

SMA Directional Coupler 20 dB 1 GHz to 4 GHz Rated to 50 Watts

Directional couplers are indispensable components for isolating, separating and combining signals. For example, they provide a simple way of sampling microwave signals. They also can make accurate attenuator measurements since reflections are eliminated. The MC2104-20 is a 20 dB directional coupler that operates from 1 to 4 GHz with 20 dB directivity minimum and 1.2:1 VSWR maximum. The package interface uses SMA female connectors, and is also RoHS compliant.

The MC2104-20 is part of Fairview Microwave's family of directional/dual-directional couplers that offer coupling ratio up to 50 dB with excellent performance featuring high directivity, low insertion loss and VSWR. They are available in both narrow and broad bandwidths and can be used in a wide variety of applications including signal sampling, VSWR measurements, power combining and distribution.

Electrical Specifications

| Description | Min | Typ | Max | Units |
|-------------------|-----|-------|-------|-------|
| Frequency Range | 1 | | 4 | GHz |
| Impedance | | 50 | | Ohms |
| Coupling | | 20 ±1 | | dB |
| Freq. Sensitivity | | | ±0.7 | dB |
| Insertion Loss | | 0.4 | | dB |
| Directivity | 20 | | | dB |
| Main Line VSWR | | | 1.2:1 | |
| Input Power (CW) | | | 50 | Watts |

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

Mechanical Specifications

Size

| | |
|------------|----------------------|
| Length | 2.87 in [72.9 mm] |
| Width/Dia. | 0.59 in [14.99 mm] |
| Height | 0.43 in [10.92 mm] |
| Weight | 0.0688 lbs [31.21 g] |

Configuration

| | |
|--------------------|---------------|
| Package Type | Connectorized |
| Input Connector | SMA Female |
| Output Connector | SMA Female |
| Coupled Connectors | SMA Female |

Environmental Specifications

Temperature

| | |
|-----------------|-------------------|
| Operating Range | -55 to +85 deg C |
| Storage Range | -55 to +100 deg C |

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

Plotted and Other Data

Notes:



Features:

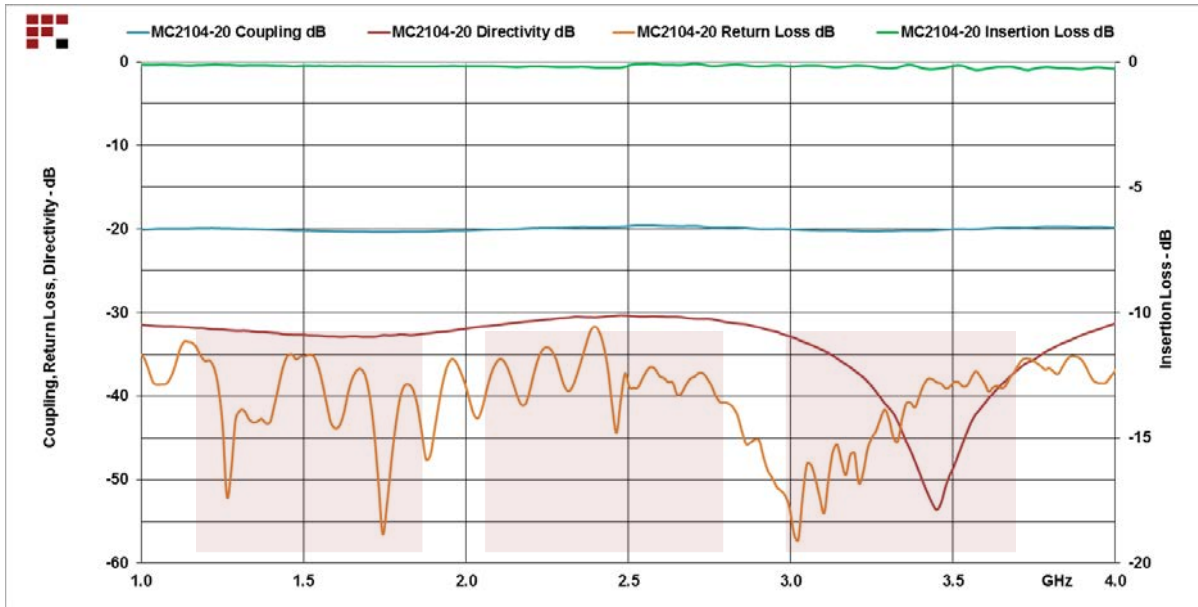
- Directional Coupler
- 1 to 4 GHz Frequency Range
- Coupling 20±1 dB
- Directivity > 20 dB
- VSWR < 1.2:1
- Max Power 50 Watts (CW)

Applications:

- Test and Measurement
- Military Communications
- Commercial Communications
- Wireless Communications
- SATCOM

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Typical Performance Data

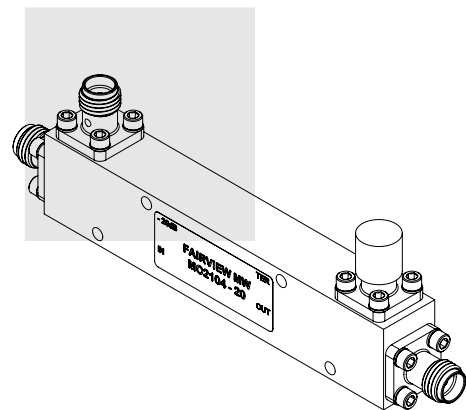
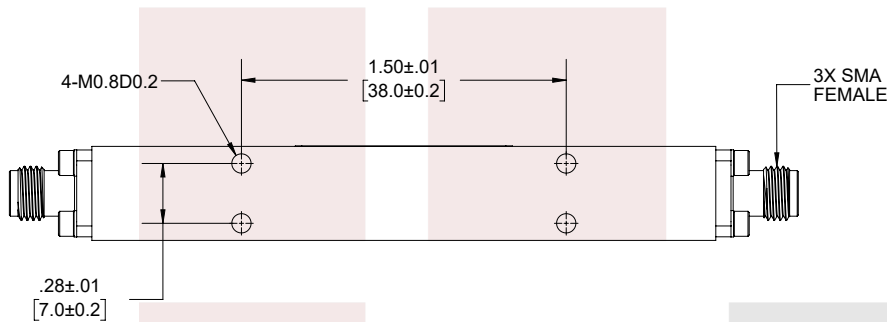
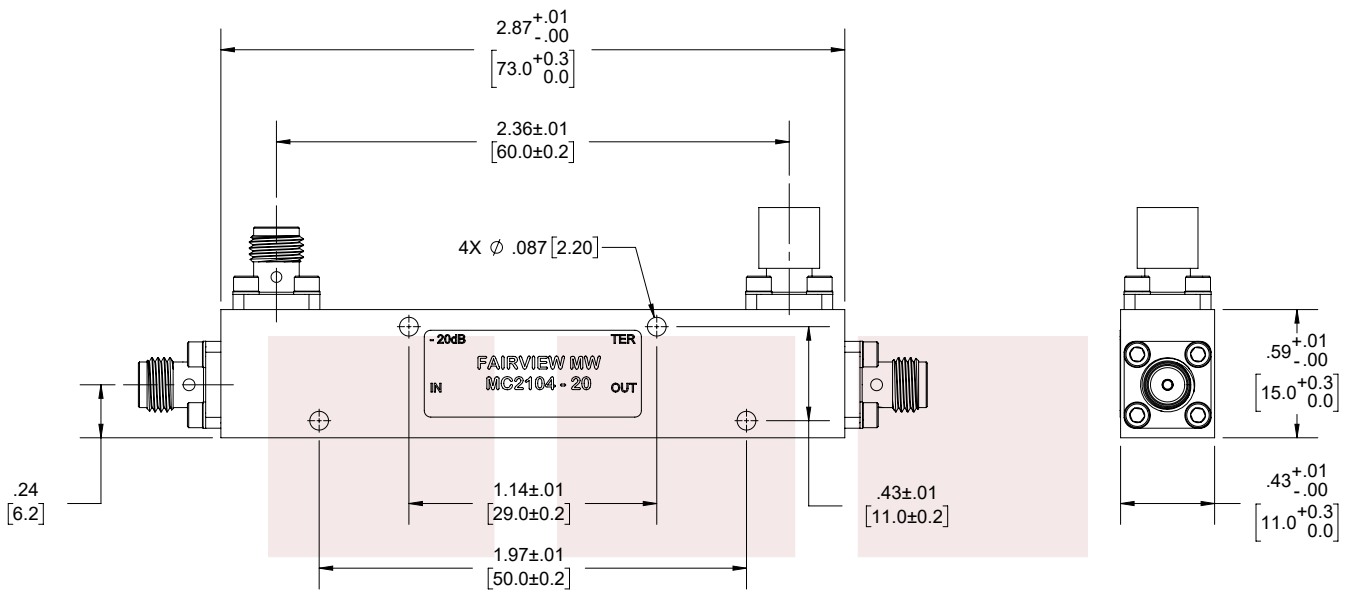


SMA Directional Coupler 20 dB 1 GHz to 4 GHz Rated to 50 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Directional Coupler 20 dB 1 GHz to 4 GHz Rated to 50 Watts MC2104-20](https://www.fairviewmicrowave.com/sma-directional-coupler-20-db-1-ghz-to-4-ghz-rated-to-50-watts-mc2104-20)

URL: <https://www.fairviewmicrowave.com/sma-directional-coupler-20-db-4-ghz-50-watts-mc2104-20-p.aspx>

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| STANDARD TOLERANCES | |
|---------------------|--------|
| .X | ±0.2 |
| .XX | ±0.01 |
| .XXX | ±0.005 |

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

| | | | | | | |
|---|--------|---|--------|---------------------------|-----|-------------|
| 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 SMA Directional Coupler 20 dB 1 GHz to 4 GHz Rated to 50 Watts | | DWG NO MC2104-20 | | CAGE CODE 3FKR5 | | |
| CAD FILE | 022018 | SHEET | 1 OF 1 | SCALE | N/A | SIZE A 7316 |