SAT-603-14115-C1

Rev. 1.0

V-Band Orthomode Transducer, Narrow Band

Description:

Model SAT-603-14115-C1 is a WR-15 orthomode transducer (OMT) operating between 58 and 62 GHz. It 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 with more than 30 dB cross polarization rejections. The OMT shows high port isolation while providing a low insertion loss. The OMT is configured with a 0.141" diameter circular waveguide for the antenna port and two WR-15 waveguides for the horizontal and vertical ports. All ports have standard UG-385/U flanges and 4-40 threaded holes.

Features:

- High Port Isolation
- High Crosspol Rejection
- 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	58 GHz		62 GHz
Insertion Loss (H to A Port)		0.8 dB	
Insertion Loss (V to A Port)		0.5 dB	
Isolation (H to V Port)		35 dB	
Cross Polarization (H to A Port)		35 dB	
Cross Polarization (V to A Port)		35 dB	
Return Loss (H Port)		17 dB	
Return Loss (V Port)		17 dB	
Return Loss (A Port, Vertical)		17 dB	
Return Loss (A Port, Horizontal)		17 dB	
Specification Temperature		+25˚C	
Operating Temperature	-40˚C		+85˚C

Mechanical Specifications:

Item	Specifications
Antenna Port	0.141" Dia Circular Waveguide
Horizontal and Vertical Ports	WR-15 Waveguide
Flange Type	UG-385/U Flange 4-40 Threaded Holes
Material and Finish	Gold Plated Aluminum
Weight	1.3 Oz
Outline	AT-VC-141-N

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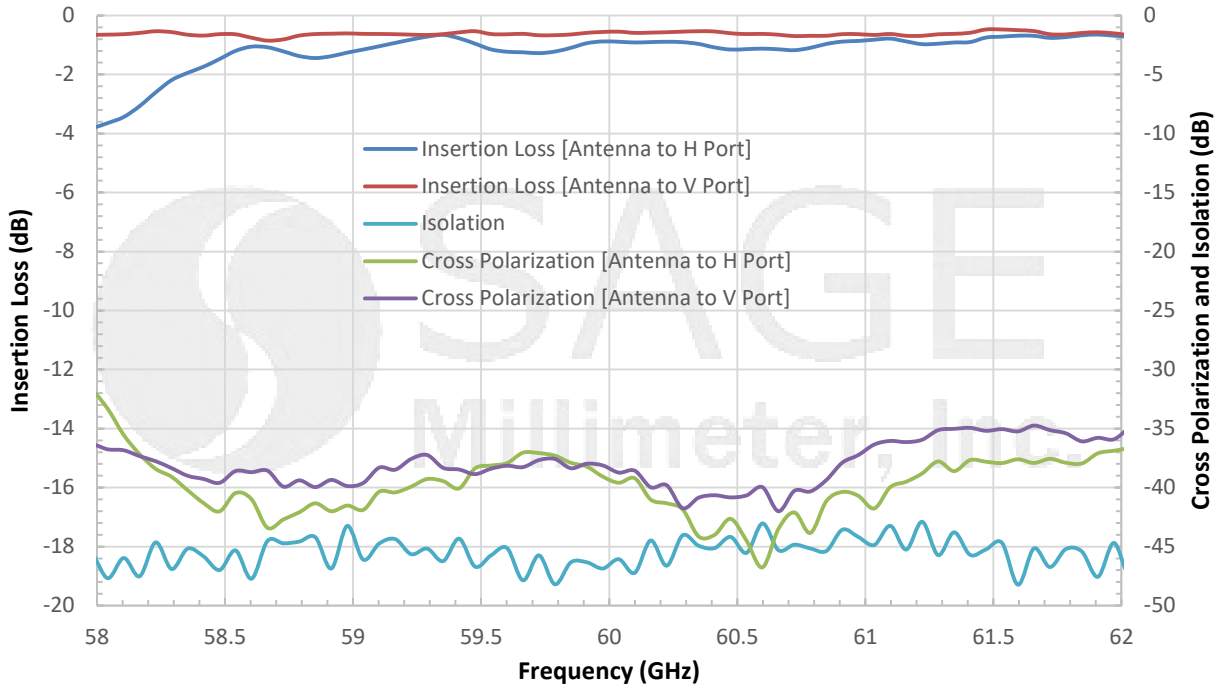
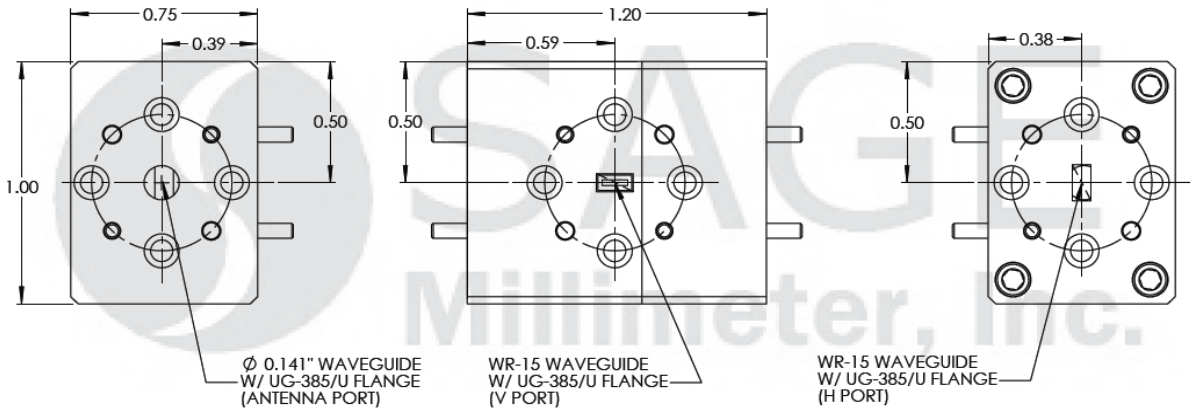
Typical Performance vs. Frequency



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 case temperature.
- SAGE Millimeter, Inc. 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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