



Active 3x Frequency Multiplier, 1800 MHz to 2250 MHz
Output Frequency, 4 dB Conversion Gain, SMA

Frequency Multipliers Technical Data Sheet

PE88X2018

Features

- Active Frequency Tripler (x3)
- 600 to 750 MHz Input Frequency
- 1800 to 2250 MHz Output Frequency
- Conversion Gain 4 dB typ
- Fundamental Isolation 30 dB typ
- RF Input Drive Level: -3 dBm
- Max RF Input Power: +23 dBm
- DC Bias: +12Vdc @ 105 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 PE88X2018 is an active Frequency Tripler (x3) module that covers a broad output frequency bandwidth from 1800 MHz to 2250 MHz. Typical performance includes 4 dB conversion gain, 30 dB fundamental Isolation, with an RF input drive level of -3 dBm. DC bias is +12Vdc with 105 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 = 105 mA, Pin = -3dBm)

Description	Minimum	Typical	Maximum	Units
Input Frequency Range	600		750	MHz
Output Frequency Range	1,800		2,250	MHz
Impedance		50		Ohms
Conversion Gain	-1	4		dB
Fundamental Isolation (F0)*	20	30		dB
2F0 Isolation*	20	30		dB
4F0 Isolation*	20	30		dB
Input VSWR(@ 675 MHz)		1.4:1	2:1	
Output VSWR(@ 2025 MHz)		2.3:1	3:1	
Operating DC Voltage 1	10	12	15	V
Operating DC Current 1		105	125	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, 1800 MHz to 2250 MHz Output Frequency, 4 dB Conversion Gain, SMA PE88X2018](#)



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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 °

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, 1800 MHz to 2250 MHz Output Frequency, 4 dB Conversion Gain, SMA PE88X2018](#)

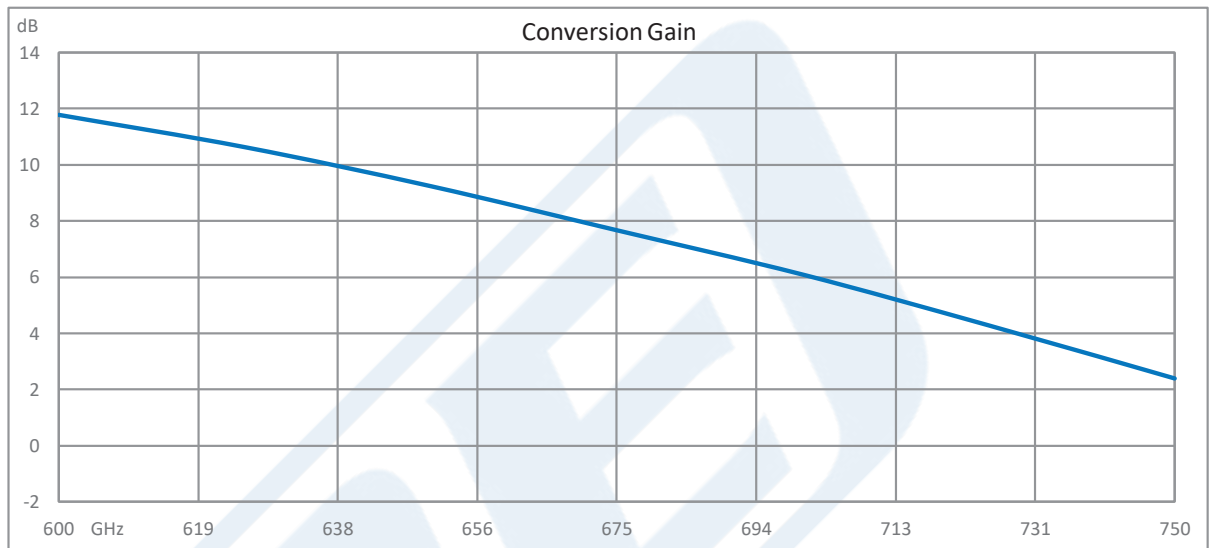


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Typical Performance Data



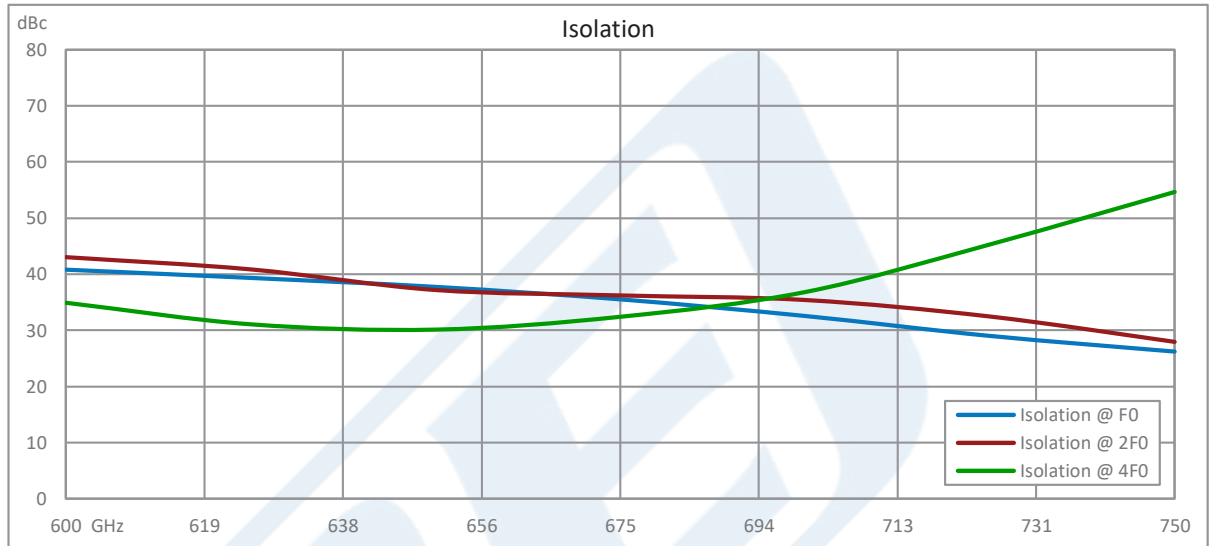
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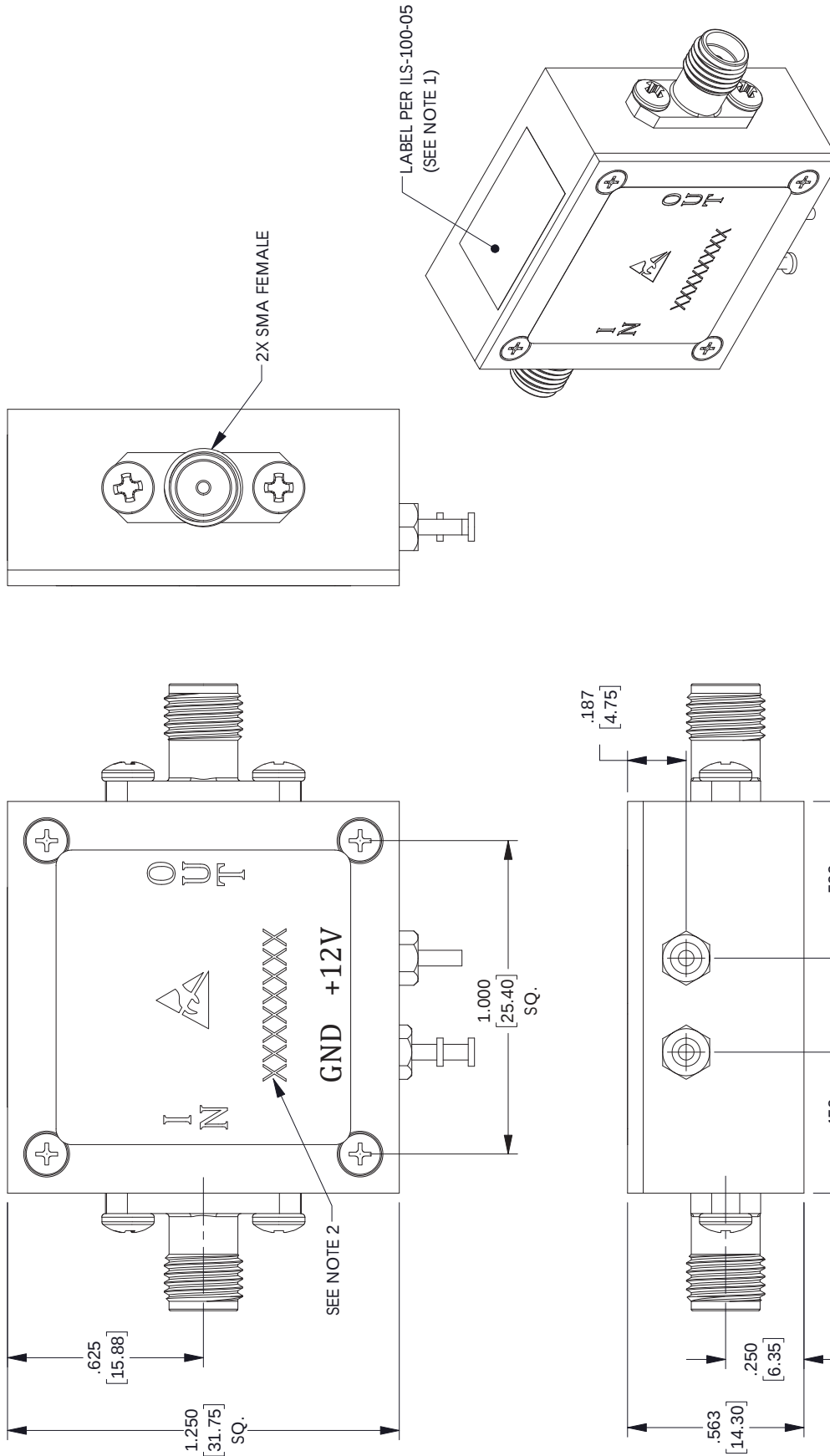
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PE88X2018 CAD Drawing

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	03-24-2021	TGALLA



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