

G-Band Conical Horn Antenna, 140 to 220 GHz, 22 dBi Gain

Description:

Model SAC-2214-067-S2 is a G-band conical horn antenna that operates from 140 to 220 GHz. The antenna offers 22 dBi nominal gain and a typical half power beamwidth of 13.5 degrees on the E-plane and 15 degrees on the H-plane. The horn also offers typical sidelobes of -15 dB on the E-plane and -25 dB on the H-plane. The conical horn can support linear and circular polarization. The input of this antenna is a $\varnothing 0.067''$ circular waveguide with UG-387/U-M anti-cocking flange.



Features:

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

Applications:

- Antenna Ranges
- Feed Horns
- System Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	140 GHz		220 GHz
Gain		22 dBi	
3 dB Beamwidth, E-plane		13.5°	
3 dB Beamwidth, H-plane		15°	
Sidelobes, E-plane		-15 dB	
Sidelobes, H-plane		-25 dB	
Return Loss		20 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

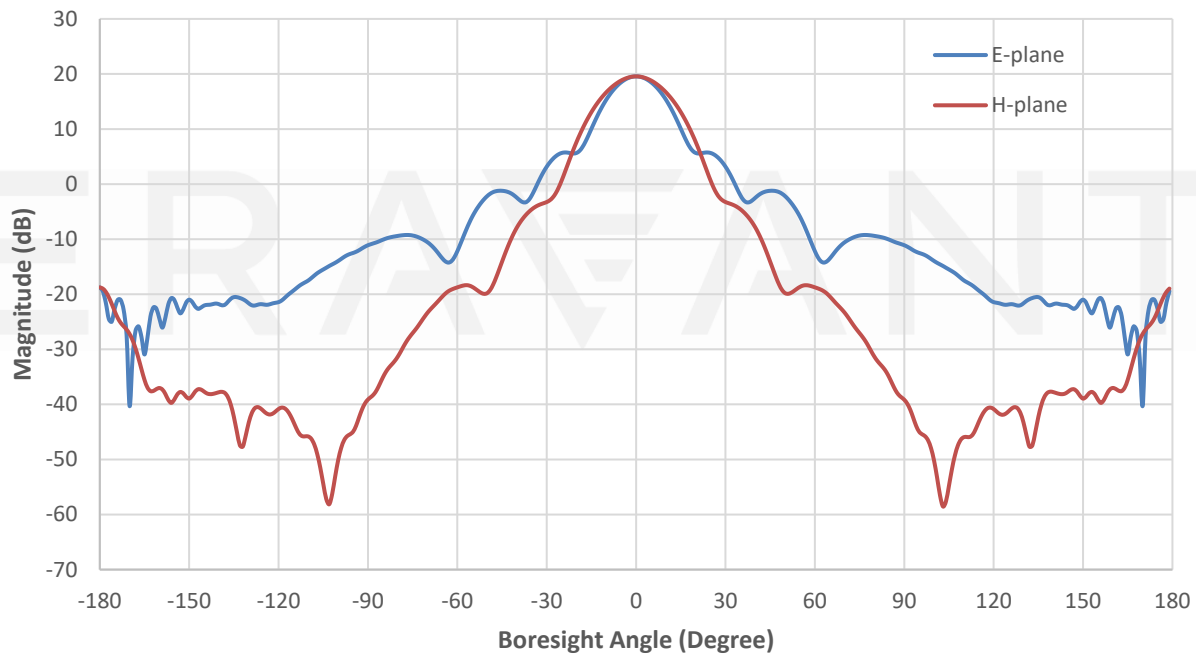
Mechanical Specifications:

Item	Specification
Antenna Port	$\varnothing 0.067''$ Circular Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	0.4 oz
Outline	AC-CG22-067-A

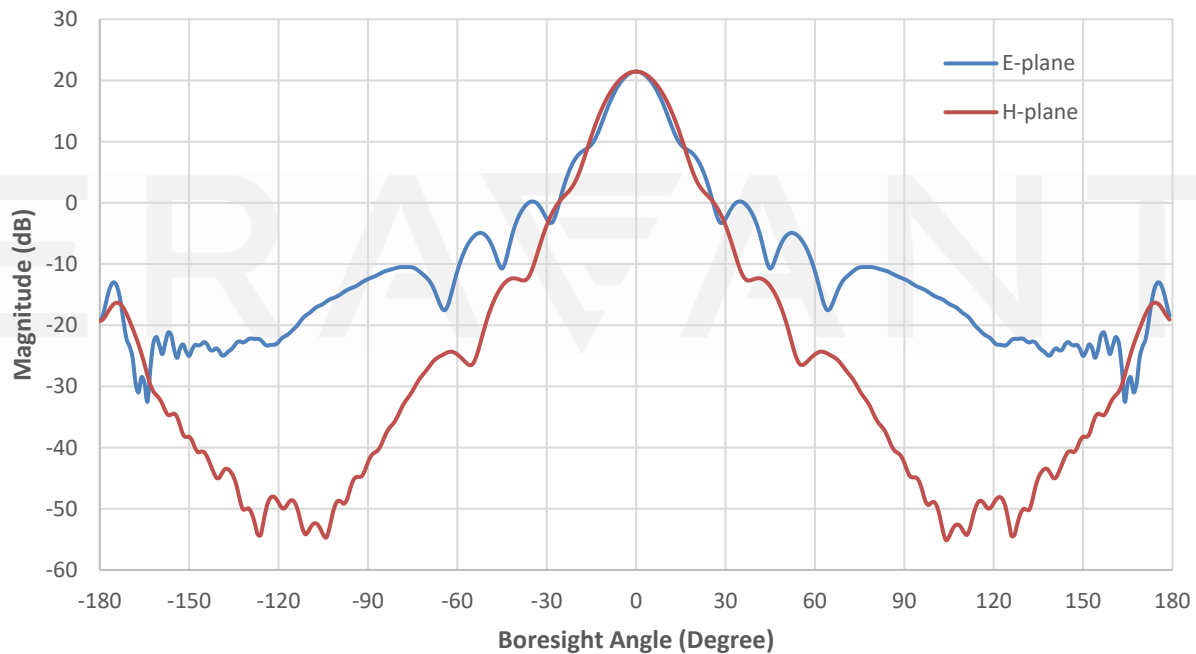


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Simulated Antenna Pattern @ 140 GHz

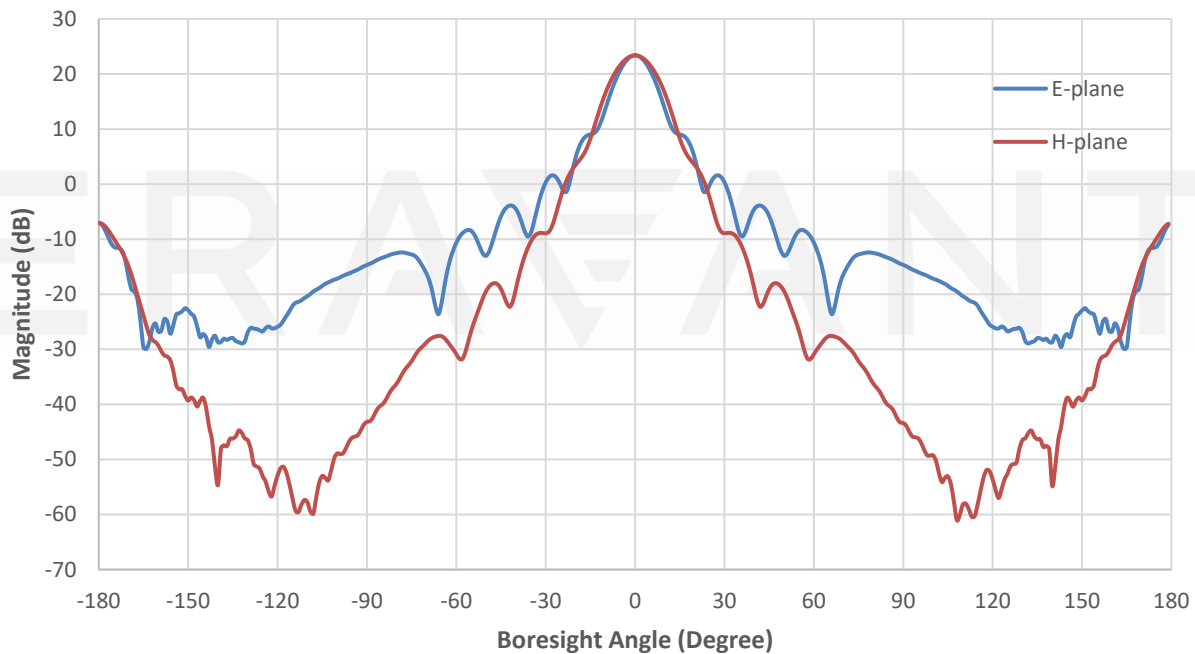


Simulated Antenna Pattern @ 180 GHz

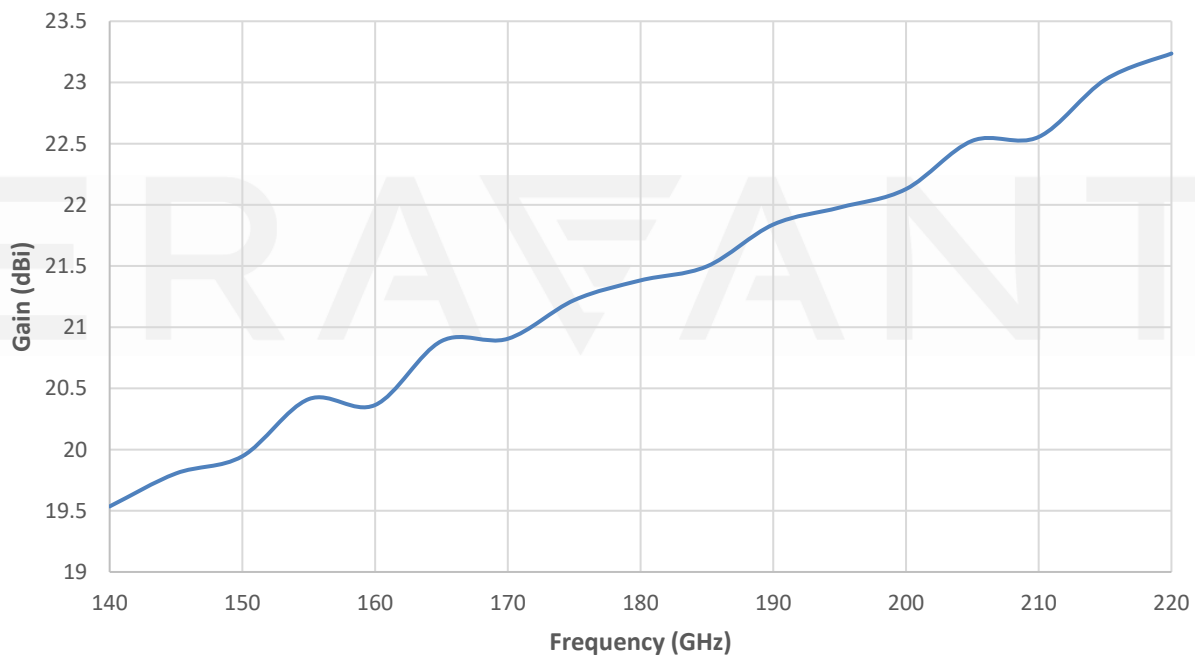


G-Band Conical Horn Antenna, 140 to 220 GHz, 22 dBi Gain

Simulated Antenna Pattern @ 220 GHz

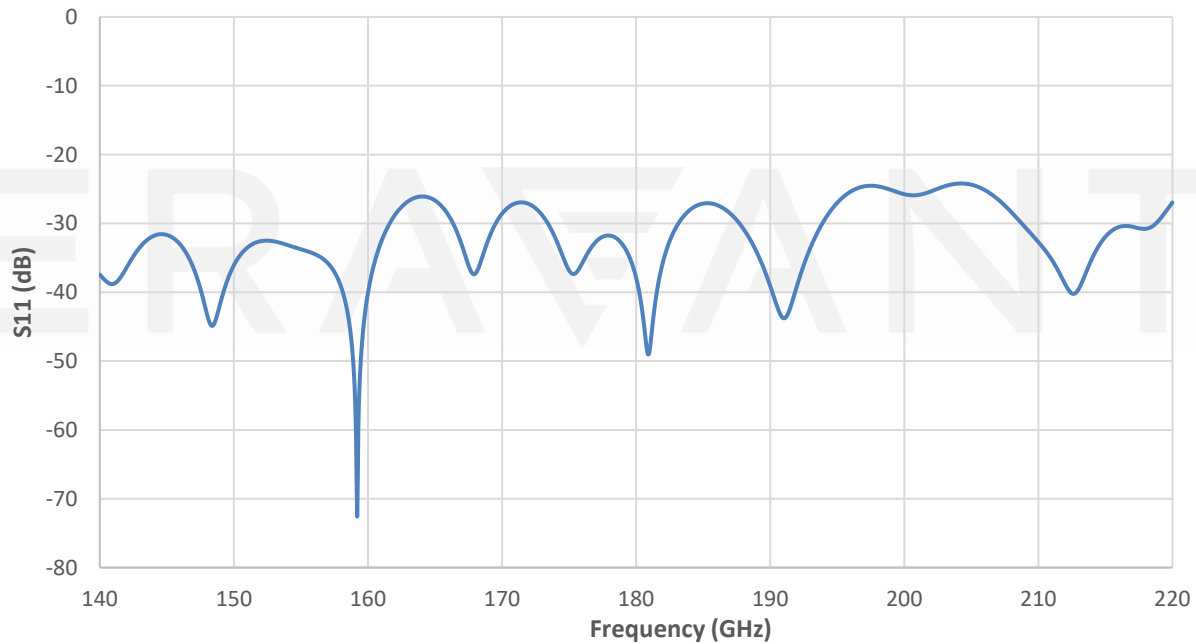


Simulated Gain vs Frequency

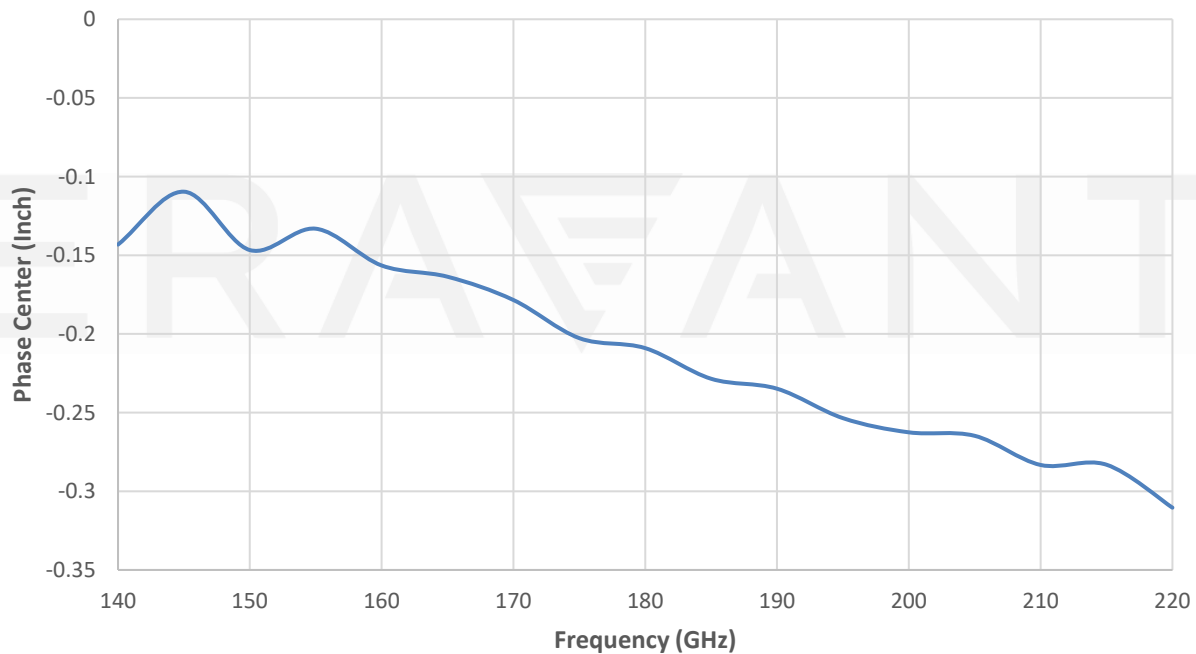


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Simulated Return Loss vs Frequency

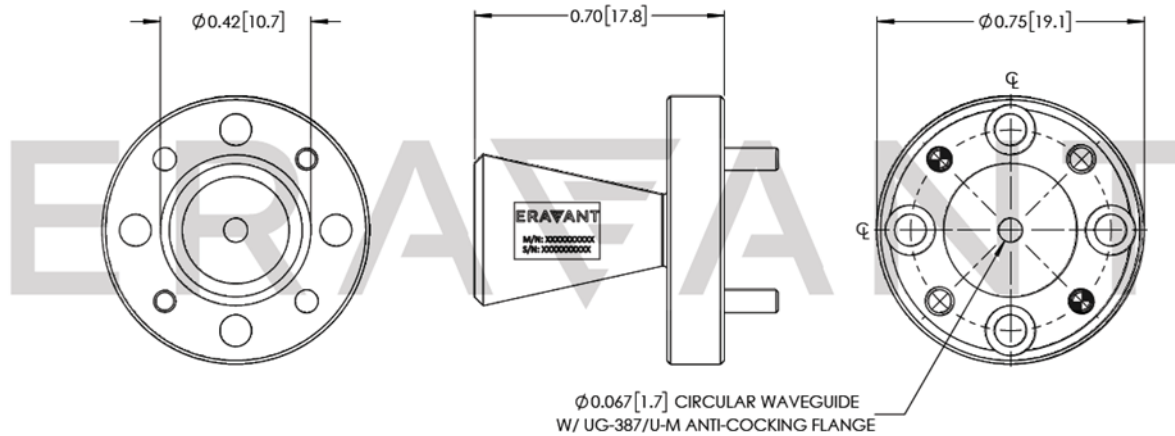


Simulated Phase Center vs Frequency



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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 waveguide will degrade performance and/or damage the device.

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