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.

Features

- E Band (70.5 to 76.5GHz) waveguide power amplifier
- Psat +19 dBm min
- Gain +20 dB min

Applications

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

Description

The PE15A4024 is an E Band Waveguide Power Amplifier, operating in the 80.5 to 86.5 GHz frequency range. The amplifier offers +19 dBm Minimum of Psat and 20 dB small signal gain min performance. This amplifier requires only a single positive DC supply, is unconditionally stable. The gold plated compact package design uses integrated WR-12 with UG-387/U-MOD waveguide flange interfaces for the RF ports.

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</td>
<td>80.5</td>
<td>86.5</td>
<td></td>
<td>GHz</td>
</tr>
<tr>
<td>Small Signal Gain</td>
<td>20</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Saturated Output Power</td>
<td>+19</td>
<td></td>
<td></td>
<td>dBm</td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>-4</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Output Return Loss</td>
<td>-4</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Operating DC Voltage</td>
<td>8</td>
<td></td>
<td>12</td>
<td>Volts</td>
</tr>
<tr>
<td>Operating DC Current</td>
<td></td>
<td></td>
<td>700</td>
<td>mA</td>
</tr>
</tbody>
</table>

Mechanical Specifications

- Size
  - Length: 1.6 in [40.64 mm]
  - Width: 1 in [25.4 mm]
  - Height: 0.6 in [15.24 mm]
  - Weight: 0.119 lbs [53.98 g]

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: WR-12, Waveguide Power Amplifier, , 80.5 GHz to 86.5 GHz, 20 dB Gain, 19 dBm Psat, UG-387/U Flange PE15A4024
WR-12, Waveguide Power Amplifier, , 80.5 GHz to 86.5 GHz, 20 dB Gain, 19 dBm Psat, UG-387/U Flange

### Waveguide Power Amplifiers - PE15A4024

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Description</th>
<th>Input Port</th>
<th>Output Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Type</td>
<td>WR-12</td>
<td>WR-12</td>
</tr>
<tr>
<td>DC Bias Connector</td>
<td>Flange</td>
<td>UG-387/U</td>
<td>UG-387/U</td>
</tr>
</tbody>
</table>

**Mechanical Specification Notes:**
ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation. Heat Sink Required for Proper Operation, Unit is cooled by conduction to heat sink.

**Environmental Specifications**

**Compliance Certifications** (see product page for current document)

**Plotted and Other Data**

Notes:

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: WR-12, Waveguide Power Amplifier, , 80.5 GHz to 86.5 GHz, 20 dB Gain, 19 dBm Psat, UG-387/U Flange PE15A4024
WR-12, Waveguide Power Amplifier, 80.5 GHz to 86.5 GHz, 20 dB Gain, 19 dBm Psat, UG-387/U Flange

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WR-12, Waveguide Power Amplifier, 80.5 GHz to 86.5 GHz, 20 dB Gain, 19 dBm Psat, UG-387/U Flange

Waveguide Power Amplifiers - PE15A4024

WR-12, Waveguide Power Amplifier, 80.5 GHz to 86.5 GHz, 20 dB Gain, 19 dBm Psat, UG-387/U Flange 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.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: WR-12, Waveguide Power Amplifier, 80.5 GHz to 86.5 GHz, 20 dB Gain, 19 dBm Psat, UG-387/U Flange PE15A4024

URL: https://www.pasternack.com/wr-12-waveguide-power-amplifier-e-band-86.5-ghz-pe15a4024-p.aspx

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**5PE15A4024  REV 1.0**

WR-12, Waveguide Power Amplifier, 80.5 GHz to 86.5 GHz, 20 dB Gain, 19 dBm Psat, UG-387/U Flange

**NOTE:**

HEAT SINK REQUIRED FOR PROPER OPERATION, UNIT IS COOLED BY CONDUCTING TO HEAT SINK.

**UNLESS OTHERWISE SPECIFIED:**

DIMENSIONS ARE IN: inches
TOLERANCES ARE: [mm]

\(XX \pm .01 [\pm .25]\)

\(XX \pm .001 [\pm .025]\)

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