

## SAF-3534531725-219-S1

### Q Band Scalar Feed Horn Antenna, 35 to 45 GHz, 17 dBi Gain

**SAF-3534531725-219-S1** is a Q-band scalar feed horn antenna that operates from 35 to 45 GHz. The antenna offers a 17 dBi nominal gain, 25 degree typical half power beamwidth, and -28 dB typical side lobe level. The scalar feed horn is equipped with a 0.219" diameter circular waveguide that supports both linear and circular polarization. A rectangular waveguide port configuration that only supports linear polarization is available under a different model number.



### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range*	35 GHz	40 GHz	45 GHz
Gain		17 dBi	
3 dB Beamwidth, E-plane		25°	
3 dB Beamwidth, H-plane		25°	
Side Lobes, E-plane		-28 dB	
Side Lobes, H-plane		-28 dB	
Return Loss		20 dB	
Polarization		Linear and Circular	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

\*Note: The operating frequency range of the feed horn can be extended to 33 to 48 GHz with small performance degradation at band edge.

### Mechanical Specifications:

Item	Specification
Antenna Port	0.219" Diameter Circular Waveguide
Flange Type	UG-383/U-M Anti-cocking Flange
Material	Aluminum
Finish	Gold Plated
Weight	2.0 Oz
Outline	AF-CQ17-219-A

### ECCN

EAR99

### FEATURES

- Circular Waveguide Interface
- Precisely Machined
- Low Side Lobe Level
- High Return Loss
- Linear and Circular Polarization

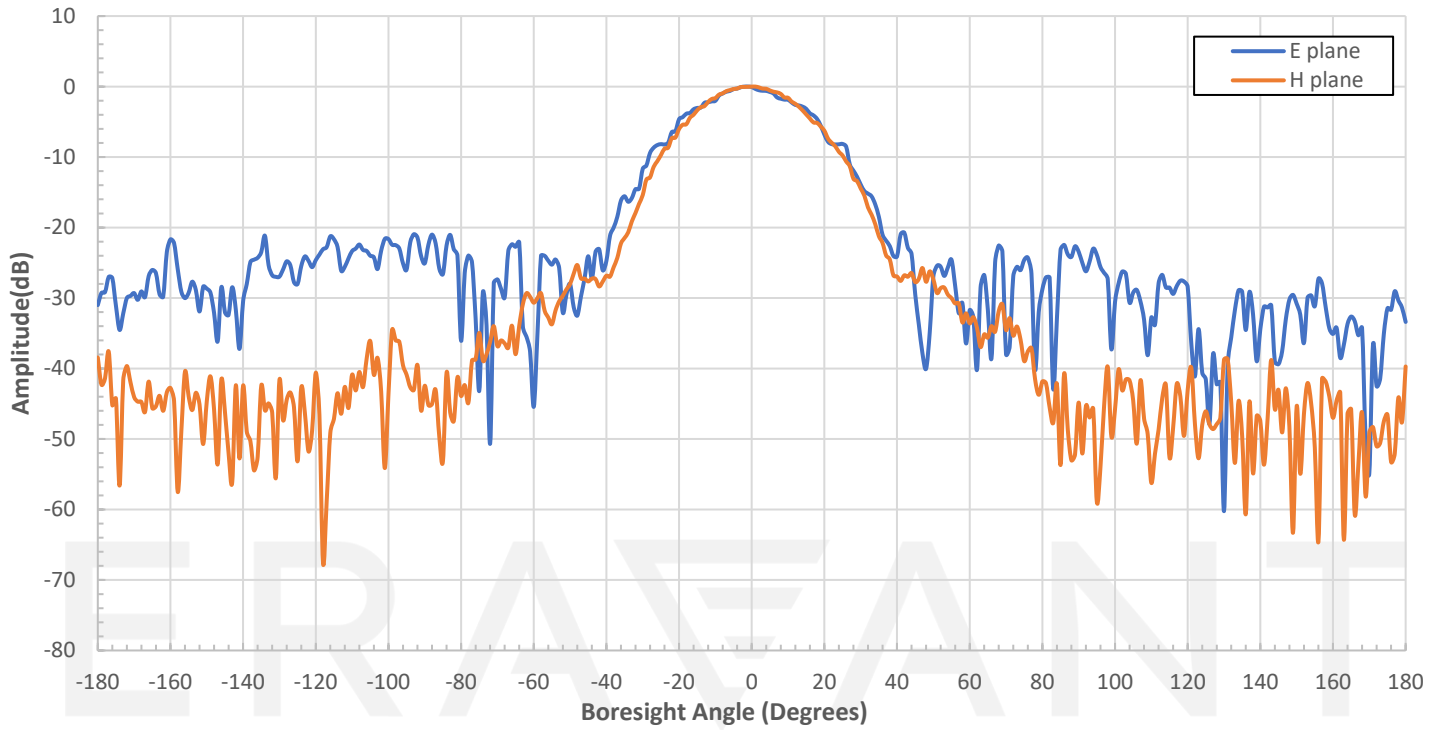
### APPLICATIONS

- 5G Systems
- Feed Horn for Gaussian Optical Antennas
- Feed Horn for Cassegrain Antennas
- Rapid System Setups
- Engineering Setups

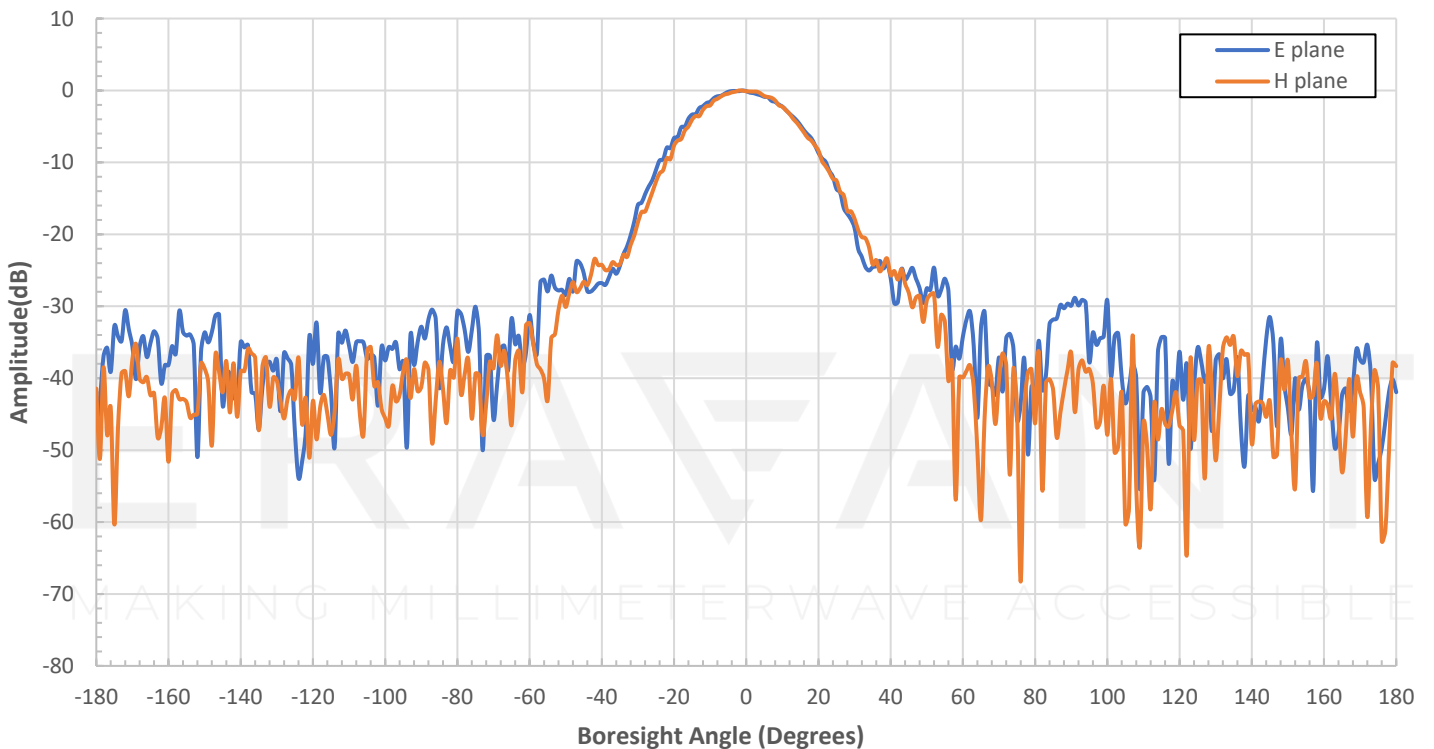
### SUPPLEMENTAL DETAILS



### Measured Patterns at 35 GHz

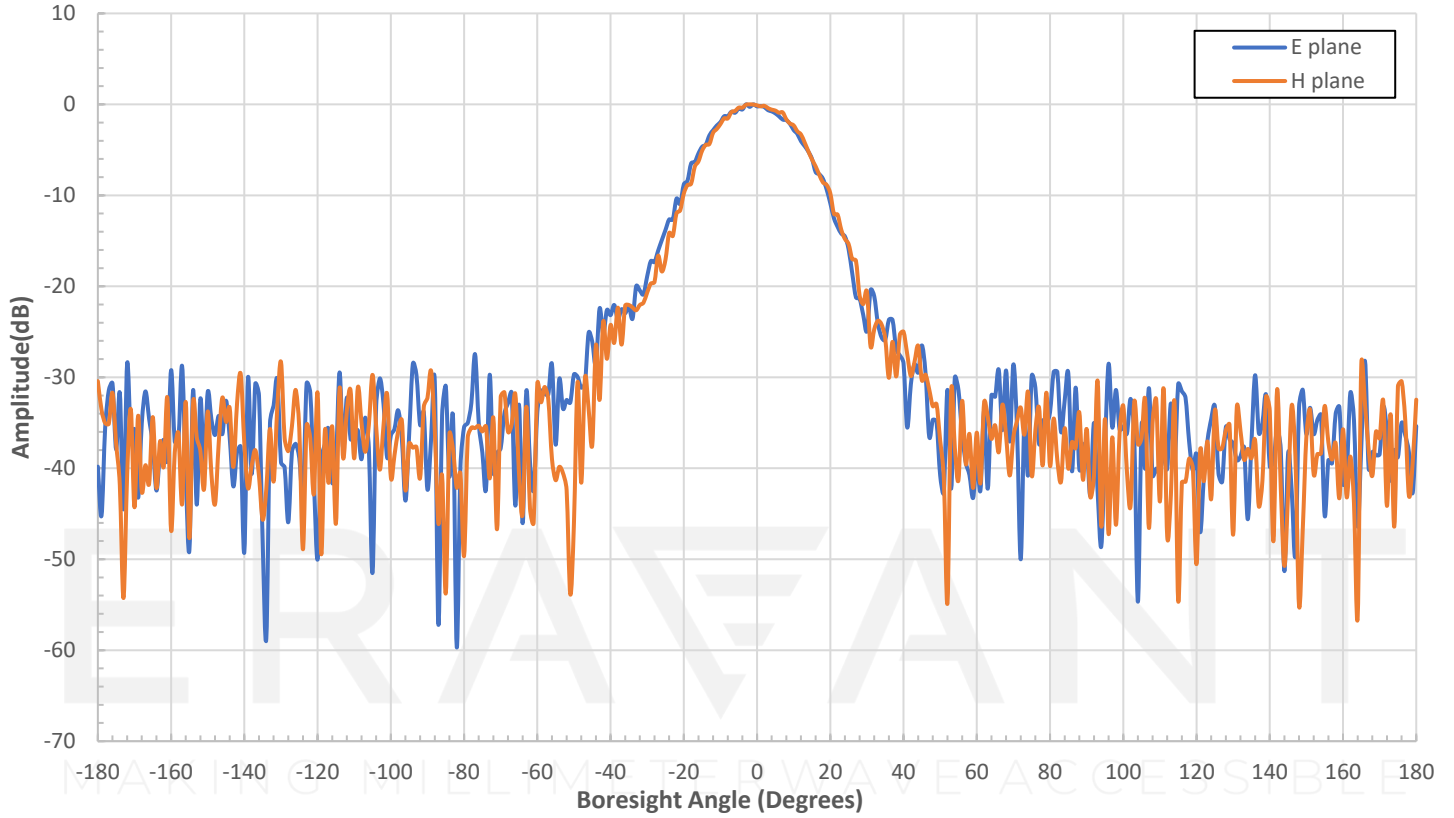


### Measured Patterns at 40 GHz

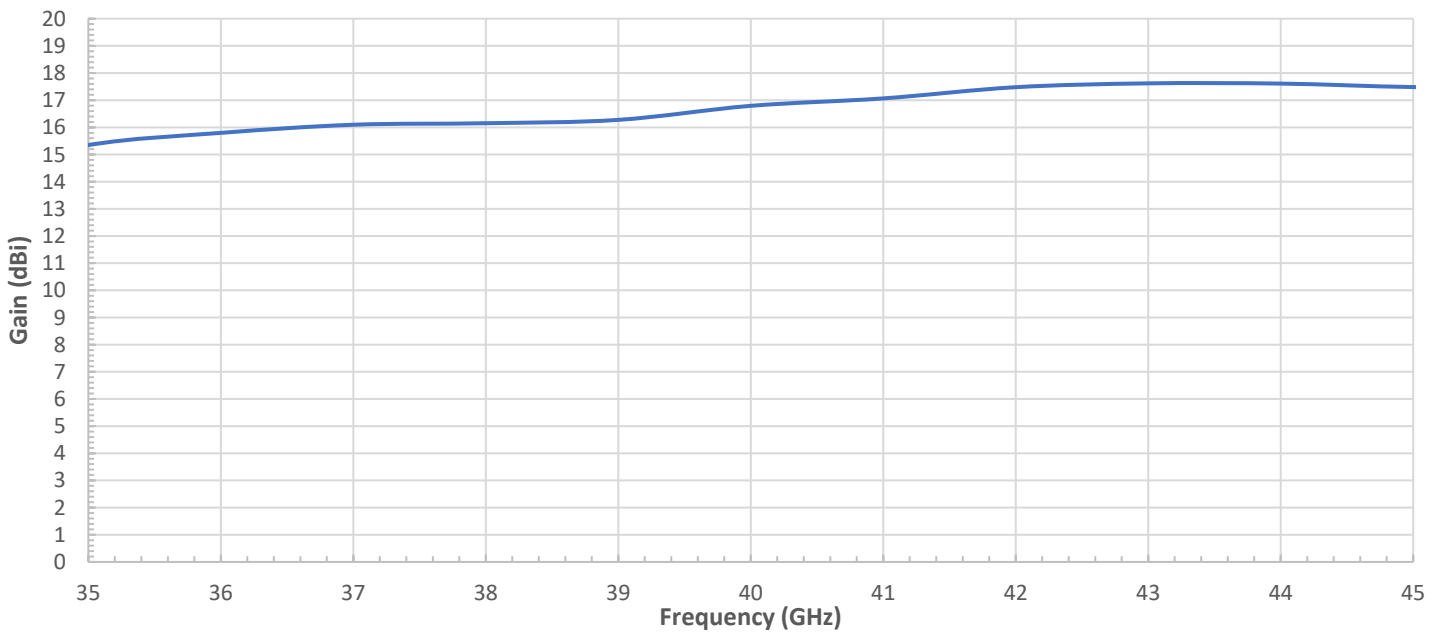


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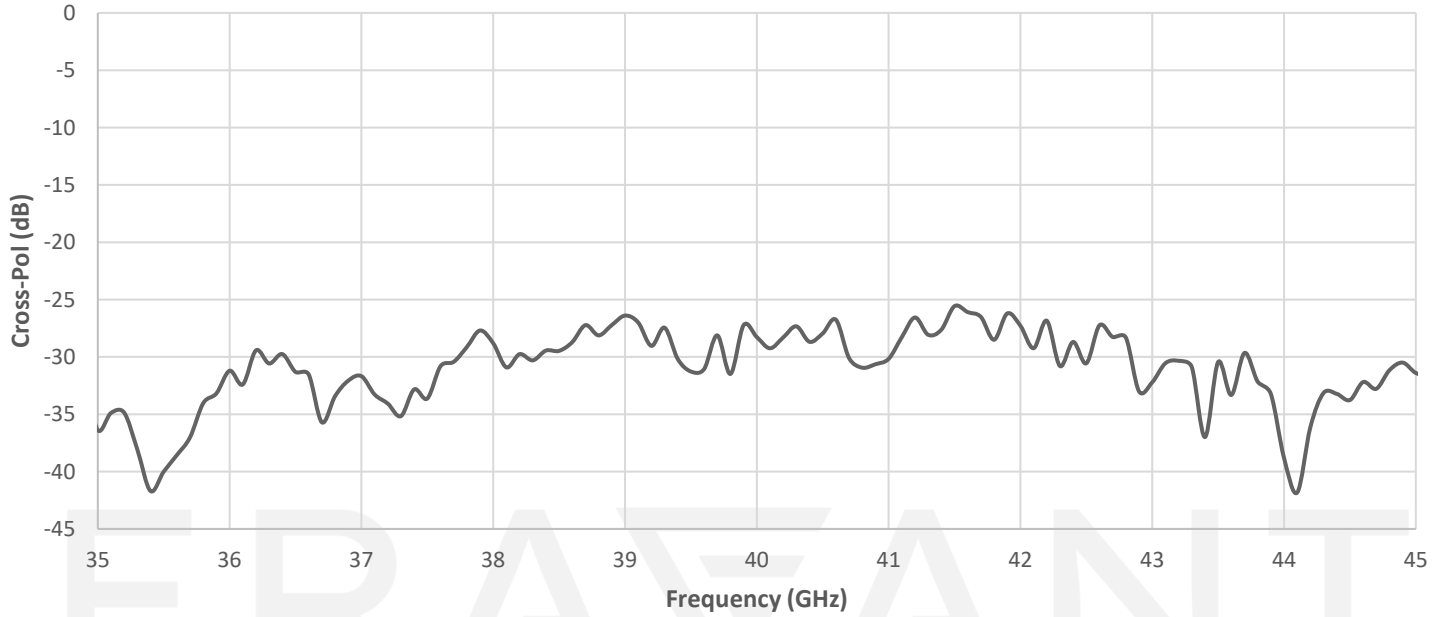
### Measured Patterns at 45 GHz



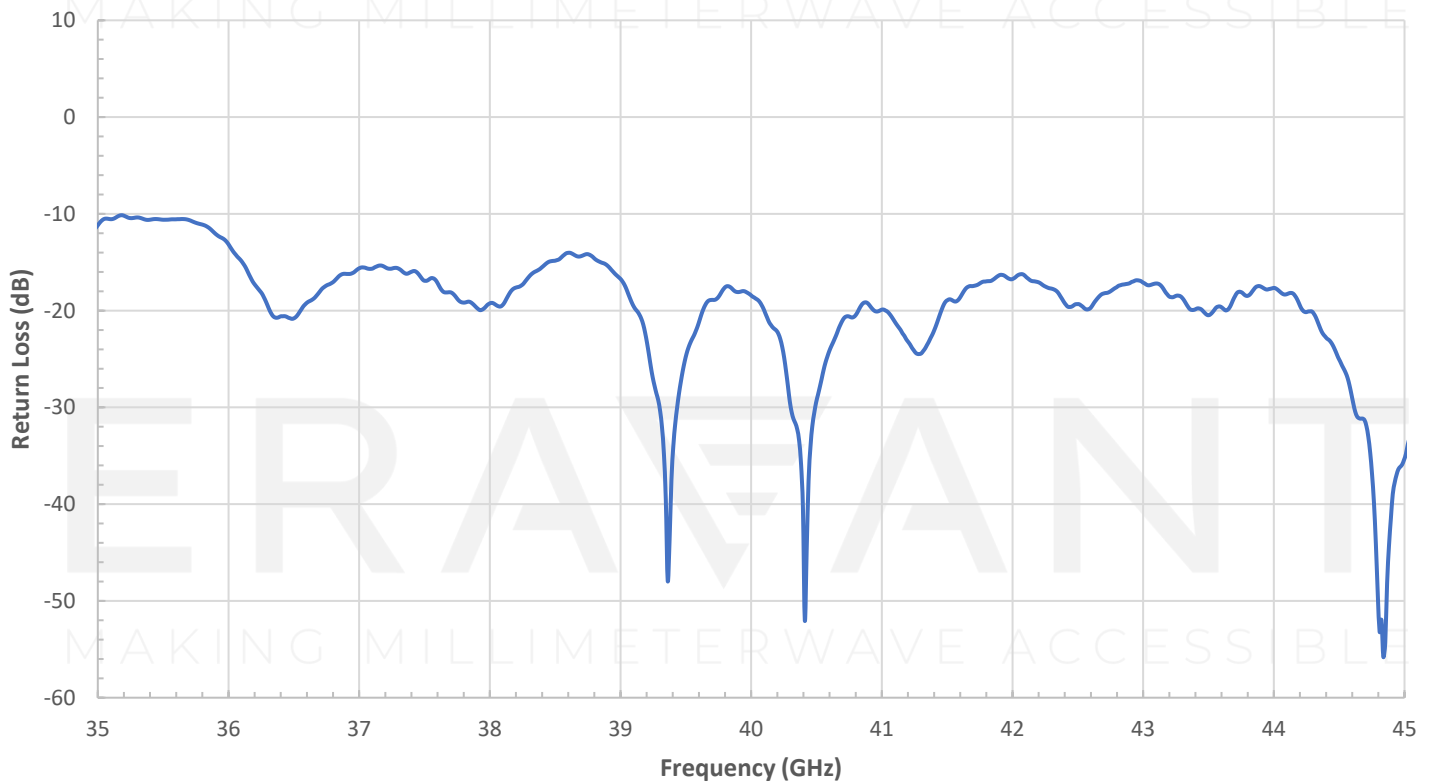
### Measured Gain vs Frequency



### Measured Cross-Pol vs Frequency

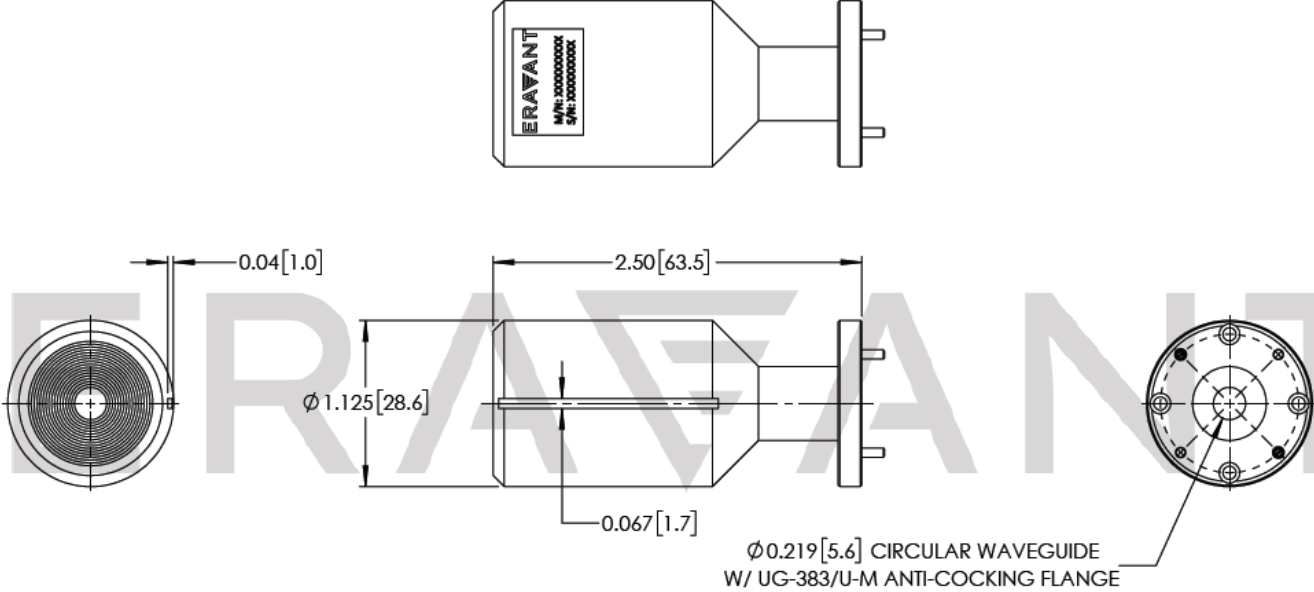


### Measured Return Loss vs Frequency



## SAF-3534531725-219-S1

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



**NOTE:**

- Test data provided is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is 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.

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