

## SAR-2507-101F-R2 & SAR-2507-101M-R2

### WR-10 Pyramidal Horn Antenna, 25 dBi Gain with 1 mm Coax Input

**SAR-2507-101F-R2 & SAR-2507-101M-R2** are W-band pyramidal horn antennas with right angle (90°) 1 mm coax connectors to cover the frequency range of 75 GHz to 110 GHz. The antennas offer 25 dBi nominal gain and a typical half power beamwidth of 9 degrees on the E-plane and 10 degrees on the H-plane. The antennas support linear polarized waveforms. End launch (180°) 1 mm connector configurations are available under models **SAR-2507-101F-E2** and **SAR-2507-101M-E2**.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	75 GHz		110 GHz
Gain	23.5 dBi	25 dBi	26 dBi
Polarization		Linear	
3 dB Beamwidth, E-Plane		9°	
3 dB Beamwidth, H-Plane		10°	
Sidelobes, E-Plane		-14 dB	
Sidelobes, H-Plane		-30 dB	
Return Loss		15 dB	
Power Handling			10 W (CW)
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

#### Mechanical Specifications:

Item	Specification
Antenna Port (F)	1 mm Female for Model Number: SAR-2507-101F-R2
Antenna Port (M)	1 mm Male for Model Number: SAR-2507-101M-R2
Material	Brass
Finish	Gold Plated
Connector Material	Stainless Steel
Weight	1.7 Oz
Size	3.40" (L) X 1.09" (W) X 0.89"(H)
Outline	AR-WC3-R-2

#### ECCN

EAR99

#### FEATURES

- Inline Configuration
- Linear Polarization
- High Return Loss

#### APPLICATIONS

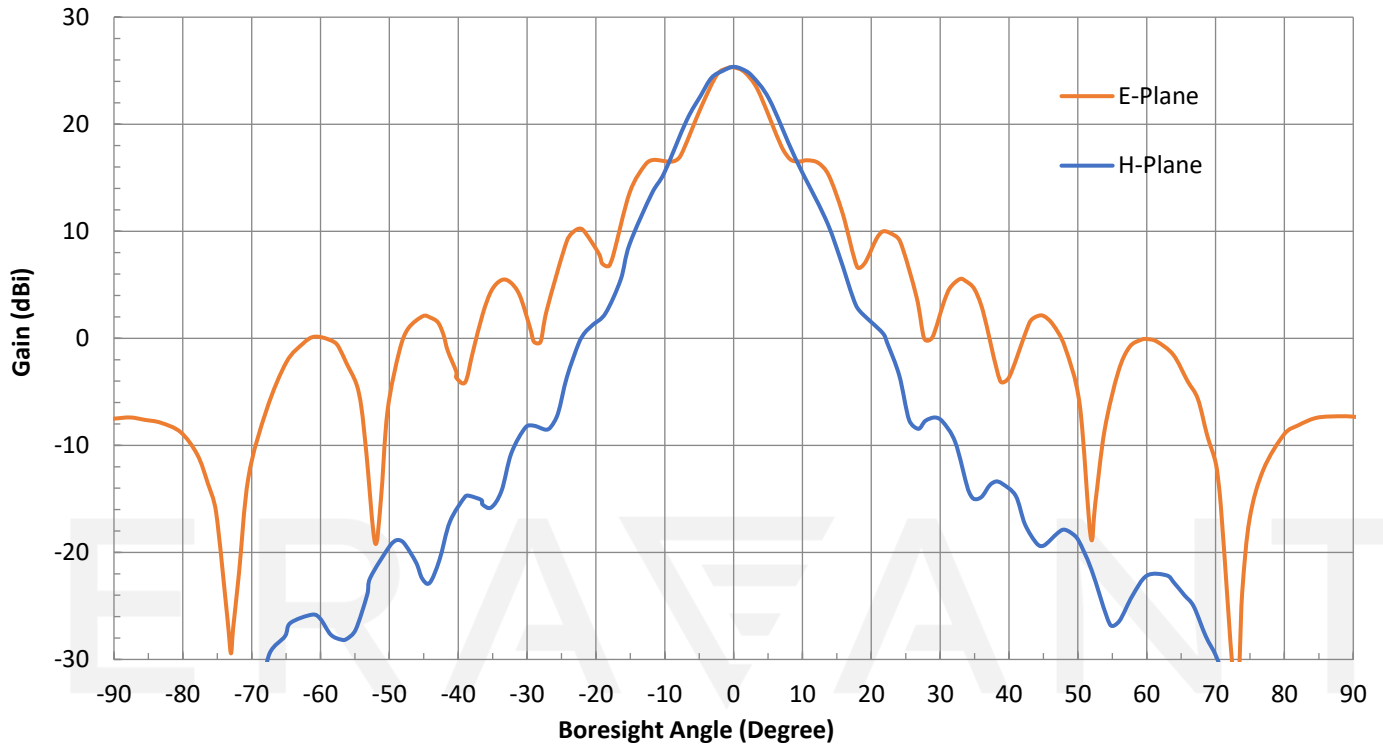
- Antenna Ranges
- Antenna Gain Measurements
- System Setups

#### SUPPLEMENTAL DETAILS

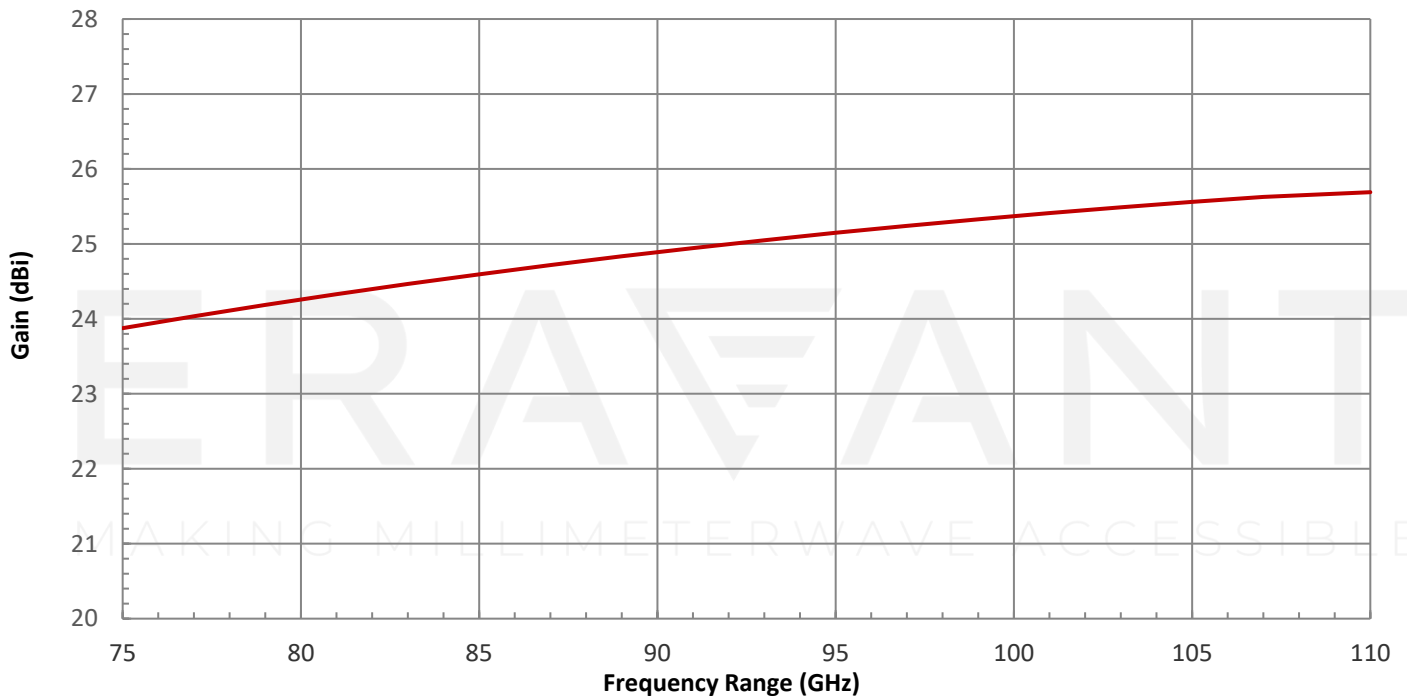


## SAR-2507-101F-R2 & SAR-2507-101M-R2

### Typical Antenna Pattern @ 92.5 GHz

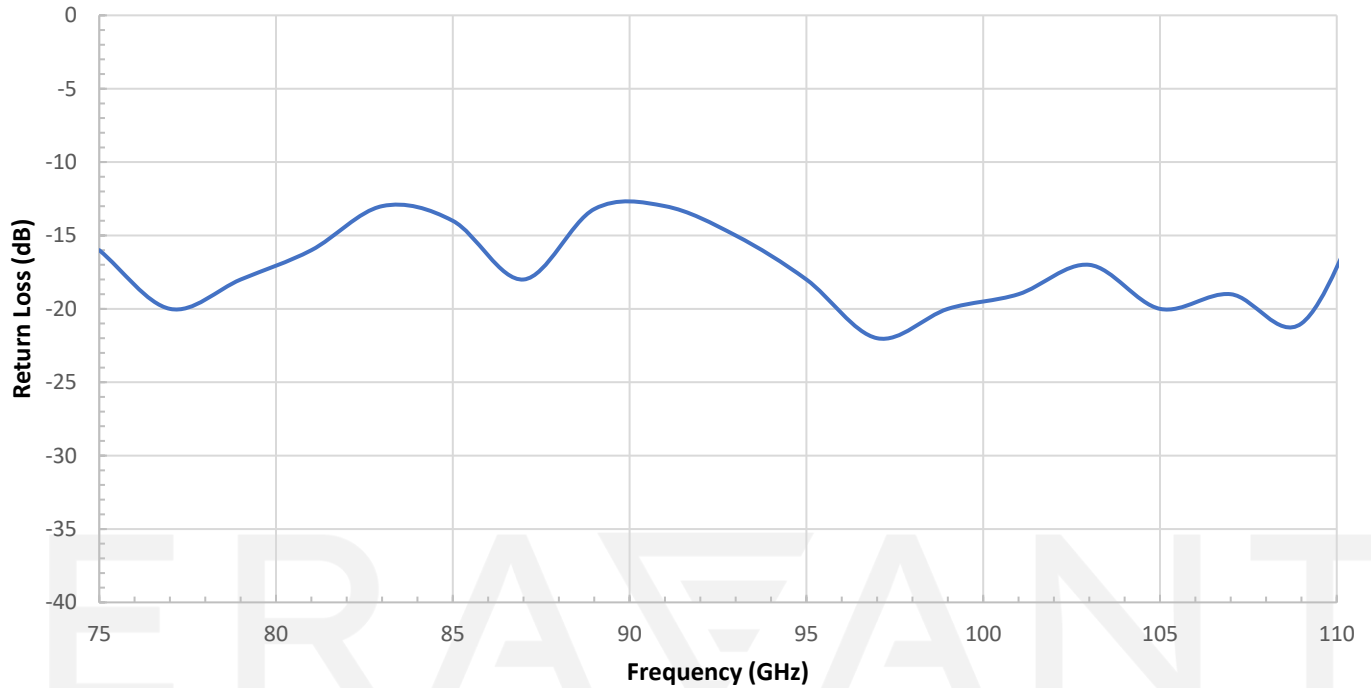


### Typical Gain vs. Frequency

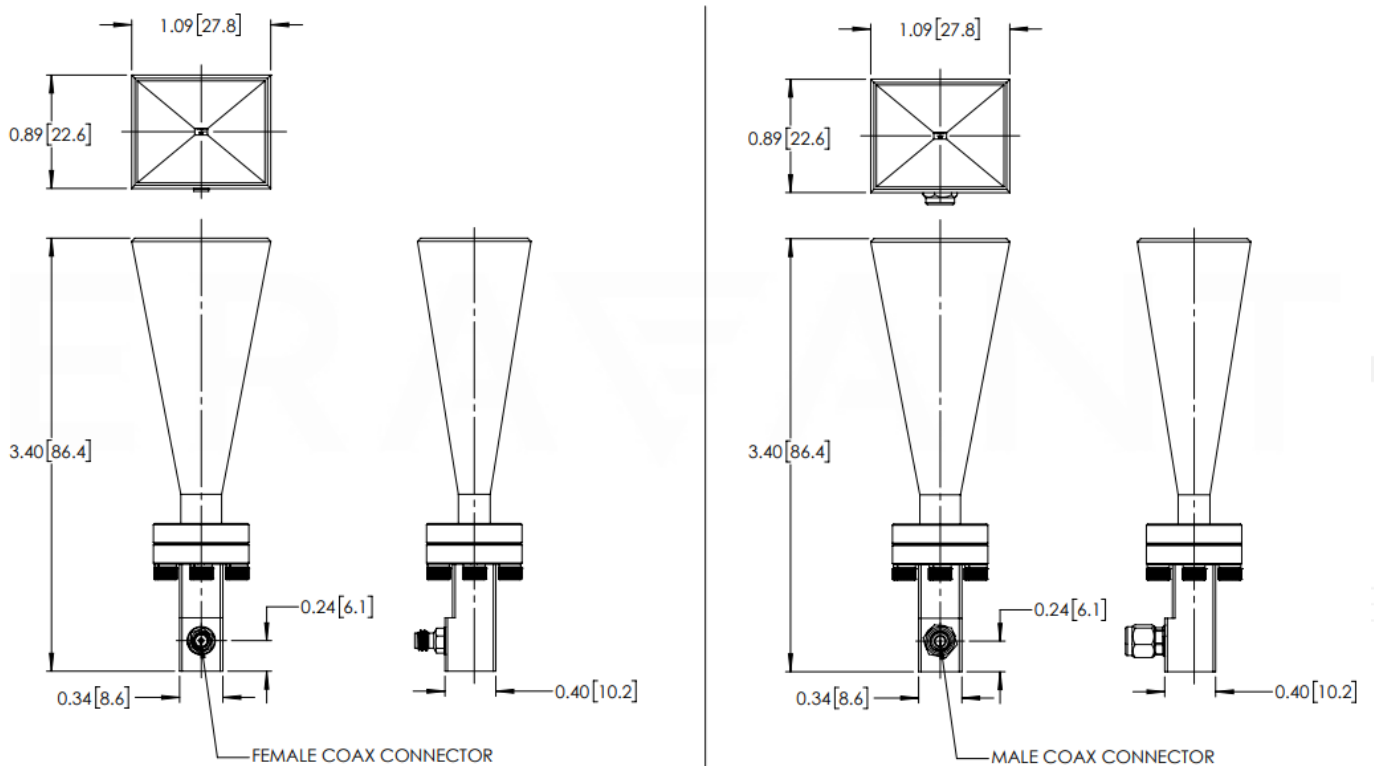


## SAR-2507-101F-R2 & SAR-2507-101M-R2

### Typical Measured Return Loss vs. Frequency



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



## SAR-2507-101F-R2 &amp; SAR-2507-101M-R2

**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:**

- 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.
- Proper torque,  $4.0 \pm 0.15$  inch-pounds ( $0.45 \pm 0.02$  Nm), should be used. **Eravant torque wrench, model SCH-06004-S1, is highly recommended.**

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