SAR-2013-08-S2

Rev 1.4

WR-08 Pyramidal Horn Antenna, 20 dBi Gain

Description:

Model SAR-2013-08-S2 is an F-band pyramidal horn antenna that operates from 90 to 140 GHz. The antenna offers 20 dBi nominal gain and a typical half power beamwidth of 16 degrees on the E-plane and 18 degrees on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-08 waveguide with UG-387/U-M anti-cocking flange.

Features:

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

Applications:

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	90 GHz		140 GHz
Gain	19 dBi	20 dBi	21.5 dBi
Polarization		Linear	
3 dB Beamwidth, E-Plane		16°	
3 dB Beamwidth, H-Plane		18°	
Sidelobes, E-Plane		-14 dB	
Sidelobes, H-Plane		-30 dB	
Return Loss		23 dB	
Specification Temperature		+25˚C	
Operating Temperature	-40˚C		+85˚C

Mechanical Specifications:

Item	Specification
Antenna Port	WR-08 Waveguide
Flange Type	UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	0.5 Oz
Outline	AR-F1-A

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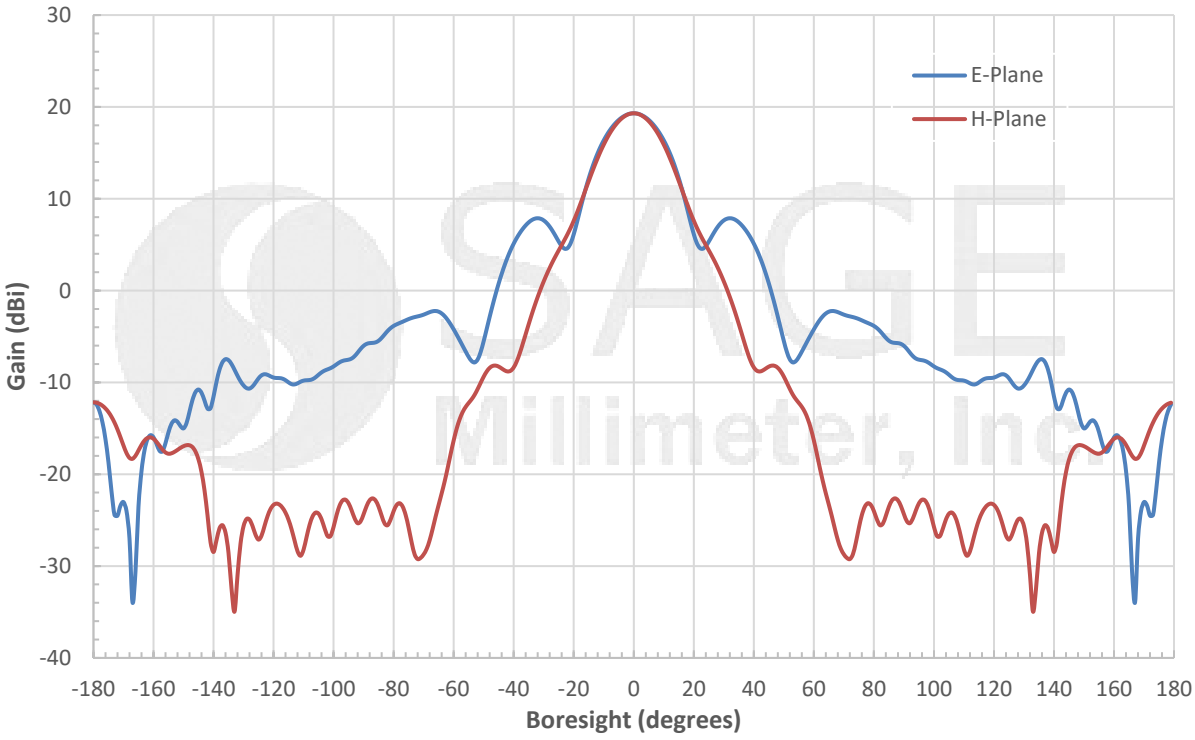
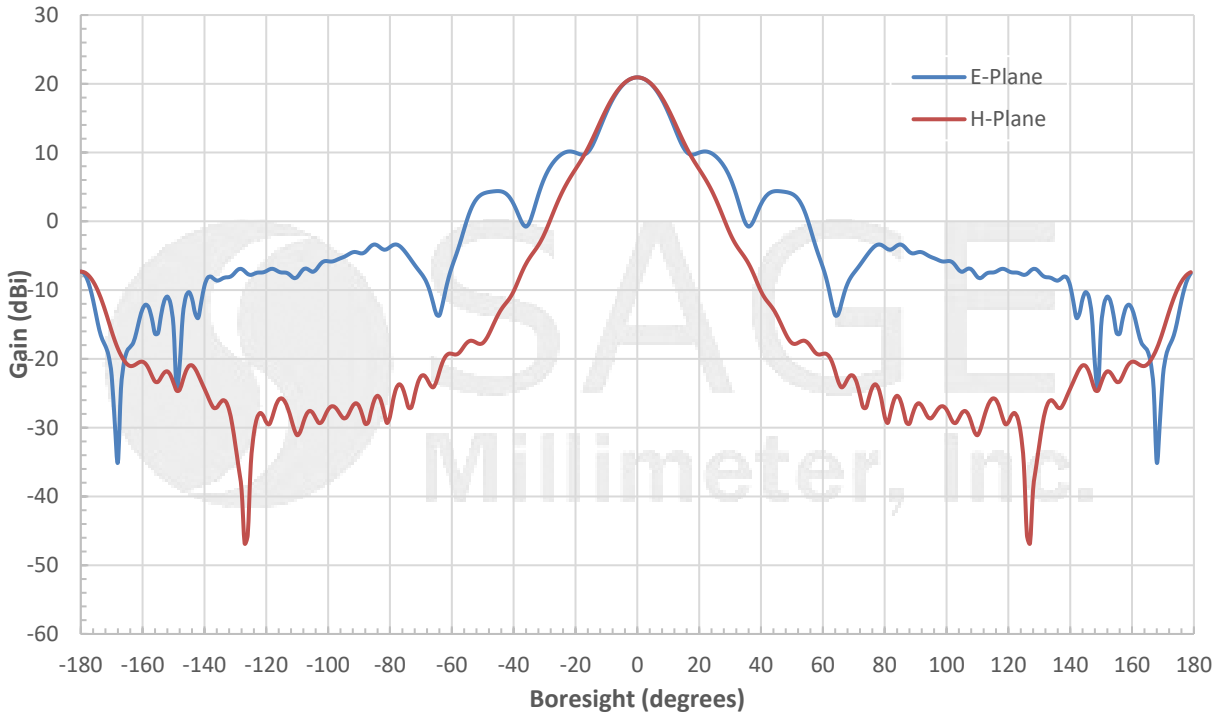
WR-08 Pyramidal Horn Antenna, 20 dBi Gain

Simulated Antenna Patterns @ 90 GHz



Simulated Antenna Patterns @ 115 GHz



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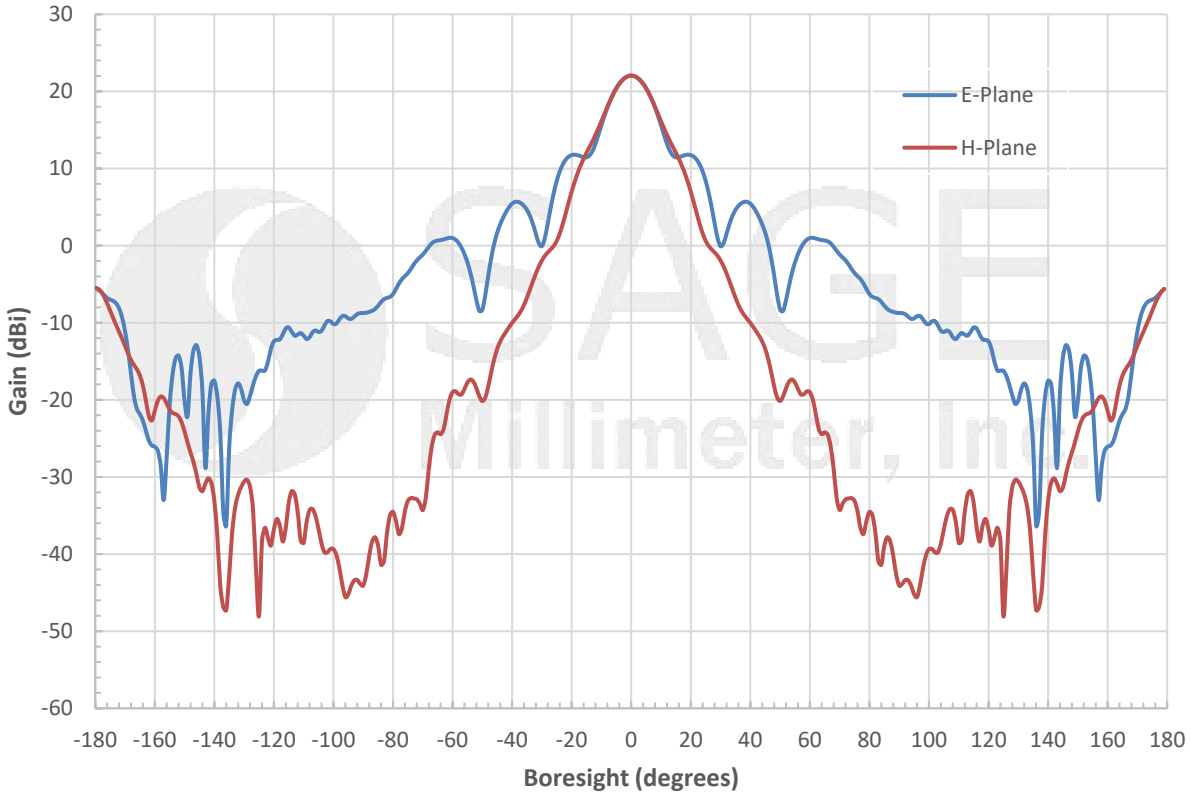
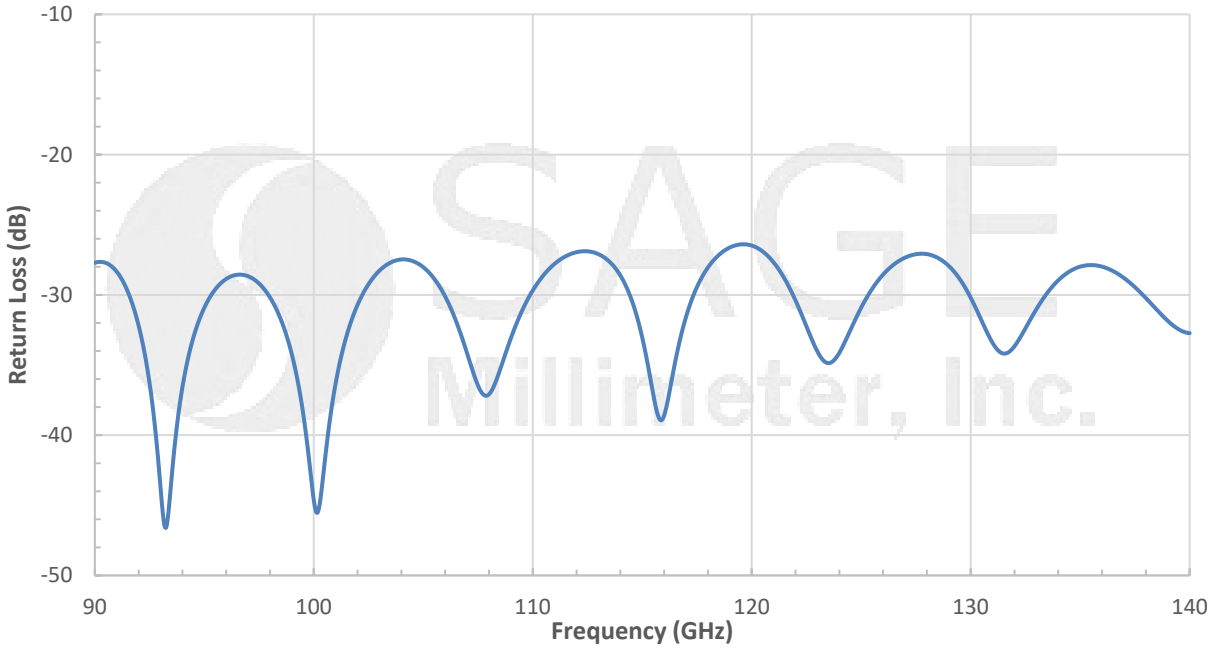
WR-08 Pyramidal Horn Antenna, 20 dBi Gain

Simulated Antenna Patterns @ 140 GHz



Simulated Return Loss vs. Frequency



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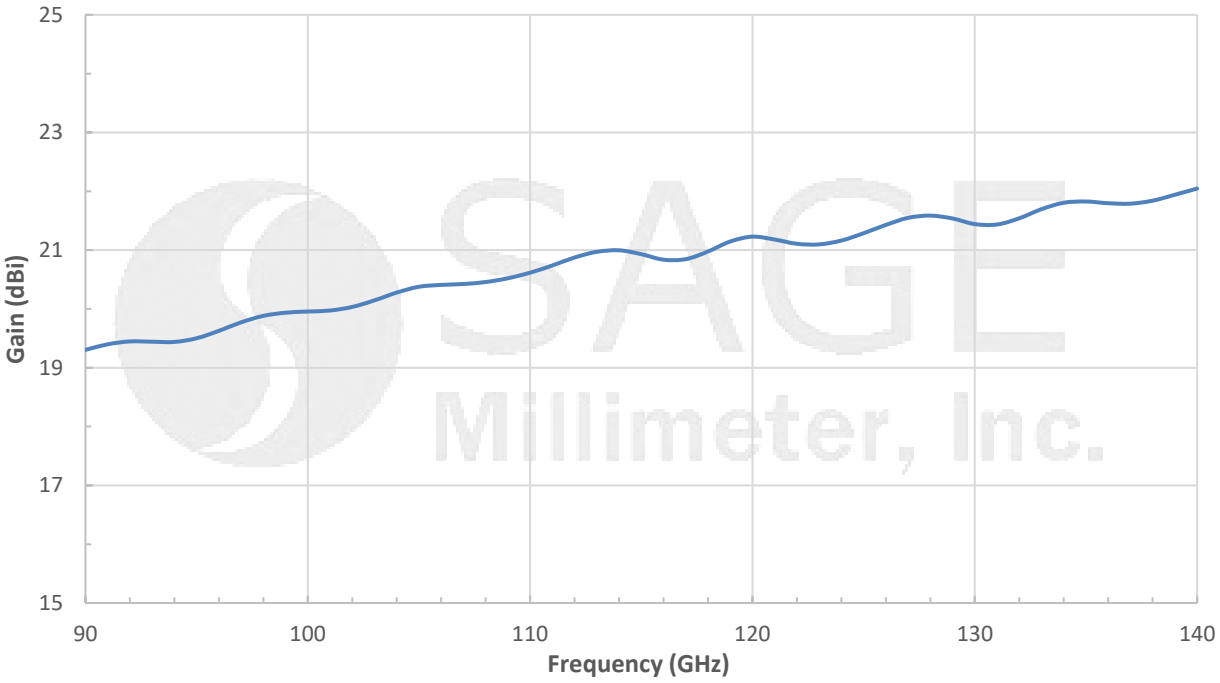
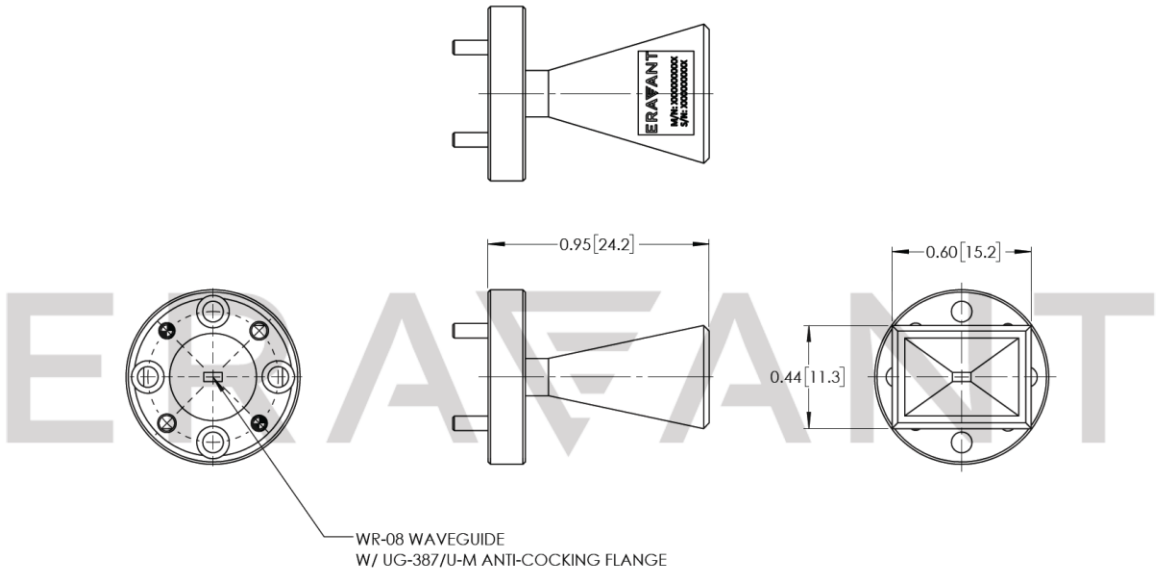
Simulated Gain vs. Frequency



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 waveguide will cause performance degradation and possible device damage.

SAGE Millimeter, Inc.

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