

SMA Mixer from 5 MHz to 1 GHz with an IF Range from DC to 1 GHz and LO Power of +7 dBm



FMMX1014

Features

- Broadband Double Balanced Mixer Design
- LO & RF Frequency Range: 5 MHz to 1000 MHz
- IF Frequency Range: DC to 1000 MHz
- LO Drive Level Range: +4 dBm to +10 dBm
- Schottky Ring Quad Diodes with Optimized Balun Structures
- Conversion Loss: 7 dB typ
- High Port Isolations up to 62 dB typ
- High Input IP3 Level: +20 dBm
- RF Input Up to +1 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
- Military End-Use

Description

The FMMX1014 is a broadband Double Balanced Mixer that operates across an RF and LO frequency range from 5 MHz to 1000 MHz with an IF frequency range of DC to 1000 MHz and supports an LO drive level range from +4 to +10 dBm, with +7 dBm nominal. The design utilizes Schottky Ring Quad Diodes with optimized balun structures. Exceptional typical performance includes Conversion Loss of 7 dB, RF to LO and LO to IF isolation levels up to 62 dB, and a high input IP3 level of +20 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.

Description	Min	Typ	Max	Units
RF Frequency Range	5		1,000	MHz
LO Frequency Range	5		1,000	MHz
IF Frequency Range	DC		1,000	MHz
Impedance		50		Ohms
Conversion Loss		7	8.5	dB
LO to RF Isolation	22	47		dB
LO to IF Isolation	20	45		dB
RF Port VSWR		1.5:1	2.5:1	
IF Port VSWR		1.5:1	2.5:1	
Input at IP3	+17	+20		dBm
RF Input Power			+1	dBm
LO Input Power		+7		dBm

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Absolute Maximum Rating

Parameter	Rating	Units
RF Input Power	+17	dBm
Peak IF Current	40	mA
Operating Temperature	-40 °C to +85	°C
Storage Temperature	-55 °C to +100 °C	°C



ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

Mechanical Specifications

Size

Length	1.25 in [31.75 mm]
Width	0.563 in [14.3 mm]
Height	0.563 in [14.3 mm]
Weight	0.09 lbs [40.82 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
Storage Range	-55 to +100 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

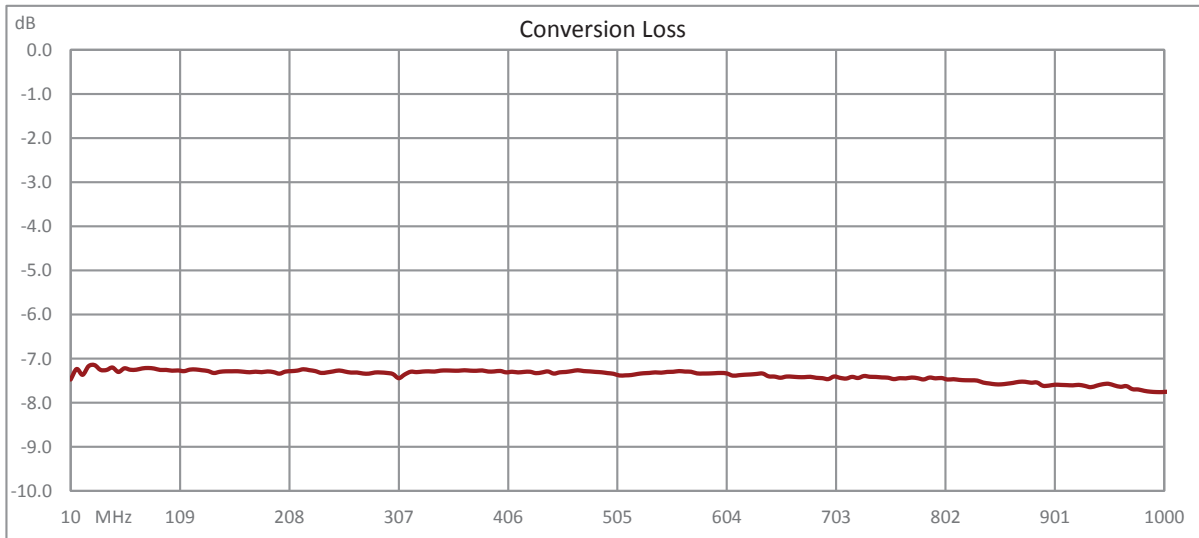
Notes:

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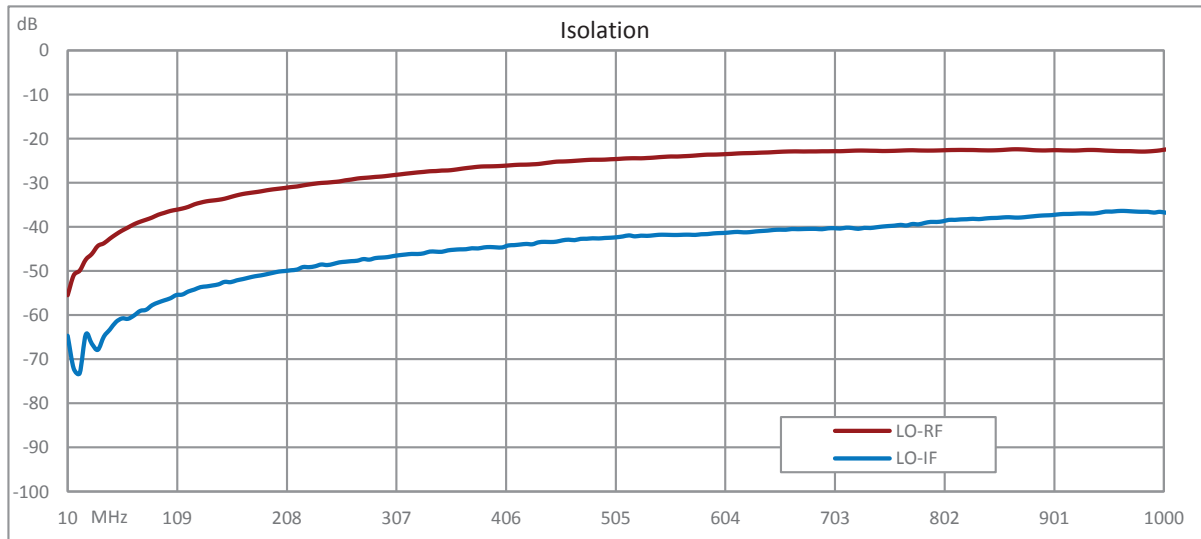
Typical Performance Data



SMA Mixer from 5 MHz to 1 GHz with an IF Range from DC to 1 GHz and LO Power of +7 dBm



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SMA Mixer from 5 MHz to 1 GHz with an IF Range from DC to 1 GHz and LO Power of +7 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 Lewisville, Texas. Fairview Microwave is RF on-demand.

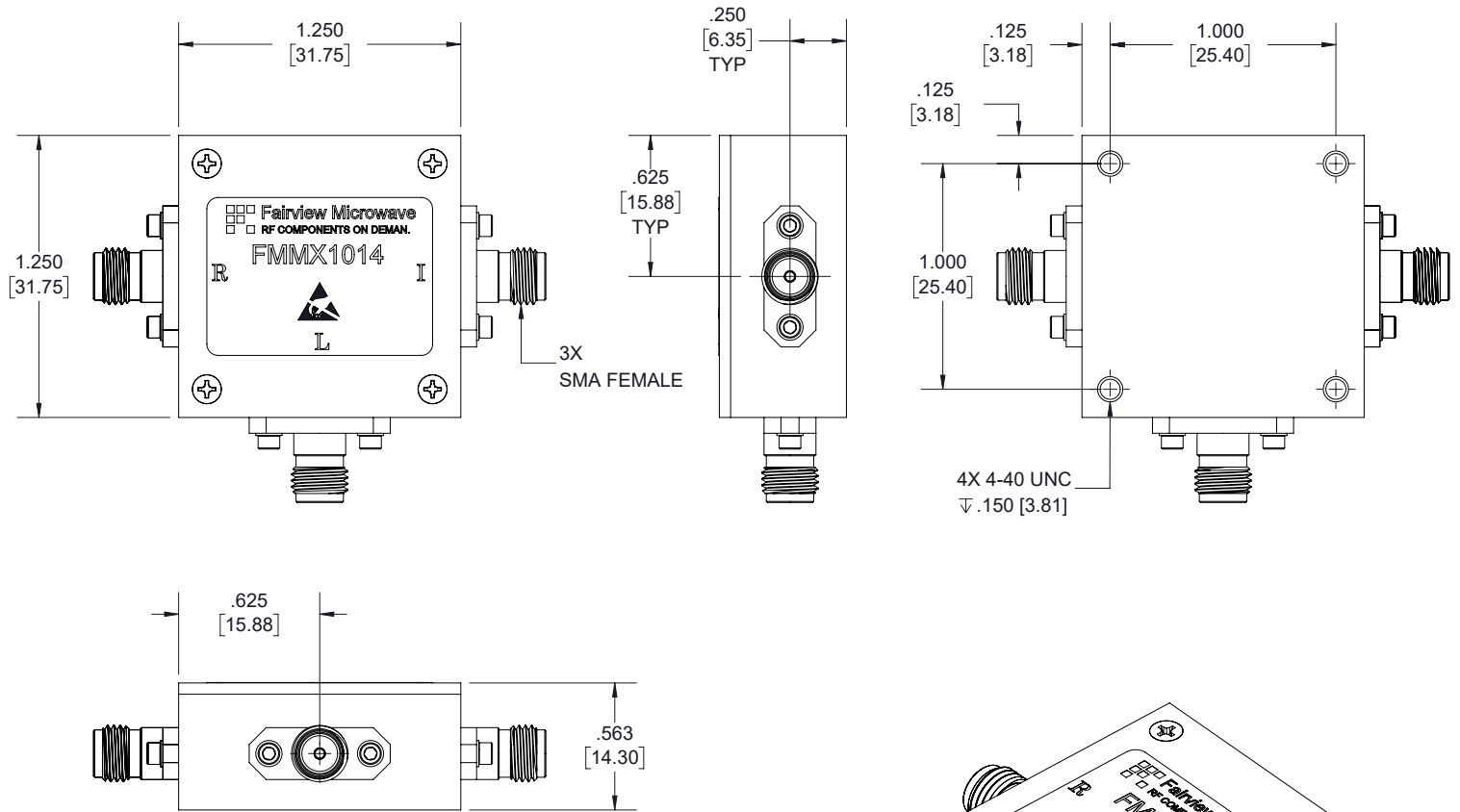
For additional information on this product, please click the following link: [SMA Mixer from 5 MHz to 1 GHz with an IF Range from DC to 1 GHz and LO Power of +7 dBm FMMX1014](https://www.fairviewmicrowave.com/sma-mixer-7-dbm-fmmx1014-p.aspx)

URL: <https://www.fairviewmicrowave.com/sma-mixer-7-dbm-fmmx1014-p.aspx>

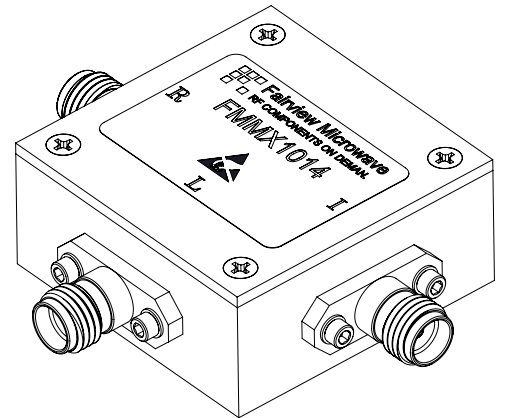
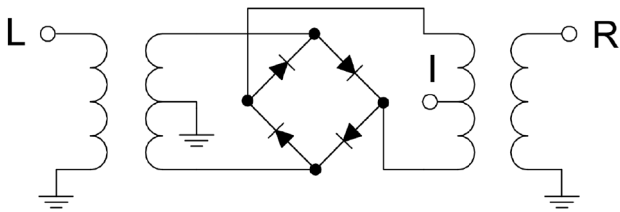
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FMMX1014 CAD Drawing

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SCHEMATIC



STANDARD TOLERANCES

.X ±0.2
.XX ±0.01
.XXX ±0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

 Fairview Microwave RF COMPONENTS ON DEMAND. <i>Done!</i>		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		DWG NO FMMX1014		CAGE CODE 3FKR5				
CAD FILE	04/26/18	SHEET	1 OF 1	SCALE	N/A	SIZE	A	7361