



## Ka-Band Faraday Isolator, 90° Twist Input

### Description:

**Model STF-28-91** 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 and feature a 90° twist.



### 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:

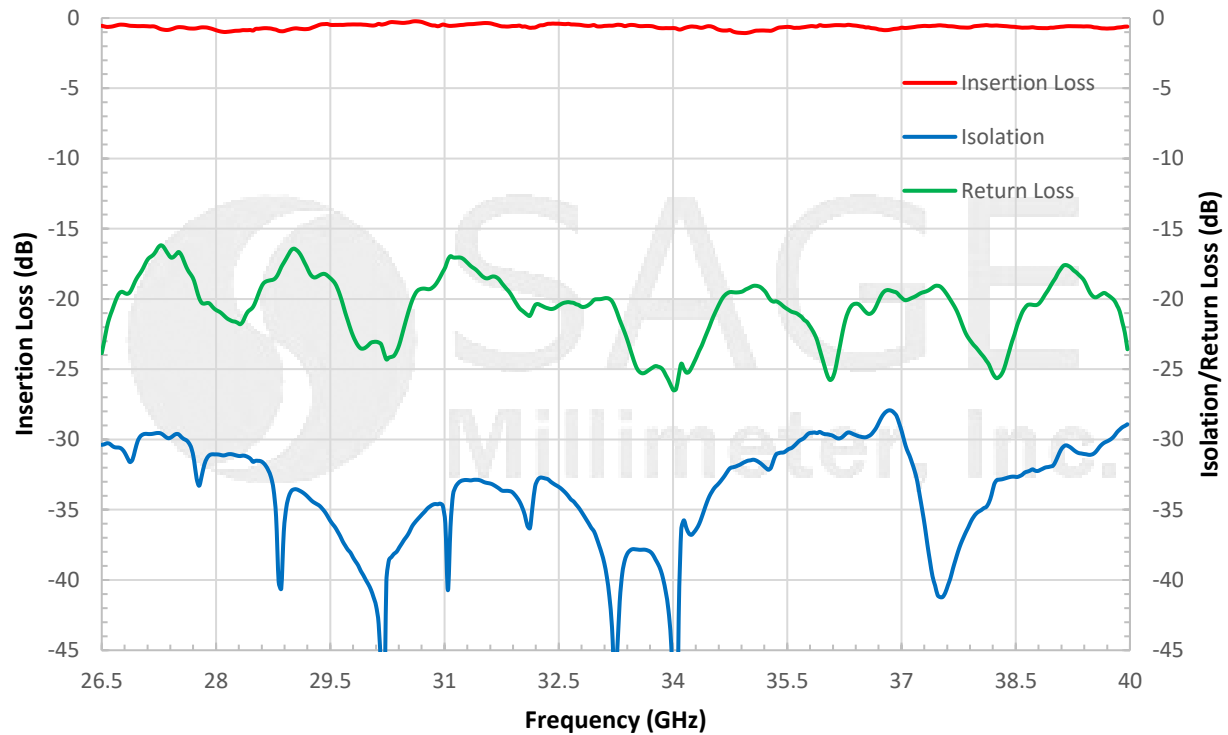
Item	Specification
RF Input and Output	WR-28 Waveguide with UG-599/U Flange
Waveguide Flange Material	Brass
Waveguide Flange Finish	Gold Plated
Cover Material	Aluminum
Cover Finish	Black Anodized
Weight	4.6 Oz
Insertion Length	2.72"
Outline	TF-SA-9



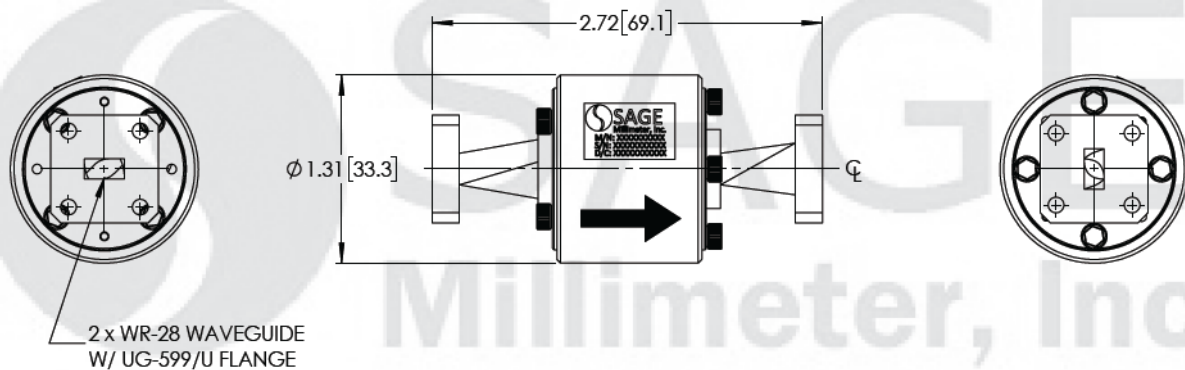


## Ka-Band Faraday Isolator, 90° Twist Input

### 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.
- All testing was performed under +25°C case temperature.
- The standard model is offered under model number **STF-28-S1**.
- The compact version is offered under model number **STF-28-91-C**.
- Other mechanical configurations are available under different model numbers.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.



www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505  
 Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

## Ka-Band Faraday Isolator, 90° Twist Input

### 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.

