



# Frequency Divider, Divide by 6 Prescaler Module, 100 MHz to 15 GHz, SMA

## Frequency Dividers Technical Data Sheet

PE88D6000

### Features

- Wide Input Frequency Range: 100 MHz to 15 GHz
- Divide-by-6 Prescaler
- Output Frequency 16 MHz to 2.5 GHz
- Output Power: +4 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 PE88D6000 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 6. Output Frequency is 16 MHz to 2.5 GHz. Impressive broadband typical performance of this Prescaler includes output power of +4 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) | 0.016   |         | 2.5     | GHz    |
| Output Power                          | 3       | 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           | -8        | -18    | -24     | -20      | 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 6 Prescaler Module, 100 MHz to 15 GHz, SMA PE88D6000](#)



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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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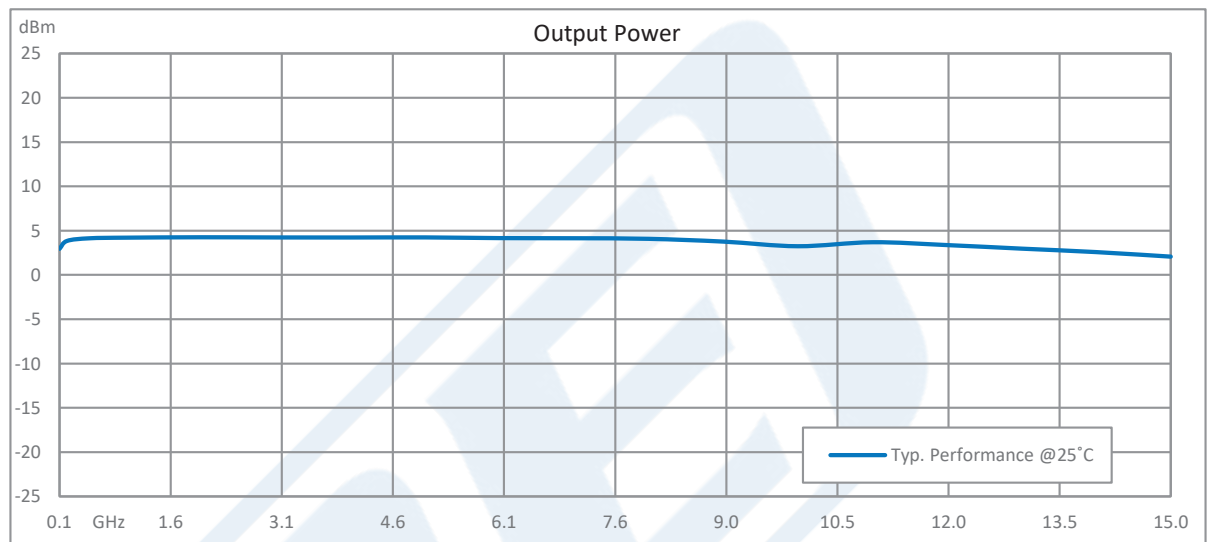


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### Typical Performance Data



Frequency Divider, Divide by 6 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.

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 6 Prescaler Module, 100 MHz to 15 GHz, SMA PE88D6000](https://www.pasternack.com/frequency-divider-divide-6-prescaler-module-100-mhz-15-ghz-sma-pe88d6000-p.aspx)

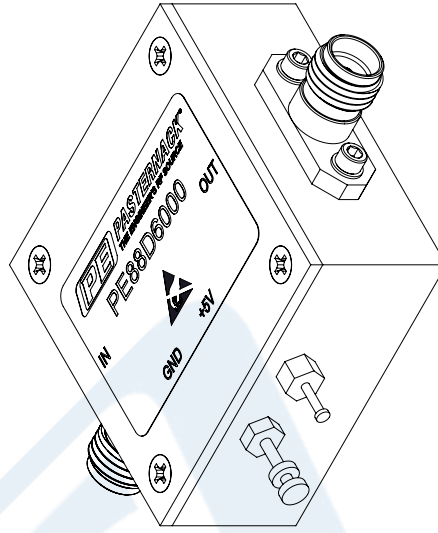
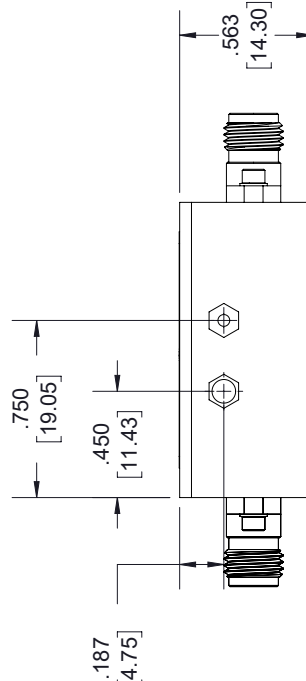
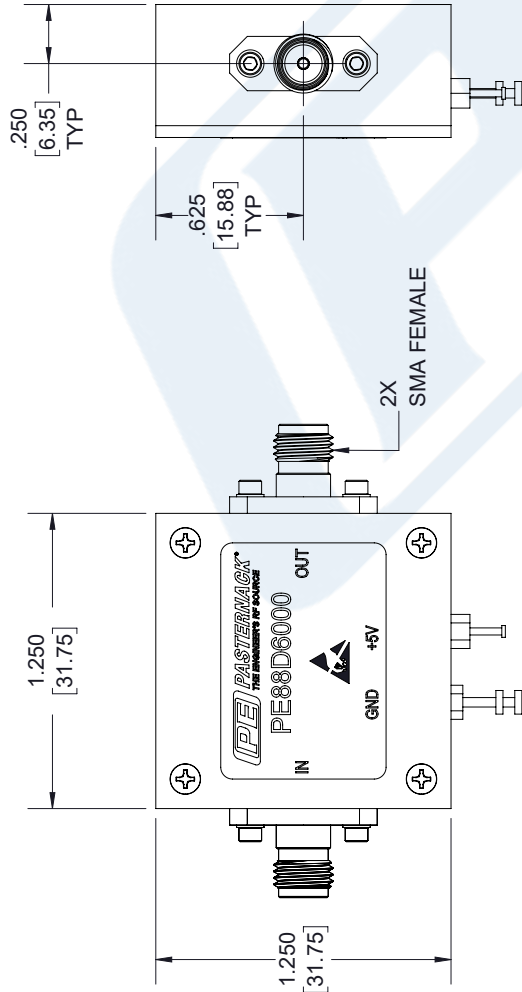
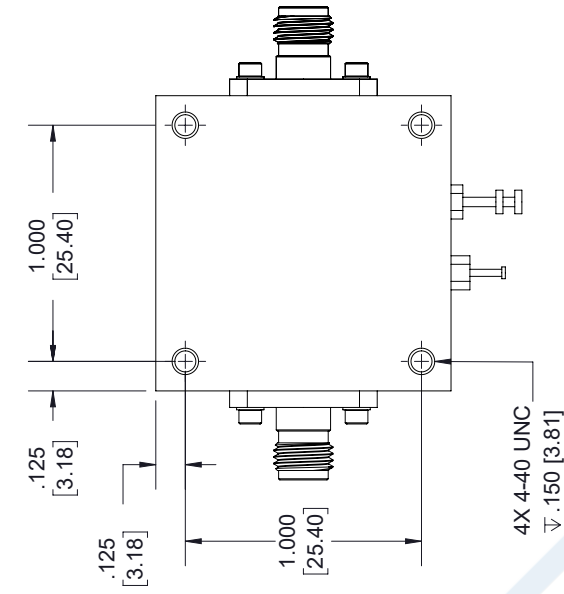
URL: <https://www.pasternack.com/frequency-divider-divide-6-prescaler-module-100-mhz-15-ghz-sma-pe88d6000-p.aspx>

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# PE88D6000 CAD Drawing

Frequency Divider, Divide by 6 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±.2 [5.08]  
 .XX±.01 [ .25]  
 .XXX±.005 [ .13]

FRACTIONS  
 ±.132  
 ANGLES ± 1°

ALL DIMENSIONS SHOWN  
 ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION

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 an INFINITO brand

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SIZE [CAGE] DRAWN BY PART NUMBER  
 A 53919 K.DANG PE88D6000

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SHEET 1 OF 1  
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