

## Dual Junction Circulator SMA Female With 32 dB Isolation From 8 GHz to 18 GHz Rated to 5 Watts

The FMC1023 is a dual junction circulator offering 32 dB minimum isolation over a frequency band of 8 to 18 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.

### Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	8		18	GHz
Impedance		50		Ohms
Insertion Loss			1.4	dB
Dual Junction Isolation (ports 2-1, 4-3)	32			dB
Single Junction Isolation (ports 1-4, 3-2)		16		dB
VSWR			1.45:1	
Forward Power, CW			5	Watts
Forward Power, Peak			30	Watts
Reverse Power, CW			5	Watts

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

### Mechanical Specifications

<b>Size</b>	
Length	1 in [25.4 mm]
Width	0.56 in [14.22 mm]
Height	0.68 in [17.27 mm]
Weight	0.0785 lbs [35.61 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 Isolation of 32 dB
- Frequency Range of 8 to 18 GHz
- Female SMA Connectors
- VSWR of 1.45:1
- Forward and Reverse Power of 5 watts

### Applications:

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

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**Environmental Specifications**

**Temperature**

Operating Range 0 to +70 deg C

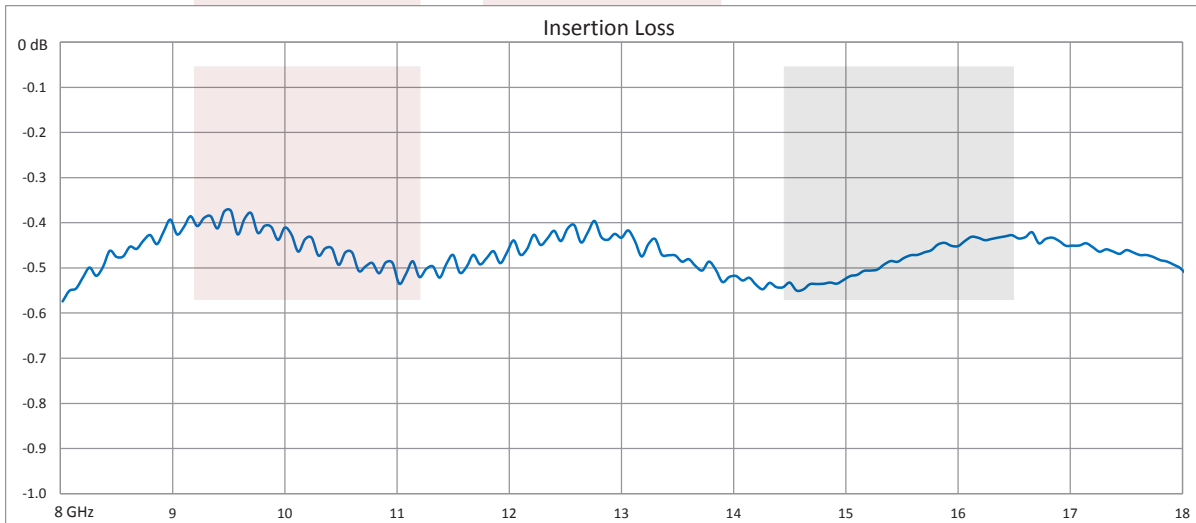
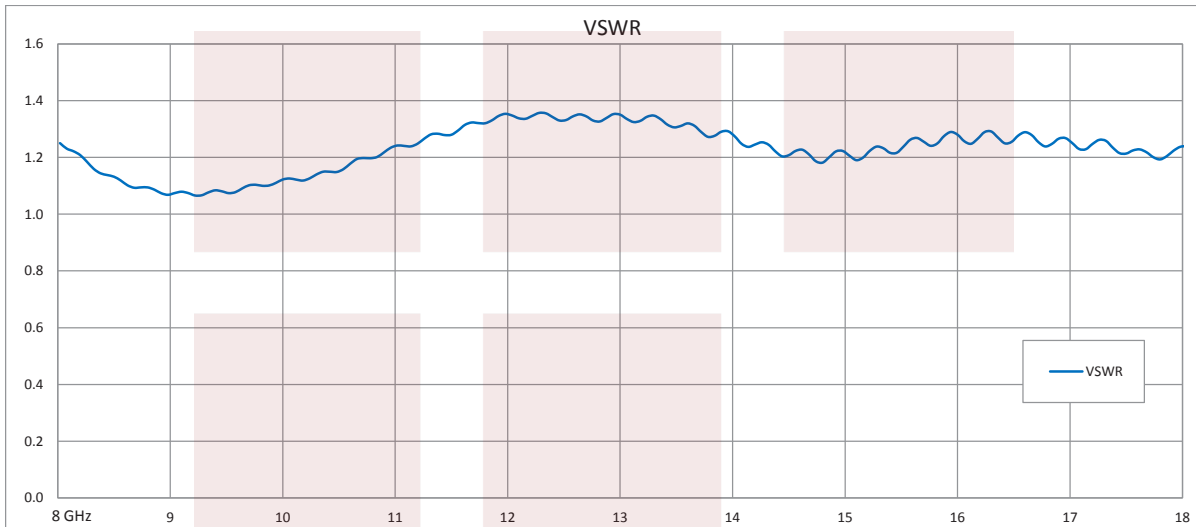
**Compliance Certifications** (see [product page](#) for current document)

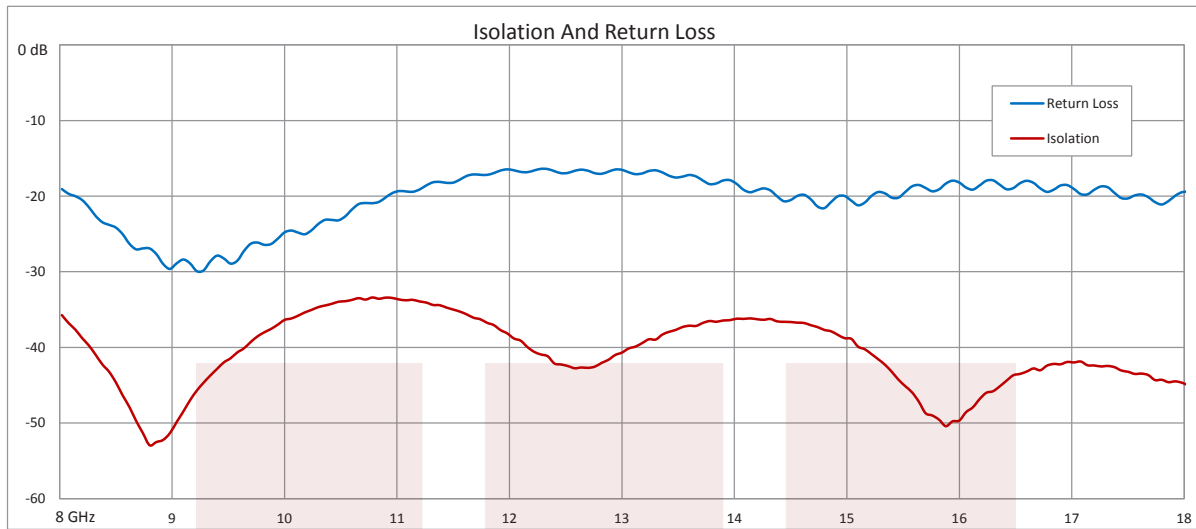
**Plotted and Other Data**

Notes:

- Values at 25°C, sea level.

**Typical Performance Data**



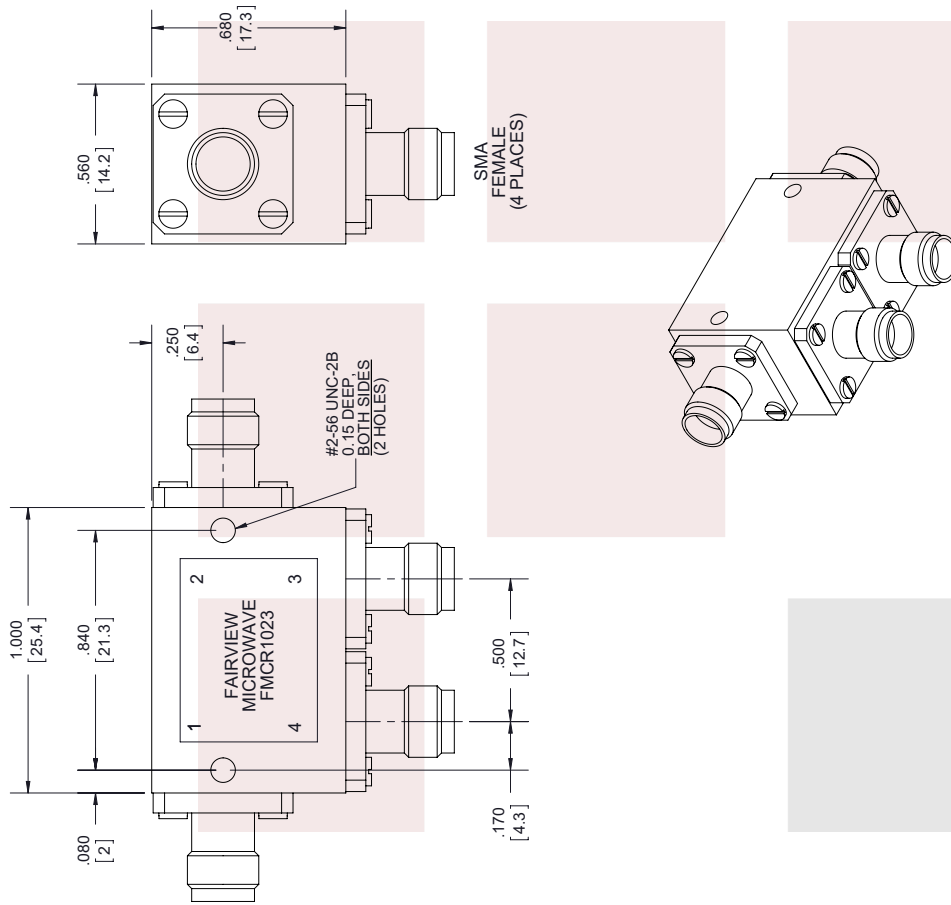


Dual Junction Circulator SMA Female With 32 dB Isolation From 8 GHz to 18 GHz Rated to 5 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Dual Junction Circulator SMA Female With 32 dB Isolation From 8 GHz to 18 GHz Rated to 5 Watts FMCR1023](#)

URL: <https://www.fairviewmicrowave.com/sma-female-dual-junction-circulator-32db-isolation-18-ghz-5-watts-fm-cr1023-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.



**STANDARD TOLERANCES**  
.X ±0.2  
.XX ±0.01  
.XXX ±0.005

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

<b>FAIRVIEW MICROWAVE INC.</b> ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM TITLE		DWG NO <b>FMCR1023</b>		CAGE CODE <b>3FKR5</b>	
		CAD FILE 073117	SHEET 1 OF 1	SCALE N/A	SIZE A

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].

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