

## SMA Frequency Divider Divide by 10 Prescaler Module Operating from 100 MHz to 12.5 GHz

The FMFD1001 is a coaxial packaged Frequency Divider module that operates across a wide input frequency range from 100 MHz to 12.5 GHz and supports a divide ratio of 10. Output Frequency is 10 MHz to 1.25 GHz. Impressive broadband typical performance of this Prescaler includes output power of -1 dBm and SSB phase noise of -144 dBc/Hz at 100 kHz offset. This exceptional technical performance is achieved through the use of a hybrid MIC PCB solder assembly which is RoHS and REACH compliant. This frequency divider design requires +12 Vdc typical bias voltage, operates over maximum temperature range of -40°C to +85°C, and has an absolute maximum rating for input power of +13 dBm. The rugged and compact package supports SMA Female connectors, RFI and Ground Pins. For highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for Humidity, Shock, Vibration, and Altitude.



### Electrical Specifications (TA= 25°C, Vd1 = 12 Vdc, Id1 = 200 mA)

Description	Min	Typ	Max	Units
Input Frequency (Sine Wave)	0.1		12.5	GHz
Output Frequency (Square Wave Output)	0.01		1.25	GHz
Output Power	-4	-1		dBm
Phase Noise @100kHz Offset		-144		dBc/Hz
Operating DC Voltage 1	9	12	15	V
Operating DC Current 1		200	220	mA

### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.1 to 1	1 to 10	10 to 12	12 to 12.5		GHz
Input Power (CW), Max	10	10	5	2		dBm
Input Power (CW), Typ	0	0	0	0		dBm
Input Power (CW), Min	-6	-15	-10	-4		dBm

### Mechanical Specifications

#### Size

Length	1.25 in [31.75 mm]
Width	1.25 in [31.75 mm]
Height	0.563 in [14.3 mm]
Output Connector	SMA Female

### Environmental Specifications

#### Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +125 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

### Features:

- Wide Input Frequency Range: 100 MHz to 12.5 GHz
- Divide-by-10 Prescaler
- Output Frequency 10 MHz to 1.25 GHz
- Output Power: -1 dBm typical
- Low SSB Phase Noise: -144 dBc/Hz @ 100 KHz offset typical
- RoHS & REACH Compliant Assembly
- Bias Voltage: +12 Vdc
- Operational Temperature Range: -40°C to +85°C
- Compact SMA Connectorized Package
- Designed to meet MIL-STD-202 Test Conditions

### Applications:

- PLL Applications
- Test Instrumentation
- Countermeasures
- Point to Point Microwave Radio
- SATCOM
- MILCOM
- Base Stations

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

Altitude

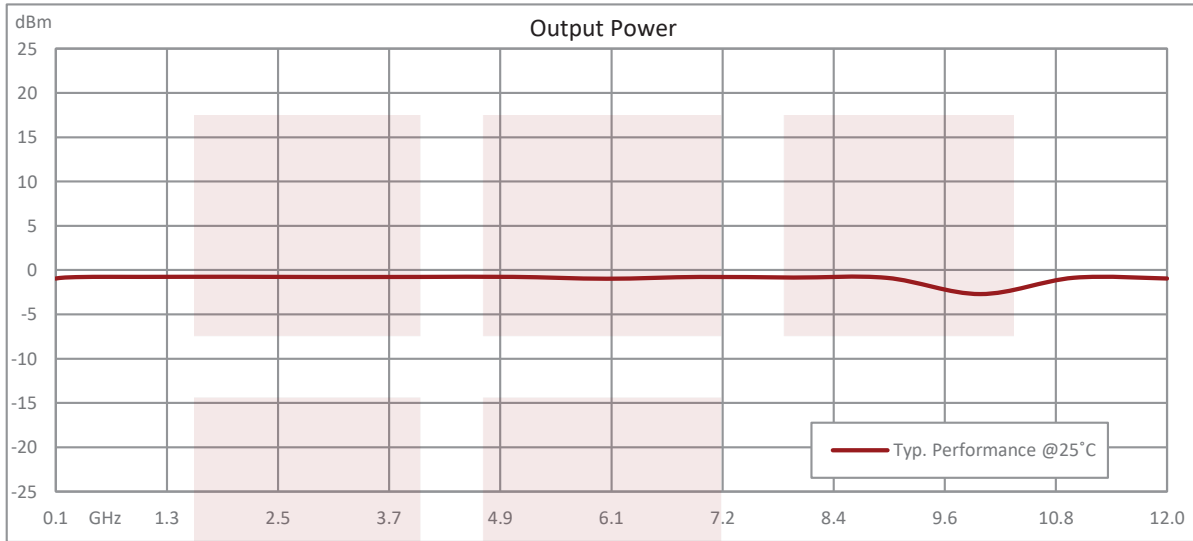
MIL-STD-202F, Method 105C, Condition B

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**

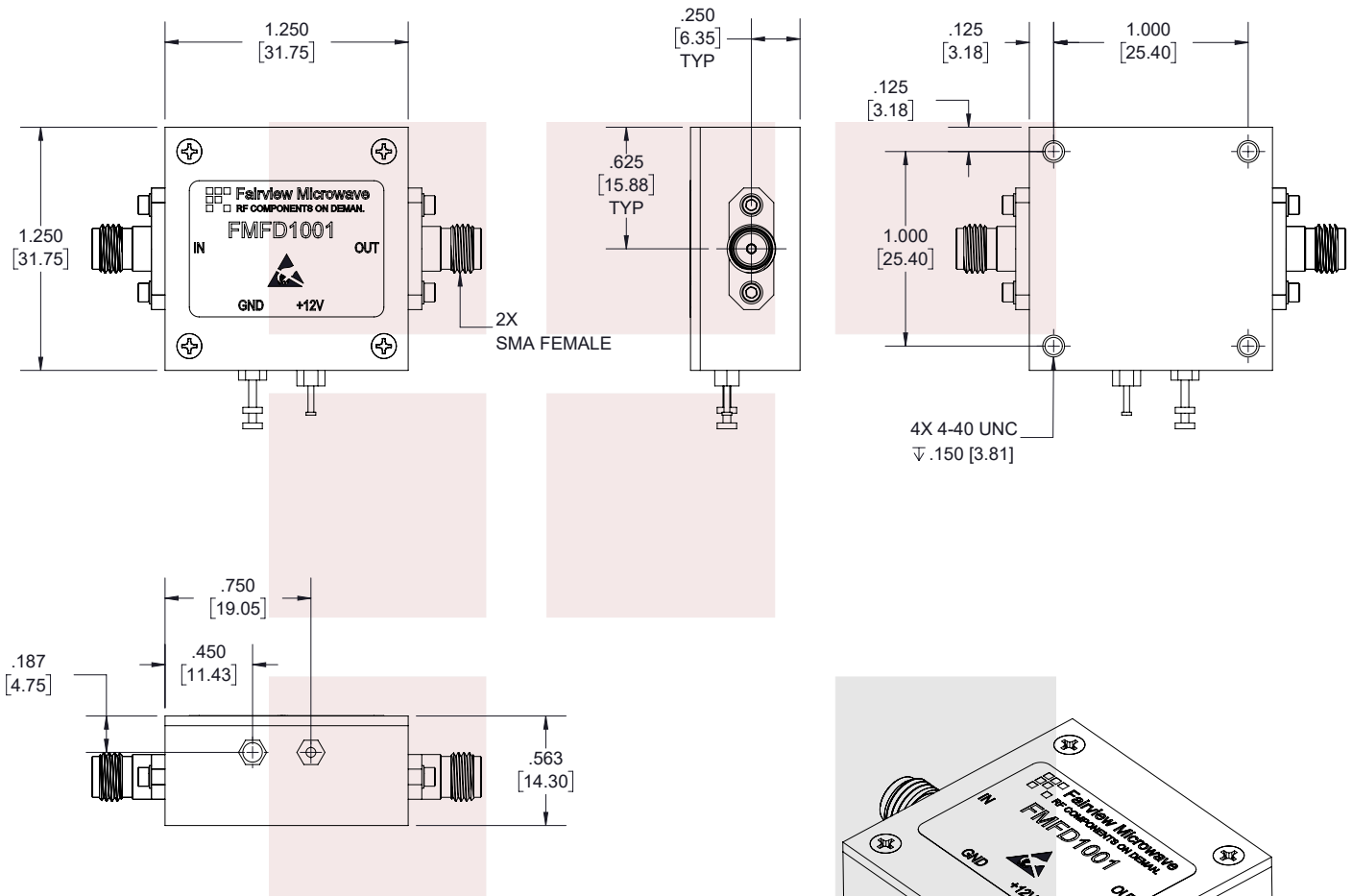


SMA Frequency Divider Divide by 10 Prescaler Module Operating from 100 MHz to 12.5 GHz from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Frequency Divider Divide by 10 Prescaler Module Operating from 100 MHz to 12.5 GHz FMFD1001](#)

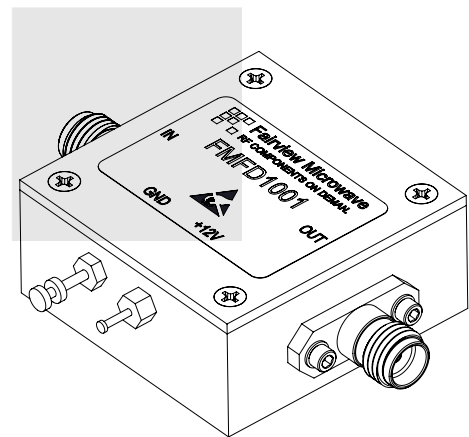
URL: <https://www.fairviewmicrowave.com/sma-frequency-divider-divide-10-prescaler-module-100-mhz-12.5-ghz-fmfd1001-p.aspx>

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	$\pm 0.2$
.XX	$\pm 0.01$
.XXX	$\pm 0.005$

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES



Fairview Microwave RF COMPONENTS ON DEMAND. <i>Done!</i>		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	
SMA Frequency Divider Divide by 10 Prescaler Module Operating from 100 MHz to 12.5 GHz	FMFD1001	3FKR5	
CAD FILE	04/25/19	SHEET	1 OF 1
SCALE	N/A	SIZE	A
			7361