



Waveguide Mixer Up Converter WR-12 From
60 GHz to 90 GHz, IF From DC to 18 GHz And LO Power
of +13 dBm, UG-387/U Flange, E Band

Waveguide Converters - PE13U1001

Features

- E Band (60 to 90 GHz) full waveguide up converter
- Broad IF Frequency Range: DC to 18 GHz
- LO Drive level: +13 dBm nominal
- RF & LO Ports: WR-12 with UG-387/U-MOD Flange
- Double Balanced design
- Low Capacitance GaAs Schottky Beam Lead diodes
- Gold Plated Compact Package Design
- Operating Temperature: 0°C to +50°C

Applications

- Transmitter Subsystems
- Military Communications
- Commercial Communications
- Instruments and Test Equipment

Description

The PE13U1001 is a full waveguide band up converter mixer with an LO and RF frequency range of 60 to 90 GHz (E Band). The IF frequency range is DC to 18 GHz with a nominal LO drive level of +13 dBm. The double balanced circuit design utilizes high performance GaAs Schottky beam lead diodes. Conversion loss is 8.5 dB typical and flat across the entire frequency band. The gold plated compact package design uses integrated WR-12 with UG-387/U-MOD waveguide flange interfaces for the RF and LO ports and a female SMA connector for the IF port.

Electrical Specifications

| Description | Minimum | Typical | Maximum | Units |
|--------------------|---------|---------|---------|-------|
| Frequency Range | 60 | | 90 | GHz |
| LO Frequency Range | 60 | | 90 | GHz |
| IF Frequency Range | DC | | 18 | GHz |
| Conversion Loss | | 8.5 | | dB |
| LO Port Power | | 13 | 15 | dBm |

Mechanical Specifications

| | |
|-------------|----------------------|
| Size | |
| Length | 1.4 in [35.56 mm] |
| Width | 0.75 in [19.05 mm] |
| Height | 0.75 in [19.05 mm] |
| Weight | 0.0625 lbs [28.35 g] |

| | |
|----------------------|--------------------|
| Configuration | |
| Design | Mixer Up Converter |

| Description | RF Port | LO Port | IF Port |
|-------------|----------------|----------------|------------|
| Type | WR-12 UG-387/U | WR-12 UG-387/U | SMA Female |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [Waveguide Mixer Up Converter WR-12 From 60 GHz to 90 GHz, IF From DC to 18 GHz And LO Power of +13 dBm, UG-387/U Flange, E Band PE13U1001](#)



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Environmental Specifications

Temperature

Operating Range

0 to +50 deg C



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

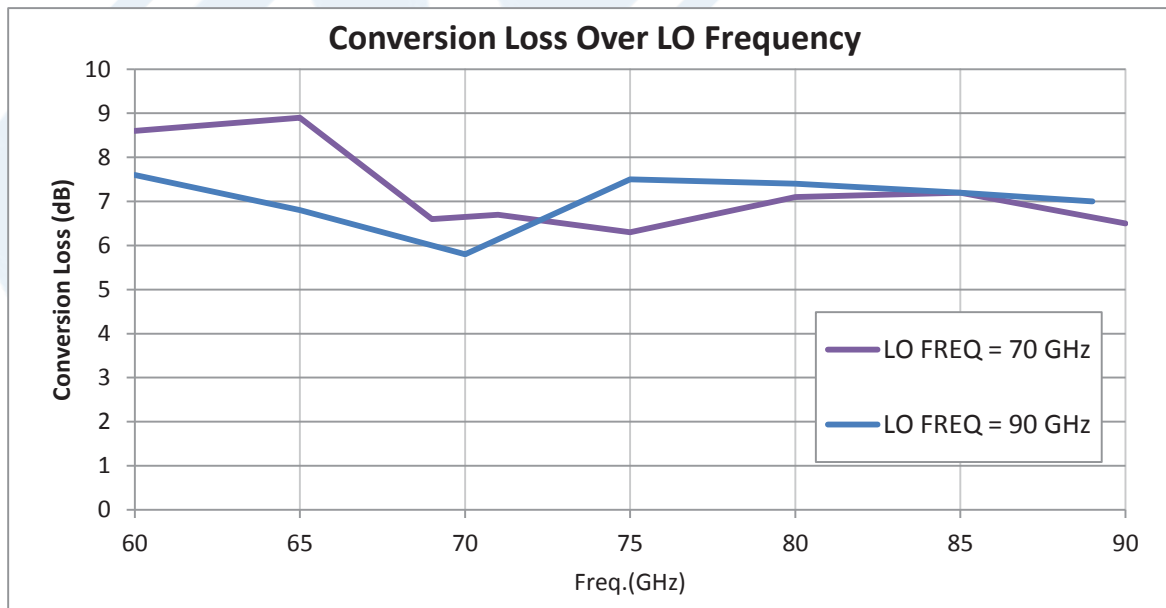
Not RoHS Compliant

Plotted and Other Data

Notes:

Typical Performance Data

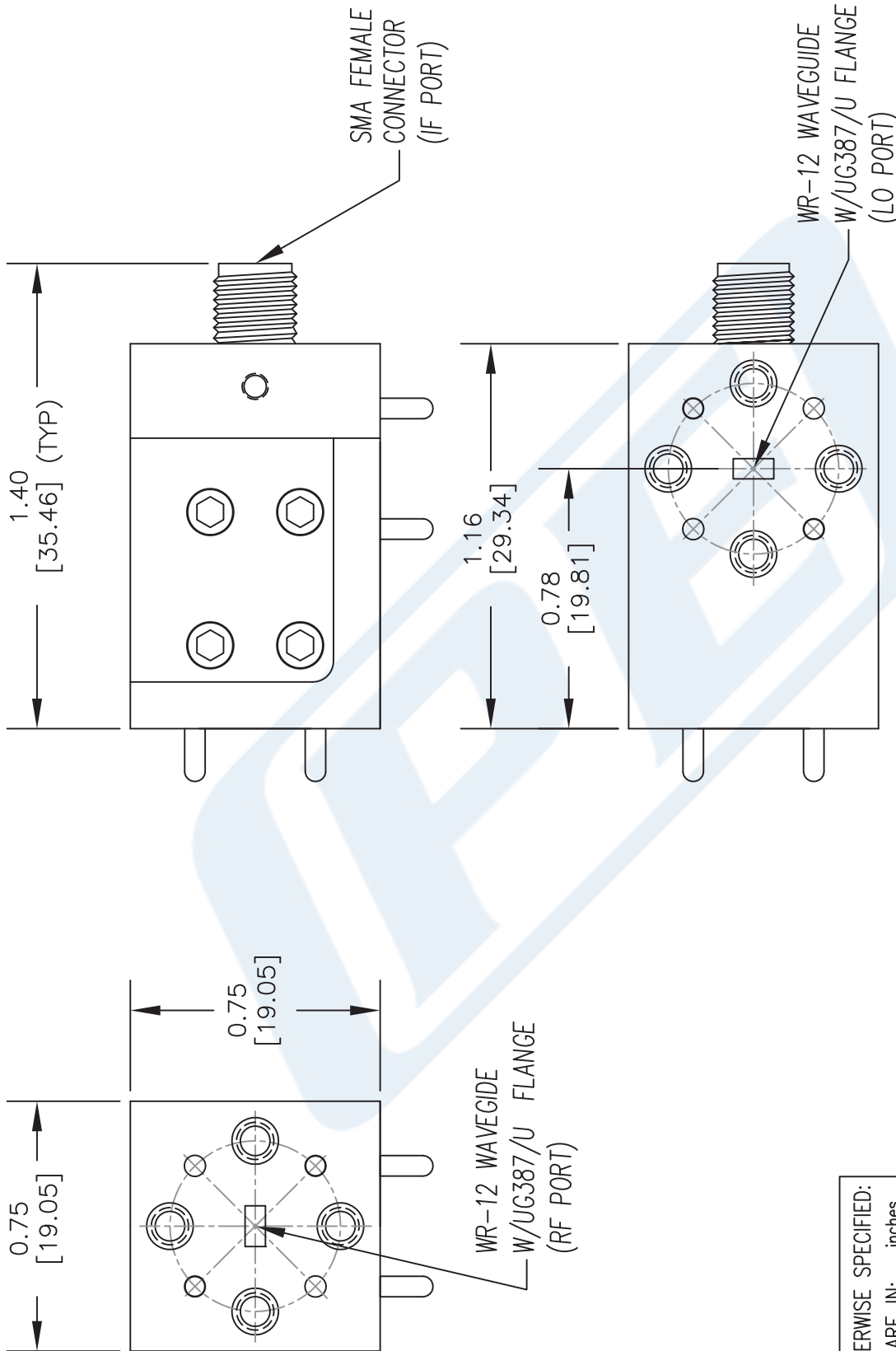
erGraph



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PE13U1001 CAD Drawing

Waveguide Mixer Up Converter WR-12 From 60 GHz to 90 GHz, IF From DC to 18 GHz And LO Power of +13 dBm, UG-387/U Flange, E Band



UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN: inches
TOLERANCES ARE: [mm]
.XX ± .01 [±.25]
.XX ± .001 [±.025]

* THESE DIMENSIONS AND TOLERANCES
SUPERSEDE NOTE #1 ON TITLE BLOCK.

PE PASTERNAK®
THE ENGINEER'S RF SOURCE

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DWG TITLE

PE13U1001

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].

FSCM NO. 53919

CAD FILE 072015

SCALE N/A

SIZE A

2233