



Double Balanced Mixer Operating from 6 GHz to 18 GHz with an IF Range from DC to 3 GHz and LO Power of +6 dBm, Field Replaceable SMA

Mixers Technical Data Sheet

PE86X1007

Features

- Double Balanced Mixer Module
- RF/LO Frequency 6 to 18 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 +6 dBm
- Low Conversion loss 7.5 dB
- High LO/RF Isolation >20 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 PE88X1007 is a broadband double balanced mixer that operates across an RF and LO frequency range from 6 to 18 GHz with an IF frequency range of DC to 3 GHz and supports an LO drive level of +6 dBm typical. The 50 ohm design utilizes high performance GaAs Schottky diodes in a balanced configuration that's DC coupled. Exceptional typical performance includes 7.5 dB conversion loss, 23 dB LO to RF Isolation, and 20 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	6		18	GHz
LO Frequency Range	6		18	GHz
IF Frequency Range	DC		3	GHz
Impedance		50		Ohms
Conversion Loss		7.5		dB
LO to RF Isolation		23		dB
LO to IF Isolation		20		dB
RF Input Power			+10	dBm
LO Input Power		+6		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 6 GHz to 18 GHz with an IF Range from DC to 3 GHz and LO Power of +6 dBm, Field Replaceable SMA PE86X1007](#)



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Mechanical Specifications

Configuration

Design	Double Balanced
Package Type	Connectorized
Connector Option	Field Replaceable
RF Connector	SMA Female
LO Connector	SMA Female
IF Connector	SMA Female

Environmental Specifications

Temperature

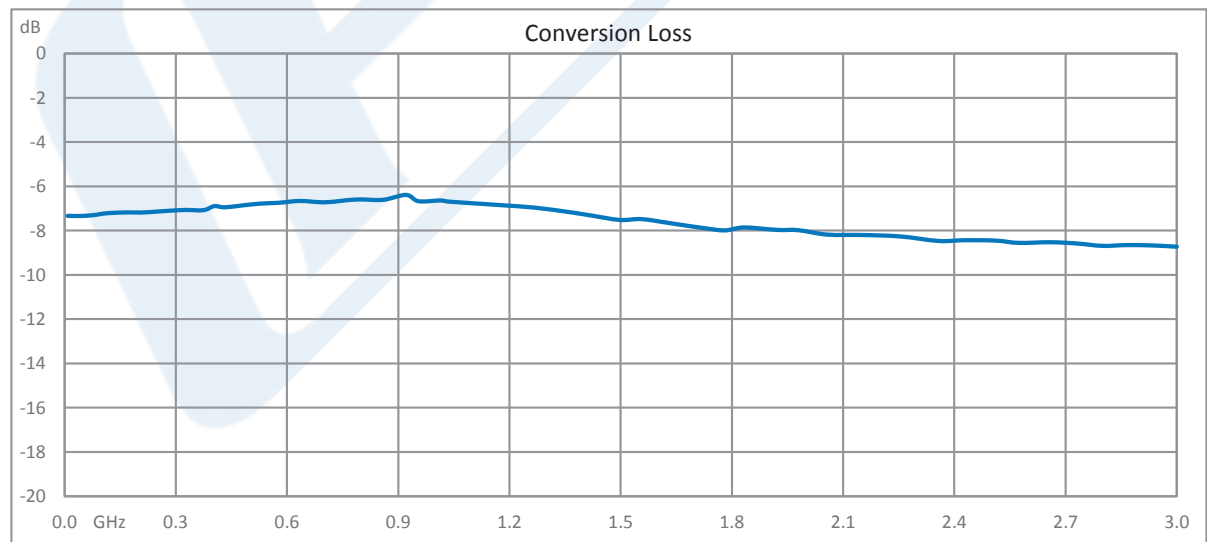
Operating Range	0 to +50 deg C
Humidity	MIL-STD-202F, Method 103B, Condition B
Shock	MIL-STD-202F, Method 213B, Condition B
Vibration	MIL-STD-202F, Method 204D, Condition B
Altitude	MIL-STD-202F, Method 105C, Condition B

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

Plotted and Other Data

Notes:

Typical Performance Data



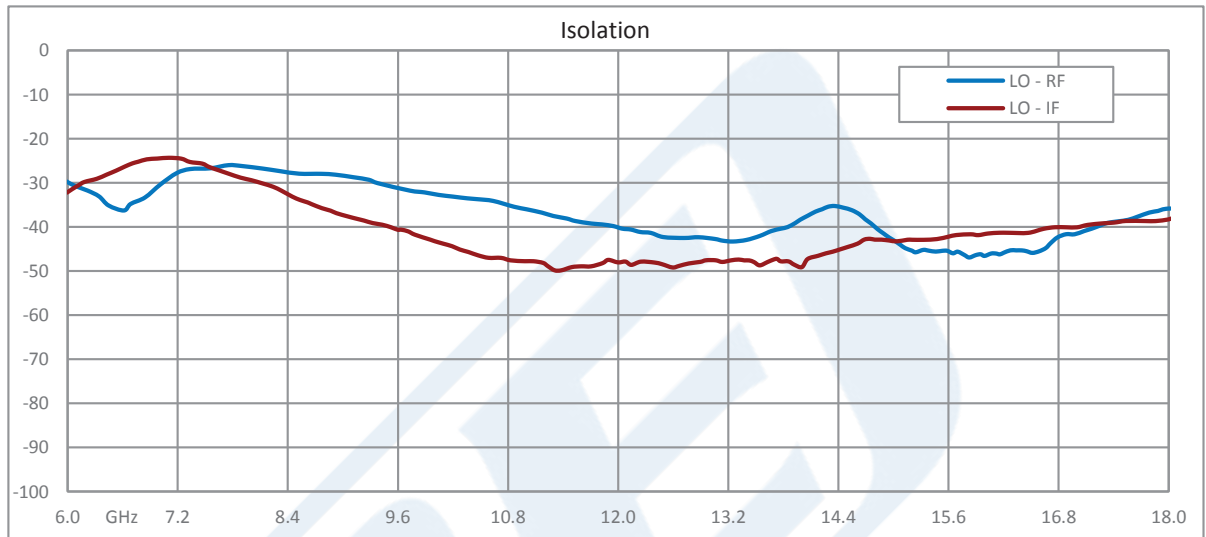
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Double Balanced Mixer Operating from 6 GHz to 18 GHz with an IF Range from DC to 3 GHz and LO Power of +6 dBm, Field Replaceable SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter 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 6 GHz to 18 GHz with an IF Range from DC to 3 GHz and LO Power of +6 dBm, Field Replaceable SMA PE86X1007](https://www.pasternack.com/sma-mixer-6-18-ghz-if-dc-3-ghz-pe86x1007-p.aspx)

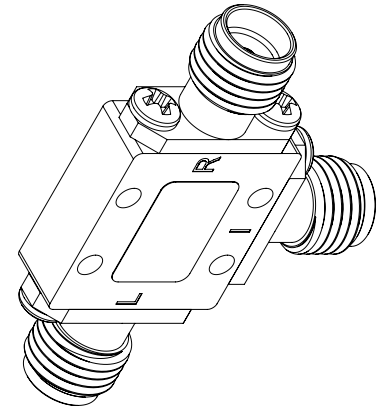
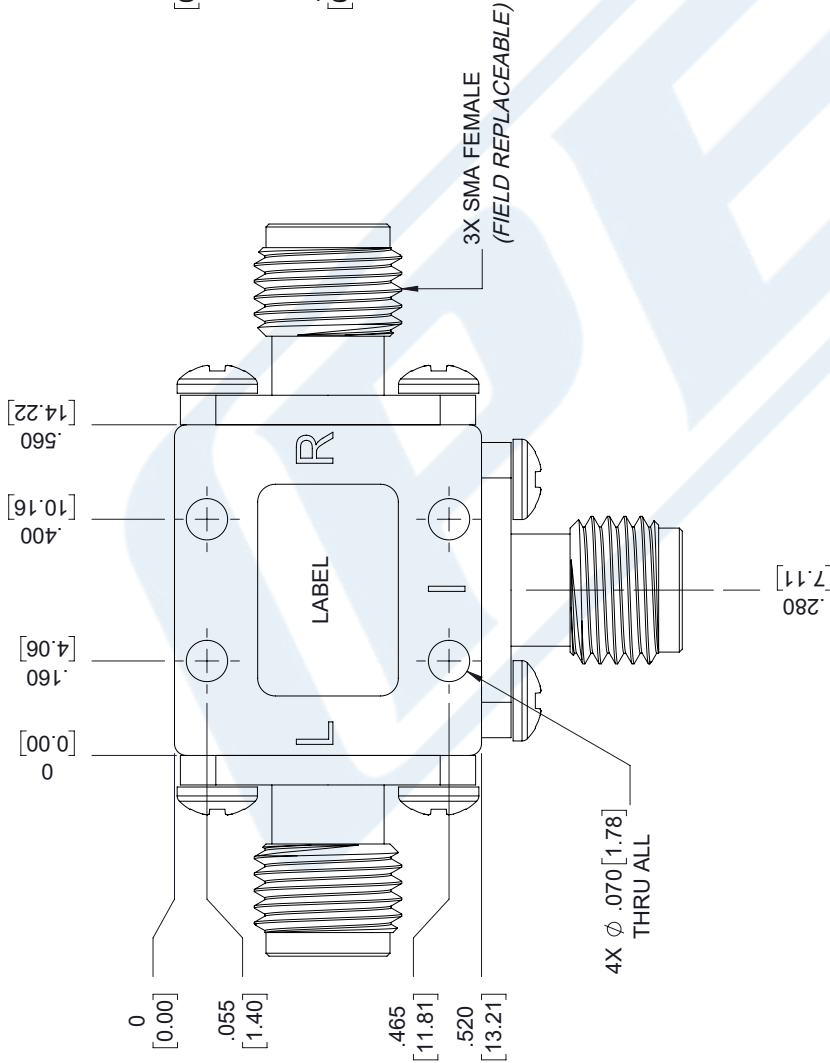
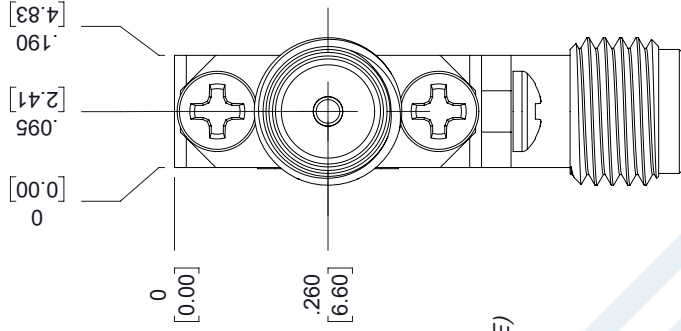
URL: <https://www.pasternack.com/sma-mixer-6-18-ghz-if-dc-3-ghz-pe86x1007-p.aspx>

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PE86X1007 CAD Drawing

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



LABEL
 PASTERNAK
 PE86X1007
 D/C: YYWW

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

TOLERANCES:
 .X = ±.2 [5.08] FRACTIONS ±.132
 .XX = ±.02 [.51] ±.132
 .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%L / -0

ALL DIMENSIONS SHOWN
 ARE FOR REFERENCE ONLY.

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