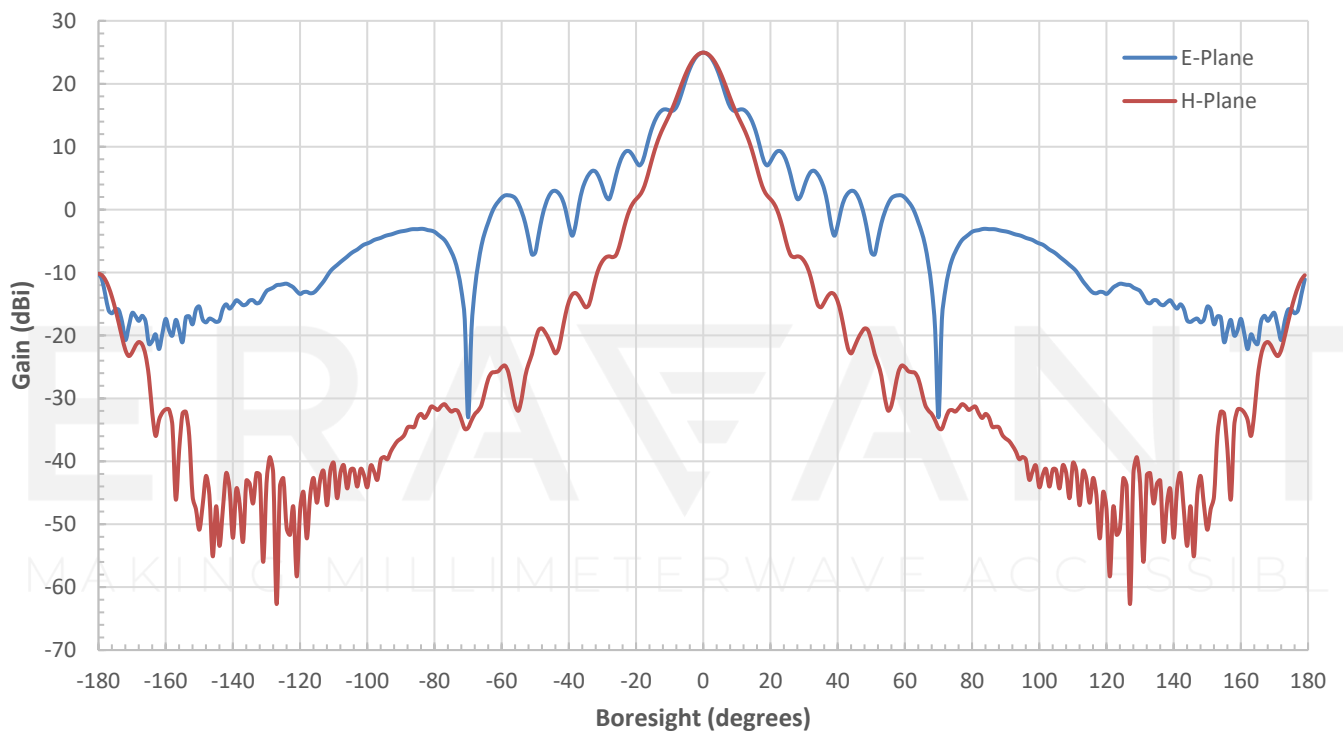
#### SUPPLEMENTAL DETAILS



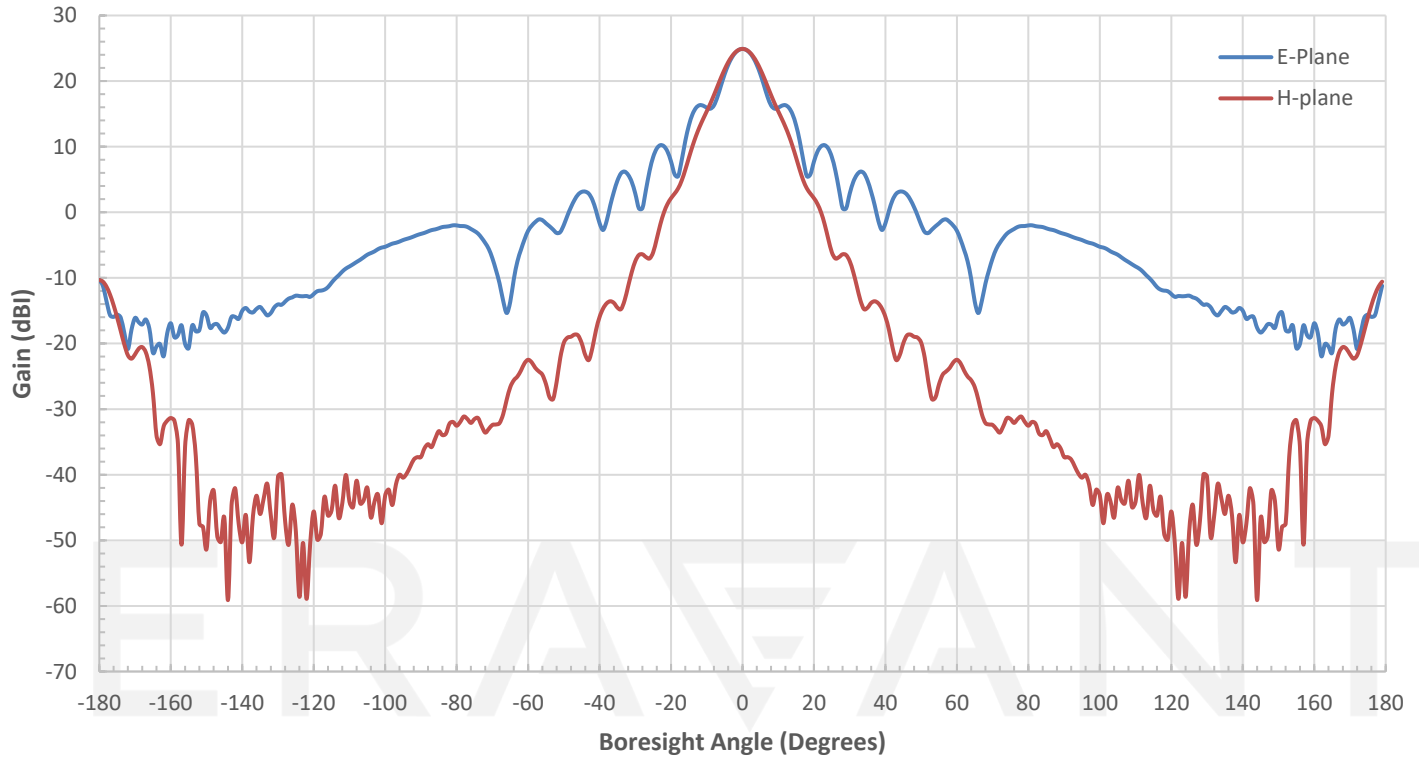
### Simulated Antenna Patterns @ 220 GHz



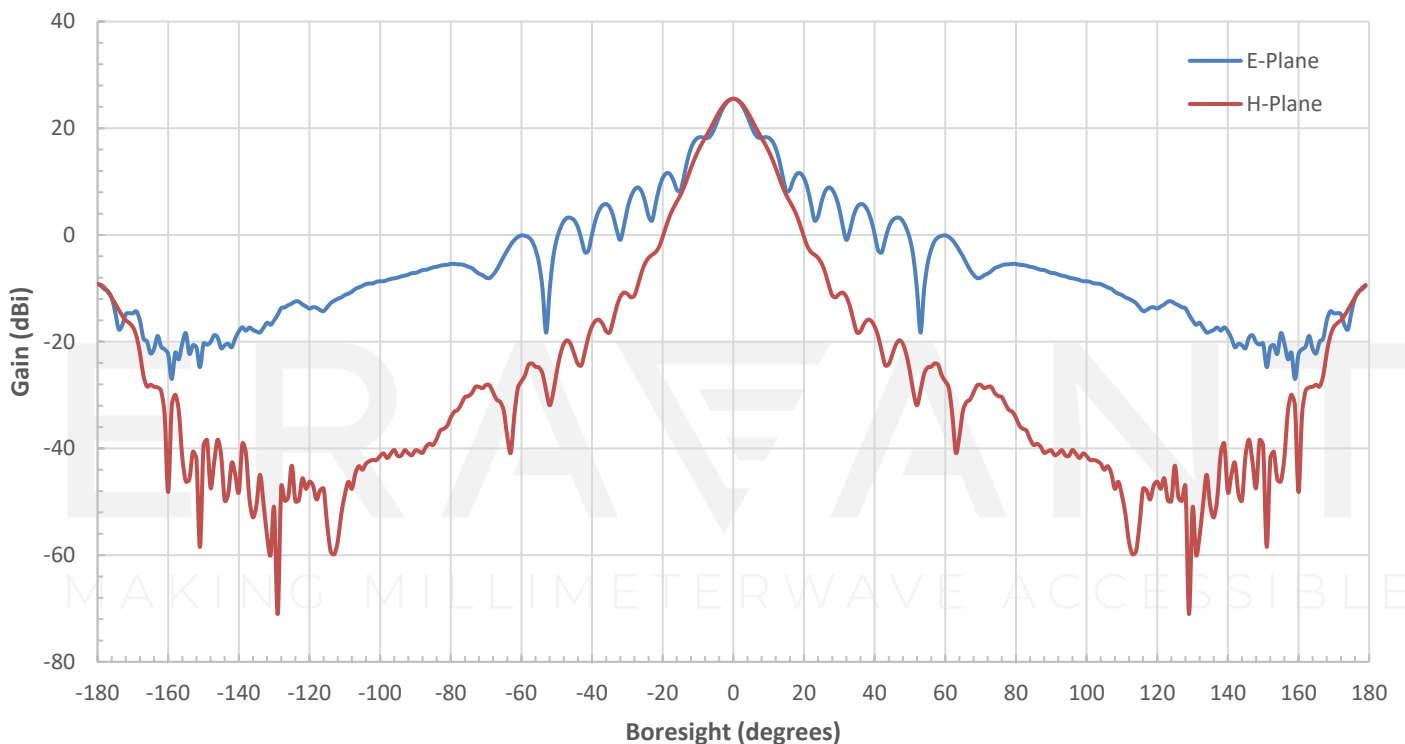
### Simulated Antenna Patterns @ 272 GHz



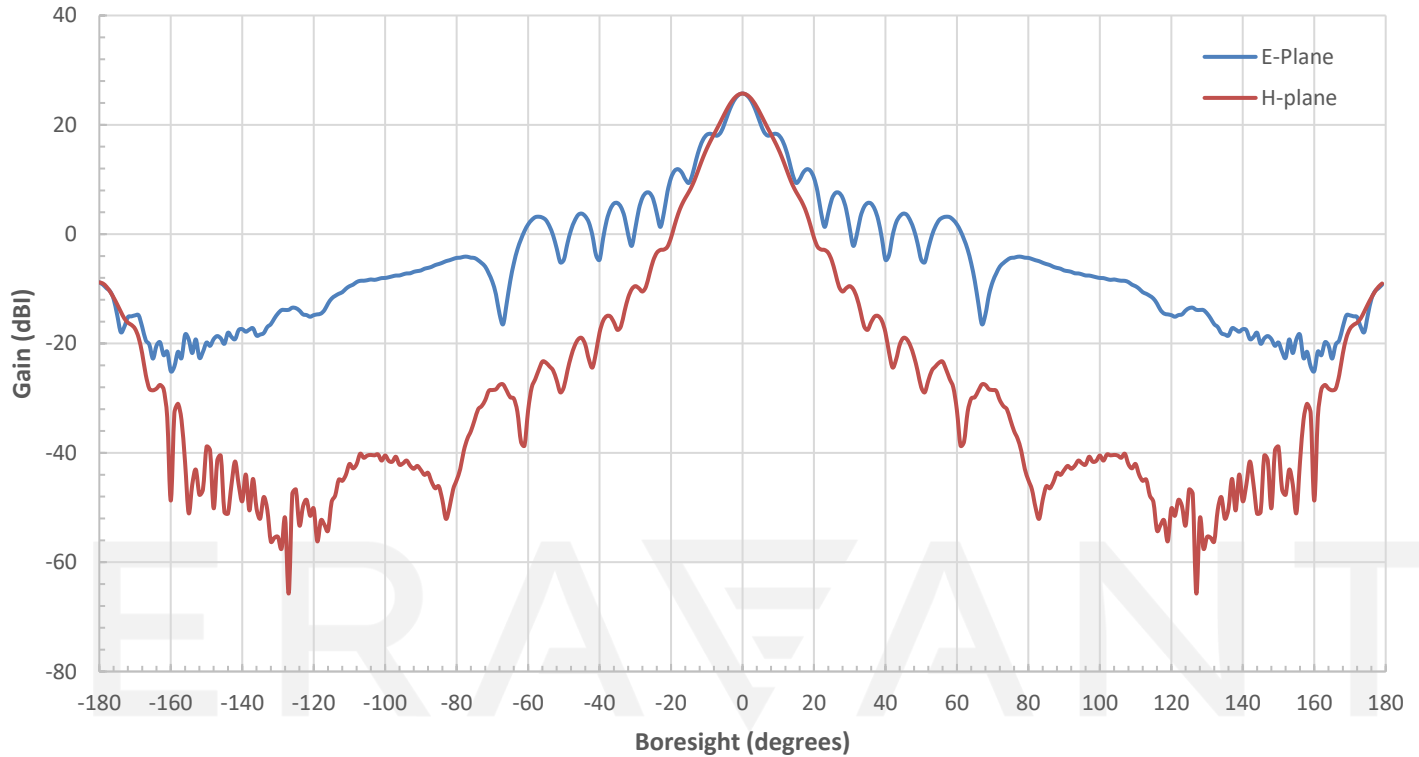
### Simulated Antenna Patterns @ 275 GHz



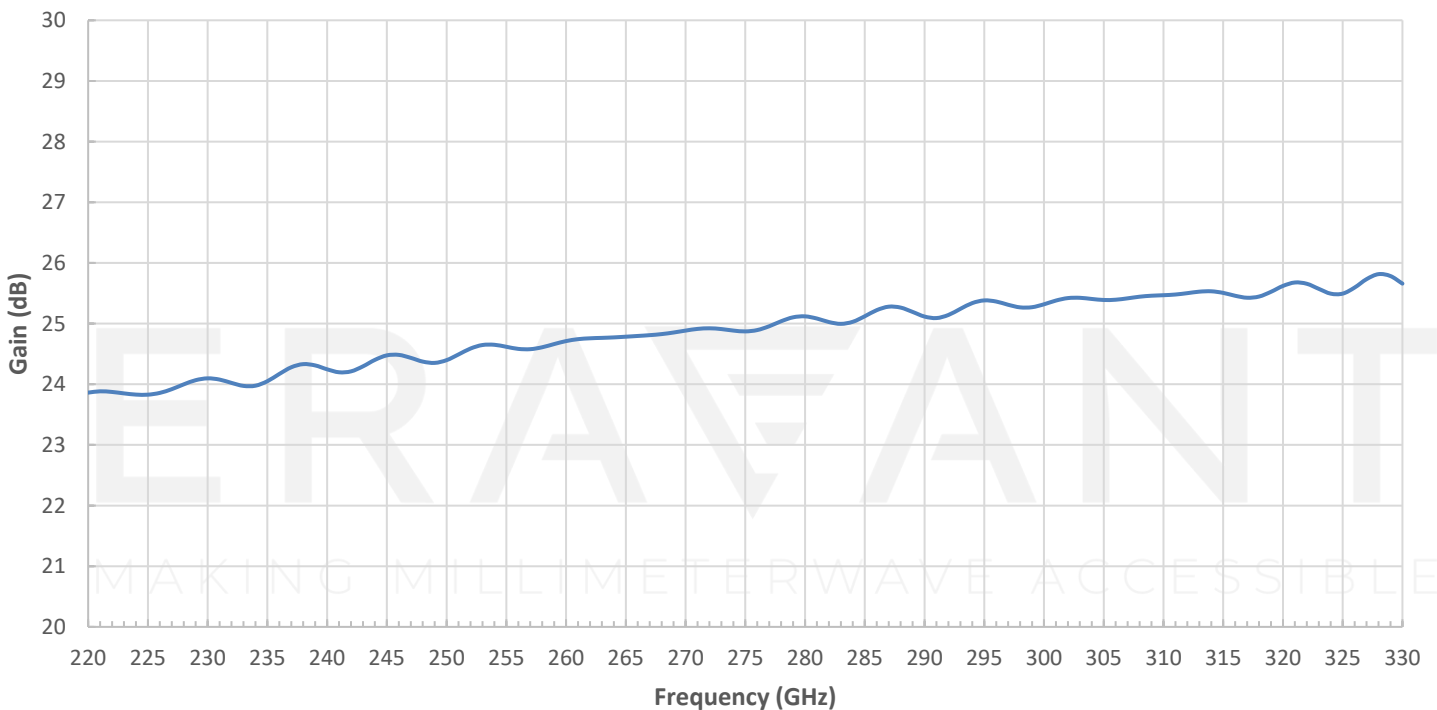
### Simulated Antenna Patterns @ 325 GHz



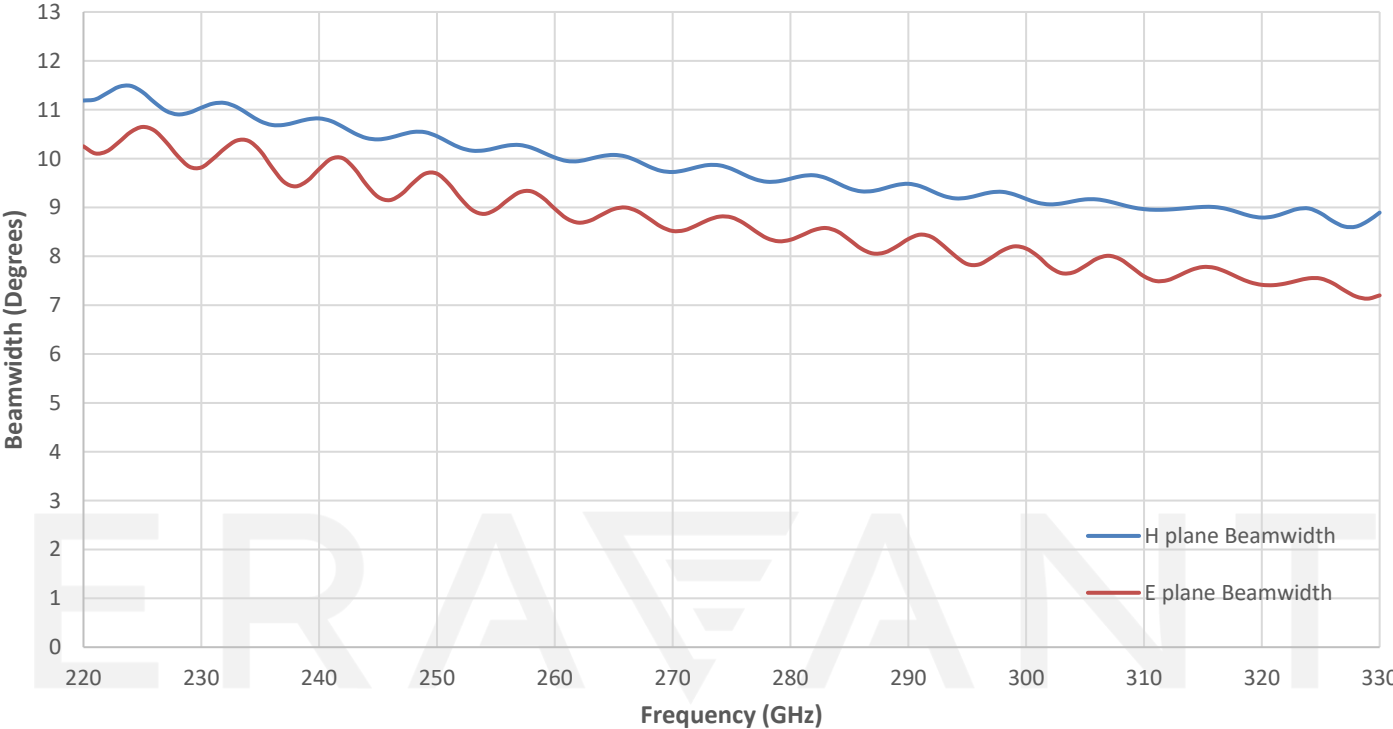
### Simulated Antenna Patterns @ 330 GHz



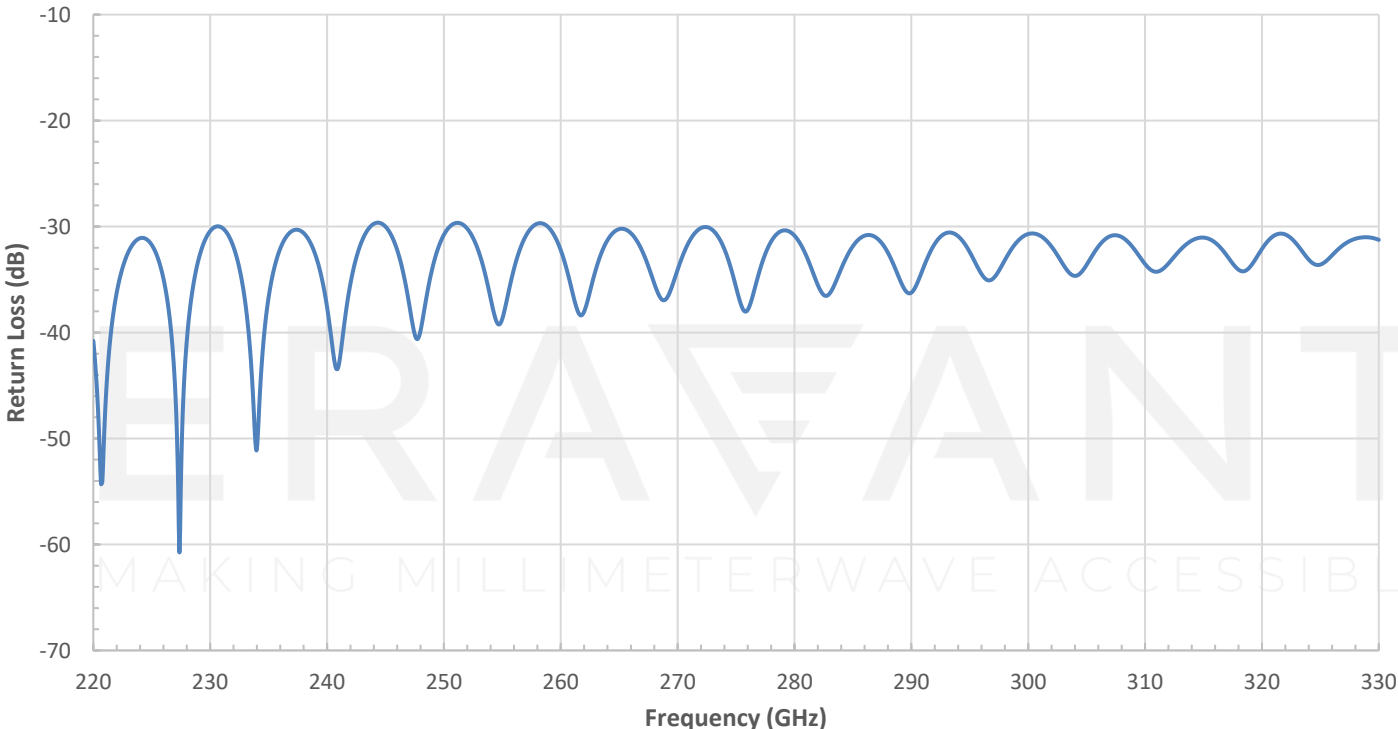
### Simulated Gain vs. Frequency



Simulated Beamwidth vs Frequency

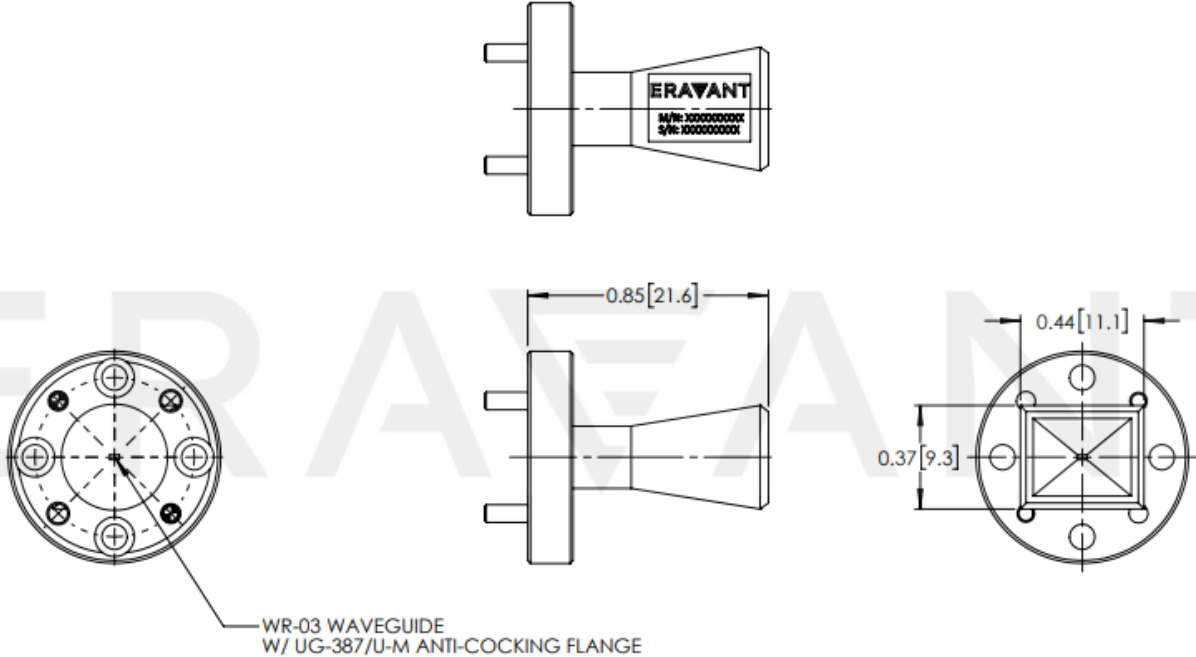


Simulated Return Loss vs. Frequency



## SAR-2507-03-S2

**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 waveguide will cause performance degradation and may damage the device.

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