

Dual Junction Circulator SMA Female with 36 dB Isolation from 2 GHz to 4 GHz Rated to 50 Watts

The FMCR1017 is a dual junction circulator offering 36 dB minimum dual junction isolation over a frequency band of 2 to 4 GHz. This coaxial part uses SMA female connectors on all ports and has a power rating of 50 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.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	2		4	GHz
Insertion Loss			1	dB
Dual Junction Isolation (ports 2-1, 4-3)	36			dB
Single Junction Isolation (ports 1-4, 3-2)		15		dB
VSWR			1.3:1	
Forward Power, CW			50	Watts
Reverse Power, CW			50	Watts

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

Mechanical Specifications

Size	
Length	3.2 in [81.28 mm]
Width	0.6 in [15.24 mm]
Height	1.6 in [40.64 mm]
Weight	0.3715 lbs [168.51 g]

Configuration

Design	Dual Junction
Package Style	Connectorized
Connector 1	SMA Female
Connector 2	SMA Female
Connector 3	SMA Female
Connector 4	SMA Female



Features:

- High Dual Junction Isolation of 36 dB
- Frequency Range of 2 to 4 GHz
- Female SMA Connectors
- VSWR of 1.3:1
- Forward and Reverse Power of 50 Watts

Applications:

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

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Environmental Specifications

Temperature

Operating Range 0 to +50 deg C

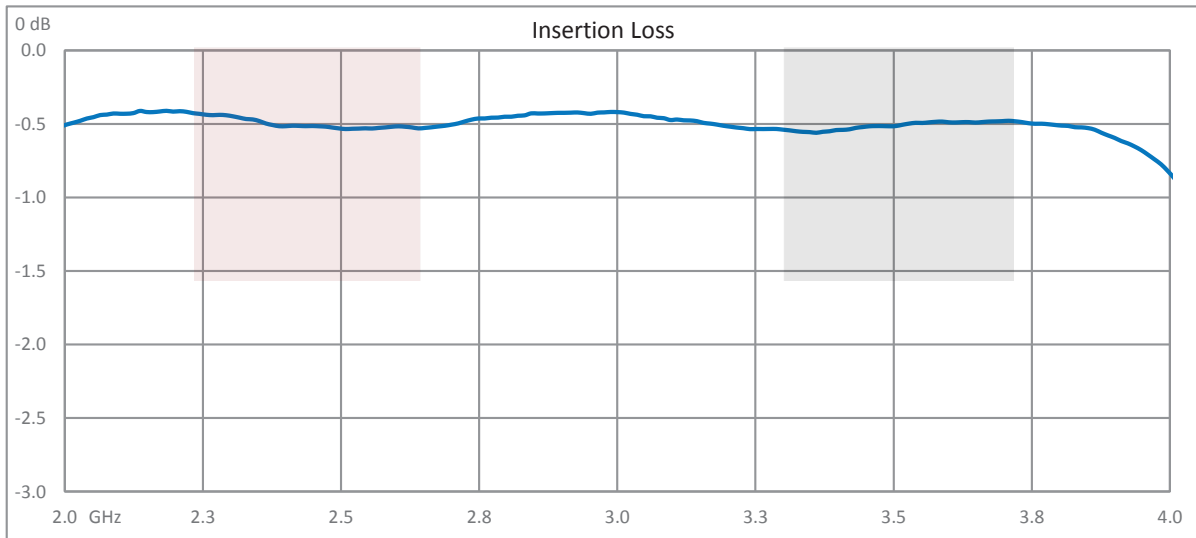
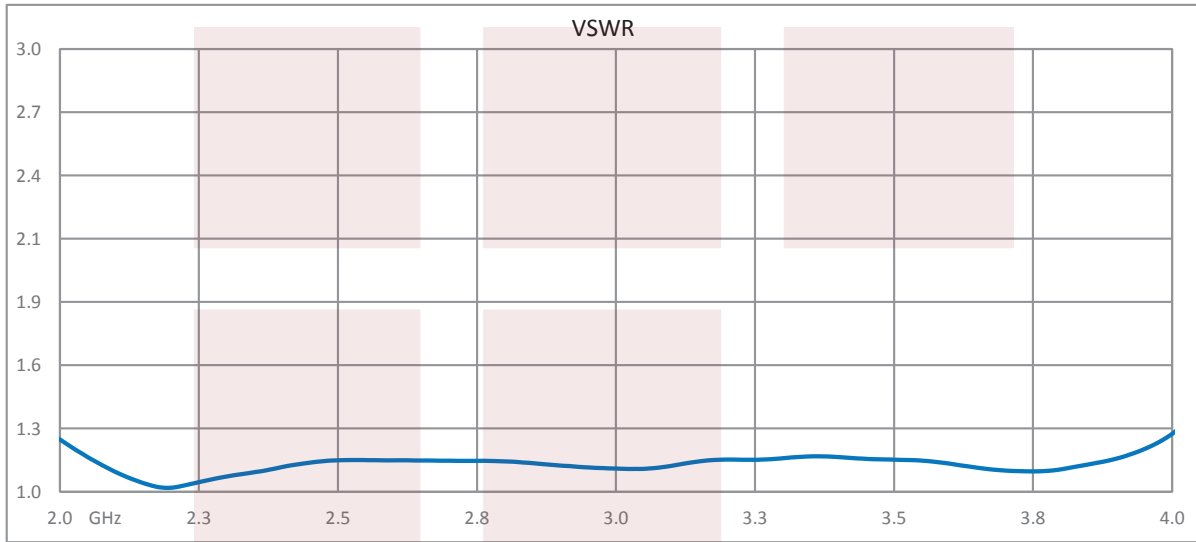
Compliance Certifications (see [product page](#) for current document)

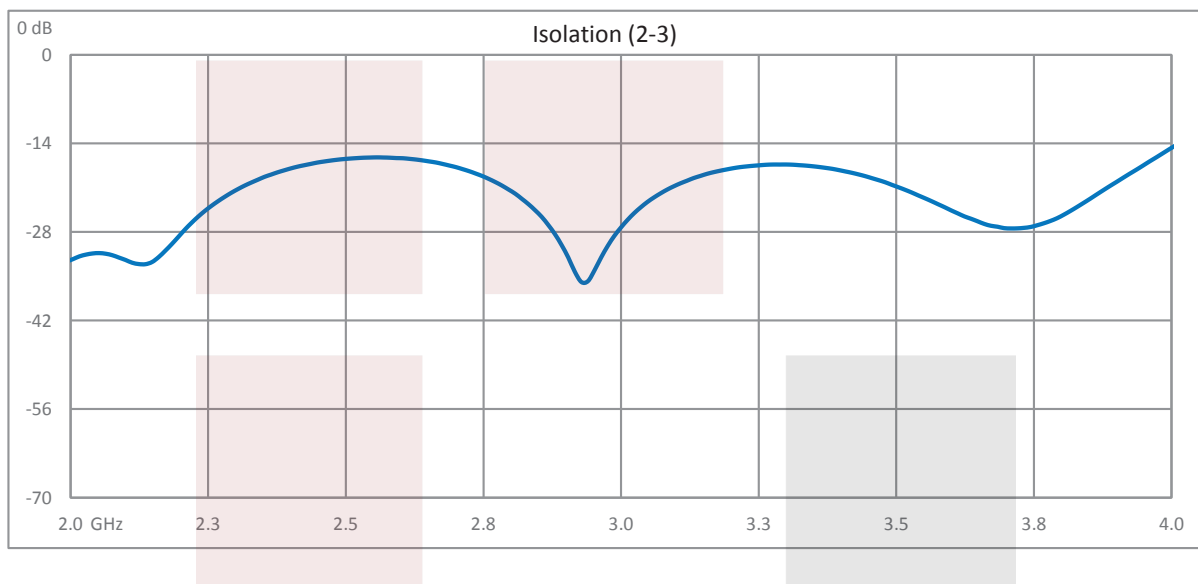
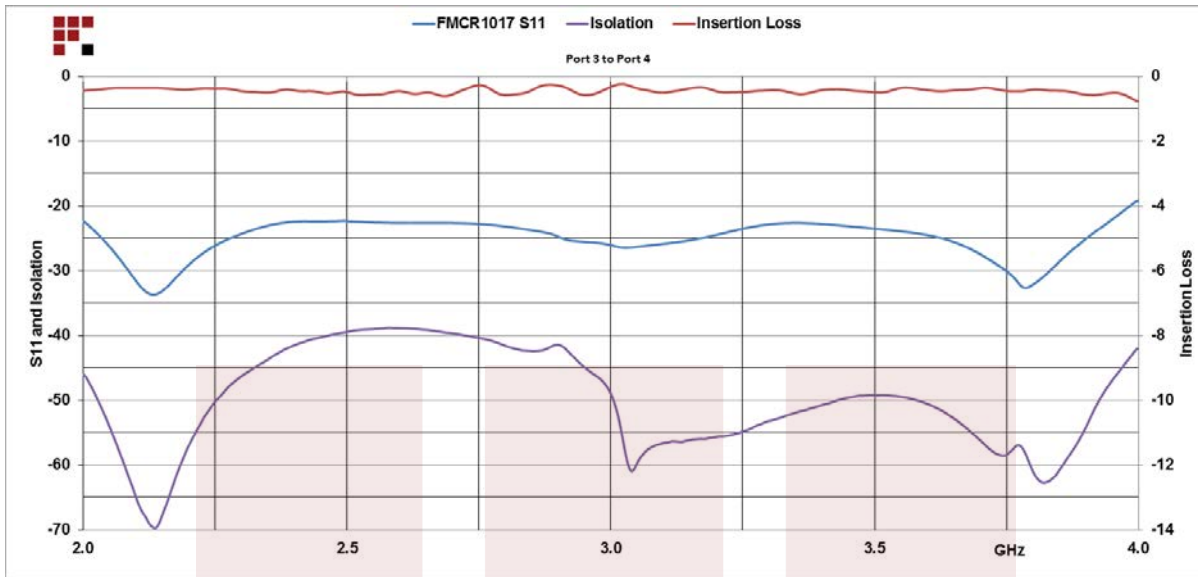
Plotted and Other Data

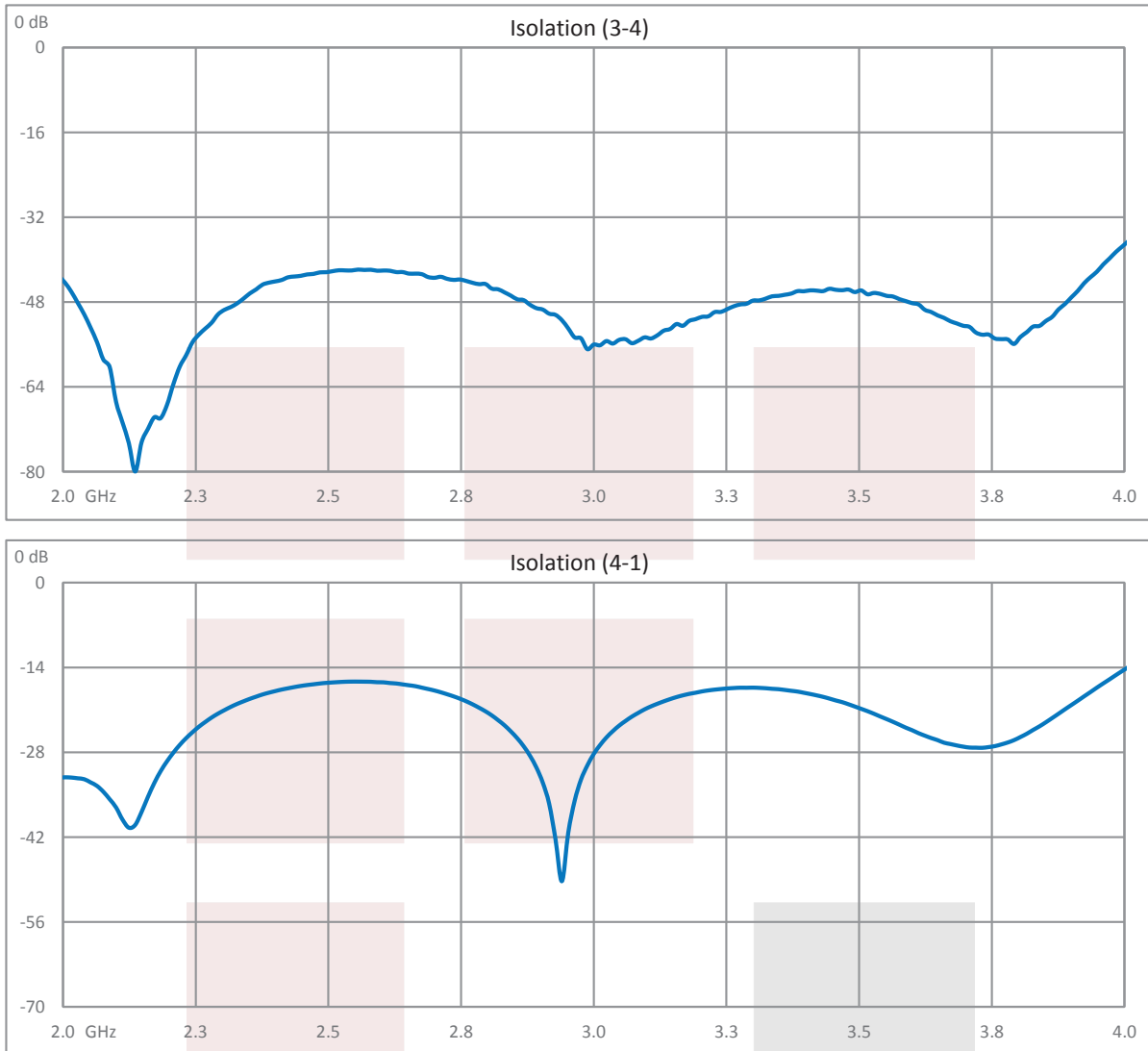
Notes:

- Values at 25°C, sea level.

Typical Performance Data





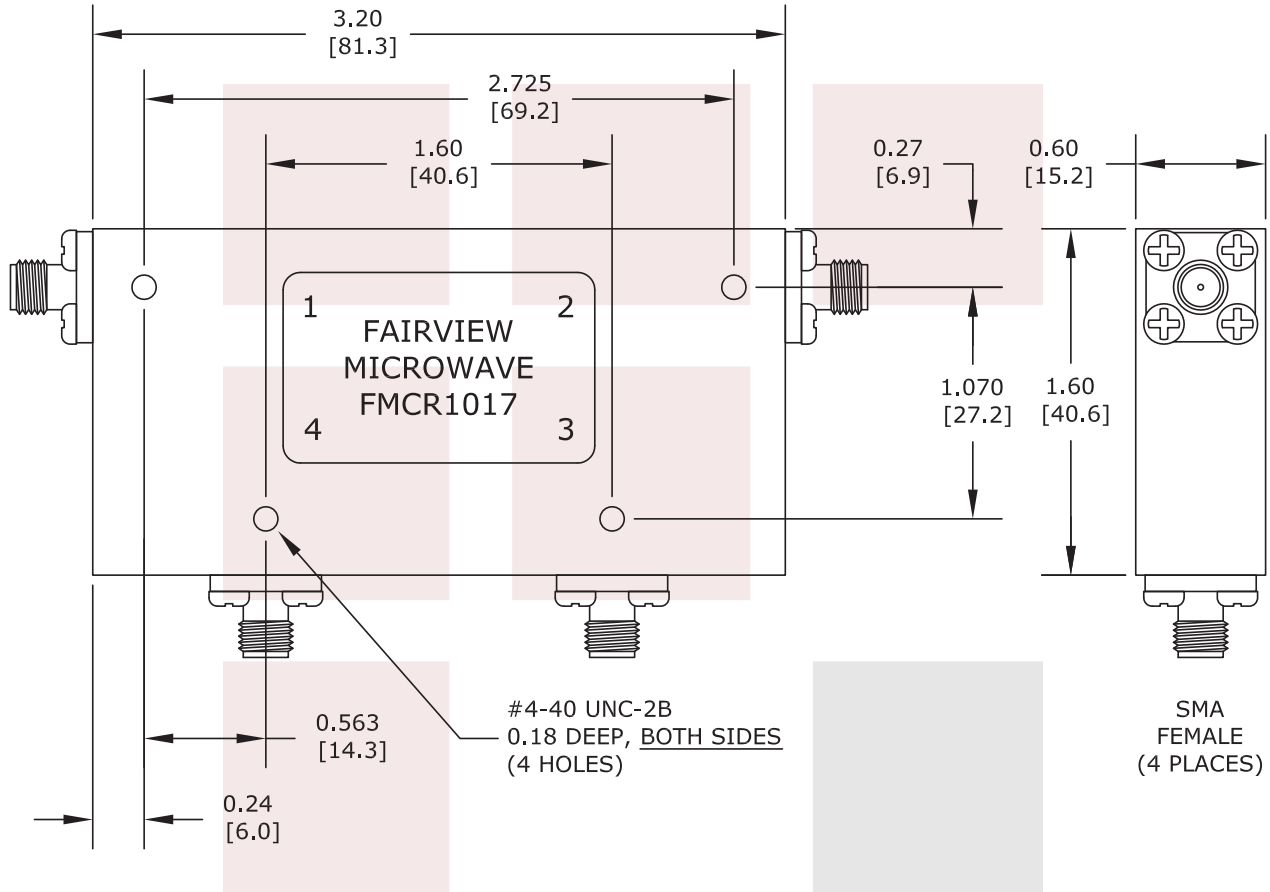


Dual Junction Circulator SMA Female with 36 dB Isolation from 2 GHz to 4 GHz Rated to 50 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Dual Junction Circulator SMA Female with 36 dB Isolation from 2 GHz to 4 GHz Rated to 50 Watts FMC1017](#)

URL: <https://www.fairviewmicrowave.com/dual-junction-circulator-sma-female-36db-isolation-4-ghz-50-watts-fm-cr1017-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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TITLE Dual Junction Circulator SMA Female with 36 dB Isolation from 2 GHz to 4 GHz Rated to 50 Watts		DWG NO FMCR1017		CAGE CODE 3FKR5	
CAD FILE	110216	SHEET	SCALE	N/A	SIZE A 2233