

STF-15-S1

V-Band Faraday Isolator

STF-15-S1 is a full band Faraday isolator that operates from 50 to 75 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 1.5 dB nominal insertion loss with good flatness. The return loss of the isolator is 16 dB. The input and output ports are WR-15 waveguides with UG-385/U flanges.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
RF Frequency	50 GHz		75 GHz
Insertion Loss		1.5 dB	1.8 dB
Isolation		28 dB	
Return Loss		16 dB	
Power Handling		1.0 W (CW)	1.2 W (CW)
Specification Temperature		+25°C	
Operation Temperature	-40°C		+85°C

Mechanical Specifications:

Item	Specification
RF Input and Output	WR-15 Waveguide with UG-385/U Anti-Cocking Flange
Waveguide Flange Material	Brass
Waveguide Flange Finish	Gold Plated
Cover Material	Aluminum
Cover Finish	Black Anodized
Weight	2.2 Oz
Insertion Length	2.5"
Outline	TF-SV-A

ECCN

EAR99

FEATURES

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

APPLICATIONS

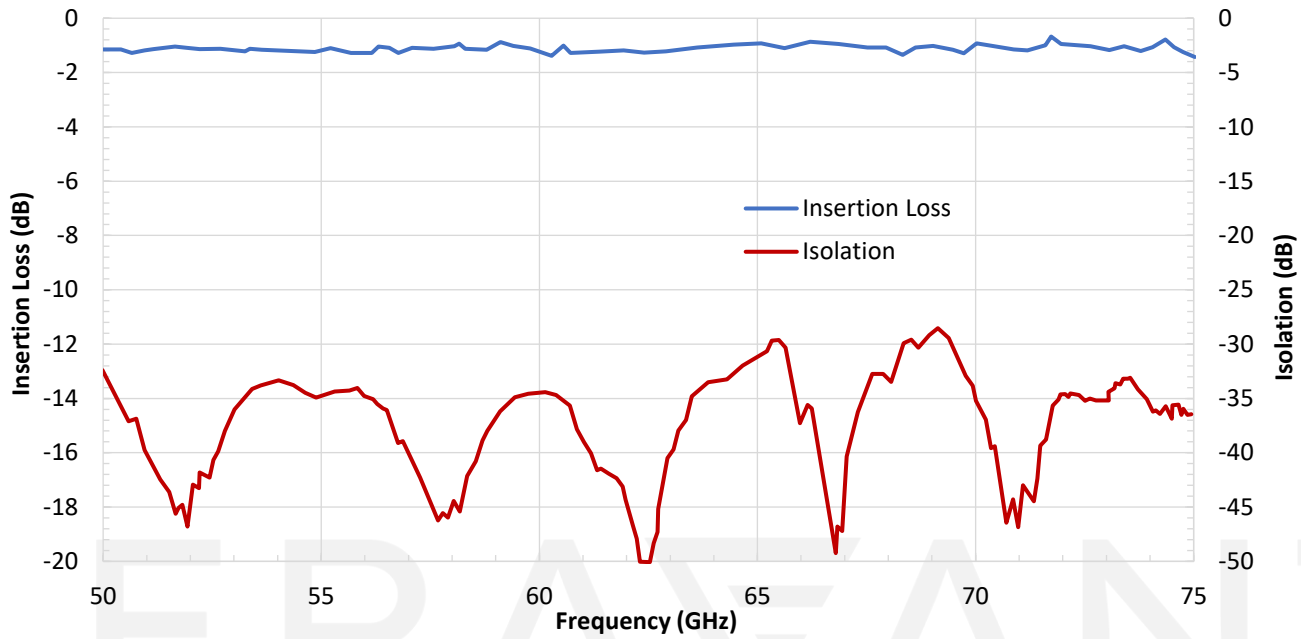
- Test Lab
- Instrumentations
- Sub-assemblies

SUPPLEMENTAL DETAILS

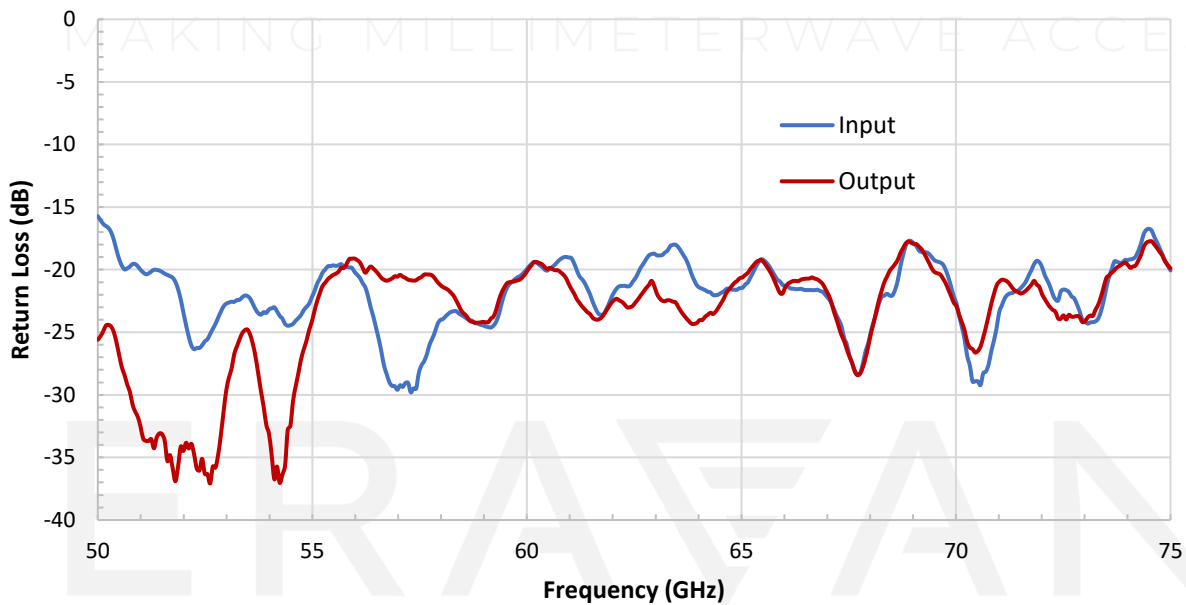


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Typical Performance vs. Frequency

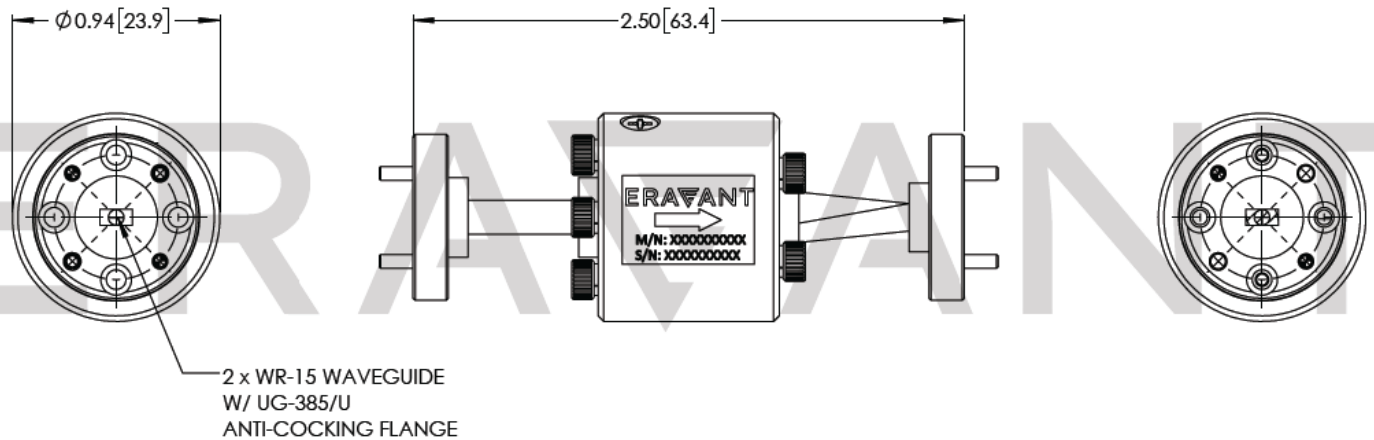


Typical Return Loss vs. Frequency



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



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NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- The model with orthogonal input and output ports is offered under model number STF-15-91.
- The compact version is offered under model number STF-15-S1-C.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- This device is sensitive to magnetic fields. Always keep magnet fields 6 inches away.
- Exceeding absolute maximum ratings will damage the device.

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