

Isolator 2.4mm Female with 14 dB Isolation from 40 to 45 GHz Rated to 20 Watts

FMIR1055



Features

- 40 to 45 GHz Frequency Range
- Max Forward Power 20 Watt CW
- Max Reverse Power 1 Watt CW
- Insertion Loss 1.6 dB
- VSWR < 1.6:1
- Isolation > 14 dB
- 2.4mm Female Connectors

Applications

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

Description

The FMIR1055 is a single junction isolator offering a forward power rating of 20 Watt and reverse power rating of 1 Watt CW over an operational frequency band of 40 to 45 GHz. This coaxial isolator uses 2.4mm female connectors on all ports and has a minimum of 14 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	40		45	GHz
Impedance		50		Ohms
Insertion Loss		0.8	1.6	dB
Isolation	14	16		dB
VSWR		1.5:1	1.6:1	
Forward Power, CW			20	Watts
Reverse Power, CW			1	Watt

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	0.19 lbs [86.18 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:

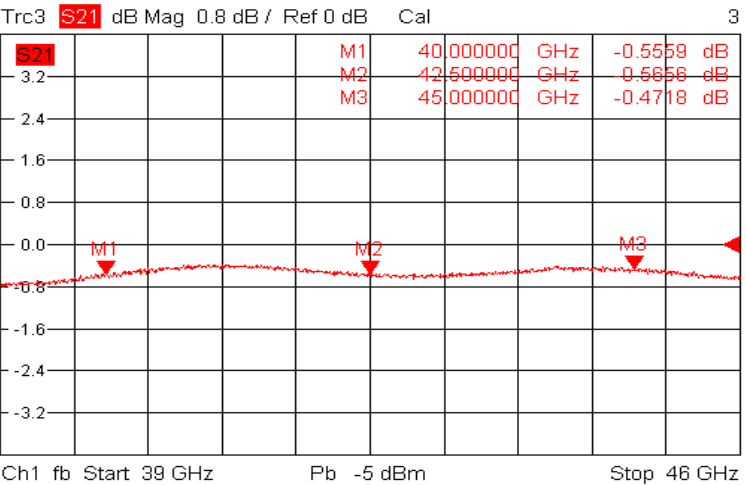
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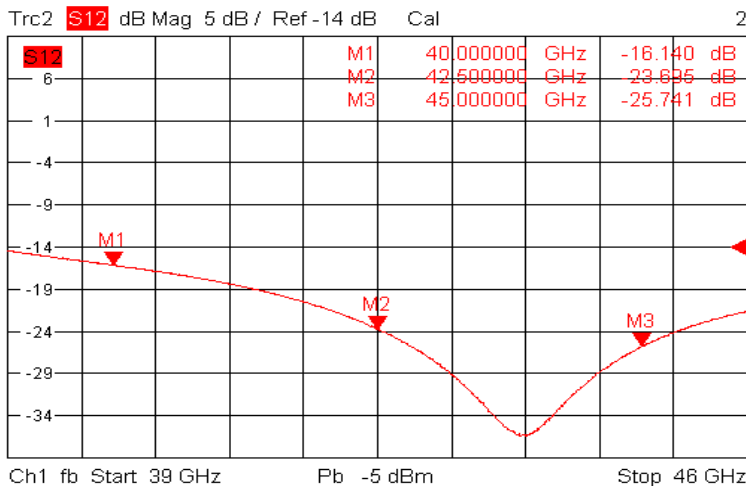


Typical Performance Data

Insertion Loss



Isolation

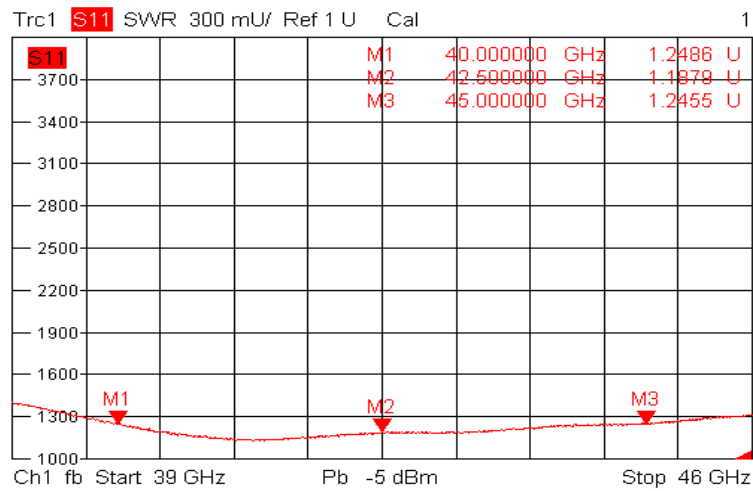


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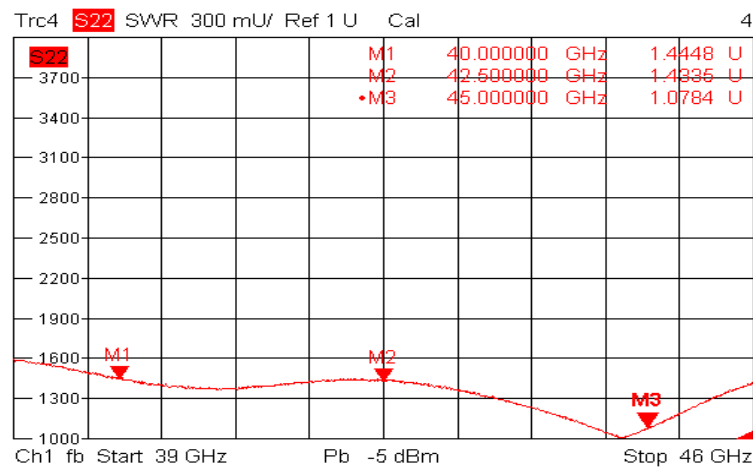


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VSWR 1



VSWR 2



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Isolator 2.4mm Female with 14 dB Isolation from 40 to 45 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 14 dB Isolation from 40 to 45 GHz Rated to 20 Watts FMIR1055](https://www.fairviewmicrowave.com/isolator-2.4mm-female-14db-isolation-45-ghz-20-watts-fmir1055-p.aspx)

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The information contained within this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume liability arising out of the use of any part or document.

FMIR1055 CAD Drawing

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