

2x Active Frequency Multiplier, 18 GHz to 29 GHz Output Frequency, 12.0 dB Conversion Gain, 2.92mm Output

The FMFX2027 is an active Frequency Multiplier (2x) module that covers a broad output frequency bandwidth from 18 GHz to 29 GHz. Typical performance includes 12 dB conversion gain, 20 dB fundamental Isolation, with an RF input drive level of +3 dBm. DC bias is +12Vdc with 95 mA DC current. Maximum RF input power is +13 dBm with an operational temperature range of -40°C to +85°C. The rugged and compact package assembly supports an input SMA female connector and output 2.92mm female connector. And for highly reliable operation, the model is designed to meet a variety of MIL-STD-202 test conditions including shock, vibration, altitude, and humidity.



Electrical Specifications (TA= 25°C, VDC1 = 12 Vdc, IDC1 = 95 mA)

Description	Min	Typ	Max	Units
Input Frequency Range	9		14.5	GHz
Output Frequency Range	18		29	GHz
Impedance		50		Ohms
Input Power (CW)	+0	+3	+6	dBm
Output Power	+10	+14		dBm
Conversion Gain (Pin = +3 dBm)	8	12		dB
F0 Isolation* (Fin=12GHz/Fout=36GHz)	15	20		dB
3F0 Isolation* (Fin=12GHz/Fout=36GHz)	15	20		dB
Phase Noise @100kHz Offset		-132		dBc/Hz
Input VSWR(Fin=12GHz)		1.5:1	2:1	
Output VSWR(Fout=24GHz)		2.2:1	2.7:1	
Operating DC Voltage 1	9	12	15	V
Operating DC Current 1		95	110	mA

*Isolation with respect to desired frequency output power level at 24GHz

Mechanical Specifications

Size	
Length	1.25 in [31.75 mm]
Width	1.25 in [31.75 mm]
Height	0.563 in [14.3 mm]
Weight	0.009 lbs [4.08 g]
Package Type	Drop-In
Output Connector	2.92mm Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +105 deg C

Humidity	MIL-STD-202, 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:

- 2x Active Frequency Multiplier
- 9 GHz to 14.5 GHz Input Frequency
- 18 GHz to 29 GHz Output Frequency
- Conversion Gain 12 dB typ
- Fundamental Isolation 20 dB typ
- RF Input Drive Level +3 dBm
- Max RF Input Power +13 dBm
- DC Bias +12Vdc @ 95 mA
- SMA Female Input and 2.92mm Female Output Connectors
- -40°C to +85°C Operating Temperature
- RoHS & REACH Compliant
- 50 Ohm Design
- Rugged Design meets MIL-STD-202 Test Conditions

Applications:

- Aerospace & Defense
- Test & Measurement
- Microwave Radio Systems
- Military & Commercial Communication Systems
- Research & Development
- SATCOM
- Wireless Communications

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

Plotted and Other Data

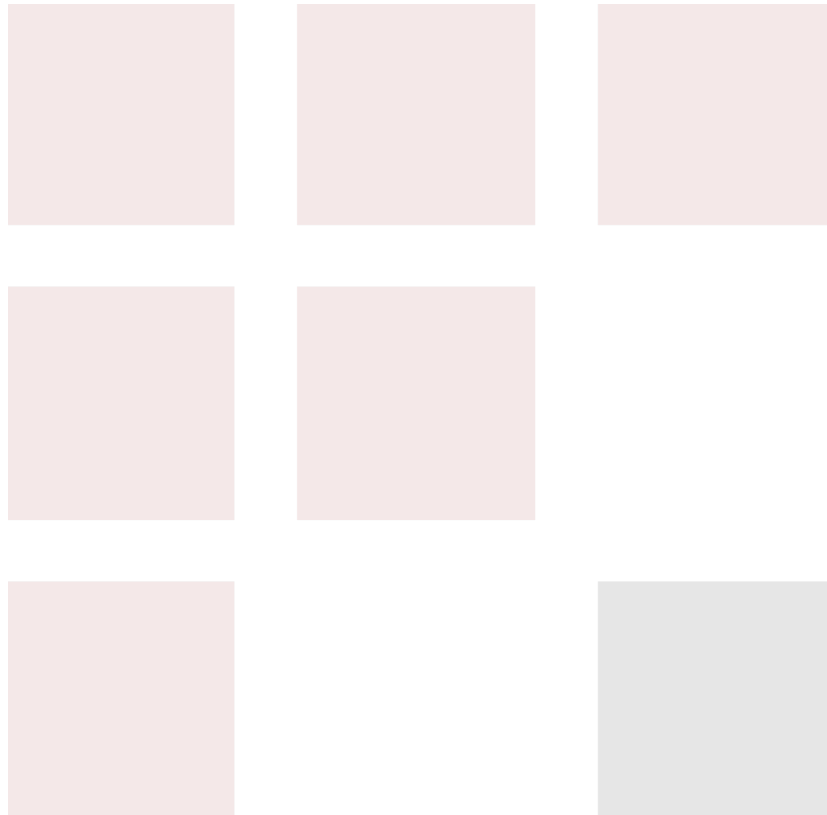
Notes:

Absolute Maximum Rating

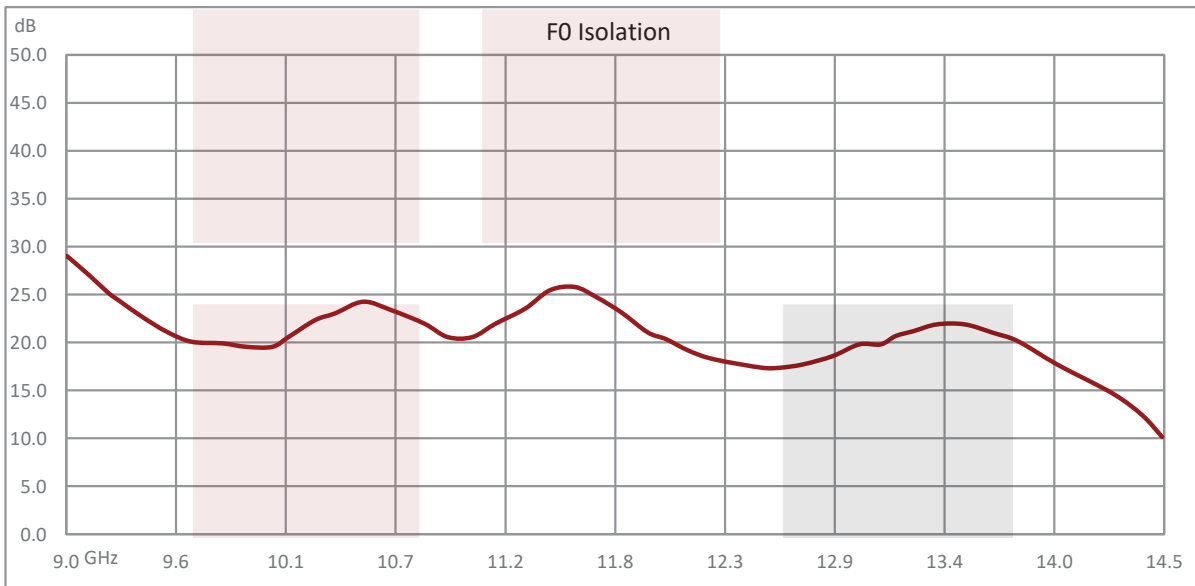
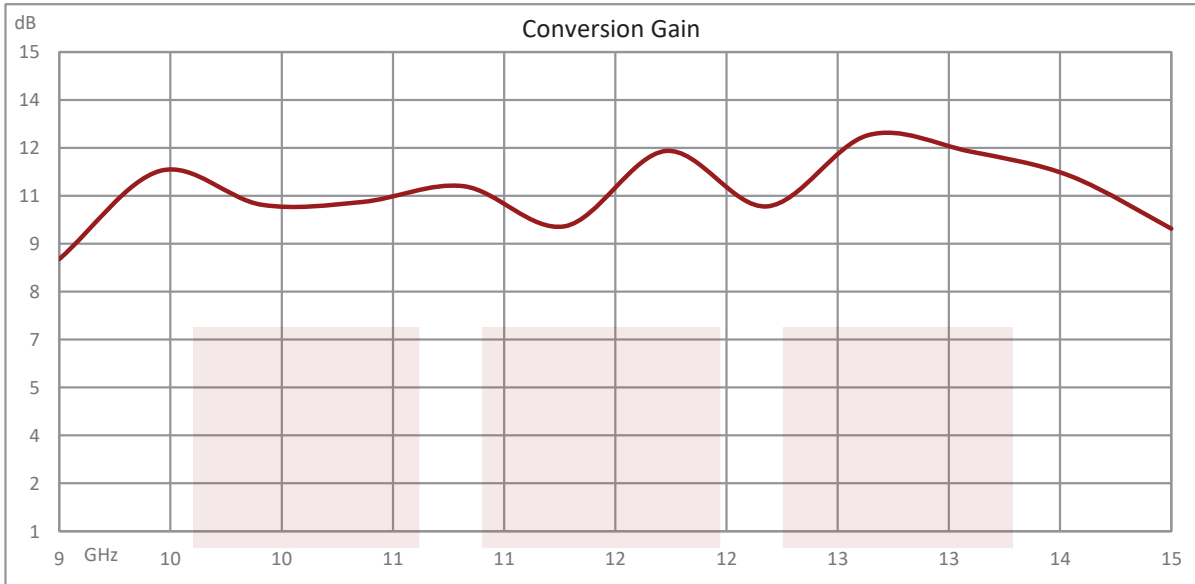
Parameter	Absolute Maximum
RF Input Power	+13dBm
DC Supply Voltage	+25V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

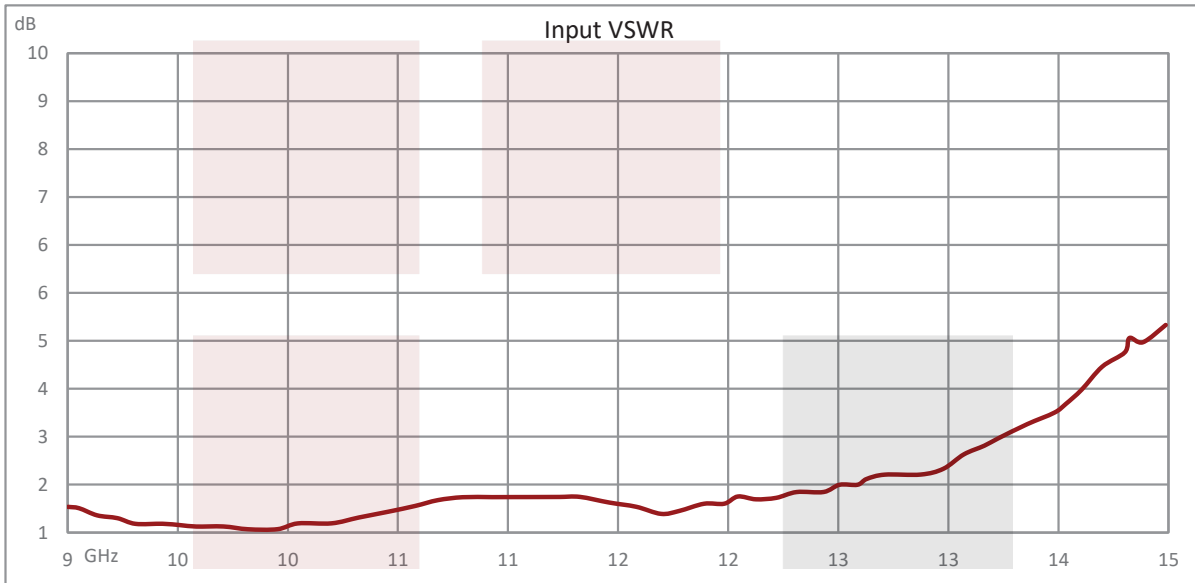
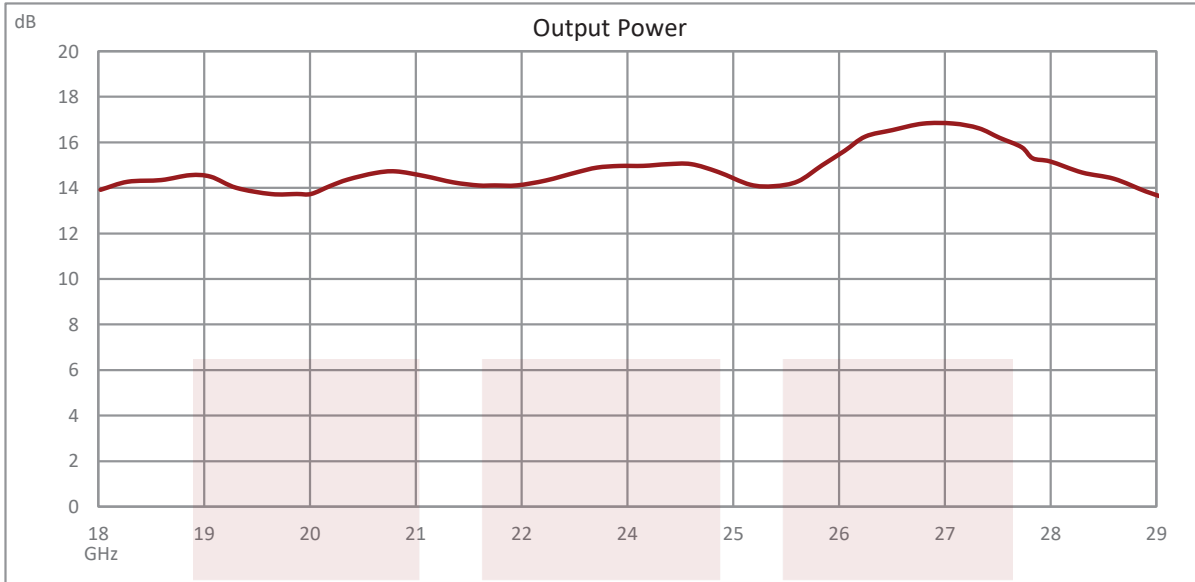


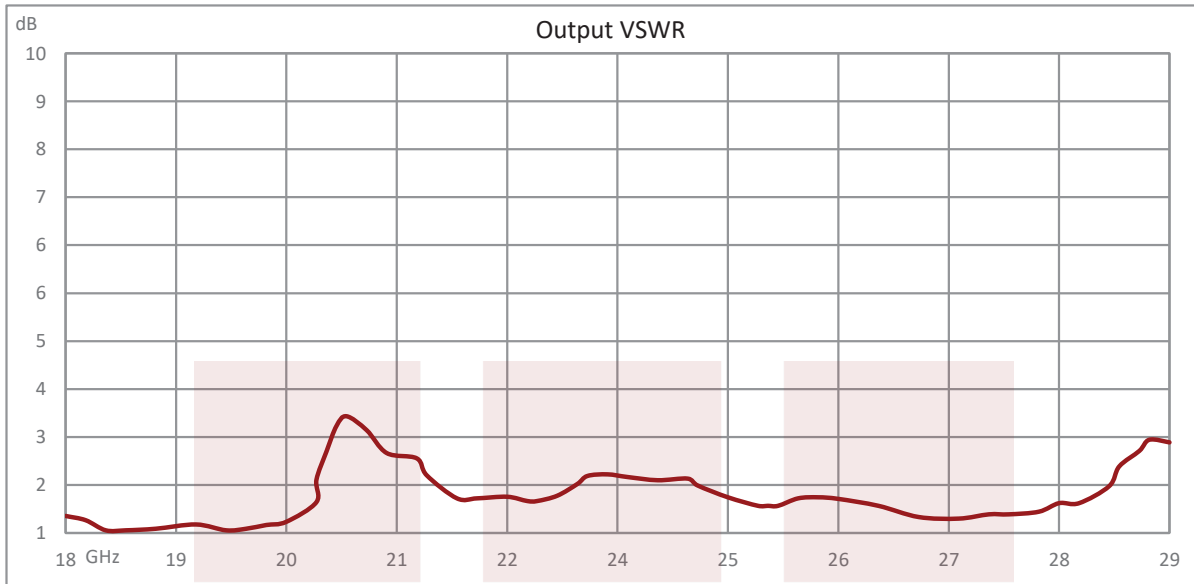
ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved



Typical Performance Data







2x Active Frequency Multiplier, 18 GHz to 29 GHz Output Frequency, 12.0 dB Conversion Gain, 2.92mm Output 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: [2x Active Frequency Multiplier, 18 GHz to 29 GHz Output Frequency, 12.0 dB Conversion Gain, SMA FMFX2027](#)

URL: <https://www.fairviewmicrowave.com/2.92mm-active-2x-frequency-multiplier-29-ghz-10-dbm-fmfx2027-p.aspx>

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