SAT-FG-05105-S1

WR-05 Orthomode Transducer, 140 to 220 GHz, Square Waveguide Port

SAT-FG-05105-S1 is a WR-05 orthomode transducer (OMT) that operates between 140 and 220 GHz. The OMT separates a circular or elliptical polarized waveform into two linear, orthogonal waveforms or combines two linear polarized waveforms into one circular or elliptical polarized waveform or vice versa. The OMT also supports either vertical or horizontal polarized waveguide forms. The OMT shows high port isolation while providing a low insertion loss. The OMT is configured with a 0.051” x 0.051” square waveguide for the antenna port and two WR-05 waveguides for the horizontal and vertical ports. All ports have UG-387/U-M anti-cocking flanges.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	140 GHz		220 GHz
Insertion Loss (A to V Port)		3.0 dB	
Insertion Loss (A to H Port)		3.0 dB	
Isolation (V to H Port)		30 dB	
Return Loss (H Port)		15 dB	
Return Loss (V Port)		15 dB	
Return Loss (A Port, Vertical)		15 dB	
Return Loss (A Port, Horizontal)		15 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
Antenna Port	0.051” Square Waveguide with UG-387/U-M Anti-Cocking Flange
Horizontal & Vertical Ports	WR-05 Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Aluminum
Finish	Gold Plated
Weight	1.2 Oz
Outline	AT-GS-051-F-A

ECCN

EAR99

FEATURES

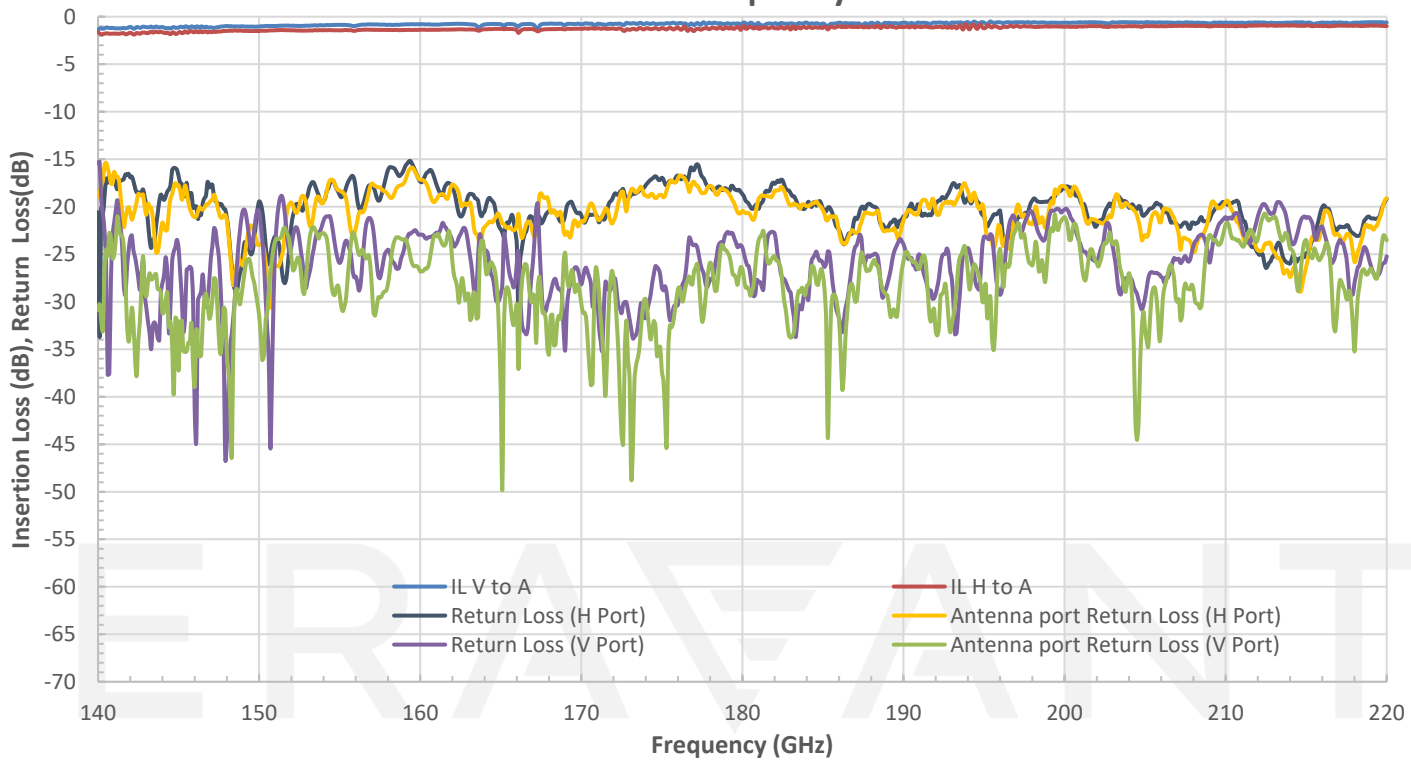
- High Isolation
- Low Insertion Loss
- Full Band Performance

APPLICATIONS

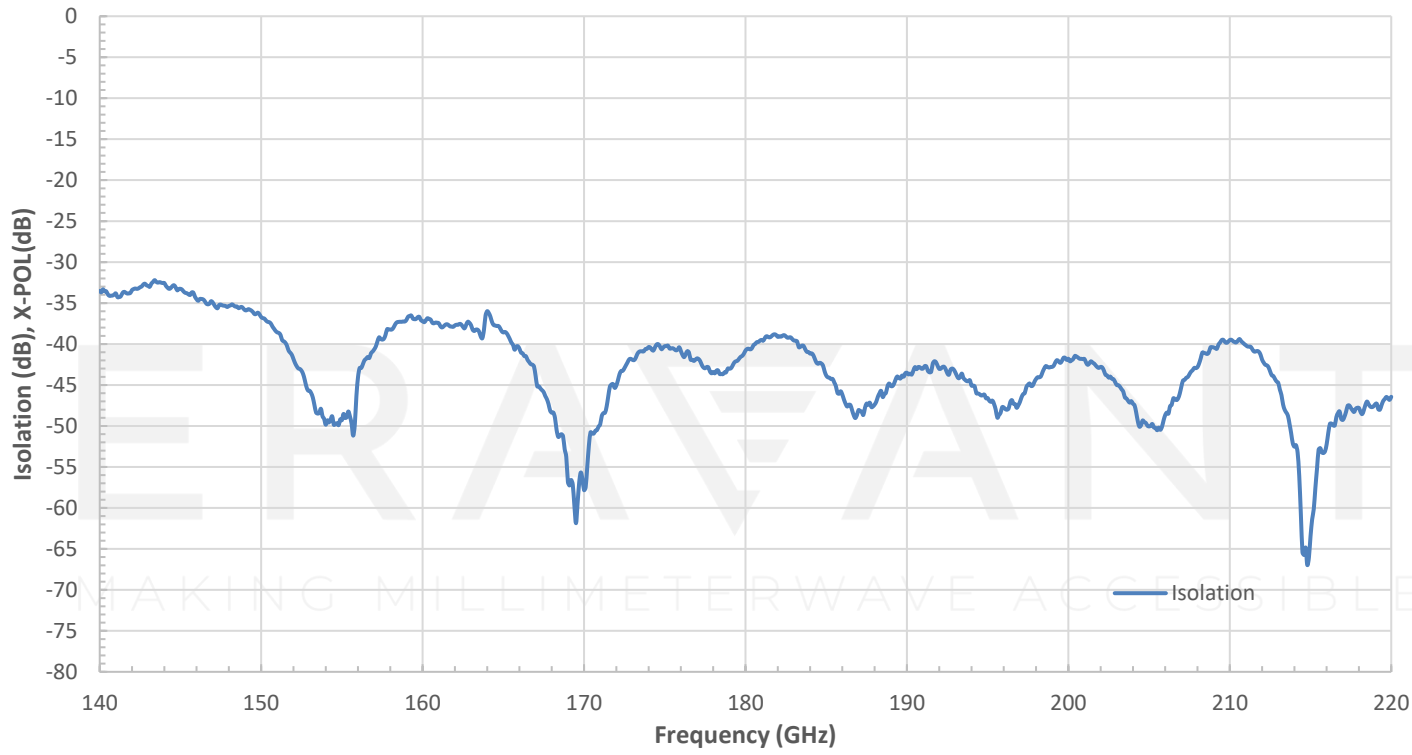
- Radar and Communication Systems Antenna Range
- Circular and Linear Waveform Separation and Combination

SUPPLEMENTAL DETAILS

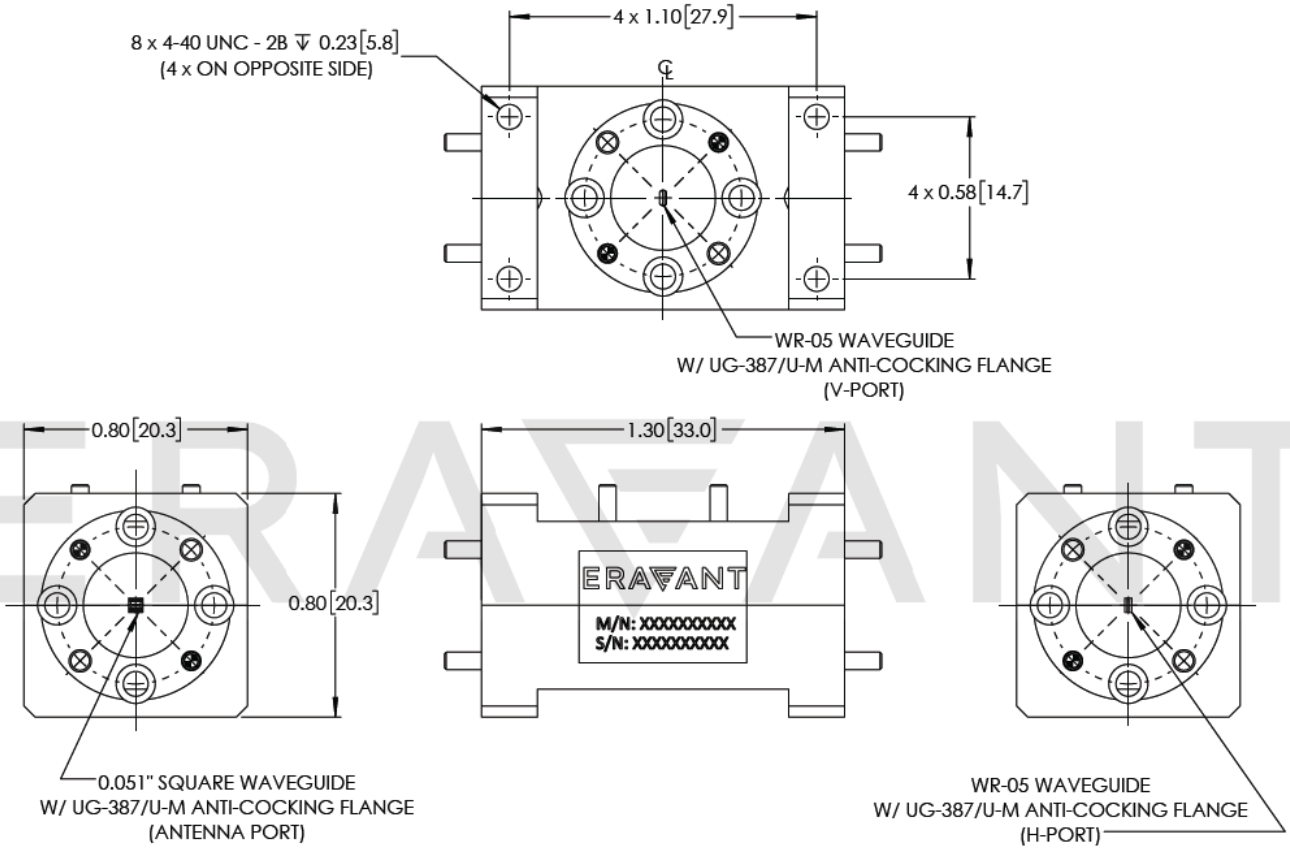
Measured Insertion Loss and Return Loss Vs Frequency



Isolation Vs Frequency



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



NOTE:

- On condition that test data is provided it 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.