



Active 3x Frequency Multiplier, 2850 MHz to 4500 MHz
Output Frequency, 9 dB Conversion Gain, SMA

Frequency Multipliers Technical Data Sheet

PE88X2020

Features

- Active Frequency Tripler (x3)
- 950 to 1500 MHz Input Frequency
- 2850 to 4500 MHz Output Frequency
- Conversion Gain 9 dB typ
- Fundamental Isolation 20 dB typ
- RF Input Drive Level: 0 dBm
- Max RF Input Power: +23 dBm
- DC Bias: +12Vdc @ 150 mA
- SMA Female Connectors
- -40° C to +85° C Operating Temperature
- 50 Ohm Design
- Rugged Design meets MIL-STD-202 Test Conditions

Applications

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

Description

The PE88X2020 is an active Frequency Tripler (x3) module that covers a broad output frequency bandwidth from 2850 MHz to 4500 MHz. Typical performance includes 9 dB conversion gain, 20 dB fundamental Isolation, with an RF input drive level of 0 dBm. DC bias is +12Vdc with 150 mA DC current. Maximum RF input power is +23 dBm with an operational temperature range of -40° C to +85° C. The rugged and compact package assembly supports SMA female connectors. And for highly reliable operation, the model is designed to meet a variety of MIL-STD-202 test conditions including shock, vibration, altitude, and humidity.

Electrical Specifications (TA= 25°C, VDC1 = 12 Vdc, IDC1 = 150 mA, Pin = 0 dBm)

Description	Minimum	Typical	Maximum	Units
Input Frequency Range	950		1,500	MHz
Output Frequency Range	2,850		4,500	MHz
Impedance		50		Ohms
Conversion Gain	5	9		dB
Fundamental Isolation (F0)*	10	20		dB
2F0 Isolation*	15	25		dB
4F0 Isolation*	20	30		dB
Input VSWR(@ 1200 MHz)		1.1:1	1.5:1	
Output VSWR(@ 3600 MHz)		1.6:1	2.5:1	
Operating DC Voltage 1	10	12	15	V
Operating DC Current 1		150	170	mA

*Isolation with respect to output power level

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Active 3x Frequency Multiplier, 2850 MHz to 4500 MHz Output Frequency, 9 dB Conversion Gain, SMA PE88X2020](#)



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Mechanical Specifications

Size

Length	1.25 in [31.75 mm]
Width	0.563 in [14.3 mm]
Height	1.25 in [31.75 mm]
Weight	0.003 lbs [1.36 g]
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

Shock

Vibration

Altitude

MIL-STD-202, Method 103B, Condition B
MIL-STD-202F, Method 213B, Condition B
MIL-STD-202F, Method 204D, Condition B
MIL-STD-202F, Method 105C, Condition B

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

Plotted and Other Data

Notes:

Absolute Maximum Rating

Absolute Maximum Ratings

Parameter	Maximum
RF Input Power	+23dB
Operating Temperature	-40 °C to +85 °
Storage Temperature	-55 °C to +105 °

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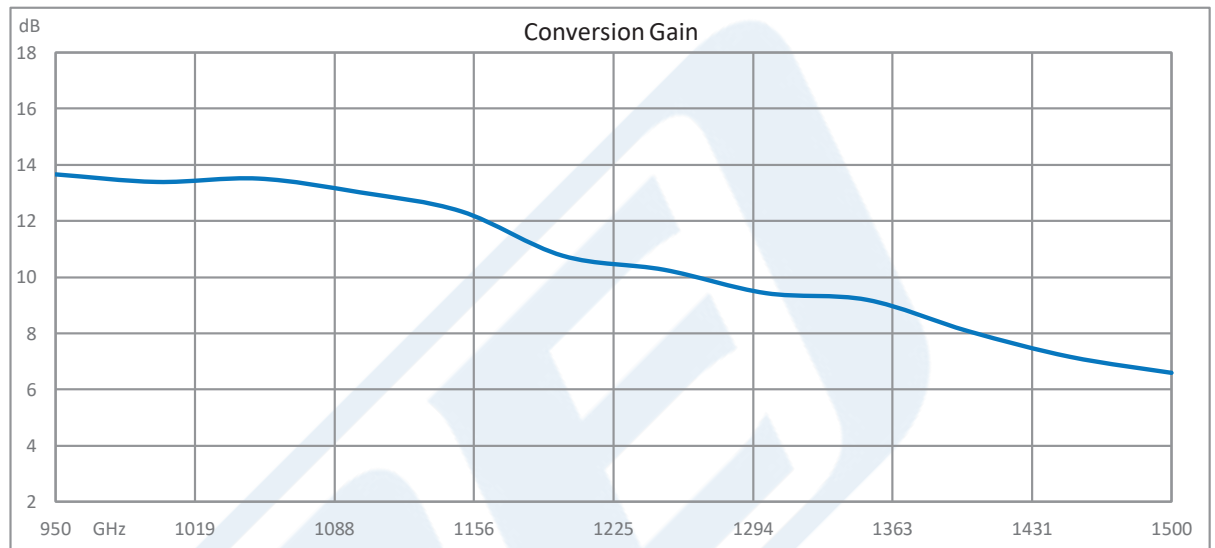


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Typical Performance Data



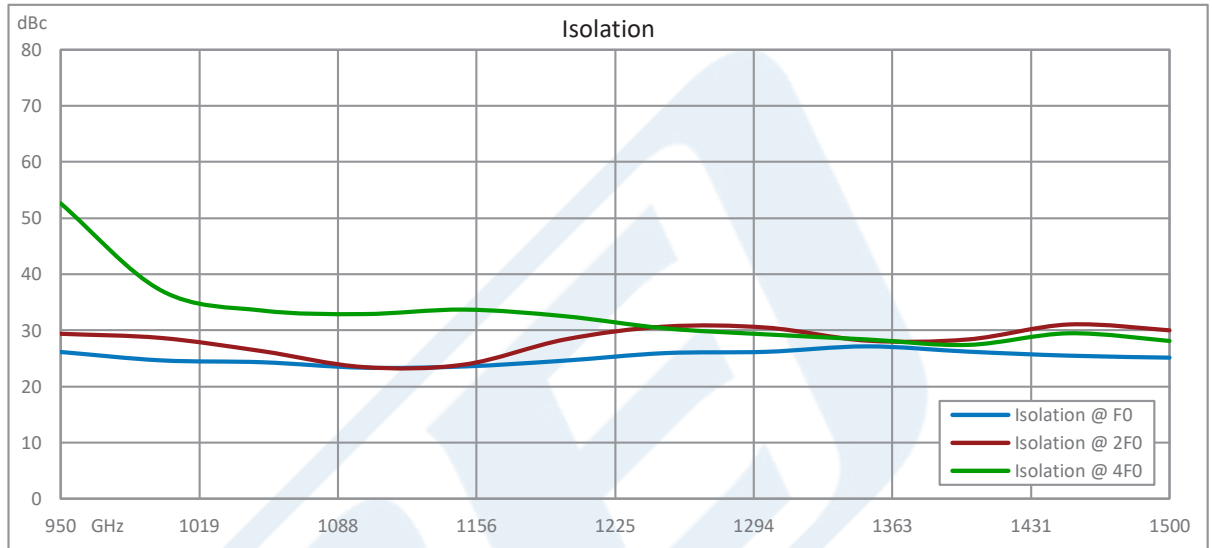
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PE88X2020 CAD Drawing

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