



W-Band Omnidirectional Antenna, 30 Degrees

Description:

Model SAO-7531140230-10-S1 is a W-band omnidirectional antenna that operates between 75 and 110 GHz. This vertically polarized antenna offers a 360-degree azimuth coverage with typical 2.0 dBi gain and ± 0.5 dB gain flatness. The antenna features a half power typical beamwidth of 30 degrees in the vertical direction.



Features:

- 360° Azimuth Coverage
- 30° Vertical 3 dB Beamwidth
- Vertically Polarized

Applications:

- Communication Links
- EW Systems
- Indoor Local Area Networks

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	75 GHz		110 GHz
Gain		2.0 dBi	
Gain Variation		± 0.5 dB	
Azimuth		360°	
3 dB Beamwidth, Vertical		30°	
Return Loss		8 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

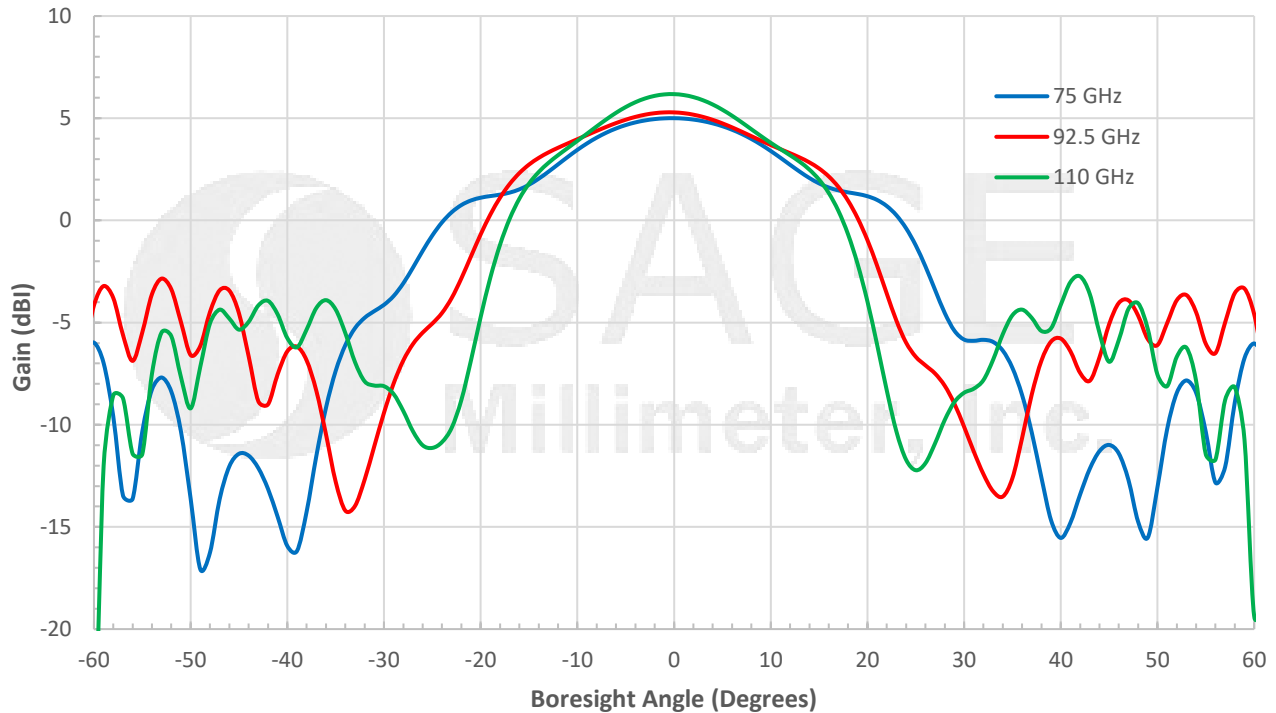
Item	Specification
Input Port	WR-10 Waveguide with UG-387/U-M Flange
Body Material	Aluminum
Lens Material	PTFE
Finish	Gold Plated
Weight	0.26 Oz
Size	0.52" (H) x 0.85" (\emptyset)
Outline	AO-W02-030-1



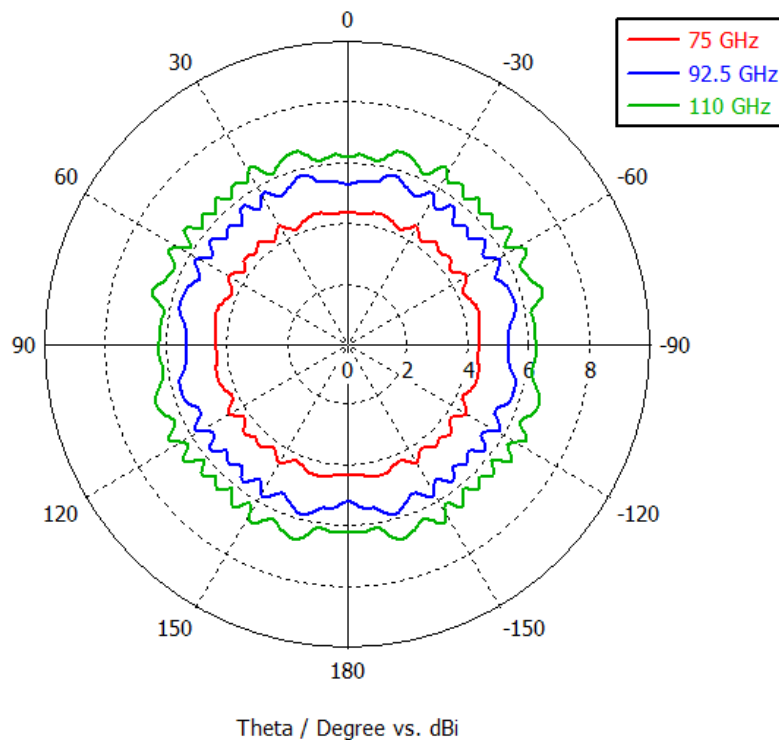


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Simulated E-Plane Antenna Pattern @ 75, 92.5, 110 GHz



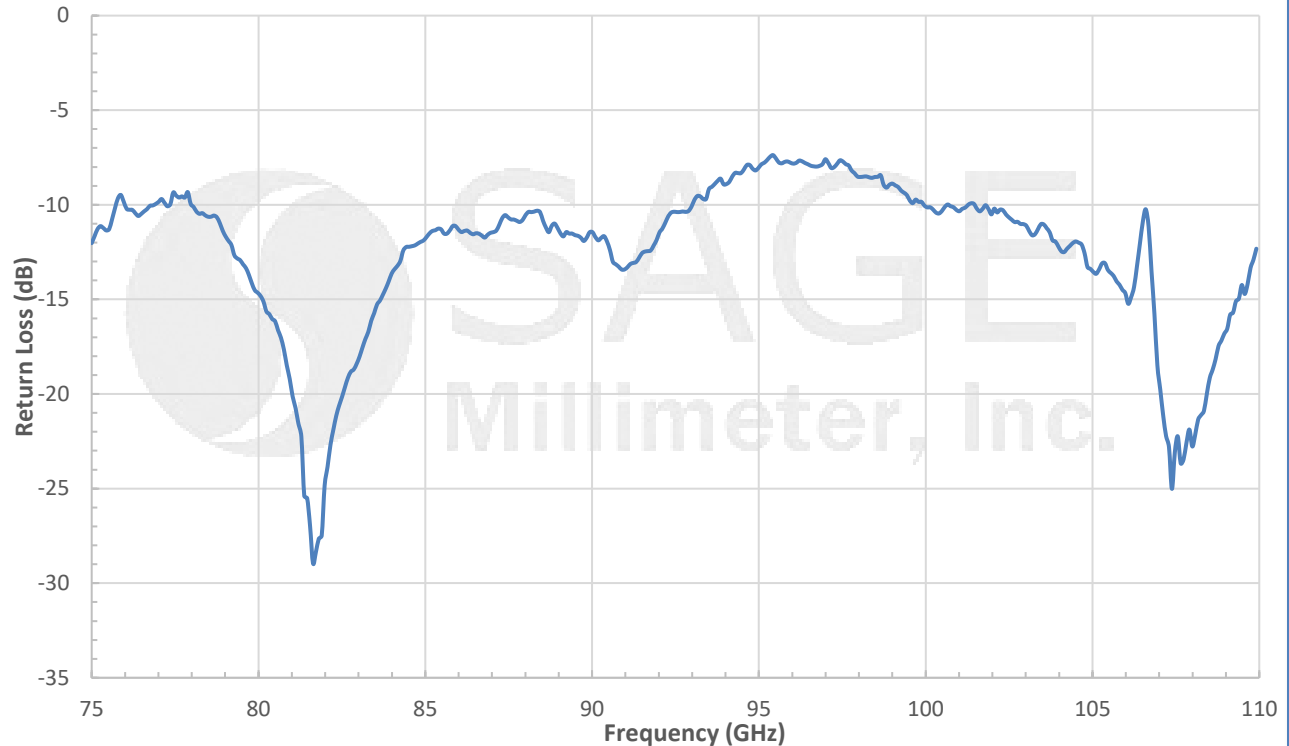
Simulated H-plane Antenna Pattern @ 75, 92.5, 110 GHz



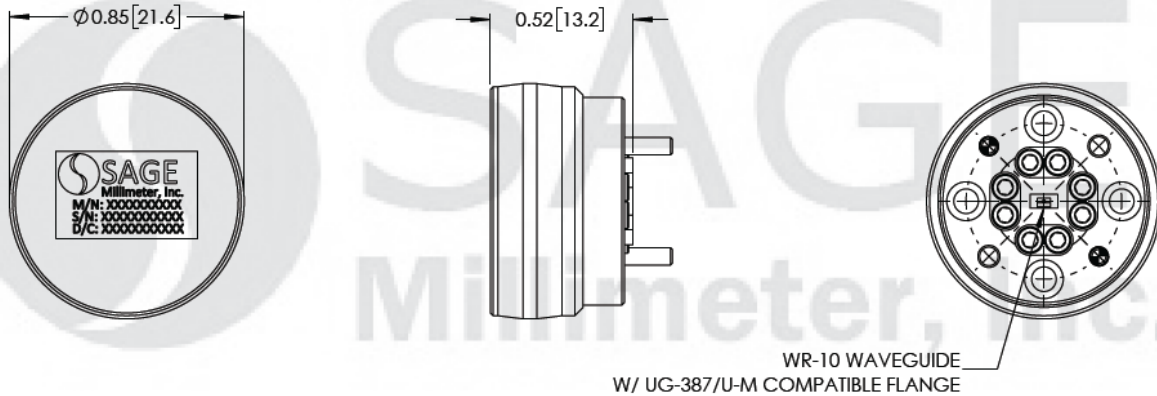


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Measured Return Loss vs. Frequency



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



Note:

- Return Loss data is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C room temperature.
- Antenna Pattern data presented is simulated. The actual data may vary.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Foreign objects in the waveguide will affect device performance and may damage the antenna.



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