

High Power Circulator N Female with 18 dB Isolation from 2 GHz to 4 GHz Rated to 100 Watts

The FMCR1031 is an RF circulator offering a forward and reverse power rating of 100 watts over an operational frequency band of 2 to 4 GHz. This coaxial part uses Type-N female connectors on all ports and has a minimum of 18 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 circulator 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.



Features:

- Forward/Reverse Power 100 watts
- Wide-Band Operating Frequency Range of 2 to 4 GHz
- Female Type-N Connectors
- Low VSWR of 1.35:1 Max
- Low Insertion Loss of 0.6 dB
- Good Isolation Performance of 18 dB Minimum

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	2		4	GHz
Impedance		50		Ohms
Insertion Loss			0.6	dB
Isolation	18			dB
VSWR			1.35:1	
Forward Power, CW			100	Watts

Applications:

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

Mechanical Specifications

Size

Length	1.2 in [30.48 mm]
Width	1.2 in [30.48 mm]
Height	0.67 in [17.02 mm]
Weight	0.22 lbs [99.79 g]
Body Material and Plating	Aluminum, Nickel

Configuration

Design	Single Junction
Direction	Clockwise
Connector 1	N Female
Connector 2	N Female
Connector 3	N Female

Environmental Specifications

Temperature

Operating Range	-20 to +70 deg C
Storage Range	-40 to +85 deg C

Humidity	100% RH at 35c
Shock	20G for 11msec
Vibration	25g RMS
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)

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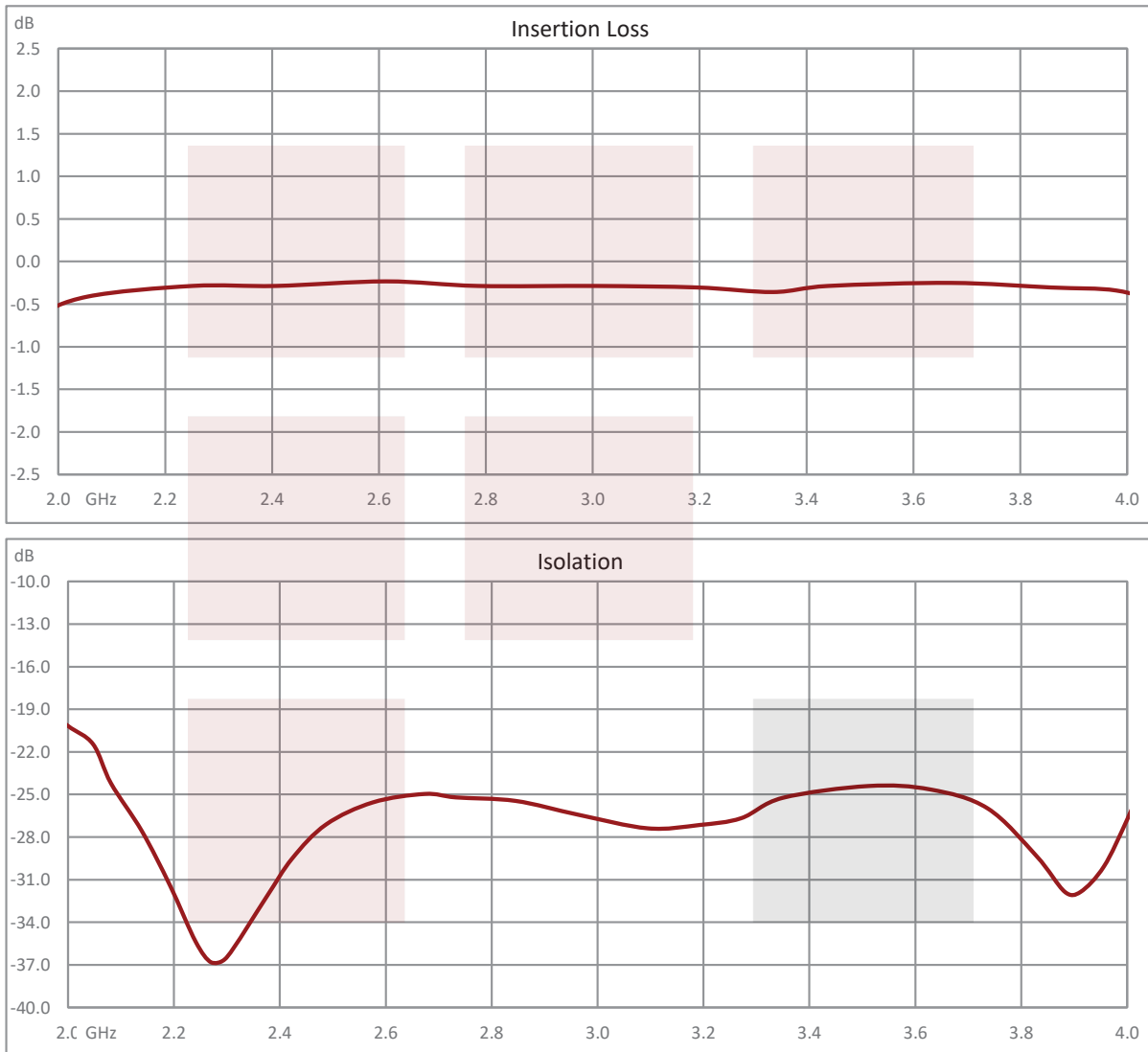
Compliance Certifications (see [product page](#) for current document)

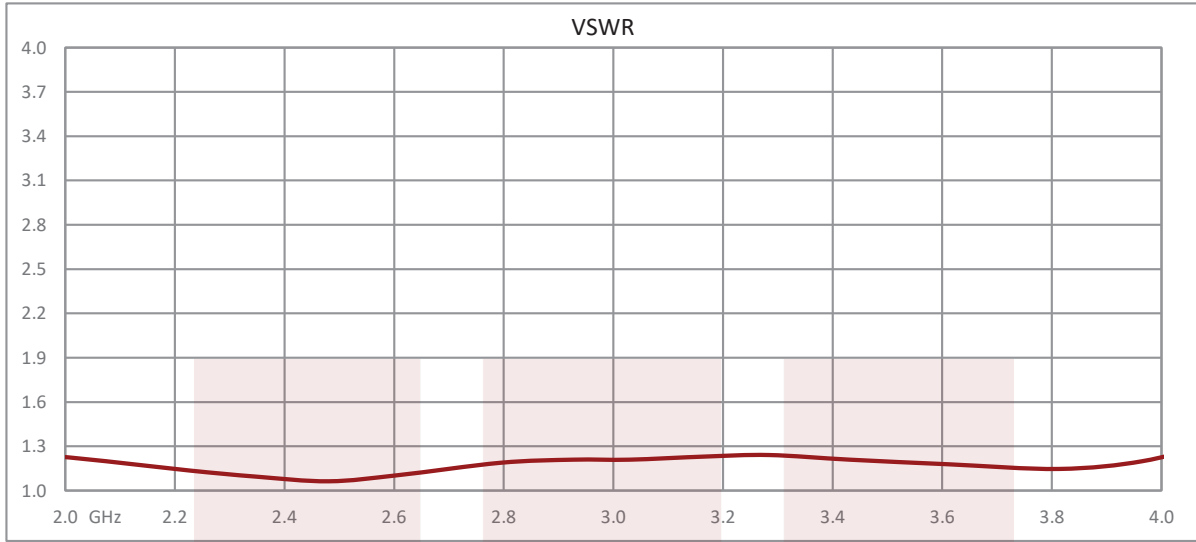
Plotted and Other Data

Notes:

- Values at 25°C, sea level.

Typical Performance Data





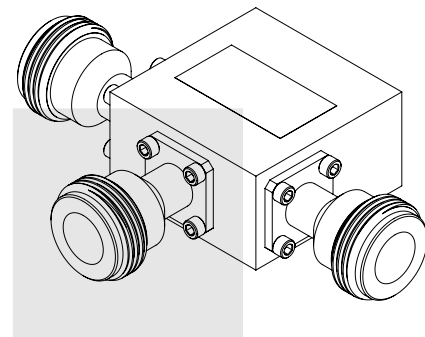
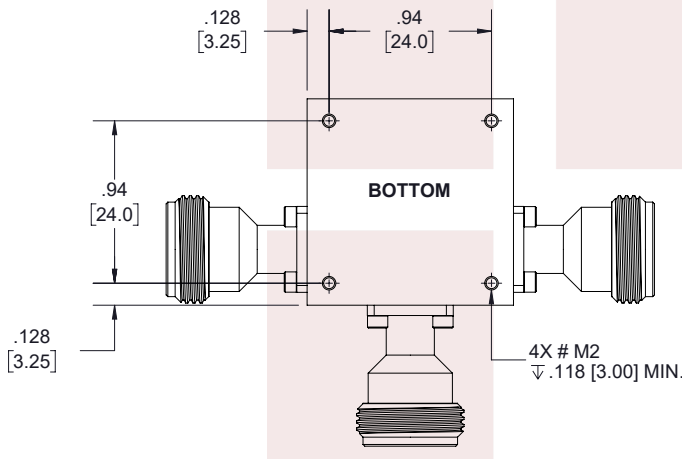
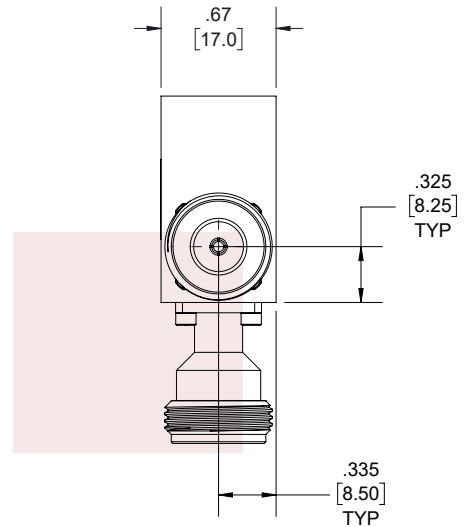
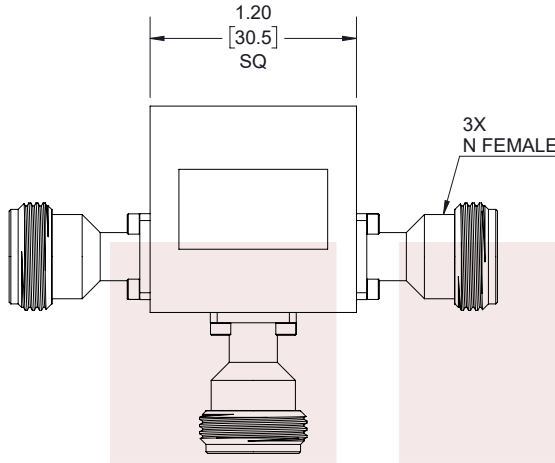
High Power Circulator N Female with 18 dB Isolation from 2 GHz to 4 GHz Rated to 100 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [High Power Circulator N Female with 18 dB Isolation from 2 GHz to 4 GHz Rated to 100 Watts FMCR1031](#)

URL: <https://www.fairviewmicrowave.com/high-power-circulator-n-female-18db-isolation-4-ghz-100-watts-fmcr1031-p.aspx>

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	3/12/2020	S.PONG



LABEL

FAIRVIEW MICROWAVE		
FMCR1031		
1	D/C: WWYY	2
3		

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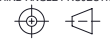
TITLE
High Power Circulator N Female with 18 dB Isolation from 2 GHz to 4 GHz Rated to 100 Watts

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES
DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES: CABLE LENGTH (L) TOLERANCES:

.X = ±.2 [5.08]	FRACTIONS	L ≤ 12 [305] = +1 [25] / -0
.XX = ±.02 [-.51]	± 1/32	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ±.005 [-.13]	ANGLES ± 1°	60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
		120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
		300 [7620] < L = +5%L / -0

THIRD-ANGLE PROJECTION



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SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	ITEM NO. FMCR1031	REV A
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T-Rev.D