

WR-10 Orthomode Transducer

SAT-FW-10010-S1-2-WP is a WR-10 orthomode transducer (OMT) that operates between 75 and 110 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 0.100" x 0.100" square waveguide for the antenna port and two WR-10 waveguides for the horizontal and vertical ports. All ports have standard UG-387/U-M flanges.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	75 GHz		110 GHz
Insertion Loss (A to V Port)		1.4 dB	
Insertion Loss (A to H Port)		1.4 dB	
Isolation (V to H Port)		35 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	0.100" x 0.100" Square Waveguide
Horizontal and Vertical Ports	WR-10 Waveguide
Flange Type	UG-387/U-M Flange
Material and Finish	Gold Plated Aluminum
Weight	1.2 Oz
Size	1.30" (L) x 0.80" (W) x 0.80" (H)
Outline	AT-WS-100-F

ECCN

EAR99

FEATURES

- High Isolation
- Low Insertion Loss
- Full Band Performance

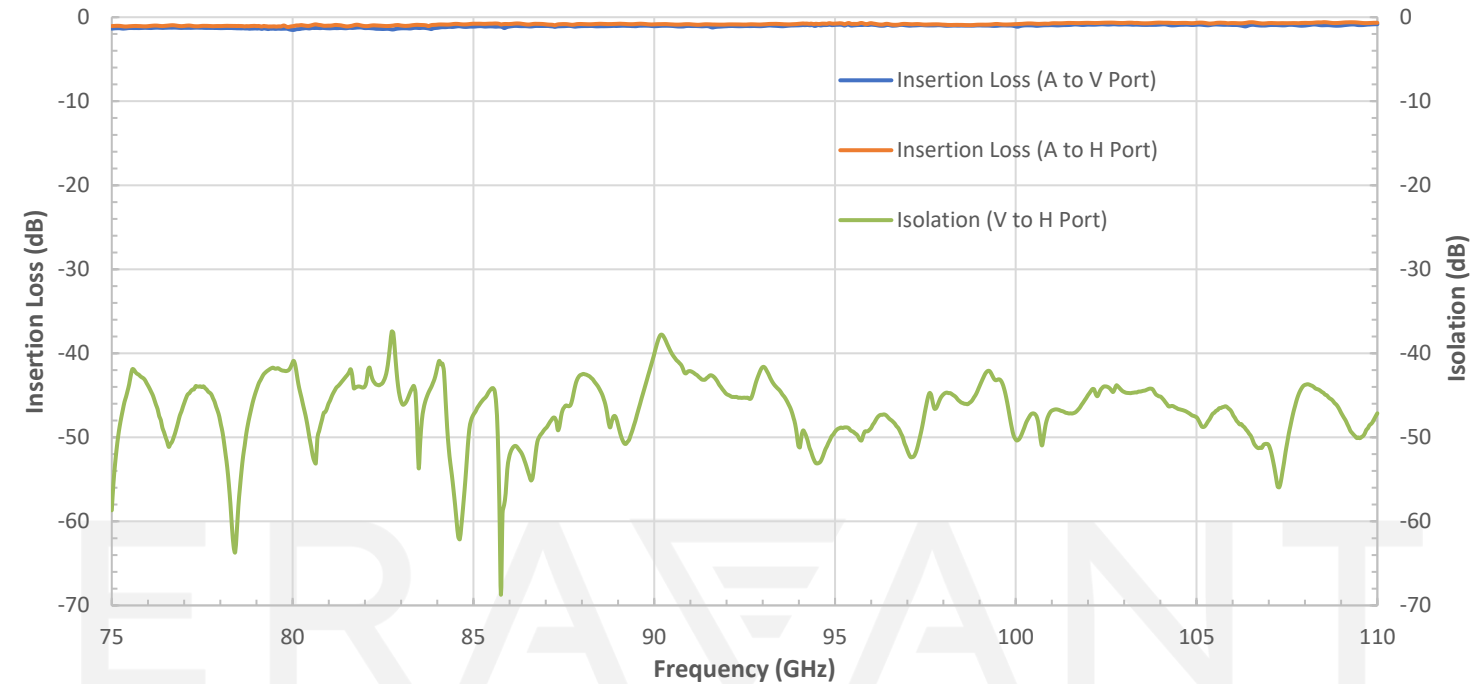
APPLICATIONS

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

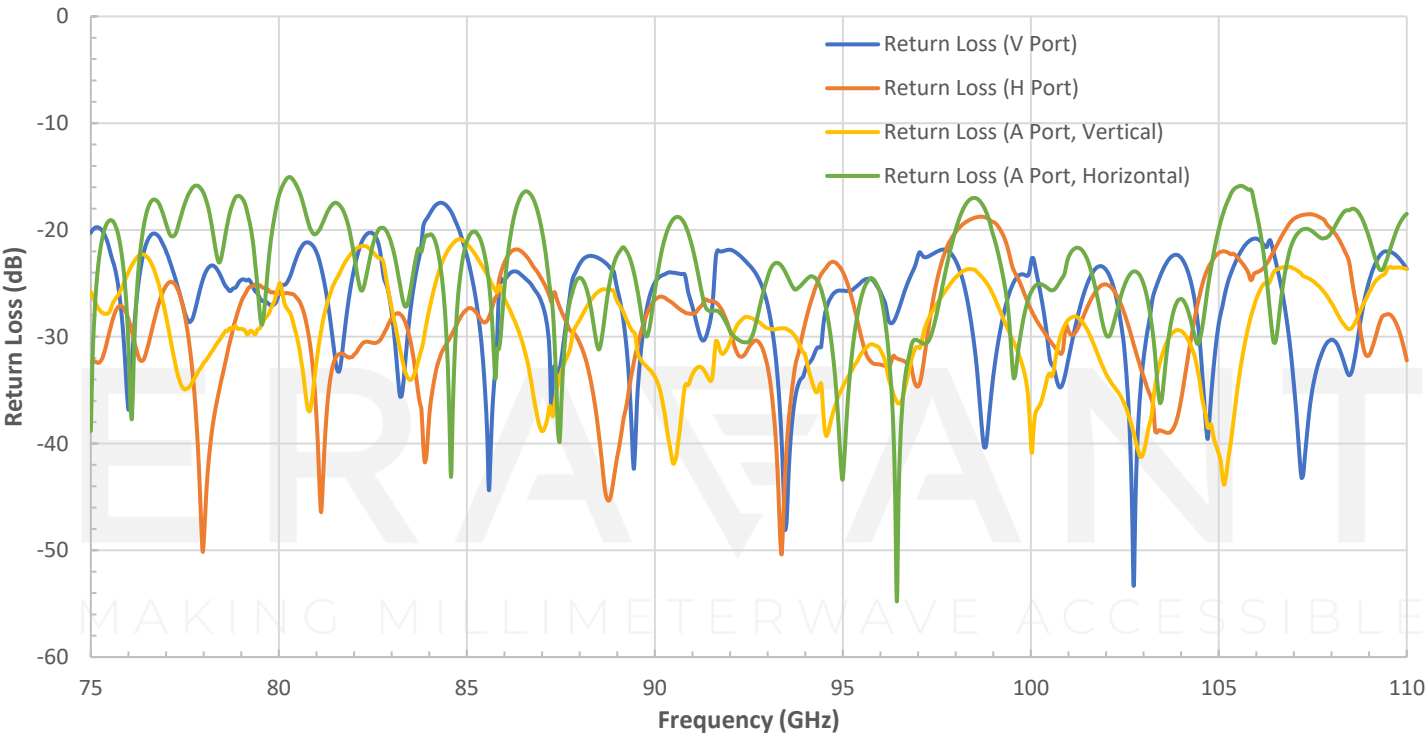
SUPPLEMENTAL DETAILS



Typical Performance vs Frequency



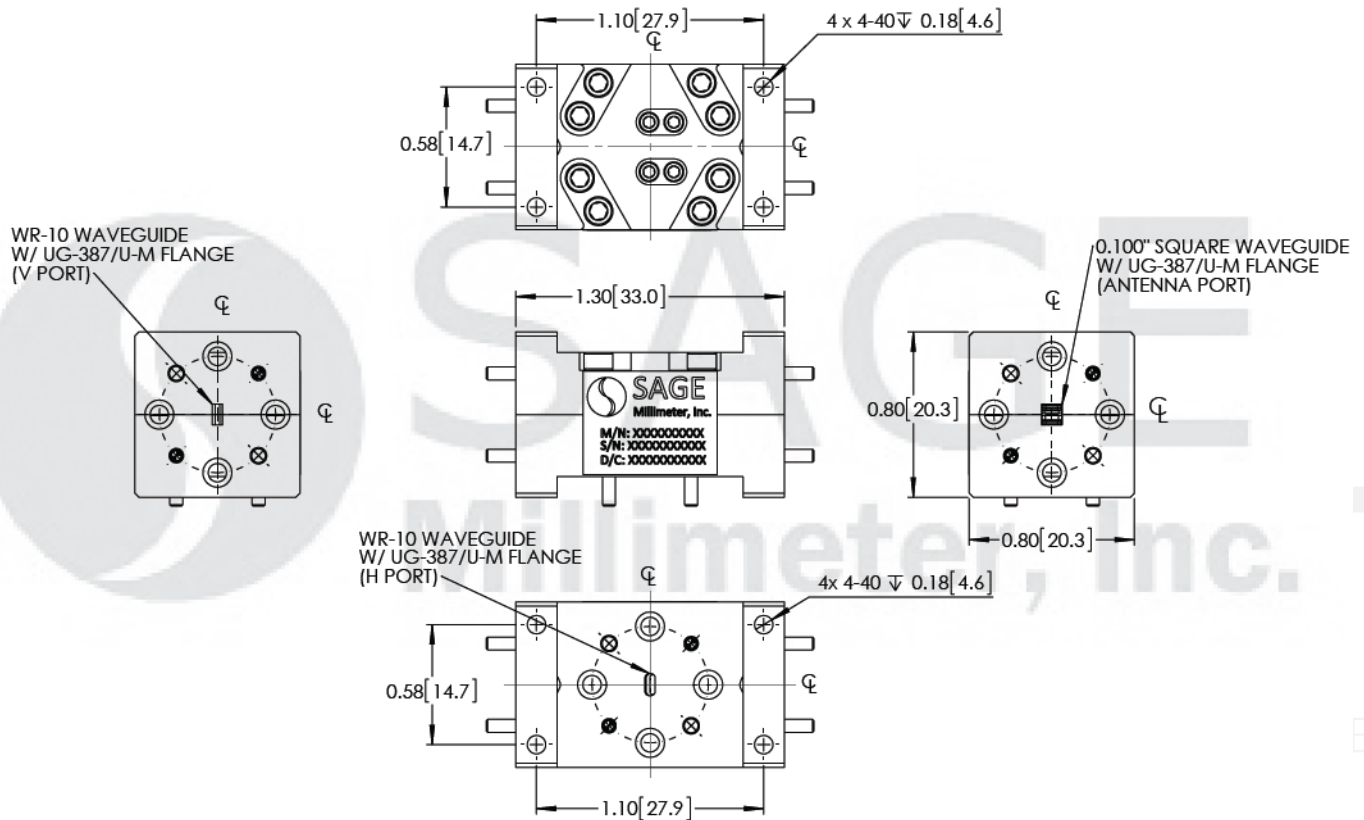
Typical Return Loss vs Frequency



SAT-FW-10010-S1-2-WP

Mechanical Outline:

Unless otherwise specified, all dimensions are in inches [millimeters]



NOTE:

- All data presented 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.