

## Frequency Divider, Divide by 2 Prescaler Module, 500 MHz to 18 GHz, SMA



## Frequency Dividers Technical Data Sheet

PE88D2001

### Features

- Wide Input Frequency Range: 500 MHz to 18 GHz
- Divide-by-2 Prescaler
- Output Frequency 250 MHz to 9 GHz
- Output Power: -4 dBm typical
- Low SSB Phase Noise: -147 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 PE88D2001 is a coaxial packaged Frequency Divider module that operates across a wide input frequency range from 500 MHz to 18 GHz and supports a divide ratio of 2. Output Frequency is 250 MHz to 9 GHz. Impressive broadband typical performance of this Prescaler includes output power of -4 dBm and SSB phase noise of -147 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 = 85 mA)

| Description                           | Minimum | Typical | Maximum | Units  |
|---------------------------------------|---------|---------|---------|--------|
| Input Frequency (Sine Wave)           | 0.5     |         | 18      | GHz    |
| Output Frequency (Square Wave Output) | 0.25    |         | 9       | GHz    |
| Input Power (CW)                      | -15     | 0       | 10      | dBm    |
| Output Power                          | -7      | -4      |         | dBm    |
| Phase Noise @100kHz Offset            |         | -147    |         | dBc/Hz |
| Operating DC Voltage 1                | 9       | 12      | 15      | V      |
| Operating DC Current 1                |         | 85      | 100     | mA     |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Frequency Divider, Divide by 2 Prescaler Module, 500 MHz to 18 GHz, SMA PE88D2001](#)

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**Performance by Frequency**

| Description           | F1       | F2     | F3      | F4       | F5       | Units |
|-----------------------|----------|--------|---------|----------|----------|-------|
| Frequency Range       | 0.5 to 1 | 1 to 2 | 2 to 14 | 14 to 16 | 16 to 18 | GHz   |
| Input Power (CW), Max | 10       | 10     | 10      | 5        | 3        | dBm   |
| Input Power (CW), Typ | 5        | 0      | 0       | 0        | 0        | dBm   |
| Input Power (CW), Min | 3        | -10    | -15     | -15      | -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]

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:

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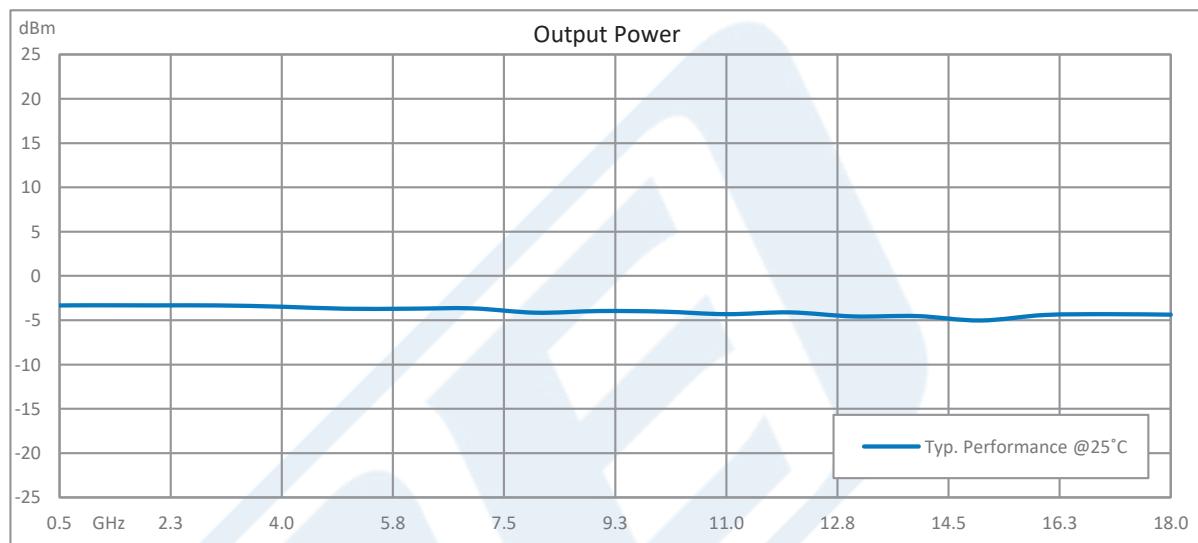
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Typical Performance Data



Frequency Divider, Divide by 2 Prescaler Module, 500 MHz to 18 GHz, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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URL: <https://www.pasternack.com/frequency-divider-divide-2-prescaler-module-500-mhz-18-ghz-sma-pe88d2001-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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

# PE88D2001 CAD Drawing

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