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

**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**

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>60</td>
<td>90</td>
<td>90</td>
<td>GHz</td>
</tr>
<tr>
<td>LO Frequency Range</td>
<td>60</td>
<td>90</td>
<td>90</td>
<td>GHz</td>
</tr>
<tr>
<td>IF Frequency Range</td>
<td>DC</td>
<td></td>
<td>18</td>
<td>GHz</td>
</tr>
<tr>
<td>Conversion Loss</td>
<td>8.5</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>LO Port Power</td>
<td>13</td>
<td>15</td>
<td></td>
<td>dBm</td>
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</tbody>
</table>

**Mechanical Specifications**

<table>
<thead>
<tr>
<th>Size</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>1.4 in [35.56 mm]</td>
</tr>
<tr>
<td>Width</td>
<td>0.75 in [19.05 mm]</td>
</tr>
<tr>
<td>Height</td>
<td>0.75 in [19.05 mm]</td>
</tr>
<tr>
<td>Weight</td>
<td>0.0625 lbs [28.35 g]</td>
</tr>
</tbody>
</table>

**Configuration**

<table>
<thead>
<tr>
<th>Description</th>
<th>RF Port</th>
<th>LO Port</th>
<th>IF Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>WR-12 UG-387/U</td>
<td>WR-12 UG-387/U</td>
<td>SMA Female</td>
</tr>
</tbody>
</table>
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Waveguide Converters - PE13U1001

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

Conversion Loss Over LO Frequency

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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Waveguide Converters - PE13U1001

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 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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Waveguide Mixer Up Converter WR-12 From 80 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.