

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

The FMCR1022 is a dual junction circulator offering 40 dB minimum isolation over a frequency band of 7 to 12.4 GHz. This coaxial part uses N 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
- Frequency Range of 7 to 12.4 GHz
- Female N Connectors
- VSWR of 1.25:1
- 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
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			1.25:1	
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

<b>Size</b>	
Length	1.7 in [43.18 mm]
Width	0.75 in [19.05 mm]
Height	1 in [25.4 mm]
Weight	0.2685 lbs [121.79 g]

### Configuration

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

Fairview Microwave  
 1130 Junction Dr. #100  
 Allen, TX 75013  
 Tel: 1-800-715-4396 / (972) 649-6678  
 Fax: (972) 649-6689  
[www.fairviewmicrowave.com](http://www.fairviewmicrowave.com)  
[sales@fairviewmicrowave.com](mailto:sales@fairviewmicrowave.com)

**Environmental Specifications**

**Temperature**

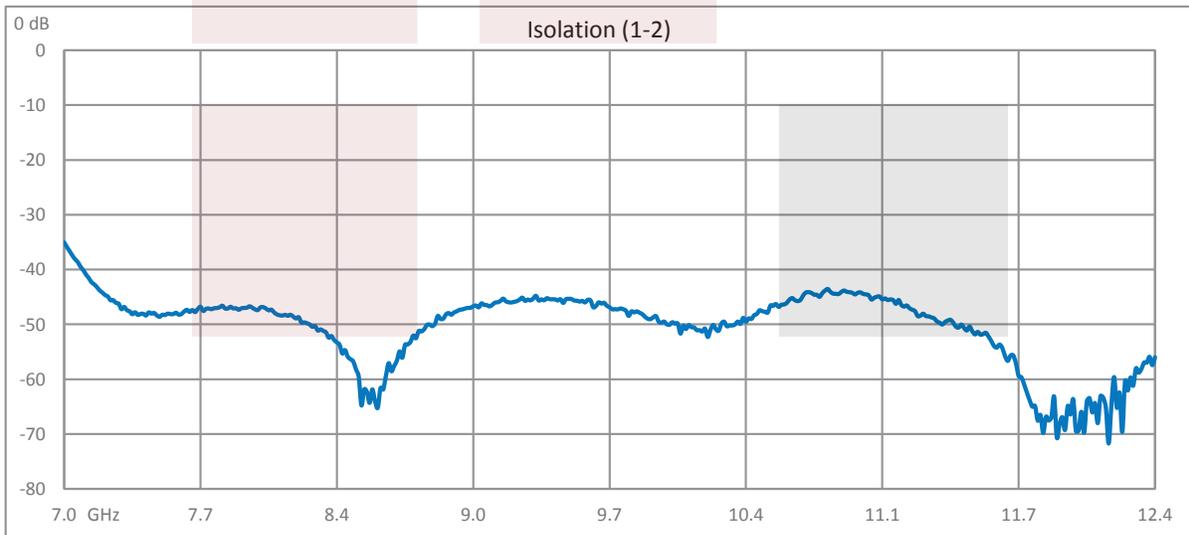
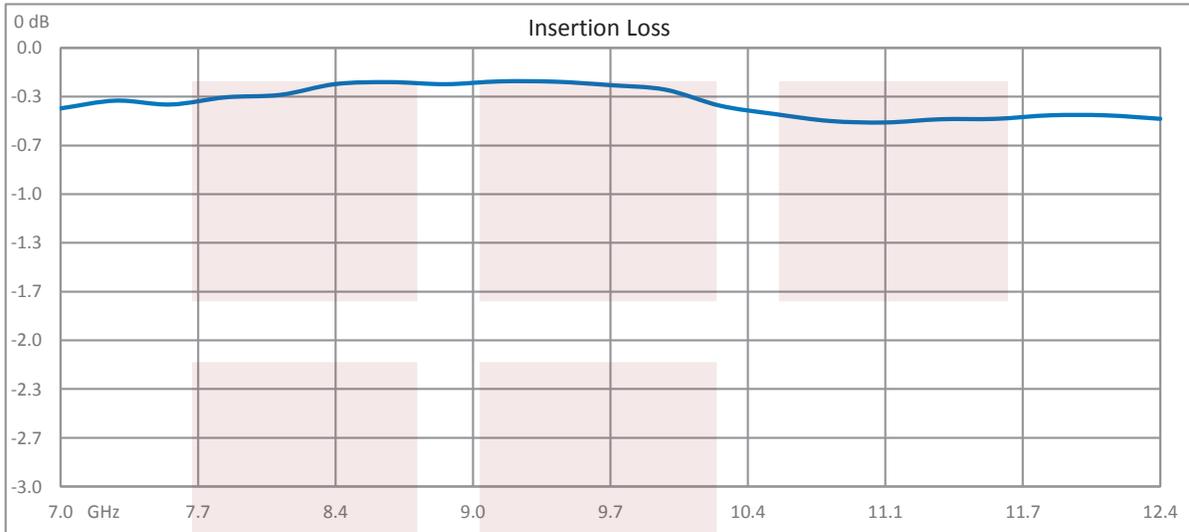
Operating Range 0 to +50 deg C

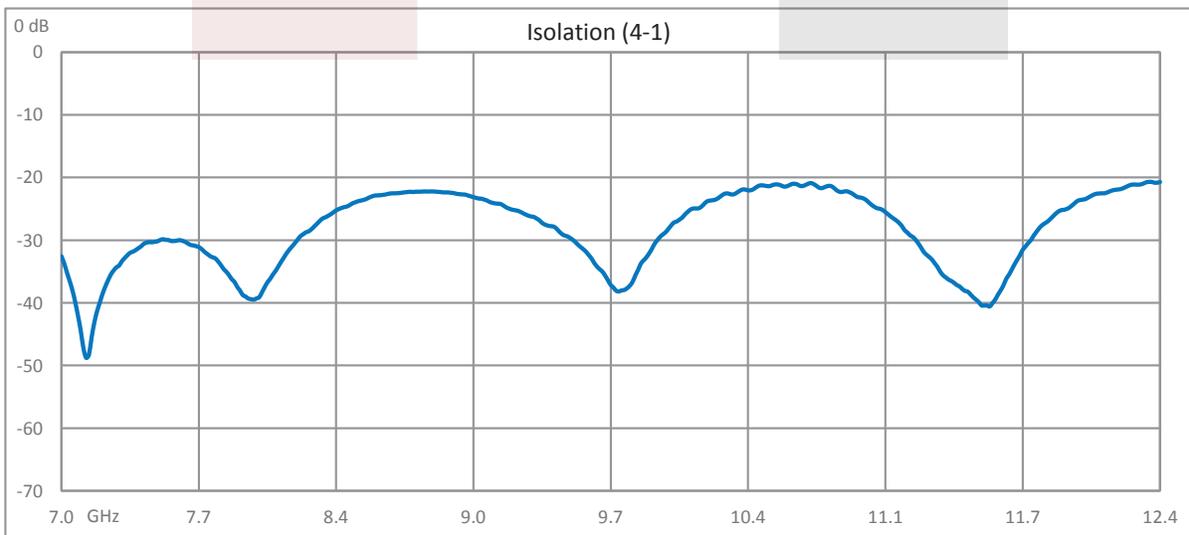
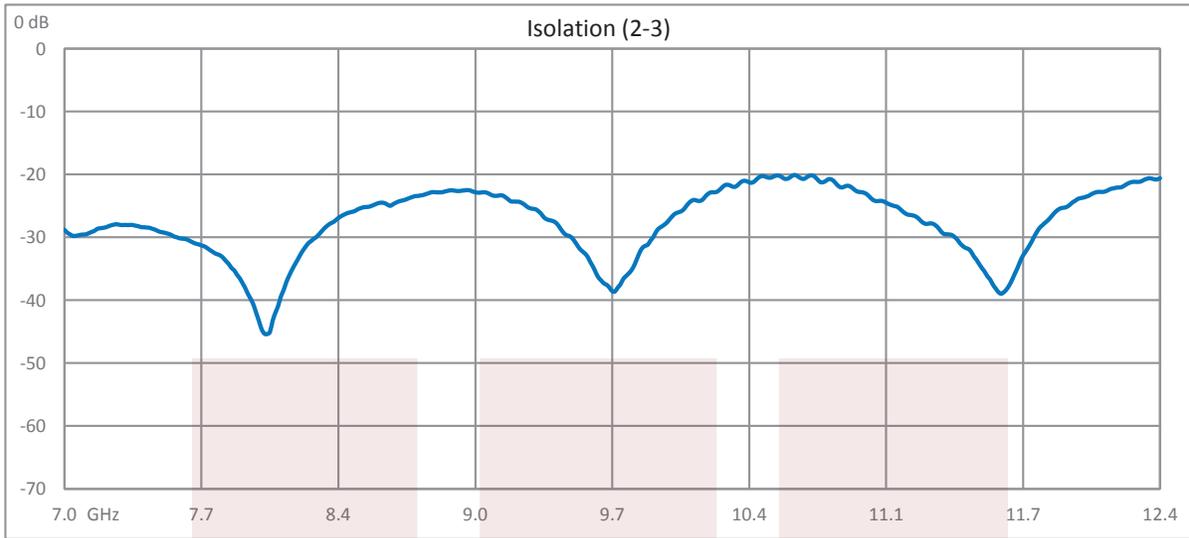
**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

- Values at 25°C, sea level.



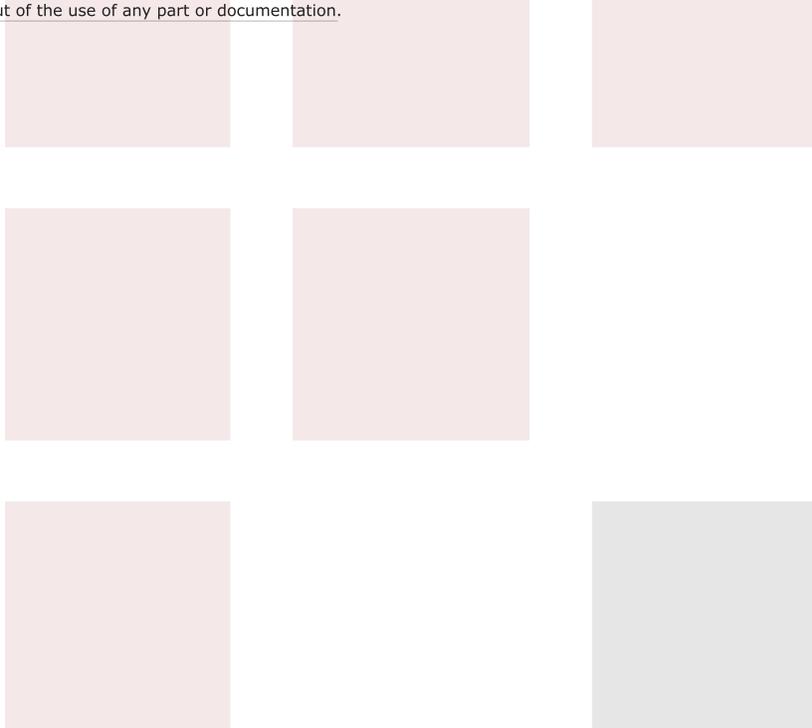


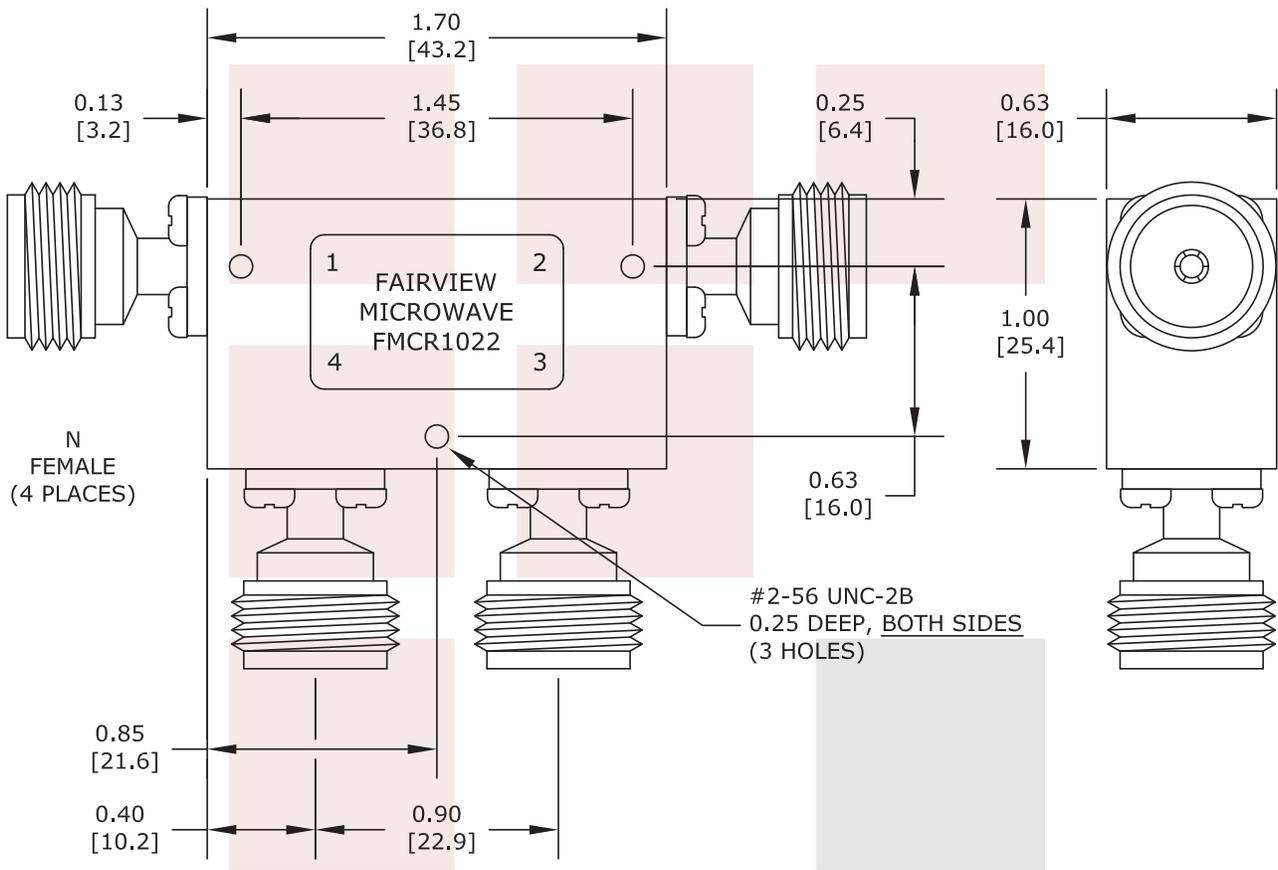
Dual Junction Circulator N Female With 40 dB Isolation From 7 GHz to 12.4 GHz Rated to 5 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave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

For additional information on this product, please click the following link: [Dual Junction Circulator N Female With 40 dB Isolation From 7 GHz to 12.4 GHz Rated to 5 Watts FMCR1022](#)

URL: <https://www.fairviewmicrowave.com/dual-junction-circulator-n-female-40db-isolation-12.4-ghz-5-watts-fmcr1022-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	

**FAIRVIEW MICROWAVE INC.**  
 ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM

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 N Female With 40 dB Isolation From 7 GHz to 12.4 GHz Rated to 5 Watts		DWG NO FMCR1022		CAGE CODE 3FKR5	
CAD FILE	110216	SHEET	SCALE	N/A	SIZE A 2233