



Double Balanced Mixer Operating From 5 GHz to 18 GHz With an IF Range From DC to 4 GHz And LO Power of +10 dBm, SMA

Mixers Technical Data Sheet

PE8653

Features

- Double Balanced Mixer Module
- RF/LO Frequency 5 GHz to 18 GHz
- IF Bandwidth DC to 4 GHz
- LO Drive Level +10 dBm
- Low Conversion Loss of 6.2 dB
- High LO/RF Isolation of 35 dB

Applications

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

Description

Pasternack's PE8653 is a double balanced mixer module that operates across an RF and LO frequency range of 5 GHz to 18 GHz with an IF frequency range of DC to 4 GHz. This double balanced mixer provides excellent LO to RF isolation of 35 dB. The PE8653 also provides low conversion loss of 6.2 dB. RF Mixers are commonly used to convert from one frequency to another. This is done by "mixing" two signals of different frequencies, also known as heterodyning.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
RF Frequency Range	5		18	GHz
LO Frequency Range	5		18	GHz
IF Frequency Range	DC		4	GHz
Impedance		50		Ohms
Conversion Loss		6.2	8.5	dB
LO to RF Isolation	25	35		dB
LO to IF Isolation	20	30		dB
Input at 1dB Compression Point		+4		dBm
Input at 3rd Order Intercept Point		+14		dBm
LO Input Power		+10	+13	dBm
Input Power (CW)			0.2	Watts
Input Current (Peak)			0.1	Amps

Electrical Specification Notes:

Values at 25°C, sea level.

Peak input power for any single port: +23 dBm peak

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 18 GHz With an IF Range From DC to 4 GHz And LO Power of +10 dBm, SMA PE8653](#)

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.



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Mechanical Specifications

Size

Length	1.55 in [39.37 mm]
Width	0.19 in [4.83 mm]
Height	0.97 in [24.64 mm]
Weight	0.034 lbs [15.42 g]
Housing Material and Plating	Passivated Stainless Steel

Configuration

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

Environmental Specifications

Temperature

Operating Range	-45 to +90 deg C
Storage Range	-65 to +100 deg C

Compliance Certifications (visit www.Pasternack.com for current document)

RoHS Compliant	
REACH Compliant	12/17/2015

Plotted and Other Data

Notes:

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Double Balanced Mixer Operating From 5 GHz to 18 GHz With an IF Range From DC to 4 GHz And LO Power of +10 dBm, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

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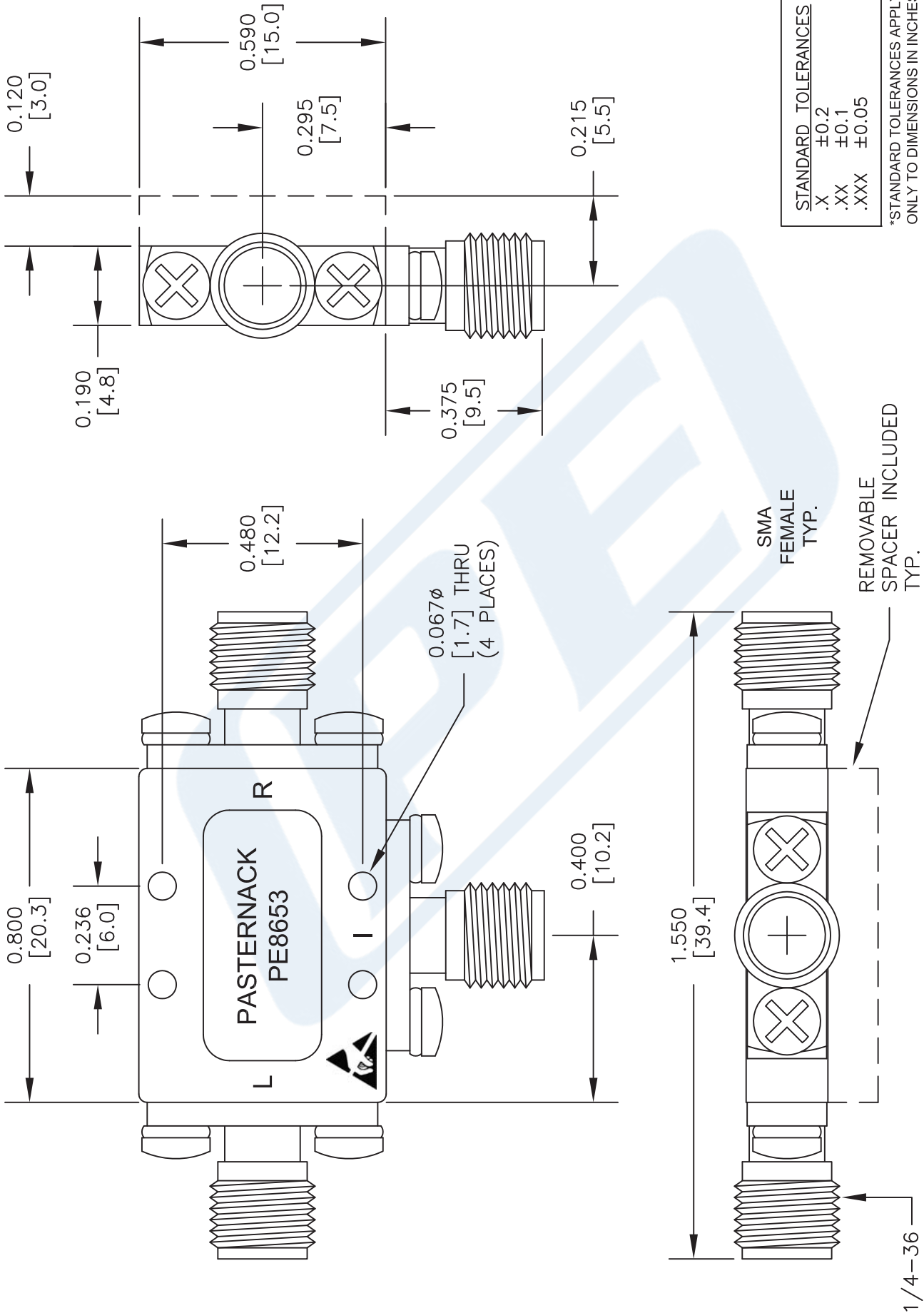
URL: <https://www.pasternack.com/50-ohm-sma-mixer-5000-mhz-18000-mhz-if-dc-4000-mhz-pe8653-p.aspx>

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PE8653 CAD Drawing

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DWG TITLE

PE8653

(PE) PASTERNAK®
THE ENGINEER'S RF SOURCE

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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].

FSCM NO. 53919

CAD FILE 071216

SCALE N/A

SIZE A

2233