

Waveguide Converter Mixer WR-12 From 60 GHz to 90 GHz, IF from DC to 30 GHz And LO Power of +13 dBm, UG-387/U Flange, E Band

The FMWGMX1005 is a WR-12 Waveguide Down Converter Mixer, operating across the E Band from 60 GHz to 90 GHz. The IF frequency band is DC to 30 GHz with a nominal LO drive level of +13 dB. Typical performance for the 50 Ohm double balanced mixer design includes 10 dB conversion loss and 30 dB isolation, with a maximum RF input power level of +17 dBm. The rugged and small size gold plated aluminum package supports a UG-387/U waveguide flange pattern at RF and LO ports, and an SMA female connector at the IF port. The mixer design is RoHS compliant and operates across a temperature range from -10°C to +45°C.



Electrical Specifications (@ +25°C)

Description	Min	Typ	Max	Units
Frequency Range	60		90	GHz
LO Frequency Range	60		90	GHz
IF Frequency Range	DC		30	GHz
RF to LO Isolation		30		dB
Conversion Loss		10		dB
LO Port Power		13		dBm

Electrical Specification Notes:

- Do not put any foreign objects inside the waveguide. Warranty will be voided
- Open and short-circuit loads are not recommended at the mixer output
- Ensure proper 50 Ohm load before applying RF

Mechanical Specifications

Size	
Length	1 in [25.4 mm]
Width/Diameter	1 in [25.4 mm]
Height	1 in [25.4 mm]
Weight	0.22 lbs [99.79 g]
Body Material and Plating	Aluminum, Gold

Configuration

Description	RF Port	LO Port	IF Port
Type	WR-12	WR-12	SMA Female
Waveguide Flange	UG-387/U	UG-387/U	

Environmental Specifications

Temperature

Operating Range	-10 to +45 deg C
Storage Range	-40 to +100 deg C

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

Plotted and Other Data

Notes:

Features:

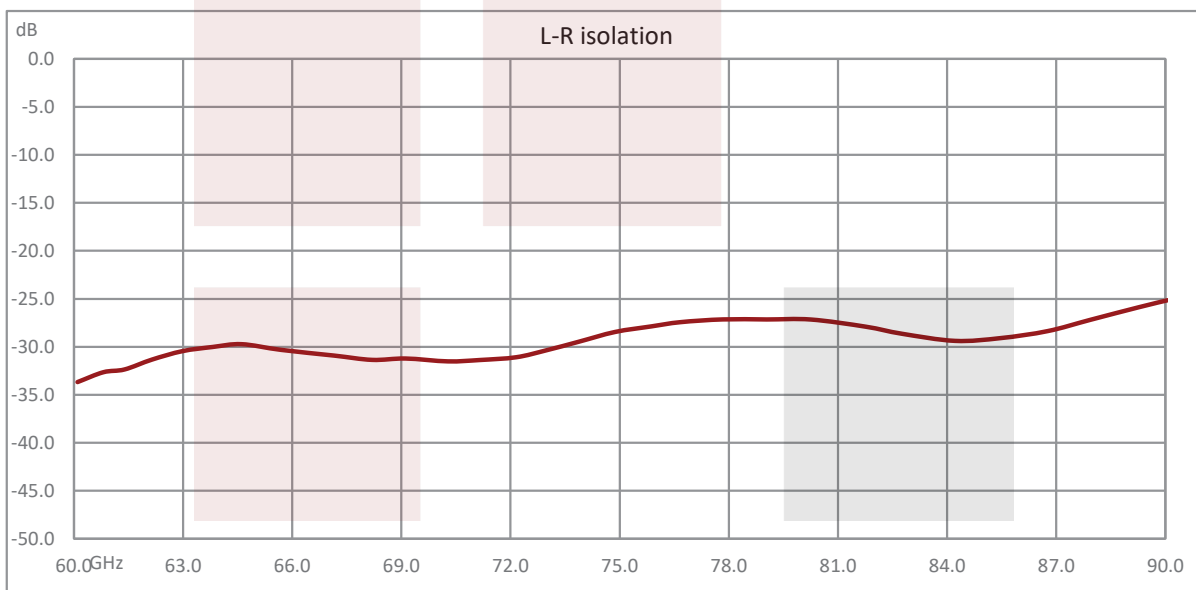
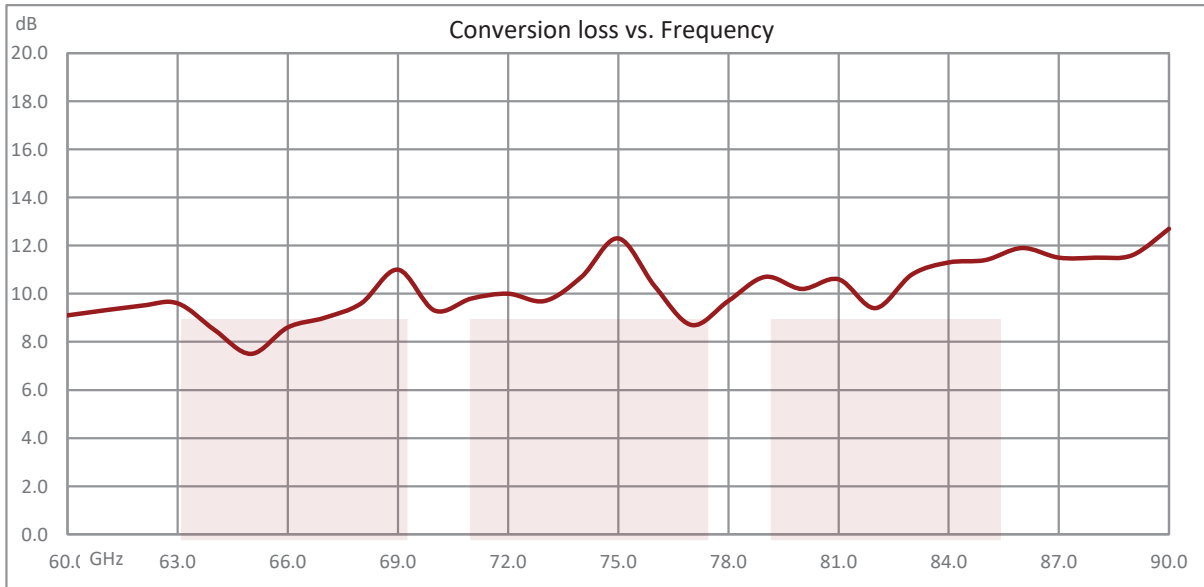
- WR-12 Waveguide Downconverter Mixer
- E Band
- RF/LO Frequency: 60 GHz to 90 GHz
- IF Frequency: DC to 30 GHz
- E Band
- LO Drive: +13 dBm
- Conversion Loss: 10 dB typ
- Isolation: 30 dB typ
- RF Input Power: +17 dBm max
- 50 Ohm Double Balanced Design
- RF/LO Port Waveguide Flange UG-387/U
- IF Port: SMA Female
- Operational Temperature Range -10°C to +45°C
- Rugged and Compact Gold Plated Aluminum Package Design
- RoHS Compliant

Applications:

- Test & Measurement
- Military & Commercial Communications
- Electronic Warfare
- ELINT
- Research & Development

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Typical Performance Data



Waveguide Converter Mixer WR-12 From 60 GHz to 90 GHz, IF from DC to 30 GHz And LO Power of +13 dBm, UG-387/U Flange, E Band 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: [Waveguide Converter Mixer WR-12 From 60 GHz to 90 GHz, IF from DC to 30 GHz And LO Power of +13 dBm, UG-387/U Flange, E Band FMWGMX1005](#)

URL: <https://www.fairviewmicrowave.com/wr-12-waveguide-mixer-60-90-ghz-ug-387-u-fmwgmx1005-p.aspx>

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