The MPS 3435A9D-82 is a high quality linearity modular amplifier designed to meet the ultralinear transmitter driver requirements for commercial Wireless Local Loop (WLL) applications. Key advantages are low intermodulation performance for multi-carrier or wideband CDMA systems (IMD3 -70 dBc typical) and exceptionally low input/output return loss for ease of integration.

**Features**
- 1.3:1 Typical Output VSWR
- 13 dB Typical Gain
- +41 dBm Typical IP3
- Single Positive Bias
- +24 dBm Typical P1dB
- Surface Mount Package

Features include:

- 3400 to 3500 MHz Linear Amplifier

**Specifications**

Electrical at 25°C, Vdd= 7.5 V, Zo= 50 Ω

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Min.</th>
<th>Typical</th>
<th>Max</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Freq</td>
<td>Frequency Range</td>
<td>3400</td>
<td>3500</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>SSG</td>
<td>Small Signal Gain</td>
<td>12</td>
<td>13</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>P1dB</td>
<td>P out at 1 dB Compression</td>
<td>+23.0</td>
<td>+24.0</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>IP3</td>
<td>Third-order Intercept</td>
<td>+39.0</td>
<td>+41.0</td>
<td>dBm</td>
<td></td>
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<tr>
<td>VSWR</td>
<td>VSWR, In/Out</td>
<td>1.4:1/1.3:1</td>
<td>1.5:1</td>
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<tr>
<td>∆GOF</td>
<td>Gain Variation over Freq.</td>
<td>+/- 0.20</td>
<td>+/- 0.30</td>
<td>dB</td>
<td></td>
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<tr>
<td>∆GOT</td>
<td>Gain Variation over Temp.</td>
<td>- 0.015</td>
<td></td>
<td>dB/°C</td>
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<tr>
<td>Idd</td>
<td>DC Current</td>
<td>300</td>
<td>400</td>
<td>mA</td>
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</tbody>
</table>

**Absolute Maximum Ratings**

- Maximum Bias Voltage: 8.0 V
- Maximum Continuous RF Input Power: +25 dBm
- Maximum Peak Input Power: +27 dBm
- Maximum Case Operating Temperature: +85°C
- Maximum Storage Temperature: -65°C to +150°C
**Typical Biasing Configuration**

- **C1**: 100 pF
- **C2**: 22 μF
- **L1**: 160 nH
- **CR1**: 8.0 V

**Outline Diagrams**

**IP3 at 13 dBm/Tone**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>IP3 (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3400</td>
<td>33</td>
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<tr>
<td>3450</td>
<td>37</td>
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<tr>
<td>3500</td>
<td>41</td>
</tr>
<tr>
<td>3435A9D</td>
<td>42</td>
</tr>
</tbody>
</table>

**Pin Configuration**

- **Pin 1**: N/C
- **Pin 2**: N/C
- **Pin 3**: RF Input
- **Pin 4**: N/C
- **Pin 5**: N/C
- **Pin 6**: N/C
- **Pin 7**: N/C
- **Pin 8**: RF Output, Vdd
- **Pin 9**: N/C
- **Pin 10**: N/C

**Outline Diagram**

- **C1**: Chip Capacitor
- **C2**: Chip Capacitor
- **L1**: Printed or Wound Coil
- **CR1**: Zener Diode
- **Zener Diode**: 50 Ω Microstrip Line

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