

WR-90 Waveguide Circulator with 18 dB Min. Isolation from 8.2 GHz to 12.4 GHz using Cover Flange in Aluminum

The FMWCR1001 is a Waveguide Circulator offering 18 dB minimum isolation over the full X band frequency range of 8.2 to 12.4 GHz. The design achieves high isolation with wide band performance and the WR-90 waveguide uses UG-135/U compatible cover flanges on all ports and has a power rating of 20 watts (CW).

Fairview offers a wide variety of circulators and waveguide 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 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.



Features:

- Waveguide Circulator
- WR-90
- Full X Band Frequency Range 8.2 to 12.4 GHz
- Mates with UG-135/U Cover Flange
- 1.3:1 VSWR
- 18 dB isolation across the full band

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	8.2		12.4	GHz
VSWR			1.3:1	
Insertion Loss			0.4	dB
Isolation	18			dB
Forward Power (CW)			20	Watts
Input Power (Peak)			10	kWatts

Applications:

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

Mechanical Specifications
Size

Waveguide Size	WR-90
Flange Designation	None
Flange Type	Cover
Flange Material and Plating	Aluminum, Chem Film

Environmental Specifications
Temperature

Operating Range	-10 to +65 deg C
-----------------	------------------

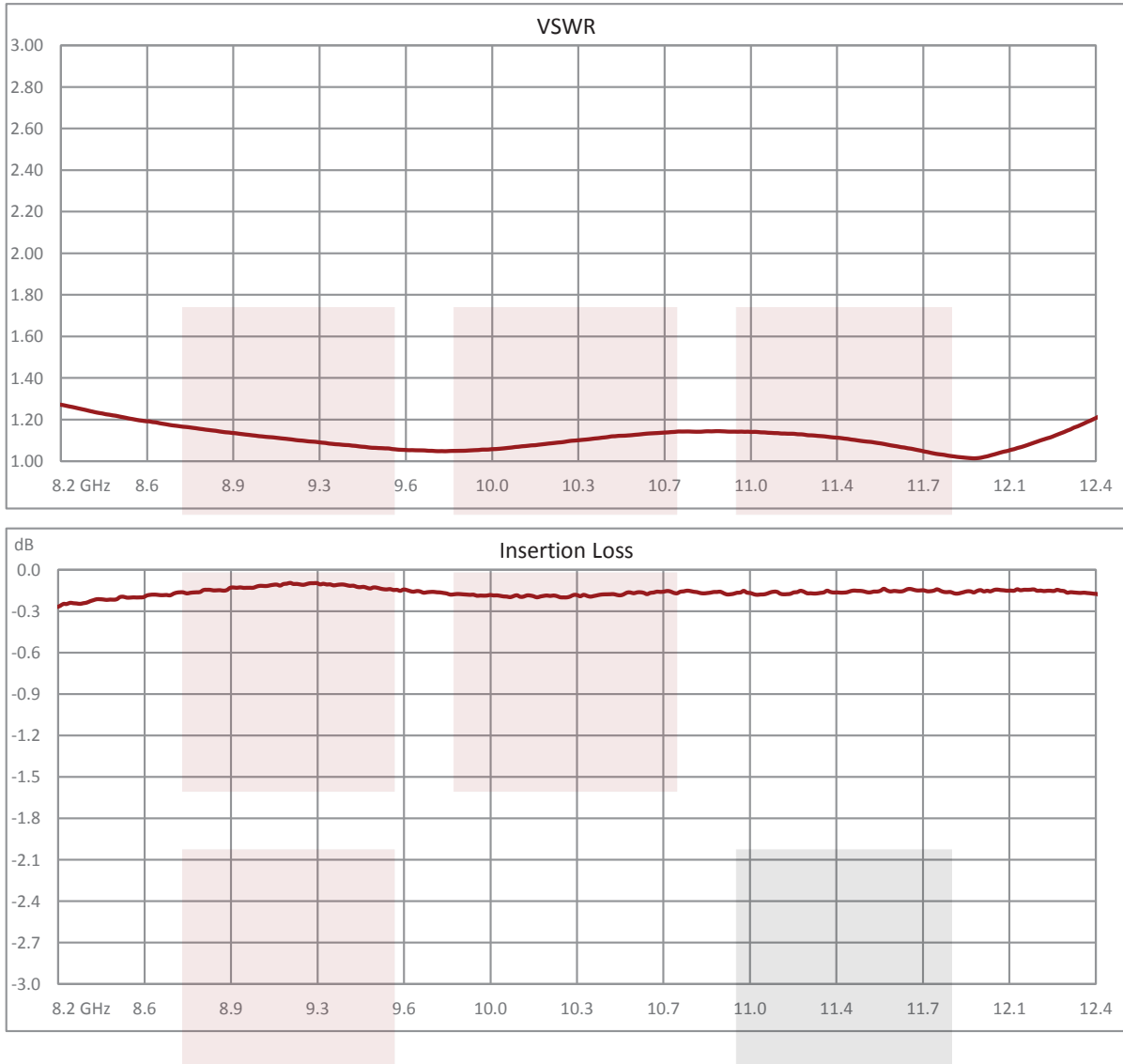
Compliance Certifications (see [product page](#) for current document)

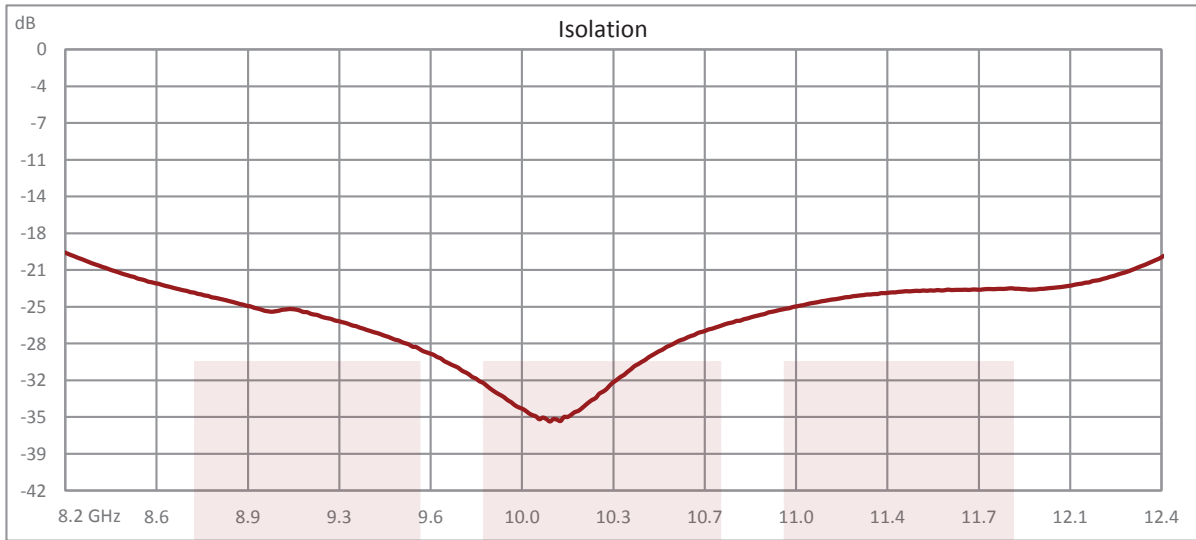
Plotted and Other Data

Notes:

Fairview Microwave
301 Leora Ln., Suite 100
Lewisville, TX 75056
Tel: 1-800-715-4396 / (972) 649-6678
Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

Typical Performance Data



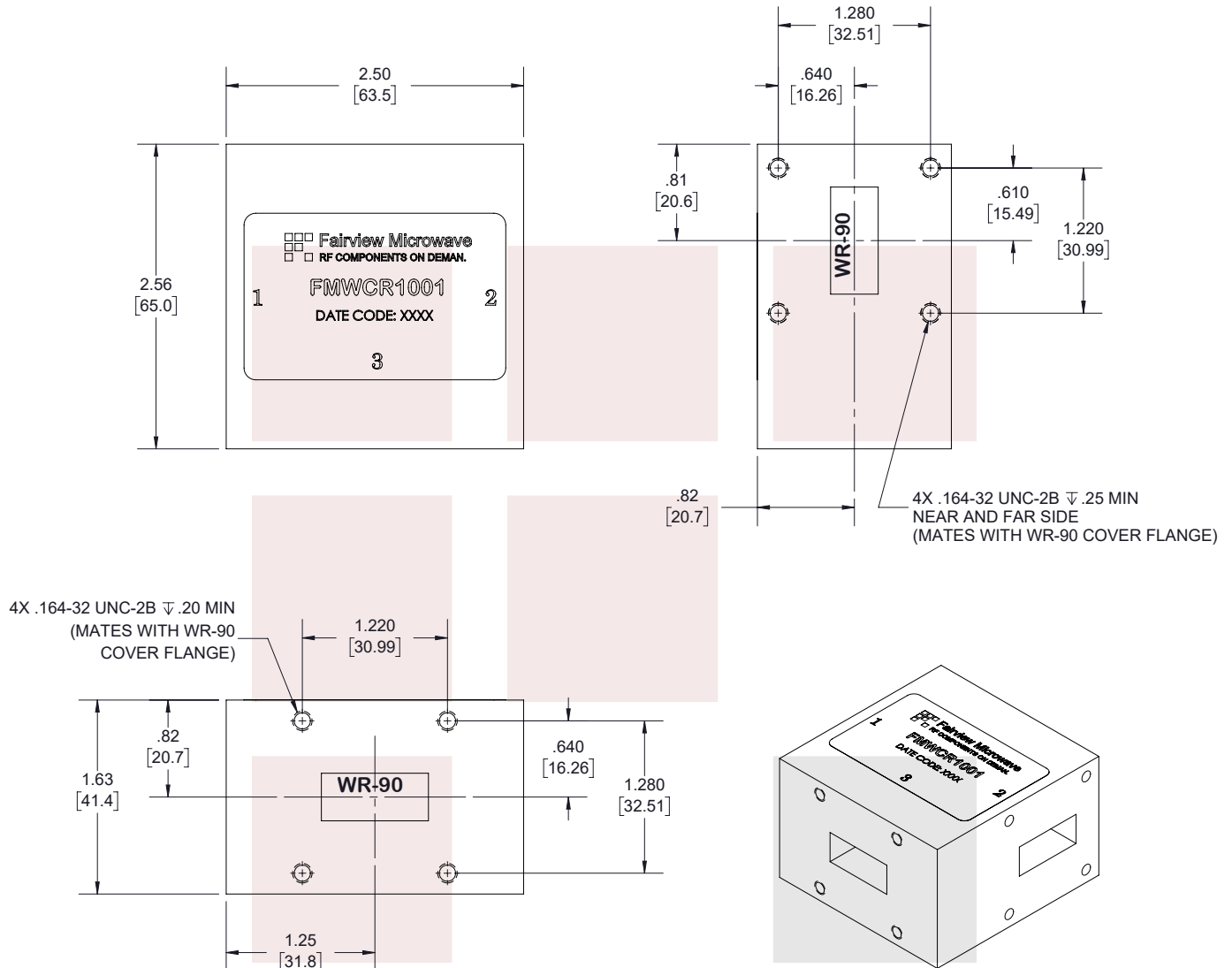


WR-90 Waveguide Circulator with 18 dB Min. Isolation from 8.2 GHz to 12.4 GHz using Cover Flange in Aluminum from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [WR-90 Waveguide Circulator with 18 dB Min. Isolation from 8.2 GHz to 12.4 GHz using Cover Flange in Aluminum FMWCR1001](https://www.fairviewmicrowave.com/wr90-waveguide-circulator-18db-12.4-ghz-cover-flange-aluminum-fmw-cr1001-p.aspx)

URL: <https://www.fairviewmicrowave.com/wr90-waveguide-circulator-18db-12.4-ghz-cover-flange-aluminum-fmw-cr1001-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	±0.02
.XXX	±0.010

*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 WR-90 Waveguide Circulator with 18 dB Min. Isolation from 8.2 GHz to 12.4 GHz using Cover Flange in Aluminum		DWG NO FMWCR1001		CAGE CODE 3FKR5				
CAD FILE	103117	SHEET	1 OF 1	SCALE	N/A	SIZE	A	7361