50 MHz to 18 GHz, Broadband Amplifier using USB Control with 10 dBm, 12 dB Gain and SMA

SBUA-180-12-010-SMA is a broadband amplifier covering 50 MHz to 18 GHz. The amplifier has a 12 dB of Typical Gain, a Gain Flatness of +/- 2.5 dB typ and a P1dB of +10 dBm typ. The unit uses a USB connector for power.

**Electrical Specifications** (TA = +25°C)

<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>0.05</td>
<td>12</td>
<td>18</td>
<td>GHz</td>
</tr>
<tr>
<td>Gain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gain Flatness</td>
<td></td>
<td>±2.5</td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>P1dB</td>
<td></td>
<td>+10</td>
<td></td>
<td>dBm</td>
</tr>
<tr>
<td>Noise Figure</td>
<td></td>
<td>4.5</td>
<td></td>
<td>dB</td>
</tr>
<tr>
<td>Input VSWR</td>
<td></td>
<td>2.3:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output VSWR</td>
<td></td>
<td>2.3:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Range (OTR)</td>
<td>-40</td>
<td></td>
<td>+85</td>
<td>°C</td>
</tr>
</tbody>
</table>

**Configuration**
- Connector 1
- Connector 2
- SMA Female
- SMA Female

**Environmental Specifications**
**Temperature**
- Operating Range: -40 to +85 deg C
- Storage Range: -55 to +125 deg C

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

**Features:**
- 0.05 GHz to 18 GHz Frequency Range
- P1dB: 10 dBm typ
- Small Signal Gain: 12 dB typ
- Gain Flatness: ±2.5 dB typ
- Noise Figure: 4.5 dB typ
- 50 Ohm Input and Output Matched
- Unconditionally Stable
- USB type a plug DC Positive Supply
- Built-in Voltage Regulator

**Applications:**
- Laboratory Applications
- R&D Labs
- Military Radio
- Radar Systems
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Wireless Communication
- Microwave Radio Systems
- Cellular Base Stations
- Low Noise Amplifier
- General Purpose Amplification
- General Purpose Wireless
- Wideband Gain Block
- IF Amplifier/RF Driver Amplifier
- RF Wideband Front Ends
- RF Pre-amplification

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

Gain & Return Loss

<table>
<thead>
<tr>
<th>File</th>
<th>Trace/Chan</th>
<th>Response</th>
<th>Marker/Analysis</th>
<th>Stimulus</th>
<th>Utility</th>
<th>Help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tr 1</td>
<td>S11 LogM 5.000dB/ 0.00dB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tr 3</td>
<td>S22 LogM 5.000dB/ 0.00dB</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tr 2</td>
<td>S21 LogM 2.000dB/ 14.0dB</td>
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</tbody>
</table>

1: 50.000 MHz -13.31 dB
Δ 1: 5.744 GHz -0.83 dB
Δ 2: 7.856 GHz 13.84 dB
1: 5.614 GHz -10.28 dB

>Ch1: Start 50.0000 MHz Stop 18.0000 GHz

Cont-Ch1: 521 LC 2-Port Smooth=1.48%

LCL
50 MHz to 18 GHz, Broadband Amplifier using USB Control with 10 dBm, 12 dB Gain 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: 50 MHz to 18 GHz, Broadband Amplifier using USB Control with 10 dBm, 12 dB Gain and SMA SBUA-180-12-010-SMA


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NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

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