



## Dual-Ridged Horn Antenna, 4.5 to 50 GHz

### Description:

**Model SAV-4525031429-2F-U5** is a dual-ridged broadband horn antenna that operates from 4.5 to 50 GHz. The antenna offers a typical gain of 14 dBi and a typical 3 dB beamwidth of 29° on both the E-plane and H-plane, respectively. The antenna supports linear polarized waveforms. The antenna features a compact design and provides an M3 screw and a mounting plate for flexible mounting capacity. The RF port is equipped with a female 2.4 mm connector.



### Features:

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

### Applications:

- Antenna Ranges
- Antenna Gain Measurements
- System Setups

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	4.5 GHz		50 GHz
Gain		14 dBi	
Polarization	Linear		
E-Plane 3 dB Beamwidth		29°	
H-Plane 3 dB Beamwidth		29°	
E-Plane Sidelobe Levels		-15 dB	
H-Plane Sidelobe Levels		-10 dB	
Return Loss		14 dB	
Cross Polarization	25 dB	30 dB	
Power Handling			10 W (CW)
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

### Mechanical Specifications:

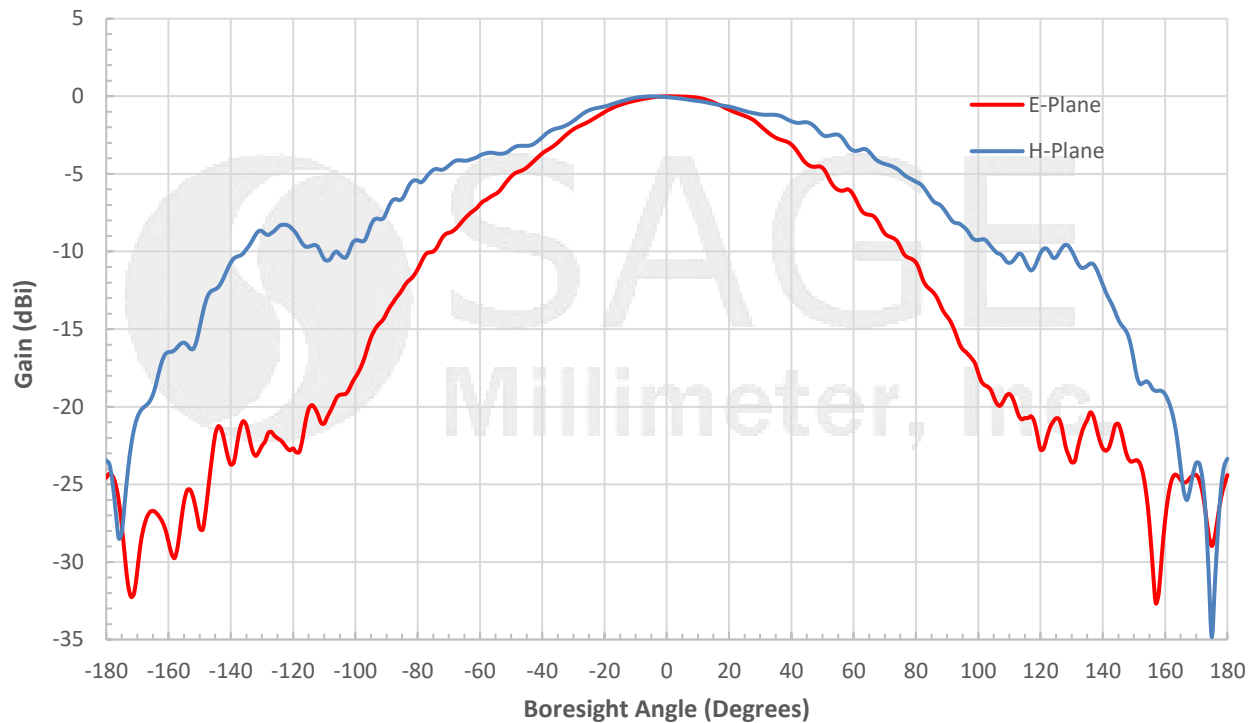
Item	Specification
Antenna Port	2.4 mm (F)
Mounting	M3 Screw and Mounting Plate
Material	Aluminum
Antenna Finish	Yellow Chem Film, Black Paint
Weight	2.5 Oz
Size	2.27" (L) X 1.72" (W) X 1.49" (H)
Outline	AV-C14-DR-RS2



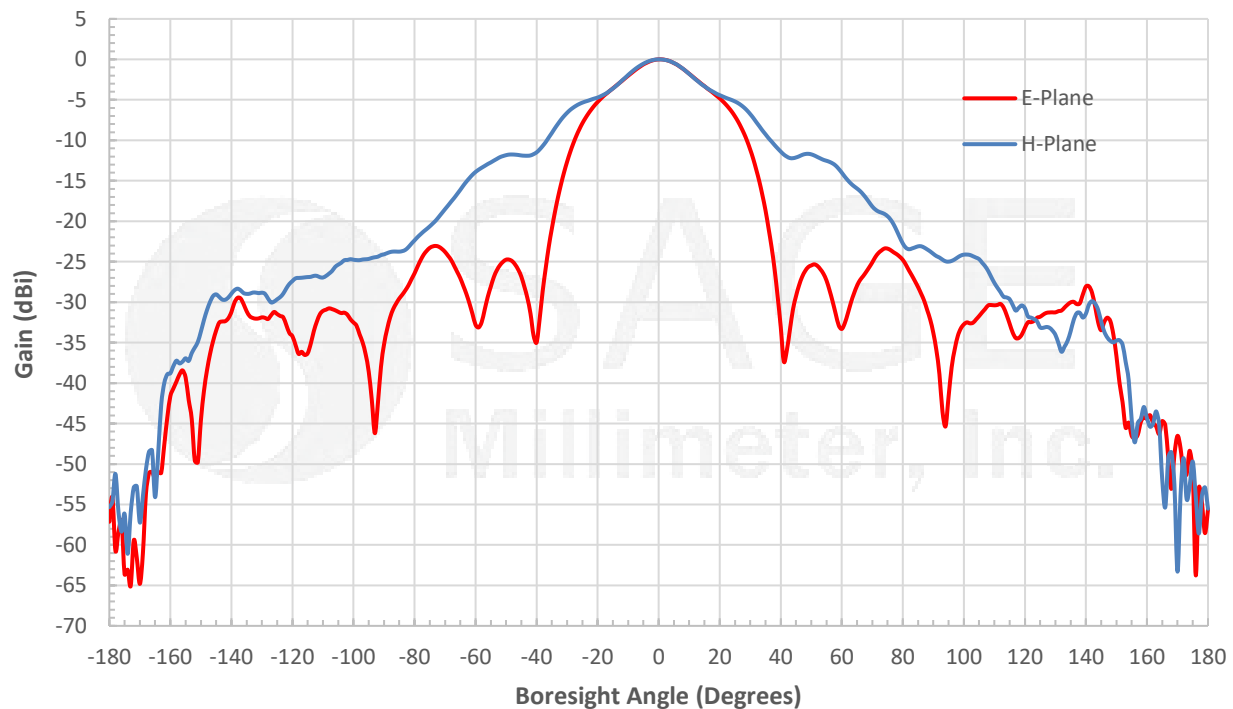


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### Typical Antenna Pattern @ 4.5 GHz



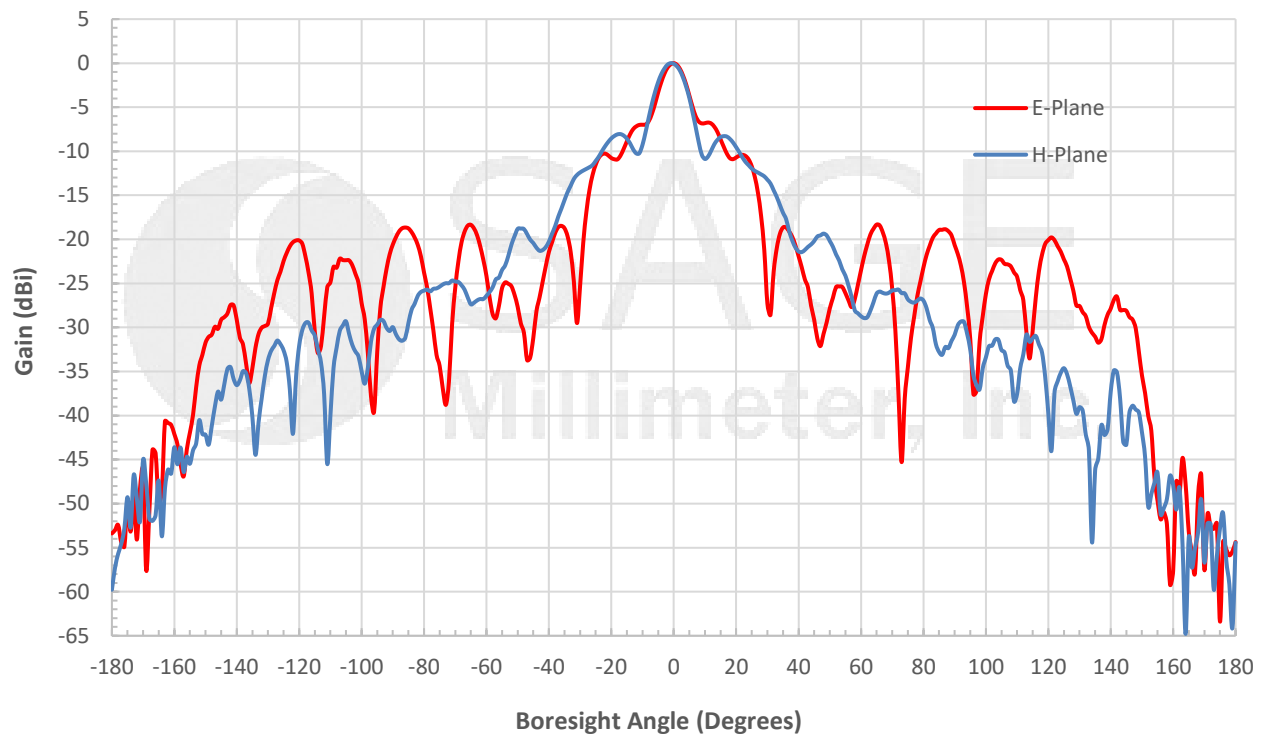
### Typical Antenna Pattern @ 27.25 GHz



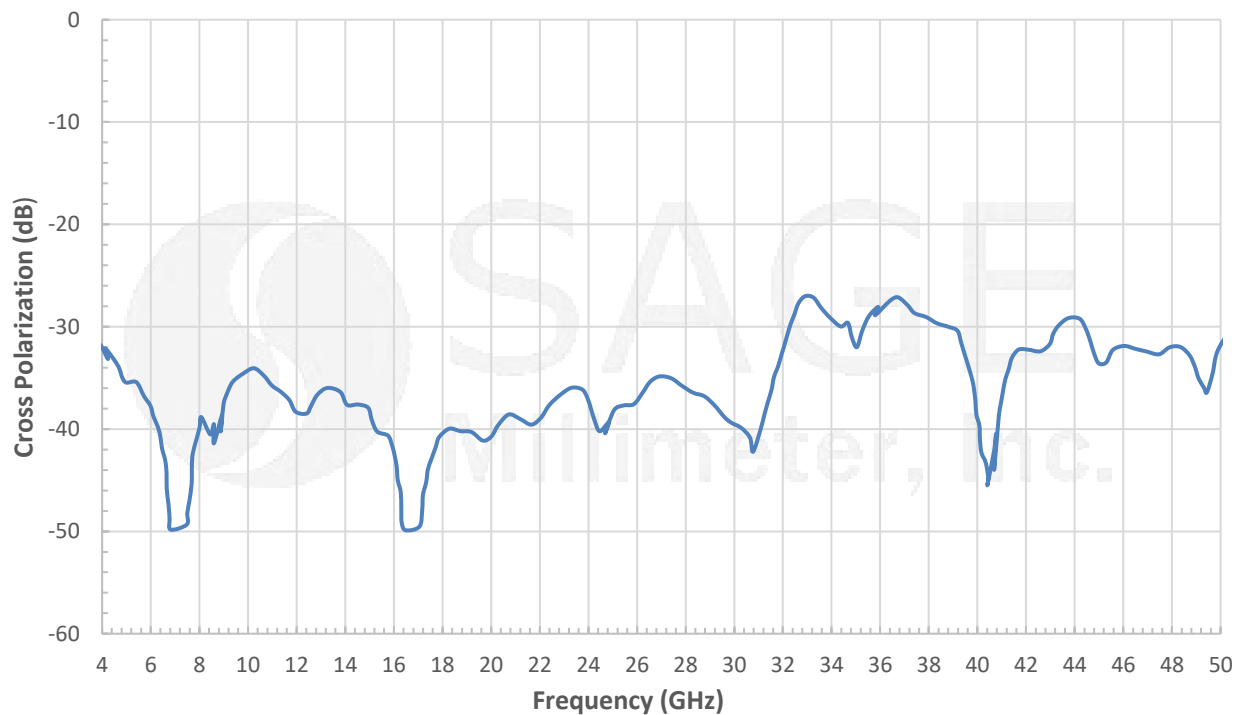


## Dual-Ridged Horn Antenna, 4.5 to 50 GHz

### Typical Antenna Pattern @ 50 GHz



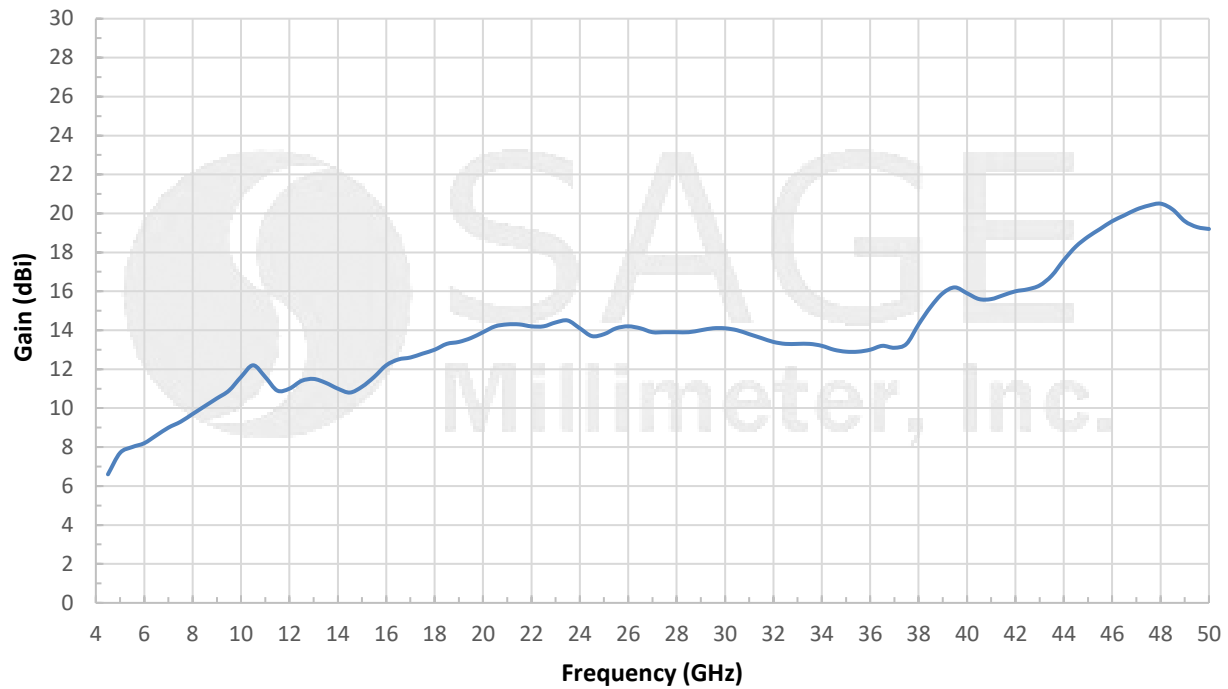
### Typical Cross Polarization vs Frequency



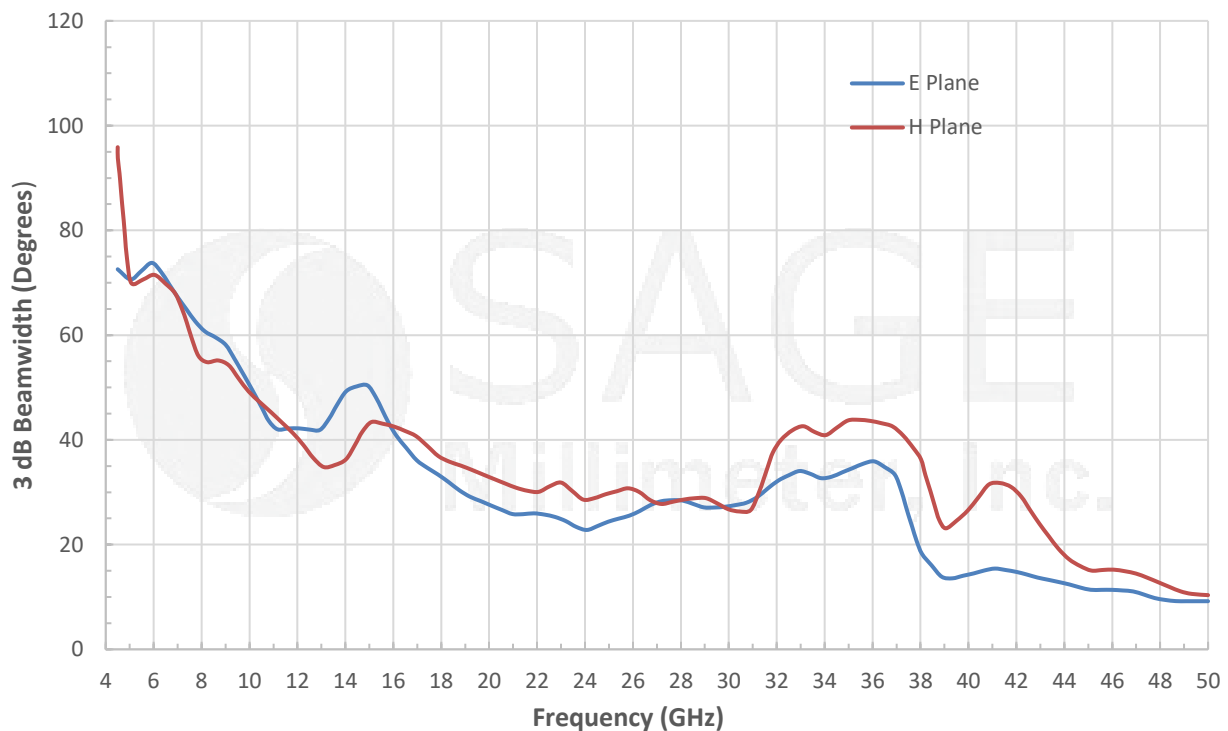


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### Typical Gain vs. Frequency



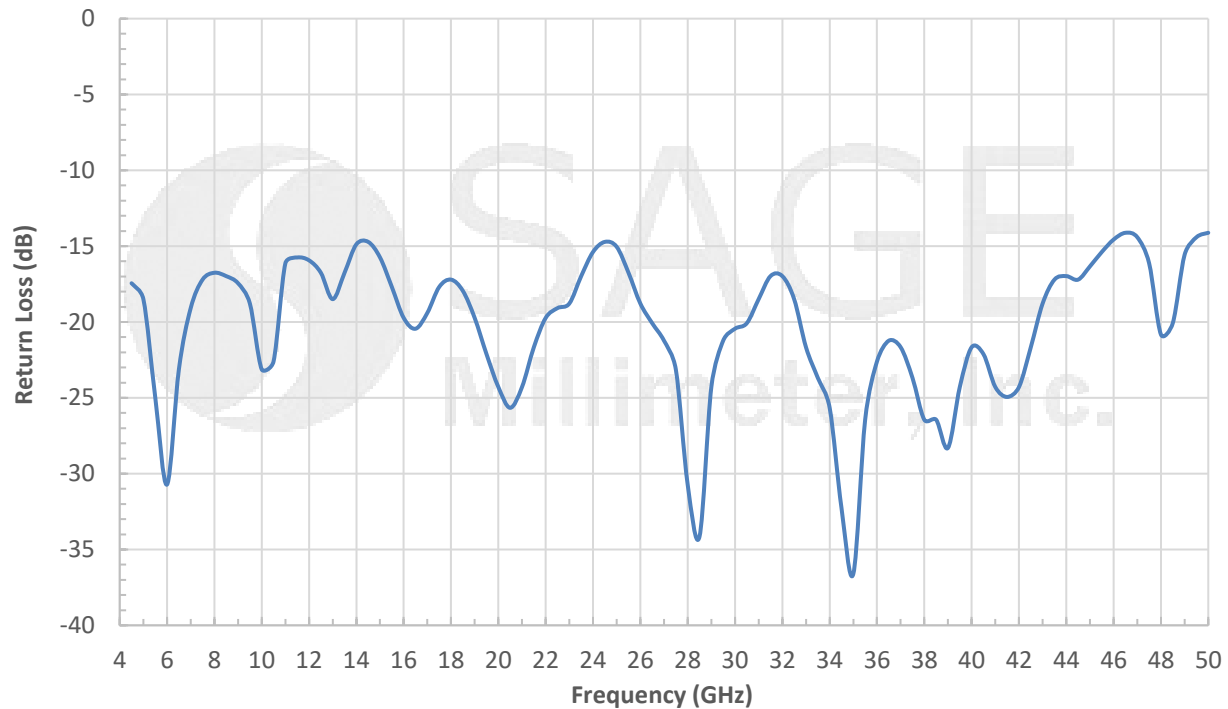
### Typical 3 dB Beamwidth vs Frequency



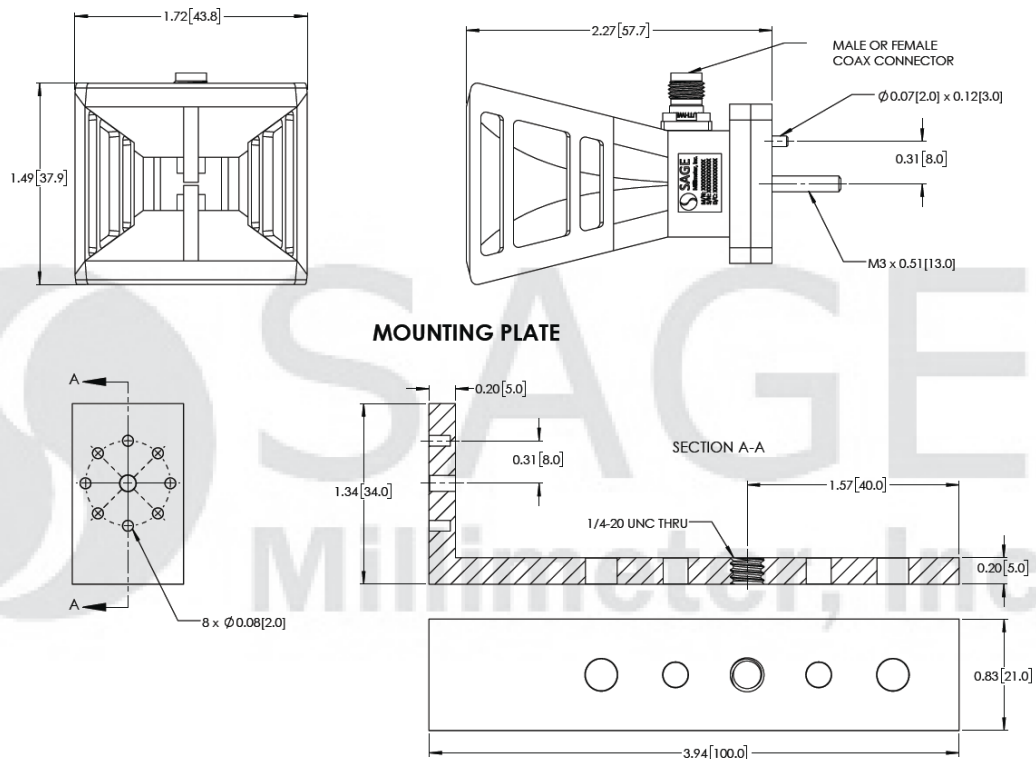


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### Typical Return Loss vs. Frequency



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



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### Note:

- All data presented 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 structure will cause performance degradation and possible device damage.
- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

