

SMA Mixer from 40 MHz to 2.5 GHz with an IF Range from DC to 1 GHz and LO Power of +13 dBm



## FMMX1019

### Features

- Broadband Double Balanced Mixer Design
- High Linearity
- LO & RF Frequency Range: 40 MHz to 2500 MHz
- IF Frequency Range: DC to 1000 MHz
- LO Drive Level Range: +10 dBm to +16 dBm
- Schottky Ring Quad Diodes with Optimized Balun Structures
- Conversion Loss: 8 dB typ
- High Port Isolations up to 47 dB typ
- High Input IP3 Level: +26 dBm
- RF Input Up to +9 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 FMMX1019 is a broadband Double Balanced Mixer that operates across an RF and LO frequency range from 40 MHz to 2500 MHz with an IF frequency range of DC to 1000 MHz and supports an LO drive level range from +10 to +16 dBm, with +13 dBm nominal. The design utilizes Schottky Ring Quad Diodes with optimized balun structures and exhibits highly linear performance. Exceptional typical performance includes Conversion Loss of 8 dB, RF to LO and LO to IF isolation levels up to 47 dB, and a high input IP3 level of +26 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	0.04		2.5	GHz
LO Frequency Range	0.04		2.5	GHz
IF Frequency Range	DC		1,000	MHz
Impedance		50		Ohms
Conversion Loss		8	9.5	dB
LO to RF Isolation	22	37		dB
LO to IF Isolation	20	35		dB
RF Port VSWR		2.1:1	3.5:1	
IF Port VSWR		1.5:1	2:1	
Input at IP3	+23	+26		dBm
RF Input Power		+7	+9	dBm
LO Input Power		+13		dBm

### Mechanical Specifications

#### Size

Weight

0.091 lbs [41.28 g]

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### Configuration

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

### Environmental Specifications

#### Temperature

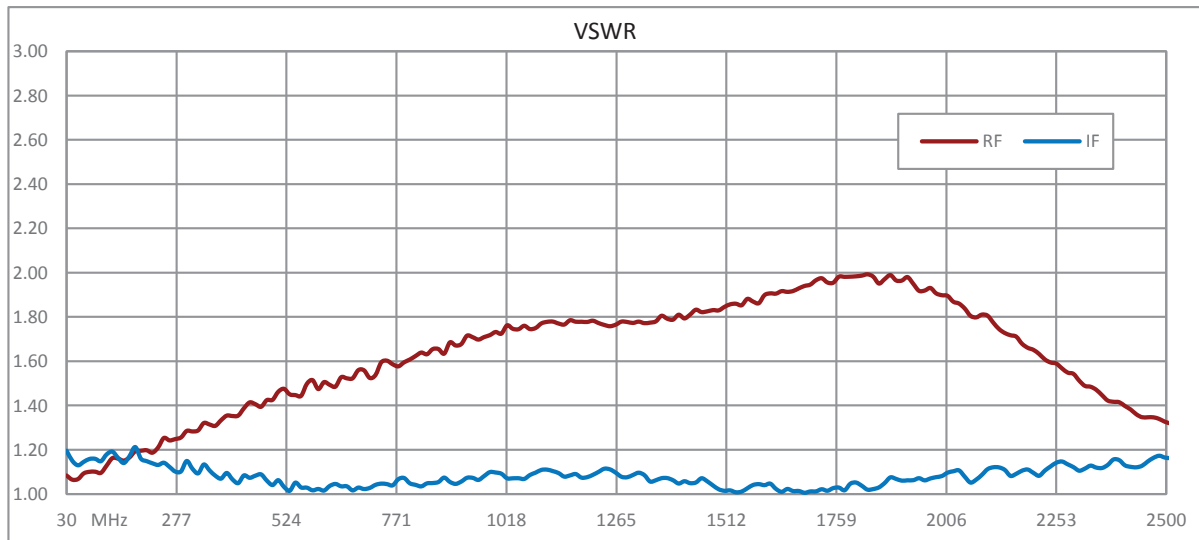
Operating Range	-40 to +85 deg C
Storage Range	-55 to +100 deg C
Humidity	MIL-STD-202F, Method 103B, Condition B
Shock	MIL-STD-202F, Method 213B, Condition B
Vibration	MIL-STD-202F, Method 204D, Condition B
Altitude	MIL-STD-202F, Method 105C, Condition B

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

### Plotted and Other Data

Notes:

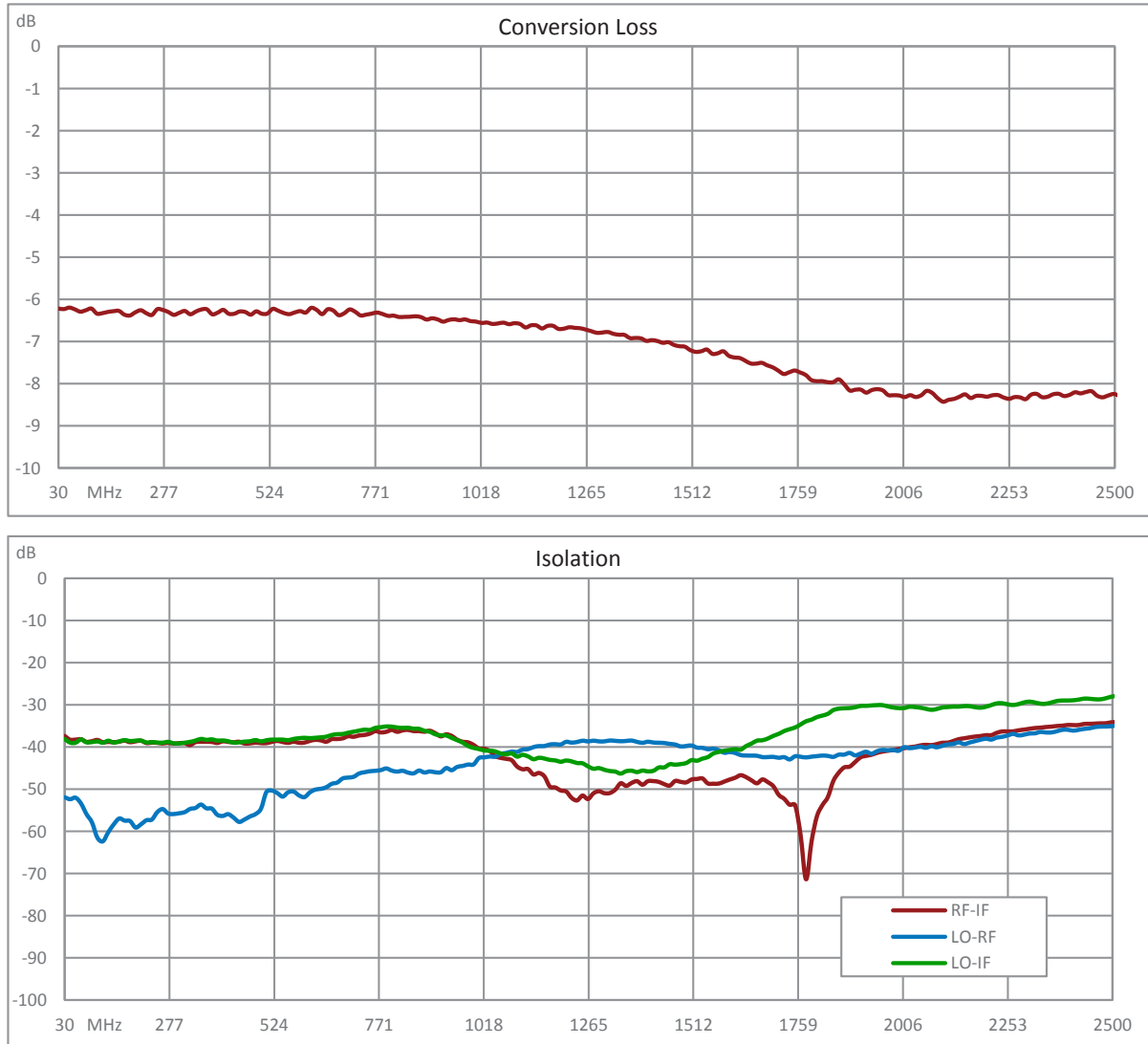
### Typical Performance Data



SMA Mixer from 40 MHz to 2.5 GHz with an IF Range from DC to 1 GHz and LO Power of +13 dBm



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SMA Mixer from 40 MHz to 2.5 GHz with an IF Range from DC to 1 GHz and LO Power of +13 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.

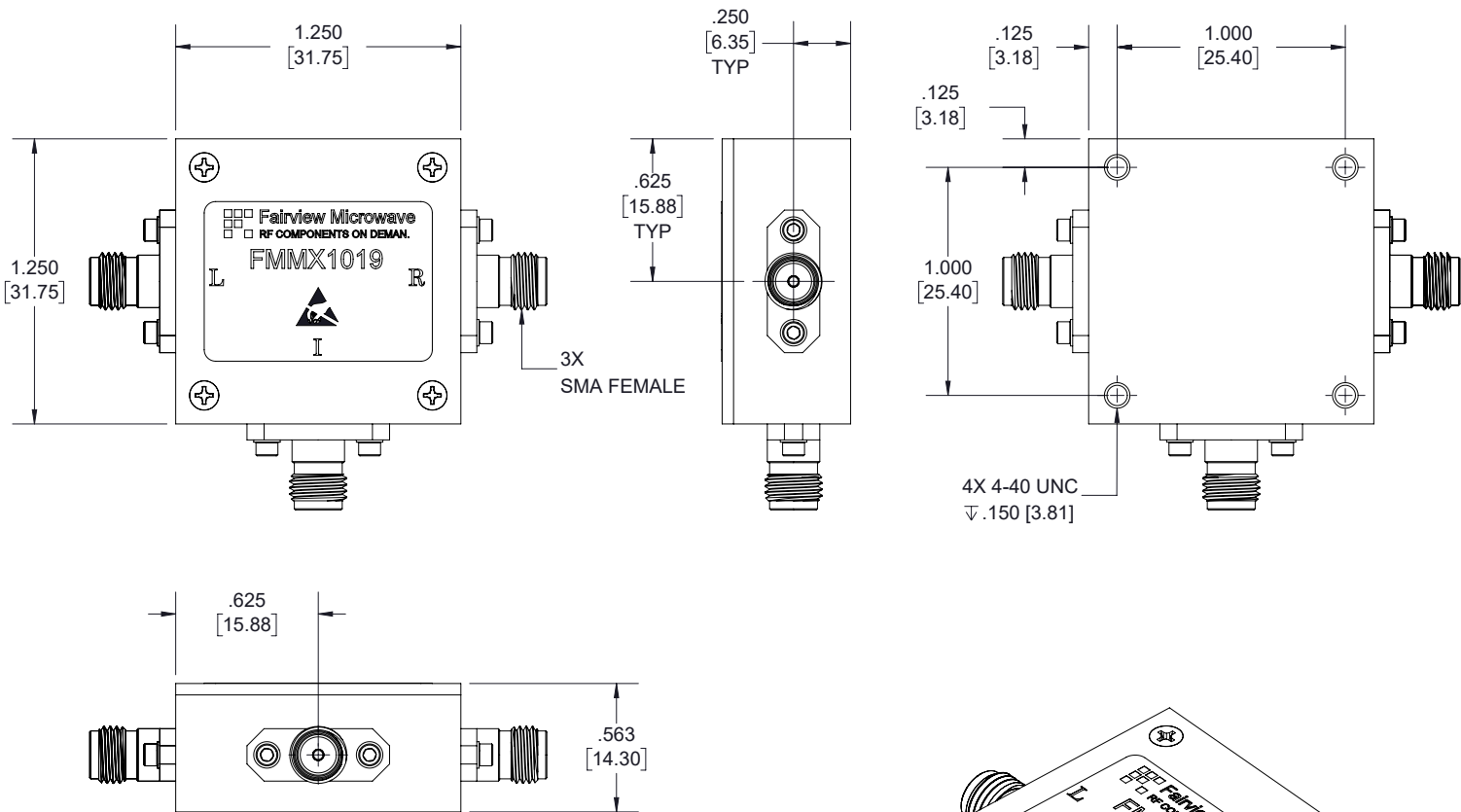
For additional information on this product, please click the following link: [SMA Mixer from 40 MHz to 2.5 GHz with an IF Range from DC to 1 GHz and LO Power of +13 dBm FMMX1019](https://www.fairviewmicrowave.com/sma-mixer-13-dbm-fmmx1019-p.aspx)

URL: <https://www.fairviewmicrowave.com/sma-mixer-13-dbm-fmmx1019-p.aspx>

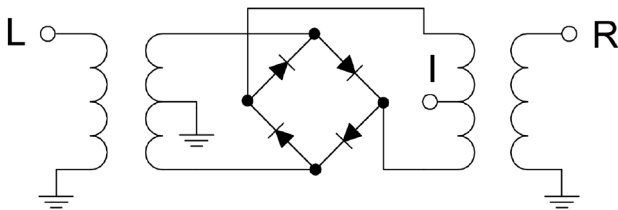
The information contained within this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part in order to implement improvements. Fairview Microwave reserves the right 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 liability arising out of the use of any part or document.

FMMX1019 CAD Drawing

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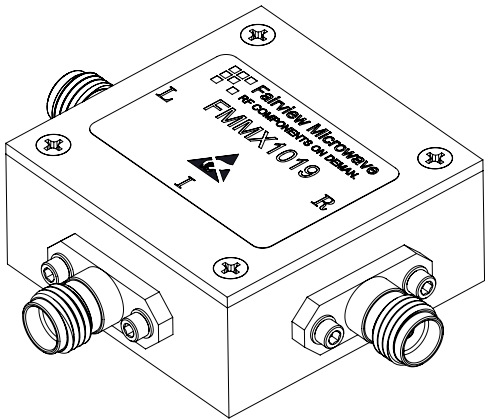
SCHEMATIC




STANDARD TOLERANCES

.X ±0.2  
.XX ±0.01  
.XXX ±0.005

\*STANDARD TOLERANCES APPLY  
ONLY TO DIMENSIONS IN INCHES



 <b>Fairview Microwave</b> 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 FMMX1019			CAGE CODE 3FKR5		
		CAD FILE	04/26/18	SHEET	1 OF 1	SCALE	N/A
						SIZE	A
							7361