



Frequency Divider, Divide by 2 Prescaler
Module, 100 MHz to 24 GHz, SMA

Frequency Dividers Technical Data Sheet

PE88D2004

Features

- Wide Input Frequency Range 100 MHz to 24 GHz
- Divide-by-2 Prescaler
- Output Frequency 50 MHz to 12 GHz
- Output Power 0 dBm typical
- Low SSB Phase Noise -150 dBc/Hz @ 100 KHz offset typical
- RoHS & REACH Compliant Assembly
- Bias Voltage +12 Vdc @ 75mA
- 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 PE88D2004 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 2. Output Frequency is 50 MHz to 12 GHz. Impressive broadband typical performance includes output power of 0 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 = 75 mA)

Description	Minimum	Typical	Maximum	Units
Input Frequency (Sine Wave)	0.1		24	GHz
Output Frequency (Square Wave Output)	0.05		12	GHz
Divide by Ratio		2		
Impedance		50		Ohms
Input Power (CW)			10	dBm
Output Power		0		dBm
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 2 Prescaler Module, 100 MHz to 24 GHz, SMA PE88D2004](#)



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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 22	22 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 8	8 to 20	20 to 24			GHz
Output Power (CW), Typ	3	0	-4			dBm
Output Power (CW), Min	-1	-4	-8			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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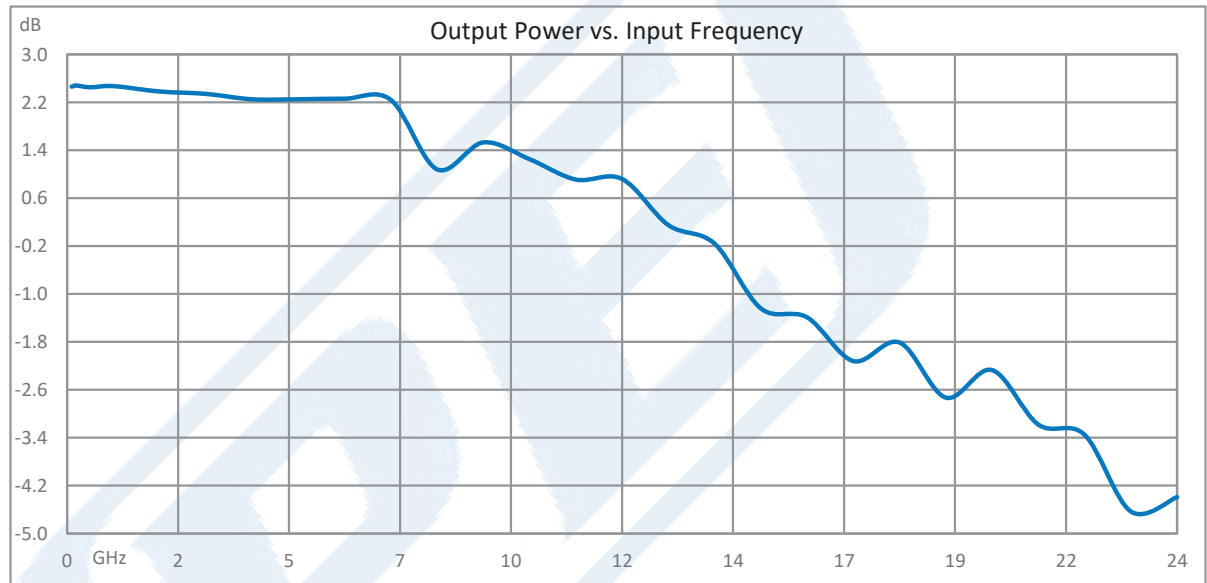
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Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

Typical Performance Data



Frequency Divider, Divide by 2 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-2-prescaler-module-100-mhz-24-ghz-sma-pe88d2004-p.aspx>

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PE88D2004 CAD Drawing

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