

Dual Junction Circulator SMA Female with 36 dB Isolation from 1 GHz to 2 GHz Rated to 50 Watts

The FMCR1013 is a dual junction circulator offering 36 dB minimum dual junction isolation over a frequency band of 1 to 2 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	1		2	GHz
Insertion Loss			1.2	dB
Dual Junction Isolation (ports 2-1, 4-3)	36			dB
Single Junction Isolation (ports 1-4, 3-2)		15		dB
VSWR			1.35:1	
Forward Power, CW			50	Watts
Reverse Power, CW			50	Watts

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

Mechanical Specifications

Size	
Length	5.96 in [151.38 mm]
Width	0.75 in [19.05 mm]
Height	2.98 in [75.69 mm]
Weight	1.2115 lbs [549.53 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 1 to 2 GHz
- Female SMA Connectors
- VSWR of 1.35:1
- 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 10 to +40 deg C

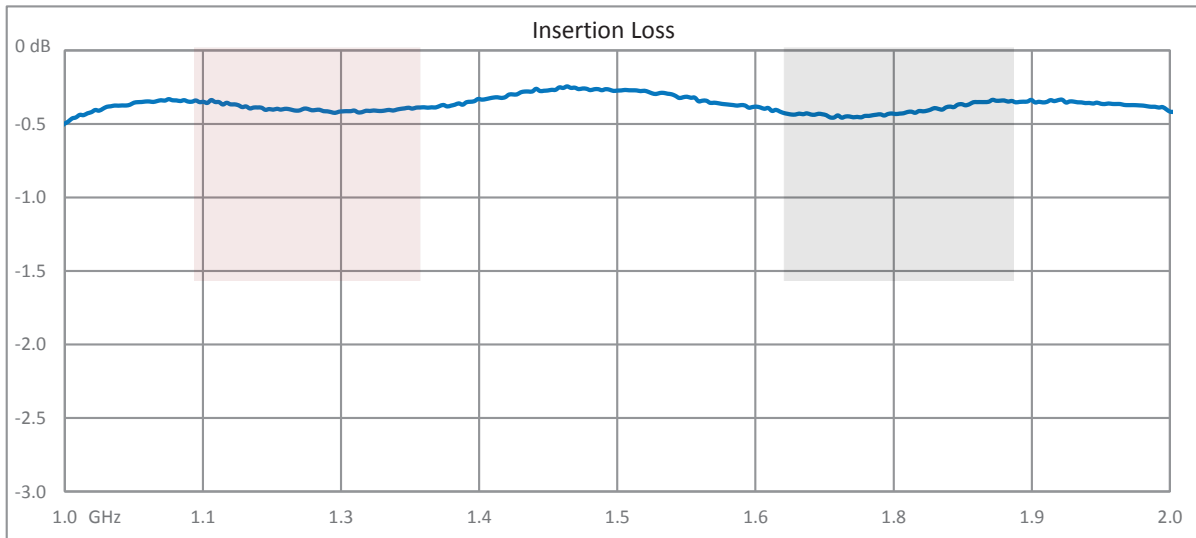
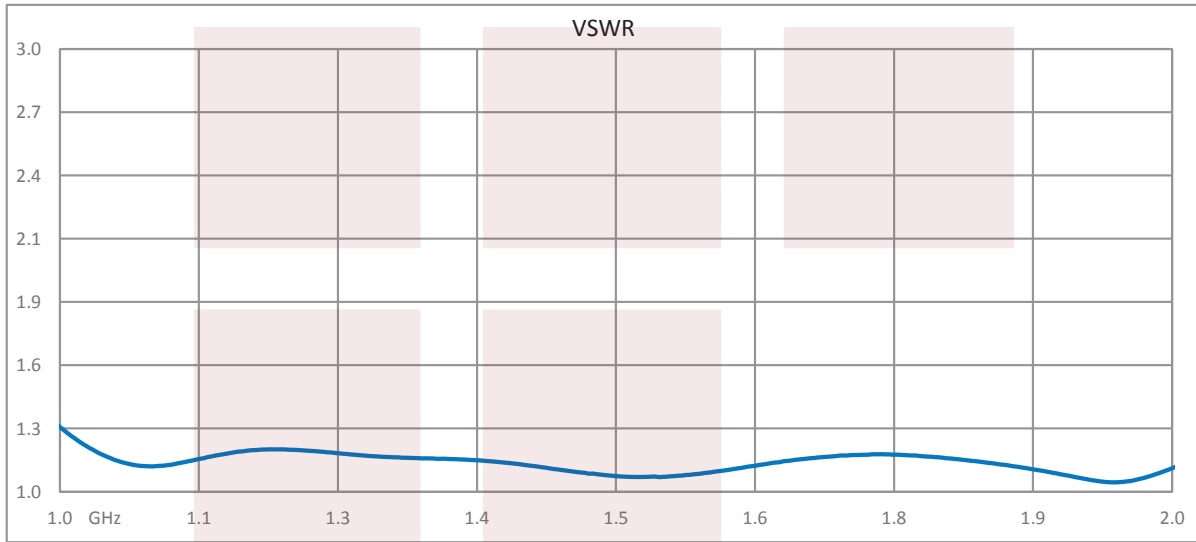
Compliance Certifications (see [product page](#) for current document)

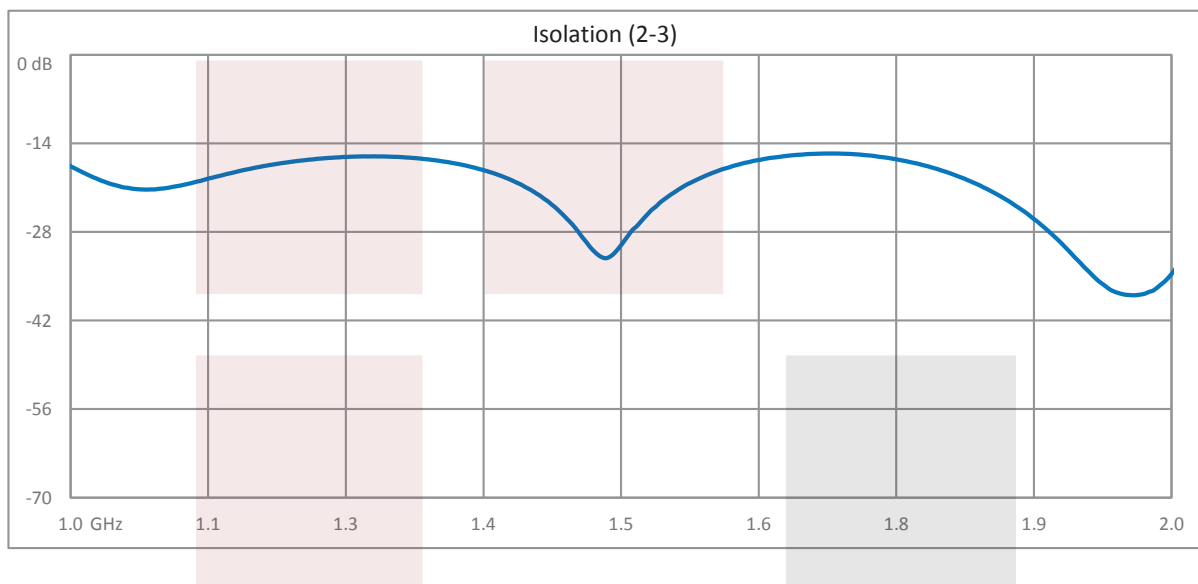
Plotted and Other Data

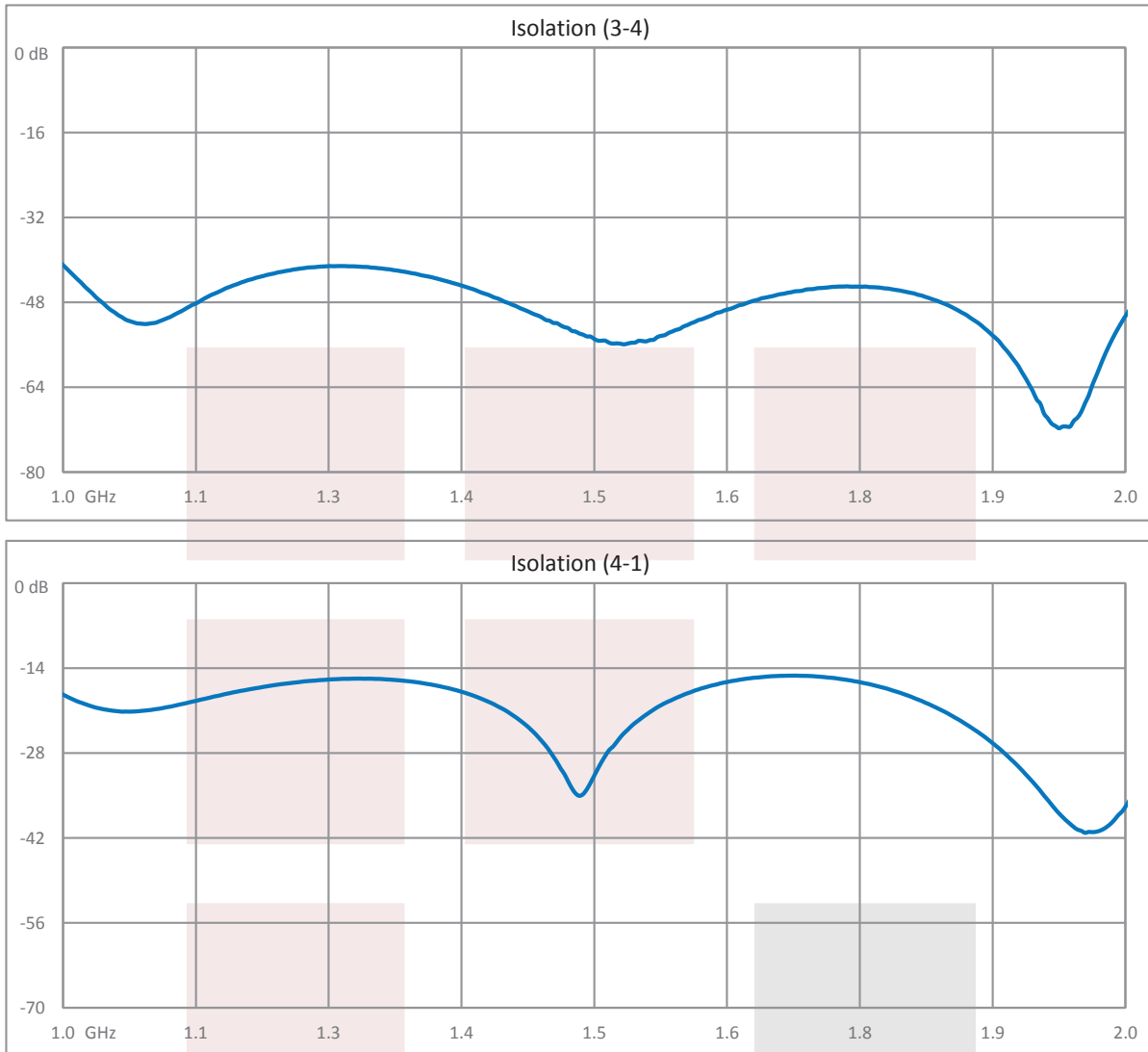
Notes:

- Values at 25°C, sea level.

Typical Performance Data





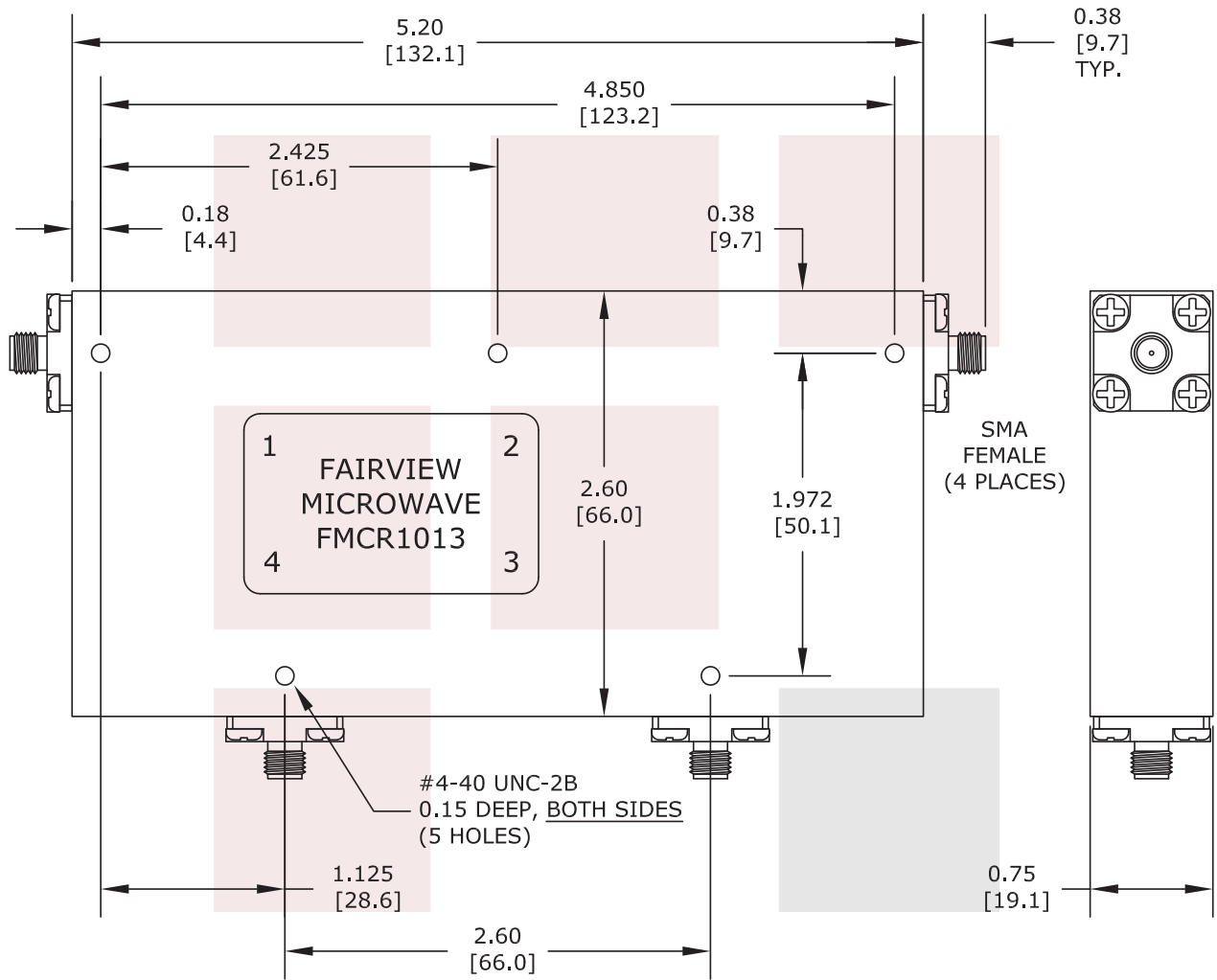


Dual Junction Circulator SMA Female with 36 dB Isolation from 1 GHz to 2 GHz Rated to 50 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave 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 1 GHz to 2 GHz Rated to 50 Watts FMCR1013](https://www.fairviewmicrowave.com/dual-junction-circulator-sma-female-36db-isolation-2-ghz-50-watts-fm-cr1013)

URL: <https://www.fairviewmicrowave.com/dual-junction-circulator-sma-female-36db-isolation-2-ghz-50-watts-fm-cr1013-p.aspx>

The information contained in 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 any liability arising out of the use of any part or documentation.



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	DWG NO		CAGE CODE		
Dual Junction Circulator SMA Female with 36 dB Isolation from 1 GHz to 2 GHz Rated to 50 Watts	FMC R1013		3FKR5		
	CAD FILE	110216	SHEET	SCALE	N/A
			SIZE	A	2233