

## SAR-2507-22-S2

### WR-22 Pyramidal Horn Antenna, 25 dBi Gain

**SAR-2507-22-S2** is a Q-band pyramidal horn antenna that operates from 33 GHz to 50 GHz. The antenna offers 25 dBi nominal gain and a typical half power beamwidth of 7 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-22 waveguide with UG-383/U anti-cocking flange.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	33 GHz		50 GHz
Gain	23.5 dBi	25 dBi	26 dBi
Polarization		Linear	
3 dB Beamwidth, E-Plane		7°	
3 dB Beamwidth, H-Plane		9°	
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
Flange Type	UG-383/U Anti-Cocking Flange
Material	Aluminum
Finish	Gold Plated
Weight	5.84 Oz
Size	5.70" (L) X 2.32" (W) X 1.87" (H)
Outline	AR-Q3-A

#### ECCN

EAR99

#### FEATURES

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

#### APPLICATIONS

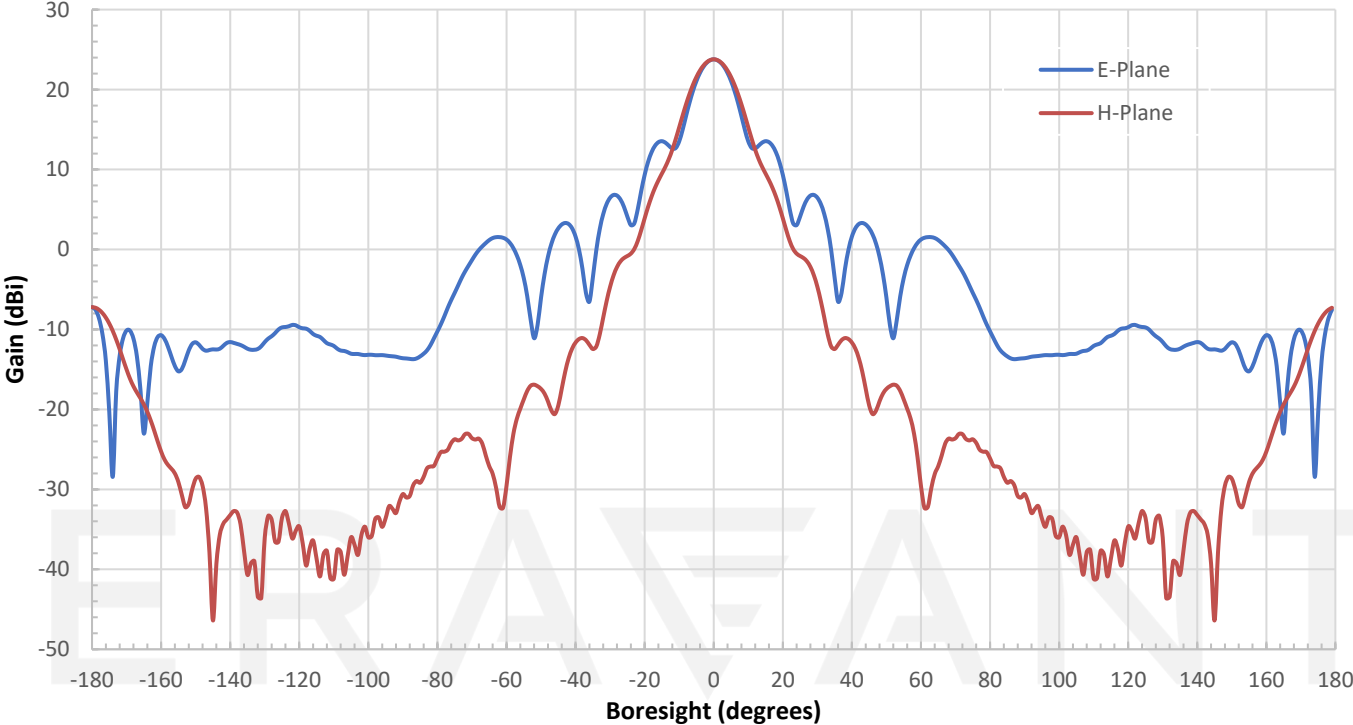
- Antenna Ranges
- Antenna Gain Measurements
- System Setups

#### SUPPLEMENTAL DETAILS

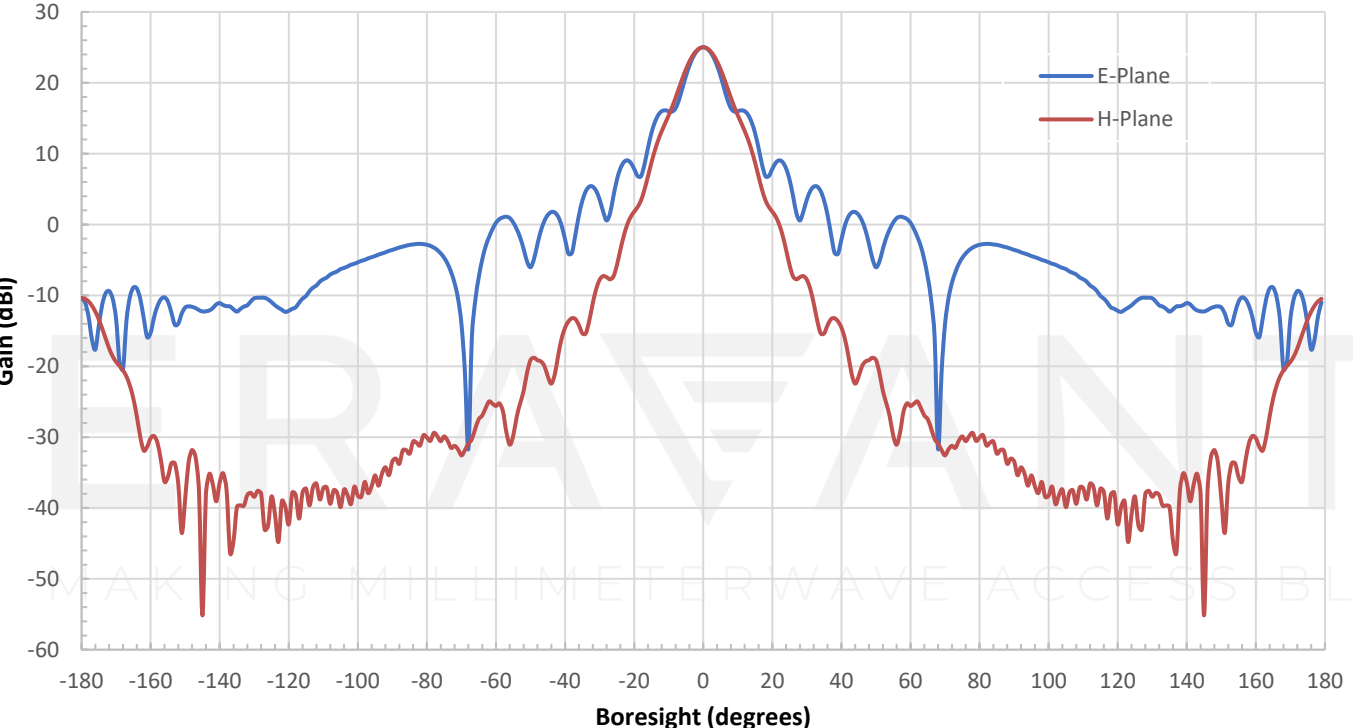


SAR-2507-22-S2

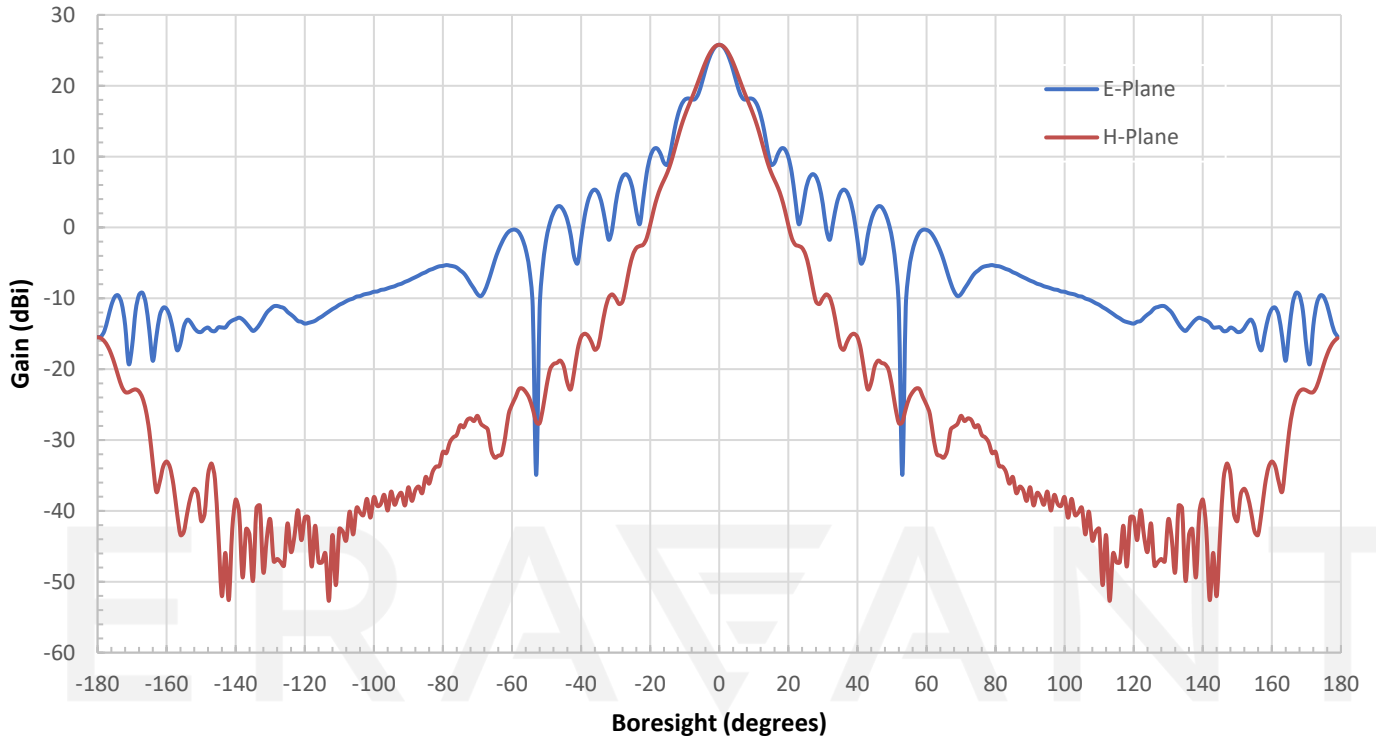
Simulated Antenna Patterns @ 33 GHz



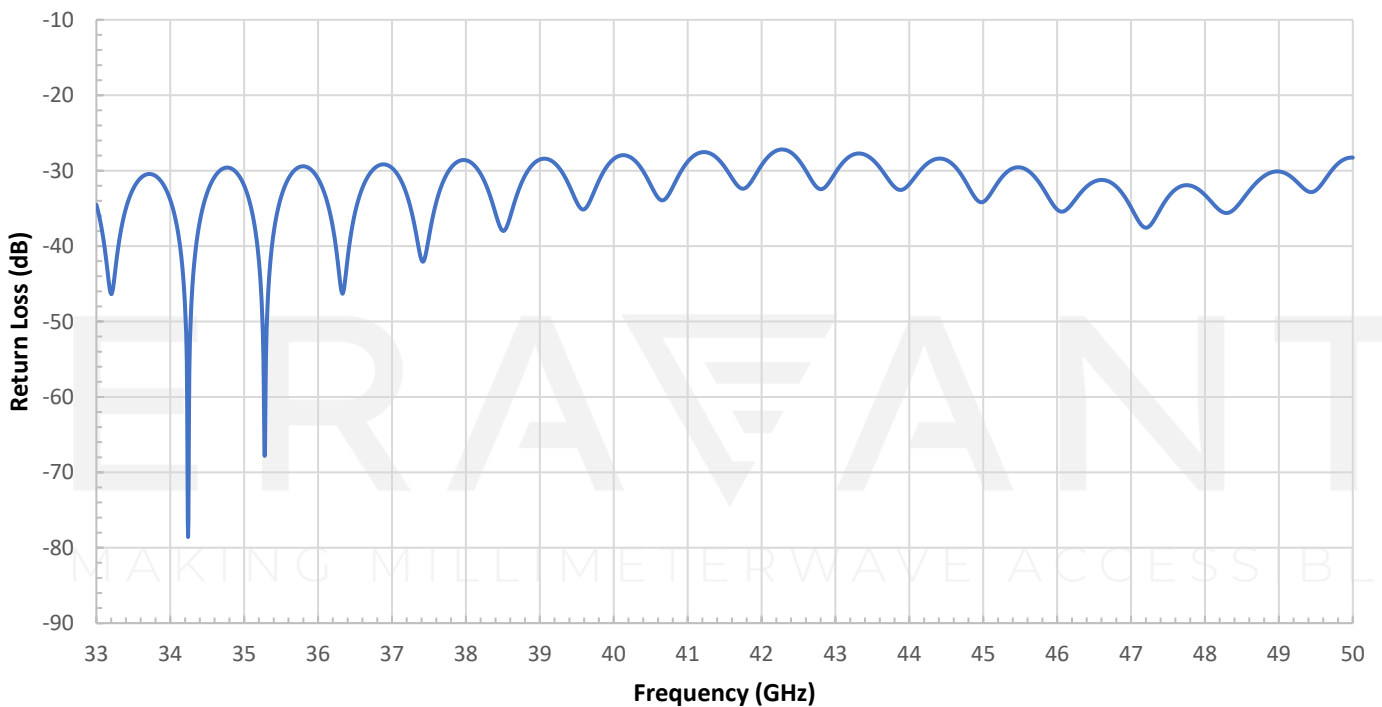
Simulated Antenna Patterns @ 42 GHz



### Simulated Antenna Patterns @ 50 GHz

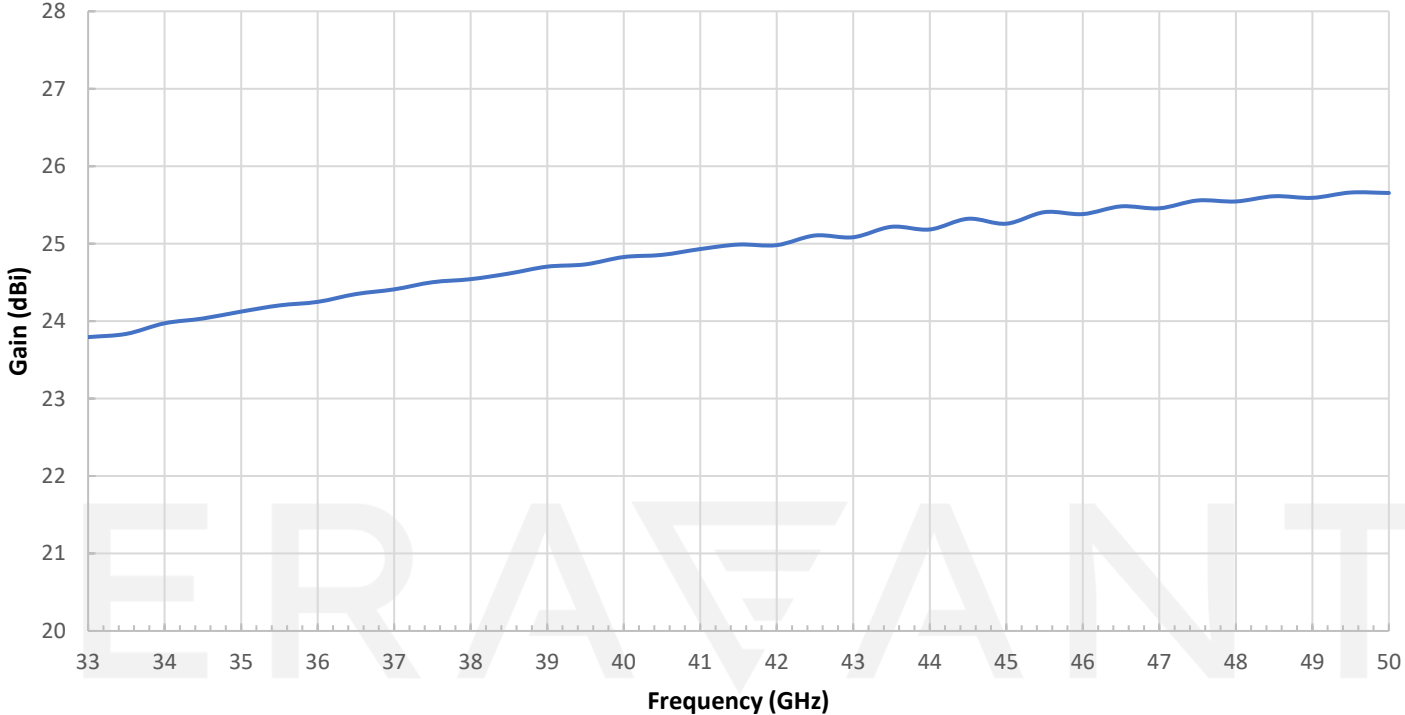


### Simulated Return Loss vs. Frequency

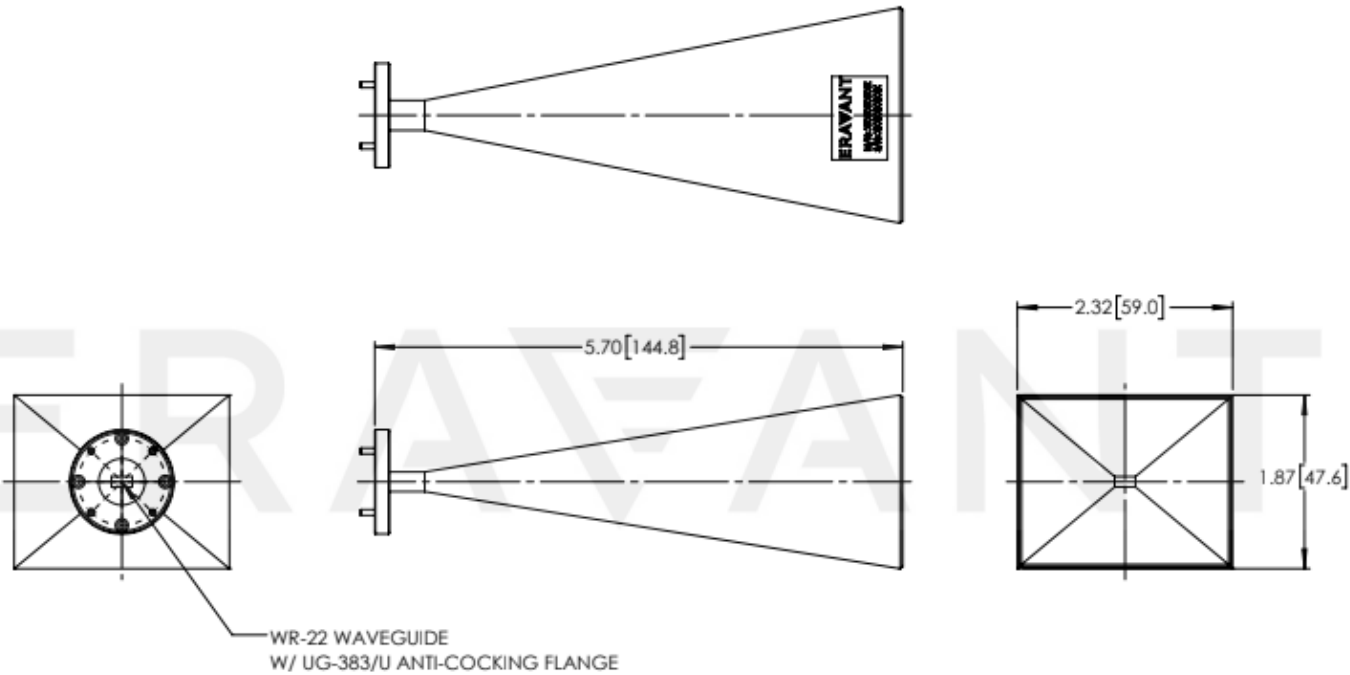


## SAR-2507-22-S2

### 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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