SAT-114-07508-C1-WP

Rev. 1.1

F-Band Orthomode Transducer, 110 to 118 GHz

Description:

Model SAT-114-07508-C1-WP is a WR-08 orthomode transducer (OMT) that operates between 110 and 118 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 0.075" diameter circular waveguide for the antenna port and two WR-08 waveguides for the horizontal and vertical ports. All ports have standard UG-387/U-M flanges and 4-40 threaded holes.

Features:

- Compact Size
- High Port Isolation
- Low Insertion Loss

Applications:

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

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	110 GHz		118 GHz
Insertion Loss, Vertical		1.0 dB	
Insertion Loss, Horizontal		1.2 dB	
Isolation		30 dB	
Return Loss		13 dB	
Specification Temperature		+25˚C	
Operating Temperature	-40˚C		+85˚C

Mechanical Specifications:

Item	Specification
Antenna Port	0.075" Dia Circular Waveguide
Horizontal and Vertical Ports	WR-08 Waveguide
Flange Type	UG-387/U-M Flange (on all ports)
Material	Aluminum
Finish	Gold Plated
Size	1.20" (L) x 1.00" (W) x 0.75" (H)
Weight	1.3 Oz
Outline	AT-FC-075-N

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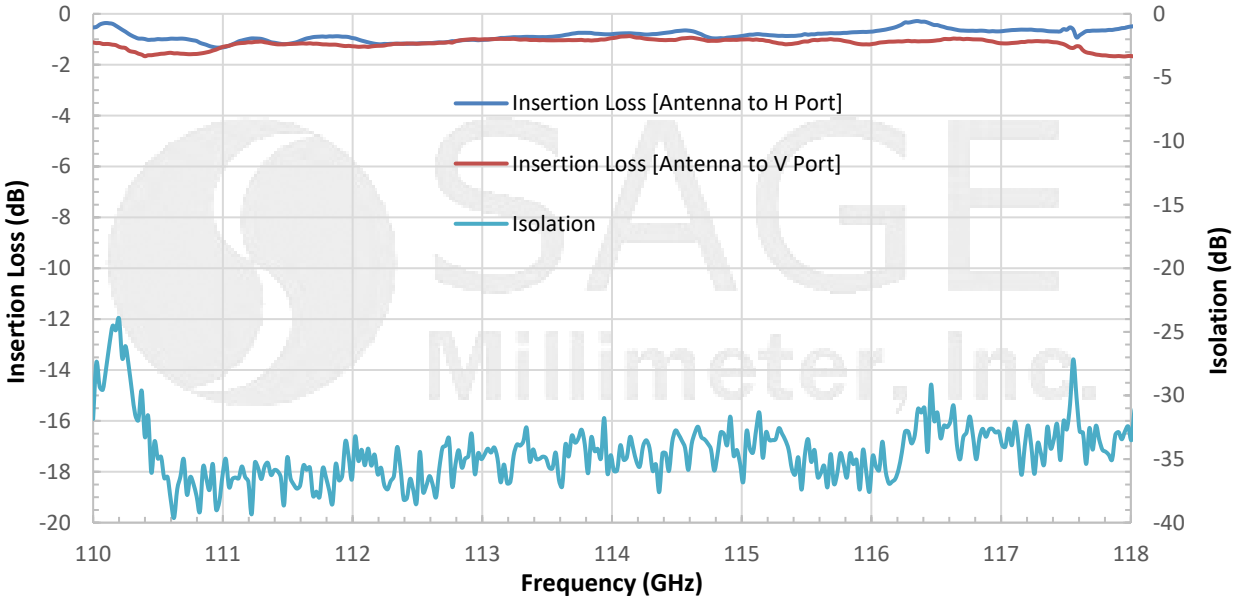
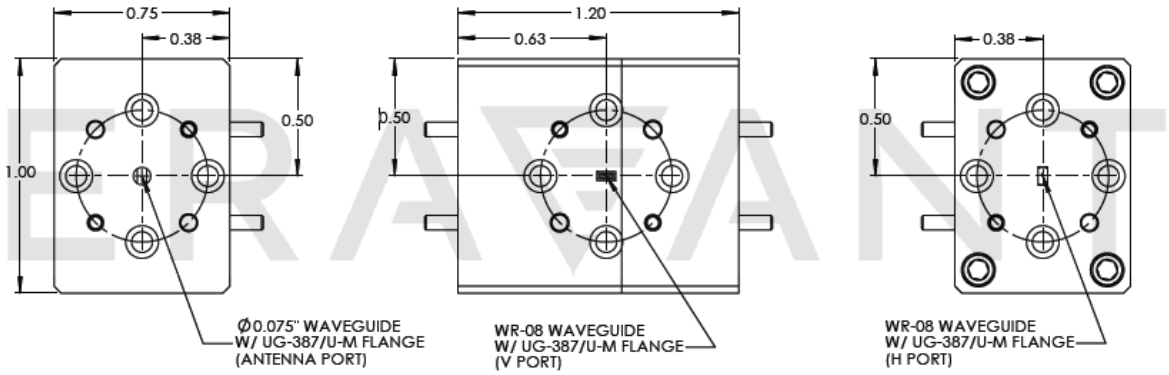
Typical Performance vs. Frequency



*Due to the limitations of the dynamic range of the network analyzer used, the actual isolation and polarization are lower than shown.

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



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 waveguide will cause performance degradation and possible device damage.

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