

## Isolator 2.4mm Female with 12 dB Isolation from 45 to 50 GHz Rated to 20 Watts



### FMIR1052

#### Features

- 45 to 50 GHz Frequency Range
- Max Forward Power 20 Watt CW
- Max Reverse Power 2 Watt CW
- Insertion Loss 1.3 dB
- VSWR < 1.8:1
- Isolation > 12 dB
- 2.4mm Female Connectors

#### Applications

- Radar Systems
- Military
- Wireless Radio Systems
- Telecom Infrastructure
- Communication Systems
- R&D Labs
- Microwave Radio Systems

#### Description

The FMIR1052 is a single junction isolator offering a forward power rating of 20 Watt and reverse power rating of 2 Watt CW over an operational frequency band of 45 to 50 GHz. This coaxial isolator uses 2.4mm female connectors on all ports and has a minimum of 12 dB isolation.

Fairview Microwave offers a wide variety of isolators to fit your needs. These are two-port devices that transmit microwave or radio frequency power in one direction only and block the signal in the opposite direction. They can be thought of as a diode for RF energy. Isolators are used to isolate equipment from the effects of conditions outside of the equipment. For instance they are used to prevent a microwave source being detuned by a mismatched load. Fairview Microwave's isolators feature excellent insertion loss, high isolation and reliability.

#### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	45		50	GHz
Impedance		50		Ohms
Insertion Loss		0.8	1.3	dB
Isolation	12	15		dB
VSWR		1.5:1	1.8:1	
Forward Power, CW			20	Watts
Reverse Power, CW			2	Watts

#### Electrical Specification Notes:

Due to the magnetic components in the Isolators,  
please keep it at least 0.2 inches away from magnetic materials during installation or placement.

#### Mechanical Specifications

##### Size

Length	1.46 in [37.08 mm]
Width	1.69 in [42.93 mm]
Height	0.79 in [20.07 mm]
Weight	0.2 lbs [90.72 g]
Body Material and Plating	Aluminum Alloy

##### Configuration

Design	Single Junction
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Direction	Clockwise
Package Style	Connectorized
Connector 1	2.4mm Female
Connector 2	2.4mm Female

Environmental Specifications

Temperature

Operating Range	-20 to +70 deg C
Storage Range	-40 to +85 deg C
Humidity	100% RH at 35°c, 95%RH at 40°c
Shock	20G for 11msc half sin wave,3 axis both directions
Vibration	25g rms (15 degree 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft. (Epoxy Seal Controlled environment)

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

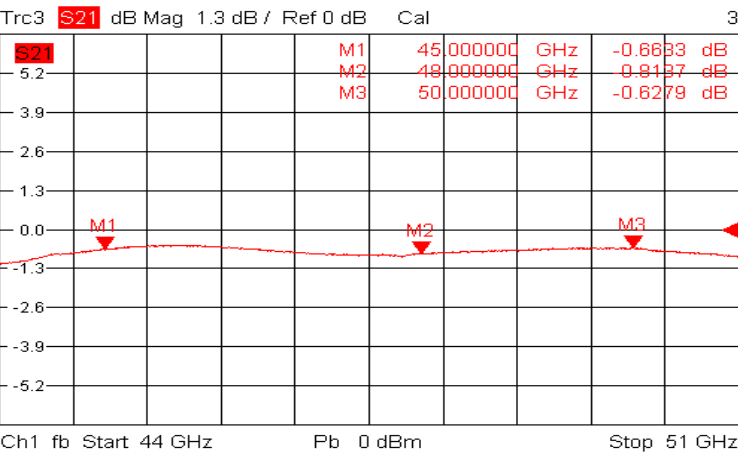
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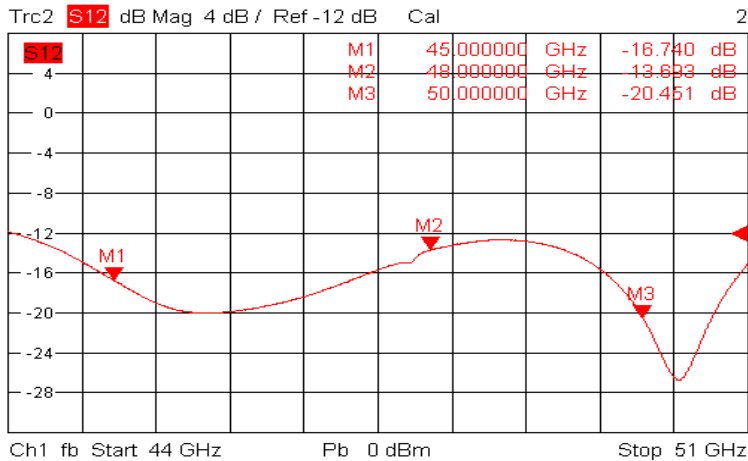


Typical Performance Data

Insertion Loss



Isolation

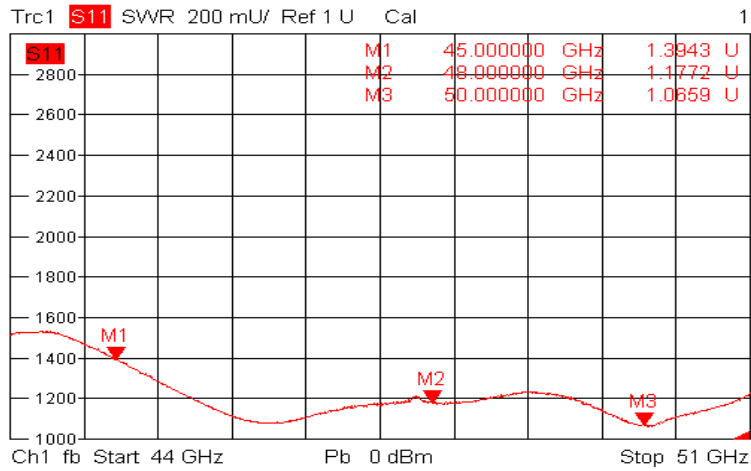


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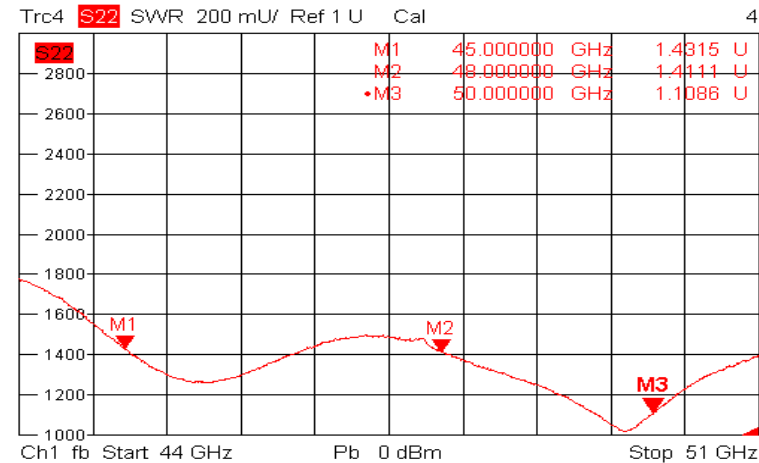


## FMIR1052

### VSWR 1



### VSWR 2



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Isolator 2.4mm Female with 12 dB Isolation from 45 to 50 GHz Rated to 20 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Isolator 2.4mm Female with 12 dB Isolation from 45 to 50 GHz Rated to 20 Watts FMIR1052](https://www.fairviewmicrowave.com/isolator-2.4mm-female-12db-isolation-50-ghz-20-watts-fmir1052-p.aspx)

URL: <https://www.fairviewmicrowave.com/isolator-2.4mm-female-12db-isolation-50-ghz-20-watts-fmir1052-p.aspx>

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