

## SAT-FD-06506-S1

### WR-06 Orthomode Transducer, 110 to 170 GHz, Square Common Port

**SAT-FD-06506-S1** is a WR-06 orthomode transducer (OMT) that operates from 110 and 170 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 supports vertical and horizontal polarized waveguide forms with high port isolation and low insertion loss. The common antenna port is a 0.065" square waveguide, while the vertical and horizontal ports are standard WR-06 waveguides with UG-387/U-M anti-cocking flanges.



#### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	110 GHz		170 GHz
Insertion Loss (A to H Port) *		1.5 dB	
Insertion Loss (A to V Port) *		1.5 dB	
Isolation (V to H Port)		40 dB	
Return Loss (H Port)		20 dB	
Return Loss (V Port)		20 dB	
Return Loss (A to H Port)		20 dB	
Return Loss (A to V Port)		20 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		+85°C

\*Performance may be reduced at band edges.

#### Mechanical Specifications:

Item	Specification
Common Antenna Port	0.065" Square Waveguide
Horizontal and Vertical Ports	WR-06 Waveguide
Flange Type	UG-387/U-M Anti-Cocking Flange
Material	Aluminum
Finish	Gold Plated
Weight	1.0 oz.
Outline	AT-DS-065-F-A

#### ECCN

EAR99

#### FEATURES

- High Port Isolation
- Low Insertion Loss
- Full Band Coverage
- Square Waveguide Common Port

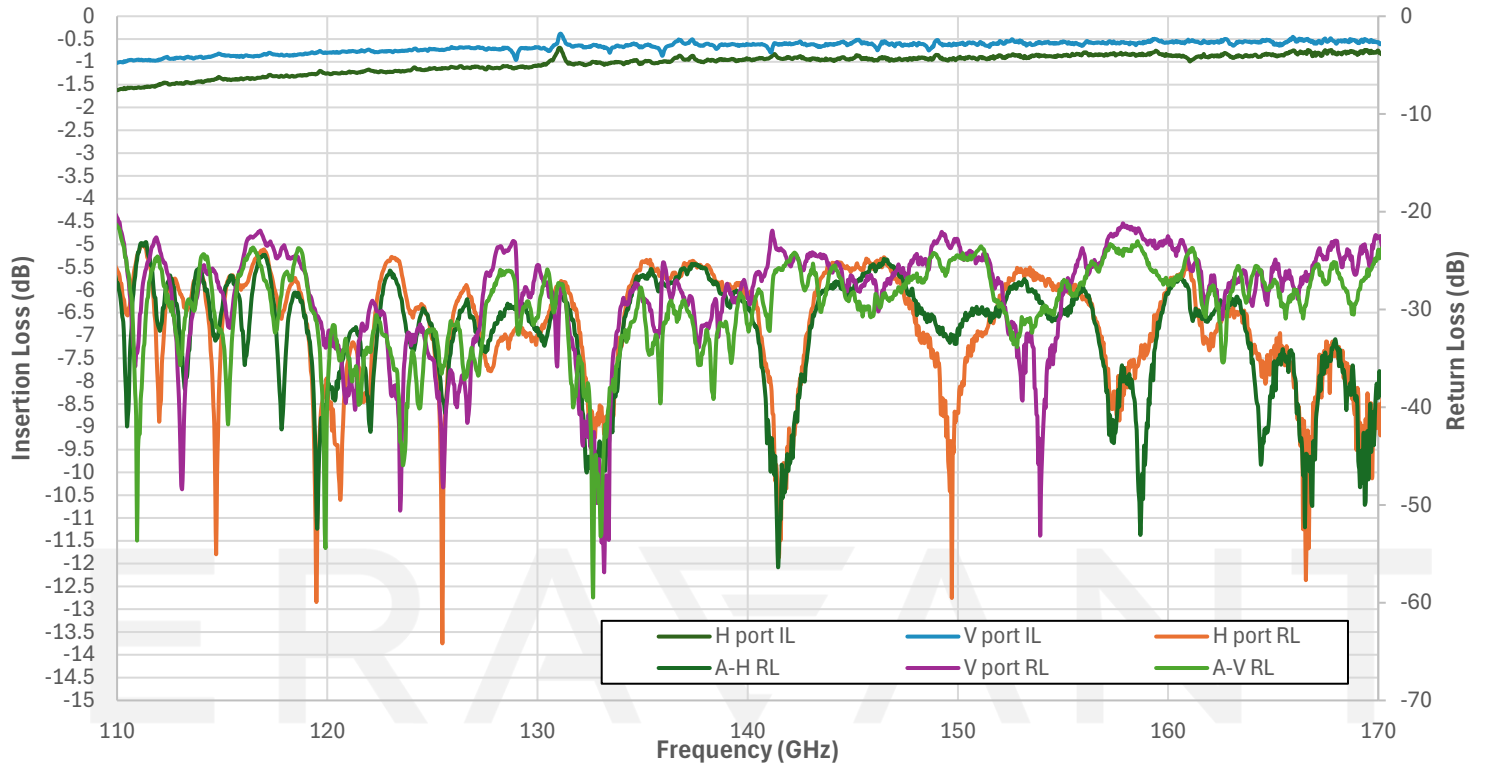
#### APPLICATIONS

- 6G Communication Systems
- Antenna Range

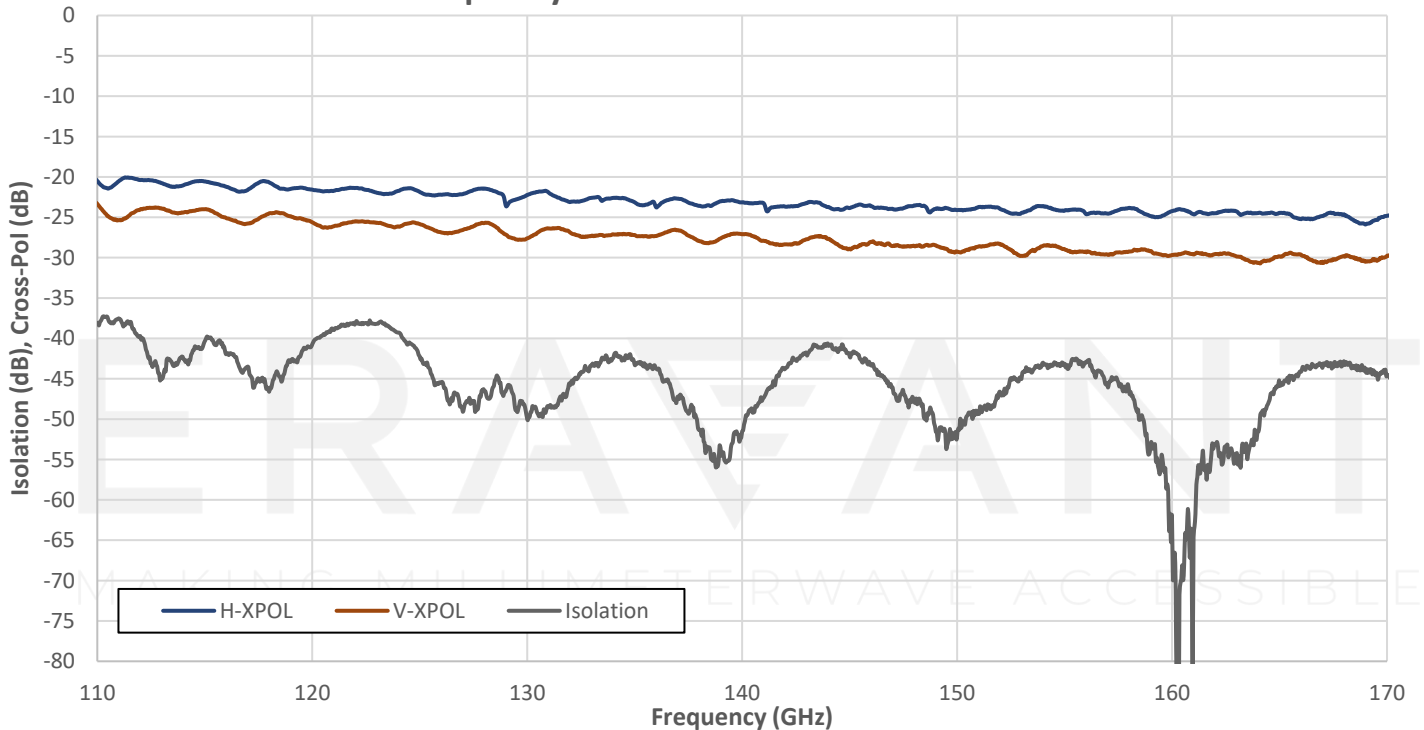
#### SUPPLEMENTAL DETAILS



### Measured Performance vs Frequency



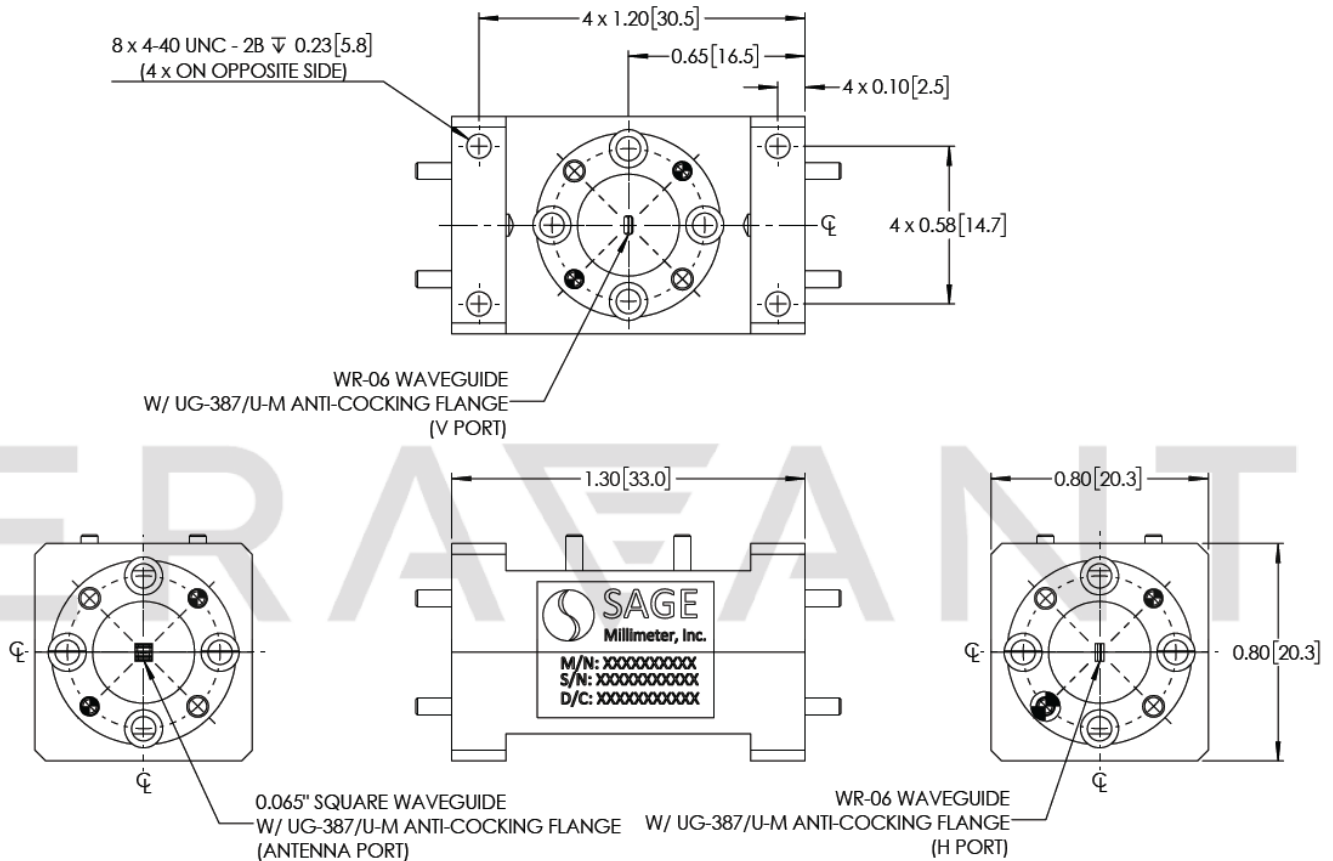
### Measured Performance vs Frequency



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### Mechanical Outline:

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



### NOTE:

- Test data provided 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 waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the antenna will cause performance degradation and possible device damage.

MAKING MILLIMETERWAVE ACCESSIBLE