SAT-FW-10010-S1

Rev. 1.3

WR-10 Orthomode Transducer

Description

Model SAT-FW-10010-S1 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 anti-cocking flanges.

Features:

- High Isolation
- Low Insertion Loss
- Full Band Performance

Applications:

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

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	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" Sq. Waveguide with UG 387/U-M Anti-Cocking Flange
Horizontal & Vertical Ports	WR-10 Waveguide with UG 387/U-M Anti-Cocking Flange
Material	Aluminum
Finish	Gold Plated
Weight	1.2 Oz
Size	1.30" (L) x 0.80" (W) x 0.80" (H)
Outline	AT-WS-100-F-A

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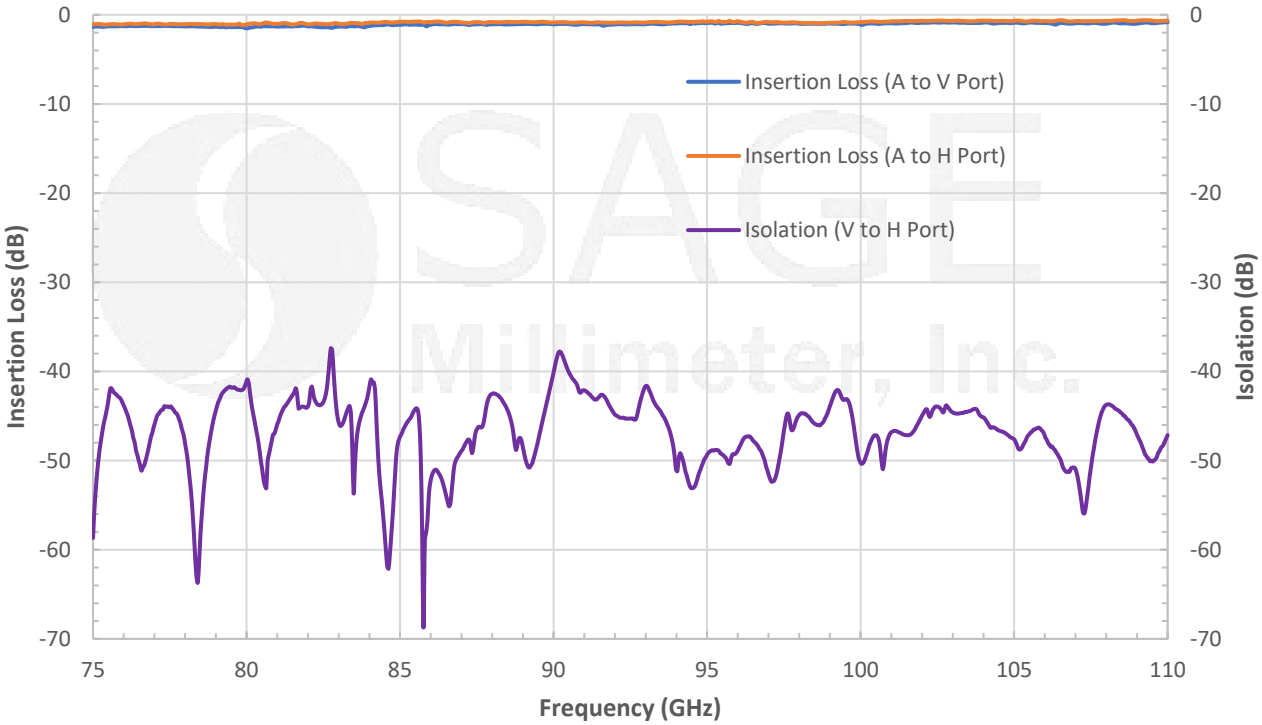
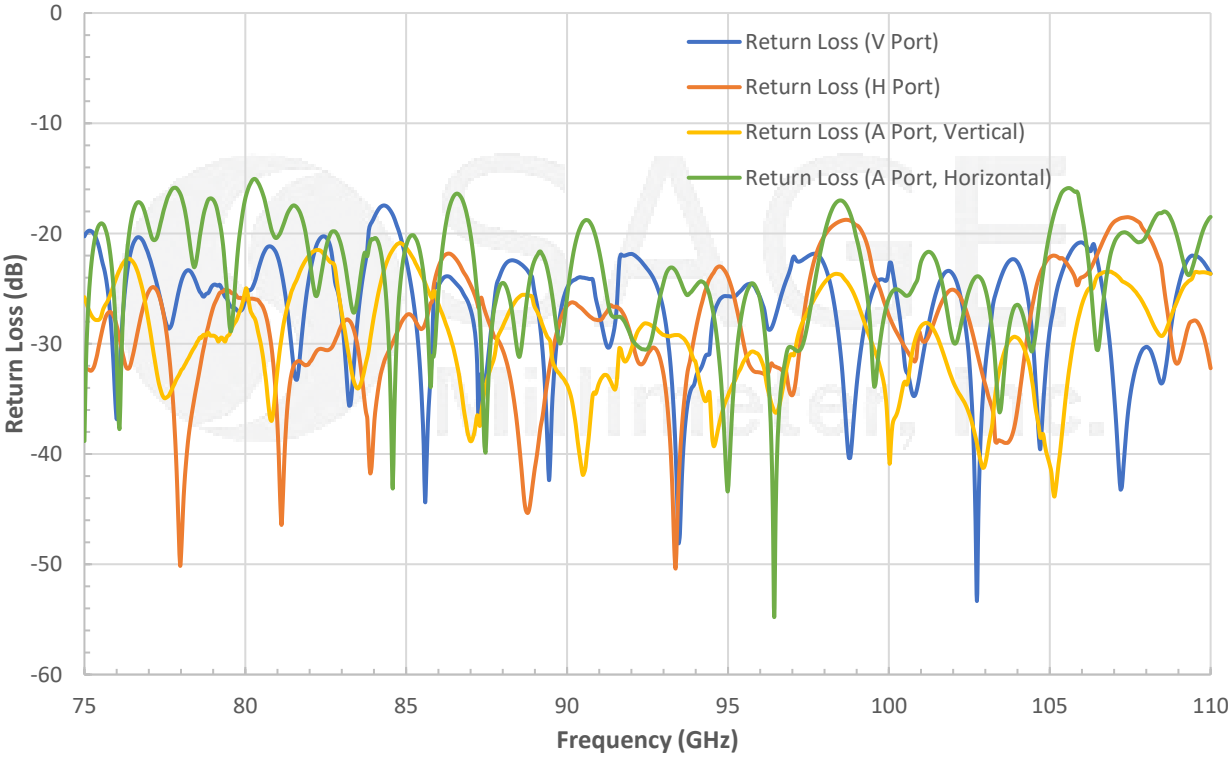
Typical Performance vs Frequency



Typical Return Loss vs Frequency



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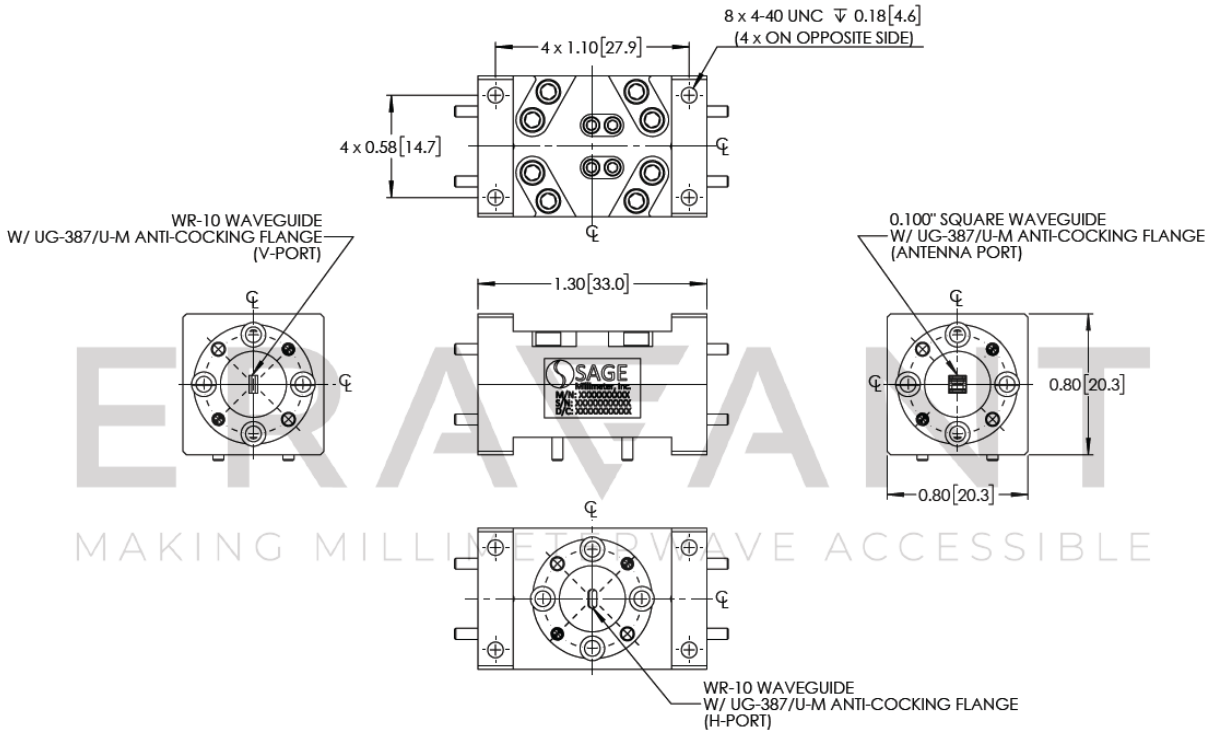
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- All data presented is collected from a sample lot. Actual data may vary 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.

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