

STF-03-91-M2

WR-03, Mini Faraday Isolator, 0.524" Insertion Length, 90° Twist

STF-03-91-M2 is a WR-03 miniature Faraday isolator that operates from 220 to 330 GHz. The isolator utilizes a novel magnetic design with precision machined housing to achieve the smallest Faraday isolator package size offered by Eravant. Due to the nature of the magnetic configuration, the isolator's performance is stable and resistant to external stray magnetic fields. The compact, robust package is highly ideal for system integration and subassemblies where space is at a premium and allows for backside access for waveguide screws. The isolator offers 20 dB typical isolation and 4.0 dB typical insertion loss from 220 to 260 GHz and 5.5 dB typical insertion loss from 260-330 GHz. The input and output ports are WR-03 waveguides with UG-387/U-M anti-cocking flanges and are twisted 90° with respect to each other. An inline version of this isolator is available under model **STF-03-S1-M2**.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	220 GHz		330 GHz
Insertion Loss (220-260 GHz)		4.0 dB	
Insertion Loss (260-330 GHz)		5.5 dB	
Isolation	16 dB	20 dB	
Return Loss		13 dB	
Power Handling			100 mW (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
RF Ports	WR-03 Waveguide with UG-387/U-M Anti-Cocking Flange
Insertion Length	0.524"
Material	Aluminum
Finish	Gold Plated
Weight	0.6 Oz
Outline	TF-S03-A-9M-0.524

ECCN

EAR99

FEATURES

- Full Band Coverage
- High Isolation
- Compact Form Factor
- Resistant to Stray Magnetic Fields
- Backside Flange Screw Access
- 90 Degree Twist

APPLICATIONS

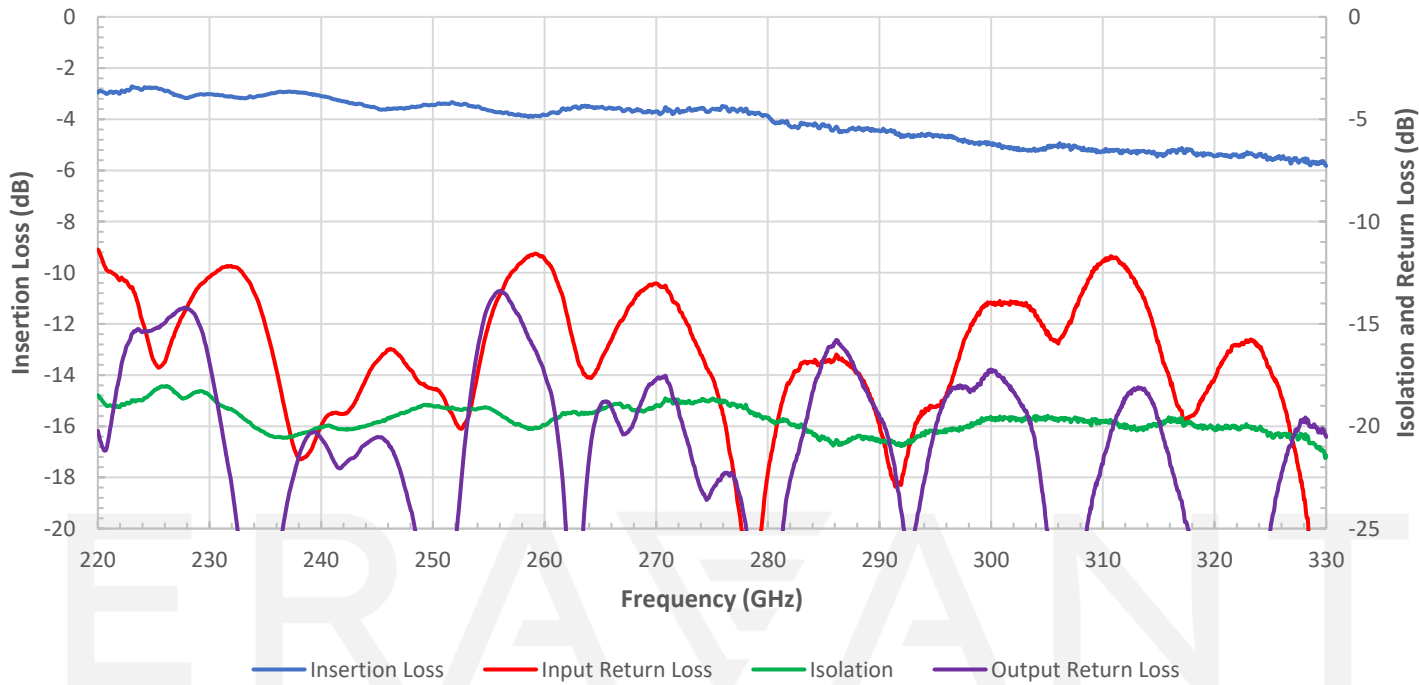
- Test Lab
- Instrumentations
- Subassemblies

SUPPLEMENTAL DETAILS

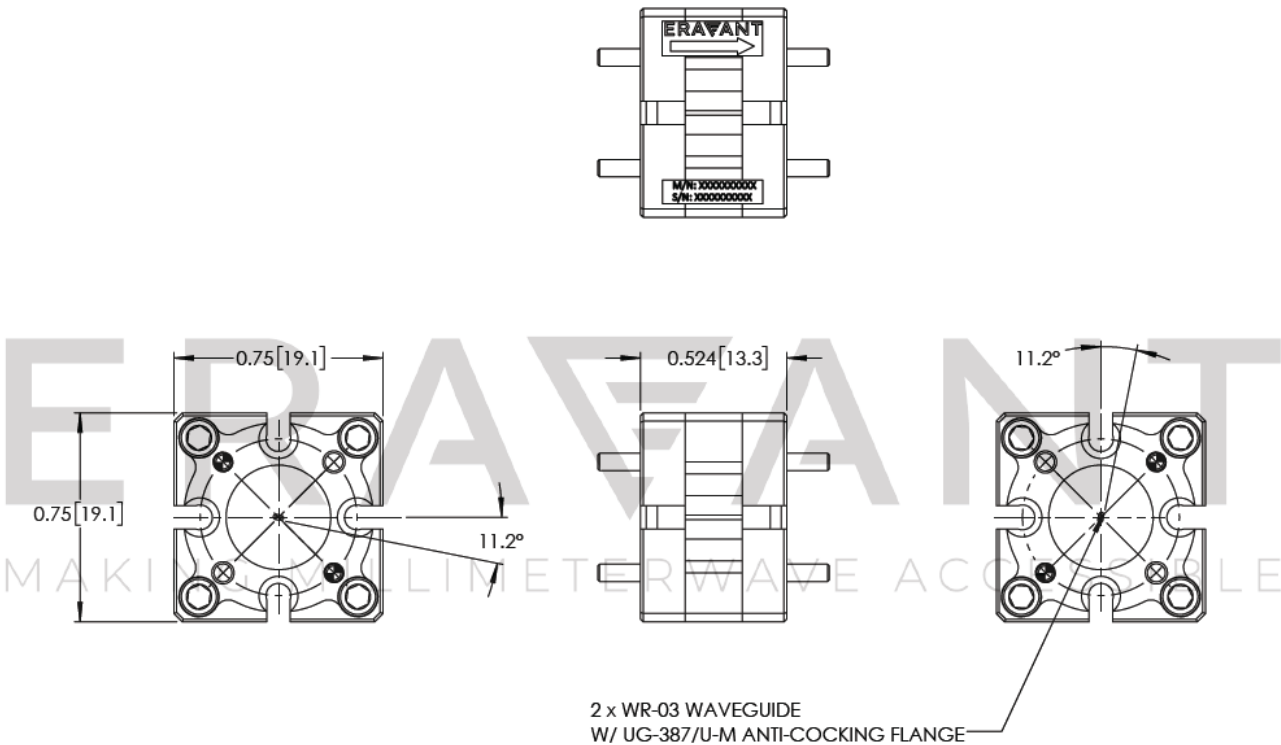


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Typical Measured Performance vs Frequency



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



NOTE:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Exceeding absolute maximum ratings will damage the device.
- The mini isolator exhibits a moderately strong magnetic field around its package. Keep devices that are sensitive to magnetic fields at least 2" away from the mini isolator.
- The mini isolator is resistant to stray magnetic fields. However, any magnets or devices that exhibit magnetic fields with a very strong, axially focused component will interfere with the operation of the isolator. Keep such magnets or devices at least 6" away from the mini isolator.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.

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