Features:
- +45 dBm IP3
- 14 dB Gain
- 2.0:1 VSWR

The MPS-182117-02 is a low cost high linearity modular amplifier designed to meet the ultra-linear transmitter driver requirements for commercial 2G, 2.5G, 3G, GSM, TDMA, EDGE, UMTS, WCDMA, CDMA2000, and TD-SCDMA applications. Key advantages are low intermodulation performance for multi-carrier and CDMA systems and low input/output return loss for ease of integration.

Electrical Specifications @ 25°C, Vdd = 7.5 V, Zo = 50 ohms

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>PARAMETERS</th>
<th>Min</th>
<th>Typical</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freq.</td>
<td>Frequency Range</td>
<td>1800</td>
<td>2000</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>SSG</td>
<td>Small Signal Gain</td>
<td>13.0</td>
<td>14.0</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>P1 dB</td>
<td>Pout at 1 dB Comp Point</td>
<td>+28.5</td>
<td>dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP3 (1)</td>
<td>Third-Order Intercept</td>
<td>42</td>
<td>45</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>VSWR</td>
<td>VSWR (Input/Output)</td>
<td>2.0:1/2.5:1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOF</td>
<td>Gain Var. over Frequency</td>
<td>±0.25</td>
<td>±0.5</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>GOT</td>
<td>Gain Var. over Temp</td>
<td>-0.015</td>
<td>dB/°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idd</td>
<td>DC Current</td>
<td>380</td>
<td>450</td>
<td>mA</td>
<td></td>
</tr>
</tbody>
</table>

(1) Two tone test @ 13 dBm/tone, centered at 1900 MHz with separation of 20 MHz.

Absolute Maximum Ratings

- Maximum Bias Voltage: 8.0 V
- Maximum Continuous RF Input Power: 950 mW
- Maximum Peak Input Power: 1400 mW
- Maximum Case Operating Temperature: +85 °C
- Maximum Storage Temperature: -65 to +150 °C

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Gain @ 25C

Return Losses @ 25C

Outline Diagram (Package 02)

Application Circuit

C1 100 pF Chip Capacitor
C2 22 uF Capacitor
L1 160 nH Printed or Wound Coil
CR1 8.0 V Zener Diode

50 ohm Microstrip Line