SLNA-180-14-30-SMA is a broadband GaAs PHEMT MMIC-based coaxial low noise amplifier, operating in the 0.1 to 18 GHz frequency range. The amplifier offers 16 dBm of P1dB and 14 dB small signal gain, with the excellent gain flatness of ±1.5 dB, along with 28 dBm of IP3 performance. This low noise amplifier requires only a single positive DC supply, is unconditionally stable, operates over the temperature range of -40°C to 85°C, and characterized by a light weight (0.8 g) and small size (1.2”x1.0”x0.4”).

**Electrical Specifications** *(TA = +25°C, DC Voltage = 12Volts, DC Current = 80mA)*

<table>
<thead>
<tr>
<th>Description</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>0.1</td>
<td>14</td>
<td>18</td>
<td>GHz</td>
</tr>
<tr>
<td>Gain</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td>dB</td>
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<tr>
<td>Gain Flatness</td>
<td>±1.5</td>
<td></td>
<td></td>
<td>dB</td>
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<tr>
<td>Gain Variance at OTR*</td>
<td>±1</td>
<td></td>
<td></td>
<td>dB</td>
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<tr>
<td>P1dB</td>
<td>+14</td>
<td>+16</td>
<td></td>
<td>dBm</td>
</tr>
<tr>
<td>Saturation Output Power</td>
<td>+16</td>
<td>+18</td>
<td></td>
<td>dBm</td>
</tr>
<tr>
<td>IP3</td>
<td>+27</td>
<td>+28</td>
<td></td>
<td>dBm</td>
</tr>
<tr>
<td>Reverse Isolation</td>
<td>28</td>
<td>40</td>
<td></td>
<td>dB</td>
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<tr>
<td>Spurious</td>
<td>-60</td>
<td></td>
<td></td>
<td>dBc</td>
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<tr>
<td>Noise Figure at 0.1 to 2 GHz</td>
<td>4</td>
<td>5</td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Noise Figure at 2 to 15 GHz</td>
<td>3</td>
<td>4</td>
<td></td>
<td>dB</td>
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<tr>
<td>Noise Figure at 15 to 18 GHz</td>
<td>3.5</td>
<td>4.5</td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Input VSWR</td>
<td>1.5:1</td>
<td>2:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output VSWR</td>
<td>1.7:1</td>
<td>2:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating DC Voltage</td>
<td>10</td>
<td>12</td>
<td>15</td>
<td>Volts</td>
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<tr>
<td>Operating DC Current</td>
<td>65</td>
<td>80</td>
<td>95</td>
<td>mA</td>
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<tr>
<td>Operating Temperature Range (OTR)</td>
<td>-40</td>
<td>+85</td>
<td></td>
<td>°C</td>
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</tbody>
</table>

*OTR= Base Plate Operating Temperature Range

**Absolute Maximum Rating**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Rating</th>
<th>Units</th>
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<tbody>
<tr>
<td>Source Voltage</td>
<td>+18</td>
<td>Volts</td>
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<tr>
<td>RF Input Power</td>
<td>+10</td>
<td>dBm</td>
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<tr>
<td>Operating Temperature (base-plate)</td>
<td>-40 to +85</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-55 to +125</td>
<td>°C</td>
</tr>
</tbody>
</table>

ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

**Features:**
- 0.1 to 18 GHz Frequency Range
- P1dB: 16 dBm
- Small Signal Gain: 14 dB
- Gain Flatness: ±1.5 dB
- Gain Variation Over the Temperature Range: ±1 dB
- Output Psat: 18 dB
- P1dB: 16 dBm
- IP3: 28 dBm
- Noise Figure Range: 3-4 dB
- Reverse Isolation: 40 dB
- 50 Ohm Input and Output Matched
- -40 to +85°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in DC Voltage Regulator
- Small Size & Light Weight

**Applications:**
- Laboratory Applications
- R&D Labs
- Radar Systems
- Electronic Warfare
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Satellite Communications
- Wireless Communications
- Unmanned Systems
- Microwave Radio Systems
- Low Noise Amplifier
- General Purpose Amplification
- RF Front Ends

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Allen, TX 75013
Tel: 1-800-715-4396 / (972) 649-6678
Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com
Configuration
- Connector 1: SMA Female
- Connector 2: SMA Female

Compliance Certifications (visit www.FairviewMicrowave.com for current document)

Plotted and Other Data
Notes:
- Values at 25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

Power Data

Gain, Input Return Loss and Output Return Loss

- Freq.(MHz)
- Gain(dB) 25 C
- IN_Return Loss(dB)
- OUT_Return Loss(dB)

Noise Figure

- Freq.(MHz)
- Noise Figure
100 MHz to 18 GHz, Low Noise Broadband Amplifier with 18 dBm, 14 dB Gain, 28 dBm IP3 and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: 100 MHz to 18 GHz, Low Noise Broadband Amplifier with 18 dBm, 14 dB Gain, 28 dBm IP3 and SMA SLNA-180-14-30-SMA

100 MHz to 18 GHz, Low Noise Broadband Amplifier with 18 dBm, 14 dB Gain, 28 dBm IP3 and SMA

NOTE:
HEAT SINK REQUIRED FOR PROPER OPERATION,
UNIT IS COOLED BY CONDUCTING TO HEAT SINK.