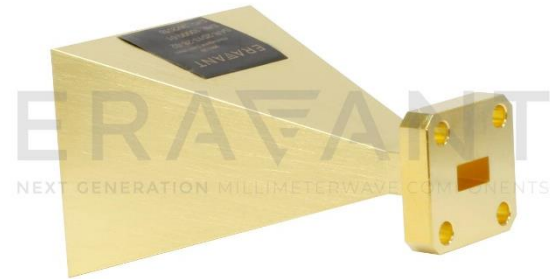


## SAR-2013-22-S2-599

### WR-22 Pyramidal Horn Antenna, 20 dBi gain, UG-599/U Flange

**SAR-2013-22-S2-599** is a Q-band pyramidal horn antenna that operates from 33 GHz to 50 GHz. The antenna offers 20 dBi nominal gain and a typical half power beamwidth of 15 degrees on the E-plane and 16 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-22 waveguide with UG-599/U flange.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	33 GHz		50 GHz
Gain		20 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		15°	
3 dB Beamwidth, H-Plane		16°	
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-599/U Flange
Material	Aluminum
Finish	Gold Plated
Weight	1.7 Oz
Size	2.00" (L) X 1.35" (W) X 1.07"(H)
Outline	AR-Q1-599

#### ECCN

EAR99

#### FEATURES

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

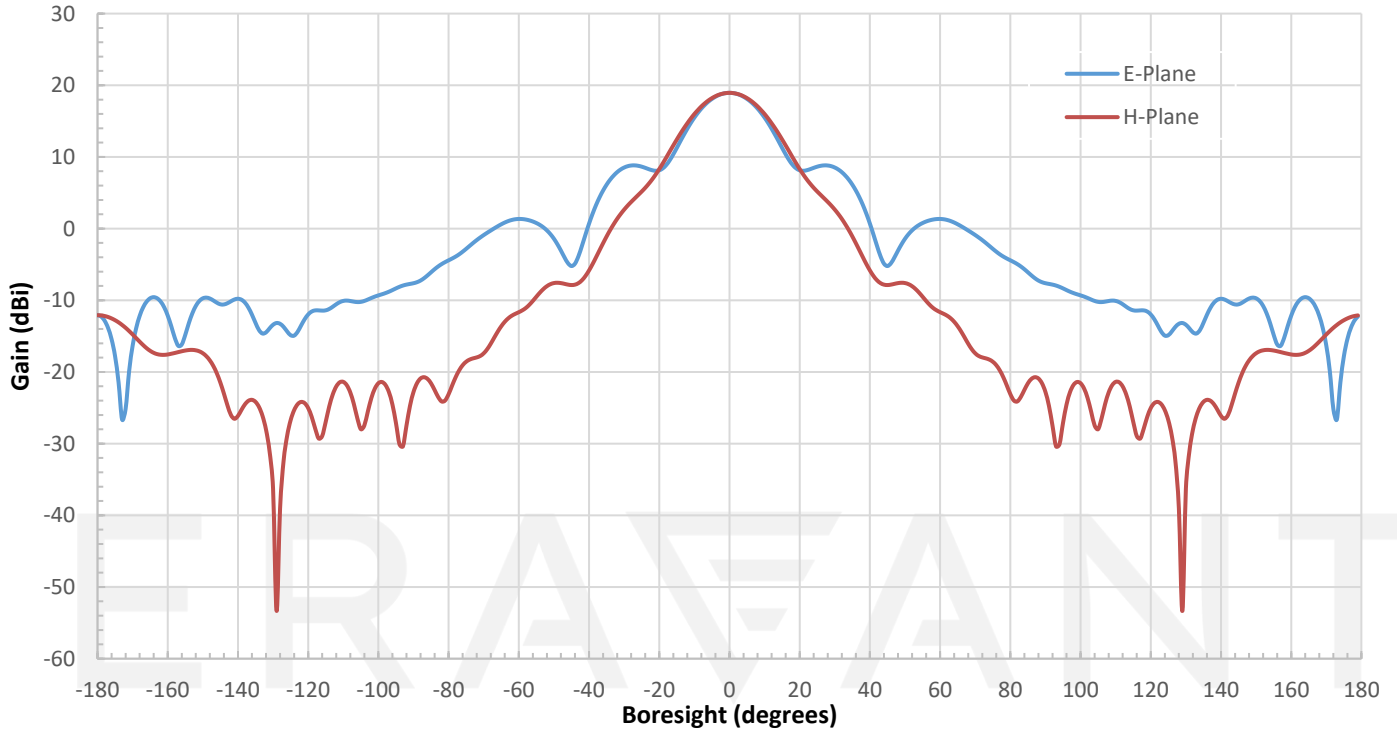
#### APPLICATIONS

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

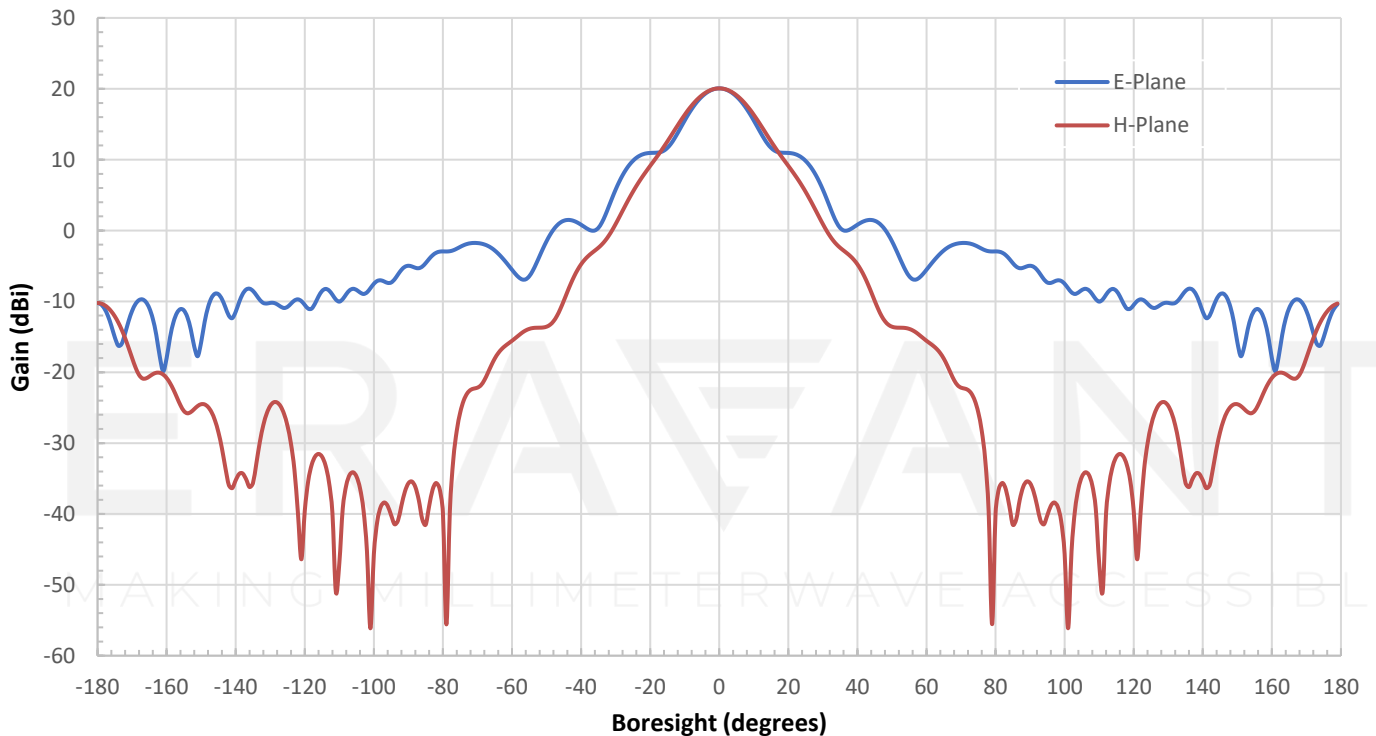
#### SUPPLEMENTAL DETAILS



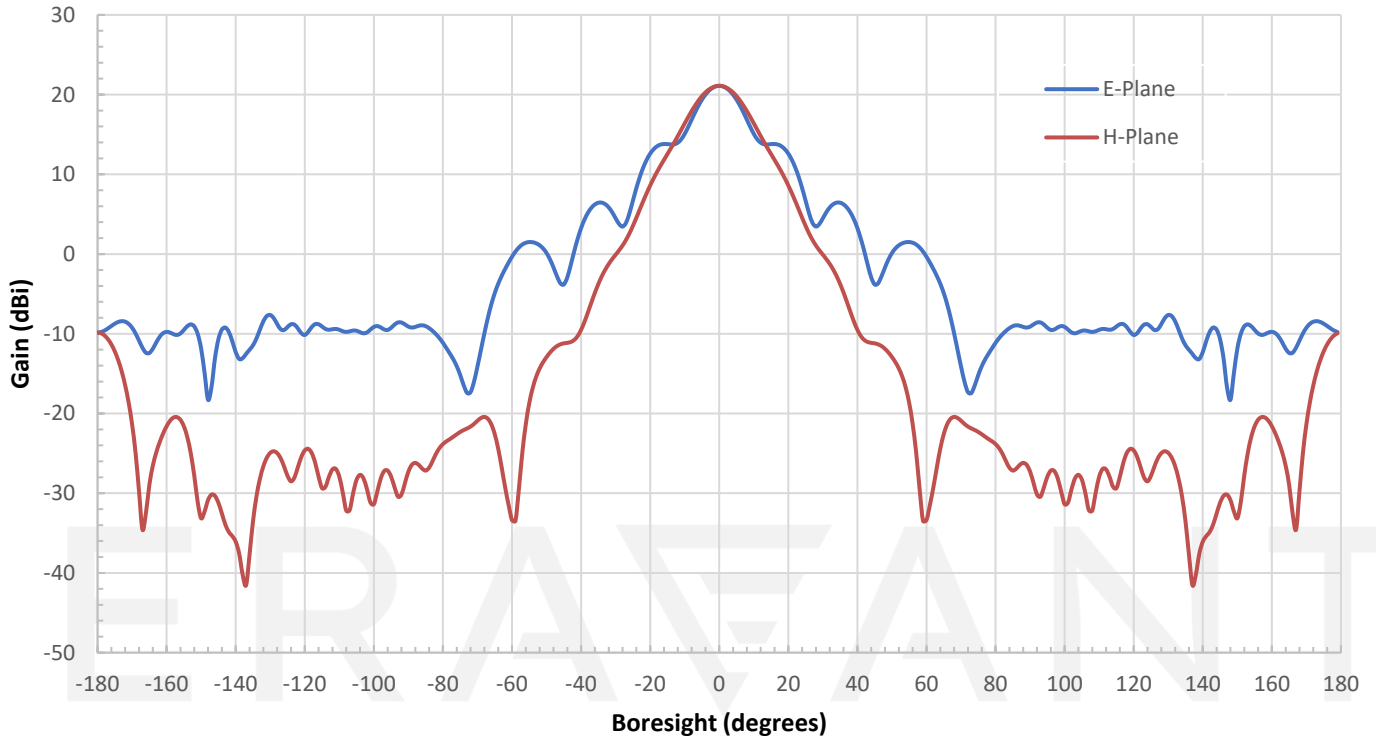
### Simulated Antenna Patterns @ 33 GHz



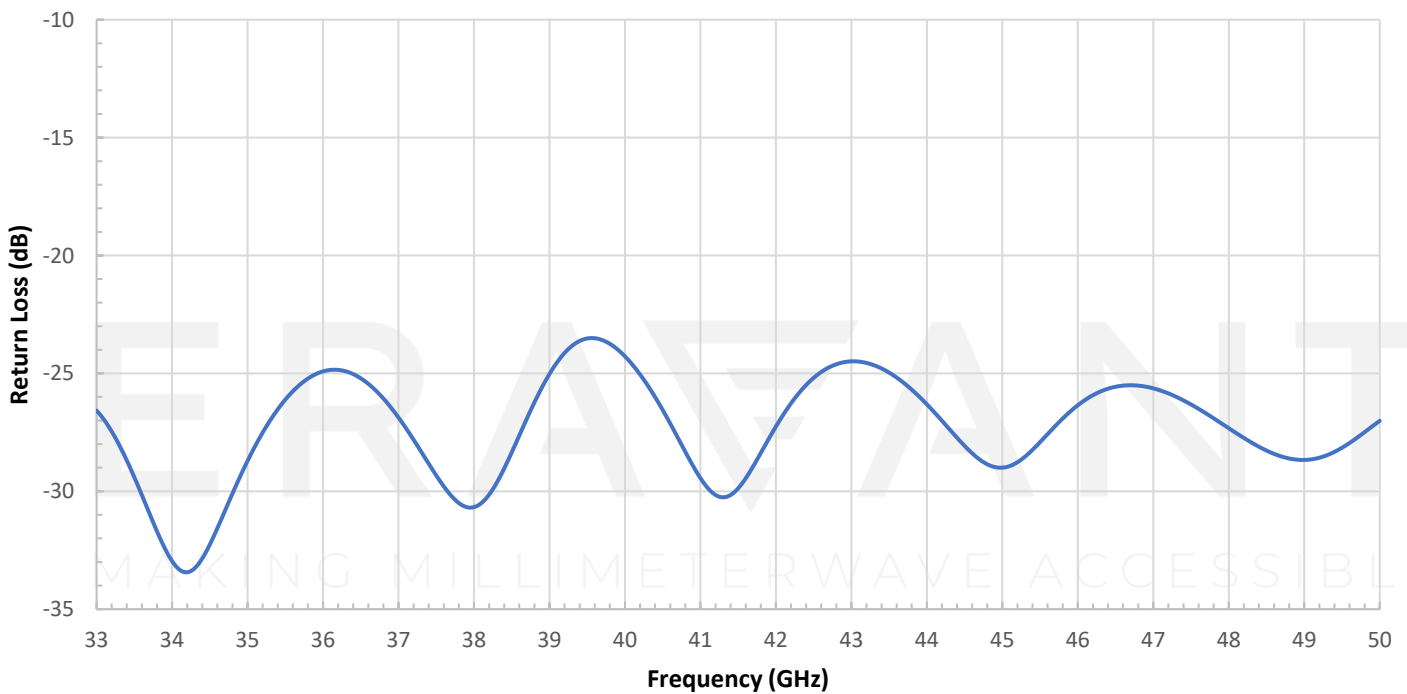
### Simulated Antenna Patterns @ 41.5 GHz



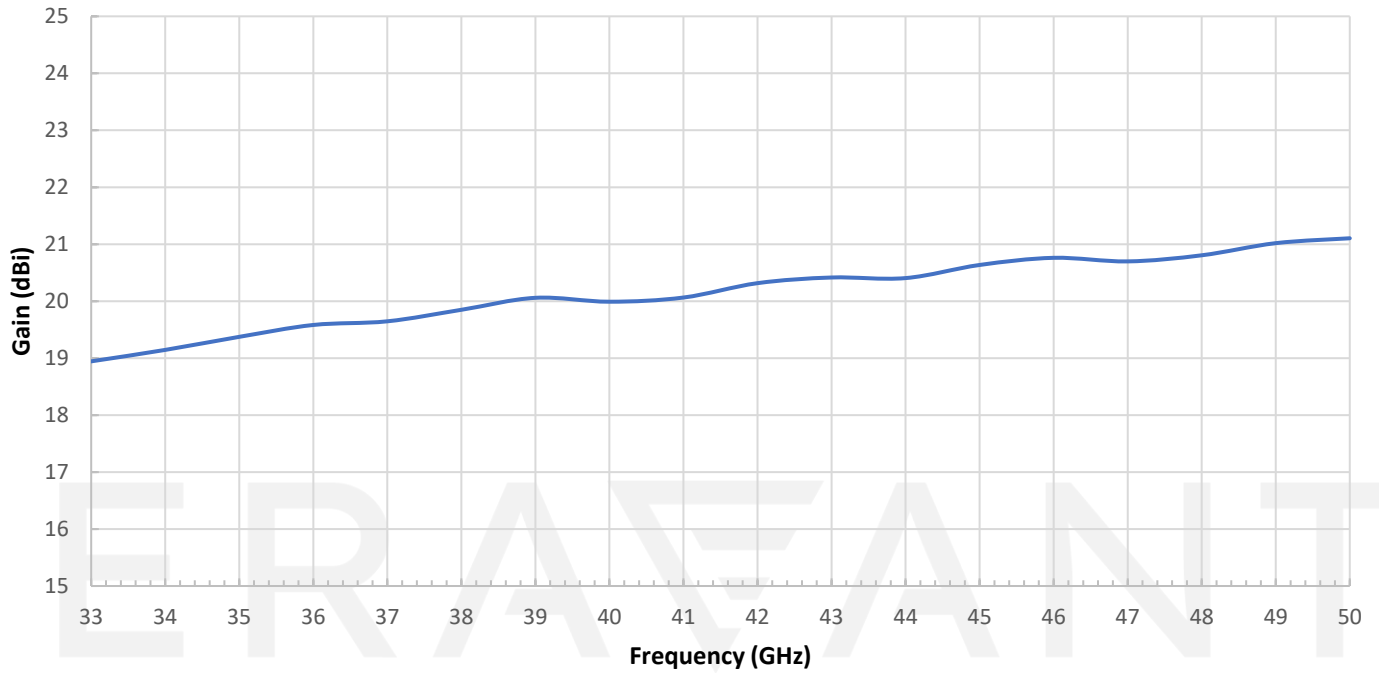
### Simulated Antenna Patterns @ 50 GHz



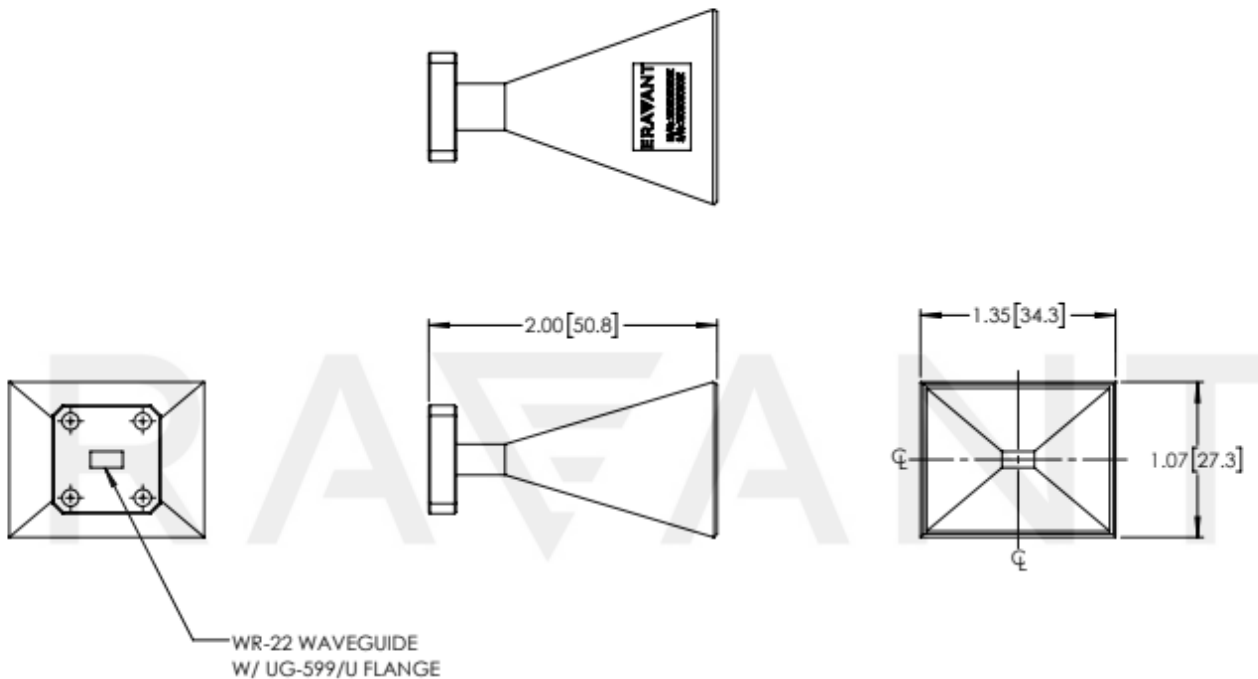
### Simulated Return Loss vs. Frequency



### 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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