

2.92mm Female Field Replaceable Active 2x Frequency Multiplier with 18 GHz to 29 GHz Output and +11 dBm Output Power

The FMFX2000 is a low noise X2 Active Broadband Frequency Multiplier Module that covers a wide output frequency bandwidth from 18 GHz to 29 GHz. The design utilizes advanced GaAs HBT MMIC semiconductor technology that produces low additive SSB phase noise performance with a typical level of -132 dBc/Hz at 100 kHz offset. Additional typical performance includes an output power level of +16 dBm with an input signal of +3 dBm. Input/output ports are matched for 50 ohms and are DC blocked. The design requires a single +5V DC supply. The compact drop-in package is RoHS compliant and hermetically sealed with field replaceable 2.92mm connectors. And for added confidence, this rugged package assembly is designed to meet MIL-STD-883 test conditions for Hermeticity and Temperature Cycle.

Electrical Specifications (TA= 25°C, VDC1 = 5 Vdc)

Description	Min	Typ	Max	Units
Input Frequency Range	9		14.5	GHz
Output Frequency Range	18		29	GHz
Impedance		50		Ohms
Output Power	+11	+16		
Operating DC Voltage 1		5		V

Performance by Frequency

Description	Min.	Typ.	Max.	Units
Frequency Range, Input		9 - 14.5		GHz
Frequency Range, Output		18 - 29		GHz
Output Power	+11	+16		dBm
Fo Isolation (With Respect To Output Level)		20		dBc
3Fo Isolation (With Respect To Output Level)		20		dBc
Input Return Loss		10		dB
Output Return Loss		10		dB
SSB Phase Noise (100 KHz Offset)		-132		dBc/Hz
Supply Current		82		mA

Mechanical Specifications

Size

Length	1.086 in [27.58 mm]
Width	0.85 in [21.59 mm]
Height	0.28 in [7.11 mm]
Weight	1.25 lbs [566.99 g]
Input Connector	Field Replaceable 2.92mm Female
Output Connector	Field Replaceable 2.92mm Female

Environmental Specifications

Temperature

Operating Range	-55 to +85 deg C
Storage Range	-65 to +150 deg C



Features:

- X2 Frequency Multiplier
- Wide Frequency Band
- GaAs HBT MMIC Technology
- Low Phase Noise -132 dBc/Hz @ 100 kHz offset
- Output Power +16 dBm
- Single +5V Bias Voltage
- Integrated DC Blocking Capacitors
- Hermetically Sealed Module
- Mil Spec Compliant
- Field Replaceable 2.92mm Connectors
- -55°C to +85°C Operating Temperature

Applications:

- Electronic Warfare
- Electronic Countermeasures
- Point-To-Point Radio
- Point-To-Multipoint Radio
- VSAT Radios
- Fiber Optic
- Space Systems
- Test Instrumentation
- Telecom Infrastructure

Fairview Microwave
 301 Leora Ln., Suite 100
 Lewisville, TX 75056
 Tel: 1-800-715-4396 / (972) 649-6678
 Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

ESD Sensitivity

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

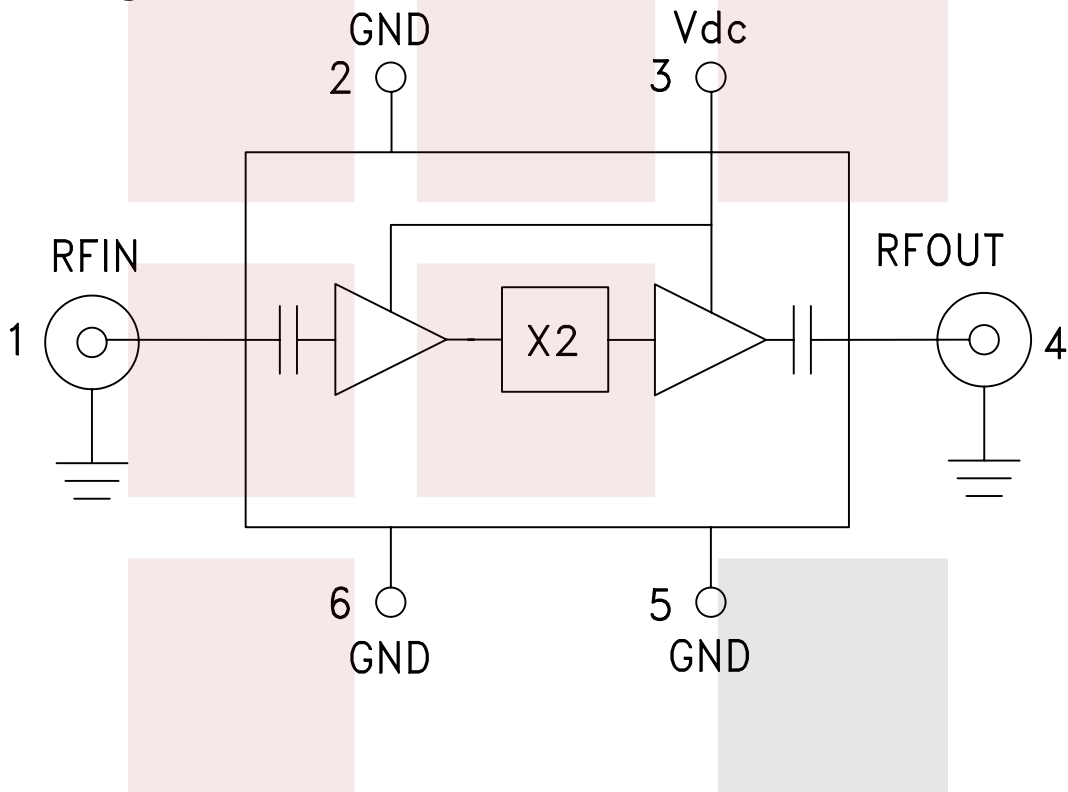


Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

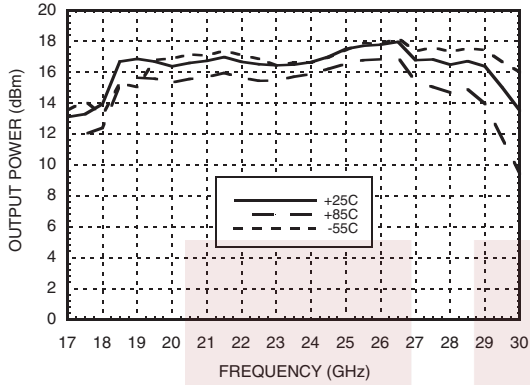
Notes:

Functional Block Diagram

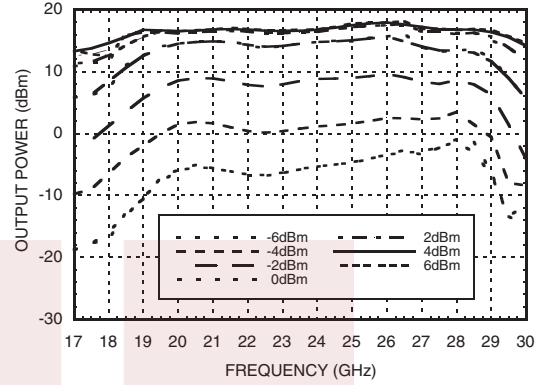


Typical Performance Data

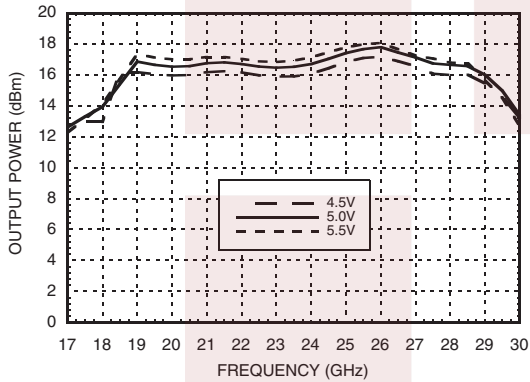
Output Power vs. Temperature @ 3 dBm Drive Level



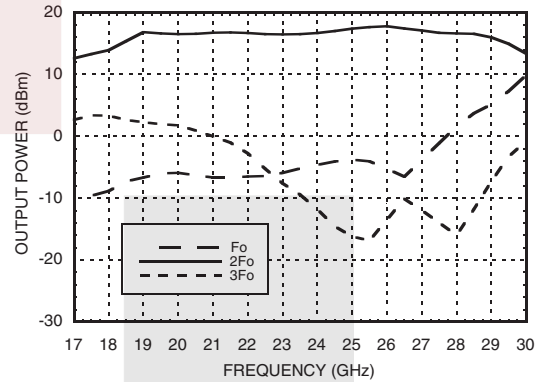
Output Power vs. Drive Level



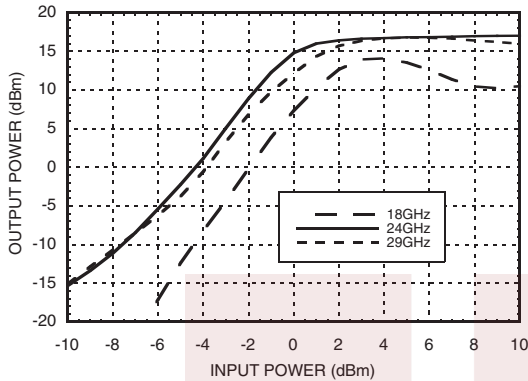
Output Power vs. Supply Voltage @ 3 dBm Drive Level



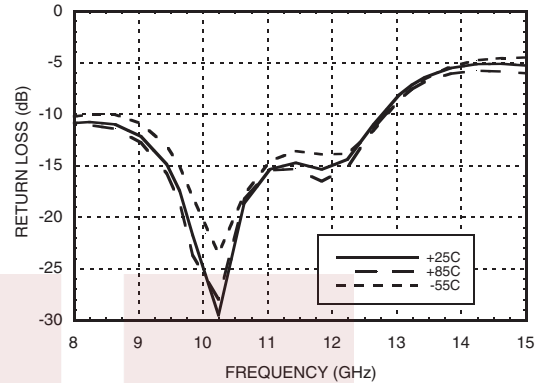
Isolation @ 3 dBm Drive Level



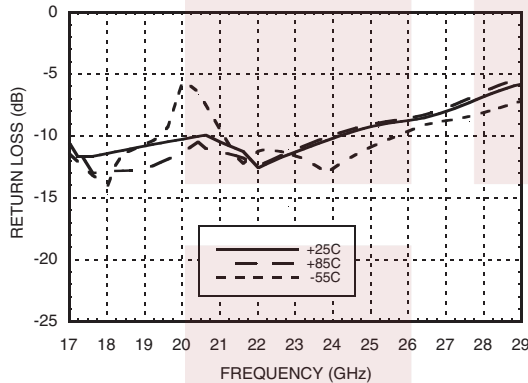
Output Power vs. Input Power



Input Return Loss vs. Temperature @ 0 dBm Drive Level



Output Return Loss vs. Temperature @ 0 dBm Drive Level



2.92mm Female Field Replaceable Active 2x Frequency Multiplier with 18 GHz to 29 GHz Output and +11 dBm Output Power 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: [2.92mm Female Field Replaceable Active 2x Frequency Multiplier with 18 GHz to 29 GHz Output and +11 dBm Output Power FMFX2000](https://www.fairviewmicrowave.com/2.92mm-field-replaceable-active-2x-frequency-multiplier-29-ghz-11-dbm-fm-fx2000-p.aspx)

URL: <https://www.fairviewmicrowave.com/2.92mm-field-replaceable-active-2x-frequency-multiplier-29-ghz-11-dbm-fm-fx2000-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.

