SAT-343-28028-S1

Broadband WR-28 Orthomode Transducer, 23 to 44 GHz, Square Common Port

SAT-343-28028-S1 is a broadband orthomode transducer (OMT) that operates from 23 to 44 GHz. This model is specifically designed to cover 5G FR2 bands n257 thru n261. 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 0.280” square waveguide, while the vertical and horizontal ports are standard WR-28 waveguides with UG-599/U flanges.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	23 GHz		44 GHz
Insertion Loss (A to H Port)		0.5 dB	
Insertion Loss (A to V Port)		0.5 dB	
Isolation (V to H Port)		40 dB	
Return Loss (H Port)		15 dB	
Return Loss (V Port)		15 dB	
Return Loss (A to H Port)		15 dB	
Return Loss (A to V Port)		15 dB	
Specification Temperature		+25 ˚C	
Operating Temperature	-40 ˚C		+85 ˚C

Mechanical Specifications:

Item	Specification
Common Antenna Port	0.280” Square Waveguide
Horizontal and Vertical Ports	WR-28 Waveguide
Flange Type	UG-599/U Compatible Flange
Material	Aluminum
Finish	Gold Plated
Weight	2.1 oz.
Outline	AT-AS-280-B

ECCN

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FEATURES

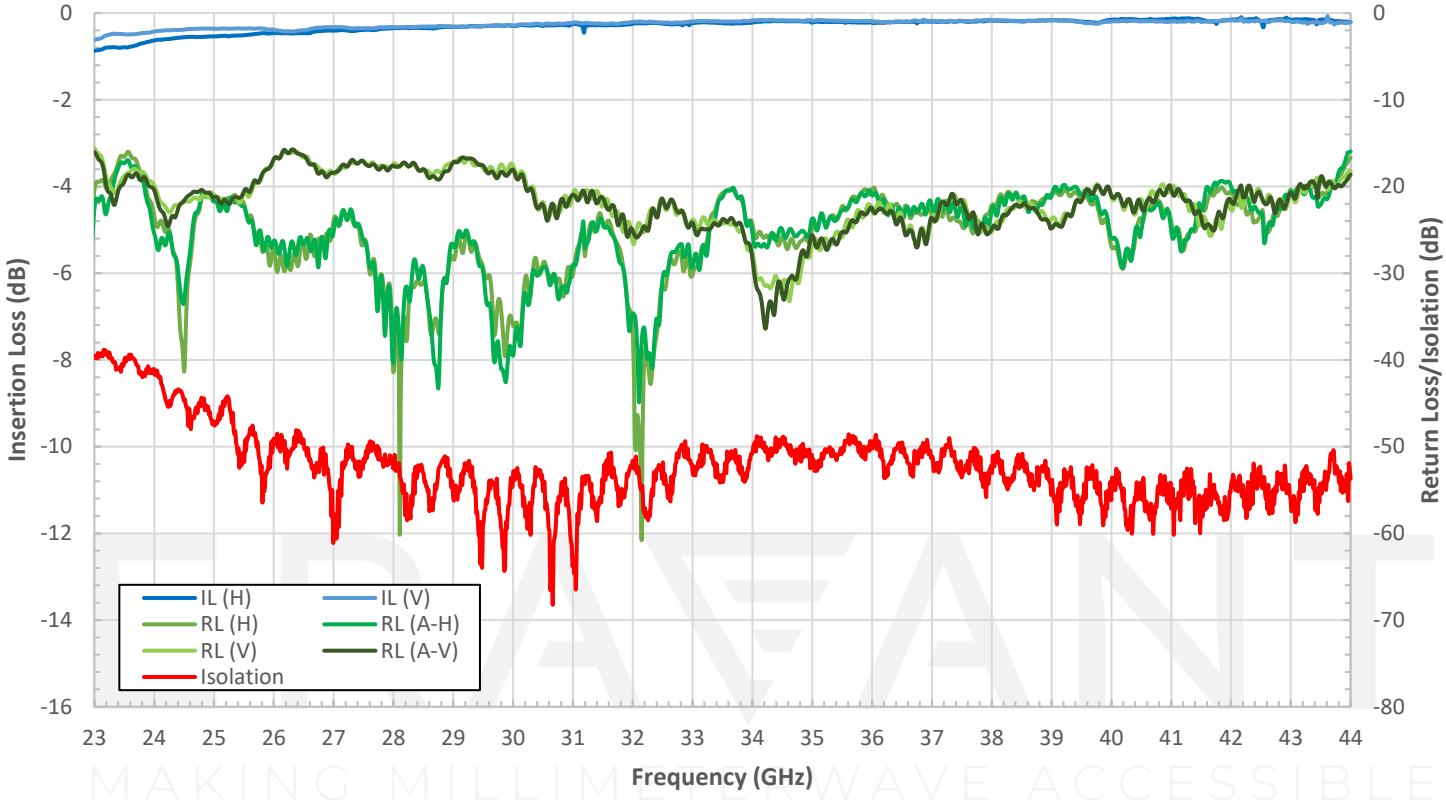
- Broad Band Coverage
- High Port Isolation
- Low Insertion Loss
- Square Waveguide Common Port
- Standard WR-28 Rectangular Horizontal/Vertical Ports

APPLICATIONS

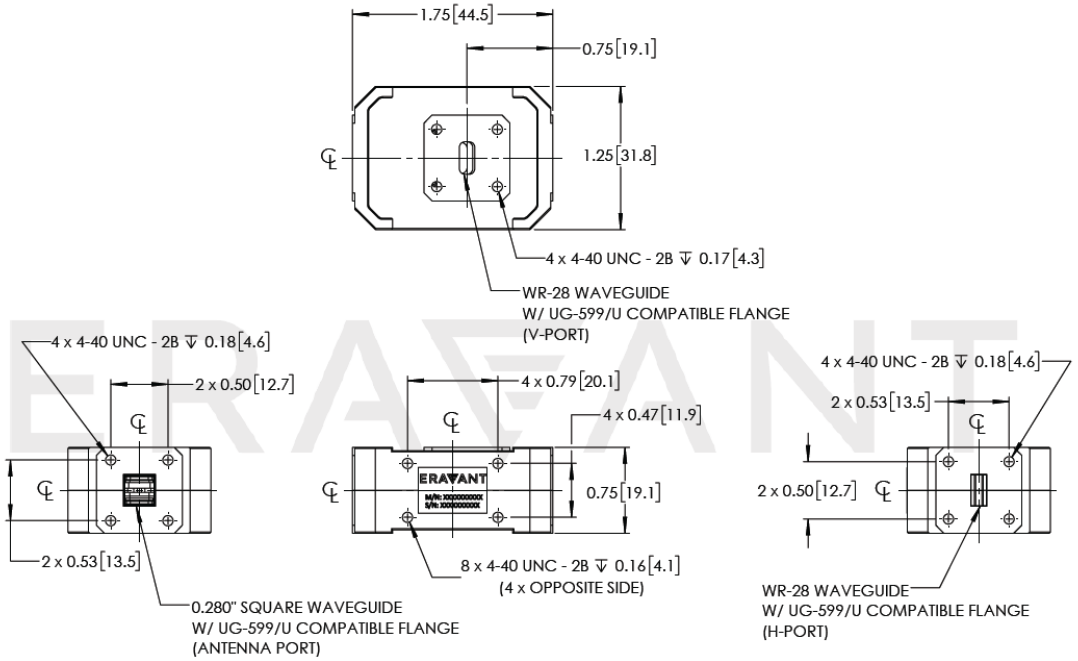
- 5G FR2 Bands (n257 to n261)
- Radar Systems
- Communication Systems
- Antenna Range

SUPPLEMENTAL DETAILS

Typical Measured Performance 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.

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