STF-34-S1

Rev 1.0

WR-34 Band Faraday Isolator

Description:

Model STF-34-S1 is a full band Faraday isolator that operates from 22 to 33 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 28 dB typical isolation and a 1.3 dB nominal insertion loss with good flatness. The return loss of the isolator is 14 dB. The input and output ports are WR-34 waveguides with UG-1530/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	22 GHz		33 GHz
Insertion Loss		1.3 dB	2.0 dB
Isolation		28 dB	
Return Loss		14 dB	
Power Handling		1.8 W (CW)	2.0 W (CW)
Specification Temperature		+25 °C	
Operation Temperature	-40 °C		+85 °C

Mechanical Specifications:

Item	Specification
RF Input and Output	WR-34 Waveguide with UG-1530/U Flange
Waveguide Flange Material	Brass
Waveguide Flange Finish	Gold Plated
Cover Material	Aluminum
Cover Finish	Black Anodized
Weight	5.2 Oz
Insertion Length	3.08”
Outline	TF-S3

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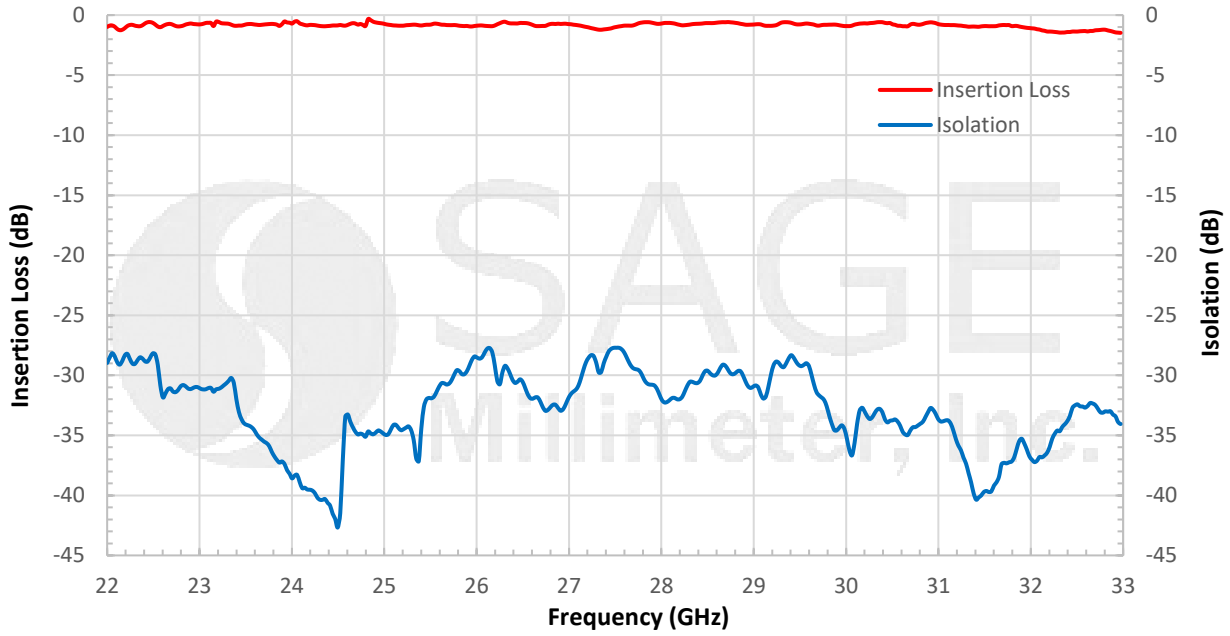
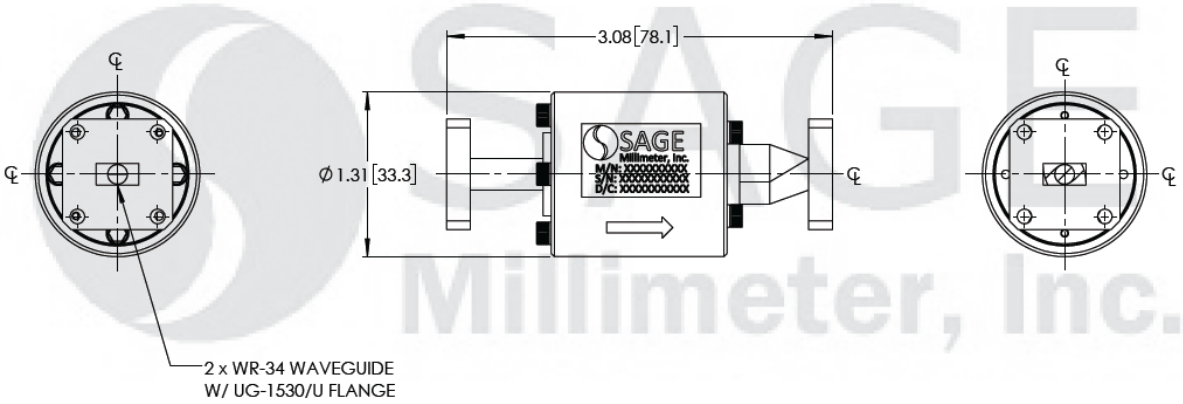
Typical Performance vs Frequency



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, slightly.
- All testing was performed under +25˚C case temperature.
- The model with orthogonal input and output ports is offered under model number **STF-34-91.**
- The compact version is offered under model number **STF-34-S1-C.**
- Other custom mechanical configurations are available under different model numbers.
- 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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