

## SAR-2013-06-S2

### WR-06 Pyramidal Horn Antenna, 20 dBi Gain

**SAR-2013-06-S2** is a D-band pyramidal horn antenna that operates from 110 to 170 GHz. The antenna offers 20 dBi nominal gain and a typical half power beamwidth of 17 degrees on the E-plane and 18 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-06 waveguide with UG-387/U-M anti-cocking flange.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	110 GHz		170 GHz
Gain		20 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		17°	
3 dB Beamwidth, H-Plane		18°	
Sidelobes, E-Plane		-11 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-06 Waveguide
Flange Type	UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	0.4 Oz
Size	0.80" (L) X 0.39" (W) X 0.32" (H)
Outline	AR-D1-A

#### ECCN

EAR99

#### FEATURES

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

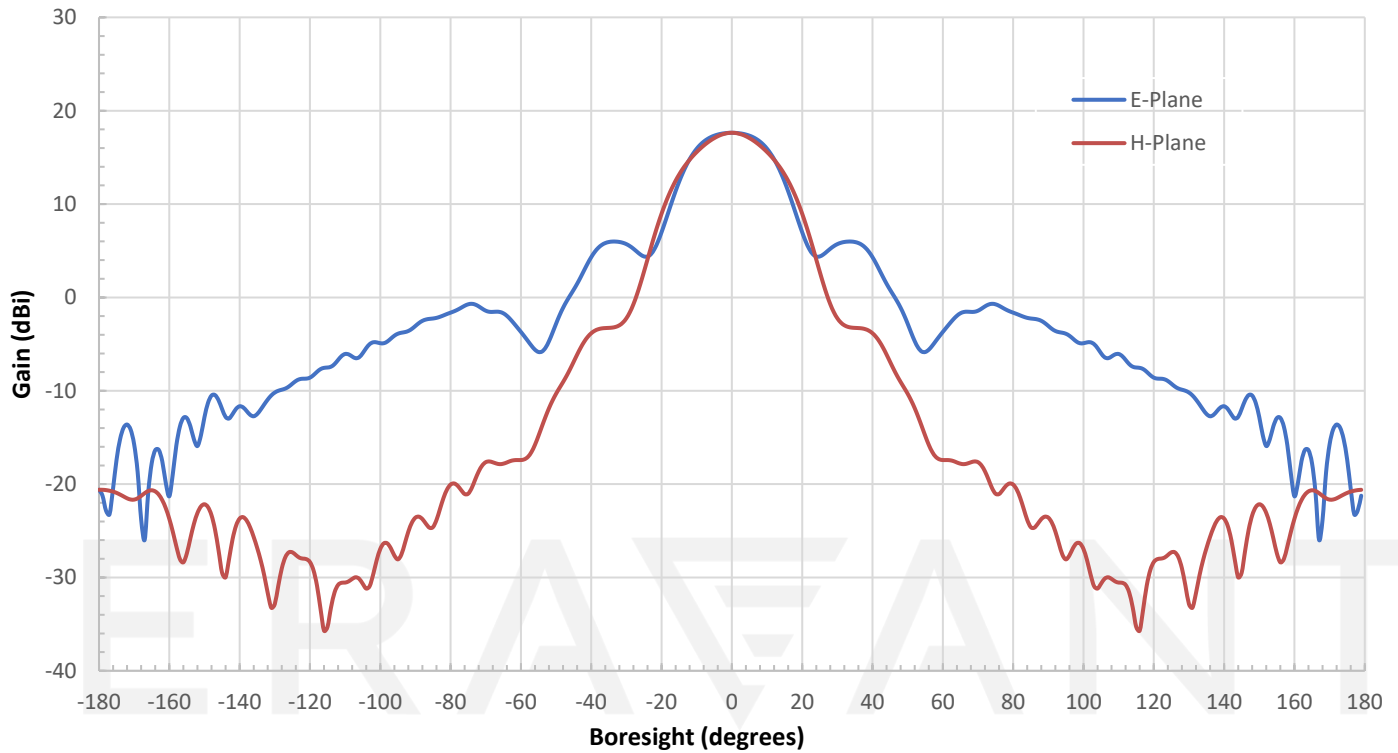
#### APPLICATIONS

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

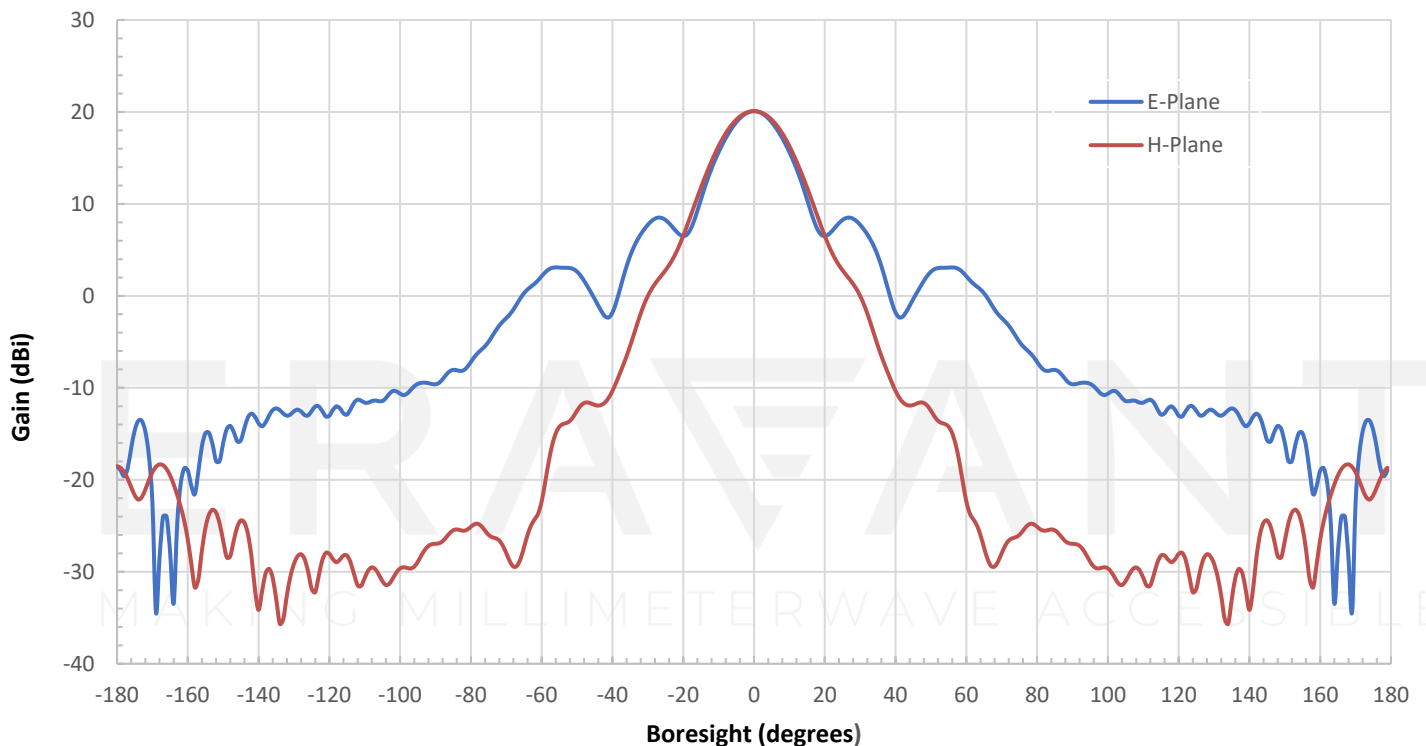
#### SUPPLEMENTAL DETAILS



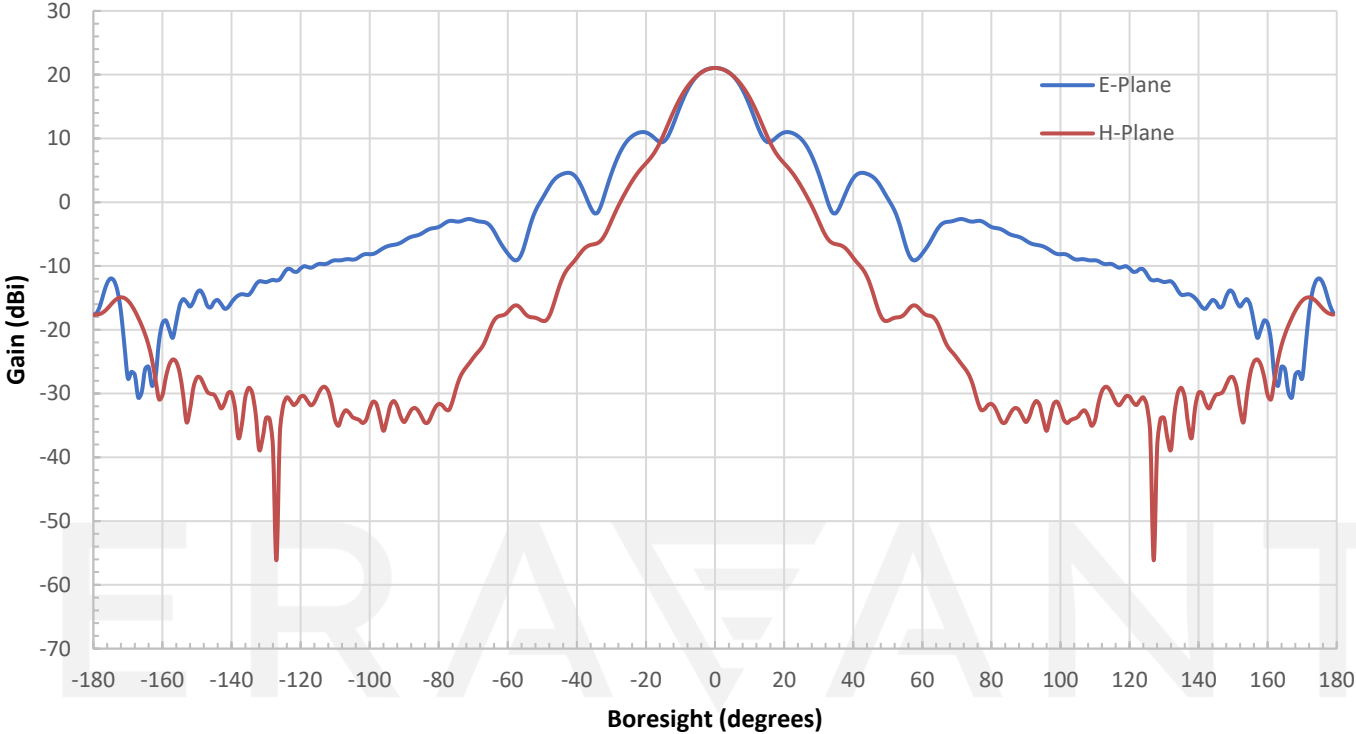
### Simulated Antenna Patterns @ 110 GHz



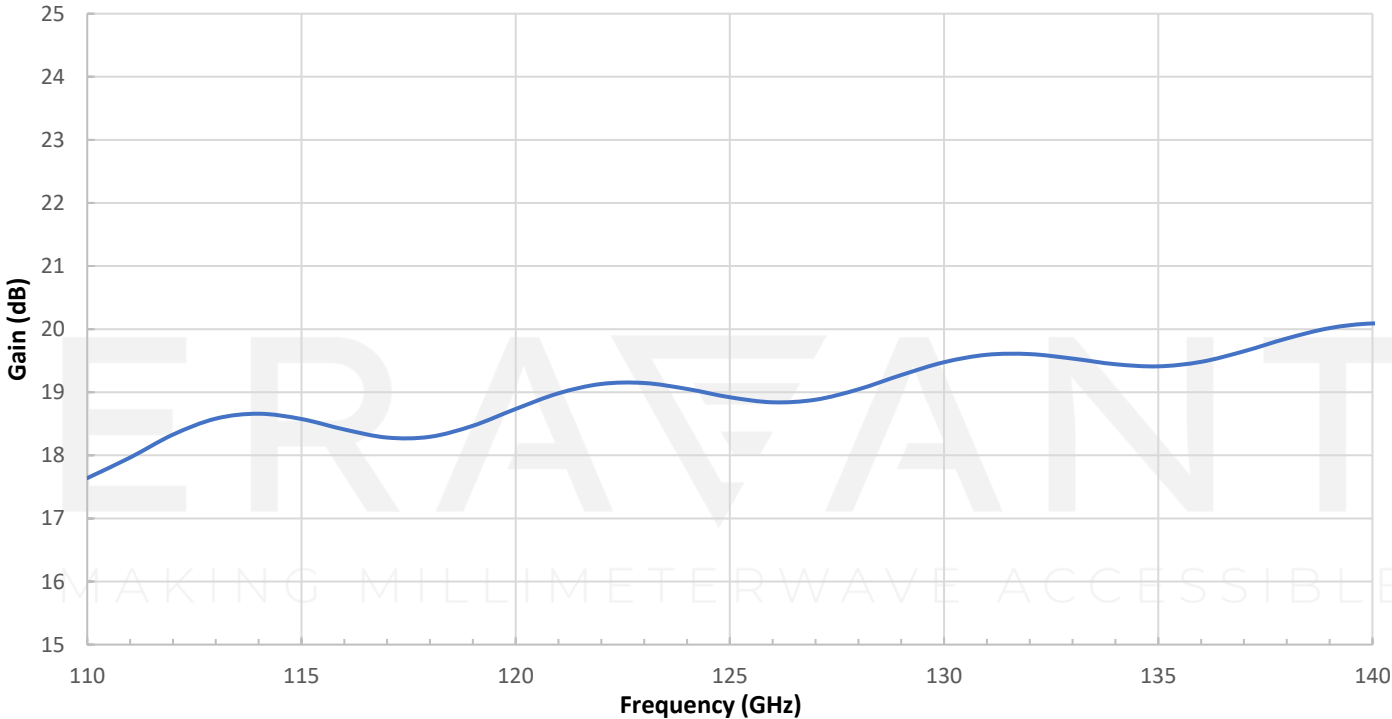
### Simulated Antenna Patterns @ 140 GHz



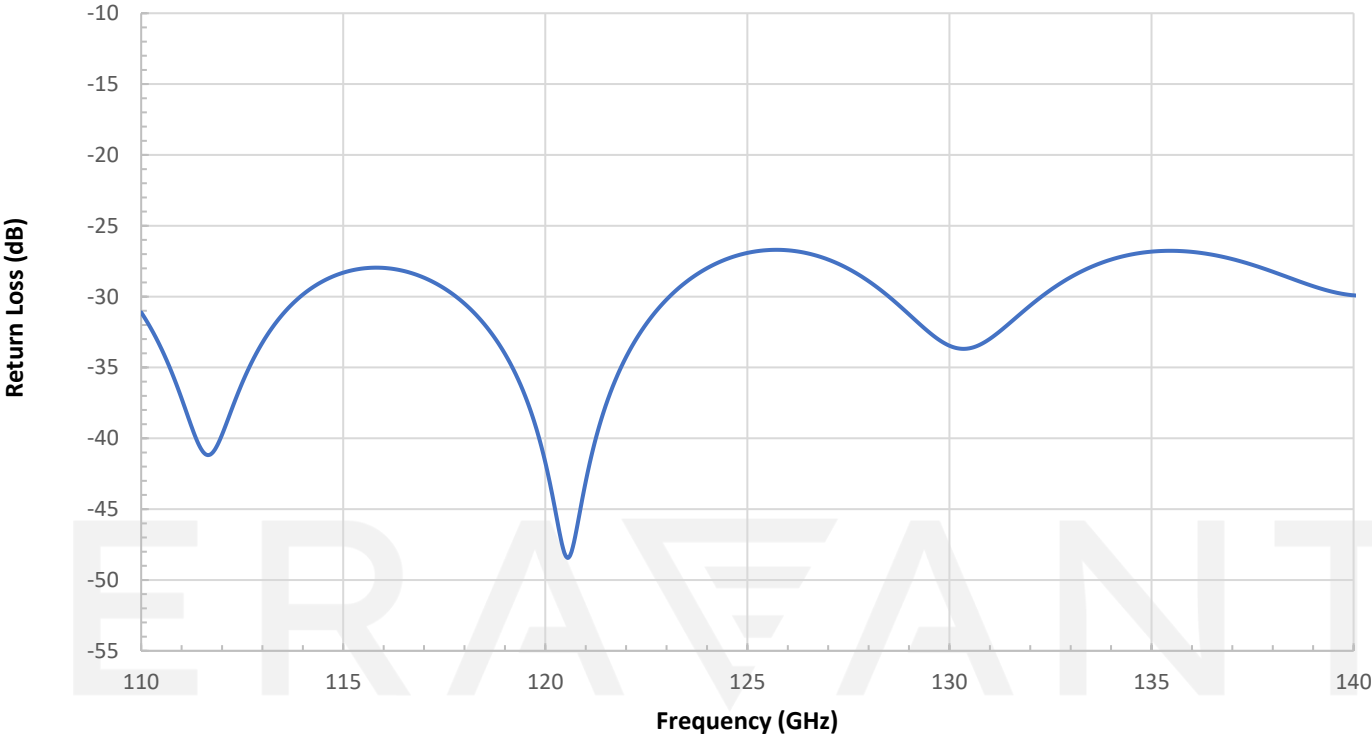
Simulated Antenna Patterns @ 170 GHz



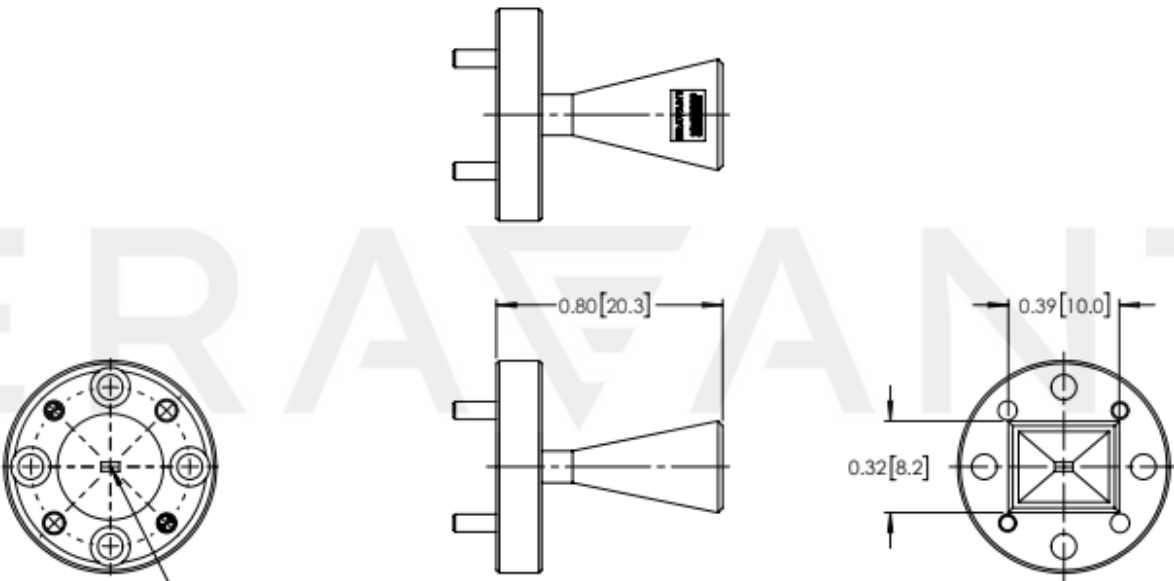
Simulated Gain vs. Frequency



Simulated Return Loss vs. Frequency



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



WR-06 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](#).
- 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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