



## Frequency Divider, Divide by 8 Prescaler Module, 100 MHz to 12 GHz, SMA

### Frequency Dividers Technical Data Sheet

PE88D8003

#### Features

- Wide Input Frequency Range: 100 MHz to 12 GHz
- Divide-by-8 Prescaler
- Output Frequency 12.5 MHz to 1.5 GHz
- Output Power: -6 dBm typical
- Low SSB Phase Noise: -153 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 PE88D8003 is a coaxial packaged Frequency Divider module that operates across a wide input frequency range from 100 MHz to 12 GHz and supports a divide ratio of 8. Output Frequency is 12.5 MHz to 1.5 GHz. Impressive broadband typical performance of this Prescaler includes output power of -6 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 +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 = 75 mA)

Description	Minimum	Typical	Maximum	Units
Input Frequency (Sine Wave)	0.1		12	GHz
Output Frequency (Square Wave Output)	0.0125		1.5	GHz
Phase Noise @100kHz Offset		-150		dBc/Hz
Operating DC Voltage 1	9	12	15	V
Operating DC Current 1		75	90	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 8 Prescaler Module, 100 MHz to 12 GHz, SMA PE88D8003](#)



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### Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.1 to 1	1 to 7	7 to 11	11 to 12		GHz
Input Power (CW), Max	10	10	3	3		dBm
Input Power (CW), Typ	0	0	0	0		dBm
Input Power (CW), Min	-3	-15	-10	-5		dBm
Output Power (CW), Typ	-9	-6	-6	-6		dBm
Output Power (CW), Min	-12	-9	-9	-9		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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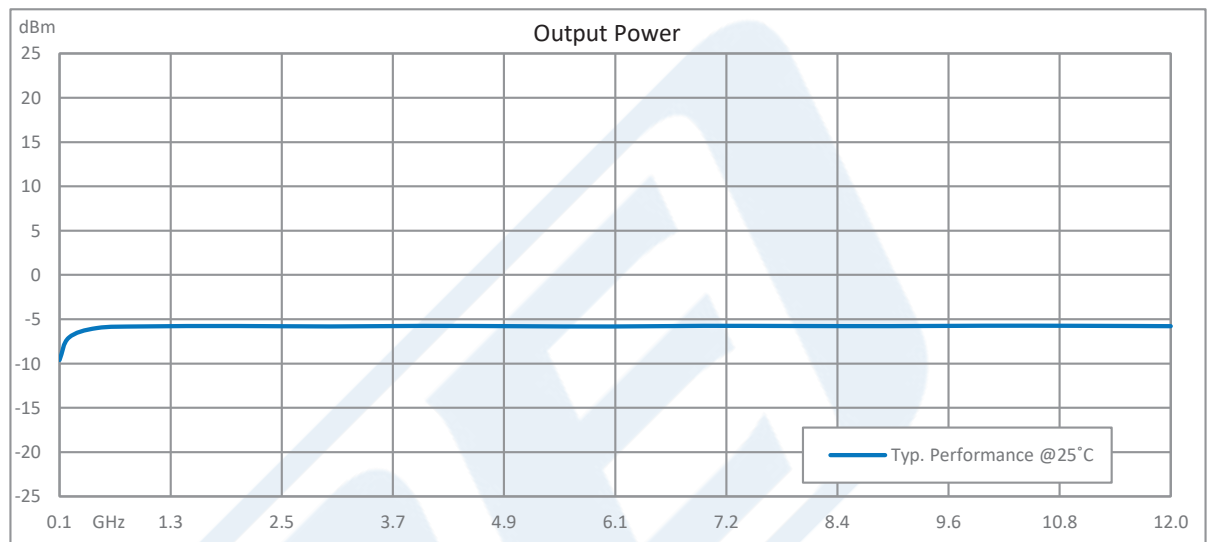


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### Typical Performance Data



Frequency Divider, Divide by 8 Prescaler Module, 100 MHz to 12 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 8 Prescaler Module, 100 MHz to 12 GHz, SMA PE88D8003](https://www.pasternack.com/frequency-divider-divide-8-prescaler-module-100-mhz-12-ghz-sma-pe88d8003-p.aspx)

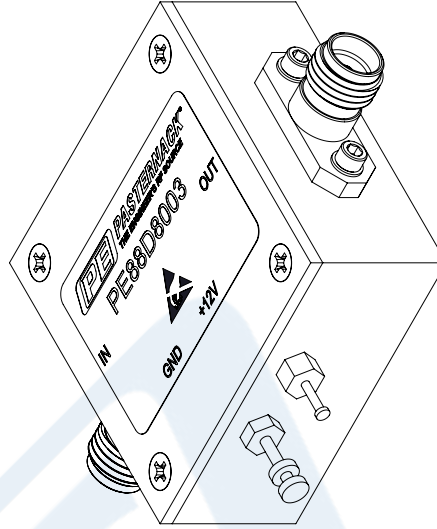
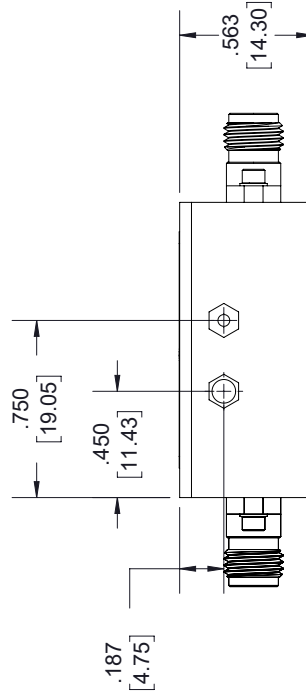
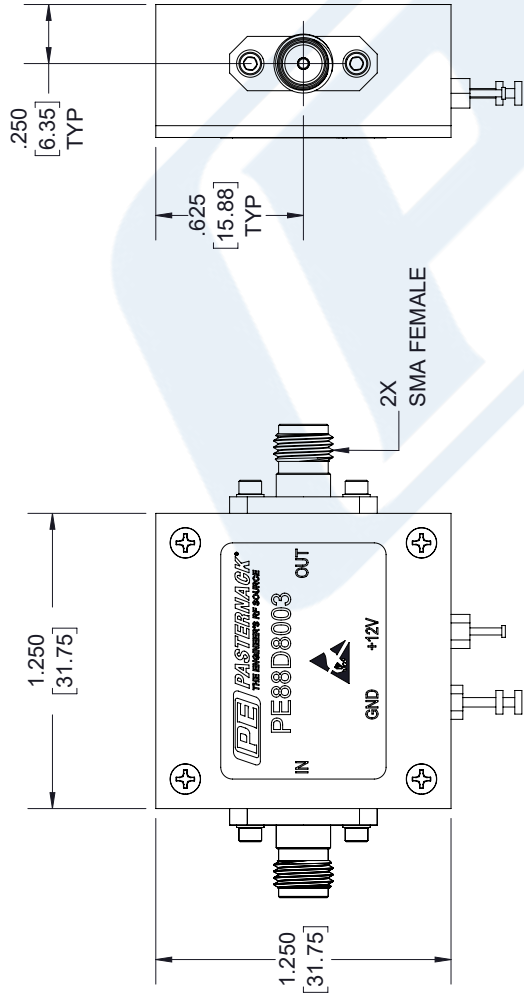
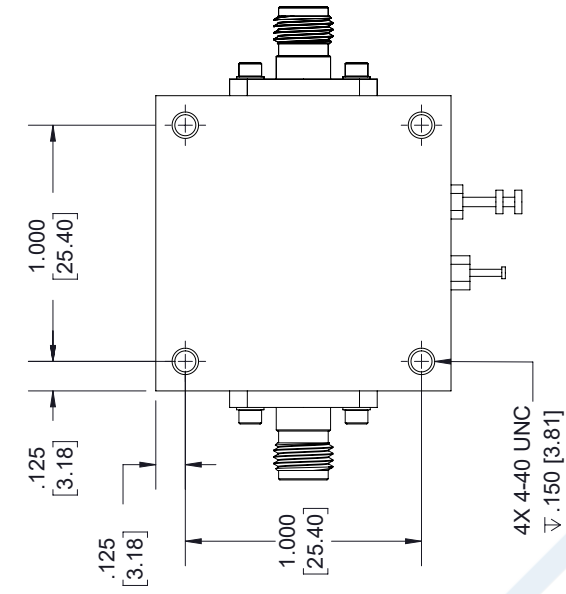
URL: <https://www.pasternack.com/frequency-divider-divide-8-prescaler-module-100-mhz-12-ghz-sma-pe88d8003-p.aspx>

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# PE88D8003 CAD Drawing

Frequency Divider, Divide by 8 Prescaler Module, 100 MHz to 12 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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SHEET 1 OF 1  
 SCALE N/A

SIZE A  
 CAGE DRAWN BY K.DANG  
 PART NUMBER PE88D8003  
 REV A

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