

SMA Frequency Divider Divide by 20 Prescaler Module Operating from 100 MHz to 13 GHz



FMFD20000

Features

- Wide Input Frequency Range: 100 MHz to 13 GHz
- Divide-by-20 Prescaler
- Output Frequency 5 MHz to 650 MHz
- Output Power: -1 dBm typical
- Low SSB Phase Noise: -145 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

Description

The FMFD20000 is a coaxial packaged Frequency Divider module that operates across a wide input frequency range from 100 MHz to 13 GHz and supports a divide ratio of 20. Output Frequency is 5 MHz to 650 MHz. Impressive broadband typical performance of this Prescaler includes output power of -1 dBm and SSB phase noise of -145 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 = 195 mA)

Description	Min	Typ	Max	Units
Input Frequency (Sine Wave)	0.1		13	GHz
Output Frequency (Square Wave Output)	5		650	MHz
Output Power	-4	-1		dBm
Phase Noise @100kHz Offset		-145		dBc/Hz
Operating DC Voltage 1	7	12	15	V
Operating DC Current 1		195		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 13		GHz
Input Power (CW), Max	10	10	3	3		dBm
Input Power (CW), Typ	0	0	0	0		dBm
Input Power (CW), Min	-1	-15	-10	-5		dBm

Mechanical Specifications

Size

Length 1.25 in [31.75 mm]

SMA Frequency Divider Divide by 20 Prescaler
Module Operating from 100 MHz to 13 GHz



FMFD20000

Width	1.25 in [31.75 mm]
Height	0.563 in [14.3 mm]
Weight	0.089 lbs [40.37 g]

Configuration

Input Connector	SMA Female
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
Altitude	MIL-STD-202F, Method 105C, Condition B

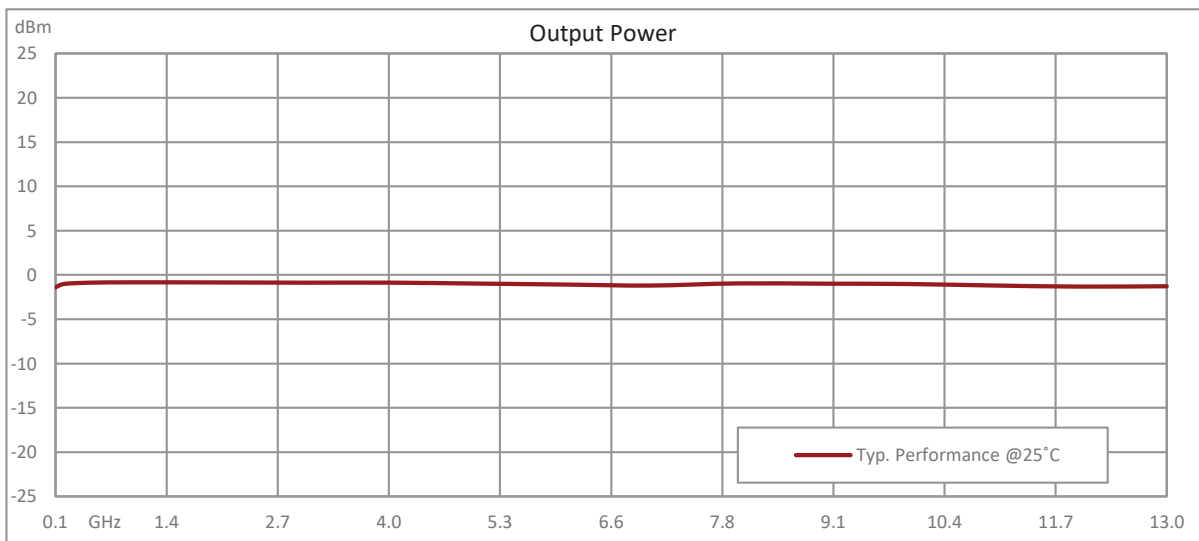
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Functional Block Diagram

Typical Performance Data



SMA Frequency Divider Divide by 20 Prescaler Module Operating from 100 MHz to 13 GHz

FMFD20000



SMA Frequency Divider Divide by 20 Prescaler Module Operating from 100 MHz to 13 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.

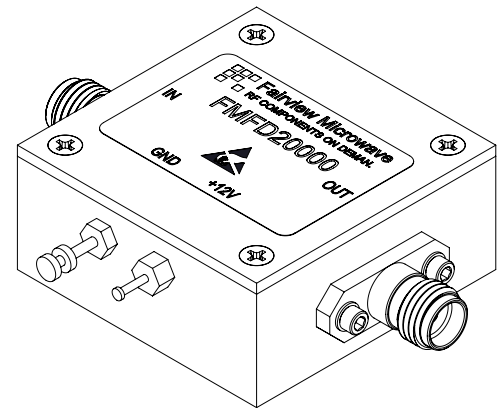
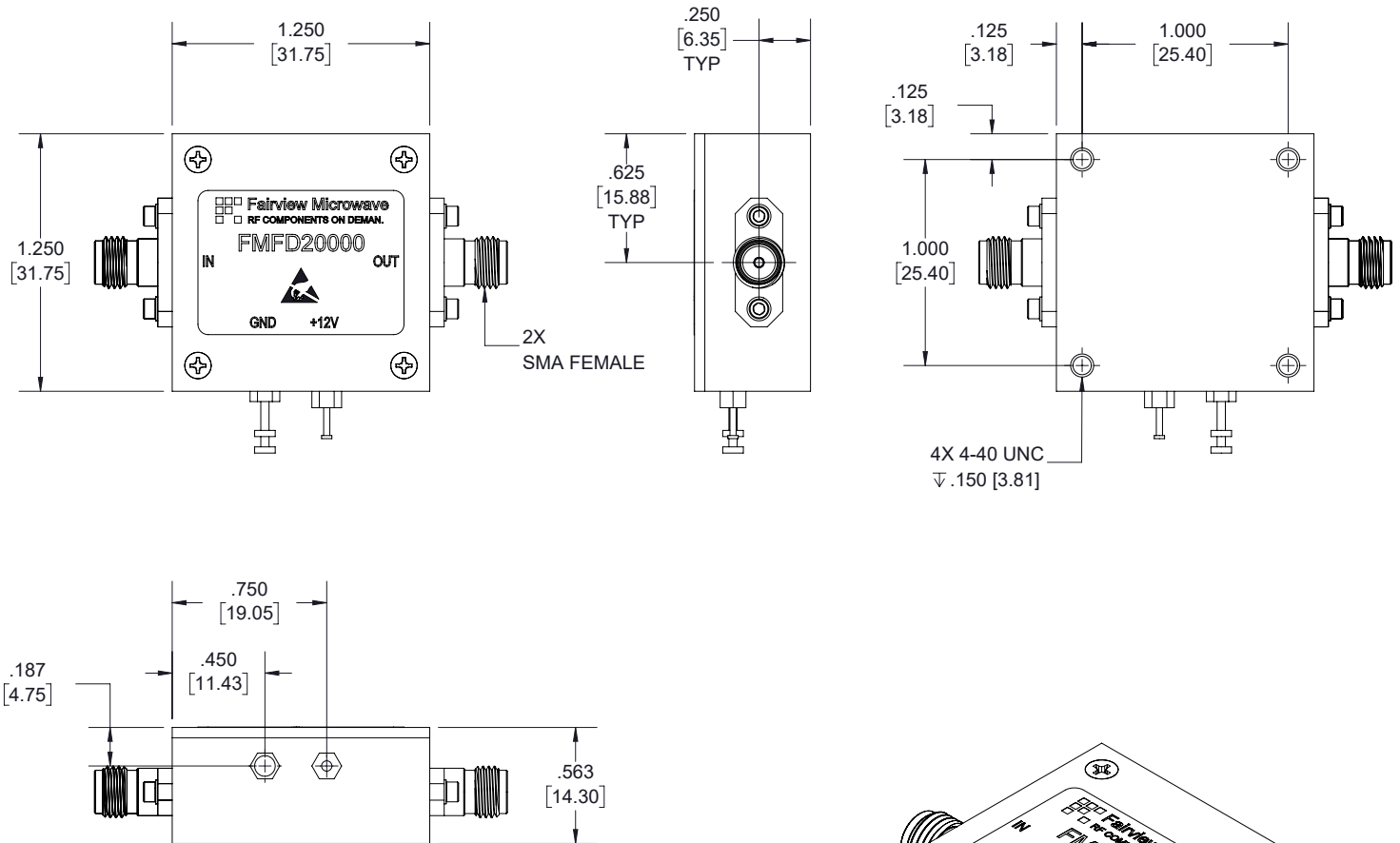
For additional information on this product, please click the following link: [SMA Frequency Divider Divide by 20 Prescaler Module Operating from 100 MHz to 13 GHz FMFD20000](https://www.fairviewmicrowave.com/sma-frequency-divider-divide-20-prescaler-module-100-mhz-13-ghz-fmfd20000-p.aspx)

URL: <https://www.fairviewmicrowave.com/sma-frequency-divider-divide-20-prescaler-module-100-mhz-13-ghz-fmfd20000-p.aspx>

The information contained within 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 liability arising out of the use of any part or document.

FMFD20000 CAD Drawing

SMA Frequency Divider Divide by 20 Prescaler Module Operating from 100 MHz to 13 GHz



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 FMFD20000	CAGE CODE 3FKR5
CAD FILE 04/26/18	SHEET 1 OF 1	SCALE N/A SIZE A 7361