



## WR-75 Pyramidal Horn Antenna, 25 dBi Gain with N Type Coax Input

### Description:

**Model SAR-2510-75NF-R3 & SAR-2510-75NM-R3** are X-Ku-band pyramidal horn antenna with a right angle (90°) N type coax connector to cover the frequency range of 9.84 GHz to 15.0 GHz. The antenna offers 25 dBi nominal gain and a typical half power beamwidth of 9 degrees on the E-plane and 11 degrees on the H-plane. The antenna supports linear polarized waveforms.



### Features:

- Inline Configuration
- Linear Polarization
- DC Short Circuit at Input

### Applications:

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	9.84 GHz		15 GHz
Gain		25 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		9°	
3 dB Beamwidth, H-Plane		11°	
Side Lobes, E-Plane		-13 dB	
Side Lobes, H-Plane		-36 dB	
Return Loss		18 dB	
Power Handling			50 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

### Mechanical Specifications:

Item	Specification
Antenna Port (F)	N Type Female for Model Number: SAR-2510-75NF-R3
Antenna Port (M)	N Type Male for Model Number: SAR-2510-75NM-R3
Material	Aluminum
Connector Material	Stainless Steel
Finish	Anti-Corrosion Paint
Weight	3.38 lbs
Size	22.95" (L) X 7.87" (W) X 6.10" (H)
Outline	AR-7C3-R-H1

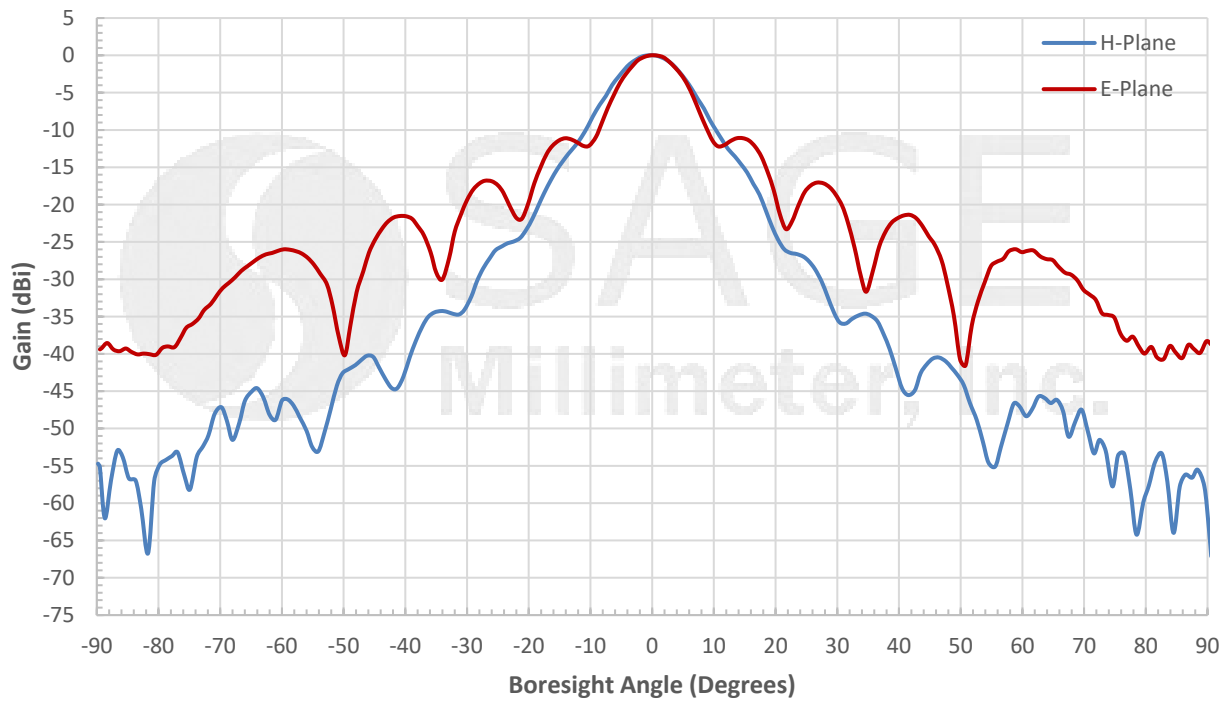


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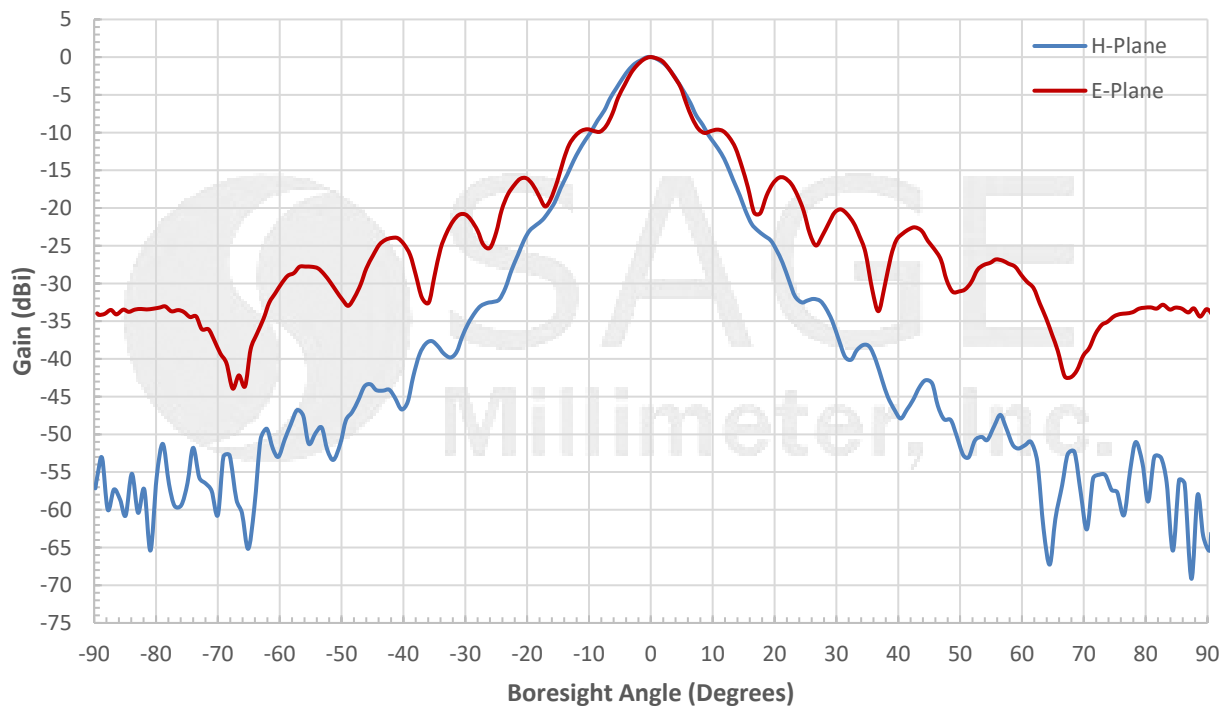


## WR-75 Pyramidal Horn Antenna, 25 dBi Gain with N Type Coax Input

### Simulated Antenna Patterns @ 10 GHz



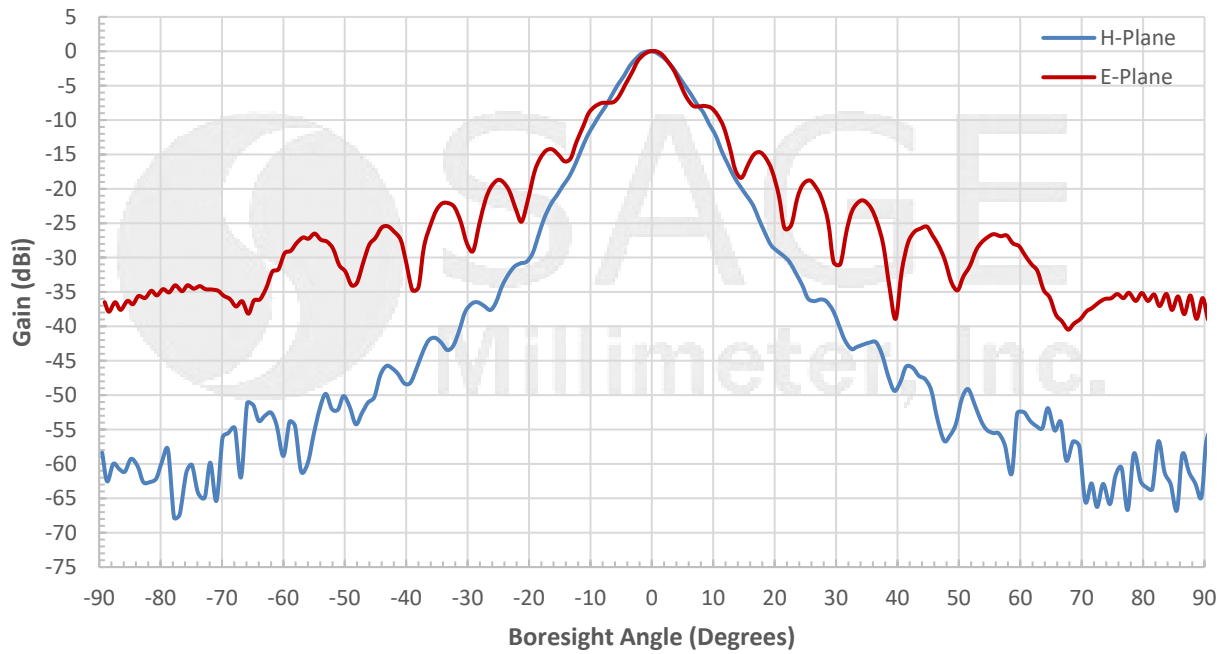
### Simulated Antenna Patterns @ 12.5 GHz



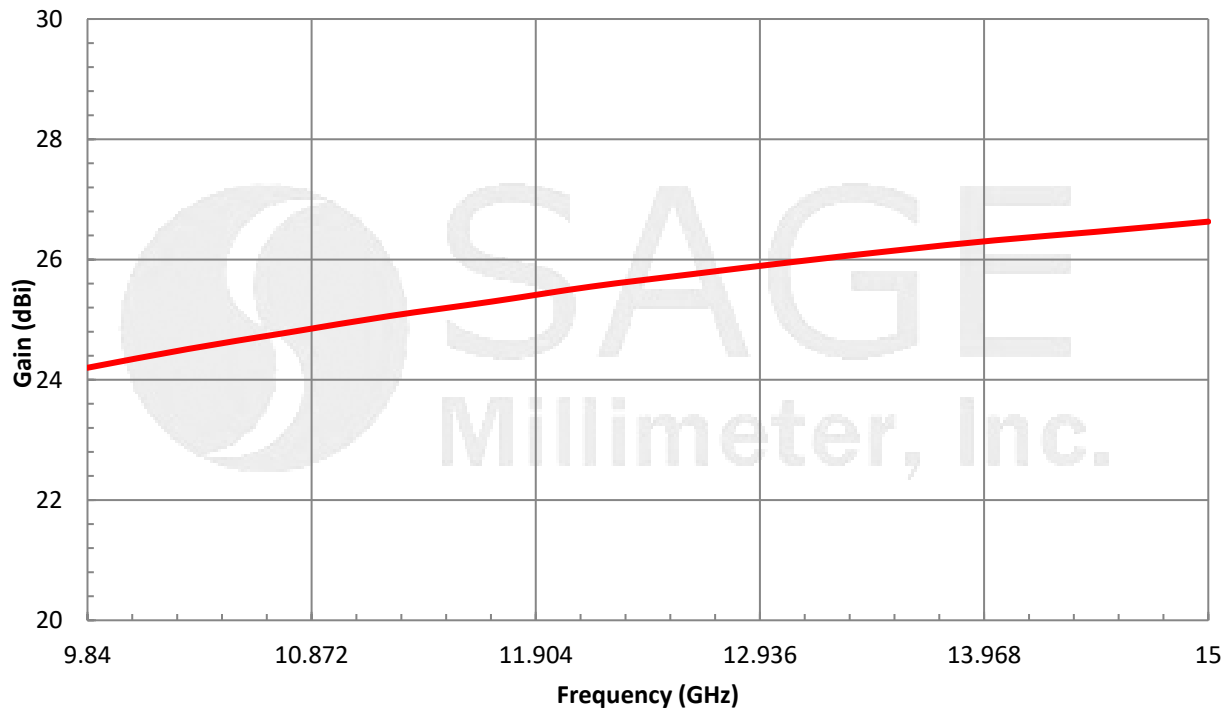


## WR-75 Pyramidal Horn Antenna, 25 dBi Gain with N Type Coax Input

### Simulated Antenna Patterns @ 15 GHz



### Measured Gain vs. Frequency



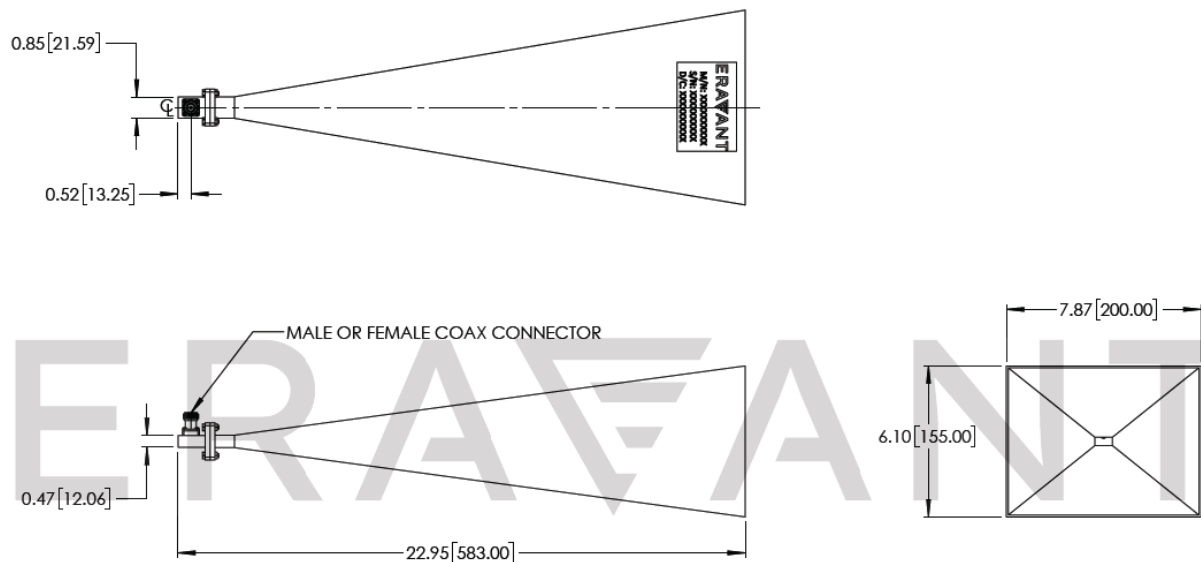


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### Measured Gain vs. Frequency in Tabular Format

Frequency (GHz)	Gain (dBi)	Frequency (GHz)	Gain (dBi)
9.84	24.20	12.63	25.76
10.30	24.51	13.09	25.96
10.77	24.79	13.56	26.15
11.23	25.06	14.02	26.32
11.70	25.30	14.48	26.46
12.16	25.55	15.00	26.63

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



**Note:**

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

**Caution:**

- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**
- Any foreign objects in the horn antenna will cause performance degradation and possible device damage.

