

WR-90 Waveguide Isolator with 18 dB min Isolation from 8.2 GHz to 12.4 GHz using Cover Flange in Aluminum

The FM-W90IR001 is a Waveguide Isolator offering 18 dB minimum isolation over the 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 Square Cover compatible flanges on all ports and has a power rating of 100 watts (CW).

Fairview Microwave offers a wide variety of isolators and waveguide isolators to fit your needs. These are two-port devices that transmit microwave or radio frequency power in one direction only and block the signal in the opposite direction. They can be thought of as a diode for RF energy. Isolators are used to isolate equipment from the effects of conditions outside of the equipment. For instance they are used to prevent a microwave source being detuned by a mismatched load. Fairview Microwave's waveguide isolators feature excellent insertion loss, full WR band high isolation and reliability.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	8.2		12.4	GHz
Insertion Loss			0.3	dB
Isolation	18			dB
VSWR			1.35:1	
Forward Power (CW)			100	Watts
Forward Power (Peak)			3	kWatts
Reverse Power (CW)			10	Watts
Reverse Power (Peak)			300	Watts

Mechanical Specifications

Size

Length	4.13 in [104.9 mm]
Width	1.97 in [50.04 mm]
Height	1.63 in [41.4 mm]
Weight	0.3 lbs [136.08 g]

Configuration

Waveguide Size	WR-90
Flange Type	Cover
Body Material and Plating	Aluminum, Chromate

Environmental Specifications

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

Plotted and Other Data

Notes:



Features:

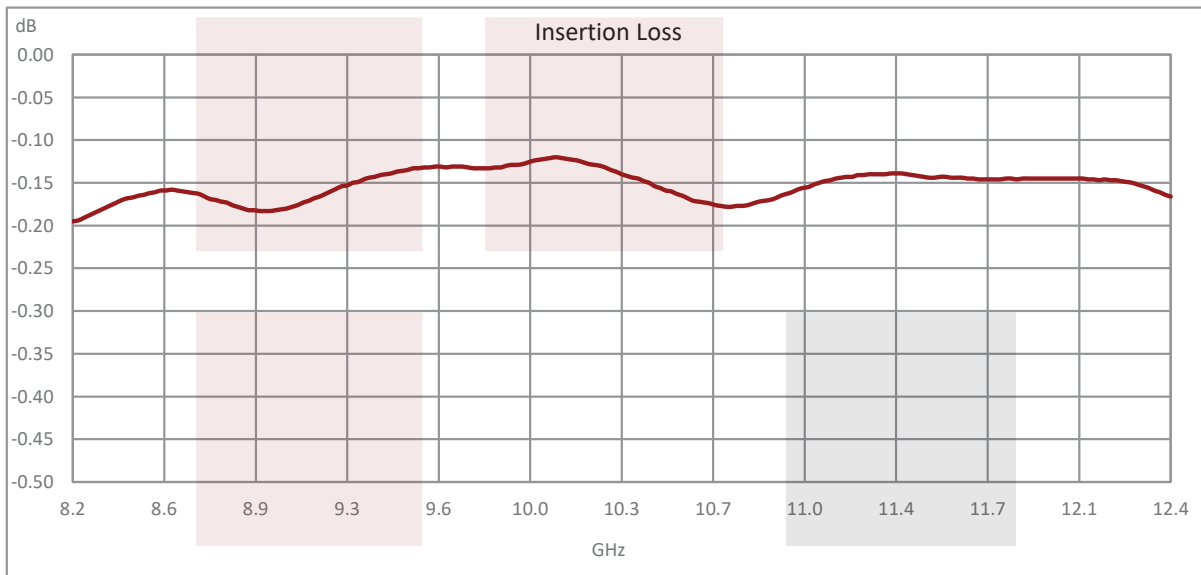
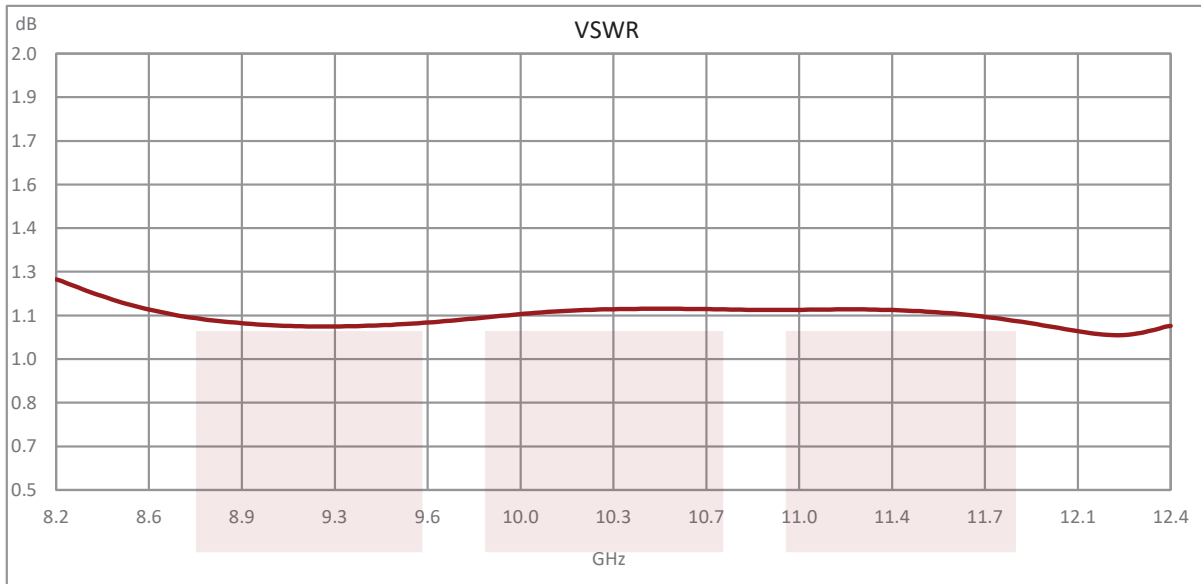
- WR-90 Waveguide Isolator
- X Band Frequency Range 8.2 to 12.4 GHz
- UG Cover Flange Configuration
- Maximum VSWR 1.35:1
- Minimum 18 dB isolation
- Maximum Forward Power 100 W (CW)

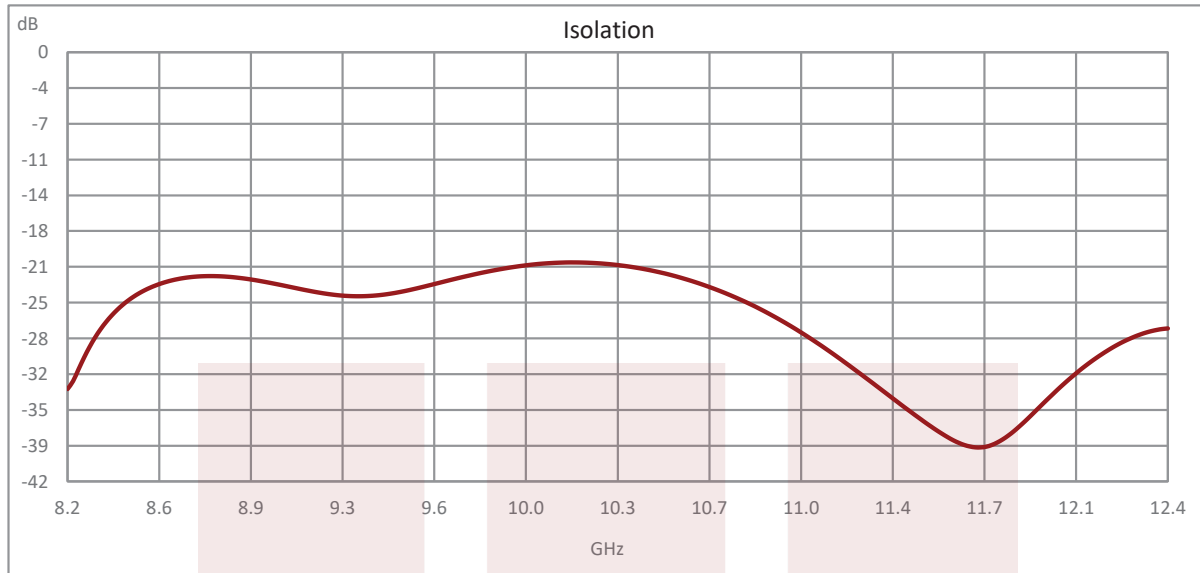
Applications:

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

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Typical Performance Data





WR-90 Waveguide Isolator 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 Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [WR-90 Waveguide Isolator with 18 dB min Isolation from 8.2 GHz to 12.4 GHz using Cover Flange in Aluminum FM-W90IR001](https://www.fairviewmicrowave.com/wr90-waveguide-isolator-18db-12.4ghz-fm-w90ir001-p.aspx)

URL: <https://www.fairviewmicrowave.com/wr90-waveguide-isolator-18db-12.4ghz-fm-w90ir001-p.aspx>

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