



Frequency Divider, Divide by 8 Prescaler Module, 100 MHz to 24 GHz, SMA

Frequency Dividers Technical Data Sheet

PE88D8004

Features

- Wide Input Frequency Range 100 MHz to 24 GHz
- Divide-by-2 Prescaler
- Output Frequency 12.5 MHz to 3 GHz
- Output Power +2 dBm typical
- Low SSB Phase Noise -150 dBc/Hz @ 100 KHz offset typical
- RoHS & REACH Compliant Assembly
- Bias Voltage +12 Vdc @ 85mA
- Operational Temperature Range -40°C to +85°C
- Compact SMA Connectorized Package
- Designed to meet MIL-STD-202 Test Conditions
- Reverse Voltage Protection
- Internal Voltage Regulation

Applications

- Aerospace & Defense
- Test & Measurement
- Microwave Radio Systems
- Military & Commercial Communication Systems
- Research & Development
- SATCOM
- Wireless Communications

Description

The PE88D8004 is a Frequency Divider module that operates across a wide input frequency range from 100 MHz to 24 GHz and supports a divide ratio of 8. Output Frequency is 12.5 MHz to 3 GHz. Impressive broadband typical performance includes output power of +2 dBm, and phase noise of -150 dBc/Hz. This exceptional technical performance is achieved through the use of a hybrid MIC PCB solder assembly which is RoHS and REACH compliant. Additional features include internal voltage regulation and reverse voltage protection. 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 and RFI and Ground Pins. And 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)	0.1		24	GHz
Output Frequency (Square Wave Output)	0.0125		3	GHz
Divide by Ratio		8		
Impedance		50		Ohms
Input Power (CW)			10	dBm
Output Power	-2	2		dBm
Phase Noise @100kHz Offset		-150		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 8 Prescaler Module, 100 MHz to 24 GHz, SMA PE88D8004](#)



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Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	0.1 to 0.3	0.3 to 1	1 to 18	18 to 21	21 to 24	GHz
Input Power (CW), Max	10	10	10	10	10	dBm
Input Power (CW), Min	3	-5	-15	-5	0	dBm

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Output Frequency Range	0.1 to 24					GHz
Output Power (CW), Typ	2					dBm
Output Power (CW), Min	-2					dBm

Absolute Maximum Rating

Parameter	Absolute Maximum
RF Input Power	+13dBm
DC Supply Voltage	+16V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

Mechanical Specifications

Size	
Length	1.25 in [31.75 mm]
Width	1.25 in [31.75 mm]
Height	0.563 in [14.3 mm]
Weight	0.085 lbs [38.56 g]
Package Type	Connectorized
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature	
Operating Range	-40 to +85 deg C
Storage Range	-55 to +105 deg C
Humidity	MIL-STD-202, 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

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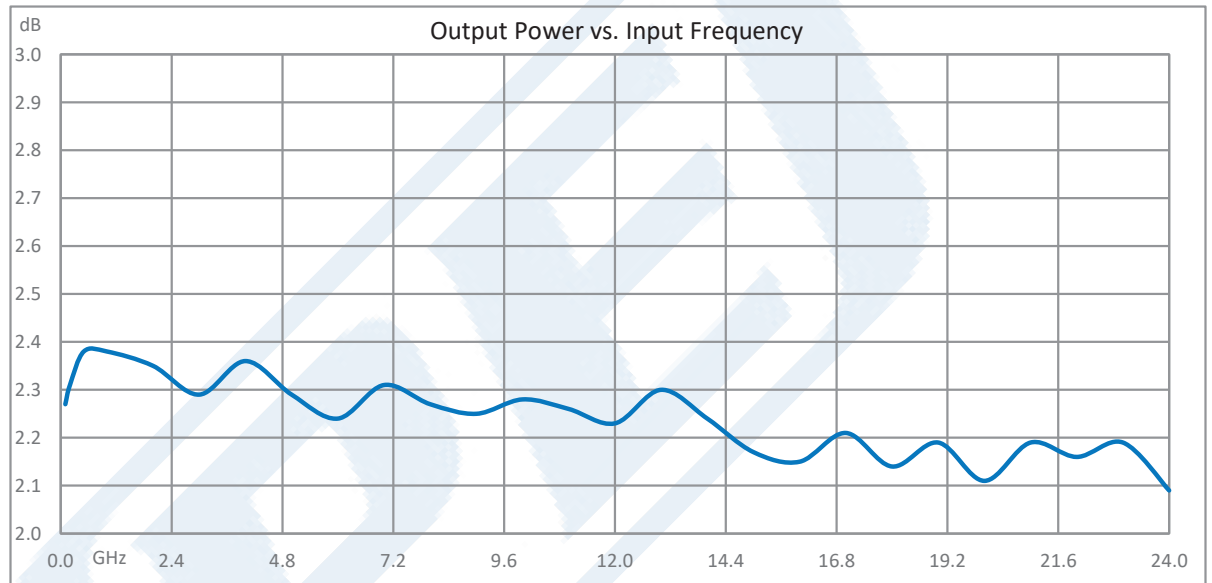
PE88D8004

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

Plotted and Other Data

Notes:

Typical Performance Data



Frequency Divider, Divide by 8 Prescaler Module, 100 MHz to 24 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-8-prescaler-module-100-mhz-24-ghz-sma-pe88d8004-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.

PE88D8004 CAD Drawing

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