

## SAR-2013-15VF-R2 & SAR-2013-15VM-R2

### WR-15 Pyramidal Horn Antenna, 20 dBi Gain with 1.85 mm (V) Coax Input

**SAR-2013-15VF-R2 & SAR-2013-15VM-R2** are V-band pyramidal horn antennas equipped with right angle (90°) 1.85 mm coax connectors to cover the frequency range of 50 GHz to 70 GHz. The antennas offer 20 dBi nominal gain and a typical half power beamwidth of 14 degrees on the E-plane and 15 degrees on the H-plane. The antennas only support linear polarized waveforms. End launch (180°) 1.85 mm coax connector configurations are available under the models **SAR-2013-15VF-E2** and **SAR-2013-15VM-E2**.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	50 GHz		70 GHz
Gain		20 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		14°	
3 dB Beamwidth, H-Plane		15°	
Sidelobes, E-Plane		-10 dB	
Sidelobes, H-Plane		-20 dB	
Return Loss		15 dB	
Power Handling			30 W (CW)
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

#### Mechanical Specifications:

Item	Specification
Antenna Ports	1.85 mm Female for Model Number: <b>SAR-2013-15VF-R2</b>
	1.85 mm Male for Model Number: <b>SAR-2013-15VM-R2</b>
Material	Brass
Finish	Gold Plated
Weight	1.8 Oz
Size	2.25" (L) X 0.93" (W) X 0.75" (H)
Outline	AR-VC1-R

#### ECCN

EAR99

#### FEATURES

- Right Angle Configuration
- Linear Polarization
- DC Open Circuit at Input

#### APPLICATIONS

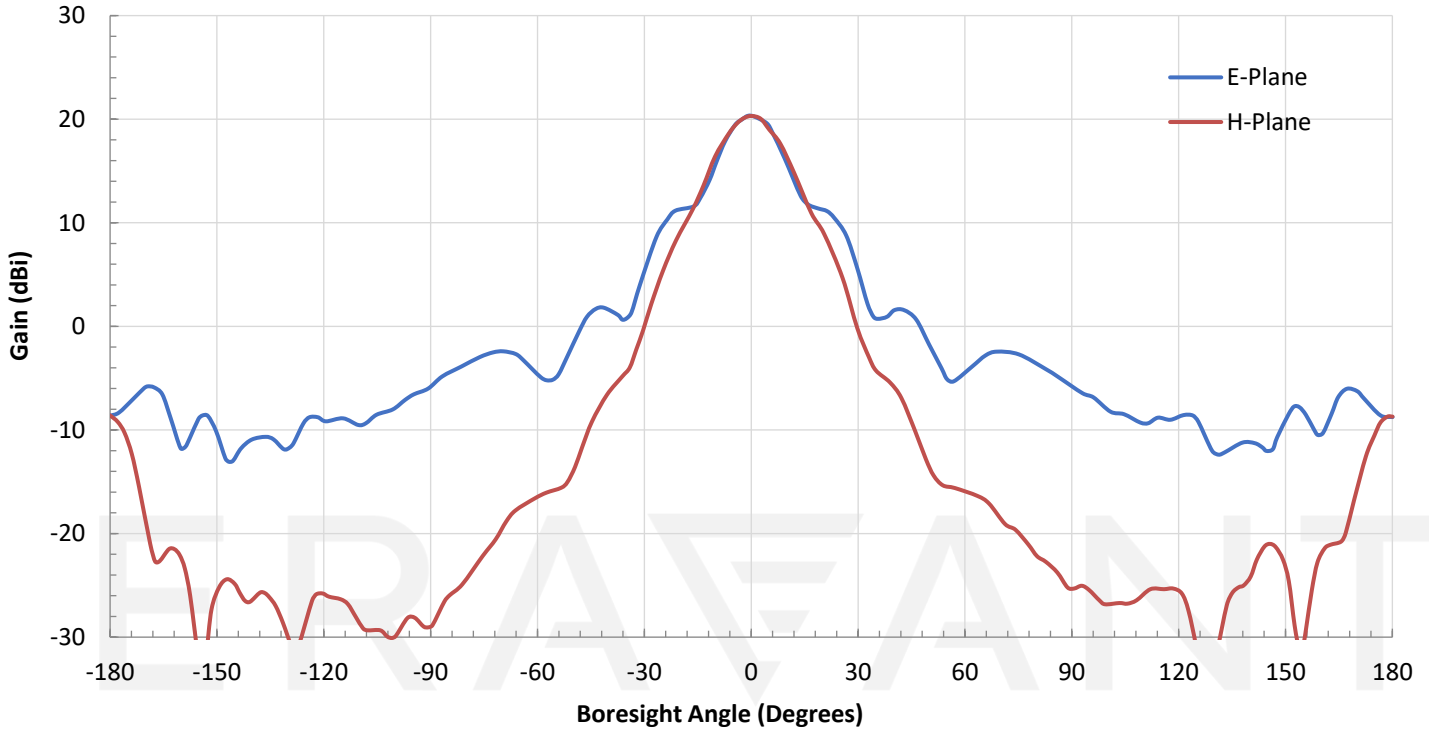
- Antenna Ranges
- Antenna Gain Measurements
- System Setups

#### SUPPLEMENTAL DETAILS

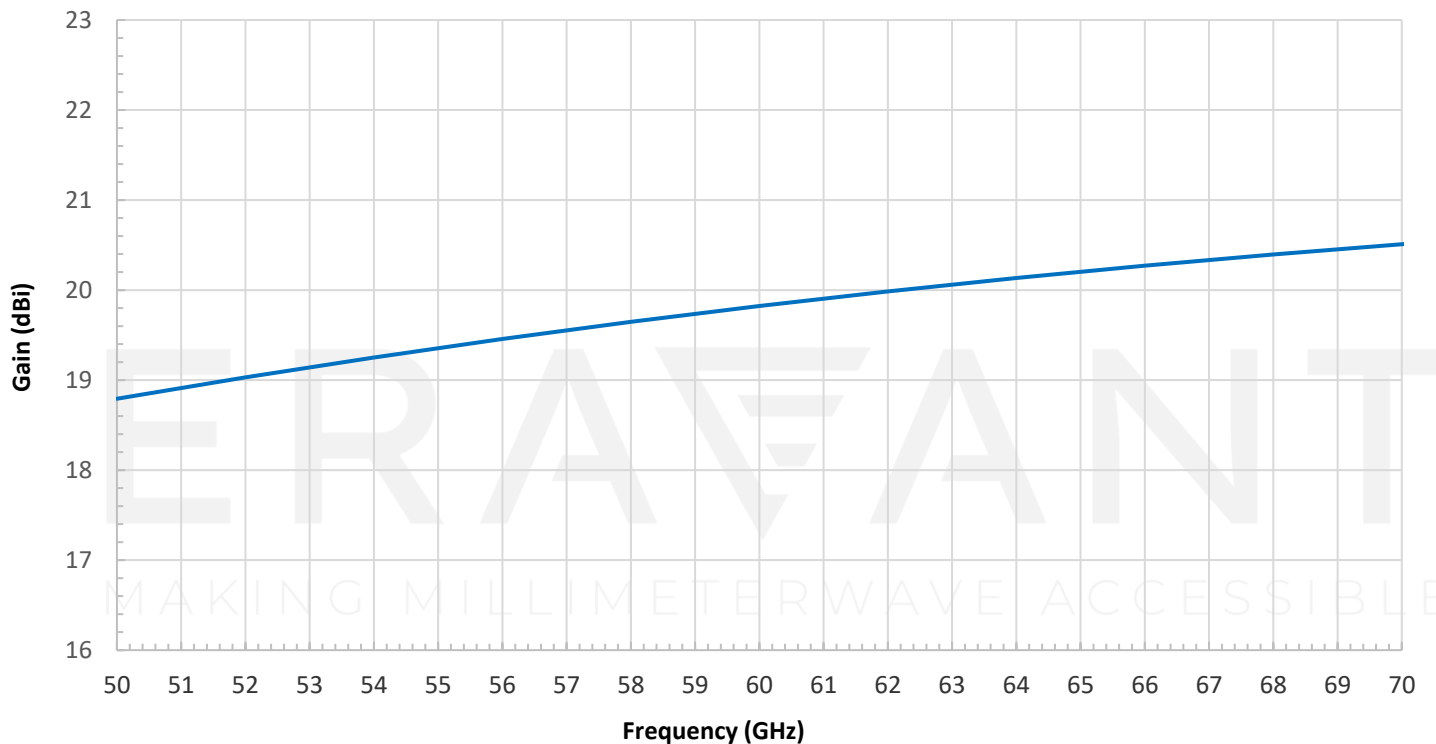


## SAR-2013-15VF-R2 & SAR-2013-15VM-R2

### Simulated Antenna Pattern @ 60 GHz

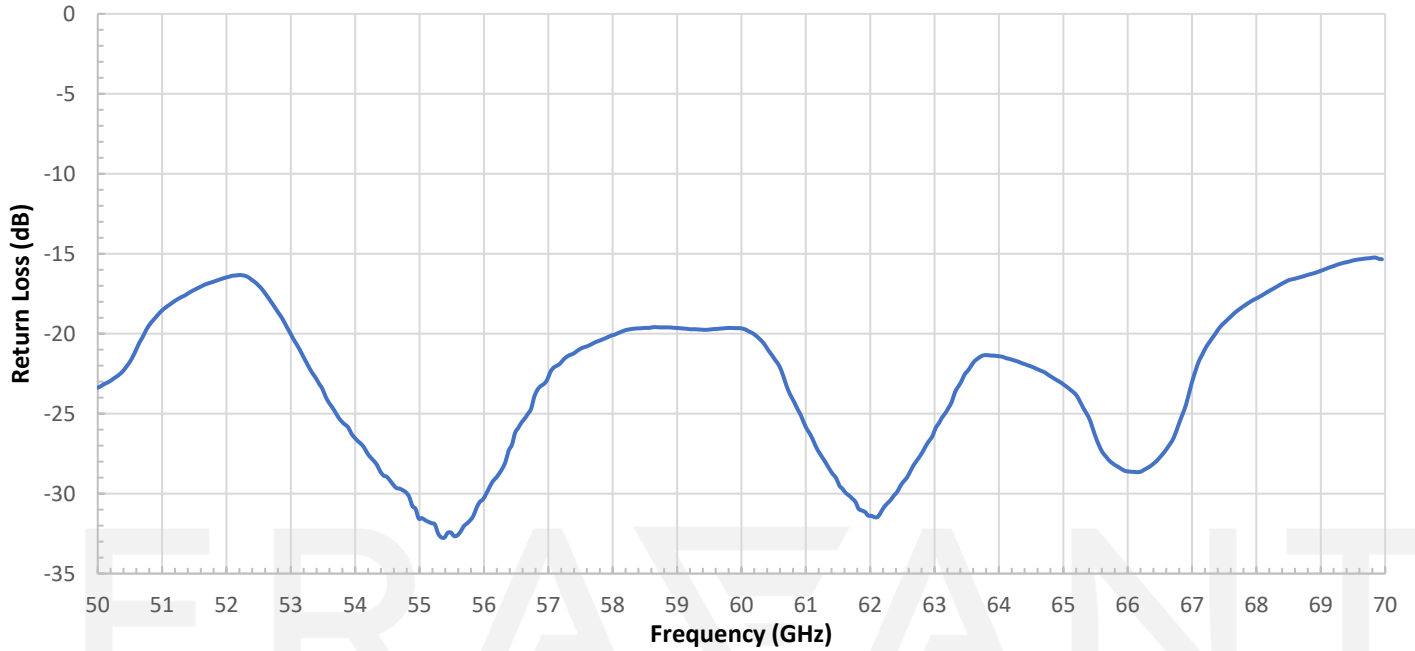


### Simulated Gain vs. Frequency

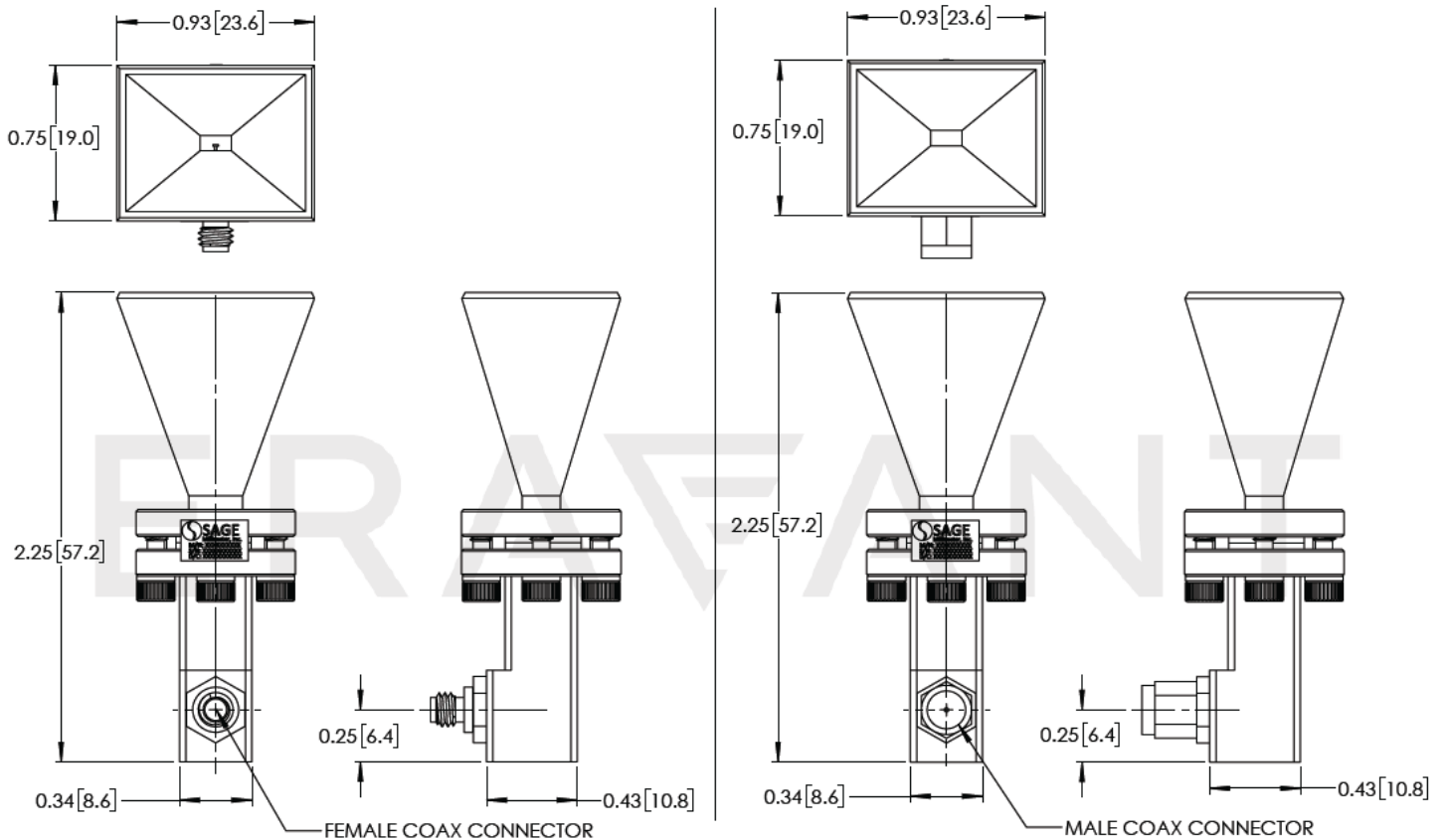


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### Typical Return Loss vs Frequency



**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](#).
- 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 1.35 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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