

## SAR-1532-12-S2

### WR-12 Pyramidal Horn Antenna, 15 dBi Gain

**SAR-1532-12-S2** is an E-band pyramidal horn antenna that operates from 60 GHz to 90 GHz. The antenna offers 15 dBi nominal gain and a typical half power beamwidth of 30 degrees on the E-plane and 32 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 Range	60 GHz		90 GHz
Gain		15 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		30°	
3 dB Beamwidth, H-Plane		32°	
Sidelobes, E-Plane		-15 dB	
Sidelobes, H-Plane		-22 dB	
Return Loss		-19 dB	
Specification Temperature		+25°C	
Operation Temperature	-40°C		+85°C

#### Mechanical Specifications:

Item	Specification
Antenna Port	WR-12 Waveguide
Flange Type	UG-387/U Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	0.40 Oz
Size	0.67" (L) X 0.43" (W) X 0.35" (H)
Outline	AR-E15-A

#### ECCN

EAR99

#### FEATURES

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

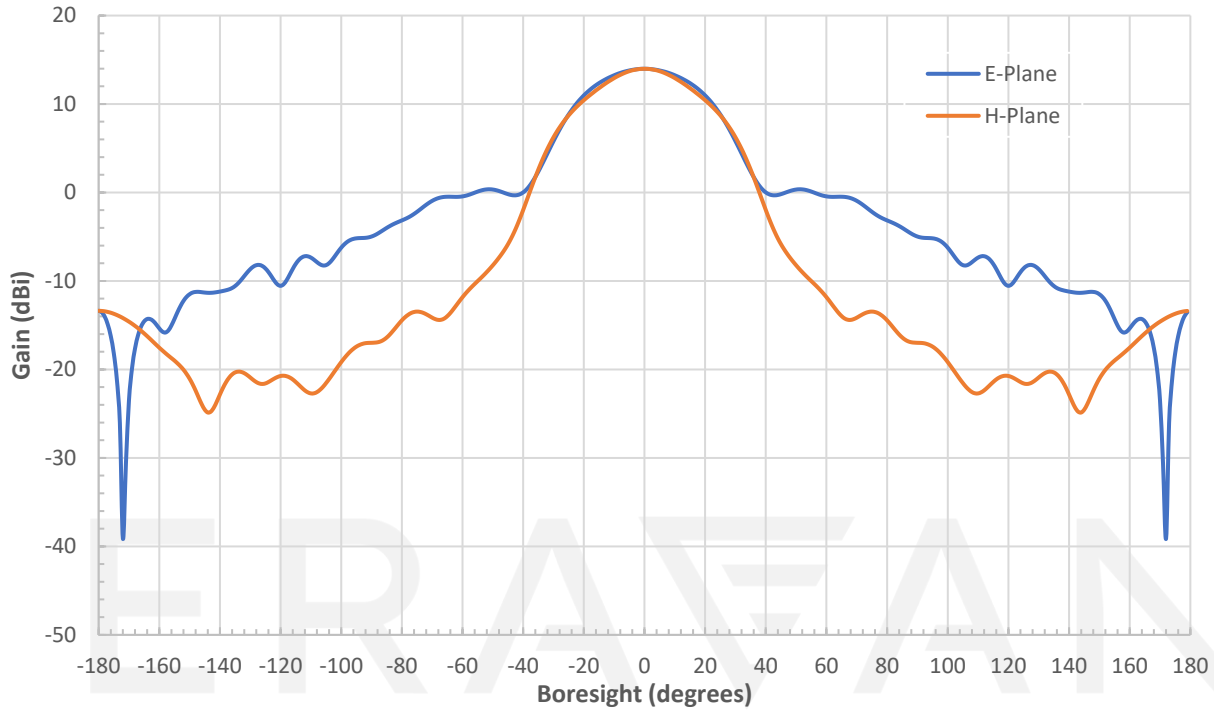
#### APPLICATIONS

- 5G Systems
- Antenna Ranges
- Antenna Gain Measurements
- System Setups

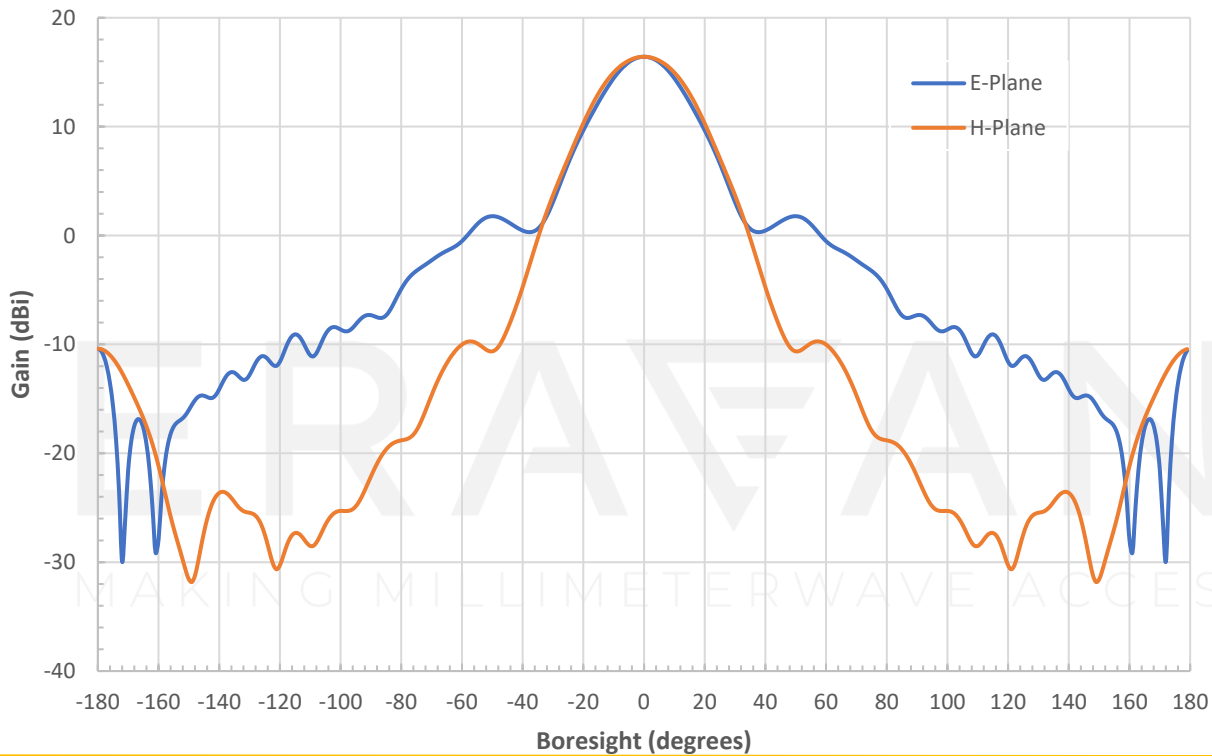
#### SUPPLEMENTAL DETAILS



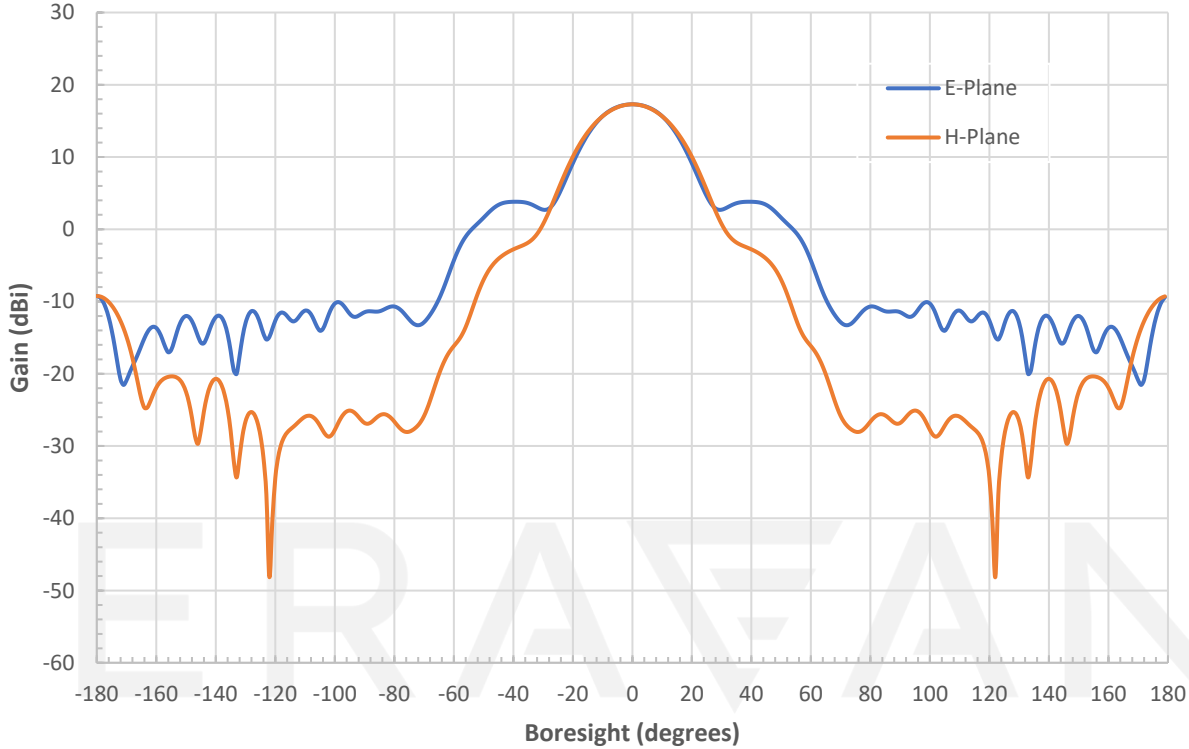
### Simulated Antenna Patterns @ 60 GHz



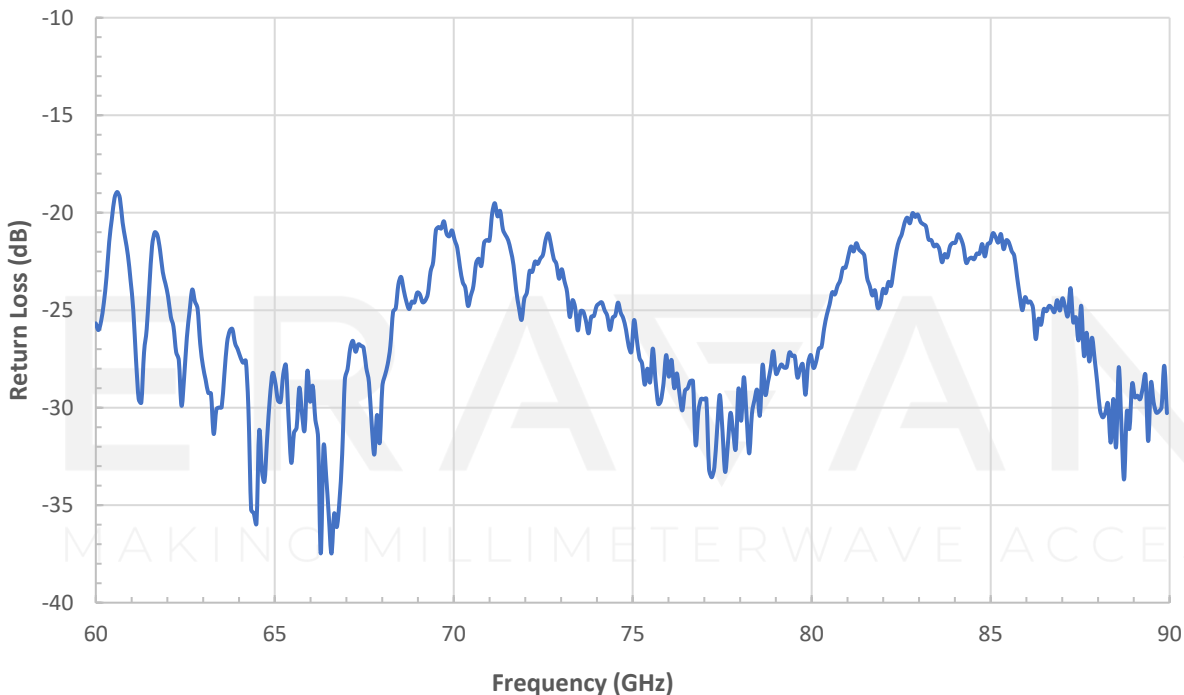
### Simulated Antenna Patterns @ 75 GHz



### Simulated Antenna Patterns @ 90 GHz

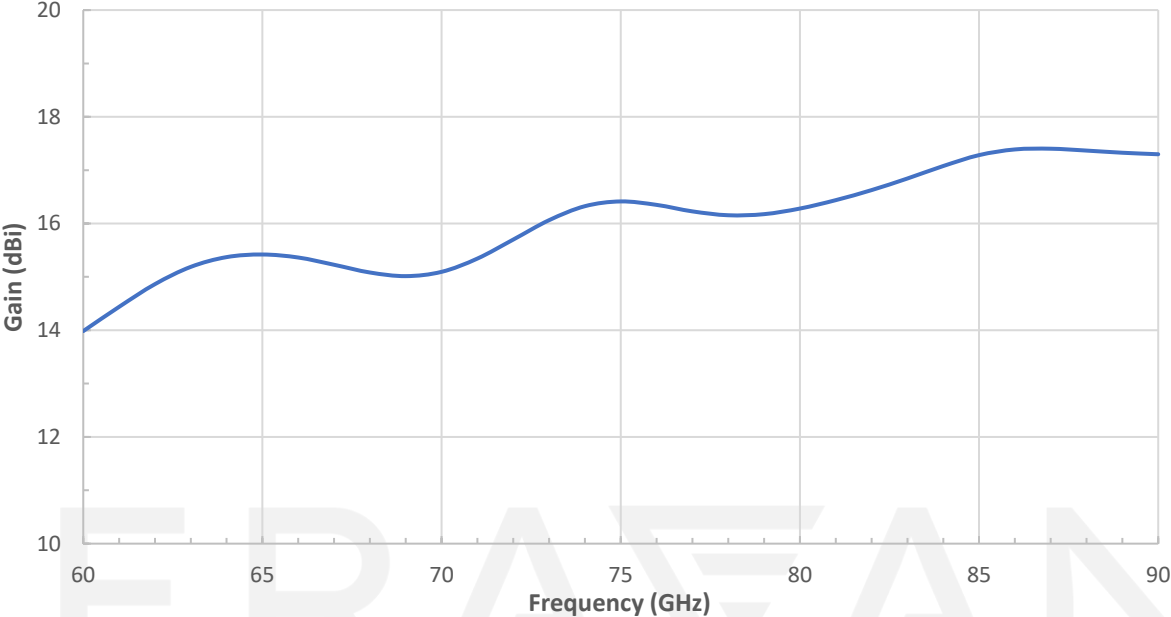


### Measured Return Loss vs. Frequency

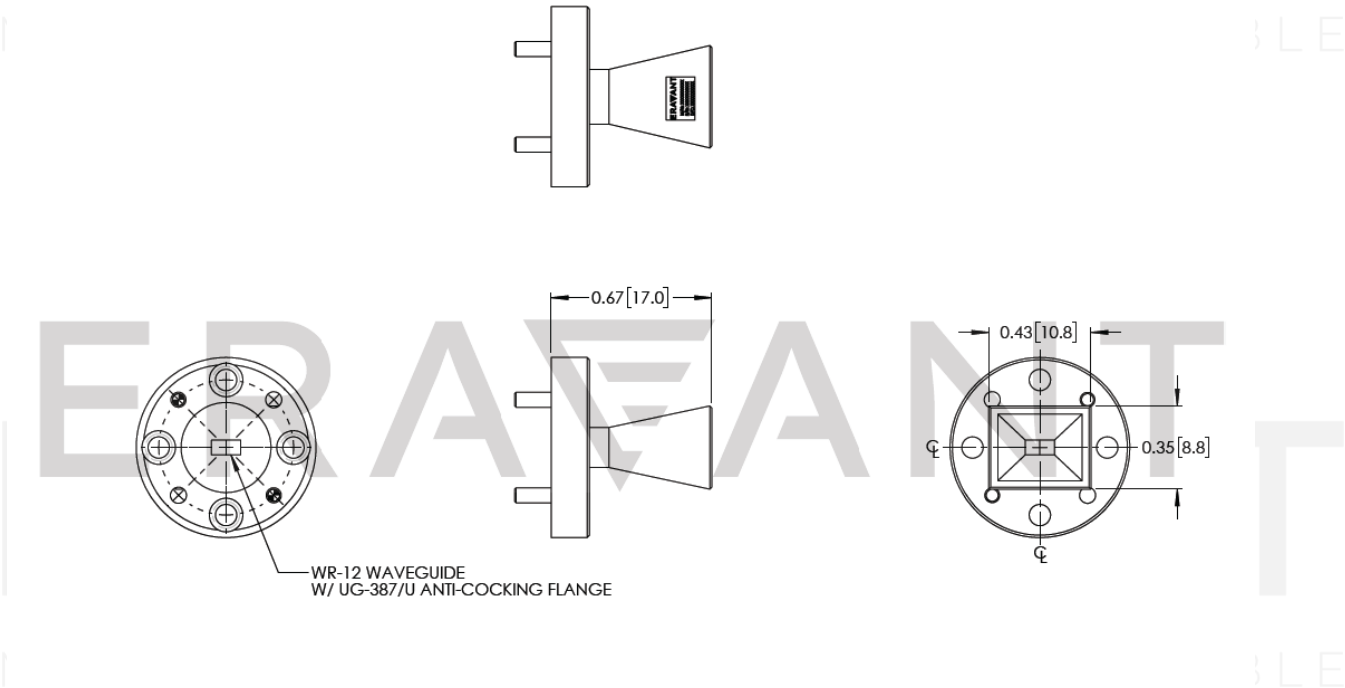


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Simulated Gain vs. Frequency



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



**NOTE:**

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- 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 antenna will cause performance degradation and possible device damage.
- For 1 mm connectors proper torque should be applied:  $4.0 \pm 0.15$  inch-pounds ( $0.45 \pm 0.02$  Nm). Torque wrench model [SCH-06004-S1](#) is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied:  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm). Torque wrench model [SCH-08008-S1](#) is highly recommended.

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