



## WR-12 Rectangular Horn Antenna, 13 dBi Gain

### Description:

**Model SAR-1340-12-S2** is an E-band rectangular horn antenna that operates from 60 GHz to 90 GHz. The antenna offers 13 dBi nominal gain and a typical half power beamwidth of 39 degrees on E-plane and 41 degrees on H-plane, respectively. The antenna supports linear polarized waveforms. The input of this antenna is a WR-12 waveguide with UG-387/U anti-cocking flange.



### Features:

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

### Applications:

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

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	60 GHz	77 GHz	90 GHz
Gain	11 dBi	13 dBi	15 dBi
Polarization	Linear		
E-Plane 3 dB Beamwidth	48°	39°	33°
H-Plane 3 dB Beamwidth	50°	41°	34°
Sidelobes, E-Plane		-14 dB	
Sidelobes, H-Plane		-30 dB	
Return Loss		20 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

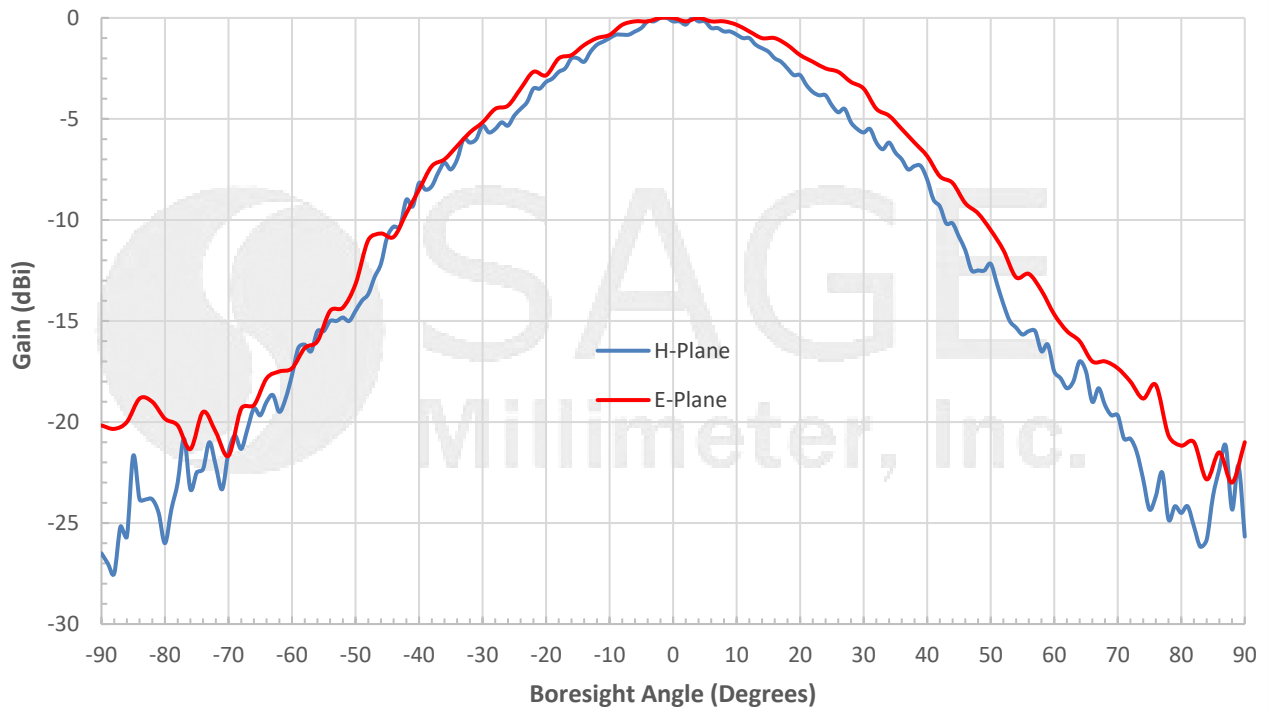
Item	Specification
Antenna Port	WR-12 Waveguide
Flange Type	UG-387/U Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	0.32 Oz
Size	0.60" (L) X 0.35" (W) X 0.29" (H)
Outline	AR-E13-A



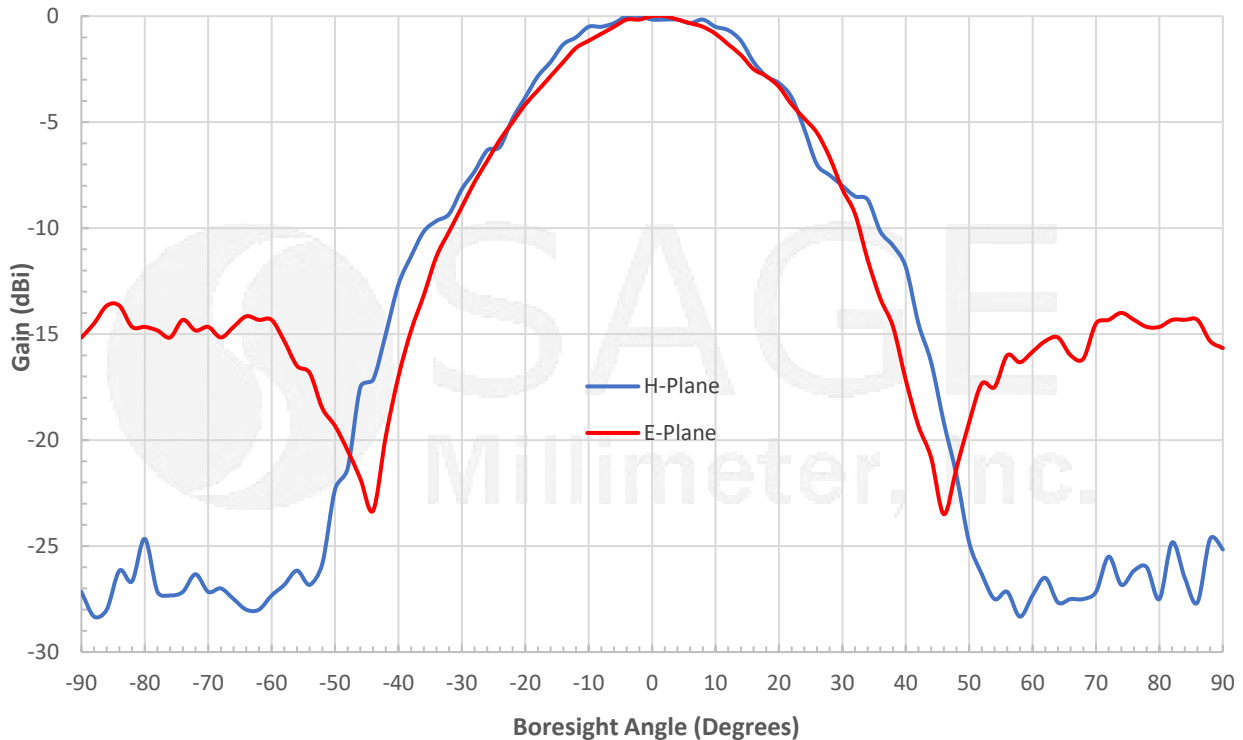


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### Typical Antenna Pattern @ 60 GHz



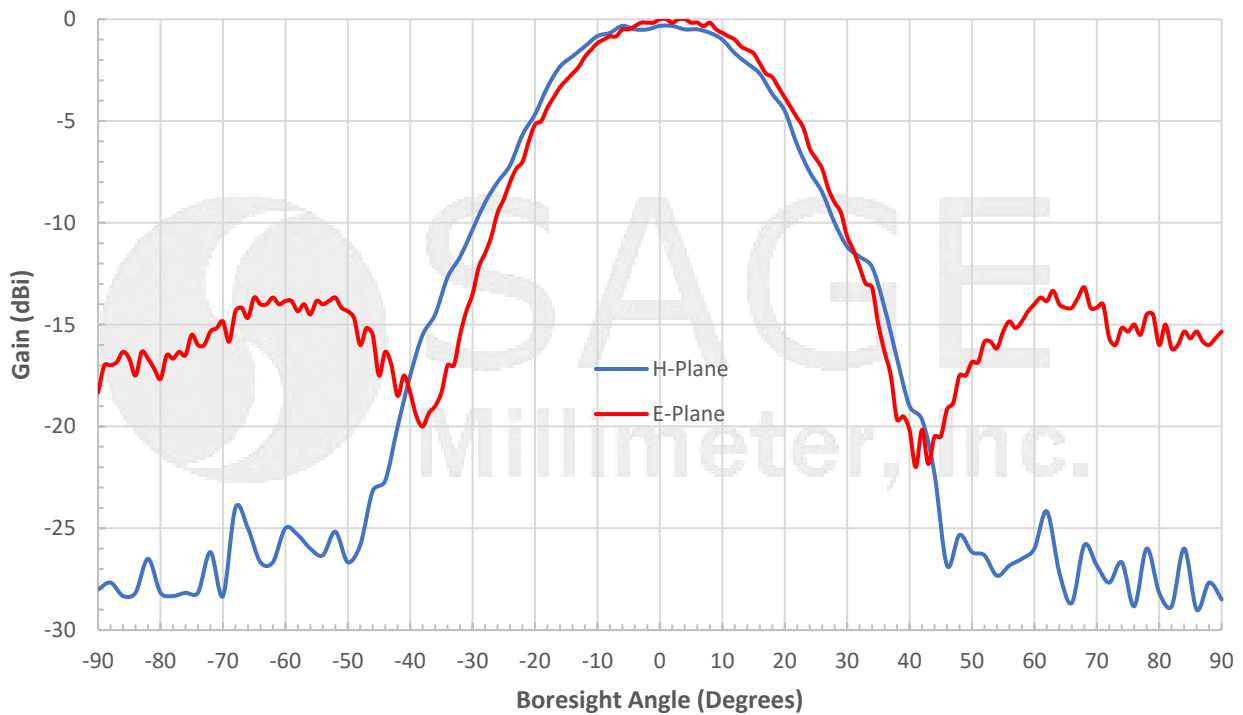
### Typical Antenna Pattern @ 77 GHz



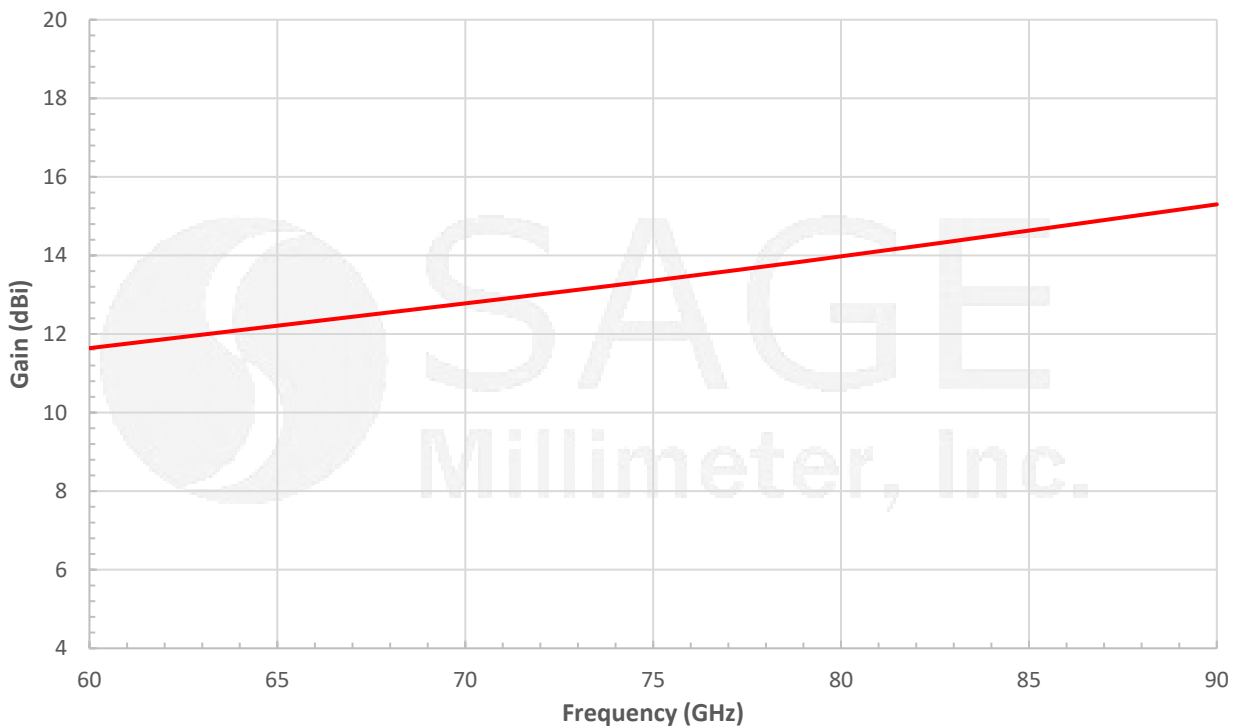


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### Typical Antenna Pattern @ 90 GHz



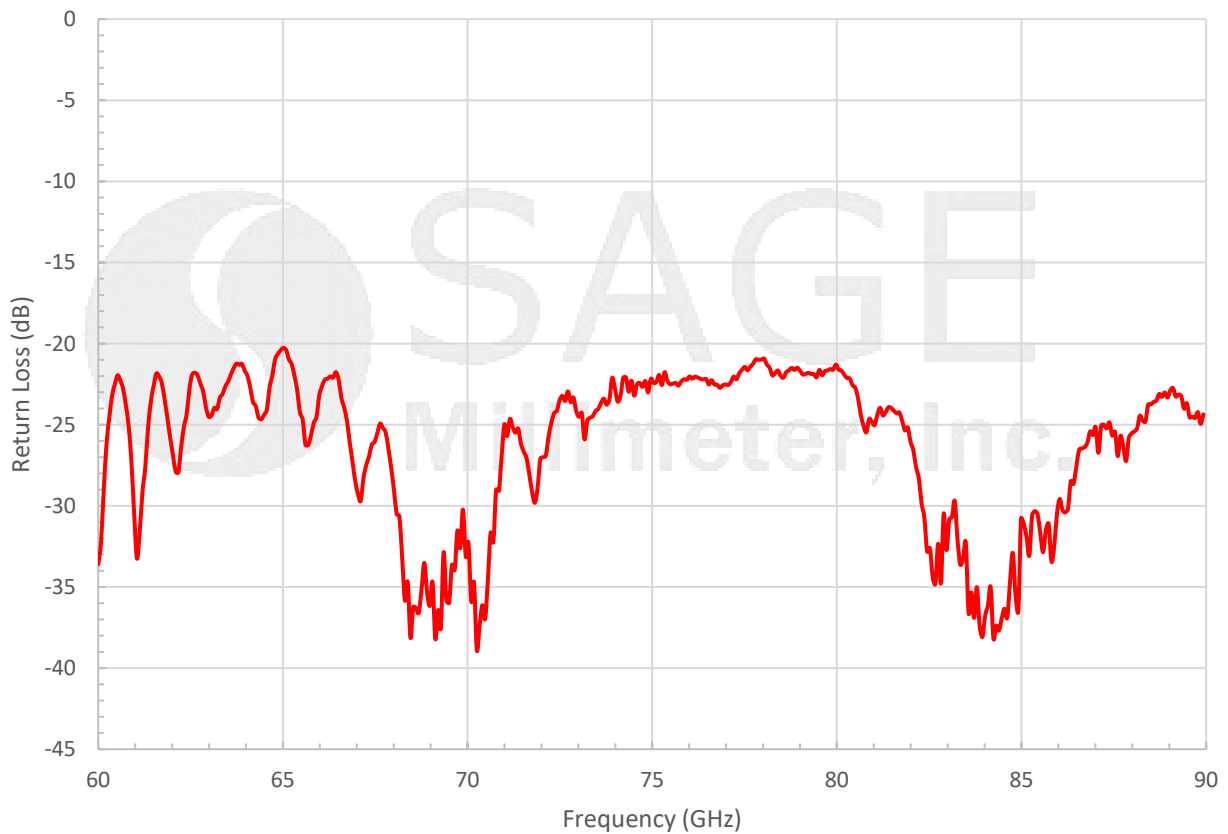
### Typical Gain vs. Frequency



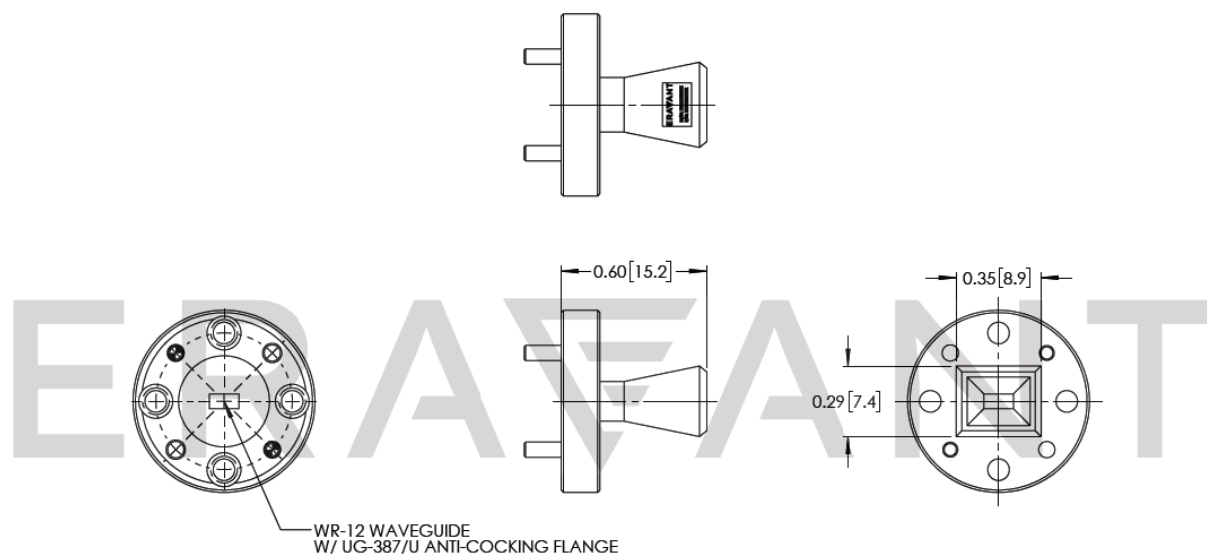


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### Typical Return Loss vs. Frequency



**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](#).
- All testing was performed under +25°C room temperature.
- Eravant reserves the right to change the information presented without notice.

### Caution:

- Any foreign objects in the waveguide will cause performance degradation and possible device damage.

