STF-10-S1-M2

W-Band, Mini Faraday Isolator, 0.658” Insertion Length

STF-10-S1-M2 is a WR-10 miniature Faraday isolator that operates from 75 to 110 GHz. The isolator utilizes a novel magnetic design with precision machined housings 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 23 dB typical isolation and 1.5 dB typical insertion loss. The input and output ports are WR-10 waveguides with UG-387/U-M anti-cocking flanges. A 90-degree twisted version of this isolator is available under model **STF-10-91-M2**.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	75 GHz		110 GHz
Insertion Loss		1.5 dB	
Isolation	16 dB	23 dB	
Return Loss		18 dB	
Power Handling			100 mW (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
RF Ports	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Insertion Length	0.658”
Material	Aluminum
Finish	Gold Plated
Weight	0.6 Oz
Outline	TF-SW-A-M-0.658

ECCN

EAR99

FEATURES

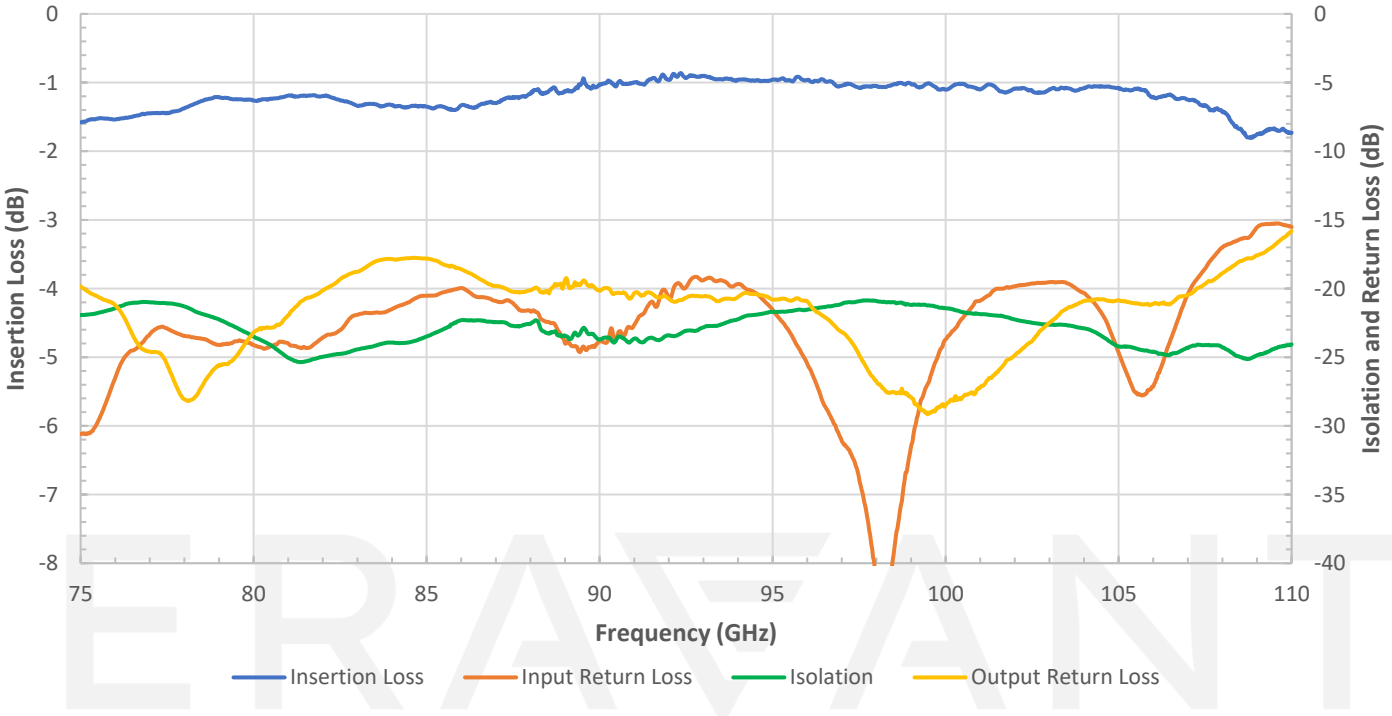
- Full Band Coverage
- Low Insertion Loss
- High Isolation
- Compact Form Factor
- Resistant to Stray Magnetic Fields
- Backside Flange Screw Access

APPLICATIONS

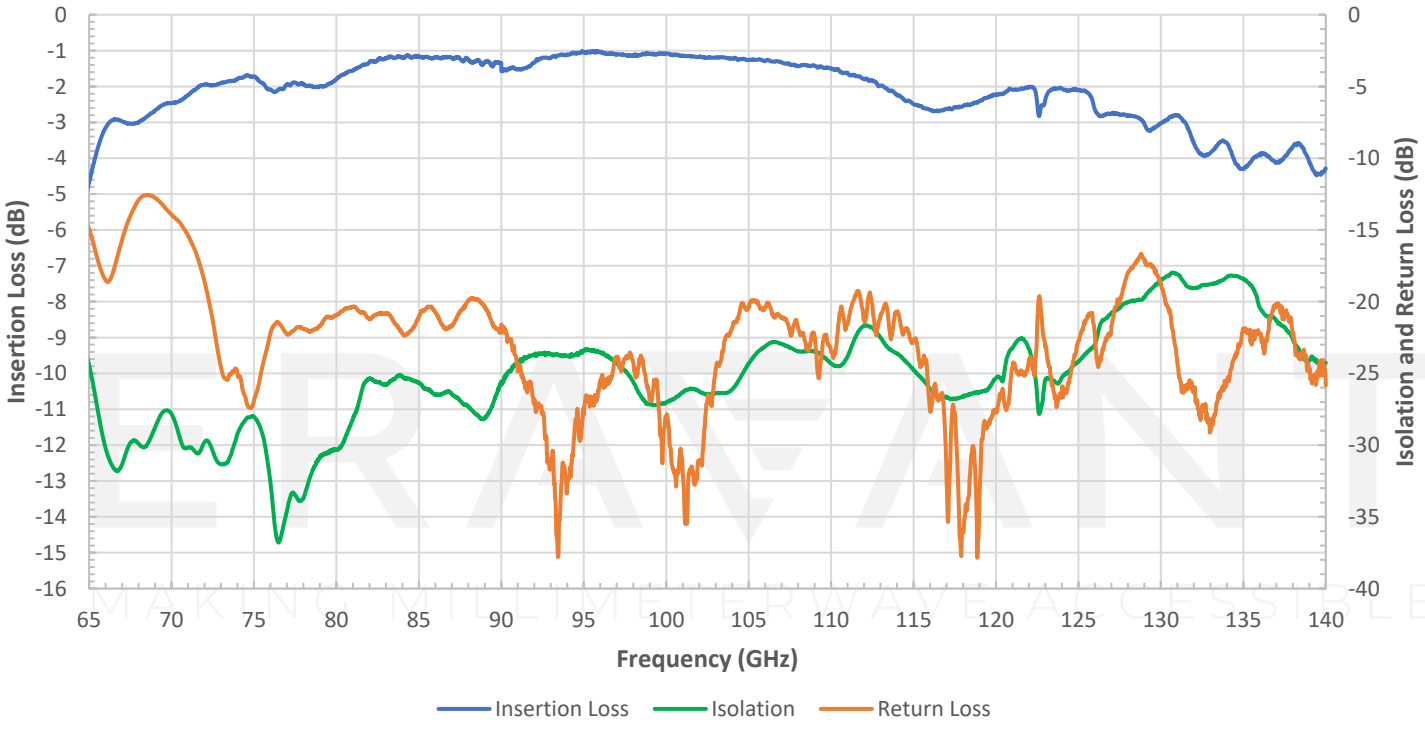
- Test Lab
- Instrumentations
- Subassemblies

SUPPLEMENTAL DETAILS

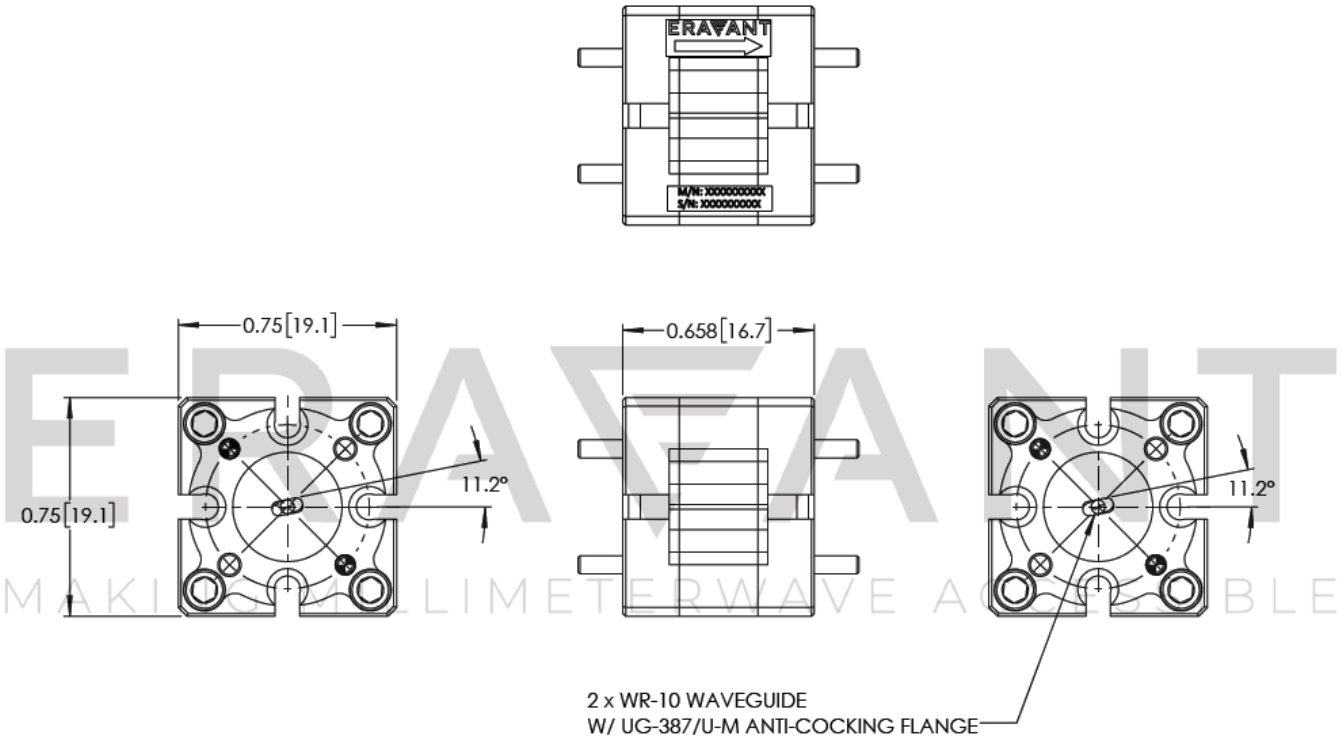
Typical Measured Performance vs Frequency



Typical Performance vs Frequency (Extended Bandwidth)



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.
- **Extended bandwidth data presented is for reference only.**
- 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.