

## SMA Frequency Divider Divide by 5 Prescaler Module Operating from 100 MHz to 7 GHz

The FMFD25000 is a coaxial packaged Frequency Divider module that operates across a wide input frequency range from 100 MHz to 7 GHz and supports a divide ratio of 5. Output Frequency is 20 MHz to 1.4 GHz. Impressive broadband typical performance of this Prescaler includes output power of -1 dBm and SSB phase noise of -150 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 = 80 mA)

| Description                           | Min  | Typ  | Max | Units  |
|---------------------------------------|------|------|-----|--------|
| Input Frequency (Sine Wave)           | 0.1  |      | 7   | GHz    |
| Output Frequency (Square Wave Output) | 0.02 |      | 1.4 | GHz    |
| Input Power (CW)                      | -12  | 0    | 12  | dBm    |
| Output Power                          | -4   | -1   |     | dBm    |
| Phase Noise @100kHz Offset            |      | -150 |     | dBc/Hz |
| Operating DC Voltage 1                | 9    | 12   | 15  | V      |
| Operating DC Current 1                |      | 80   | 95  | mA     |

### Performance by Frequency

| Description           | F1       | F2     | F3     | F4 | F5 | Units |
|-----------------------|----------|--------|--------|----|----|-------|
| Frequency Range       | 0.1 to 5 | 5 to 6 | 6 to 7 |    |    | GHz   |
| Input Power (CW), Max | 12       | 10     | 5      |    |    | dBm   |
| Input Power (CW), Typ | 0        | 0      | 0      |    |    | dBm   |
| Input Power (CW), Min | -12      | -10    | -10    |    |    | 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 |

### Features:

- Wide Input Frequency Range: 100 MHz to 7 GHz
- Divide-by-5 Prescaler
- Output Frequency 20 MHz to 1.4 GHz
- Output Power: -1 dBm typical
- Low SSB Phase Noise: -150 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

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Vibration  
Altitude

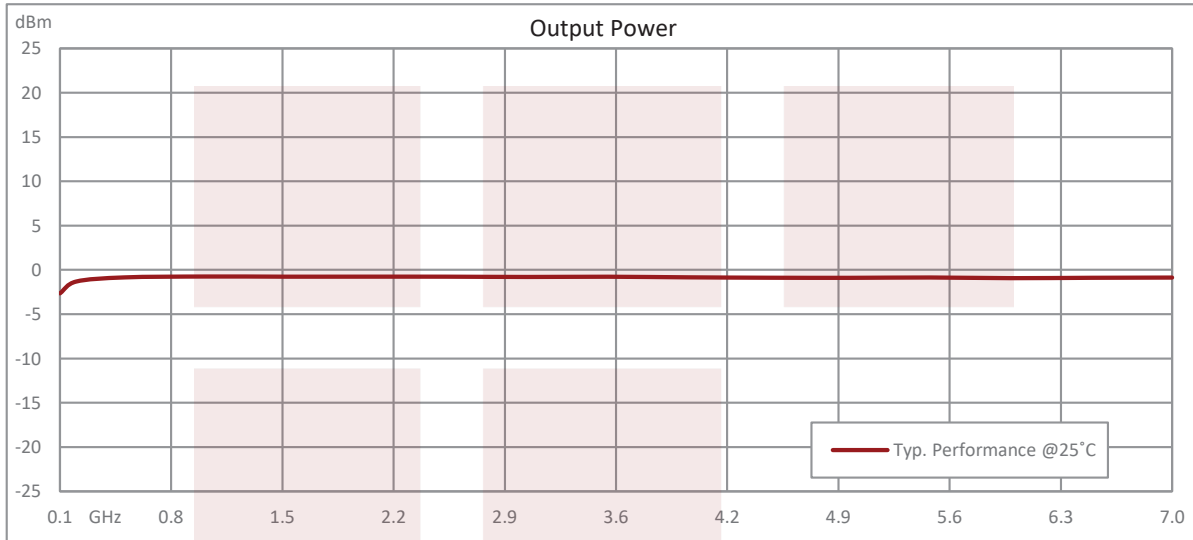
MIL-STD-202F, Method 204D, Condition B  
MIL-STD-202F, Method 105C, Condition B

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

**Plotted and Other Data**

Notes:

**Typical Performance Data**

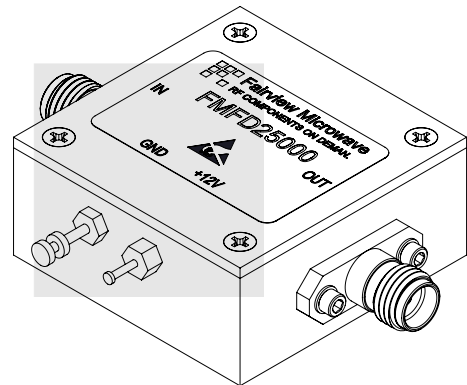
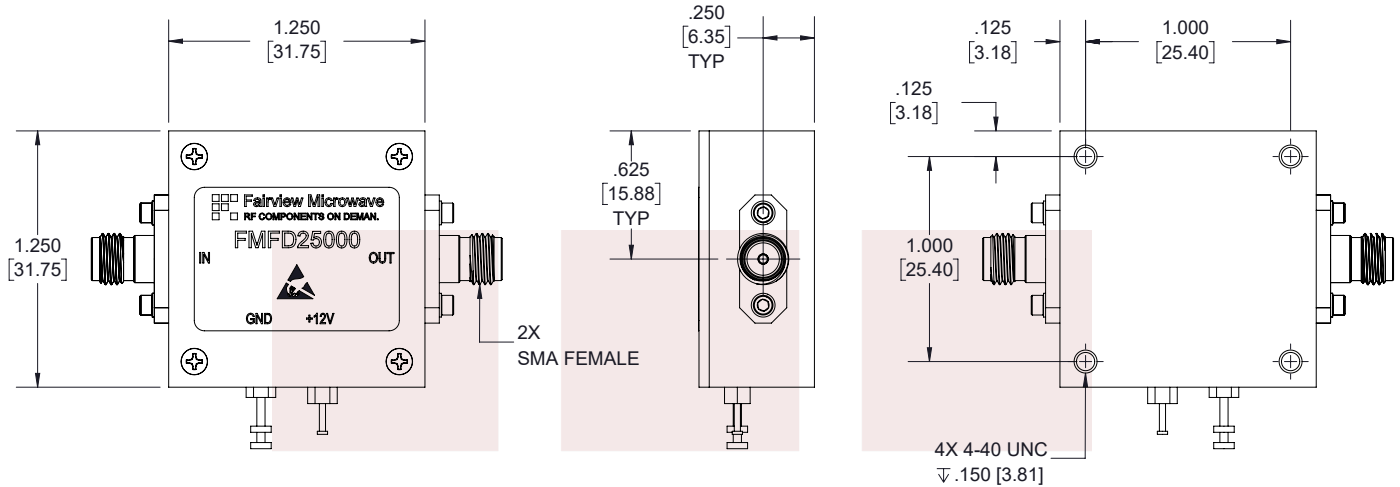


SMA Frequency Divider Divide by 5 Prescaler Module Operating from 100 MHz to 7 GHz from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [SMA Frequency Divider Divide by 5 Prescaler Module Operating from 100 MHz to 7 GHz FMFD25000](#)

URL: <https://www.fairviewmicrowave.com/sma-frequency-divider-divide-5-prescaler-module-100-mhz-7-ghz-fmfd25000-p.aspx>

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**STANDARD TOLERANCES**

- .X ±0.2
- .XX ±0.01
- .XXX ±0.005

\*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

|  |          |   |        |                               |     |      |   |      |
|--|----------|---|--------|-------------------------------|-----|------|---|------|
| <p><b>Fairview Microwave</b><br/>an INFINITE brand</p>   |          | <p>NOTES:<br/>1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.<br/>2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.<br/>3. DIMENSIONS ARE IN INCHES [mm].</p> |        |                               |     |      |   |      |
| <p>TITLE</p> <p>SMA Frequency Divider Divide by 5 Prescaler Module<br/>Operating from 100 MHz to 7 GHz</p> |          | <p>DWG NO</p> <p>FMFD25000</p>  |        | <p>CAGE CODE</p> <p>3FKR5</p> |     |      |   |      |
| CAD FILE   | 05/10/19 | SHEET   | 1 OF 1 | SCALE                         | N/A | SIZE | A | 7361 |