



Quad-Ridged, Dual Polarized Horn Antenna, 6 to 24.5 GHz

Description:

Model SAV-0632531431-SF-S1-QR is a quad-ridged horn antenna that operates from 6 to 24.5 GHz. The antenna offers a typical gain of 14 dBi and a nominal 3 dB beamwidth of 26° for the E-plane and 36° for the H-plane, respectively. The antenna supports both circular and linear polarized waveforms. The antenna features eight 4-40 threaded holes and one ¼-20 threaded hole for mounting. The antenna ports are two female SMA connectors. A weather resistant configuration with radome is available under the model **SAV-0632531431-SF-S1-QR-WR**.



Features:

- Broadband Operation
- Coaxial Connector for RF Input
- Circular and Linear Polarization
- Good Impedance Match

Applications:

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	6.0 GHz		24.5 GHz
Gain		14 dBi	
Polarization	Circular and Linear		
E-Plane 3 dB Beamwidth		26°	
H-Plane 3 dB Beamwidth		36°	
E-Plane Sidelobe Levels		-17 dB	
H-Plane Sidelobe Levels		-20 dB	
Port Isolation		25 dB	
Cross Polarization		25 dB	
Port Return Loss		8 dB	
Power Handling			25 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

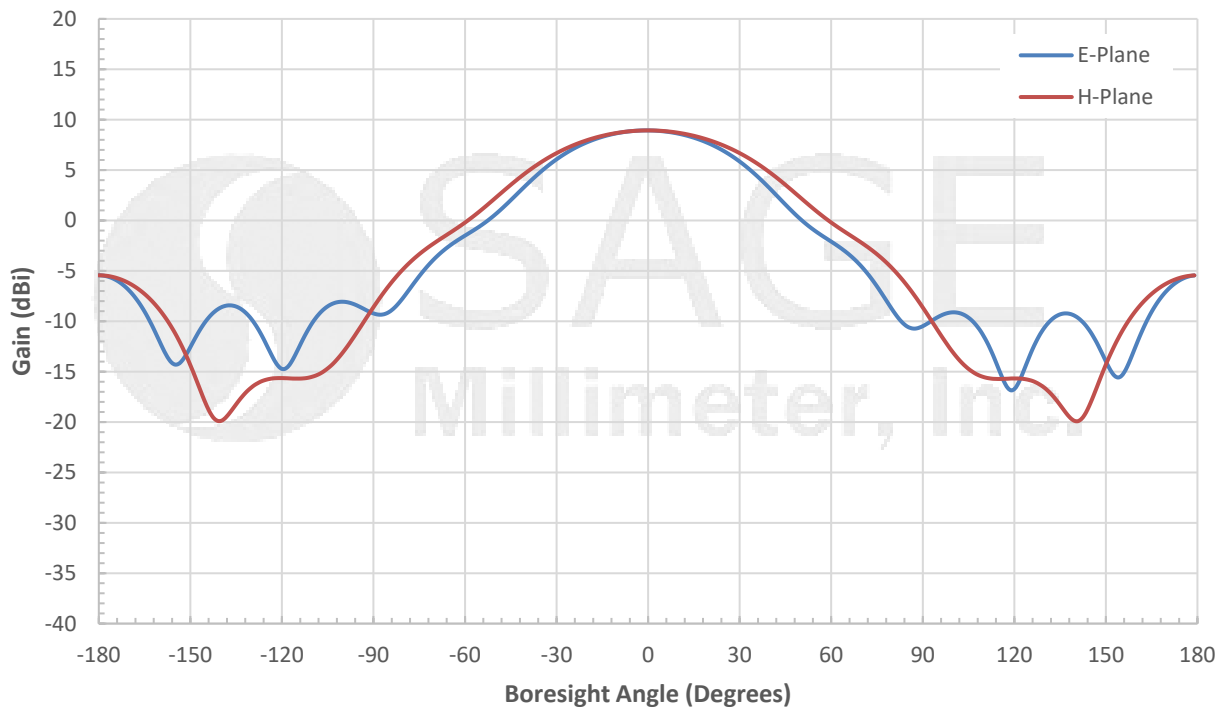
Item	Specification
Antenna Ports	SMA (F)
Mounting	1 x ¼-20 threaded hole and 8 x 4-40 threaded holes
Material	Aluminum
Finish	Gold Chem Film
Weight	11.4 oz.
Outline	AV-C14-QR



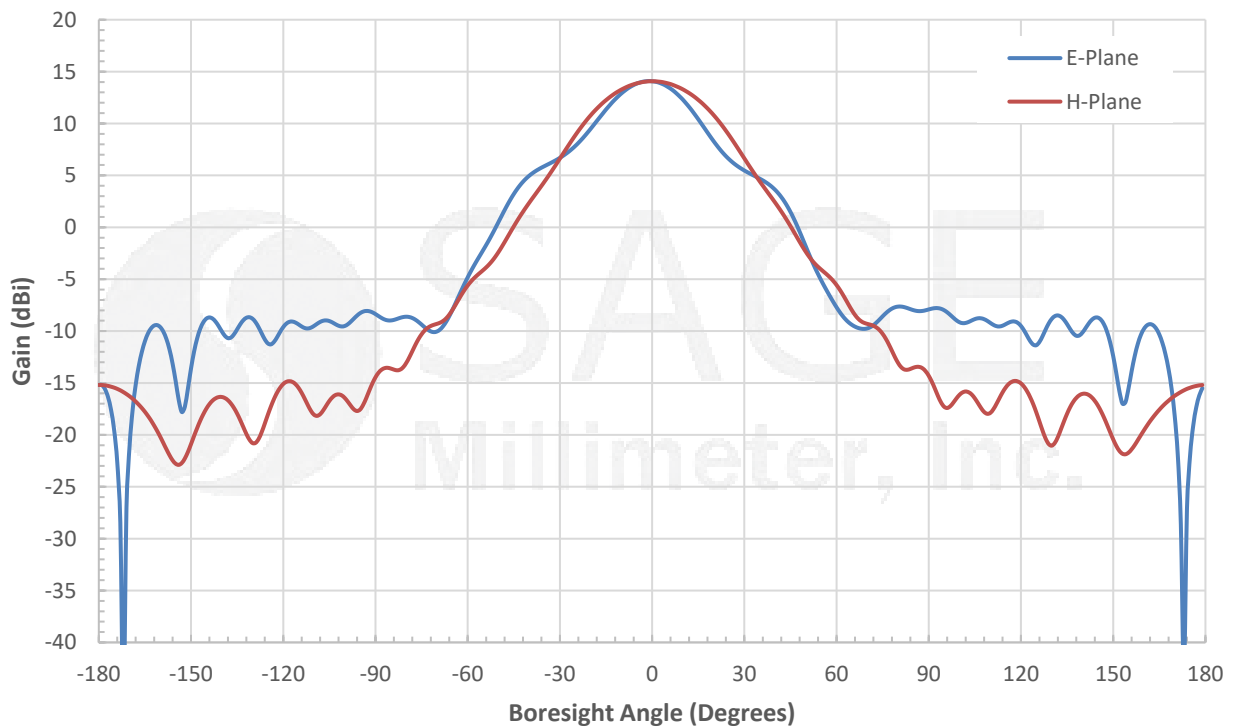


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Simulated Antenna Patterns @ 6 GHz



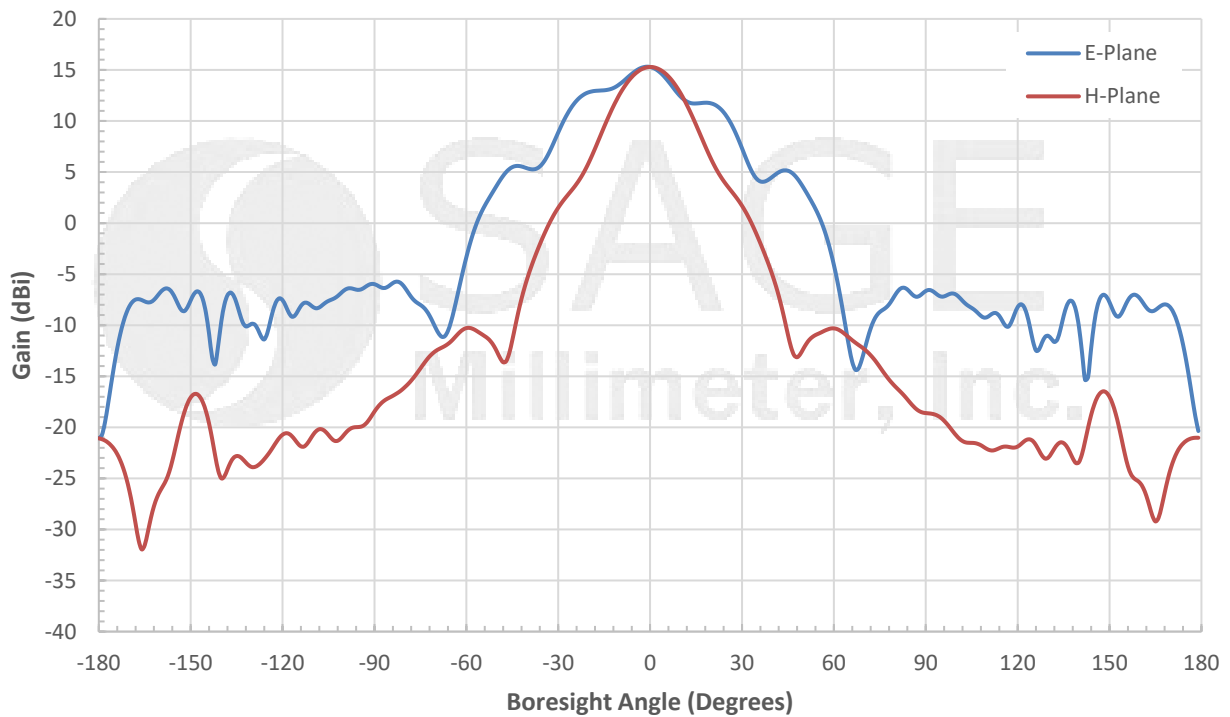
Simulated Antenna Patterns @ 16 GHz



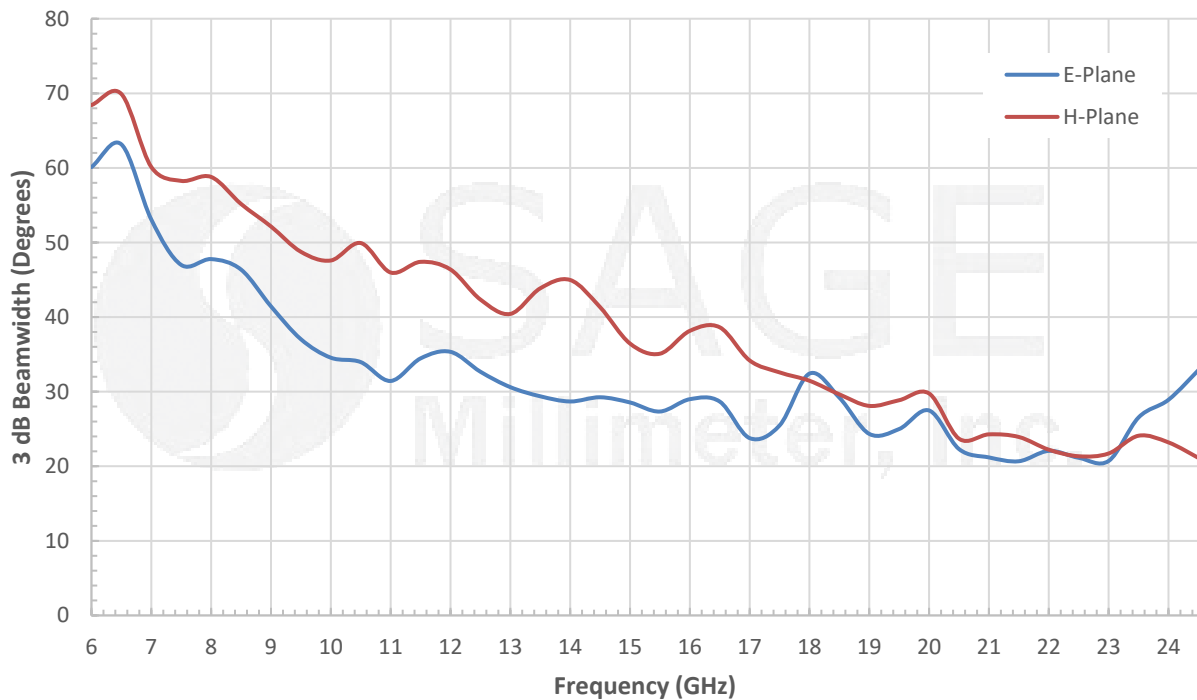


Quad-Ridged, Dual Polarized Horn Antenna, 6 to 24.5 GHz

Simulated Antenna Patterns @ 24.5 GHz



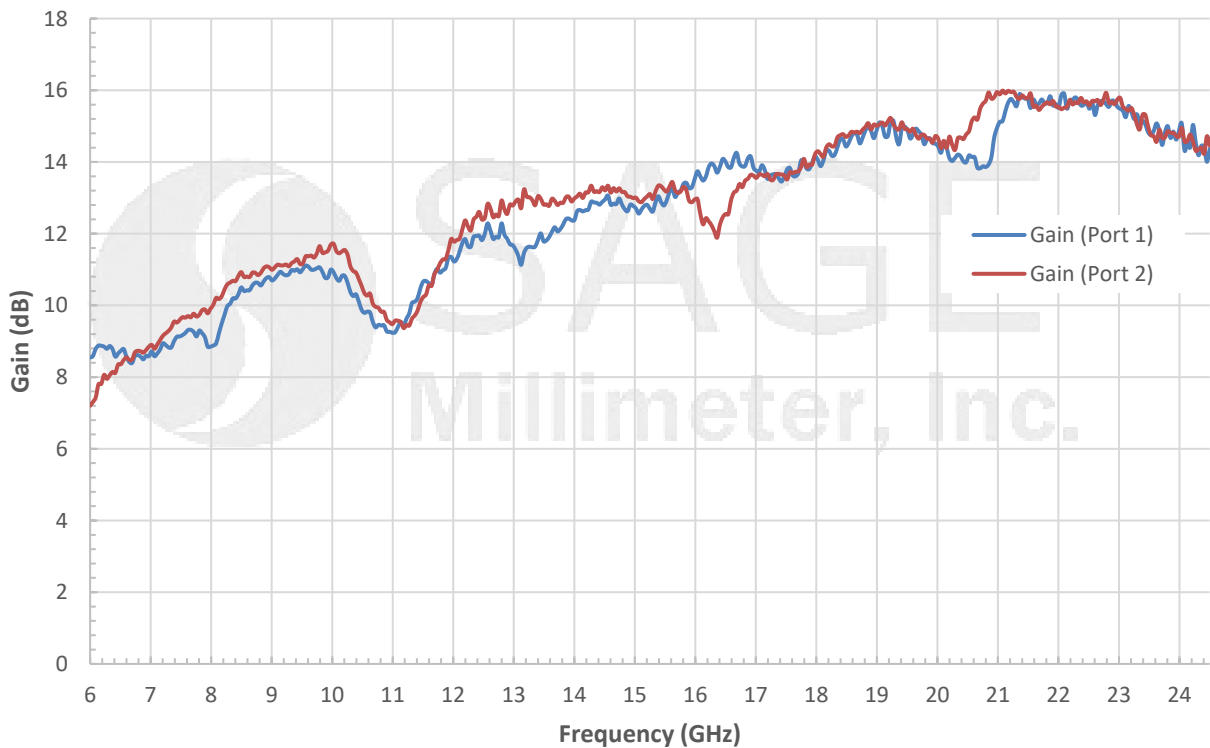
Simulated 3dB Beamwidth vs Frequency



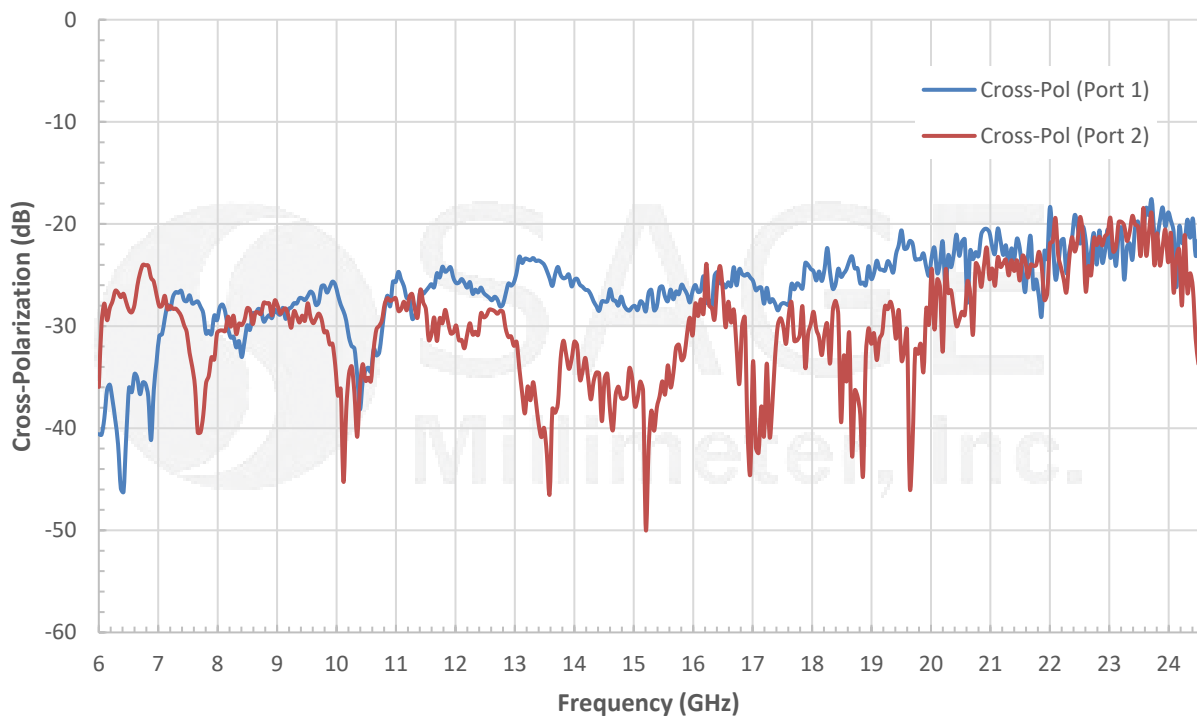


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Typical Measured Gain vs Frequency



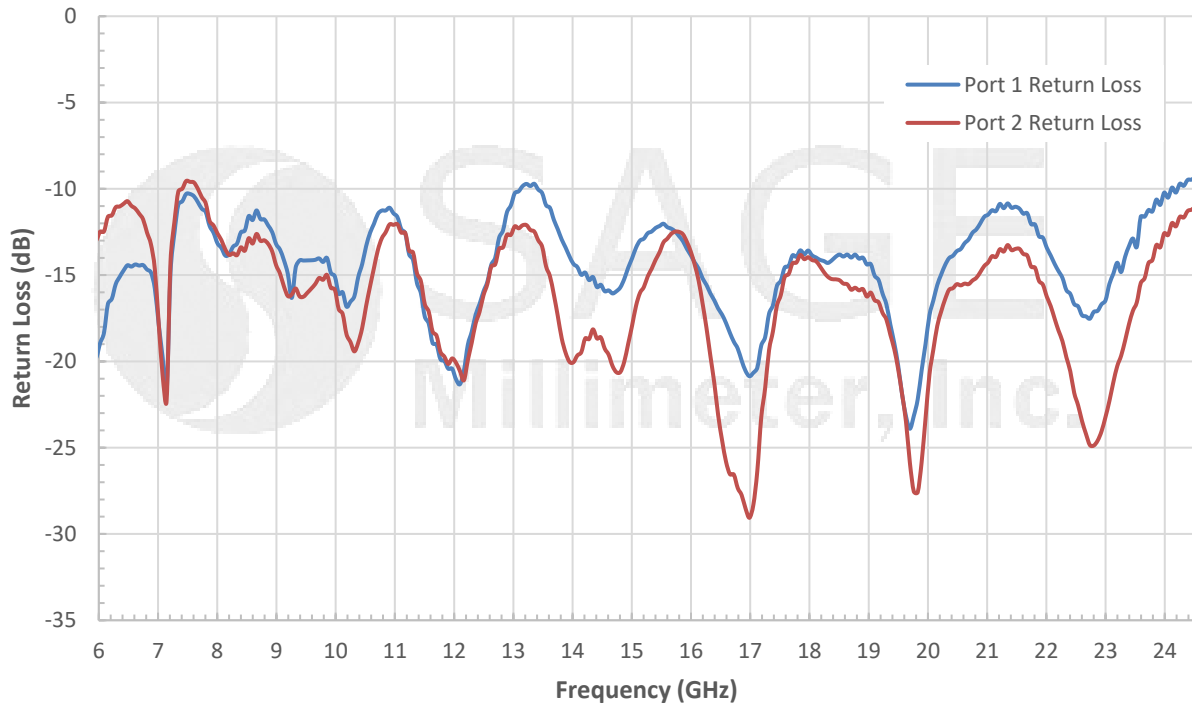
Typical Measured Cross-Polarization vs Frequency



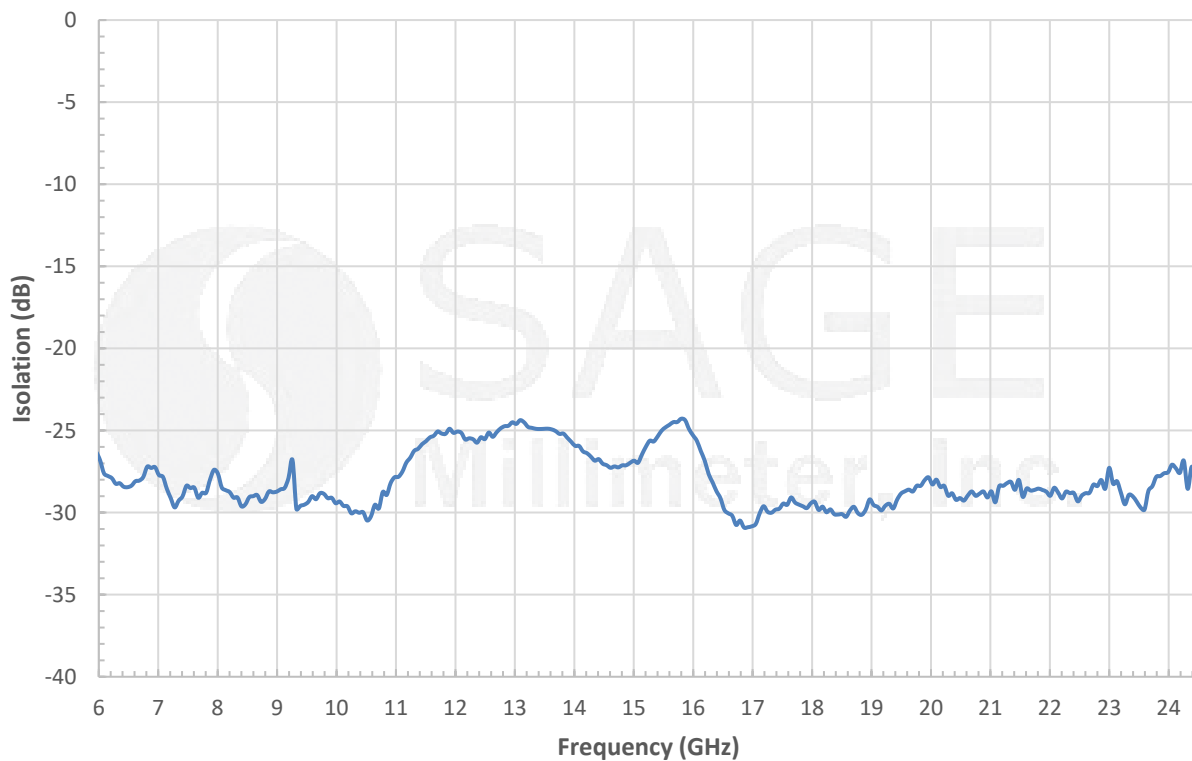


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Typical Measured Return Loss vs Frequency



Typical Measured Isolation vs Frequency

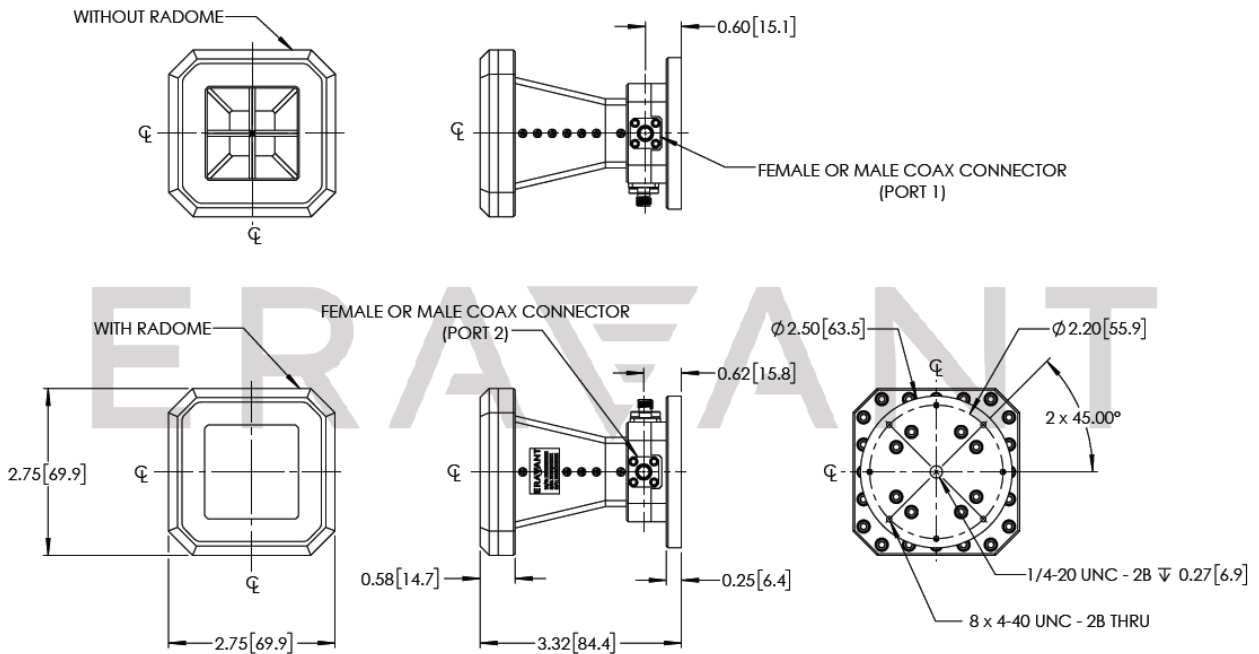


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Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- Antenna Patterns and 3 dB Beamwidth are simulated. Actual data may vary.
- All other data is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25 °C room temperature.
- SAGE Millimeter, Inc. 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.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

