STF-12-91-C

Rev. 1.0

E-Band Full Waveguide Band Compact Faraday Isolator, 90° Twist

Description:

Model STF-12-91-C is a full band Faraday isolator that operates from 60 to 90 GHz. The Faraday isolator is constructed with a longitudinal, magnetized ferrite rod that causes a Faraday rotation of the incoming RF signal. The compact, robust package is ideal for system integration and testing applications. The Faraday isolator offers 28 dB typical isolation and 1.5 dB nominal insertion loss with good flatness. The input and output ports are WR-12 waveguides with UG-387/U flanges. An in-line configuration is available under model number STF-12-S1-C.

Features:

- Full Waveguide Band Operation
- Moderate Insertion Loss
- High Isolation
- Compact Form Factor

Applications:

- Test Labs
- Instrumentations
- Sub-assemblies

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency	60 GHz		90 GHz
Insertion Loss		1.5 dB	2.0 dB
Isolation		28 dB	
Return Loss		14 dB	
Power Handling		1.2 W (CW)	1.5 W (CW)
Specification Temperature		+25 °C	
Operation Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
RF Input and Output Ports	WR-12 Waveguide with UG-387/U Flange
Material	Aluminum
Finish	Gold Plated and Black Anodized
Weight	0.8 Oz
Insertion Length	1.0”
Outline	TF-SE-9C

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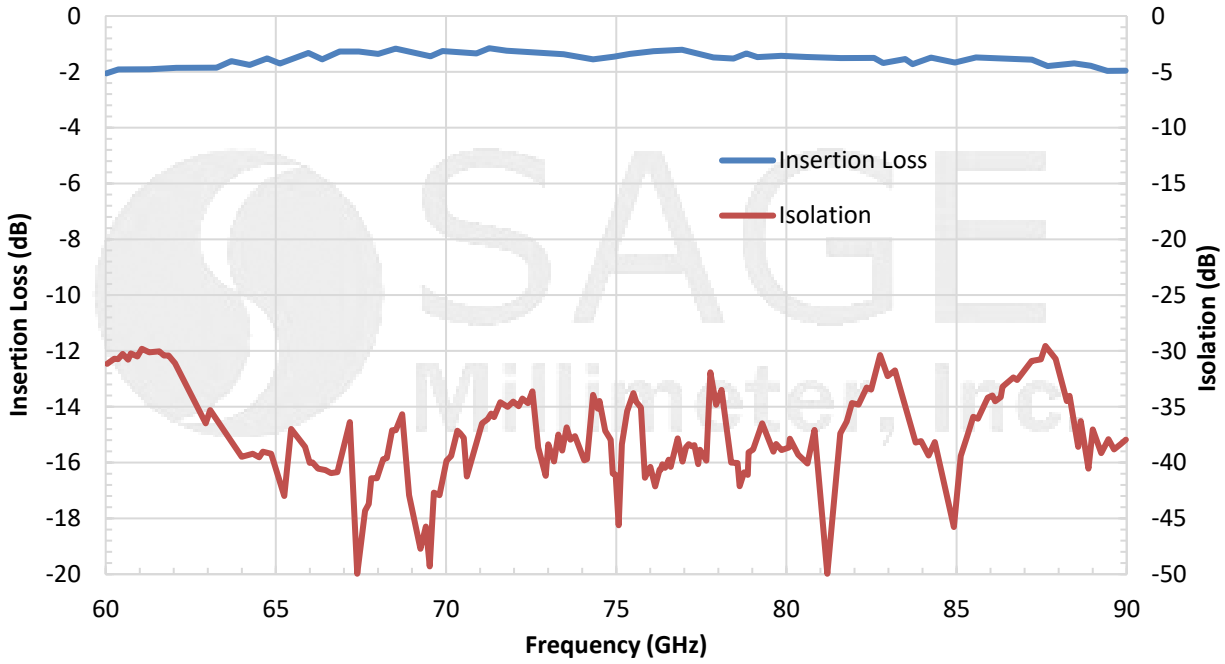
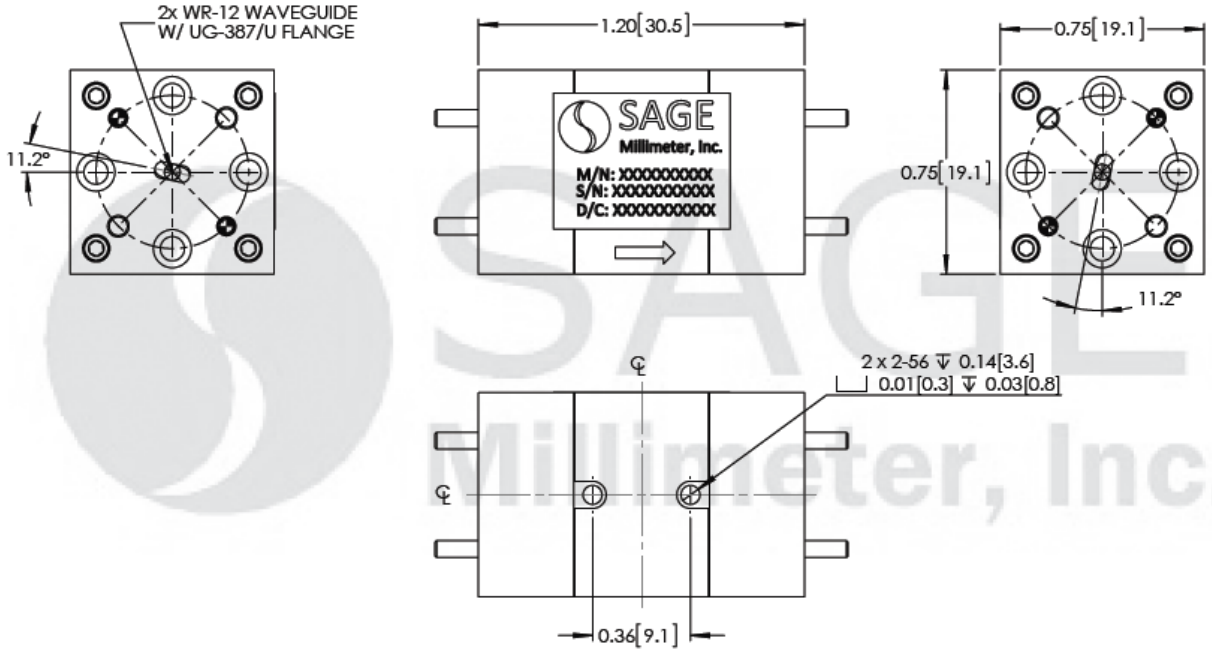
Typical Insertion Loss and Isolation vs. Frequency



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



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Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25˚C case temperature.
- The standard compact model is offered under model number **STF-12-S1-C.**
- The standard model is offered under model number **STF-12-S1**.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Exceeding absolute maximum ratings will damage the device.
- The device is sensitive to magnetic fields. Always keep magnet fields 6 inches away.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.

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