SAT-453-21922-C1

Q/V-Band Orthomode Transducer, 37.5 to 52.4 GHz, Circular Common Port

SAT-453-21922-C1 is a Q/V-Band turnstile junction orthomode transducer (OMT) that operates from 37.5 to 52.4 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 0.219" circular waveguide, while the vertical and horizontal ports are standard WR-22 waveguides with UG-383/U-M grooved anti-cocking flanges.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	37.5 GHz		52.4 GHz
Insertion Loss (H Port)		0.5 dB	
Insertion Loss (V Port)		0.5 dB	
Isolation (V to H Port)		35 dB	
Return Loss (All Ports)		20 dB	
Cross Pol (H Port)		30 dB	
Cross Pol (V Port)		30 dB	
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
Common Antenna Port	Ø0.219" Circular Waveguide
Horizontal and Vertical Ports	WR-22 Waveguide
Flange Type	UG-383/U-M Grooved Anti-Cocking Flange
Material	Aluminum
Finish	Chem Film
Weight	6.0 oz.
Outline	AT-QC-219-N-A

ECCN

EAR99

FEATURES

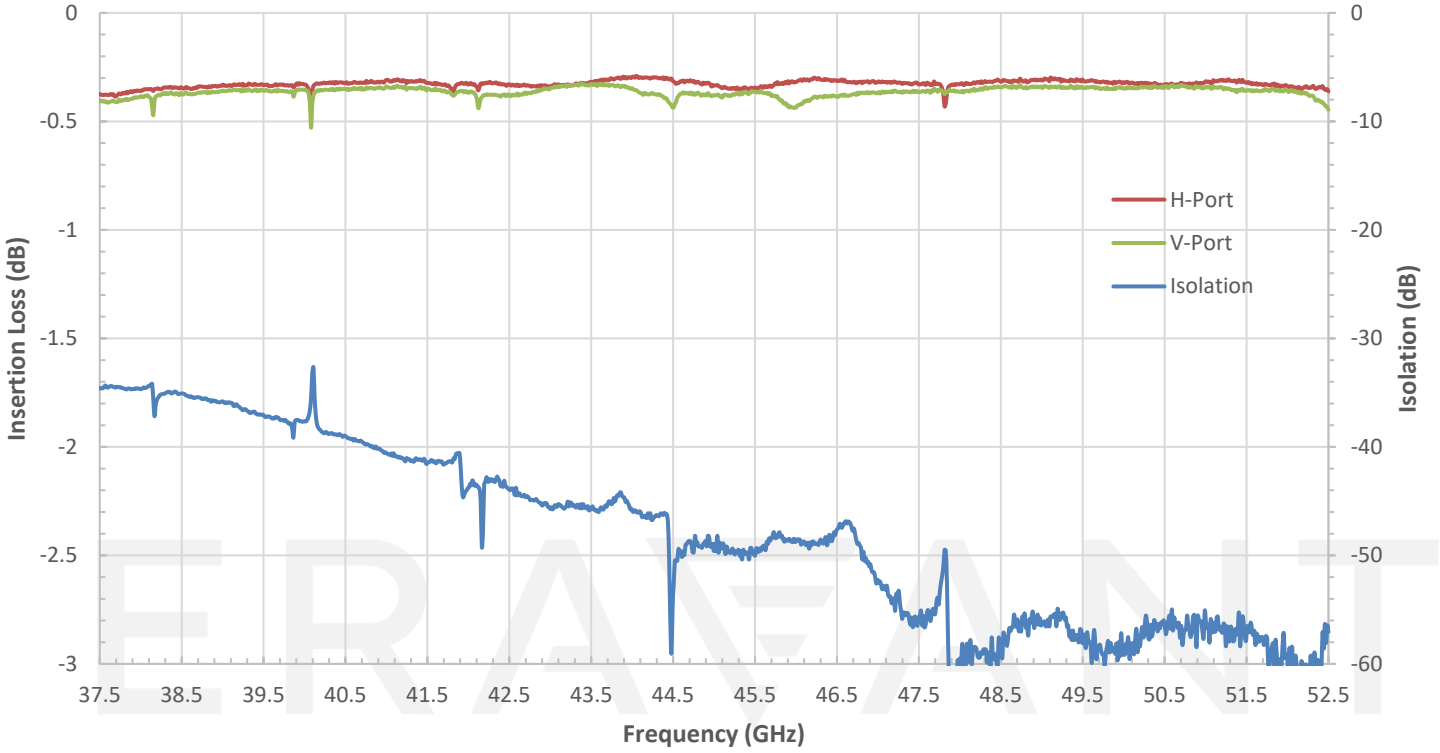
- High Port Isolation
- Low Insertion Loss
- Full Q/V-Band Coverage
- Circular Waveguide Common Port

APPLICATIONS

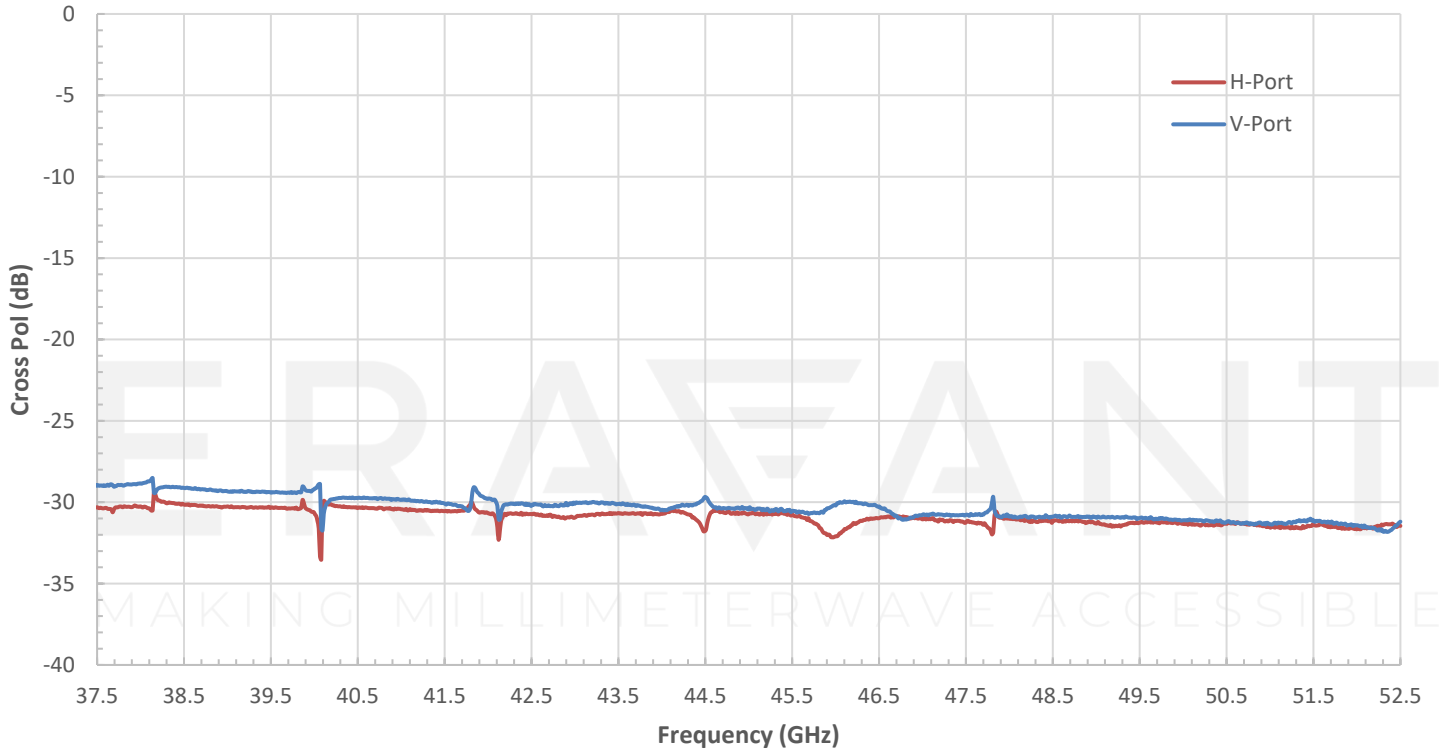
- Q/V-Band Communication Systems
- Antenna Range

SUPPLEMENTAL DETAILS

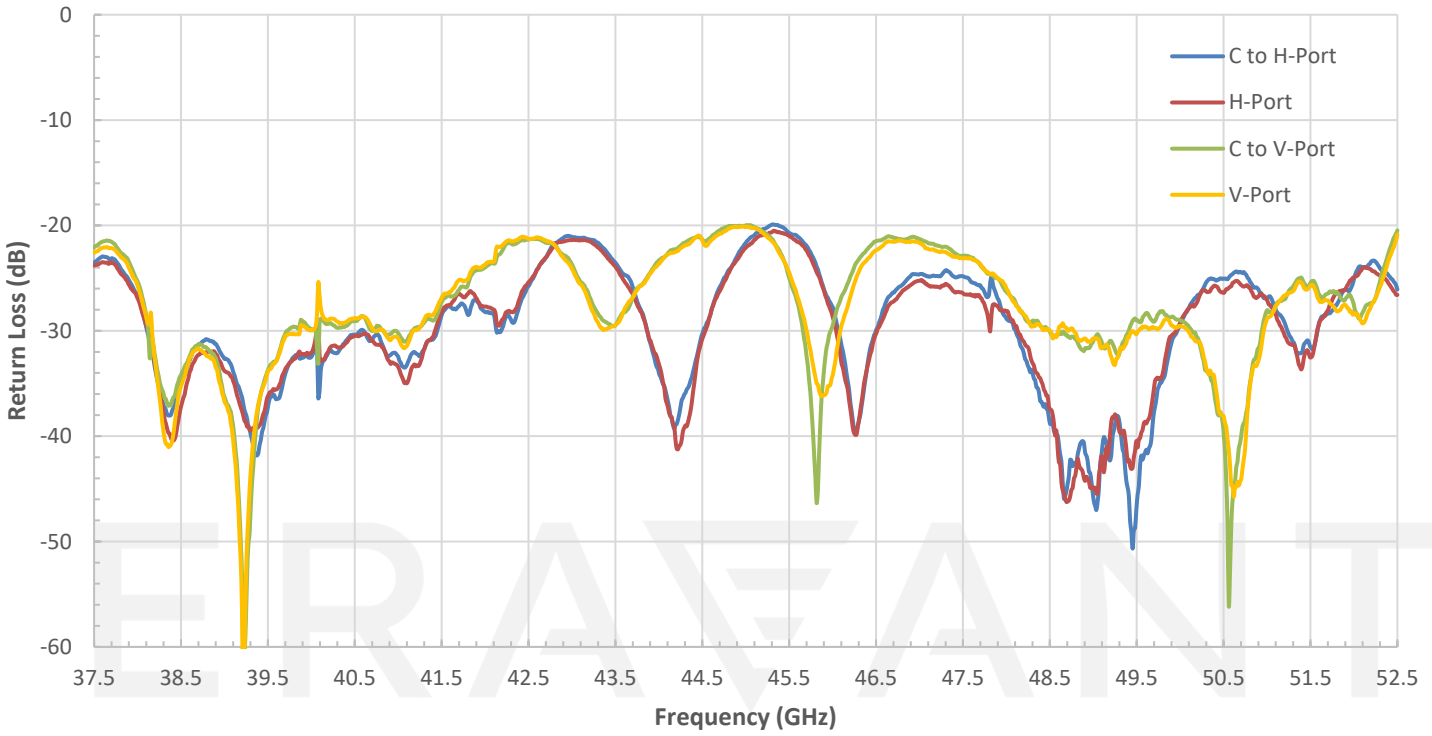
Measured Insertion Loss/Isolation vs Frequency



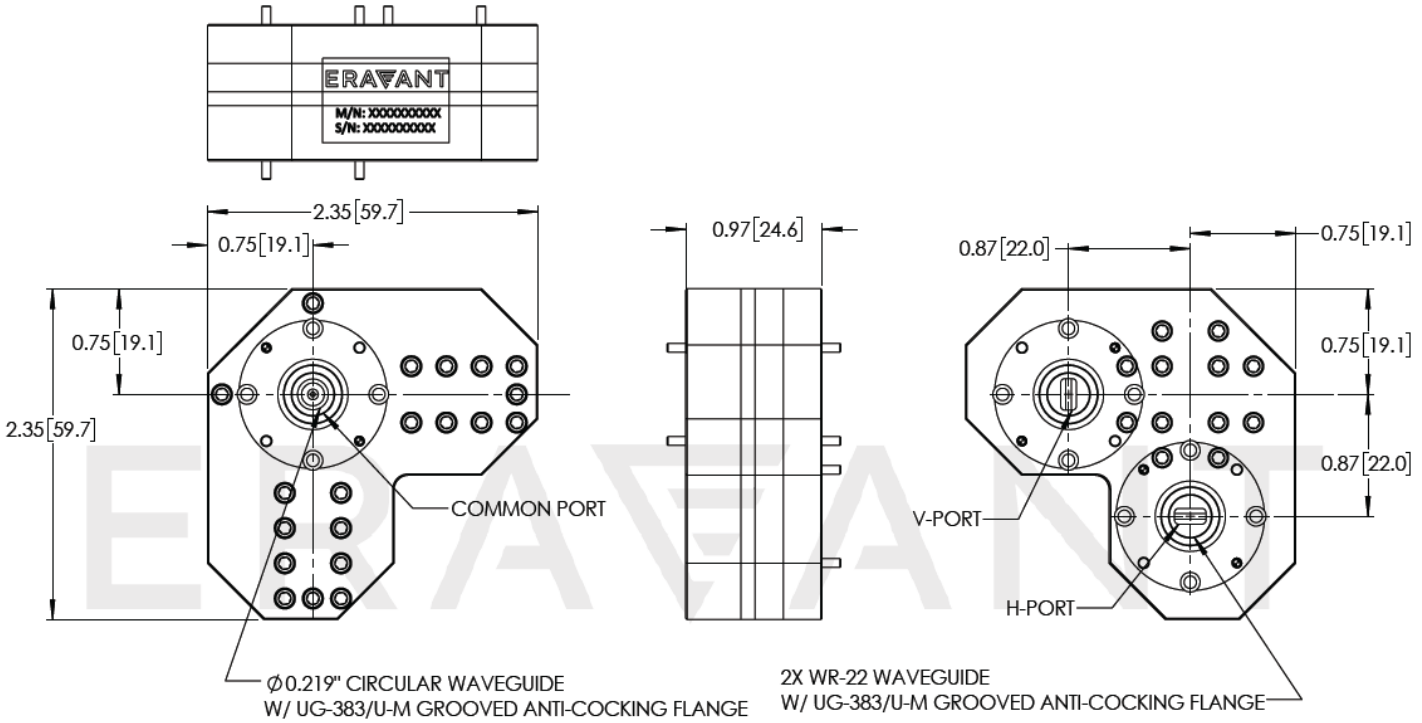
Measured Cross Pol vs Frequency



Measured Return Loss vs Frequency



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.

MAKING MILLIMETERWAVE ACCESSIBLE