The PE15A7000 is a digitally controlled variable gain amplifier which operates from 100 MHz to 18.0 GHz. The gain level is 50 dB min with available attenuation ranging up to 60 dB, and output P1dB of 14 dBm typical. The unit has an attenuation control knob on the front panel, but also has an RS-232 control feature. By connecting a serial cable from a remote PC computer to the 9 pin d-subminiature connector at the rear of the unit, commands may be sent controlling the attenuation levels. The PE3C2850, RS232 Female to RS232 Female Straight Cable, is provided to make the connection and provide the control of the attenuation. A detailed operating procedure can be downloaded from the webpage. The 19 inch rack mount package size is 1U High 10 inch Deep, and operates over a temperature range of -40°C to +85°C. The RF Input and Output Connectors are SMA Female.

Features
- 1 U Rack Mounted Unit
- Frequency Range 0.1 to 18 GHz
- Gain 50 dB Minimum
- Variable Attenuation Range: 60 dB
- Gain Flatness ±2.0 dB Typical
- OP1dB +14 dBm Typical
- RF Input/Output SMA Female Connectors
- RS-232 Control Feature
- PE3C2850 RS-232 Control Cable (provided)

Applications
- Test Labs
- Instrumentation Test Rack
- Military Communications

Electrical Specifications (TA = +25°C)

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Range</td>
<td>0.1</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Small Signal Gain</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gain Flatness</td>
<td>±2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Up to 55 dB Attenuition)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attenuation Range</td>
<td>0</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Attenuation Step Size</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output at 1 dB Compression Point</td>
<td></td>
<td>+14</td>
<td></td>
</tr>
<tr>
<td>Noise Figure</td>
<td>6.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input VSWR</td>
<td>2:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output VSWR</td>
<td>2:1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating AC Voltage</td>
<td></td>
<td></td>
<td>120 VAC</td>
</tr>
<tr>
<td>(Supplied with a fuse, 6 foot power cord, ON/OFF switch and LED power indicator)</td>
<td></td>
<td></td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40</td>
<td></td>
<td>+85</td>
</tr>
</tbody>
</table>

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications:
50 dB Gain, 14 dBm P1dB, 100 MHz to 18 GHz, Rack Mount, Variable Gain Amplifier, 6.5 dB NF, SMA PE15A7000
## Mechanical Specifications

<table>
<thead>
<tr>
<th>Size</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>19 in [482.6 mm]</td>
</tr>
<tr>
<td>Width</td>
<td>10.79 in [274.07 mm]</td>
</tr>
<tr>
<td>Height</td>
<td>1.73 in [43.94 mm]</td>
</tr>
<tr>
<td>Input Connector</td>
<td>SMA Female</td>
</tr>
<tr>
<td>Output Connector</td>
<td>SMA Female</td>
</tr>
</tbody>
</table>

## Environmental Specifications

| Temperature   | Operating Range: -40 to +85 deg C, Storage Range: -40 to +100 deg C |
| Humidity      | MIL-STD-202F, METHOD 103B COND. B |
| Shock         | MIL-STD-202F, METHOD 213B COND. B |
| Vibration     | MIL-STD-202F, METHOD 204D COND. B |
| Altitude      | MIL-STD-202F, METHOD 105C COND. B |
| Temperature Cycle | MIL-STD-202F, METHOD 107D COND. A |

## Compliance Certifications

- Not RoHS Compliant
- REACH Compliant

## Plotted and Other Data

| Notes: | Values at +25 °C, sea level |

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PE15A7000  REV 1.0
TECHNICAL DATA SHEET

Typical Performance Data

**Gain**

Gain Flatness: ±2.6dB

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50 dB Gain, 14 dBm P1dB, 100 MHz to 18 GHz, Rack Mount, Variable Gain Amplifier, 6.5 dB NF, SMA

TECHNICAL DATA SHEET

PE15A7000

0dB Reference

Gain Flatness: ±0.8dB

10dB Attenuation

Gain Flatness: ±0.8dB

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50 dB Gain, 14 dBm P1dB, 100 MHz to 18 GHz, Rack Mount, Variable Gain Amplifier, 6.5 dB NF, SMA

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 50 dB Gain, 14 dBm P1dB, 100 MHz to 18 GHz, Rack Mount, Variable Gain Amplifier, 6.5 dB NF, SMA PE15A7000
TECHNICAL DATA SHEET

20dB Attenuation

Gain Flatness: ±0.8dB

30dB Attenuation

Gain Flatness: ±0.96dB

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 50 dB Gain, 14 dBm P1dB, 100 MHz to 18 GHz, Rack Mount, Variable Gain Amplifier, 6.5 dB NF, SMA PE15A7000
TECHNICAL DATA SHEET

50 dB Gain, 14 dBm P1dB, 100 MHz to 18 GHz, Rack Mount, Variable Gain Amplifier, 6.5 dB NF, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 50 dB Gain, 14 dBm P1dB, 100 MHz to 18 GHz, Rack Mount, Variable Gain Amplifier, 6.5 dB NF, SMA PE15A7000

URL: http://www.pasternack.com/50-db-gain-variable-gain-amplifier-rack-mount-6.5-db-sma-pe15a7000-p.aspx

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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.
PE15A7000 CAD Drawing
50 dB Gain, 14 dBm P1dB, 100 MHz to 18 GHz, Rack Mount, Variable Gain Amplifier, 6.5 dB NF, SMA

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Pasternack Enterprises, Inc.
P.O. Box 167939 Irvine, CA 92616-7939
Phone: (949) 251-1920 | Fax: (949) 261-7451
Website: www.pasternack.com | E-Mail: sales@pasternack.com

Notes:
1. Unless otherwise specified, all dimensions are nominal.
2. All specifications are subject to change without notice at any time.
PE15A7000 CAD Drawing
50 dB Gain, 14 dBm P1dB, 100 MHz to 18 GHz, Rack Mount, Variable Gain Amplifier, 6.5 dB NF, SMA

D-sub 9 Connector Pinout

View B

Side of View A

NOTE: CONNECTS TO PE3C2850 FOR REMOTE CONTROL.

Serial Cable PE3C2850 (6-Feet)