



Ka-Band Faraday Isolator

Description:

Model STF-28-S1 is a full band Faraday isolator that operates from 26.5 to 40 GHz. The Faraday isolator is constructed with a longitudinal, magnetized ferrite rod that causes a Faraday rotation of the incoming RF signal. The Faraday isolator offers 30 dB typical isolation and a 1.2 dB nominal insertion loss with good flatness. The return loss of the isolator is 14 dB. The input and output ports have WR-28 waveguides with UG-599/U flanges.



Features:

- Full Waveguide Band Operation
- Moderate Insertion Loss
- High Isolation
- Instrumentation Grade

Applications:

- Test Labs
- Instrumentations
- Sub-assemblies

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency*	26.5 GHz		40 GHz
Insertion Loss		1.2 dB	2.0 dB
Isolation		30 dB	
Return Loss		14 dB	
Power Handling		1.8 W (CW)	2.0 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+85 °C

*Note: The operating bandwidth can be extended to 24 to 42 GHz.

Mechanical Specifications:

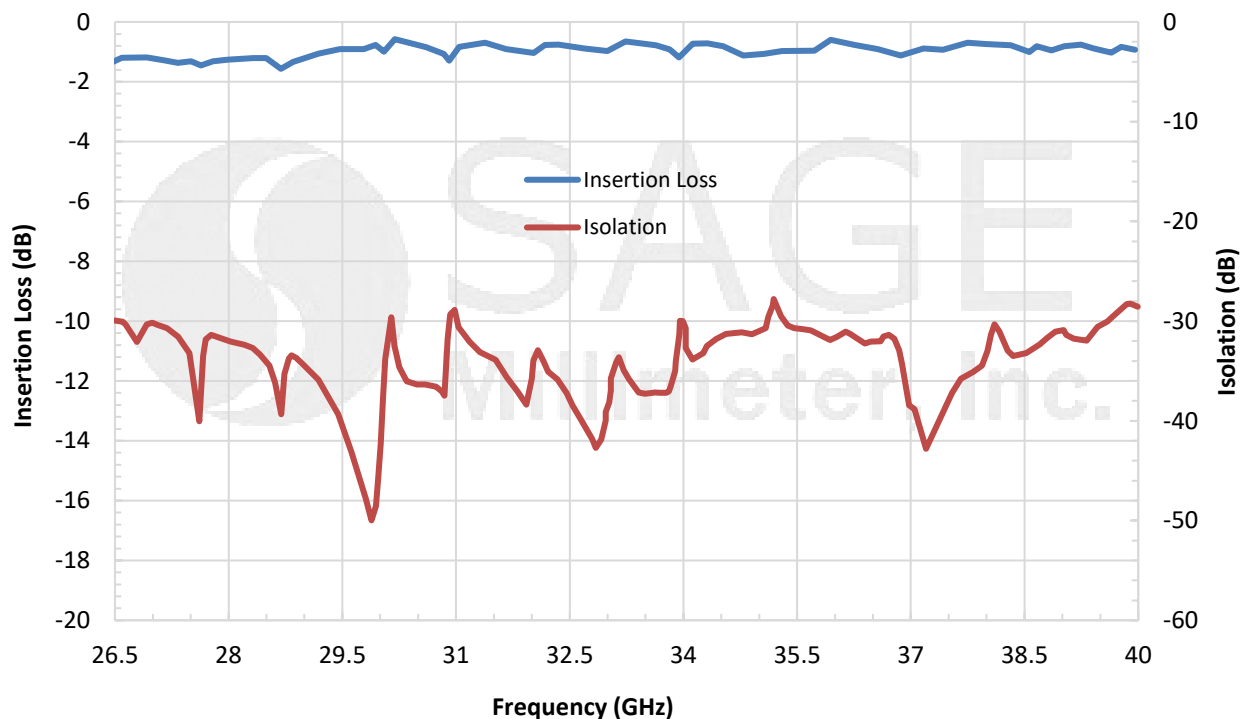
Item	Specification
RF Input and Output	WR-28 Waveguide with UG-599/U Flange
Waveguide Flange Material	Brass
Waveguide Flange Finish	Gold Plated
Cover Material	Aluminum
Cover Finish	Black Anodized
Weight	4.6 Oz
Insertion Length	2.69"
Outline	TF-SA



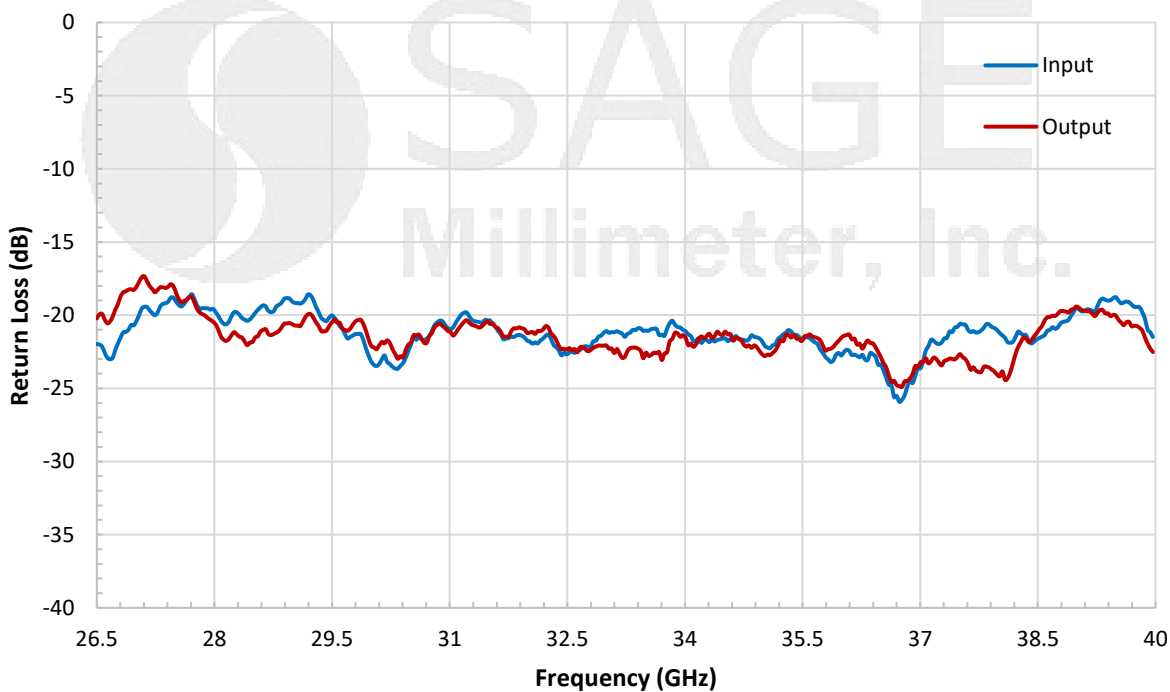


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Typical Performance vs. Frequency



Typical Return Loss vs. Frequency

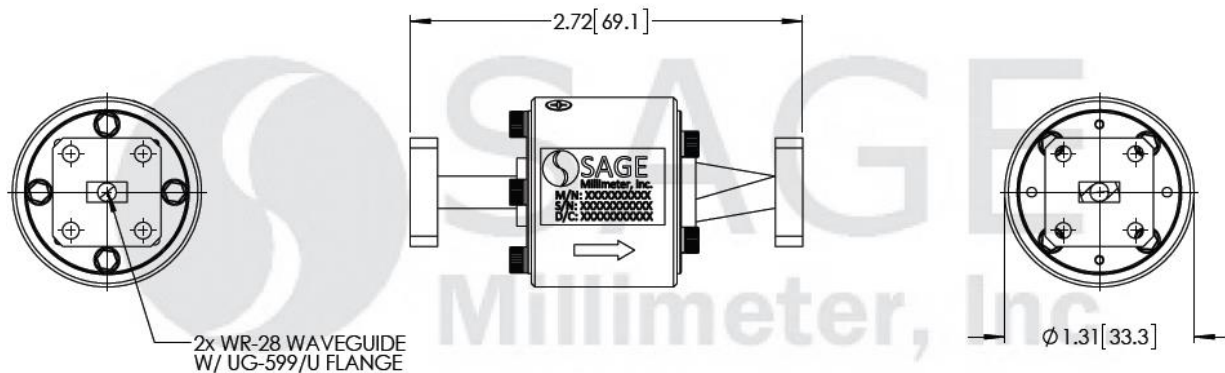


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Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25°C case temperature.
- The model with orthogonal input and output ports is offered under model number **STF-28-91**.
- The compact version is offered under model number **STF-28-S1-C**.
- Other custom mechanical configurations are available under different model numbers.
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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.

