



Double Balanced Mixer Operating from 24 GHz to 32 GHz with an IF Range from DC to 8 GHz and LO Power of +13 dBm, 2.92mm

Mixers Technical Data Sheet

PE86X1031

Features

- Double Balanced Mixer Design
- LO & RF Frequency Range: 24 GHz to 32 GHz
- IF Frequency Range: DC to 8 GHz
- LO Drive Level +13 dBm
- Advanced MMIC Technology
- Conversion Loss: 10.5 dB typ
- Port Isolations up to 40 dB typ
- Input IP3 Level: +18 dBm
- RF Input for P1dB: +13 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 PE86X1031 is a broadband Double Balanced Mixer that operates across an RF and LO frequency range from 24 GHz to 32 GHz with an IF frequency range of DC to 8 GHz and supports an LO drive level of +13 dBm nominal. The design advanced MMIC technology and exhibits exceptional typical performance that includes Conversion Loss of 10.5 dB, RF to LO and LO to IF isolation levels up to 40 dB, and an input IP3 level of +18 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 on 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	24		32	GHz
LO Frequency Range	24		32	GHz
IF Frequency Range	DC		8	GHz
Impedance		50		Ohms
Conversion Loss		10.5	12.5	dB
LO to RF Isolation	32	38		dB
LO to IF Isolation	20	40		dB
RF to IF Isolation	20	30		dB
Input at 1dB Compression Point		+13		dBm
Input at 2nd Order Intercept Point		+40		dBm
Input at 3rd Order Intercept Point		+18		dBm
LO Input Power		+13		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 24 GHz to 32 GHz with an IF Range from DC to 8 GHz and LO Power of +13 dBm, 2.92mm PE86X1031](#)



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Absolute Maximum Rating

Parameter	Rating	Units
RF/IF Power	+13	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	Double Balanced
Package Type	Connectorized
RF Connector	2.92mm Female
LO Connector	2.92mm Female
IF Connector	SMA Female

Environmental Specifications

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:

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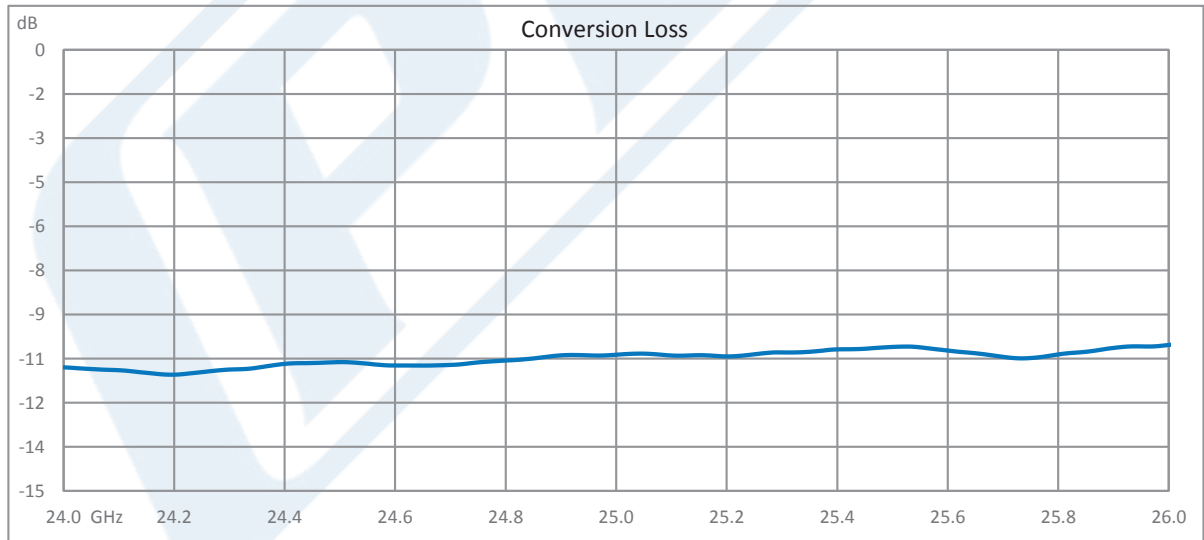
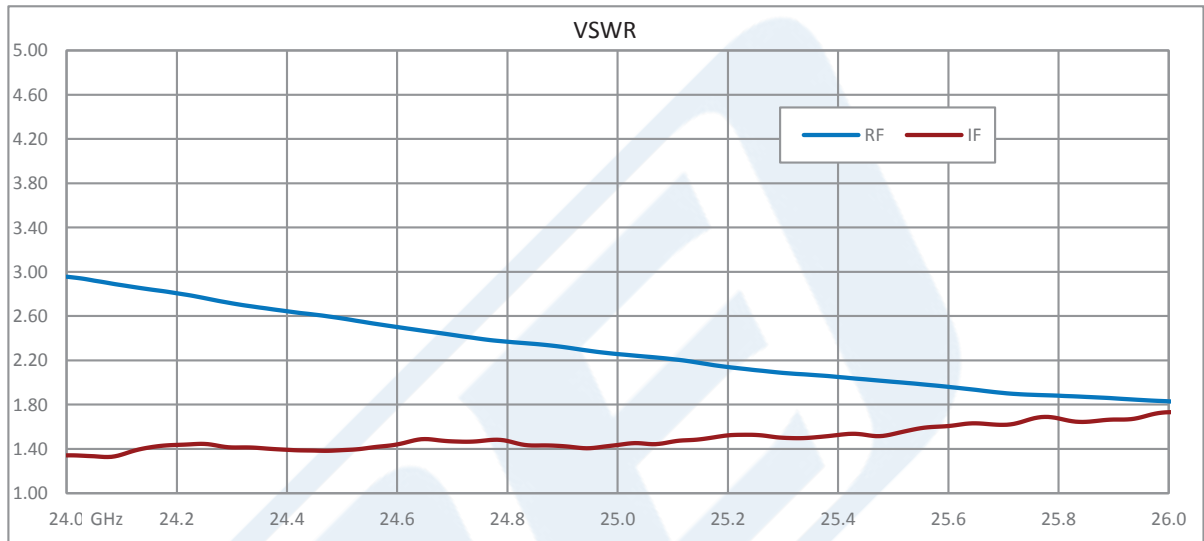


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Typical Performance Data



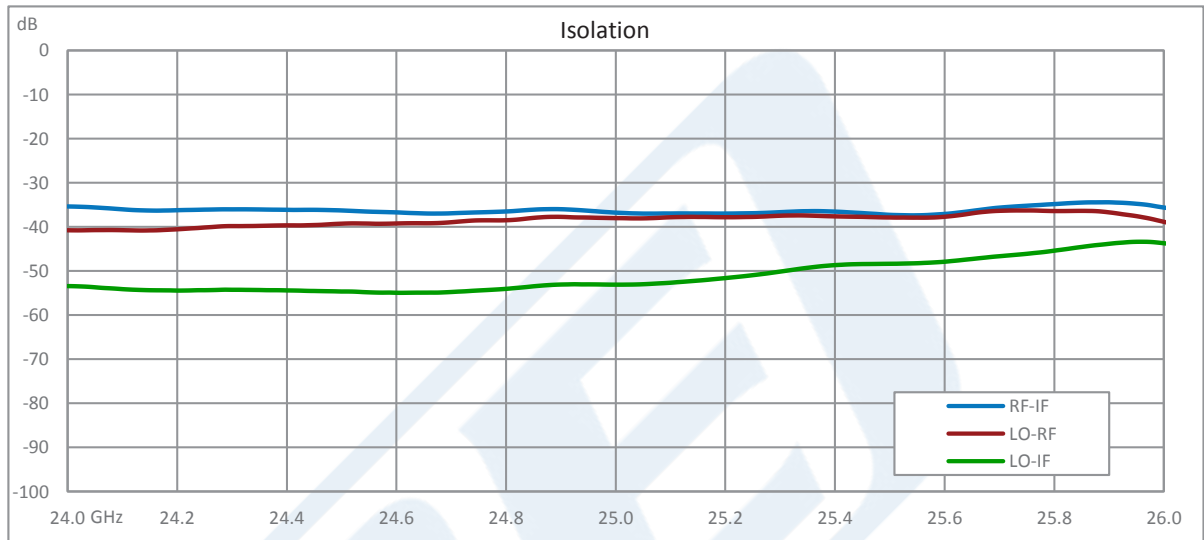
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Double Balanced Mixer Operating from 24 GHz to 32 GHz with an IF Range from DC to 8 GHz and LO Power of +13 dBm, 2.92mm from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

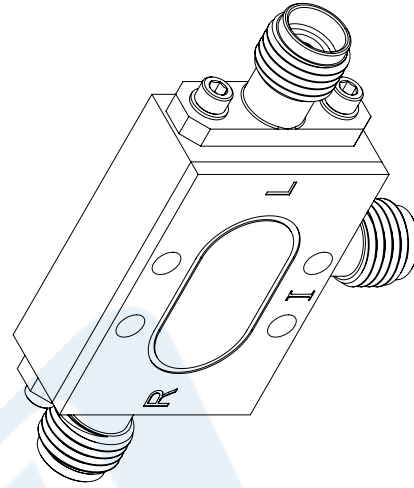
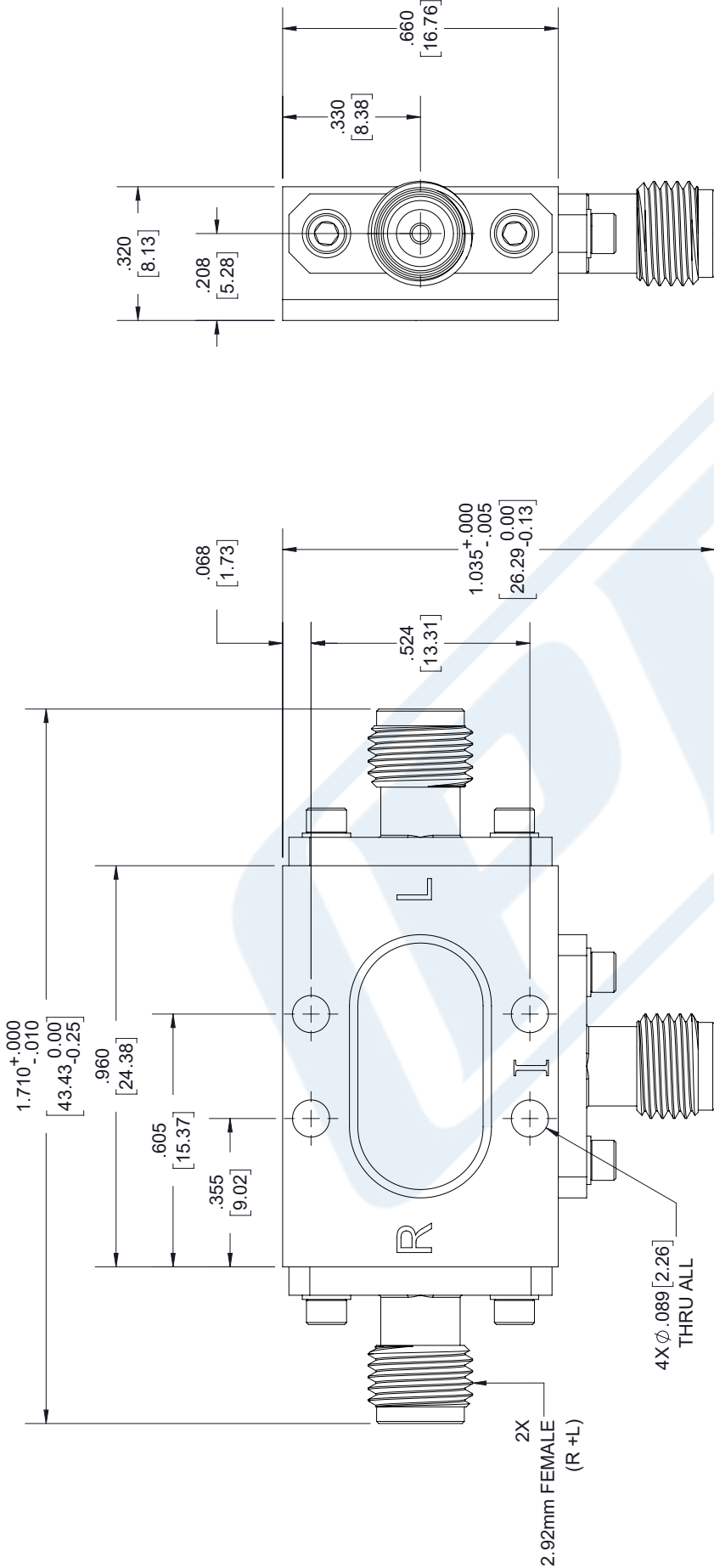
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URL: <https://www.pasternack.com/2.92mm-mixer-24-32-ghz-if-dc-8-ghz-pe86x1031-p.aspx>

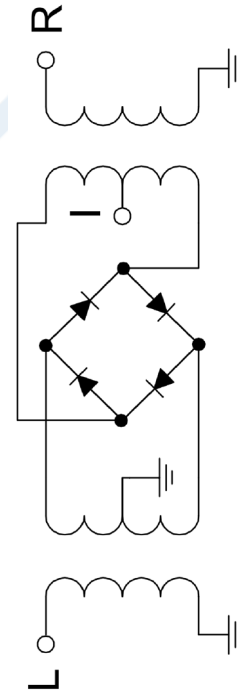
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PE86X1031 CAD Drawing

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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

PE86X1031

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