

Field Replaceable SMA Mixer from 6 GHz to 18 GHz with an IF Range from DC to 3 GHz and LO Power of +6 dBm

The FMMX1007 is a broadband double balanced mixer that operates across an RF and LO frequency range from 6 to 18 GHz with an IF frequency range of DC to 3 GHz and supports an LO drive level of +6 dBm typical. The 50 ohm design utilizes high performance GaAs Schottky diodes in a balanced configuration that's DC coupled. Exceptional typical performance includes 7.5 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.



Electrical Specifications +25°C, 50 Ohm System

| Description | Min | Typ | Max | Units |
|--------------------|-----|-----|-----|-------|
| RF Frequency Range | 6 | | 18 | GHz |
| LO Frequency Range | 6 | | 18 | GHz |
| IF Frequency Range | DC | | 3 | GHz |
| Impedance | | 50 | | Ohms |
| Conversion Loss | | 7.5 | | dB |
| LO to RF Isolation | | 23 | | dB |
| LO to IF Isolation | | 20 | | dB |
| RF Input Power | | | +10 | dBm |
| LO Input Power | | +6 | | dBm |
| IF Input Power | | | +10 | dBm |

Mechanical Specifications

Weight 0.022 lbs [9.98 g]

Configuration

| | |
|------------------|-------------------|
| Design | Double 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 |

Features:

- Double Balanced Mixer Module
- RF/LO Frequency 6 to 18 GHz
- Wide IF Bandwidth DC to 3 GHz
- Balanced Design utilizes GaAs Schottky Diodes
- No external components or matching circuitry
- MIL-Spec Compliant
- DC Coupled Design
- LO Drive level +6 dBm
- Low Conversion loss 7.5 dB
- 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

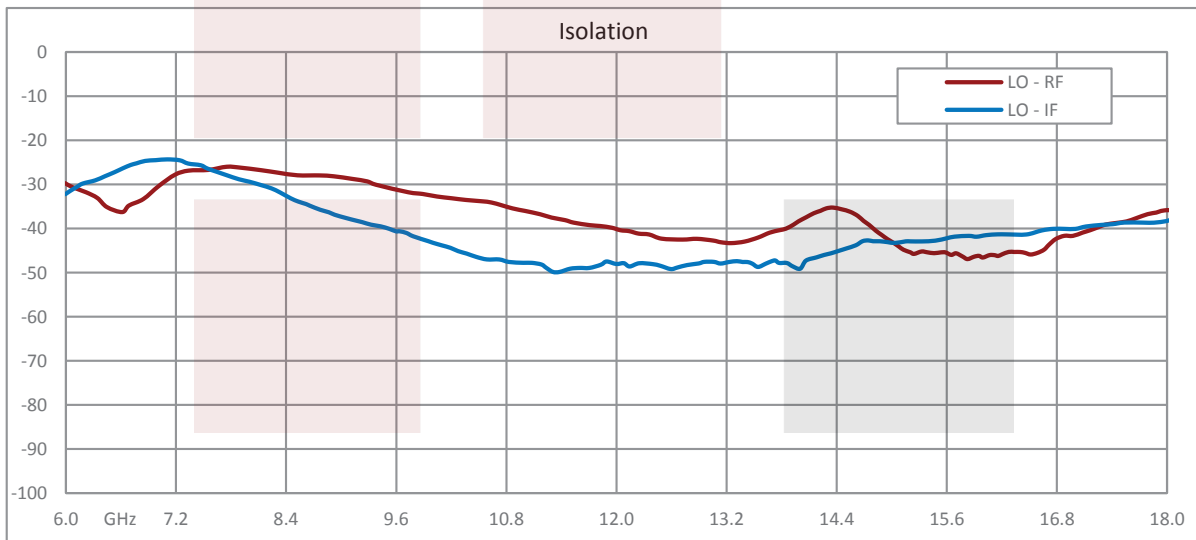
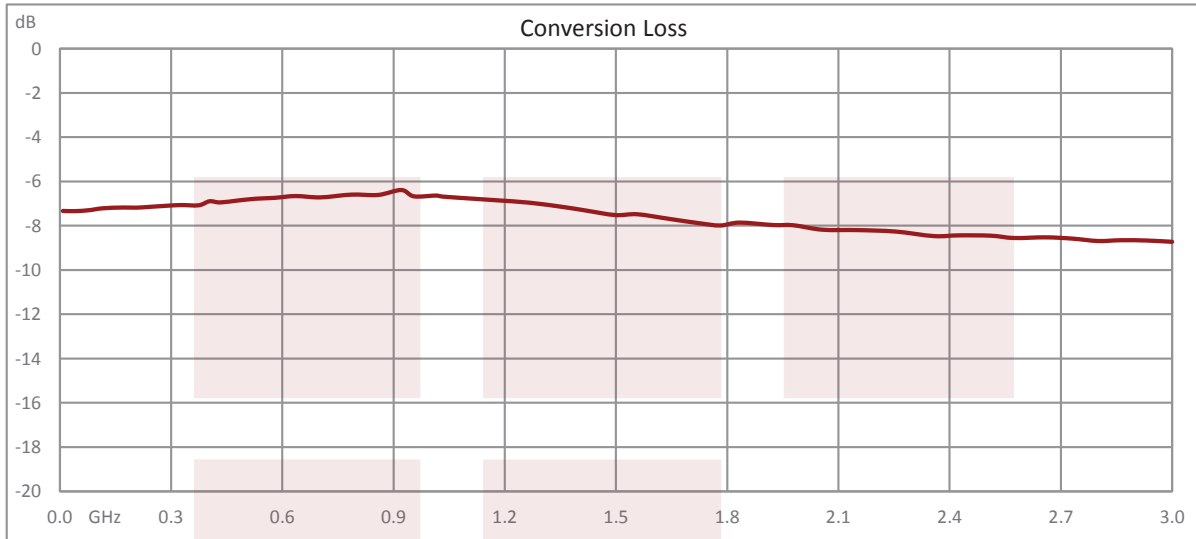
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Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data



Field Replaceable SMA Mixer from 6 GHz to 18 GHz with an IF Range from DC to 3 GHz and LO Power of +6 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.

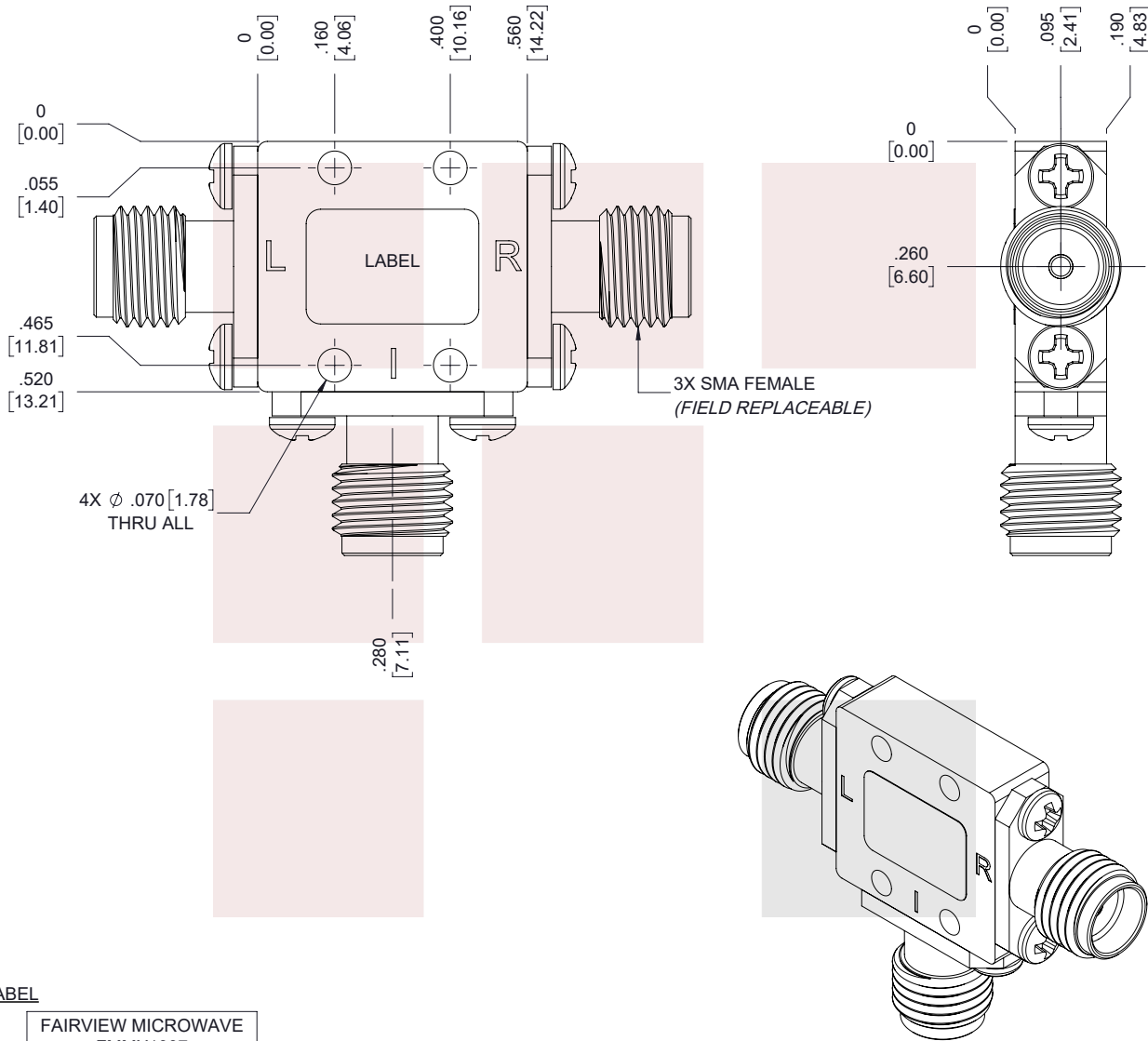
For additional information on this product, please click the following link: [Field Replaceable SMA Mixer from 6 GHz to 18 GHz with an IF Range from DC to 3 GHz and LO Power of +6 dBm FMMX1007](#)

URL: <https://www.fairviewmicrowave.com/field-replaceable-sma-mixer-6-dbm-fmmx1007-p.aspx>

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



LABEL

FAIRVIEW MICROWAVE
 FMMX1007
 D/C: YYWW

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TITLE
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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] | | 12 [305] < L ≤ 60 [1524] | = +2 [51] / -0 |
| .XXX = ±.005 [.13] | ANGLES ± 1° | 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 FMMX1007 | REV A |
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T-Rev.D