

W Band Conical Horn Antenna, 23 dBi Gain, WR-10 Waveguide

Description:

Model SAC-2309-10-S2-WP is a W-band conical horn antenna with a WR-10 rectangular waveguide interface that operates from 87 to 100 GHz. The antenna offers 23 dBi nominal gain and a typical half power beamwidth of 11 degrees on the E-plane and 13 degrees on the H-plane. The horn also offers typical sidelobes of -20 dB on the E-plane and -28 dB on the H-plane. The conical horn can support linear polarization. The RF connector of this antenna is a WR-10 waveguide with UG-387/U-M flange.



Features:

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

Applications:

- Antenna Ranges
- Feed Horns
- System Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency*	87 GHz		100 GHz
Gain		23 dBi	
3 dB Beamwidth, E-plane		11°	
3 dB Beamwidth, H-plane		13°	
Sidelobes, E-plane		-20 dB	
Sidelobes, H-plane		-28 dB	
Return Loss		23 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

*Note: Can operate from 80 to 110 GHz if the dominant mode is maintained.

Mechanical Specifications:

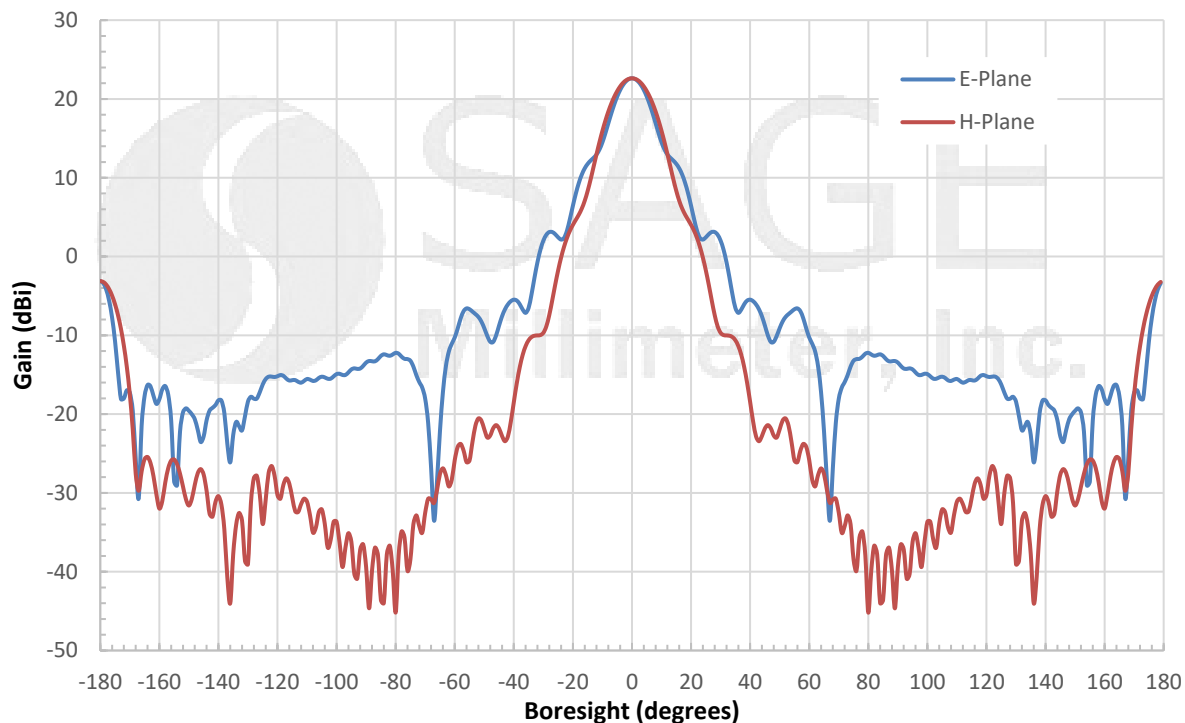
Item	Specification
Antenna Port	WR-10 Waveguide
Flange Type	UG-387/U-M Flange
Material	Brass
Finish	Gold Plated
Weight	1 Oz
Size	1.80" (L) X 0.87" (Ø)
Outline	AC-RW2-094



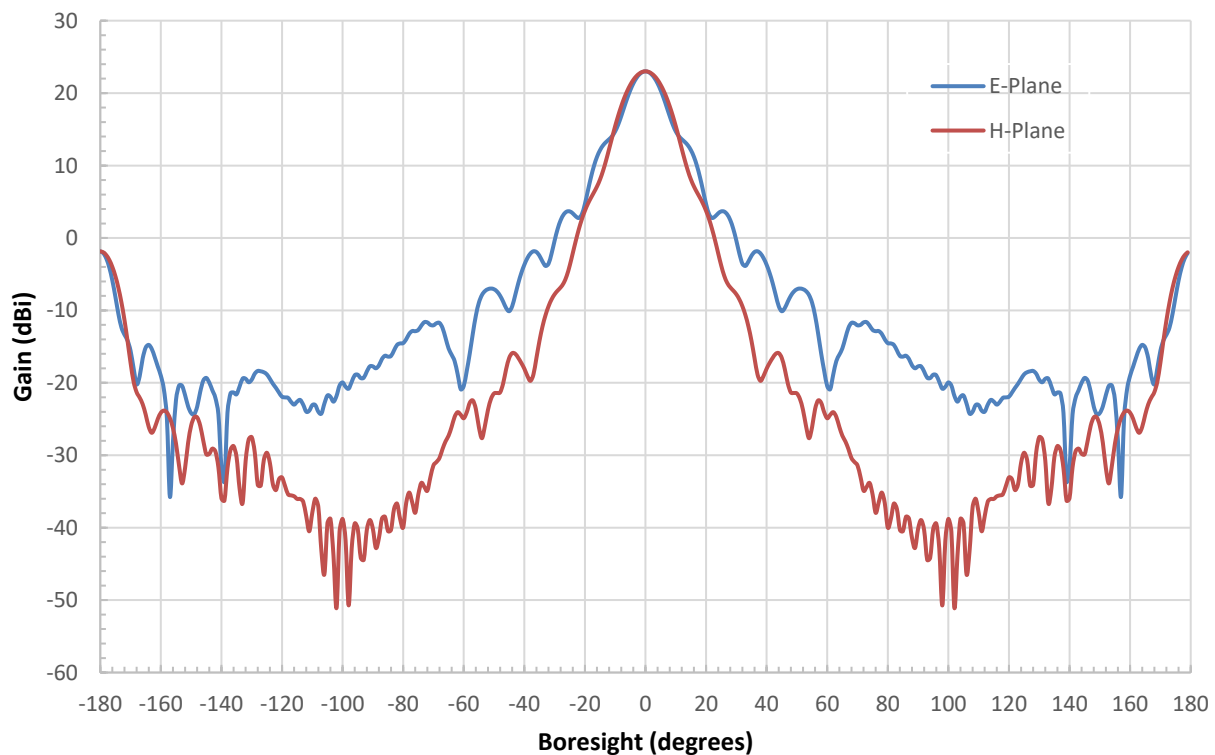


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Simulated Antenna Patterns @ 87 GHz

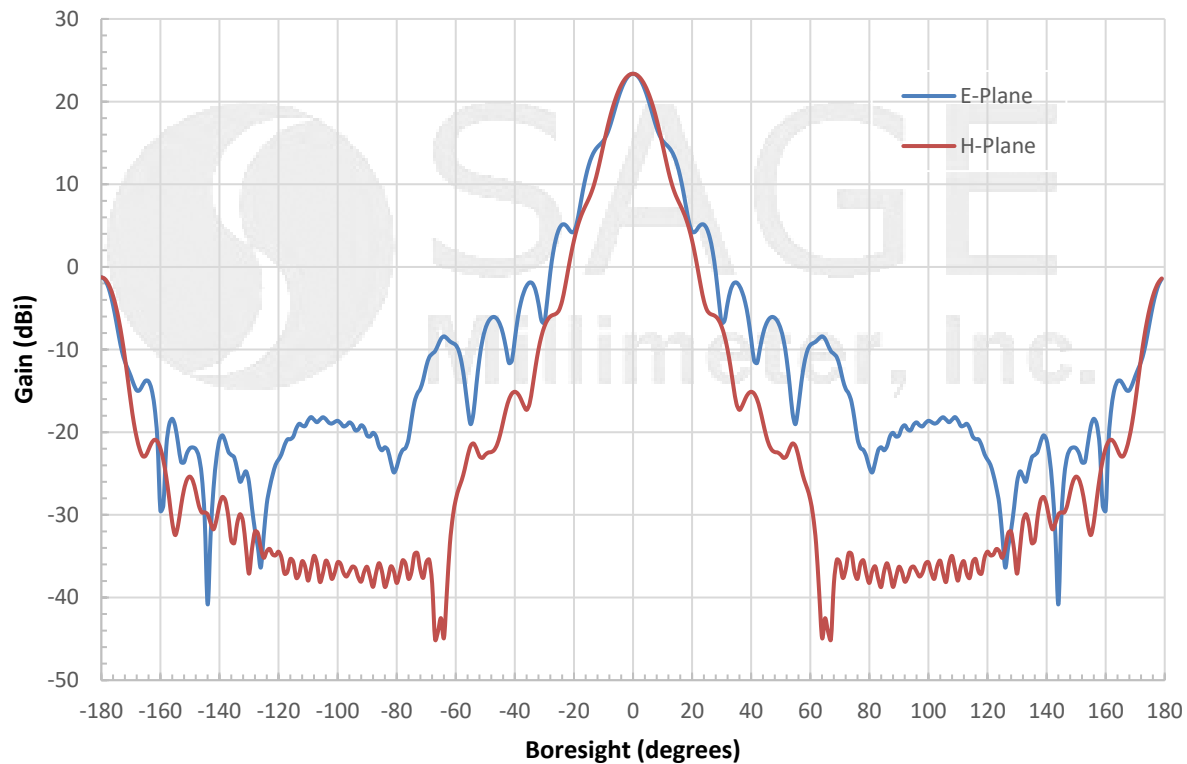


Simulated Antenna Patterns @ 93.5 GHz

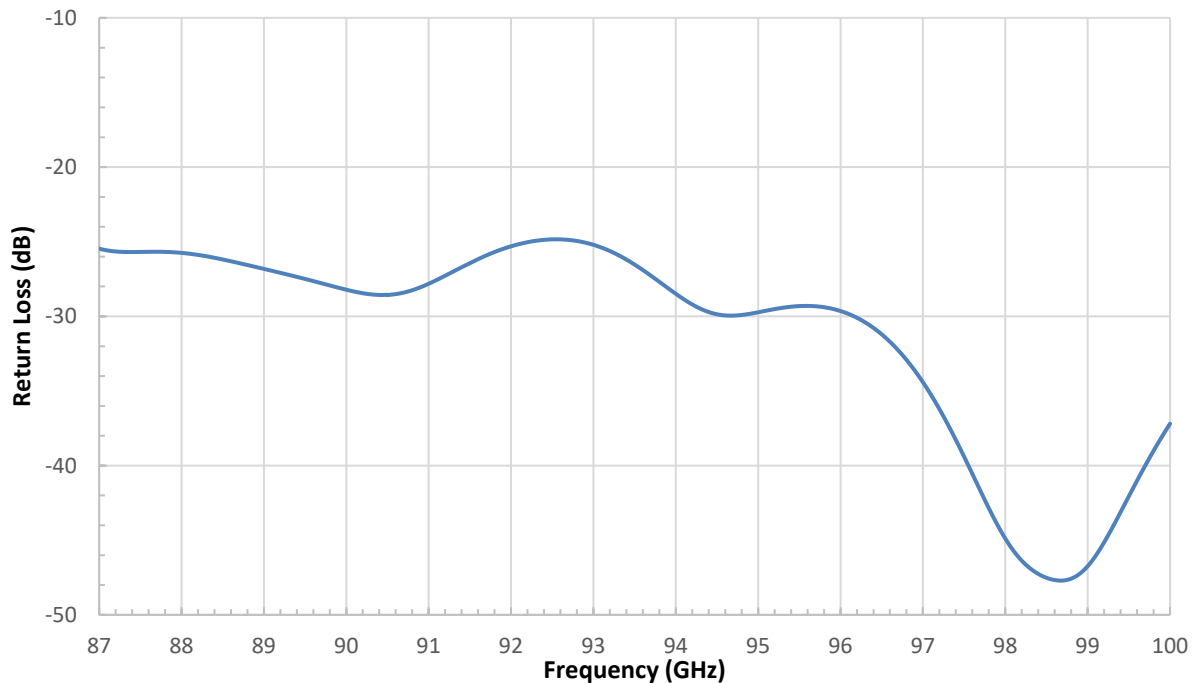


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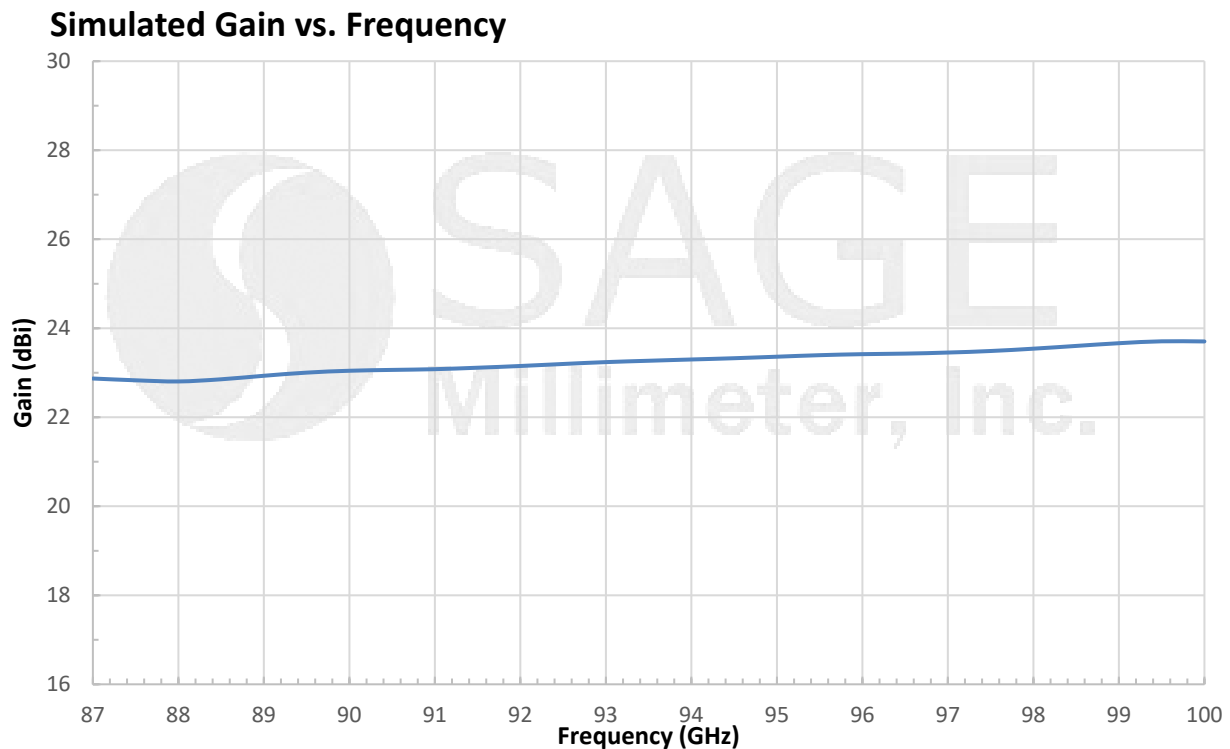
Simulated Antenna Patterns @ 100 GHz



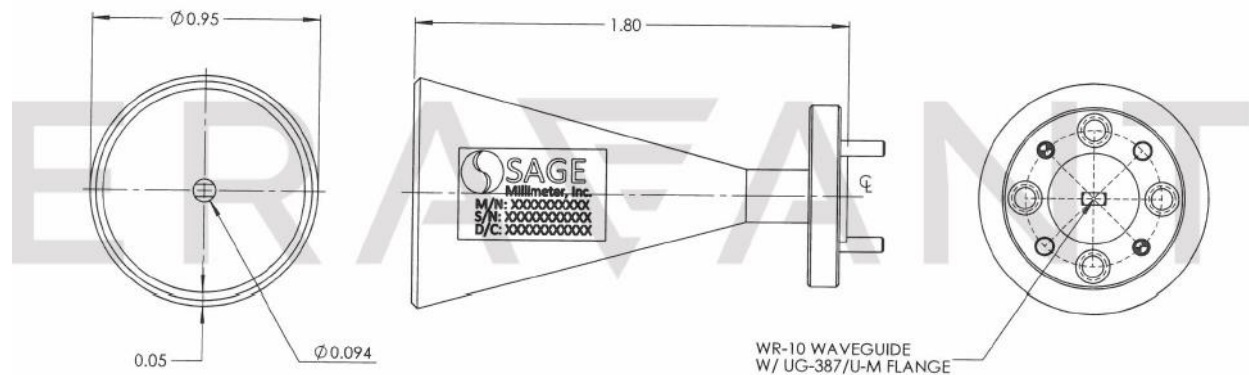
Simulated Return Loss vs. Frequency



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



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.

