AMCOM’s AM324032PA-P2 is a Power Amplifier module. It is designed for general purpose applications. It operates from 3200 MHz to 4000 MHz. The module operates using a 12V supply and uses SMA connectors for input and output.

FEATURES

- Frequency Range: 3200-4000MHz
- Gain: 35dB
- Pout: +32dBm
- IP3: +42dBm
- Noise Figure: 6dB
- Efficiency: 28%
- DC Power: 12V
- SMA Connector

Performance tested at 3600MHz

APPLICATIONS

- Wireless Infrastructure
- Military & Aerospace
- Test and Measurement

Electrical Specifications @ +25 °C, Z_s = Z_L = 50 Ω, V_supply = +12V

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>MHz</td>
<td>3200</td>
<td>35</td>
<td>4000</td>
</tr>
<tr>
<td>Small Signal Gain</td>
<td>dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output Power P_{1dB} @ P_{in} = -2dBm</td>
<td>dBm</td>
<td></td>
<td>+32</td>
<td></td>
</tr>
<tr>
<td>Channel Output Power P_{out} (OFDM QAM-64, 54Mb/s, EVM&lt;2.5%)</td>
<td>dBm</td>
<td></td>
<td>+25</td>
<td></td>
</tr>
<tr>
<td>IP3</td>
<td>dBm</td>
<td></td>
<td>+42</td>
<td></td>
</tr>
<tr>
<td>Reverse Isolation</td>
<td>dB</td>
<td></td>
<td>-50</td>
<td></td>
</tr>
<tr>
<td>Noise Figure</td>
<td>dB</td>
<td></td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>Efficiency at Pout = +32dBm</td>
<td>%</td>
<td></td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>VSWR Input/Output</td>
<td></td>
<td>1.3:1/1.3:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC Power Supply</td>
<td>V</td>
<td>9</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Quiescent Current with No Input</td>
<td>mA</td>
<td></td>
<td>730</td>
<td></td>
</tr>
<tr>
<td>Supply Current at P_{out} = +32dBm</td>
<td>mA</td>
<td></td>
<td>1300</td>
<td></td>
</tr>
<tr>
<td>Size (Excluding SMA Connector)</td>
<td>inch</td>
<td>3.750” x 2.000” x 1.813”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Oz.</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Typical Performance @ +25°C

- **Small Signal Gain S21**
  - Frequency (GHz): 3.2 to 4
  - Gain S21 (dB): 31 to 39

- **P1dB**
  - Frequency (GHz): 3.2 to 4
  - P1dB (dBm): 29 to 37

- **Boardband Gain S21**
  - Frequency (GHz): 1 to 7
  - Gain S21 (dB): -35 to 45

- **Psat @ Pin = 1dBm**
  - Frequency (GHz): 3.2 to 4
  - Psat (dBm): 29 to 37

- **Isolation S12**
  - Frequency (GHz): 3.2 to 4
  - Isolation S12 (dB): -60 to -20

- **OFMD, QAM-64, 54Mb/s @ 3.6GHz**
  - Output Power (dBm)
  - EVM (%): 0 to 4
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Email: info@amcomusa.com
Website: www.amcomusa.com

Typical Performance @ +25°C

**OFMD, QAM-64, 54Mb/s @ 3.6GHz**

- **Gain (dB)** vs. **Output Power (dBm)**
  - Gain decreases slightly as output power increases.
  - Range: 32 - 37 dBm

**Pout, Icc v.s. Pin @ 3.2GHz**

- **Pout (dBm)** vs. **Input Power (dBm)**
  - Pout increases linearly with input power.
  - Current (mA) also shown.

**Input VSWR S11**

- **S11 VSWR** vs. **Frequency (GHz)**
  - VSWR varies with frequency, peaking at certain points.
  - Range: 1 - 2

**Output VSWR S22**

- **S22 VSWR** vs. **Frequency (GHz)**
  - Similar behavior to S11, with different peaks.
  - Range: 1 - 2

**Pout, Icc v.s. Pin @ 3.4GHz**

- Similar to 3.2GHz, showing consistent trend with slight variations.

**Pout, Icc v.s. Pin @ 3.6GHz**

- Most output power and input power data trends are consistent with previous graphs.

Additional performance metrics and graphs are available in the document.
Typical Performance @ +25°C

- **Pout, Icc v.s. Pin @ 3.8GHz**
  - Pout (dBm)
  - Current (mA)
  - Input Power (dBm)

- **Pout, Eff v.s. Pin @ 3.2GHz**
  - Pout (dBm)
  - Efficiency (%)
  - Input Power (dBm)

- **Pout, Icc v.s. Pin @ 4.0GHz**
  - Pout (dBm)
  - Current (mA)
  - Input Power (dBm)

- **Pout, Eff v.s. Pin @ 3.6GHz**
  - Pout (dBm)
  - Efficiency (%)
  - Input Power (dBm)

- **Pout, Eff v.s. Pin @ 4.0GHz**
  - Pout (dBm)
  - Efficiency (%)
  - Input Power (dBm)
Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
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<tbody>
<tr>
<td>RF Input Power</td>
<td>+7dBm</td>
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<tr>
<td>Supply Voltage</td>
<td>+16V</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-30 °C to +65 °C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-55 °C to +100 °C</td>
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</table>

Outline

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inch</td>
<td>3.750</td>
<td>2.000</td>
<td>1.750</td>
<td>3.400</td>
<td>1.000</td>
<td>0.400</td>
<td>1.813</td>
<td>0.375</td>
<td>1.000</td>
</tr>
<tr>
<td>mm</td>
<td>92.25</td>
<td>50.80</td>
<td>44.45</td>
<td>86.36</td>
<td>25.40</td>
<td>10.16</td>
<td>46.05</td>
<td>9.53</td>
<td>25.40</td>
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</tbody>
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