

Dual Junction Circulator SMA Female With 40 dB Isolation From 7 GHz to 12.4 GHz Rated to 5 Watts

The FMCR1021 is a dual junction circulator offering 40 dB minimum dual isolation over a frequency band of 7 to 12.4 GHz. This coaxial part uses SMA female connectors on all ports and has a power rating of 5 watts in the forward and reverse direction.

Fairview offers a wide variety of circulators to fit your needs. These unique devices enable two signals to use a single channel. The classic use of a circulator (a three port device) is for the line/coax between the antenna and a transceiver, allowing the signal to come from the antenna to the receiver while the transmit signal goes from the transmitter to the antenna. As a dual junction device, this is essentially two circulators in one package and has four ports. This allows for roughly twice the isolation of a standard circulator. By terminating one of the four ports (using a 50 ohm load), it becomes a three port device and can be connected as a standard circulator. An isolator can be created by terminating another port, creating a two port device. These devices can be used in antenna transmitting and receiving, radar, amplifier systems and anything that requires isolation from a signal reflection and the ability to send signals in opposite directions down a single channel. These circulators feature excellent insertion loss, high isolation and reliability.



Features:

- High Isolation of 40 dB Dual Junction
- Frequency Range of 7 to 12.4 GHz
- Female SMA Connectors
- VSWR of 1.3:1
- Forward and Reverse Power of 5 watts

Applications:

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

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	7		12.4	GHz
Impedance		50		Ohms
Insertion Loss			1.2	dB
Dual Junction Isolation (ports 2-1, 4-3)	40			dB
Single Junction Isolation (ports 1-4, 3-2)		18		dB
VSWR			1.3:1	
Forward Power, CW			5	Watts
Forward Power, Peak			20	Watts
Reverse Power, CW			5	Watts

Electrical Specification Notes:
 Values at 25°C, sea level.

Mechanical Specifications

Size	
Length	1 in [25.4 mm]
Width	0.38 in [9.65 mm]
Height	0.56 in [14.22 mm]
Weight	0.0565 lbs [25.63 g]

Configuration

Design	Dual Junction
Package Style	Connectorized
Connector 1	SMA Female
Connector 2	SMA Female
Connector 3	SMA Female

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Connector 4

SMA Female

Environmental Specifications

Temperature

Operating Range 0 to +50 deg C

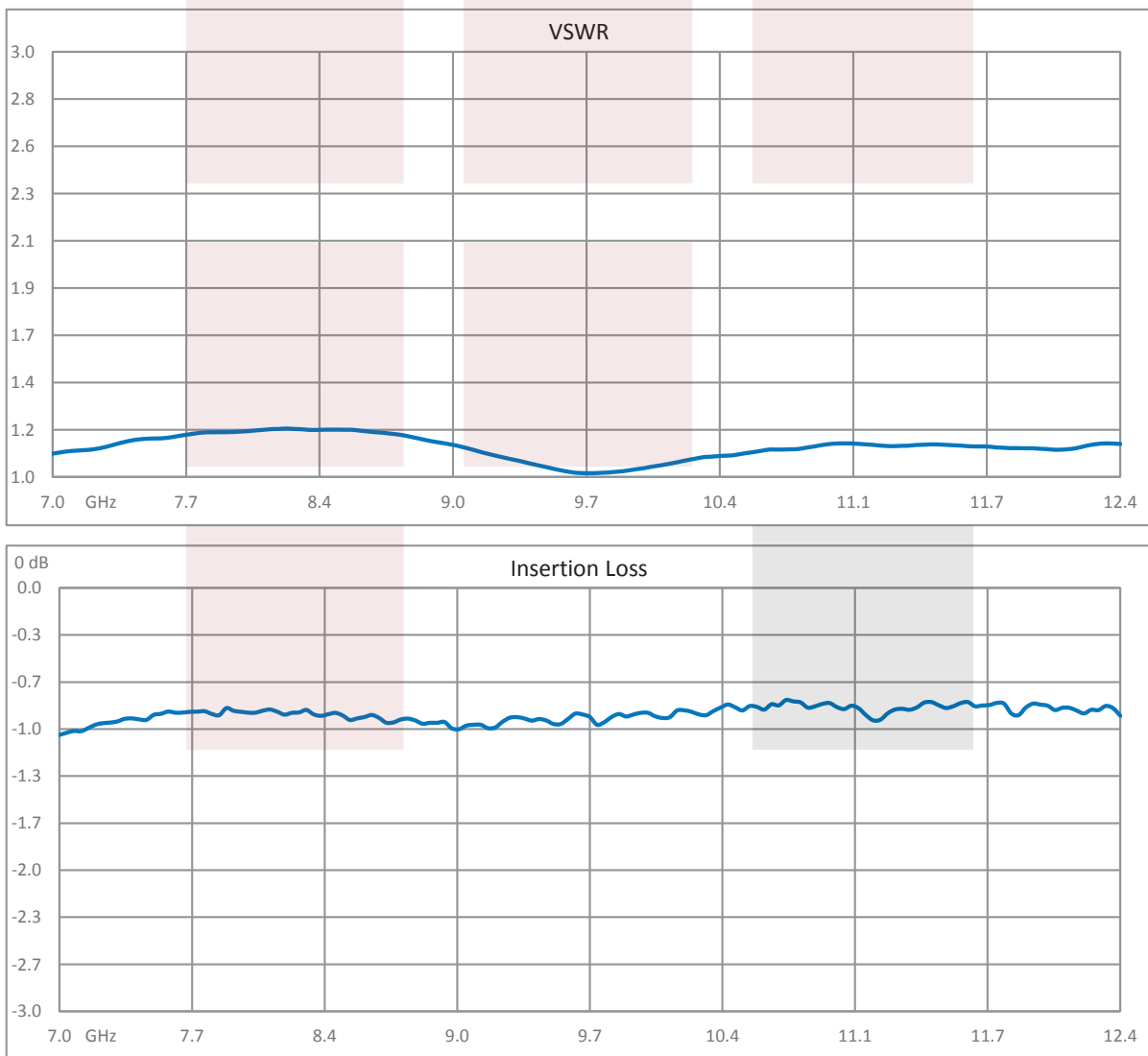
Compliance Certifications (see [product page](#) for current document)

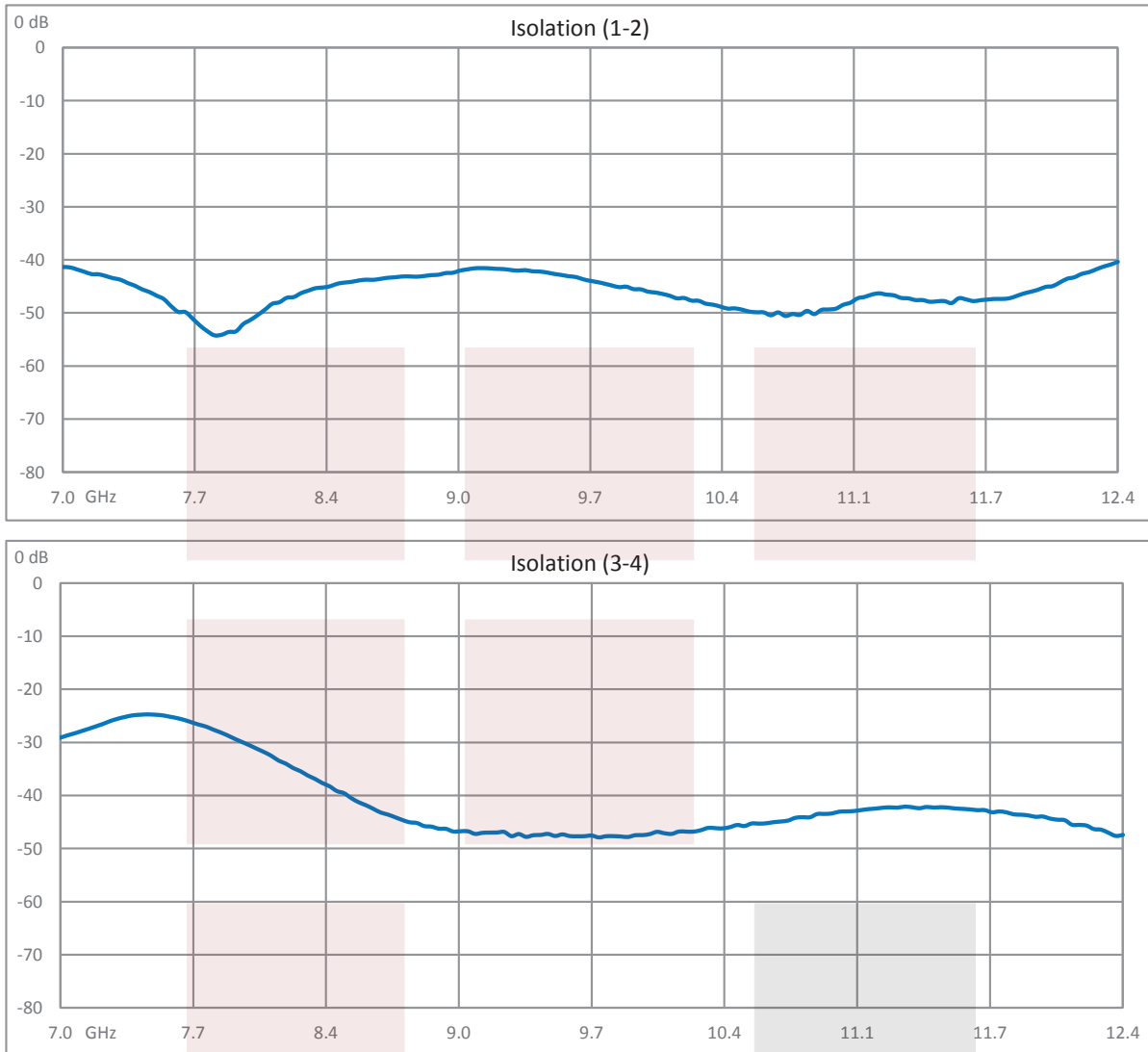
Plotted and Other Data

Notes:

- Values at 25°C, sea level.

Typical Performance Data



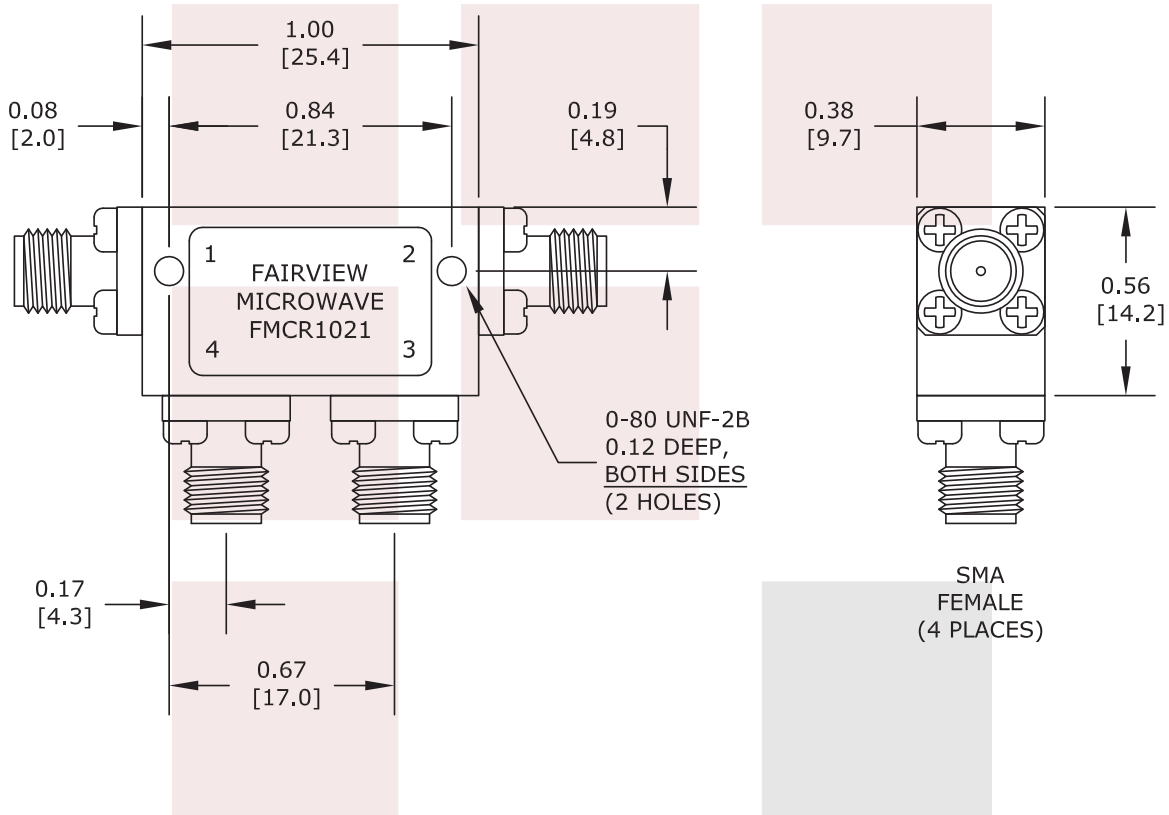


Dual Junction Circulator SMA Female With 40 dB Isolation From 7 GHz to 12.4 GHz Rated to 5 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Dual Junction Circulator SMA Female With 40 dB Isolation From 7 GHz to 12.4 GHz Rated to 5 Watts FMCR1021](#)

URL: <https://www.fairviewmicrowave.com/sma-female-dual-junction-circulator-40db-isolation-12.4-ghz-5-watts-fm-cr1021-p.aspx>

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

FRACTIONS	DECIMALS	ANGLES
± 1/64	.XX ± .03	± 1°
	.XXX ± .010	

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NOTES:
 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
 3. DIMENSIONS ARE IN INCHES [mm].

TITLE Dual Junction Circulator SMA Female With 40 dB Isolation From 7 GHz to 12.4 GHz Rated to 5 Watts		DWG NO FMCR1021		CAGE CODE 3FKR5	
CAD FILE	110216	SHEET	SCALE	N/A	SIZE A 2233