

SMA Mixer from 3 GHz to 10 GHz with an IF Range from DC to 4 GHz and LO Power of +17 dBm

The FMMX1027 is a highly linear broadband Double Balanced Mixer that operates across an RF and LO frequency range from 3 GHz to 10 GHz with an IF frequency range of DC to 4 GHz and supports an LO drive level of +17 dBm nominal. The design utilizes advanced MMIC technology and exhibits exceptional typical performance that includes Conversion Loss of 9 dB, RF to LO and LO to IF isolation levels up to 45 dB, and an input IP3 level of +23 dBm. The 50 ohm hybrid module does not require any external components or matching circuitry. The rugged compact package assembly supports female SMA connectors, operates over a temperature range of -40°C to +85°C, and is designed to meet MIL-STD-202 environmental test conditions for Humidity, Shock, Vibration, and Altitude for high reliability.

Electrical Specifications

Description	Min	Typ	Max	Units
RF Frequency Range	3		10	GHz
LO Frequency Range	3		10	GHz
IF Frequency Range	DC		4	GHz
Impedance		50		Ohms
Conversion Loss		9	12	dB
LO to RF Isolation	35	45		dB
LO to IF Isolation	20	45		dB
RF to IF Isolation	10	20		dB
RF Port VSWR		2.5:1	4:1	
LO Port VSWR		2:1	3:1	
IF Port VSWR		2:1	3:1	
Input at P1dB	+13	+15		dBm
Input at IP2	+65	+70		dBm
Input at IP3	+20	+23		dBm
RF Input Power			+15	dBm
LO Input Power		+17		dBm

Mechanical Specifications

Weight 0.043 lbs [19.5 g]

Configuration

Design Double Balanced
 Package Type Connectorized
 RF Connector SMA Female
 LO Connector SMA Female
 IF Connector SMA Female

Environmental Specifications

Temperature

Operating Range -40 to +85 deg C



Features:

- Broadband Double Balanced Mixer Design
- High Linearity
- LO & RF Frequency Range: 3 GHz to 10 GHz
- IF Frequency Range: DC to 4 GHz
- LO Drive Level: +17 dBm
- Advanced MMIC Technology
- Conversion Loss: 9 dB typ
- Port Isolations up to 45 dB typ
- Input IP3 Level: +23 dBm
- RF Input for P1dB: +15 dBm
- SMA Connectors
- Operating Temperature Range: -40°C to +85°C
- Designed to Meet MIL-STD-202 Environmental Test Conditions

Applications:

- Electronic Warfare
- Point-to-Point Radios
- Point-to-Multipoint Radios
- VSAT
- Radar
- Space Systems
- Test Instrumentation
- Sensors
- Telecom Infrastructure

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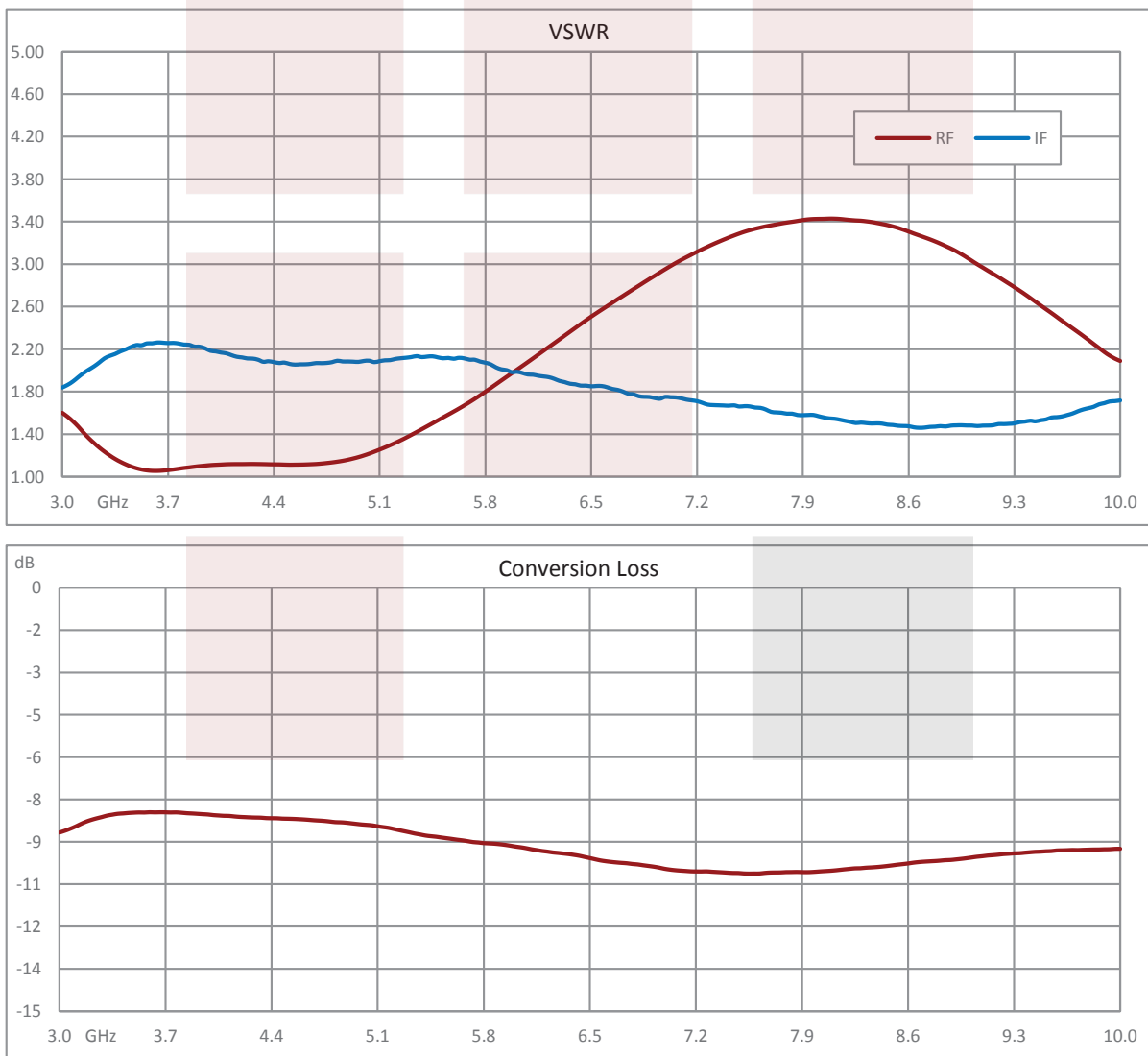
Storage Range	-65 to +150 deg C
Humidity	MIL-STD-202F, Method 103B, Condition B
Shock	MIL-STD-202F, Method 213B, Condition B
Vibration	MIL-STD-202F, Method 204D, Condition B
Altitude	MIL-STD-202F, Method 105C, Condition B

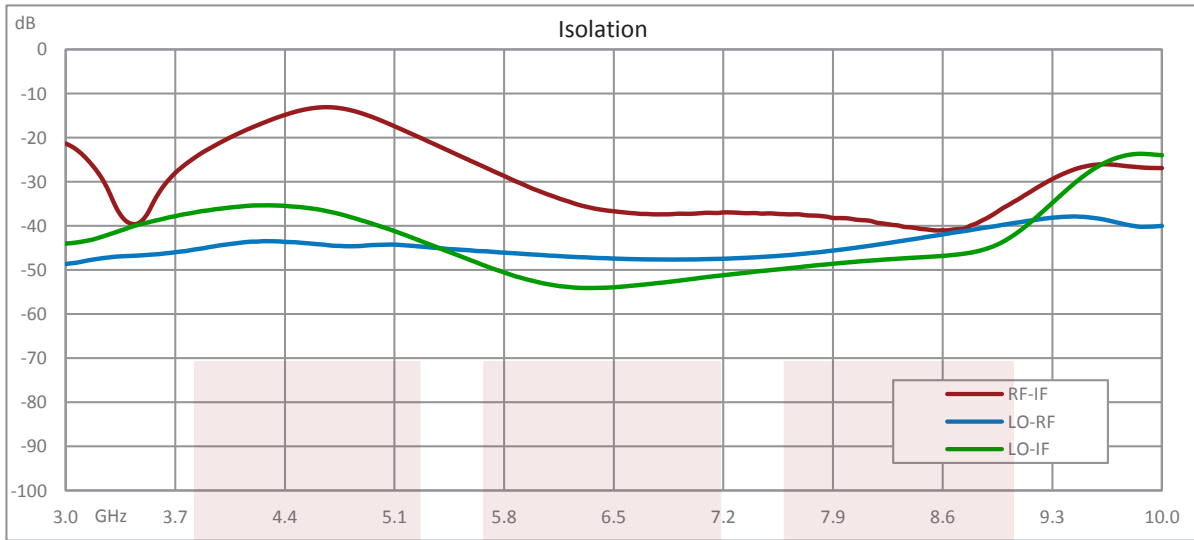
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data



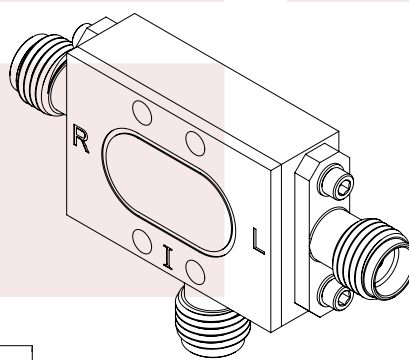
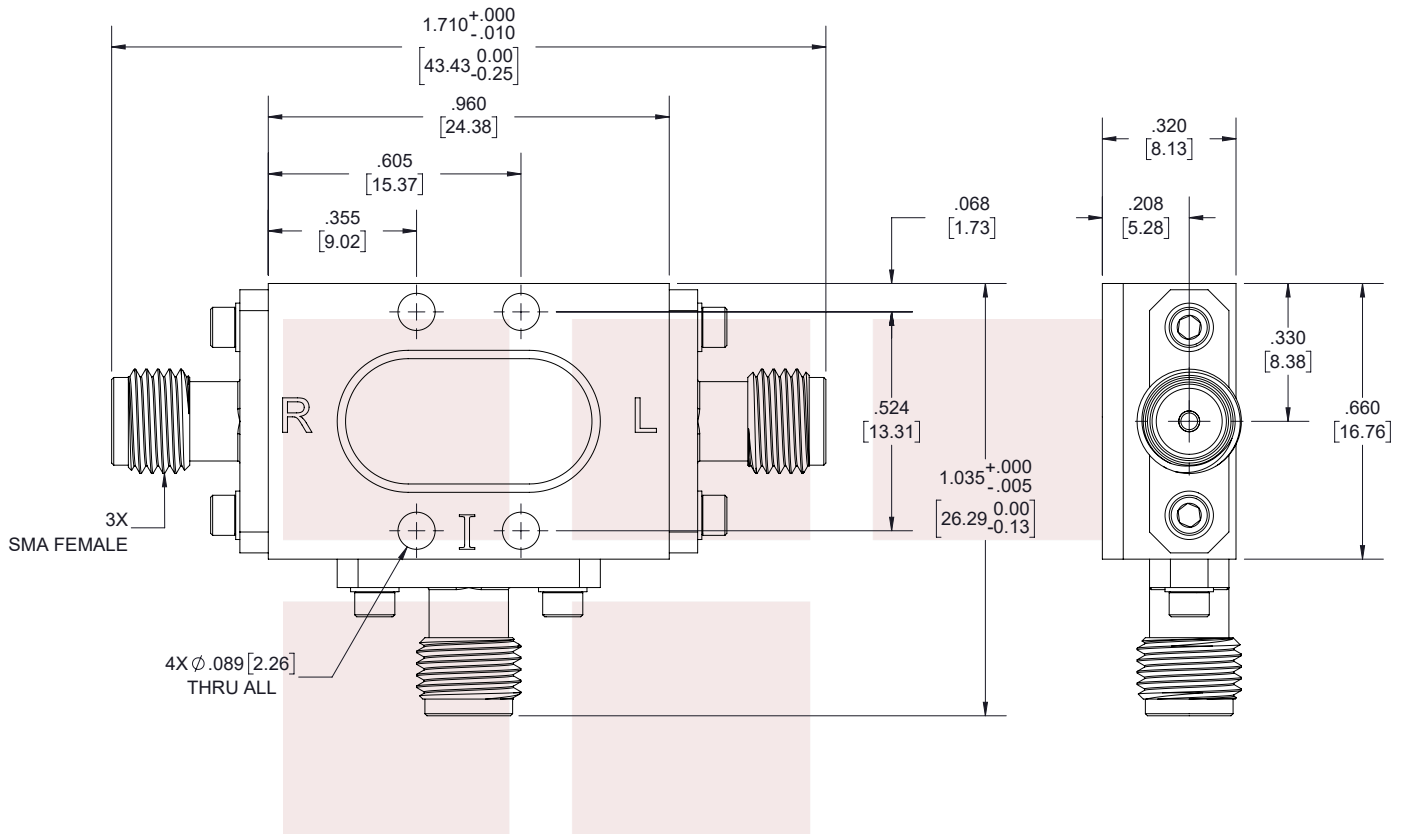


SMA Mixer from 3 GHz to 10 GHz with an IF Range from DC to 4 GHz and LO Power of +17 dBm from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Mixer from 3 GHz to 10 GHz with an IF Range from DC to 4 GHz and LO Power of +17 dBm FMMX1027](https://www.fairviewmicrowave.com/sma-mixer-17-dbm-fmmx1027-p.aspx)

URL: <https://www.fairviewmicrowave.com/sma-mixer-17-dbm-fmmx1027-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.



LABEL

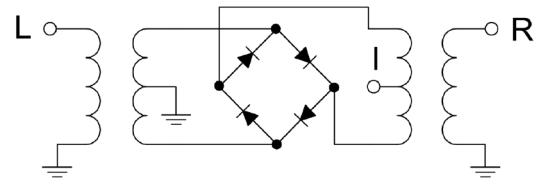
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FMMX1027

STANDARD TOLERANCES

.X ± 0.2
.XX ± 0.01
.XXX ± 0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

SCHEMATIC



<p>Fairview Microwave RF COMPONENTS ON DEMAND. <i>Done!</i></p>		<p>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].</p>						
<p>TITLE</p> <p>SMA Mixer from 3 GHz to 10 GHz with an IF Range from DC to 4 GHz and LO Power of +17 dBm</p>		<p>DWG NO</p> <p>FMMX1027</p>		<p>CAGE CODE</p> <p>3FKR5</p>				
CAD FILE	04/26/18	SHEET	1 OF 1	SCALE	N/A	SIZE	A	7361