Coaxial
Ultra Low Noise Amplifier (LNA)                  LNA500M4G

50Ω       Wideband 500M to 4G Hz

Features:
* Frequency Range: 500 MHz to 4 GHz
* Noise Figure: typical 0.4 dB @ 1.9 GHz
* Gain: 20.6 dB Gain at 1.9 GHz
* Output P1dB: +22 dBm CW
* Output IP3: +36 dBm
* DC Voltage: +5V
* Operating Current: 85 mA
* Stainless Steel SMA Female Connector
* High Quality Isola-Tera RF PCB
  (very low loss and high thermal performance)
* ROHS Compliant

Product Overview:
LNA500M4G is a high-linearity, ultra low noise amplifier in a small 1-1/8"x15/16"x0.59" shielded RF enclosure (PN: 6UED2W6S1A2). At 1.9 GHz, the amplifier typically provides 20.6 dB gain, +36 dBm OIP3 at a 85 mA bias setting, and 1.3 dB noise figure. The LNA can be biased from a single supply +5V.

Electrical Specifications:

<table>
<thead>
<tr>
<th>Item</th>
<th>Parameter</th>
<th>Conditions</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Operational Frequency Range</td>
<td></td>
<td>500</td>
<td>4000</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Test Frequency</td>
<td></td>
<td>1900</td>
<td></td>
<td></td>
<td>MHz</td>
</tr>
<tr>
<td>3</td>
<td>Gain</td>
<td></td>
<td>19</td>
<td>20.6</td>
<td>22</td>
<td>dB</td>
</tr>
<tr>
<td>4</td>
<td>Input Return Loss</td>
<td></td>
<td>16</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>5</td>
<td>Output Return Loss</td>
<td></td>
<td>17</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>6</td>
<td>Noise Figure</td>
<td></td>
<td>1.3</td>
<td></td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>7</td>
<td>Output P1dB</td>
<td>Pout =+5 dBm/tone, Δf =1 MHz</td>
<td>+32.5</td>
<td>+36</td>
<td>dBm</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Current, I_{DD}</td>
<td></td>
<td>85</td>
<td>100</td>
<td></td>
<td>mA</td>
</tr>
</tbody>
</table>

Test Conditions: V_{DD}=+5V, I_{DD} = 70 mA (typ.) Temp = +25 °C, 50Ω system.

Applications:
* Repeaters/DAS
* Mobile Infrastructure
* LTE/WCDMA/CDMA/GSM
* General Purpose Wireless
* SDR & Ham Radio
* Test Instrumentation

Lotus Communication Systems, Inc.

Rev. A LNA500M4G

www.lotussys.com 588 Boston Post Rd., Weston, MA 02493 (888) 236-8588 sales@lotussys.com
Coaxial
Ultra Low Noise Amplifier (LNA)

Outline Drawing (inch)

S-Parameters

Date: 1.JAN.97 00:10:57

Lotus Communication Systems, Inc.

www.lotussys.com 588 Boston Post Rd., Weston, MA 02493 (888) 236-8588 sales@lotussys.com