SLNA-180-38-30-SMA is a Ku-band coaxial low noise amplifier operating in the 12 to 18 GHz frequency range. The amplifier offers 3 dB noise figure, 13 dBm minimum of saturated power and high 38 dB minimal small signal gain with the excellent gain flatness of ±1.0 dB max. This technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. The low noise amplifier requires typically a +12V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation, bias sequencing, and reverse bias protection for added reliability. The amplifier operates over the temperature range of -40°C and +85°C.

Electrical Specifications (TA = +25°C, DC Voltage = 12Volts, DC Current = 300mA)

<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>12</td>
<td>18</td>
<td></td>
<td>GHz</td>
</tr>
<tr>
<td>Small Signal Gain</td>
<td>38</td>
<td></td>
<td>±1</td>
<td>dB</td>
</tr>
<tr>
<td>Gain Flatness</td>
<td></td>
<td></td>
<td>±1</td>
<td>dB</td>
</tr>
<tr>
<td>Minimum Psat</td>
<td>+13</td>
<td></td>
<td></td>
<td>dBm</td>
</tr>
<tr>
<td>Noise Figure</td>
<td>3</td>
<td></td>
<td>2:1</td>
<td>dB</td>
</tr>
<tr>
<td>Input VSWR</td>
<td>2:1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output VSWR</td>
<td>2:1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating DC Voltage</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>Volts</td>
</tr>
<tr>
<td>Operating DC Current</td>
<td>300</td>
<td></td>
<td>300</td>
<td>mA</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40</td>
<td></td>
<td>+85</td>
<td>°C</td>
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</table>

Absolute Maximum Rating

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

Features:
- 12 GHz to 18 GHz Frequency Range
- Psat: 13 dBm min
- High Small Signal Gain: 38 dB
- Gain Flatness: ±1.0 dB max
- Noise Figure: 3 dB
- 50 Ohm Input and Output Matched
- -40 to 85°C Operating Temperature
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

Applications:
- 12 GHz to 18 GHz Frequency Range
- Psat: 13 dBm min
- High Small Signal Gain: 38 dB
- Gain Flatness: ±1.0 dB max
- Noise Figure: 3 dB
- 50 Ohm Input and Output Matched
- -40 to 85°C Operating Temperature
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

Configuration
- Connector 1: SMA Female
- Connector 2: SMA Female

Compliance Certifications (visit www.FairviewMicrowave.com for current...
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](image)

![Gain vs Temperature](image)
3 dB NF Low Noise Amplifier Operating From 12 GHz to 18 GHz with 38 dB Gain, 13 dBm Psat 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: 3 dB NF Low Noise Amplifier Operating From 12 GHz to 18 GHz with 38 dB Gain, 13 dBm Psat and SMA SLNA-180-38-30-SMA


The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability, arising out of the use of any part or documentation.
SLNA-180-38-30-SMA
DATA SHEET

3 dB NF Low Noise Amplifier Operating From 12 GHz to 18 GHz with 38 dB Gain, 13 dBm Psat and SMA