



Double Balanced Mixer Operating from 5 GHz to 20 GHz with an IF Range from DC to 3 GHz and LO Power of +20 dBm, Field Replaceable SMA

Mixers Technical Data Sheet

PE86X1008

Features

- Double Balanced Mixer Module
- RF/LO Frequency 5 to 20 GHz
- Wide IF Bandwidth DC to 3 GHz
- Balanced Design utilizes GaAs Schottky Diodes
- No external components or matching circuitry
- MIL-Spec Compliant
- DC Coupled Design
- LO Drive level +20 dBm
- Low Conversion loss 10 dB
- High LO/RF Isolation 30 dB
- Field Replaceable SMA Connectors
- RF/IF Input up to +10 dBm
- Operating Temperature Range 0°C to +50°C

Applications

- Electronic Warfare
- Point-to-Point Radios
- Point-to-Multipoint Radios
- VSAT
- Radar
- Space Systems
- Test Instrumentation
- Sensors
- Telecom Infrastructure
- Military End-Use

Description

The PE86X1008 is a broadband double balanced mixer that operates across an RF and LO frequency range from 5 to 20 GHz with an IF frequency range of DC to 3 GHz and supports an LO drive level of +20 dBm typical. The 50 ohm design utilizes high performance GaAs Schottky diodes in a balanced configuration that's DC coupled. Exceptional typical performance includes 10 dB conversion loss, 30 dB LO to RF Isolation, and 17 dB LO to IF Isolation. The compact and rugged drop-in pin package supports field replaceable SMA connectors, operates over a temperature range of 0°C to +50°C, and is designed to meet MIL-STD-202 environmental test conditions for Humidity, Shock, Vibration, and Altitude for high reliability.

Electrical Specifications (+25°C, 50 Ohm System)

Description	Minimum	Typical	Maximum	Units
RF Frequency Range	5		20	GHz
LO Frequency Range	5		20	GHz
IF Frequency Range	DC		3	GHz
Impedance		50		Ohms
Conversion Loss		10		dB
LO to RF Isolation		30		dB
LO to IF Isolation		17		dB
RF Input Power			+10	dBm
LO Input Power		+20		dBm
IF Input Power			+10	dBm

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Double Balanced Mixer Operating from 5 GHz to 20 GHz with an IF Range from DC to 3 GHz and LO Power of +20 dBm, Field Replaceable SMA PE86X1008](#)



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Mechanical Specifications

Configuration

Design
Package Type
Connector Option
RF Connector
LO Connector
IF Connector

Double Balanced
Connectorized
Field Replaceable
SMA Female
SMA Female
SMA Female

Environmental Specifications

Temperature

Operating Range
Humidity
Shock
Vibration
Altitude

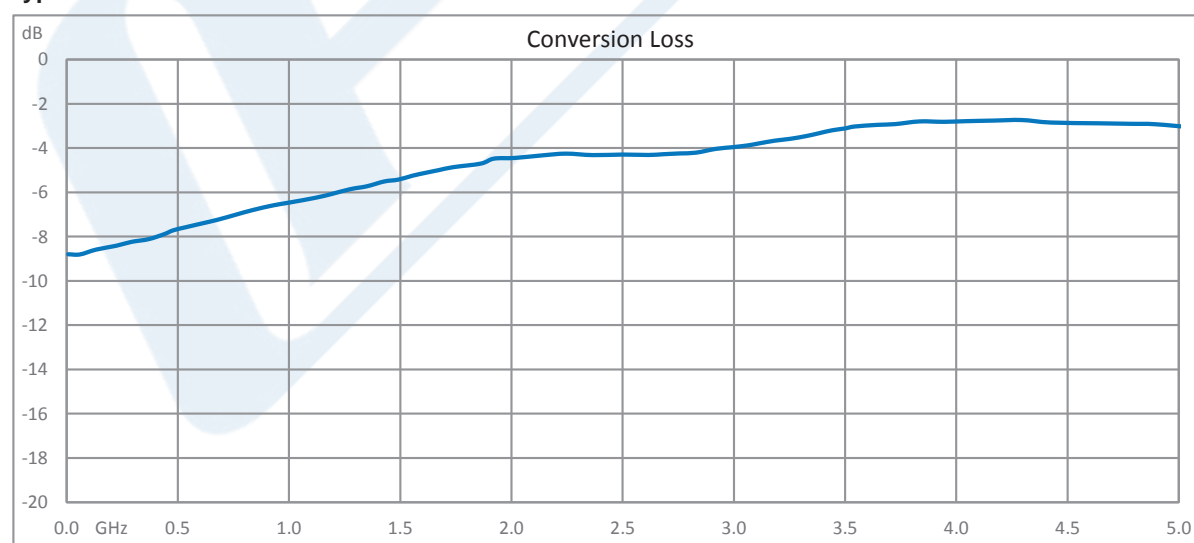
0 to +50 deg C
MIL-STD-202F, Method 103B, Condition B
MIL-STD-202F, Method 213B, Condition B
MIL-STD-202F, Method 204D, Condition B
MIL-STD-202F, Method 105C, Condition B

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

Plotted and Other Data

Notes:

Typical Performance Data



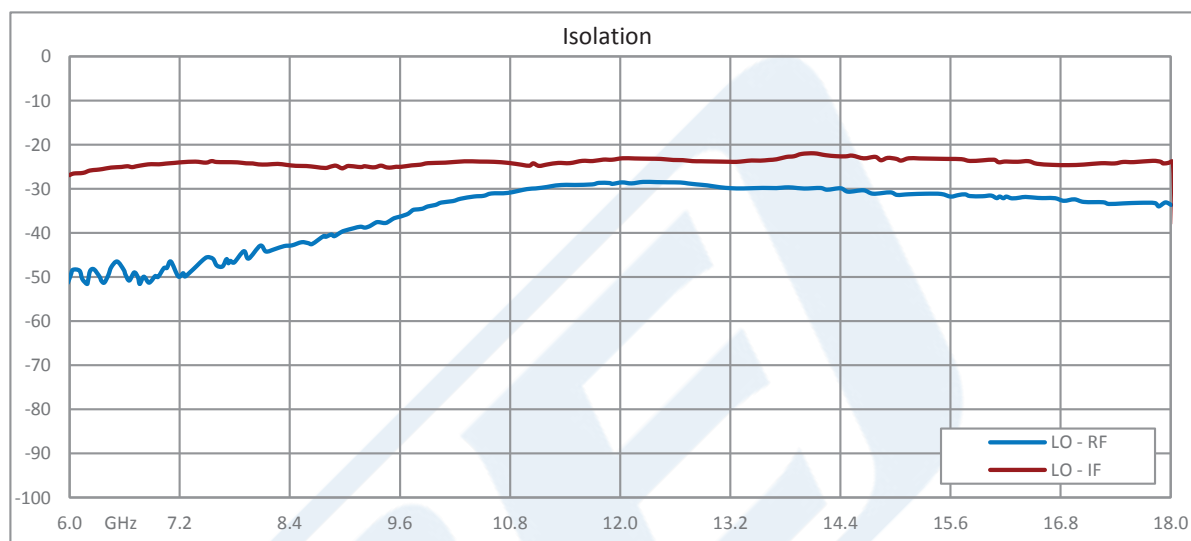
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Double Balanced Mixer Operating from 5 GHz to 20 GHz with an IF Range from DC to 3 GHz and LO Power of +20 dBm, Field Replaceable SMA PE86X1008](#)



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Double Balanced Mixer Operating from 5 GHz to 20 GHz with an IF Range from DC to 3 GHz and LO Power of +20 dBm, Field Replaceable 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: [Double Balanced Mixer Operating from 5 GHz to 20 GHz with an IF Range from DC to 3 GHz and LO Power of +20 dBm, Field Replaceable SMA PE86X1008](https://www.pasternack.com/sma-mixer-5-20-ghz-if-dc-3-ghz-pe86x1008-p.aspx)

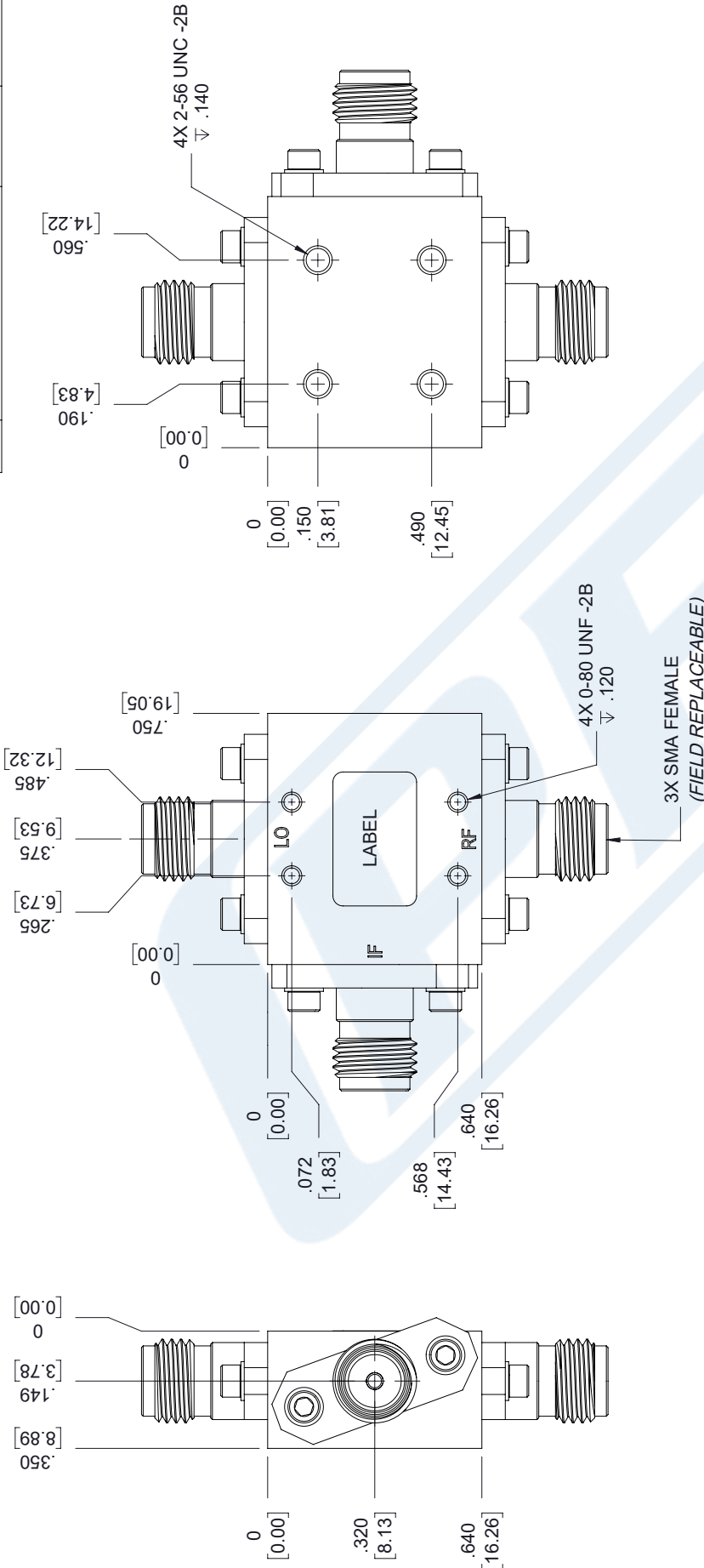
URL: <https://www.pasternack.com/sma-mixer-5-20-ghz-if-dc-3-ghz-pe86x1008-p.aspx>

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.

PE86X1008 CAD Drawing

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	11/08/19	T. GALLA



PE PASTERNAK an INFINITI® brand Pasternack Enterprises, Inc. P.O. Box 16759, Irvine, CA 92623. Phone: 1.949.261.1920 1.866.727.8376 Fax: 1.949.261.7451 Website: www.pasternack.com E-mail: sales@pasternack.com		THIRD-ANGLE PROJECTION THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF PASTERNAK CORPORATION. ALL RIGHTS RESERVED.	
SHEET 1 OF 1 SCALE N/A		REV A	
SIZE A CAGE CODE 53919 DRAWN BY K.DANG PART NUMBER PE86X1008			

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

X = ±.2 [5.08] FRACTIONS
.XX = ±.02 [.51] ±1/32
.XXX = ±.005 [.13] ANGLES ±1°

CABLE LENGTH (L) TOLERANCES:

L ≤ 12 [305] = +1 [25] / -0
12 [305] < L ≤ 60 [1524] = +2 [51] / -0
60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
300 [7620] < L = +5% / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

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PE86X1008
D/C: YYWW

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