



WR-05 Probe Antenna

Description:

Model SAP-05-R2 is a G-band probe antenna that operates from 140 GHz to 220 GHz. The antenna offers 6.5 dBi nominal gain and 115 degrees typical half power beamwidth on the E-plane and 55 degrees typical half power beamwidth on the H-plane. The antenna supports linear polarized waveforms. The input of this antenna is a WR-05 waveguide with a UG-387/U-M anti-cocking flange.



Features:

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

Applications:

- 5G Systems
- Antenna Ranges
- Antenna Gain Measurements
- System Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	140 GHz		220 GHz
Gain		6.5 dBi	
Polarization		Linear	
3 dB Beamwidth, E-Plane		115°	
3 dB Beamwidth, H-Plane		55°	
Sidelobes, E-Plane		-10 dB	
Sidelobes, H-Plane		-14 dB	
Return Loss		10 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

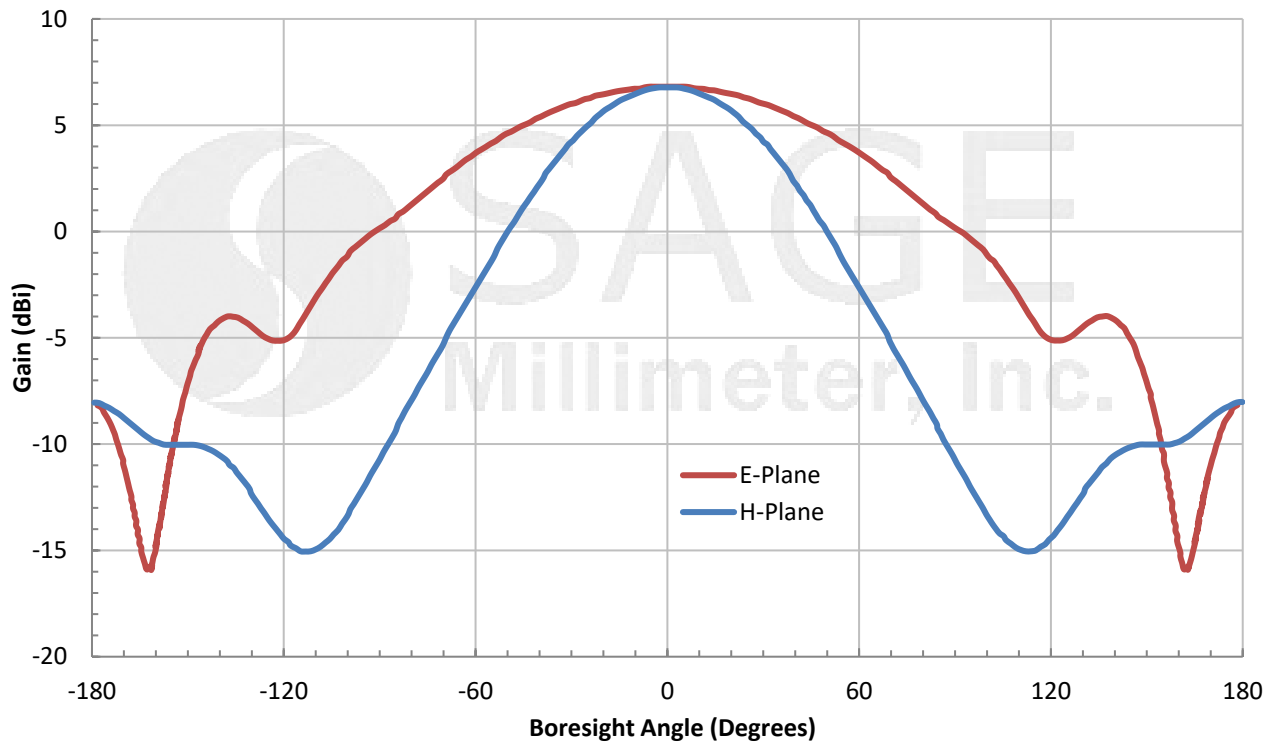
Item	Specification
Antenna Port	WR-05 Waveguide
Flange Type	UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	0.4 Oz
Size	1.00" (L) x 0.75 (Ø)
Outline	AP-RG-A



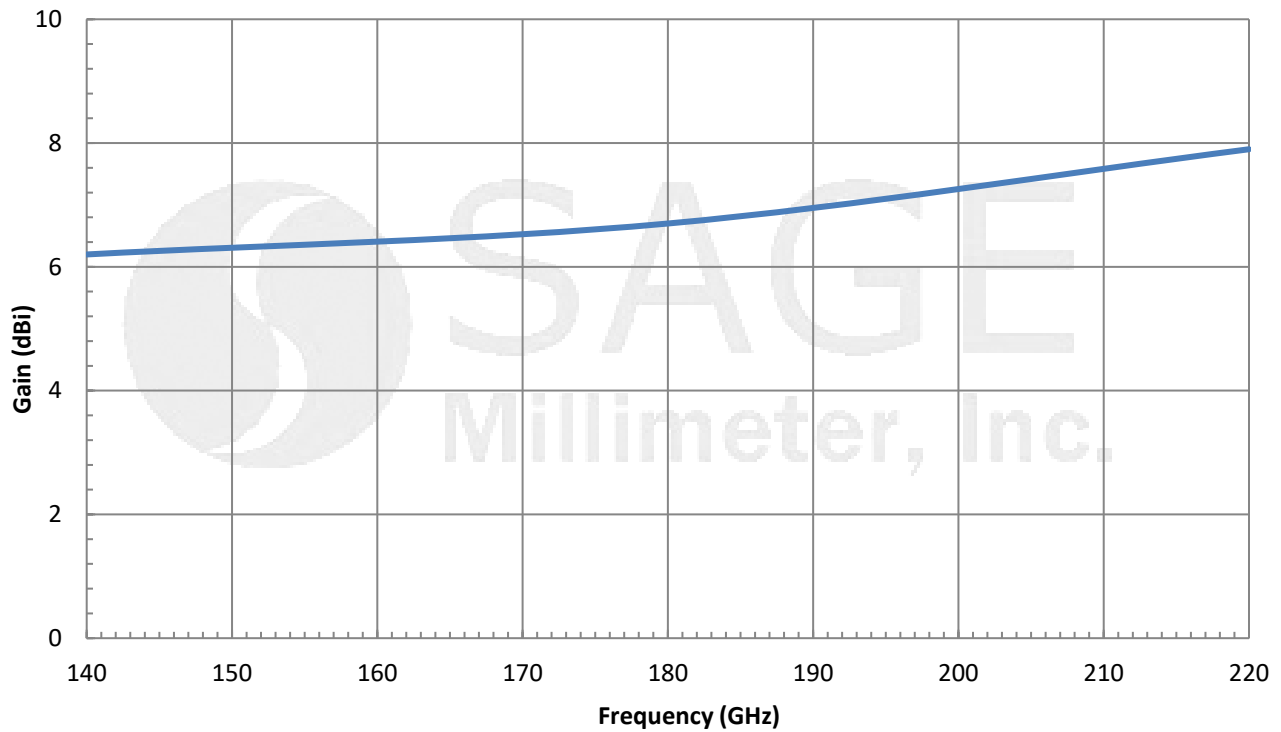


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Simulated Antenna Pattern @ 180 GHz

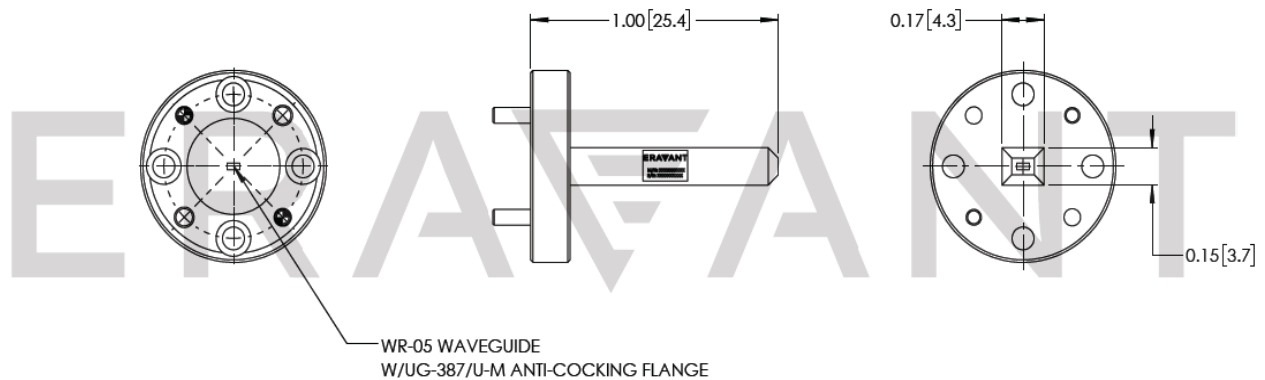


Simulated Gain vs. Frequency



WR-05 Probe Antenna

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.

