

## Circulator N Female and SMA Female with 19 dB Isolation from 4 to 8 GHz Rated to 80 Watts



### FMCR1040

#### Features

- Forward Power 80 watts
- Wide-Band Operating Frequency Range of 4 to 8 GHz
- SMA and N-Type Female Connectors (Between Series)
- Low VSWR of 1.3:1 Max
- Low Insertion Loss of 0.5 dB
- Good Isolation Performance of 19 dB Minimum

#### Applications

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

#### Description

The FMCR1040 is a high power circulator offering a forward power rating of 80 Watts over an operational frequency band of 4 to 8 GHz. This coaxial part uses two N-Type and one SMA female connectors on the three ports and has a minimum of 19 dB of isolation.

Fairview Microwave offers a wide variety of circulators to fit your needs. These unique devices enable two signals to use one channel. The classic use of this three port device is for the line/coax between an antenna and a transceiver, allowing the receive signal to come from the antenna (port 1) to the receiver (port 2) while the transmit signal goes from the transmitter (port 3) to the antenna (port 1). An isolator can be created by terminating one port into a matched load. These components 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	4		8	GHz
Impedance		50		Ohms
Insertion Loss		0.45	0.5	dB
Isolation	19	19.5		dB
VSWR		1.28:1	1.3:1	
Forward Power, CW			80	Watts

#### Electrical Specification Notes:

Due to the magnetic components in the circulators, please keep it at least 0.2 inches away from magnetic materials during installation or placement.

#### Mechanical Specifications

##### Size

Length	1.02 in [25.91 mm]
Width	0.79 in [20.07 mm]
Height	0.55 in [13.97 mm]
Weight	0.13 lbs [58.97 g]
Body Material and Plating	Aluminum Alloy, Nickel

##### Configuration

Design	Single Junction
Direction	Clockwise

Circulator N Female and SMA Female with 19 dB  
Isolation from 4 to 8 GHz Rated to 80 Watts



FMCR1040

Package Style	Connectorized
Connector 1	N Female
Connector 2	N Female
Connector 3	SMA Female

Environmental Specifications

Temperature

Operating Range	-20 to +70 deg C
Storage Range	-40 to +85 deg C
Humidity	100% RH at 35c, 95%RH at 40°c
Shock	20G for 11msec half sine wave,3 axis both directions
Vibration	25gRMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)

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

Plotted and Other Data

Notes:

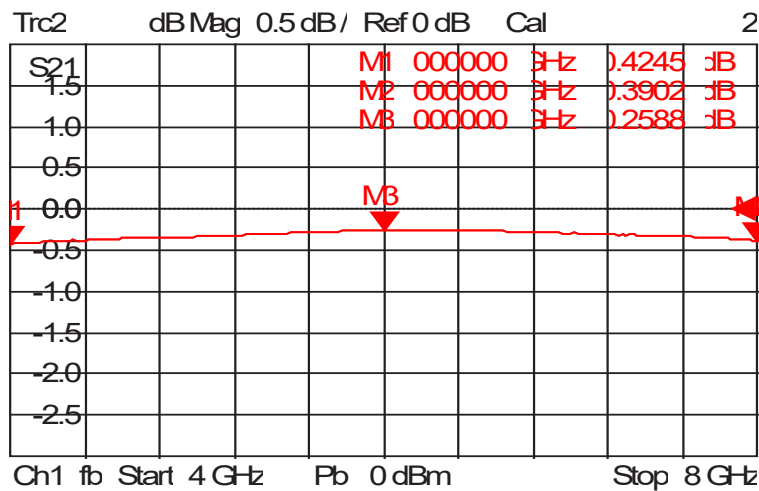
Circulator N Female and SMA Female with 19 dB  
Isolation from 4 to 8 GHz Rated to 80 Watts



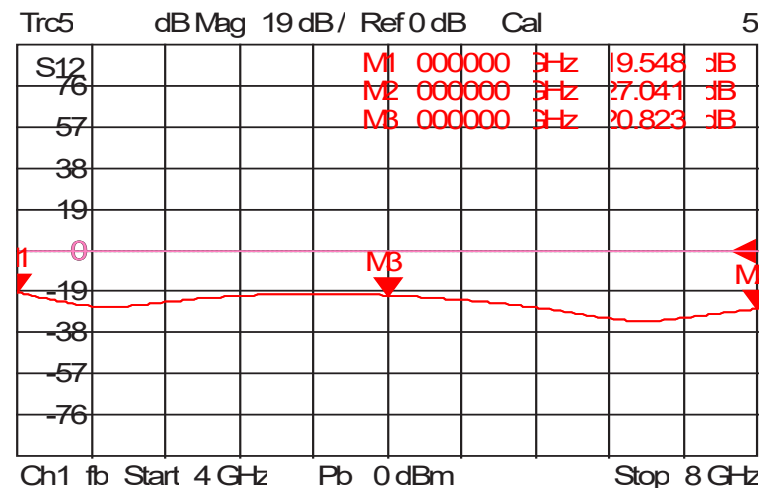
## FMCR1040

### Typical Performance Data

#### Insertion Loss

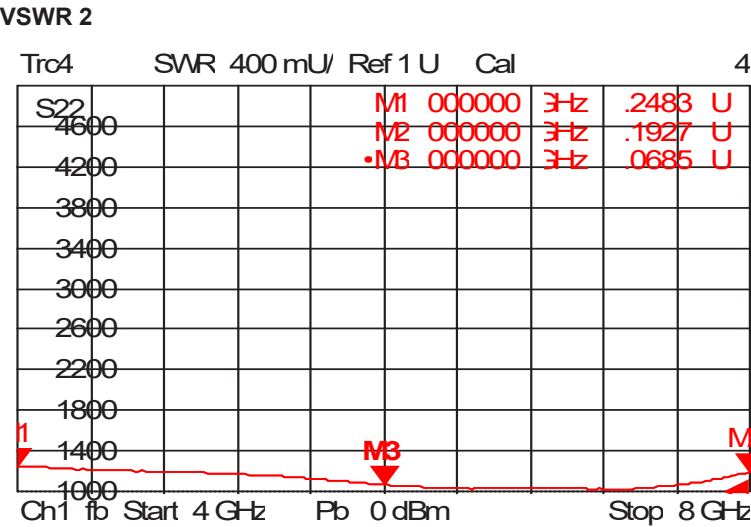
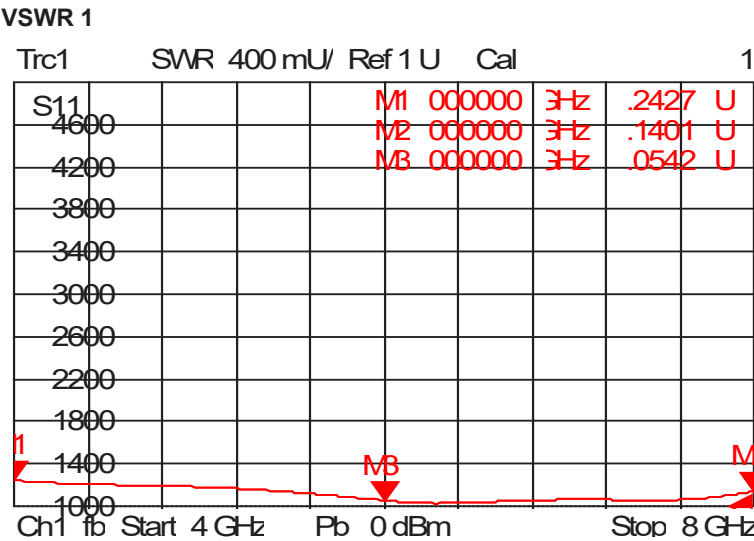


#### Isolation



Circulator N Female and SMA Female with 19 dB  
Isolation from 4 to 8 GHz Rated to 80 Watts

FMCR1040



## Circulator N Female and SMA Female with 19 dB Isolation from 4 to 8 GHz Rated to 80 Watts



### FMCR1040

Circulator N Female and SMA Female with 19 dB Isolation from 4 to 8 GHz Rated to 80 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: [Circulator N Female and SMA Female with 19 dB Isolation from 4 to 8 GHz Rated to 80 Watts FMCR1040](https://www.fairviewmicrowave.com/circulator-n-female-19db-isolation-8-ghz-80-watts-fmcr1040-p.aspx)

URL: <https://www.fairviewmicrowave.com/circulator-n-female-19db-isolation-8-ghz-80-watts-fmcr1040-p.aspx>

The information contained within 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 liability arising out of the use of any part or document.

