



Frequency Divider, Divide by 5 Prescaler Module, 100 MHz to 15 GHz, SMA

Frequency Dividers Technical Data Sheet

PE88D5001

Features

- Wide Input Frequency Range: 100 MHz to 15 GHz
- Divide-by-5 Prescaler
- Output Frequency 20 MHz to 3 GHz
- Output Power: +3 dBm typical
- Low SSB Phase Noise: -153 dBc/Hz @ 100 KHz offset typical
- RoHS & REACH Compliant Assembly
- Bias Voltage: +5 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 PE88D5001 is a coaxial packaged Frequency Divider module that operates across a wide input frequency range from 100 MHz to 15 GHz and supports a divide ratio of 5. Output Frequency is 20 MHz to 3 GHz. Impressive broadband typical performance of this Prescaler includes output power of +3 dBm and SSB phase noise of -153 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 +5 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 = 5 Vdc, Id1 = 205 mA)

| Description | Minimum | Typical | Maximum | Units |
|---------------------------------------|---------|---------|---------|--------|
| Input Frequency (Sine Wave) | 0.1 | | 15 | GHz |
| Output Frequency (Square Wave Output) | 0.02 | | 3 | GHz |
| Output Power | 2 | 5 | | dBm |
| Phase Noise @100kHz Offset | | -153 | | dBc/Hz |
| Operating DC Voltage 1 | | 5 | | V |
| Operating DC Current 1 | | 205 | | mA |

Performance by Frequency

| Description | F1 | F2 | F3 | F4 | F5 | Units |
|-----------------------|-------------|-----------|--------|---------|----------|-------|
| Frequency Range | 0.1 to 0.25 | 0.25 to 1 | 1 to 2 | 2 to 10 | 10 to 15 | GHz |
| Input Power (CW), Max | 10 | 10 | 10 | 10 | 10 | dBm |
| Input Power (CW), Min | 4 | -4 | -18 | -24 | -19 | dBm |

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 5 Prescaler Module, 100 MHz to 15 GHz, SMA PE88D5001](#)



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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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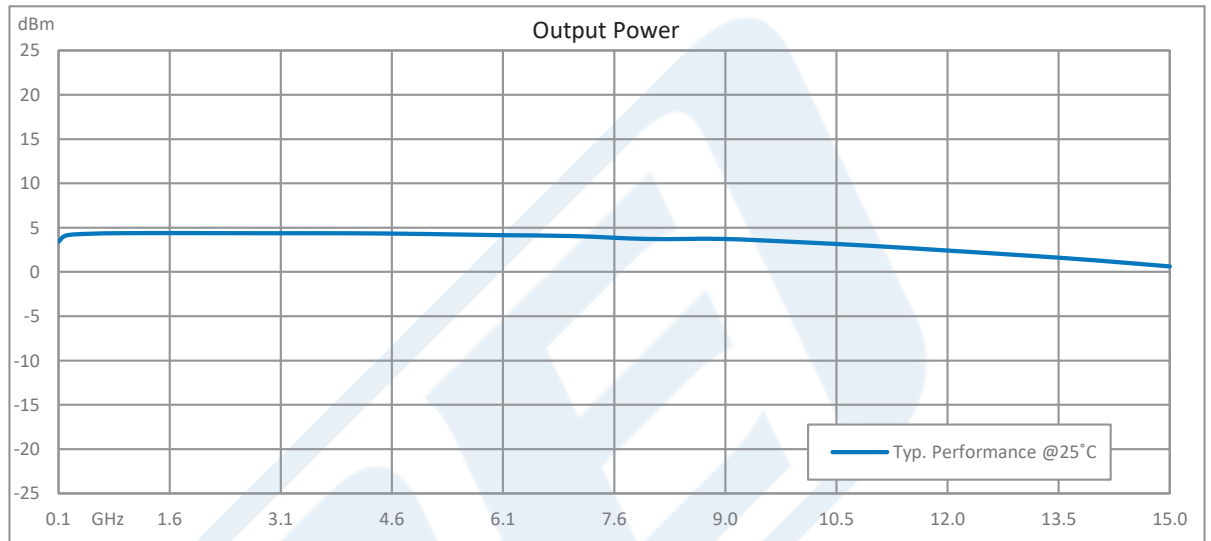


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Typical Performance Data



Frequency Divider, Divide by 5 Prescaler Module, 100 MHz to 15 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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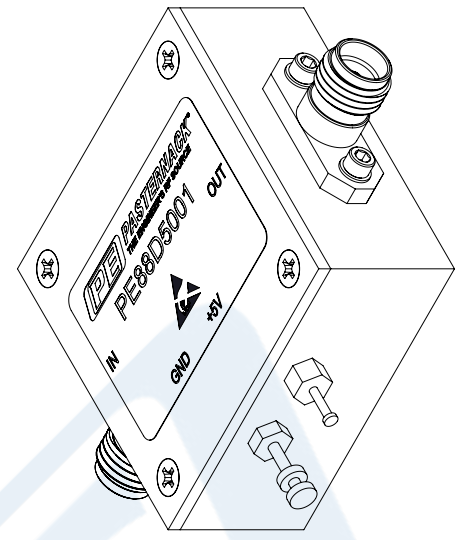
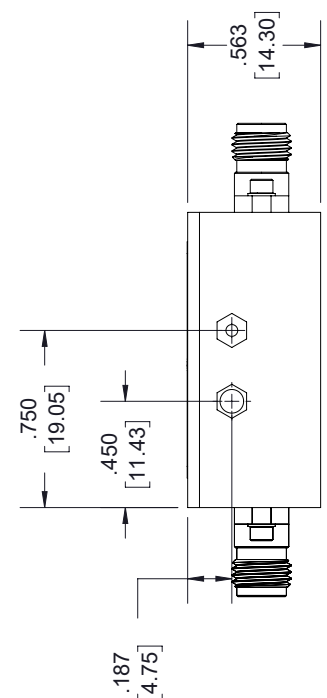
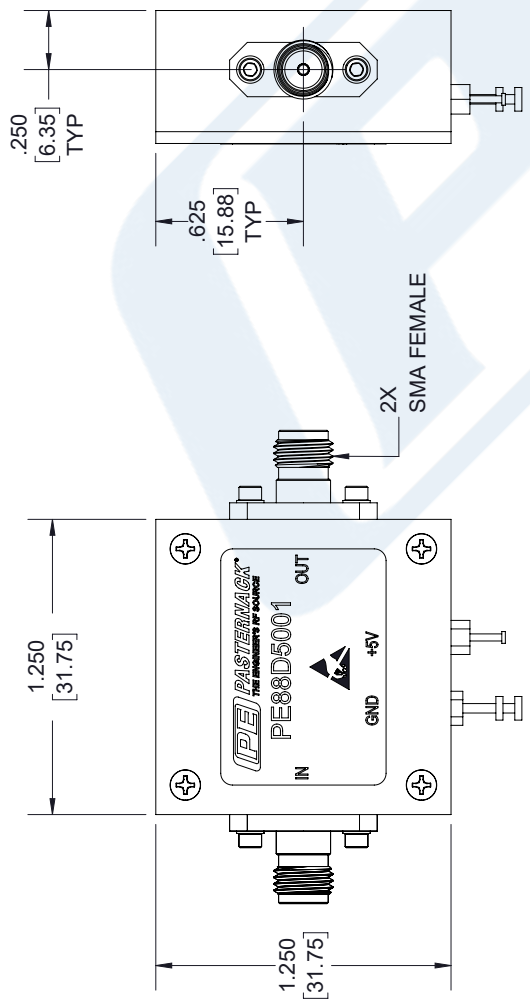
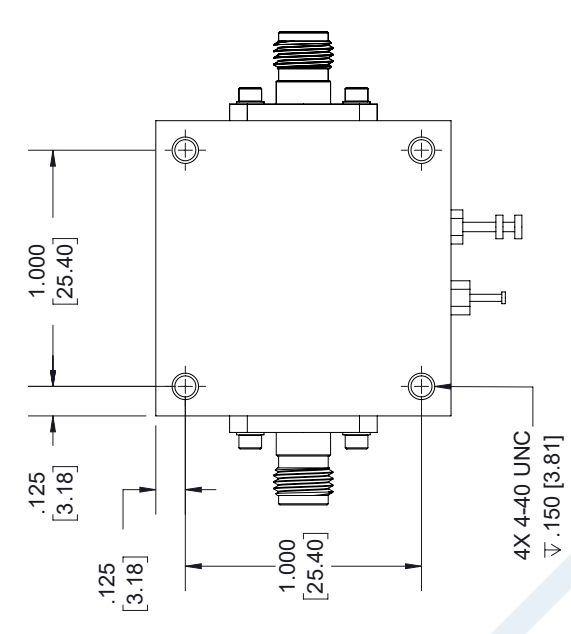
URL: <https://www.pasternack.com/frequency-divider-divide-5-prescaler-module-100-mhz-15-ghz-sma-pe88d5001-p.aspx>

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PE88D5001 CAD Drawing

Frequency Divider, Divide by 5 Prescaler Module, 100 MHz to 15 GHz, SMA

| REVISIONS | | | |
|-----------|-----------------|----------|----------|
| REV. | DESCRIPTION | DATE | APPROVED |
| A | INITIAL RELEASE | 04/25/19 | T. GALLA |



UNLESS OTHERWISE SPECIFIED
 LEADING DIMENSIONS ARE INCHES
 DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:
 X \pm 2 [5.08]
 XX \pm .01 [.25]
 .XXX \pm .005 [.13]

FRACTIONS
 \pm 1/32
 ANGLES \pm 1°

ALL DIMENSIONS SHOWN
 ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

PE PASTERNAK
 an INFINITO brand

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SHEET 1 OF 1
 SCALE N/A

SIZE A
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 PART NUMBER
 PE88D5001
 REV A

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