SAC-0432431230-SF-S4-DP-RD

Rev 1.4

Quad Ridge Dual Polarized Conical Horn Antenna with Radome, 4 to 24 GHz

Description:

SAC-0432431230-SF-S4-DP-RD is a quad ridge dual polarized conical horn antenna with radome that operates from 4 to 24 GHz. The antenna offers a 12 dBi nominal gain, a typical half power beamwidth of 40 degrees on the E plane and 30 degrees on the H plane at the center frequency of 14 GHz. The nominal sidelobe levels are -12 dB or lower. The horn antenna is equipped with SMA(F) connectors to support both linear and circular polarized waveforms vertically and horizontally. Other antenna ports such as K connectors are available under a different model numbers. The main application of the horn is being used as a feed horn for large reflector antennas.

Features:

- Broad Band Operation
- Low Sidelobe Level
- High Return Loss
- Linear and Circular Polarization

Applications:

- Feed Horn for Reflector Antennas
- Rapid System Setups
- Engineering Setups

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	4 GHz		24 GHz
Gain		12 dBi	
3 dB Beamwidth, E-plane		40°	
3 dB Beamwidth, H-plane		30°	
Sidelobes, E-plane		-12 dB	
Sidelobes, H-plane		-12 dB	
Vertical and Horizontal Isolation		30 dB	
Return Loss		10 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
Antenna Ports	SMA Female Connectors
Material	Aluminum
Finish	Gold Chem Film
Weight	22 Oz
Size	2.61” (L) X 5.75” (Ø)
Outline	AK-AC-TC12-RD-KBR1

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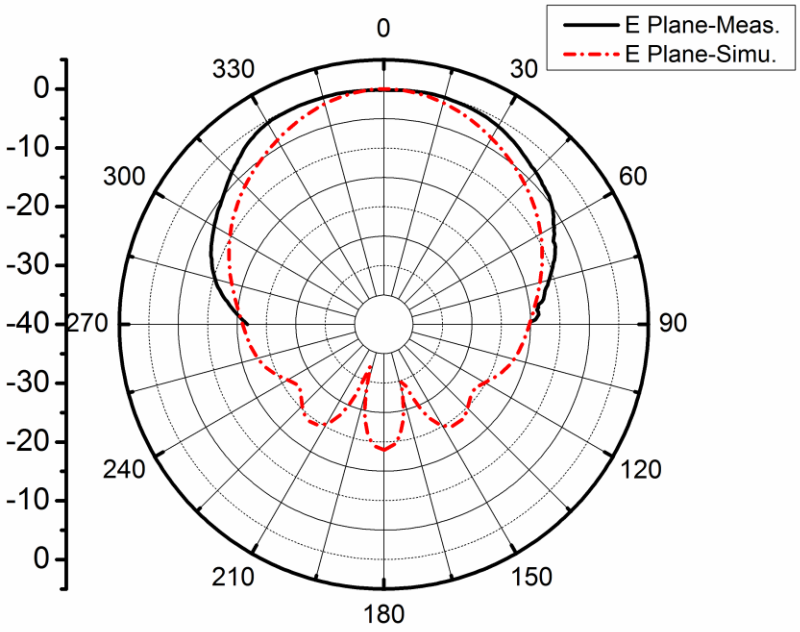
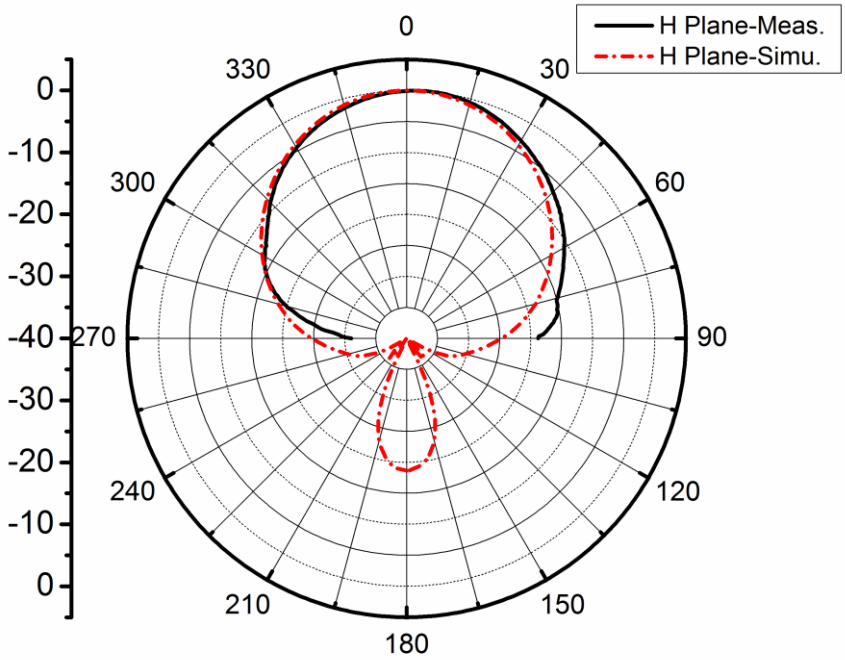
Quad Ridge Dual Polarized Conical Horn Antenna with Radome, 4 to 24 GHz

Typical Antenna Pattern @ 4 GHz- E Plane



Typical Antenna Pattern @ 4 GHz- H Plane



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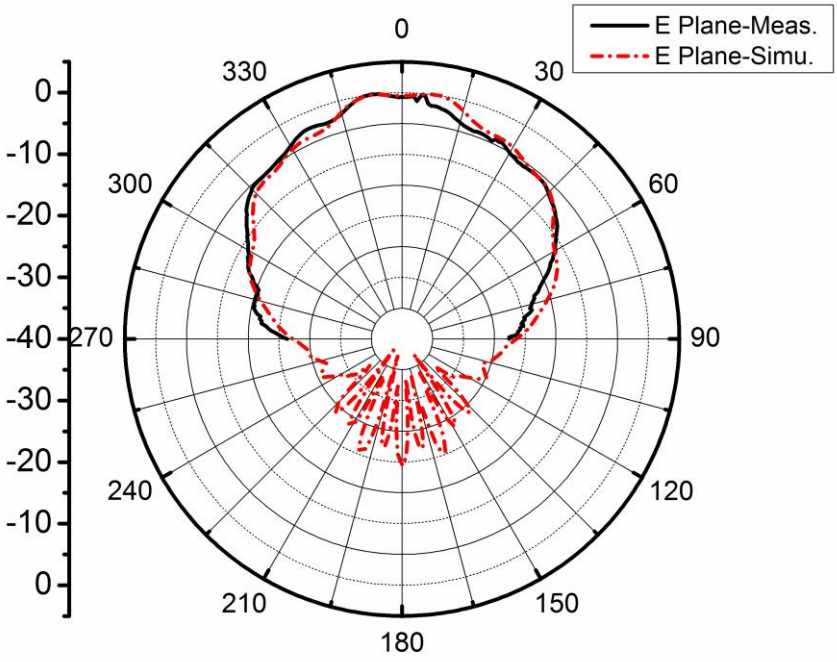
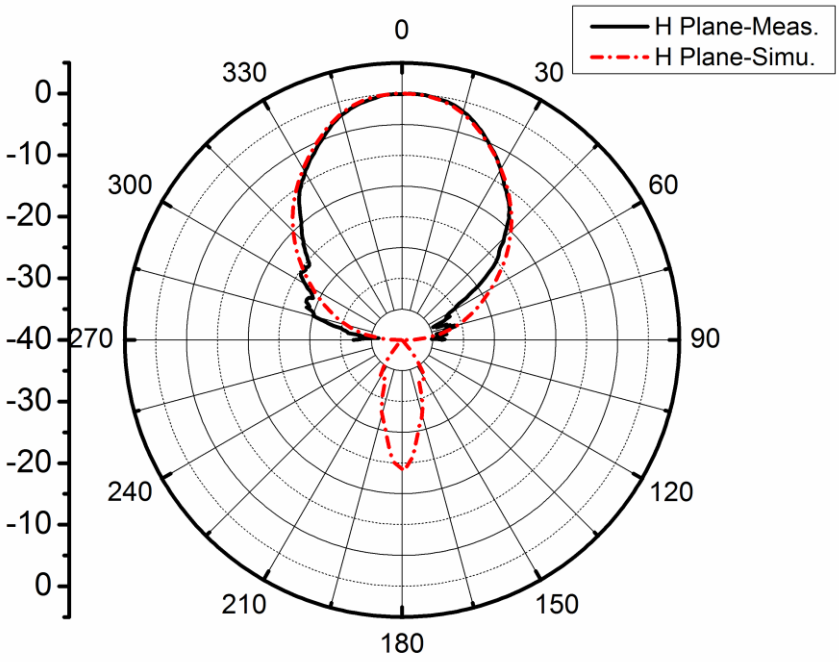
Typical Antenna Pattern @ 14 GHz- E Plane



Typical Antenna Pattern @ 14 GHz- H Plane



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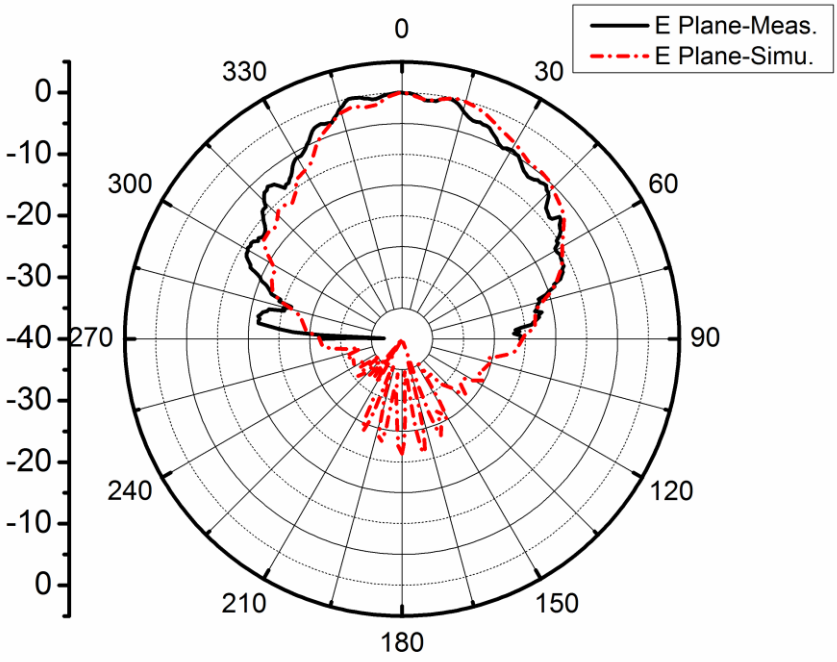
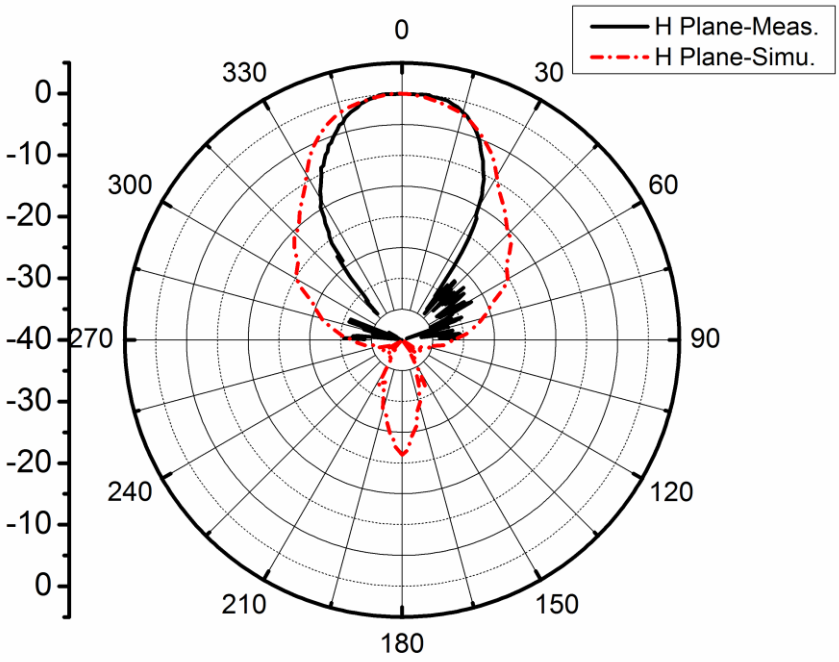
Typical Antenna Pattern @ 24 GHz- E Plane



Typical Antenna Pattern @ 24 GHz- H Plane



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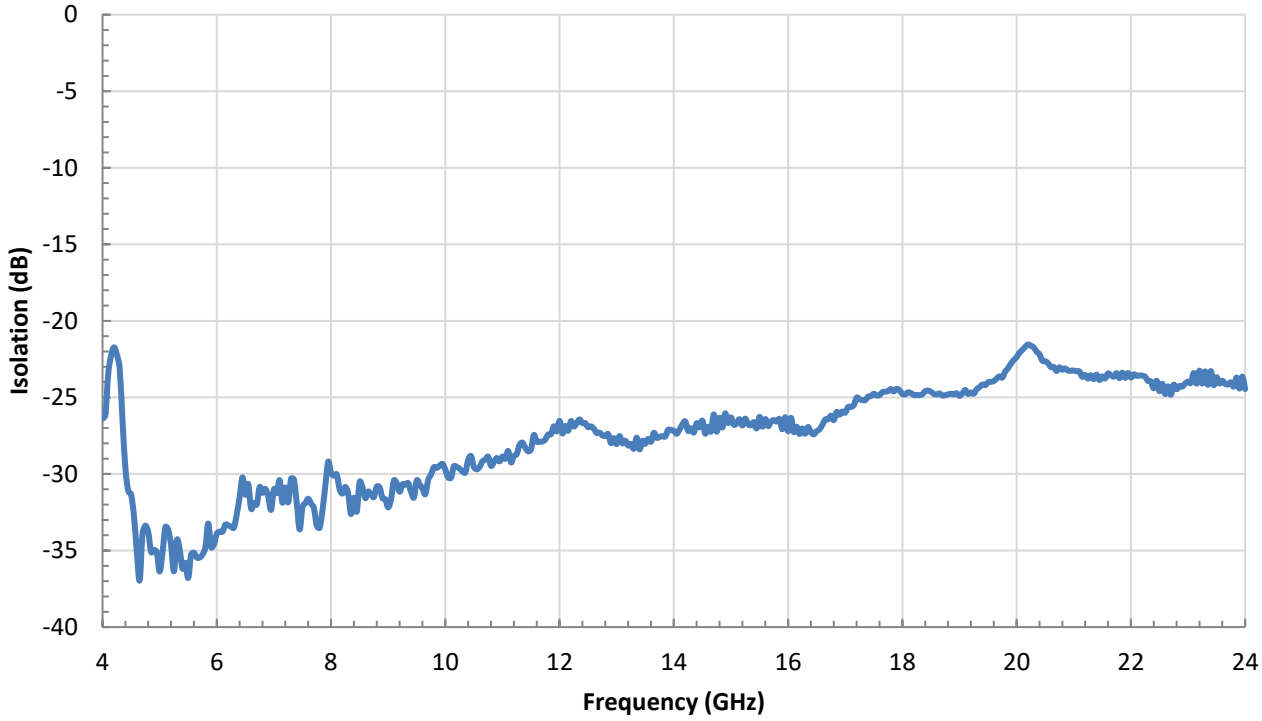
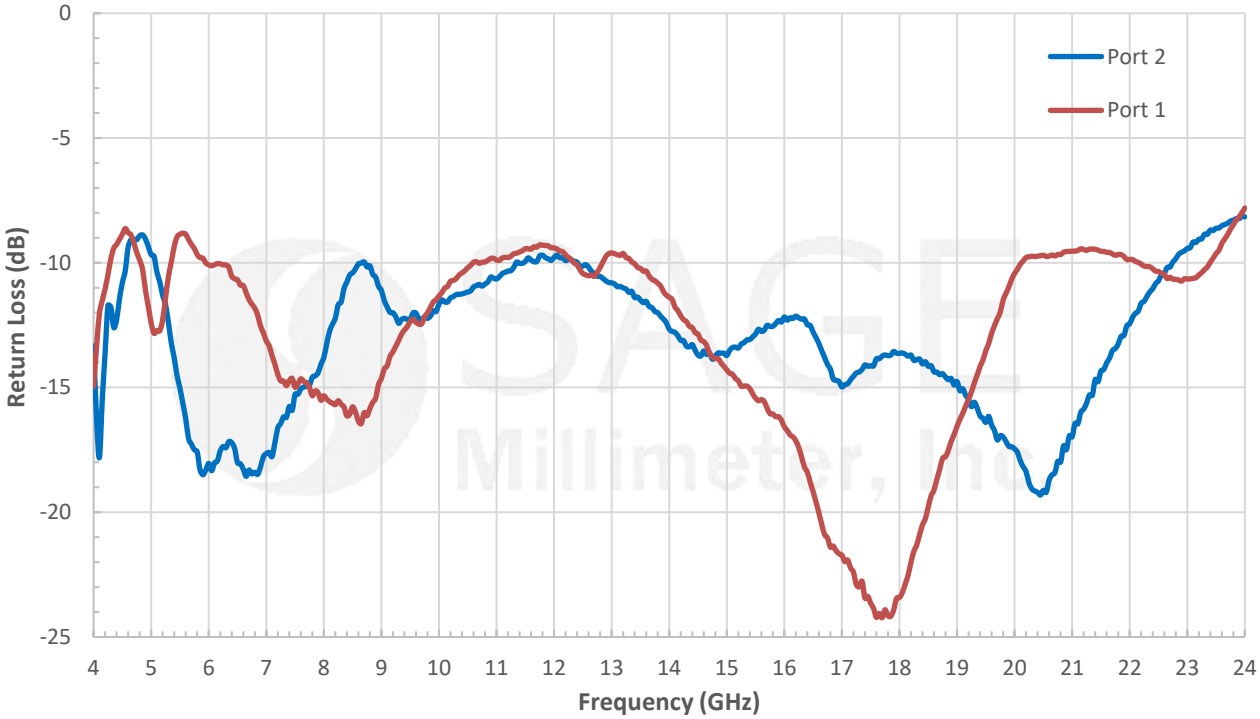
Typical Port Isolation vs. Frequency



Typical Return Loss vs. Frequency



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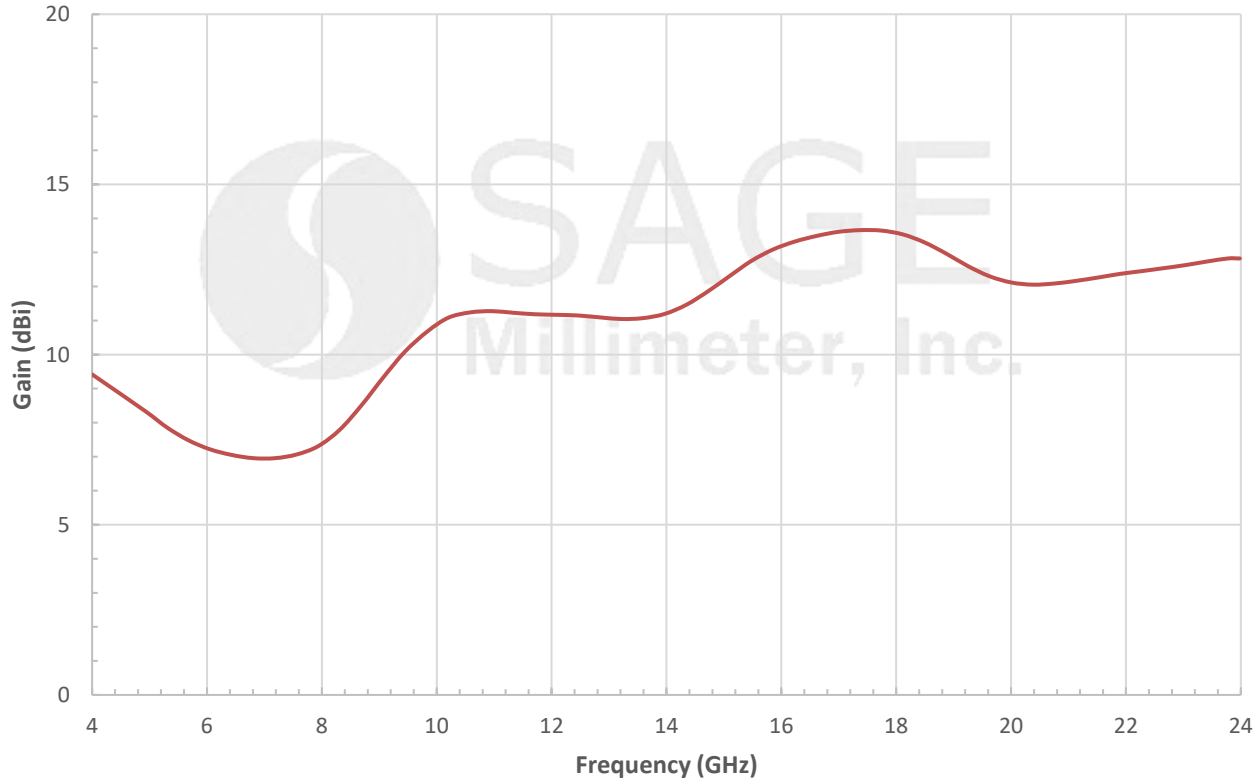
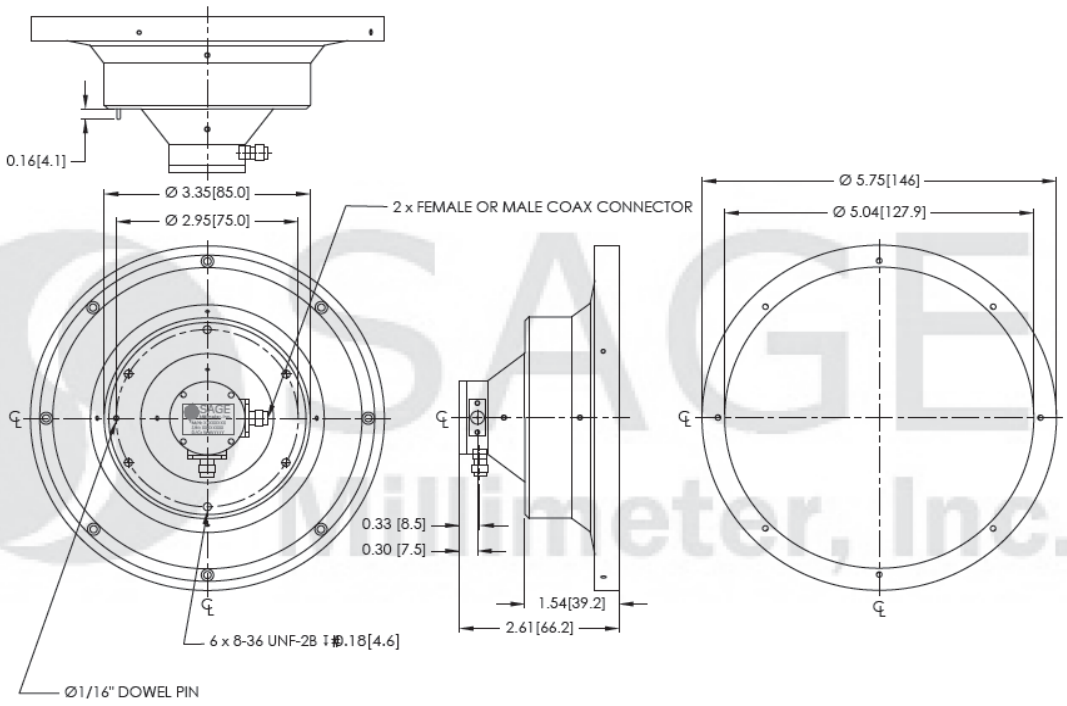
Typical Gain vs. Frequency



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.
- 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.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**

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