

**Field Replaceable SMA Frequency
 Divider Divide by 8 Prescaler Module
 Operating from 500 MHz to 18 GHz**

The FMFD8000 is a low noise Divide-by-8 Static Prescaler Module that covers a wide input frequency bandwidth from 0.5 GHz to 18 GHz. The design utilizes advanced GaAs HBT MMIC semiconductor technology that produces low additive SSB phase noise performance with a typical level of -150 dBc/Hz at 100 kHz offset. Additional typical performance includes an output power level of -4 dBm and reverse leakage up to 55 dB. 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 SMA 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, Vd1 = 5 Vdc, Id1 = 98 mA)

Description	Min	Typ	Max	Units
Input Frequency (Sine Wave)	0.5		18	GHz
Impedance		50		Ohms
Input Power (CW)	-20			dBm
Output Power	-7	-4		dBm
Reverse Leakage		55		dB
Operating DC Voltage 1		5		V
Operating DC Current 1		98		mA

Mechanical Specifications

Size	
Length	0.64 in [16.26 mm]
Width	0.59 in [14.99 mm]
Height	0.29 in [7.37 mm]
Body Material and Plating	Nickel, Gold
Input Connector	Field Replaceable SMA Female
Output Connector	Field Replaceable SMA Female
Power Supply Connector	Solder Pin

Environmental Specifications

Temperature	
Operating Range	-55 to +85 deg C
Storage Range	-65 to +150 deg C
Temperature Cycling	MIL-STD-883, Method 101C, Cond B
Hermetic Seal	Gross Leak MIL-STD-883 Method 1014C1/Fine Leak MIL-STD-883, Method 1014A2, 5 x 10 ⁻⁸ atm cc
ESD Sensitivity	ESD Class 1A Material, Transport in Approved ESD bags. Handle only in approved ESD Workstation.



Features:

- Divide by 8 Prescaler
- Wide Frequency Band
- GaAs HBT MMIC Technology
- Low Phase Noise -150 dBc/Hz @ 100 kHz offset
- Output Power -4 dBm
- Low Reverse Leakage Level 55 dB typical
- Single +5V Bias Voltage
- Integrated DC Blocking Capacitors
- Hermetically Sealed Module
- Mil Spec Compliant
- Field Replaceable SMA 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

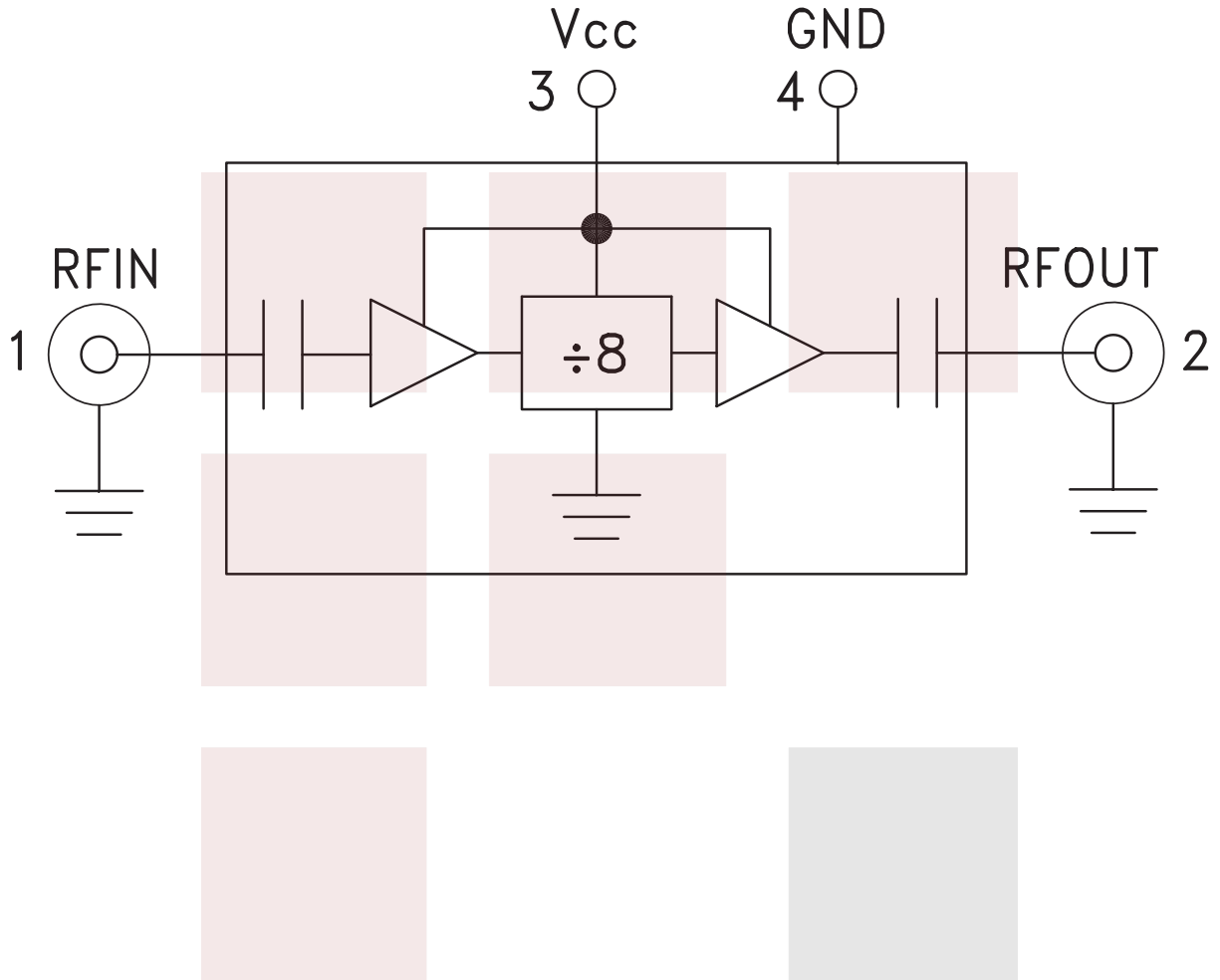
Fairview Microwave
 301 Leora Ln., Suite 100
 Lewisville, TX 75056
 Tel: 1-800-715-4396 / (972) 649-6678
 Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

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

Plotted and Other Data

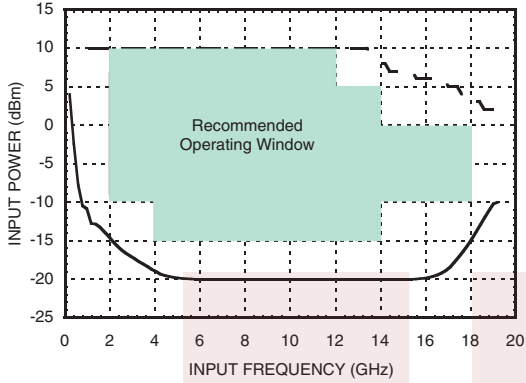
Notes:

Functional Block Diagram

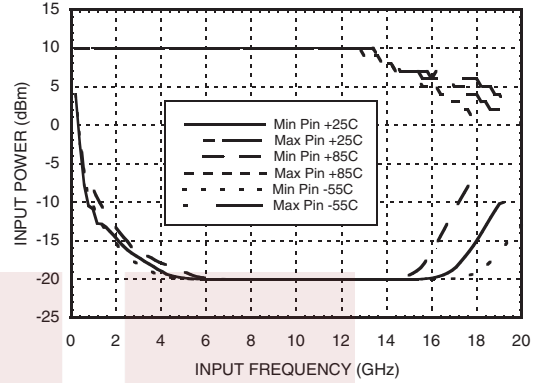


Typical Performance Data

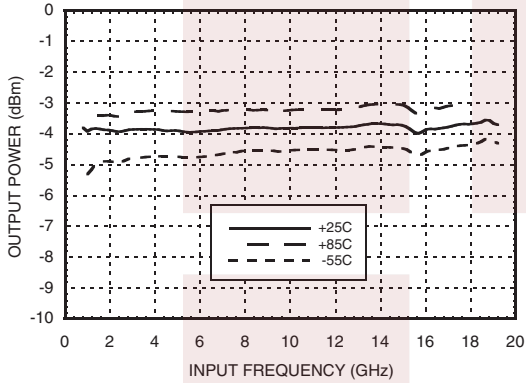
Input Sensitivity Window, $T = 25\text{ }^{\circ}\text{C}$



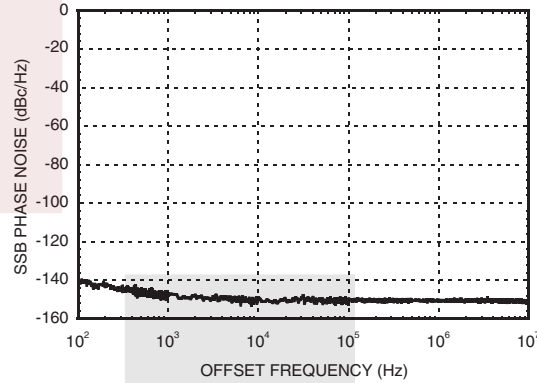
Input Sensitivity vs. Temperature



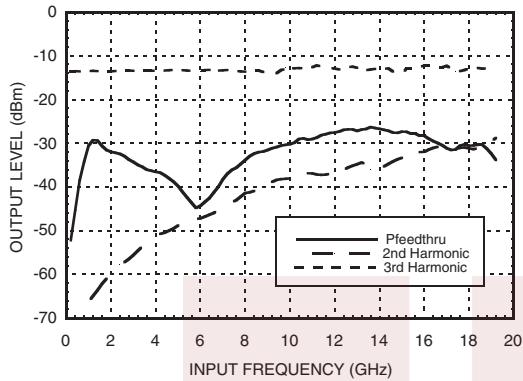
Output Power vs. Temperature



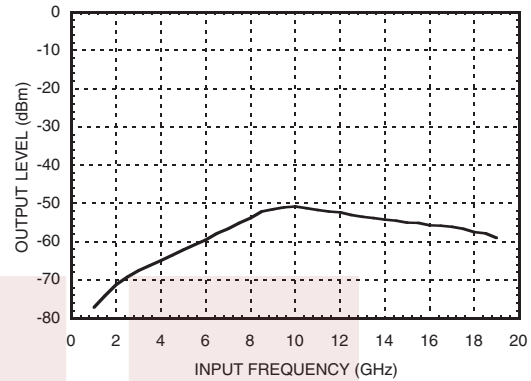
SSB Phase Noise Performance, $P_{in} = 0\text{ dBm}$, $T = 25\text{ }^{\circ}\text{C}$



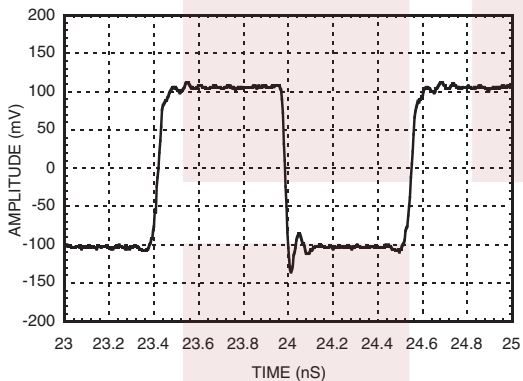
Output Harmonic Content,
 $P_{in} = 0 \text{ dBm}$, $T = 25 \text{ }^\circ\text{C}$



Reverse Leakage, $P_{in} = 0 \text{ dBm}$, $T = 25 \text{ }^\circ\text{C}$



Output Voltage Waveform,
 $P_{in} = 0 \text{ dBm}$, $F_{out} = 882 \text{ MHz}$, $T = 25 \text{ }^\circ\text{C}$

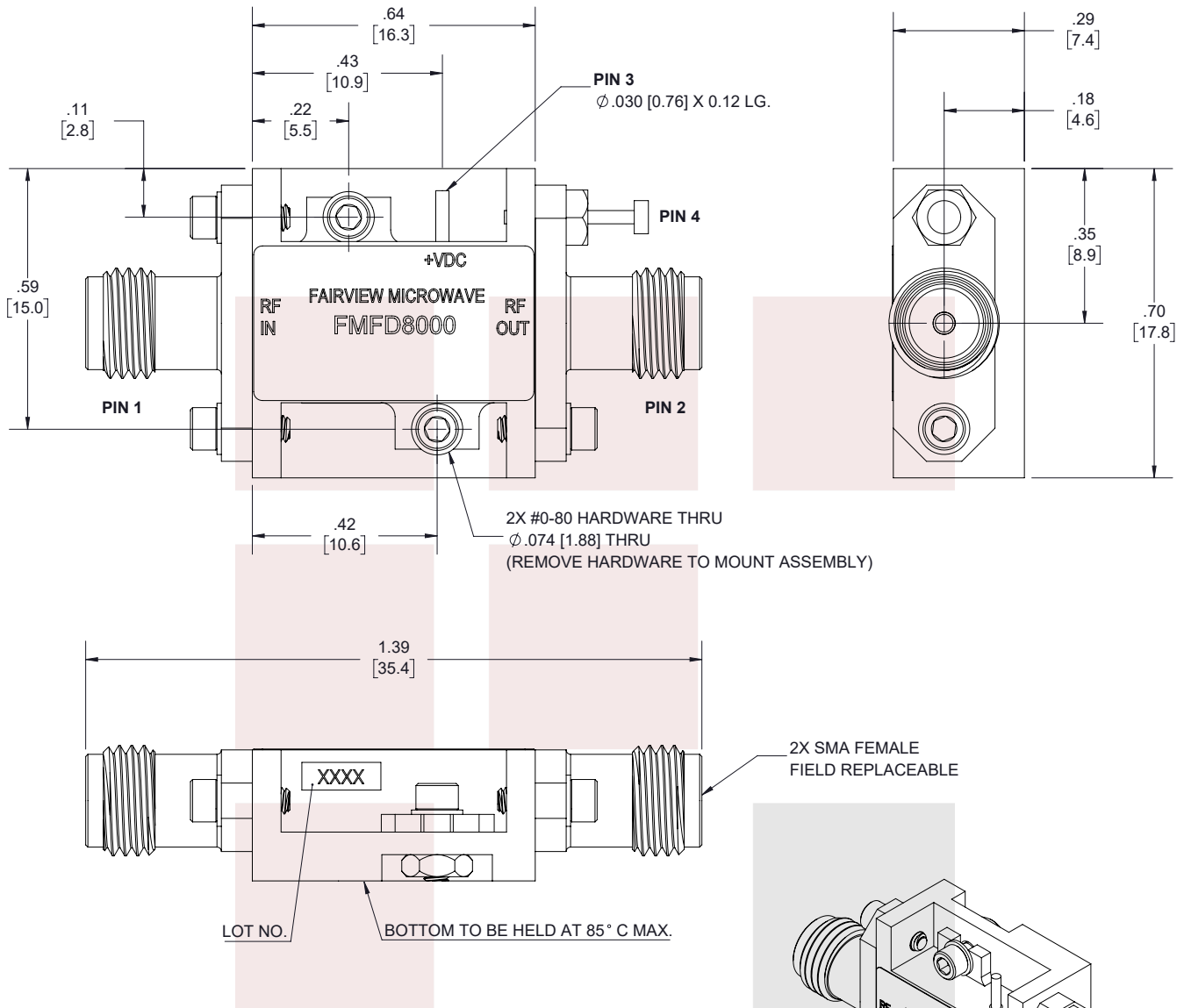


Field Replaceable SMA Frequency Divider Divide by 8 Prescaler Module Operating from 500 MHz to 18 GHz from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [Field Replaceable SMA Frequency Divider Divide by 8 Prescaler Module Operating from 500 MHz to 18 GHz FMFD8000](#)

URL: <https://www.fairviewmicrowave.com/sma-frequency-divider-divide-8-prescaler-module-500-mhz-18-ghz-fmfd8000-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.



STANDARD TOLERANCES	
.X	± 0.2
.XX	± 0.01
.XXX	± 0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

		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	CAGE CODE
Field Replaceable SMA Frequency Divider Divide by 8 Prescaler Module Operating from 500 MHz to 18 GHz		FMFD8000	3FKR5
CAD FILE	05/29/18	SHEET	1 OF 2
SCALE	N/A	SIZE	A
		7361	