The MPS-090917N-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 exceptionally 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>920</td>
<td>965</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>SSG</td>
<td>Small Signal Gain</td>
<td>12.0</td>
<td>13.5</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>P1 dB</td>
<td>Pout at 1 dB Comp Point</td>
<td>23.0</td>
<td>dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP3</td>
<td>Third-Order Intercept</td>
<td>36.0</td>
<td>dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NF</td>
<td>Noise Figure</td>
<td>0.8</td>
<td>1.1</td>
<td>dB</td>
<td></td>
</tr>
<tr>
<td>VSWR</td>
<td>VSWR (Input/Output)</td>
<td>2.0:1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOF</td>
<td>Gain Var. over Frequency</td>
<td>± 0.2</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>180</td>
<td>250</td>
<td>mA</td>
<td></td>
</tr>
</tbody>
</table>

### Absolute Maximum Ratings

- Maximum Bias Voltage: 7.0 V
- Maximum Continuous RF Input Power: +25 dBm
- Maximum Peak Input Power: +27 dBm
- Maximum Case Operating Temperature: +85 °C
- Maximum Storage Temperature: -65 to +150 °C
Gain @ 25C

- Gain (dB) vs. Freq. (MHz)

- Gain ranges from 13 to 16 dB across 800 to 900 MHz.

Return Losses @ 25C

- Return Loss (dB) vs. Freq. (MHz)

- Return Loss values are below 1.2 dB across the frequency range.

Outline Diagram

- Dimensions: .270, .430, .15 MAX.
- Gap: .003 TYP.
- Pad: .024 TYP. 10 PLCS.
- Pad: .050 TYP. 2 PLCS.

Application Circuit

- Components:
  - C1: 100 pF Chip Capacitor
  - C2: 22 uF Capacitor
  - L1: 160 nH Printed or Wound Coil
  - CR1: 7.0 V Zener Diode
- 50 ohm Microstrip Line

MicroWave Technology, Inc. an IXYS Company, 4268 Solar Way, Fremont, CA  94538
510-651-6700    FAX 510-651-2208   EMAIL info@mwtinc.com
Preliminary data contained herein is subject to change without notice.  All rights reserved © February 2005