

## Field Replaceable SMA Mixer from 2 GHz to 18 GHz with an IF Range from 1 GHz to 6 GHz and LO Power of +10 dBm

The FMMX1005 is a broadband triple balanced mixer that operates across an RF and LO frequency range from 2 to 18 GHz with an IF frequency range of 1 to 6 GHz and supports an LO drive level of +10 dBm typical. The 50 ohm design utilizes high performance GaAs Schottky diodes in a balanced configuration. Exceptional typical performance includes 7 dB conversion loss, 23 dB LO to RF Isolation, and 20 dB LO to IF isolation. The compact and rugged drop-in pin package supports field replaceable SMA connectors, operates over a temperature range of 0°C to +50°C and is designed to meet MIL-STD-202 environmental test conditions for Humidity, Shock, Vibration, and Altitude for high reliability.



### Features:

- Triple Balanced Mixer Module
- RF/LO Frequency 2 to 18 GHz
- Wide IF Bandwidth 1 to 6 GHz
- Balanced Design utilizes GaAs Schottky Diodes
- No external components or matching circuitry
- MIL-Spec Compliant
- LO Drive level +10 dBm
- Low Conversion loss 7dB
- High LO/RF Isolation >20 dB
- Field Replaceable SMA Connectors
- RF/IF Input up to +10 dBm
- Operating Temperature Range 0°C to +50°C

### Applications:

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

### Electrical Specifications +25°C, 50 Ohm System

Description	Min	Typ	Max	Units
RF Frequency Range	2		18	GHz
LO Frequency Range	2		18	GHz
IF Frequency Range	1		6	GHz
Impedance		50		Ohms
Conversion Loss		7		dB
LO to RF Isolation		20		dB
LO to IF Isolation		23		dB
RF Input Power			+10	dBm
LO Input Power		+10		dBm
IF Input Power			+10	dBm

### Mechanical Specifications

Weight 0.034 lbs [15.42 g]

#### Configuration

Design Triple Balanced  
 Package Type Connectorized  
 Connector Option Field Replaceable  
 RF Connector SMA Female  
 LO Connector SMA Female  
 IF Connector SMA Female

### Environmental Specifications

#### Temperature

Operating Range 0 to +50 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

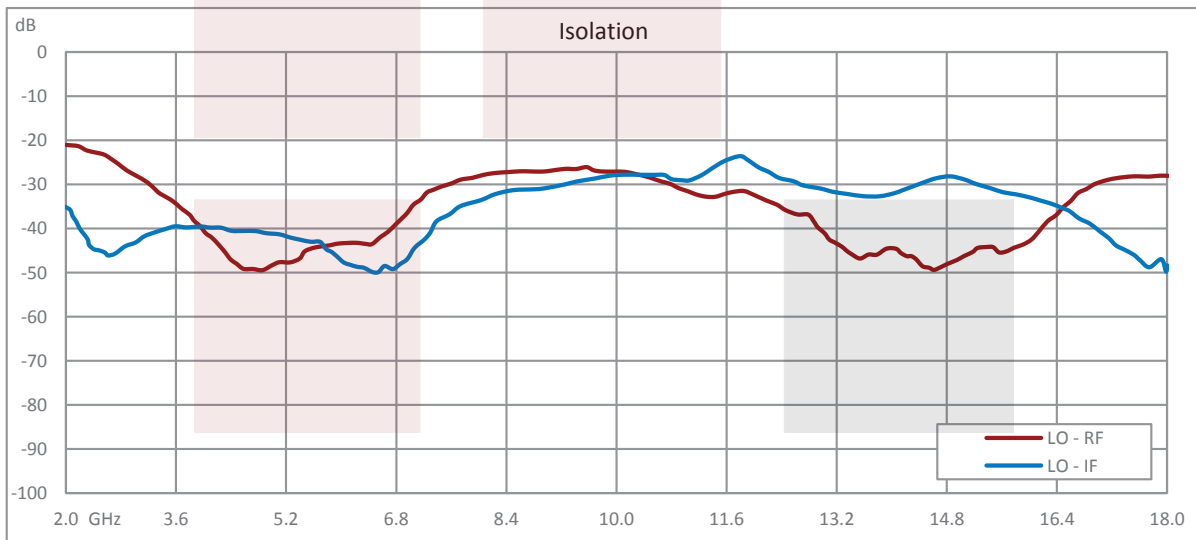
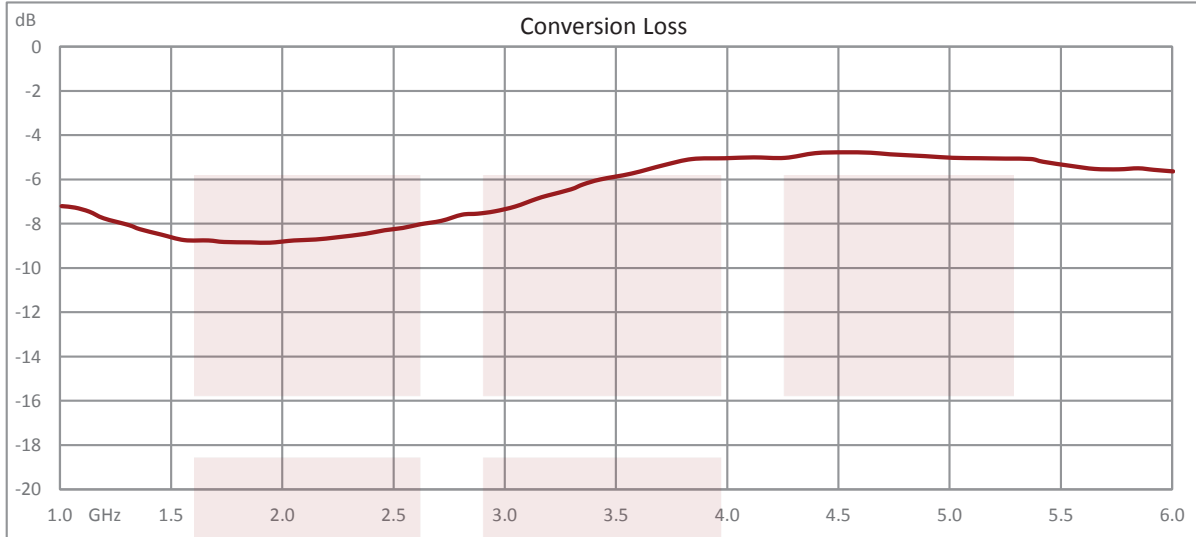
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**Compliance Certifications** (see [product page](#) for current document)

**Plotted and Other Data**

Notes:

**Typical Performance Data**



Field Replaceable SMA Mixer from 2 GHz to 18 GHz with an IF Range from 1 GHz to 6 GHz and LO Power of +10 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.

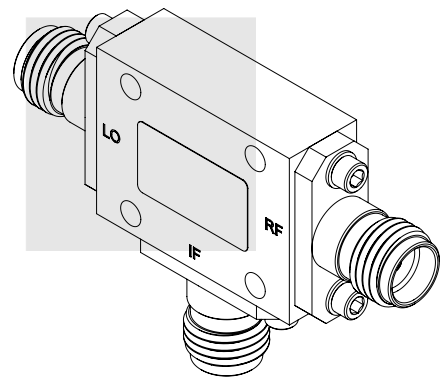
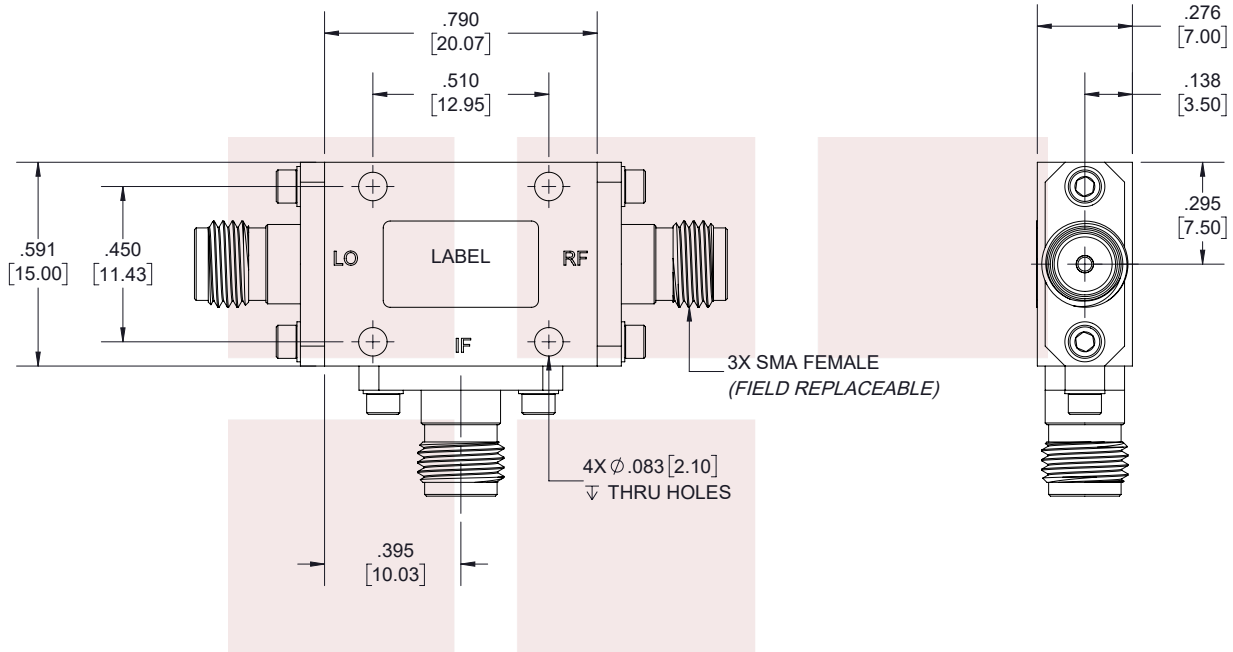
For additional information on this product, please click the following link: [Field Replaceable SMA Mixer from 2 GHz to 18 GHz with an IF Range from 1 GHz to 6 GHz and LO Power of +10 dBm FMMX1005](#)

URL: <https://www.fairviewmicrowave.com/field-replaceable-sma-mixer-10-dbm-fmmx1005-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.



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	11/08/19	T.GALLA



**LABEL**

FAIRVIEW MICROWAVE  
 FMMX1005  
 D/C: YYWW

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**TITLE**

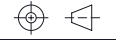
Field Replaceable SMA Mixer from 2 GHz to 18 GHz with an IF Range from 1 GHz to 6 GHz and LO Power of +10 dBm

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES: CABLE LENGTH (L) TOLERANCES:

.X = ±.2 [5.08]	FRACTIONS ± 1/32	L ≤ 12 [305] = +1 [25] / -0
.XX = ±.02 [.51]	ANGLES ± 1°	12 [305] < L ≤ 60 [1524] = +2 [51] / -0
.XXX = ±.005 [.13]		60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
		120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
		300 [7620] < L = +5%L / -0

**THIRD-ANGLE PROJECTION**



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SHEET 1 OF 1

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

SCALE N/A

SIZE A	CAGE CODE 3FKR5	DRAWN BY K.DANG	PART NUMBER FMMX1005	REV A
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T-Rev.D