



Double Balanced Mixer Operating from 16 GHz to 30 GHz with an IF Range from DC to 8 GHz and LO Power of +13 dBm, 2.92mm

Mixers Technical Data Sheet

PE86X1030

Features

- Double Balanced Mixer Design
- LO & RF Frequency Range: 16 GHz to 30 GHz
- IF Frequency Range: DC to 8 GHz
- LO Drive Level Range: +13 dBm
- Advanced MMIC Technology
- Conversion Loss: 9.5 dB typ
- Port Isolations up to 40 dB typ
- Input IP3 Level: +20 dBm
- RF Input for P1dB: +14 dBm
- RF/LO Connectors: Female 2.92mm
- IF Connector: Female SMA
- Operating Temperature Range: -40°C to +85°C
- Designed to Meet MIL-STD-202 Environmental Test Conditions

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 PE86X1030 is a broadband Double Balanced Mixer that operates across an RF and LO frequency range from 16 GHz to 30 GHz with an IF frequency range of DC to 8 GHz and supports an LO drive level of +13 dBm nominal. The design utilizes advanced MMIC technology and exhibits exceptional typical performance that includes Conversion Loss of 9.5 dB, RF to LO and LO to IF isolation levels up to 40 dB, and an input IP3 level of +20 dBm. The 50 ohm hybrid module does not require any external components or matching circuitry. The rugged compact package assembly supports female 2.92mm connectors for the RF and LO ports and a female SMA connector on the IF port, operates over a temperature range of -40°C to +85°C, and is designed to meet MIL-STD-202 environmental test conditions for Humidity, Shock, Vibration, and Altitude for high reliability.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
RF Frequency Range	16		30	GHz
LO Frequency Range	16		30	GHz
IF Frequency Range	DC		8	GHz
Impedance		50		Ohms
Conversion Loss		9	12	dB
LO to RF Isolation	32	40		dB
LO to IF Isolation	24	32		dB
RF to IF Isolation	14	25		dB
Input at 1dB Compression Point	+8	+13		dBm
Input at 3rd Order Intercept Point	+15	+18		dBm
LO Input Power	+11	+13	+15	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 16 GHz to 30 GHz with an IF Range from DC to 8 GHz and LO Power of +13 dBm, 2.92mm PE86X1030](#)



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Absolute Maximum Rating

Parameter	Rating	Units
RF/IF Power	+15	dBm
LO Driver	+27	dBm
Operating Temperature	-40 to +85	°C
Storage Temperature	-65 to +150	°C



ESD Sensitive Material,
Transport material in
Approved ESD bags.
Handle only in approved
ESD Workstation.

Mechanical Specifications

Configuration

Design
Package Type
RF Connector
LO Connector
IF Connector

Double Balanced
Connectorized
2.92mm Female
2.92mm Female
SMA Female

Environmental Specifications

Humidity
Shock
Vibration
Altitude

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:

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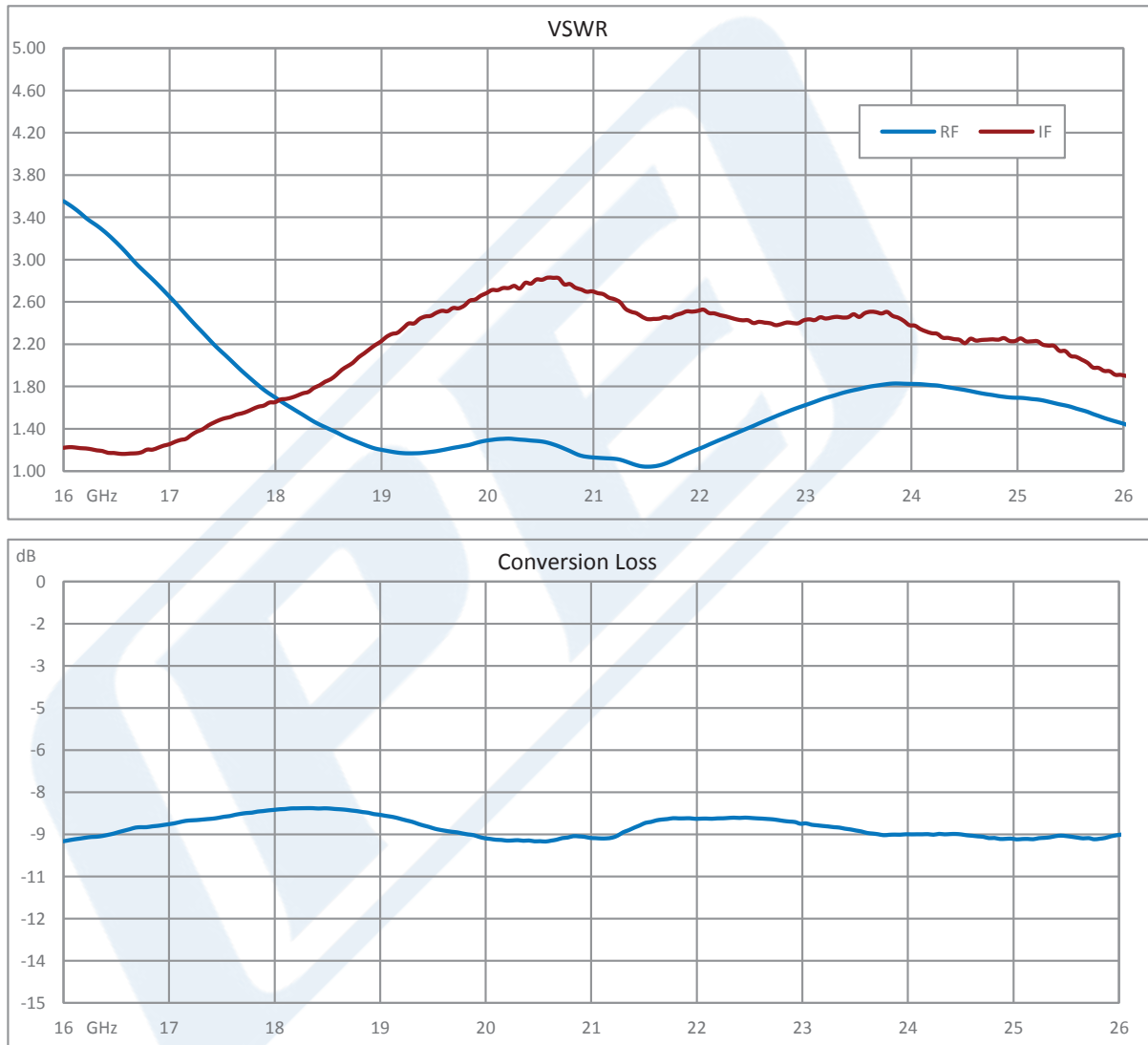


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Typical Performance Data



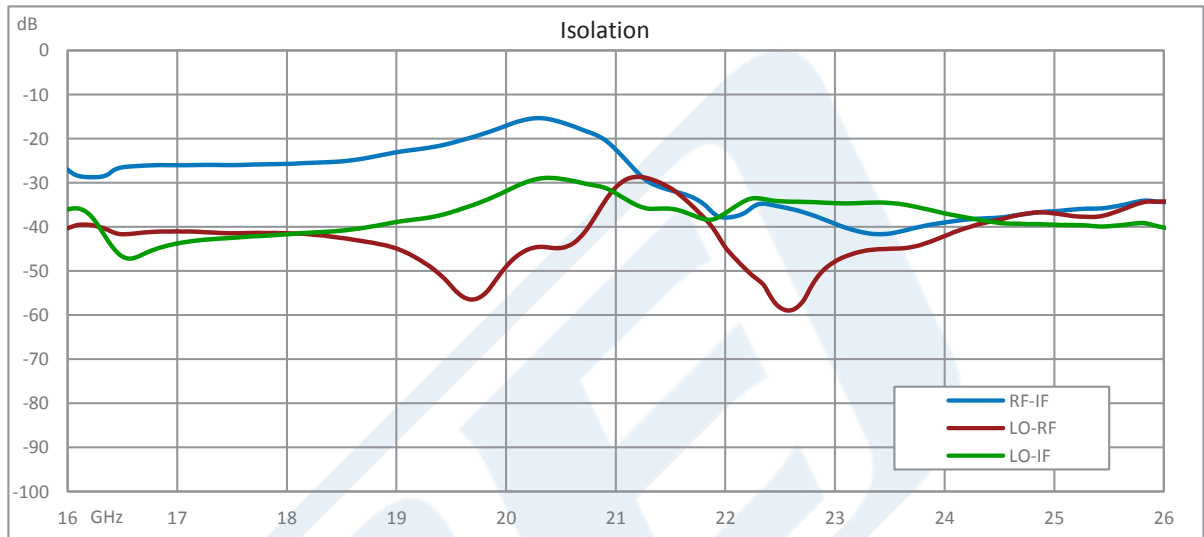
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Double Balanced Mixer Operating from 16 GHz to 30 GHz with an IF Range from DC to 8 GHz and LO Power of +13 dBm, 2.92mm from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

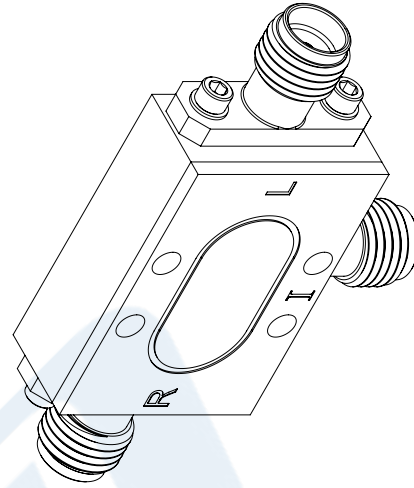
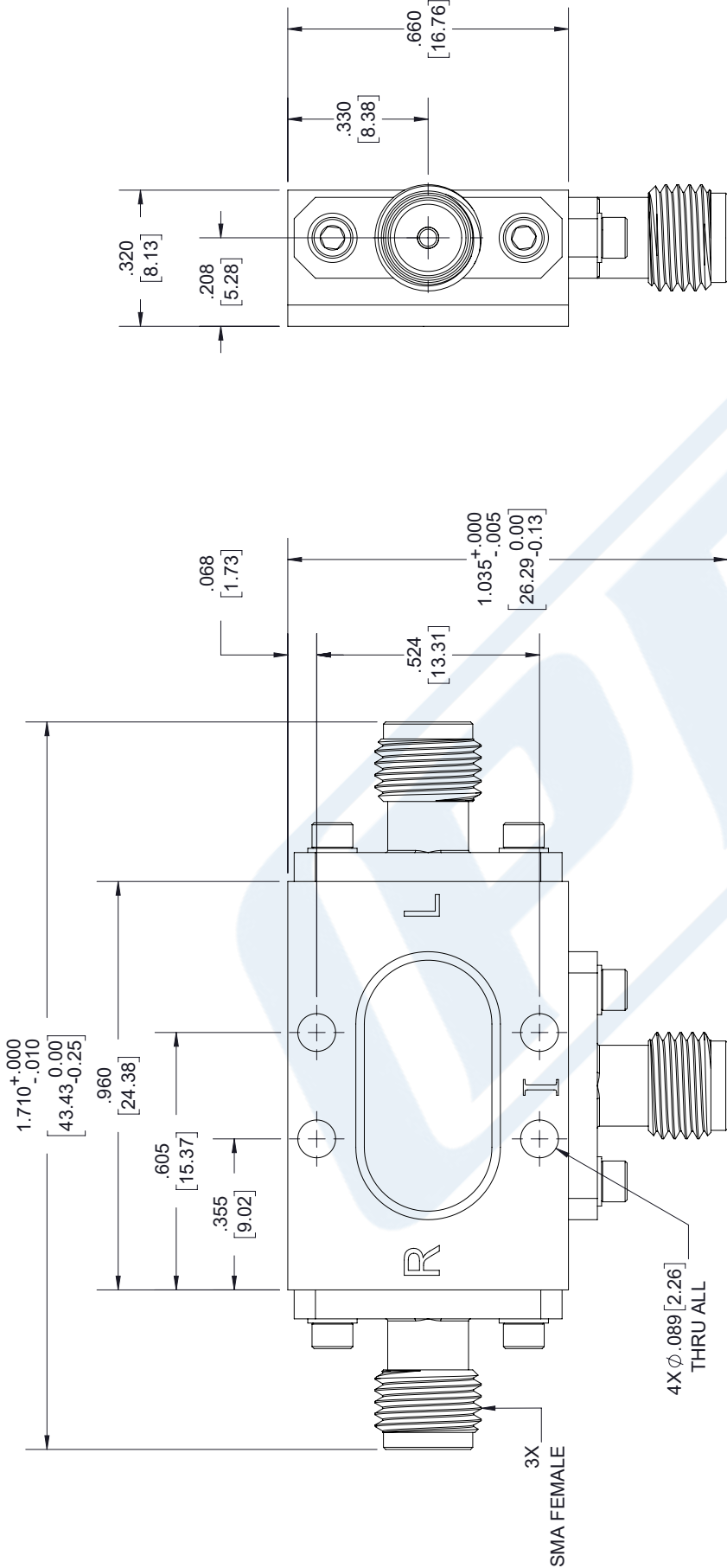
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URL: <https://www.pasternack.com/2.92mm-mixer-16-30-ghz-if-dc-8-ghz-pe86x1030-p.aspx>

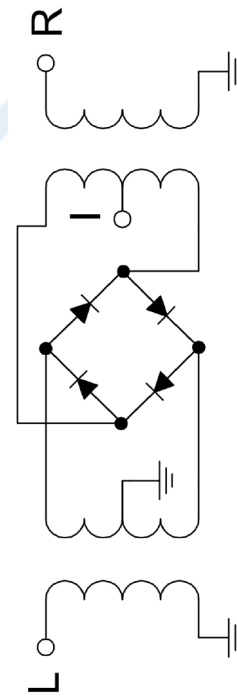
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such 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.

PE86X1030 CAD Drawing

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SCHEMATIC



LABEL



STANDARD TOLERANCES

.X ± 0.2
.XX ± 0.01
.XXX ± 0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES



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DWG TITLE

PE86X1030

CAGE CODE 53919

NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

CAD FILE 04/26/18

SCALE N/A

SIZE A

7361