

## G-Band Faraday Isolator

### Description:

**Model STF-05-S1** is a full band Faraday isolator that operates from 140 to 220 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 5 dB nominal insertion loss with good flatness. The return loss of the isolator is 14 dB. The input and output ports are WR-05 waveguides with UG-387/U-M 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	140 GHz		220 GHz
Insertion Loss		5 dB	
Isolation		30 dB	
Return Loss		14 dB	
Power Handling		0.1 W (CW)	0.2 W (CW)
Specification Temperature		+25 °C	
Operation Temperature	-40 °C		+85 °C

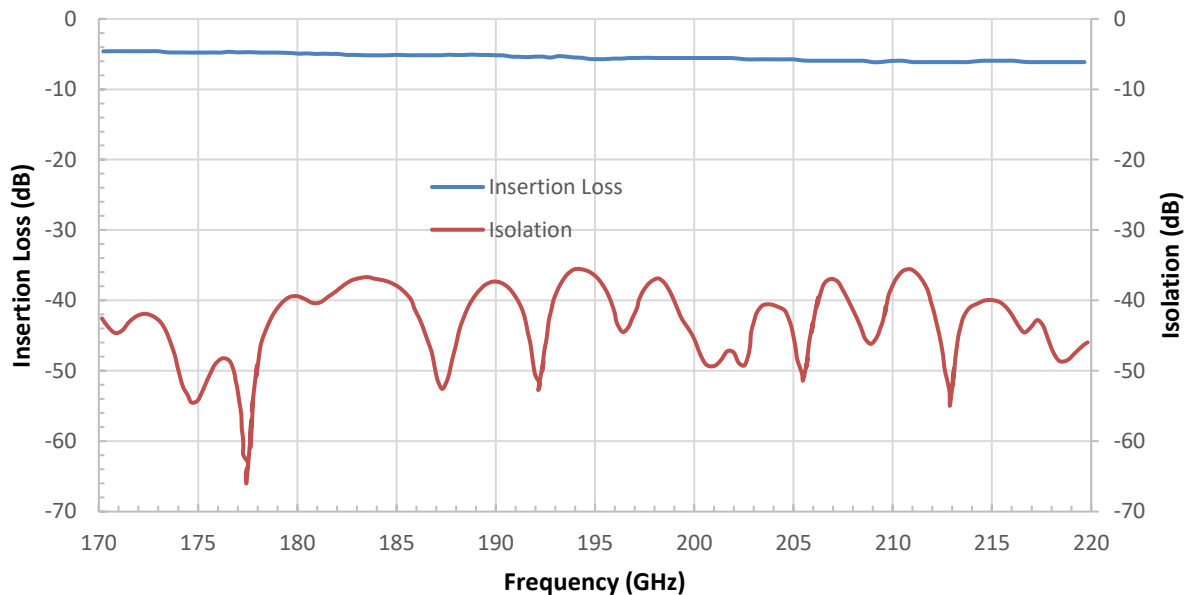
### Mechanical Specifications:

Item	Specification
RF Input and Output Ports	WR-05 Waveguide with UG-387/U-M Flange
Waveguide Flange Material	Brass
Waveguide Flange Finish	Gold Plated
Cover Material	Aluminum
Cover Finish	Black Anodized
Weight	2.2 Oz
Insertion Length	2.27"
Outline	TF-SG

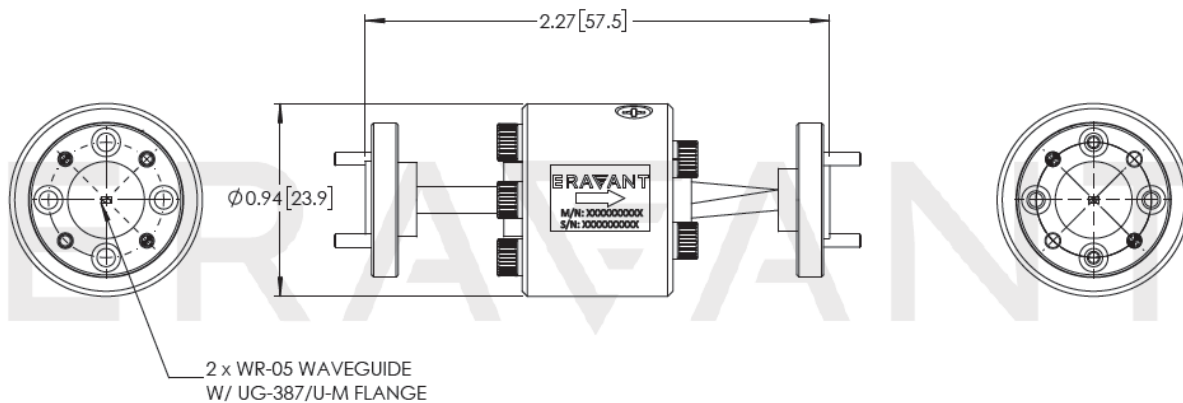


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### Typical Performance vs. Frequency



**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.
- All testing was performed under +25°C case temperature.
- Other custom mechanical configurations are available under different model numbers.
- Eravant 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 magnetic fields 6 inches away.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.

