PE15A1028 is a wideband low noise RF coaxial power amplifier operating in the 1.2 GHz to 1.6 GHz frequency range. The amplifier offers 0.7 dB noise figure typical, 12 dBm of P1dB and 40 dB small signal gain with gain flatness of ±0.5 dB. The low noise amplifier requires typically a +12V DC power supply and is unconditionally stable. The amplifier operates over the temperature range of -40°C and +85°C.

Features
• 1.2 GHz to 1.6 GHz Frequency Range
• Noise Figure: 0.7 dB typ
• P1dB: 12 dBm
• Flat Small Signal Gain: 40 dB
• Gain Flatness: ±0.5 dB
• 50 Ohm Input and Output Matched
• -40 to 85°C Operating Temperature
• Unconditionally Stable
• Single DC Positive Supply
• Built-in Voltage Regulator

Applications
• Laboratory Applications
• R&D Labs
• Radar Systems
• Telecom Infrastructure
• Test Instrumentation
• Military & Space
• Communication Systems
• Microwave Radio Systems
• Satellite Communications
• Low Noise Amplifier
• General Purpose Amplification
• Gain Block

Electrical Specifications (TA = +25°C, DC Voltage = 12Vdc, DC Current = 100mA)

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
<th>Units</th>
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<tbody>
<tr>
<td>Frequency Range</td>
<td>1.2</td>
<td>40</td>
<td>42</td>
<td>GHz</td>
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<tr>
<td>Small Signal Gain</td>
<td>38</td>
<td>40</td>
<td>42</td>
<td>dB</td>
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<tr>
<td>Gain Flatness</td>
<td>±0.5</td>
<td>±0.75</td>
<td>±1</td>
<td>dB</td>
</tr>
<tr>
<td>Gain Variance at OTR*</td>
<td>±1</td>
<td>dB</td>
<td></td>
<td></td>
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<tr>
<td>Output at 1 dB Compression Point</td>
<td>+12</td>
<td>dBm</td>
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<tr>
<td>Noise Figure</td>
<td>0.8</td>
<td>dB</td>
<td></td>
<td></td>
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<tr>
<td>Input VSWR</td>
<td>1.35:1</td>
<td>1.5:1</td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Output VSWR</td>
<td>1.35:1</td>
<td>1.5:1</td>
<td></td>
<td></td>
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<tr>
<td>Reverse Isolation</td>
<td>60</td>
<td>dB</td>
<td></td>
<td></td>
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<tr>
<td>Spurious</td>
<td>60</td>
<td>dBc</td>
<td></td>
<td></td>
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<tr>
<td>Operating DC Voltage</td>
<td>10</td>
<td>12</td>
<td>15</td>
<td>Volts</td>
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<tr>
<td>Operating DC Current</td>
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<td>100</td>
<td>120</td>
<td>mA</td>
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<tr>
<td>Operating Temperature Range</td>
<td>-40</td>
<td>+85</td>
<td>°C</td>
<td></td>
</tr>
</tbody>
</table>

*OTR= Base Plate Operating Temperature Range

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 40 dB Gain, 0.7 dB NF, 12 dBm P1dB, 1.2 GHz to 1.6 GHz, Low Noise Amplifier, SMA PE15A1028
40 dB Gain, 0.7 dB NF, 12 dBm P1dB, 1.2 GHz to 1.6 GHz, Low Noise Amplifier, SMA

**TECHNICAL DATA SHEET**

### Mechanical Specifications

<table>
<thead>
<tr>
<th>Size</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>1.5 in [38.1 mm]</td>
</tr>
<tr>
<td>Width</td>
<td>0.85 in [21.59 mm]</td>
</tr>
<tr>
<td>Height</td>
<td>0.375 in [9.53 mm]</td>
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<tr>
<td>Weight</td>
<td>0.05 lbs [22.68 g]</td>
</tr>
</tbody>
</table>

- Input Connector: SMA Female
- Output Connector: SMA Female

### Environmental Specifications

- **Temperature**
  - Operating Range: -40 to +85 deg C
  - Storage Range: -55 to +125 deg C

### Compliance Certifications

(see product page for current document)

### Plotted and Other Data

- **Notes:**
  - Values at +25 °C, sea level
  - ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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TECHNICAL DATA SHEET

Typical Performance Data

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**Gain, Input Return Loss and Output Return Loss**

- **Gain (dB)**
- **IN Return Loss (dB)**
- **OUT Return Loss (dB)**

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**Noise Figure**

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40 dB Gain, 0.7 dB NF, 12 dBm P1dB, 1.2 GHz to 1.6 GHz, Low Noise Amplifier, SMA

TECHNICAL DATA SHEET

PE15A1028

40 dB Gain, 0.7 dB NF, 12 dBm P1dB, 1.2 GHz to 1.6 GHz, Low Noise Amplifier, SMA 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: 40 dB Gain, 0.7 dB NF, 12 dBm P1dB, 1.2 GHz to 1.6 GHz, Low Noise Amplifier, SMA PE15A1028

URL: https://www.pasternack.com/40-db-gain-0.7-db-1.6-ghz-low-noise-amplifier-sma-pe15a1028-p.aspx

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PE15A1028 CAD Drawing
40 dB Gain, 0.7 dB NF, 12 dBm P1dB, 1.2 GHz to 1.6 GHz, Low Noise Amplifier, SMA