SAC-2012-110-S2-WP

E Band Conical Horn Antenna, 20 dBi Gain

SAC-2012-110-S2-WP is an E-band conical horn antenna that operates from 77 to 87 GHz. The antenna offers 20 dBi nominal gain and a typical half power beamwidth of 16 degrees on the E-plane and 20 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 and circular polarization. The input of this antenna is a 0.110” diameter circular waveguide with UG-387/U-M flange.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency*	77 GHz		87 GHz
Gain		20 dBi	
3 dB Beamwidth, E-plane		16°	
3 dB Beamwidth, H-plane		20°	
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 70 to 90 GHz if the dominant mode is maintained.

Mechanical Specifications:

Item	Specification
Antenna Port	0.110" Diameter Circular Waveguide
Flange Type	UG-387/U-M Flange
Material	Brass
Finish	Gold Plated
Weight	1.0 Oz
Size	1.20” (L) X 0.65” (Ø)
Outline	AC-CE1-110

FEATURES

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

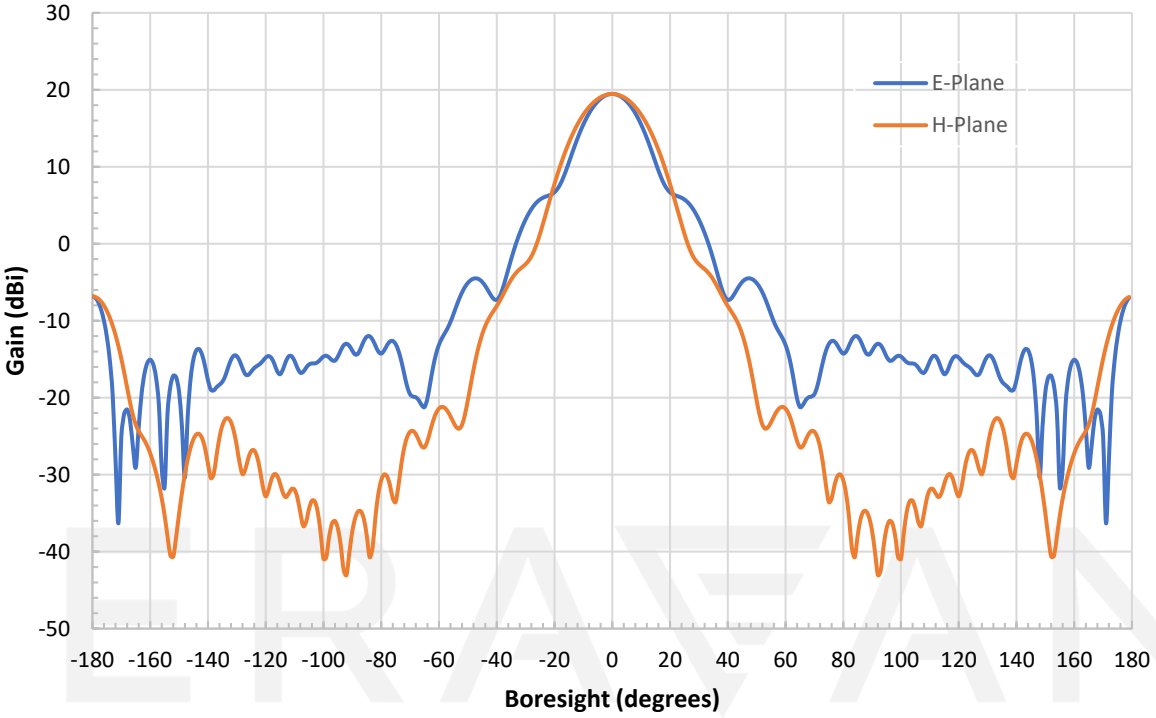
APPLICATIONS

- Antenna Ranges
- Feed Horns
- System Setups

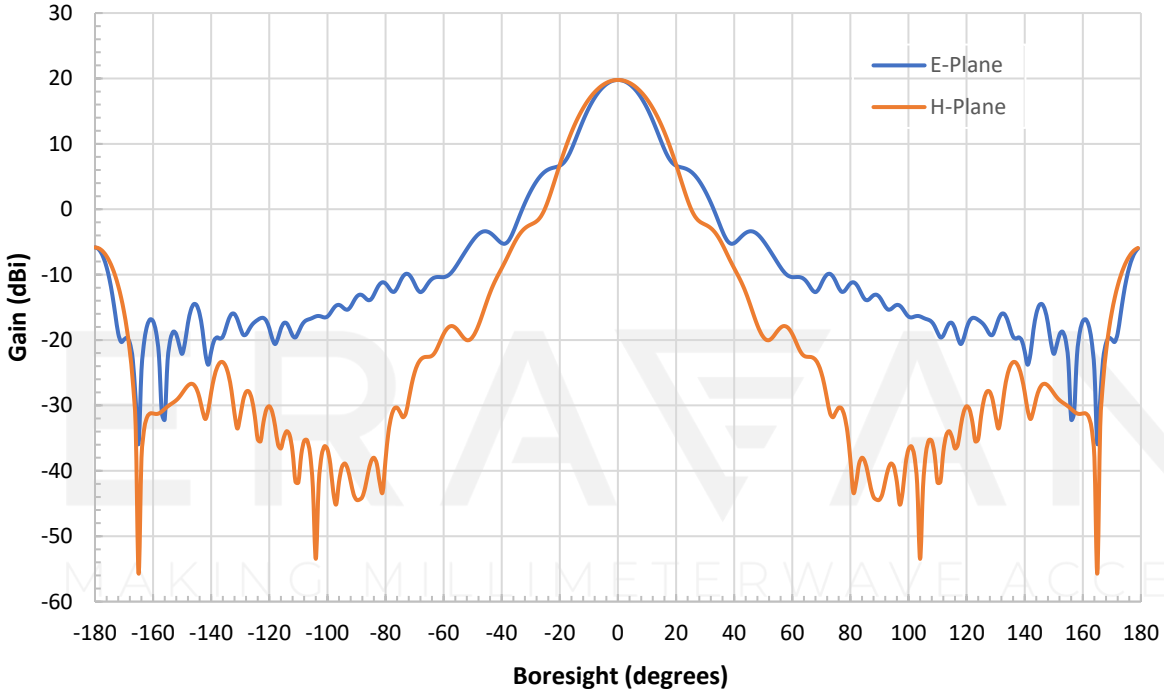
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Simulated Antenna Patterns @ 77 GHz

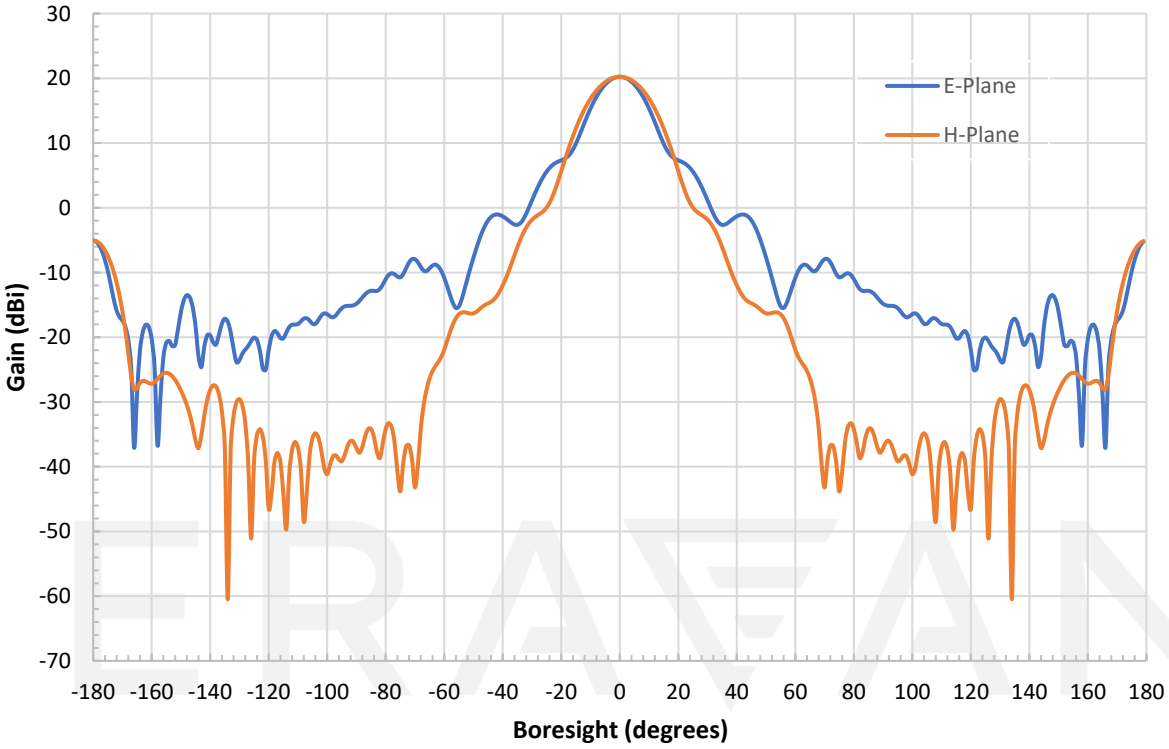


Simulated Antenna Patterns @ 82 GHz

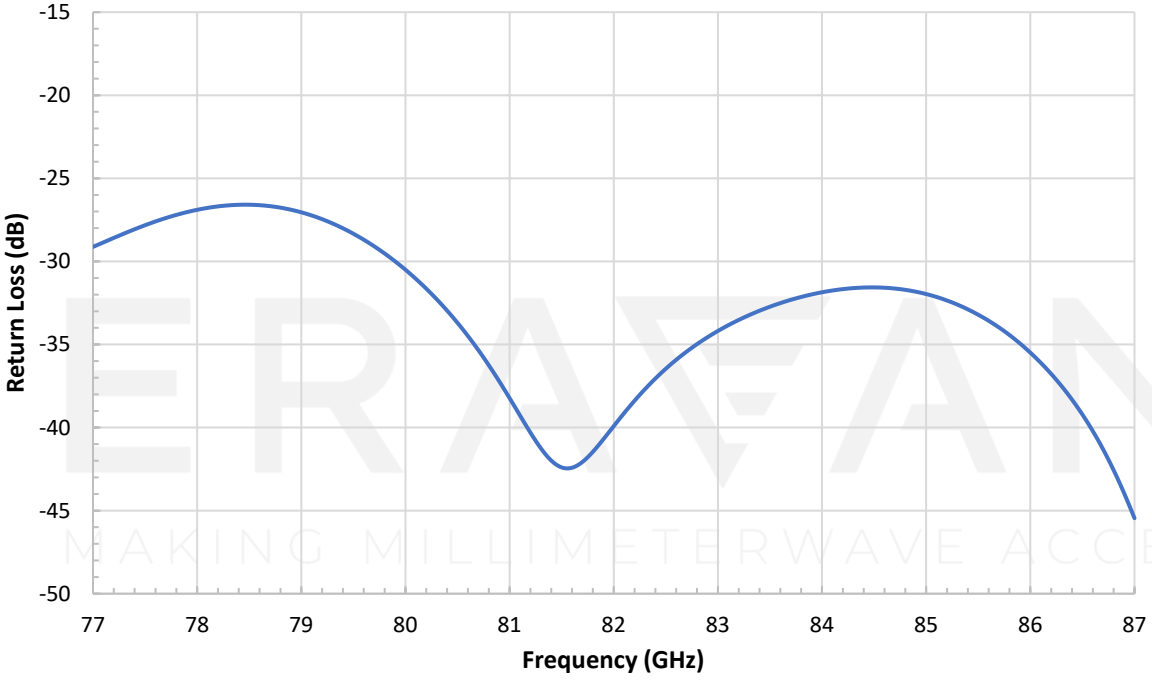


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Simulated Antenna Patterns @ 87 GHz

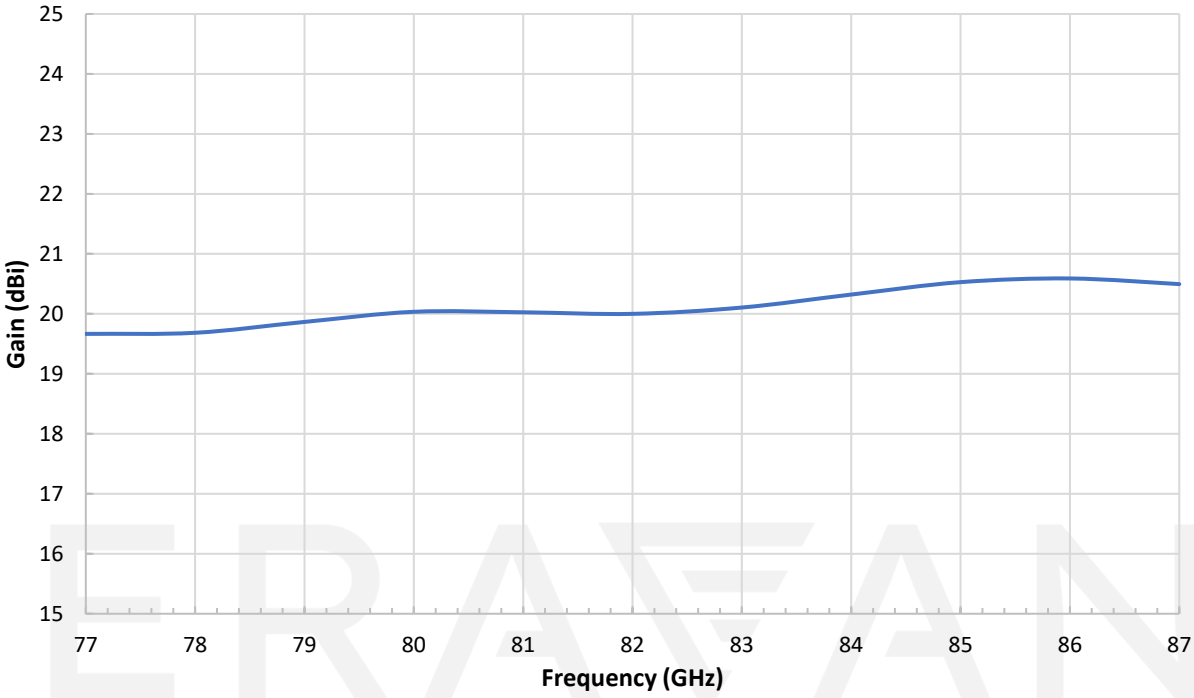


Simulated Return Loss vs. Frequency

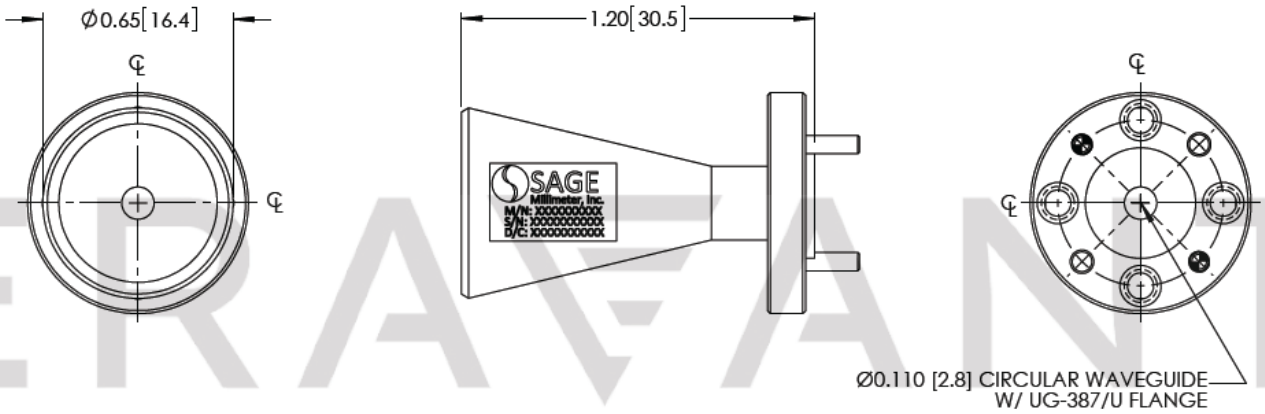


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Simulated Gain vs. Frequency



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 may damage the device.

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