



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

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)

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

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](#)



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Mechanical Specifications

Size

Length	19 in [482.6 mm]
Width	10.79 in [274.07 mm]
Height	1.73 in [43.94 mm]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-40 to +100 deg C

Humidity

Shock

Vibration

Altitude

Temperature Cycle

MIL-STD-202F, METHOD 103B COND. B
MIL-STD-202F, METHOD 213B COND. B
MIL-STD-202F, METHOD 204D COND. B
MIL-STD-202F, METHOD 105C COND. B
MIL-STD-202F, METHOD 107D COND. A

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

Not RoHS Compliant

REACH Compliant

12/17/2014

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

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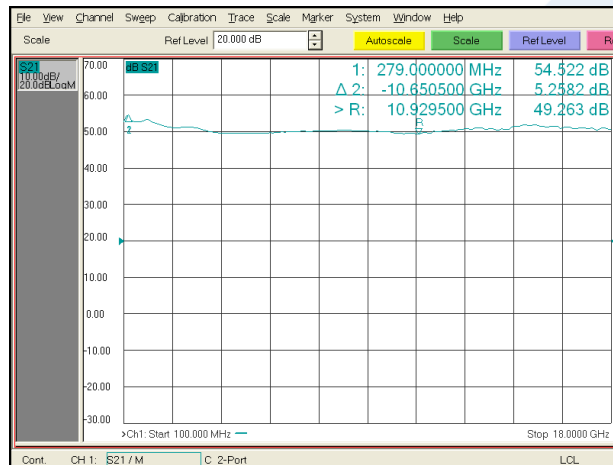
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Typical Performance Data

Gain



Gain Flatness: ±2.6dB

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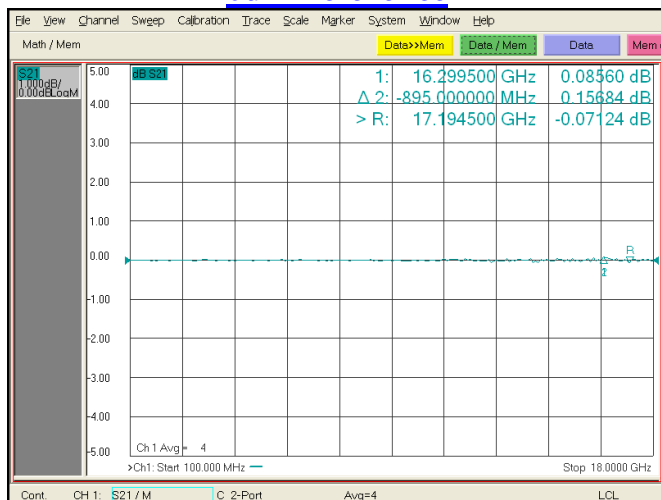


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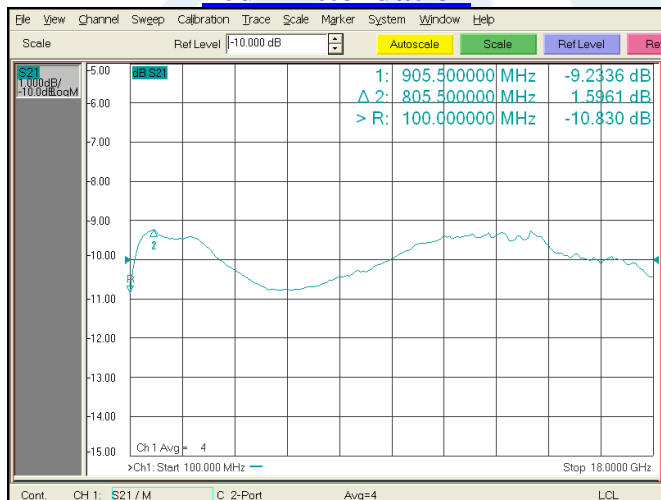
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0dB Reference



10dB Attenuation



Gain Flatness: ± 0.8 dB

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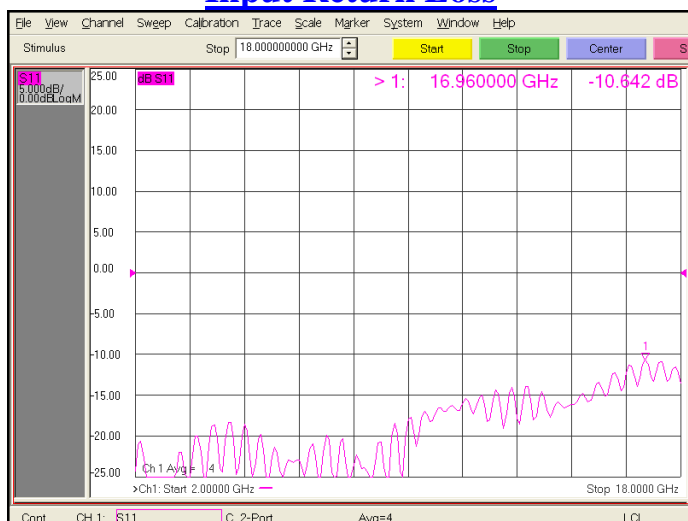


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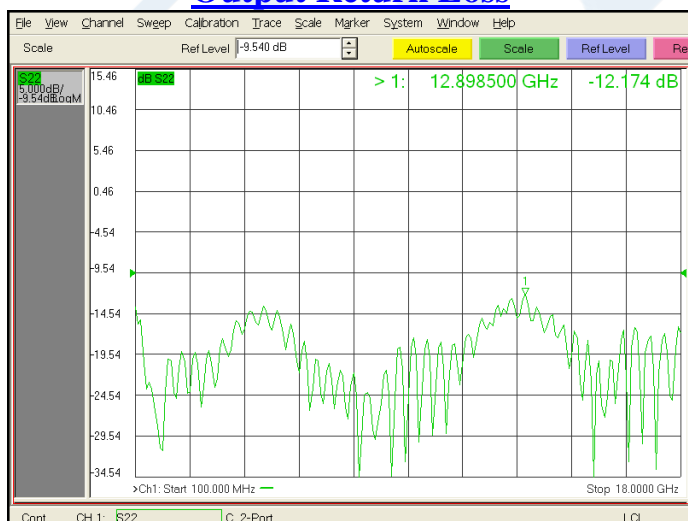
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Input Return Loss



Output Return Loss



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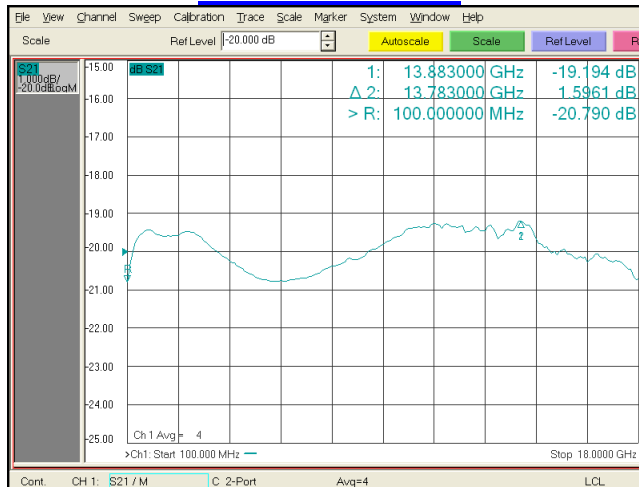


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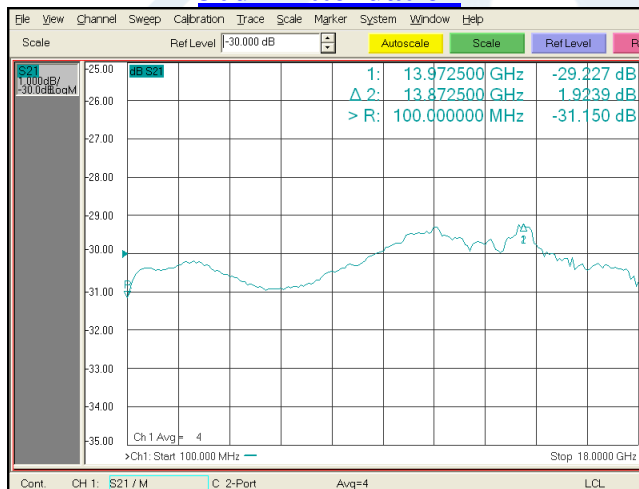
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20dB Attenuation



Gain Flatness: ± 0.8 dB

30dB Attenuation



Gain Flatness: ± 0.96 dB

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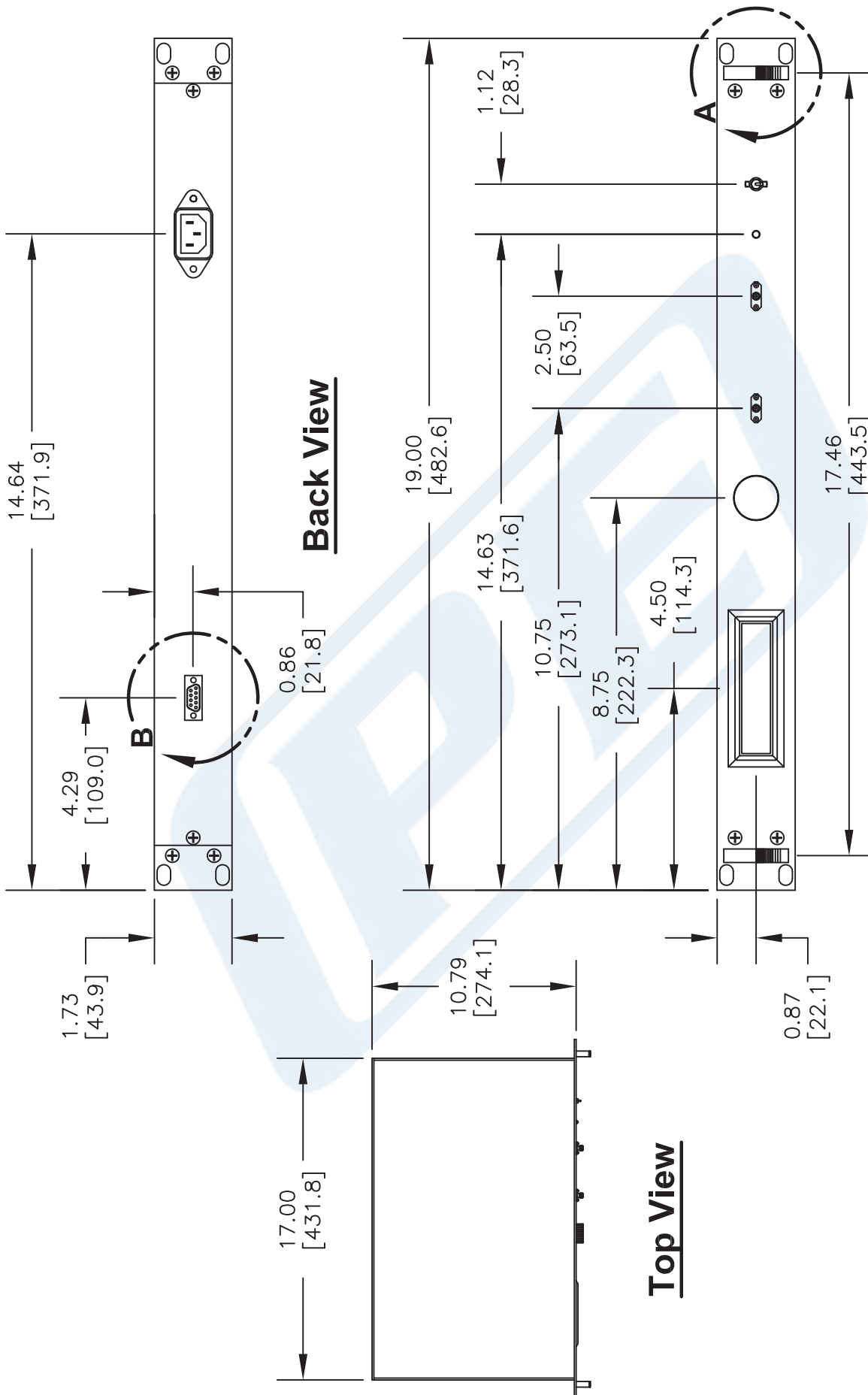
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PE15A7000 CAD Drawing

50 dB Gain, 14 dBm P1dB, 100 MHz to 18 GHz, Rack

Mount, Variable Gain Amplifier, 6.5 dB NF, SMA



Front View

DWG TITLE

PE15A7000

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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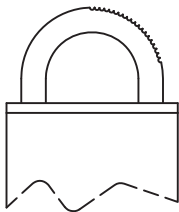
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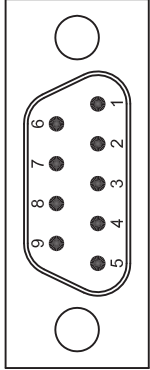
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SIZE A

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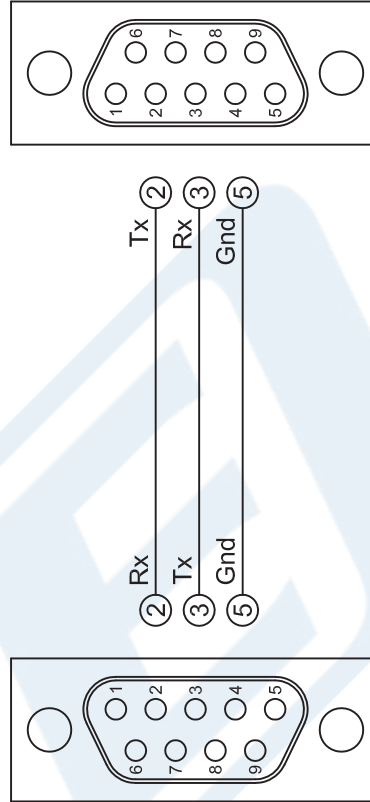


Side of View A



View B
D-sub 9 Connector Pinout
(Commonly used for serial ports RS-232)

NOTE: CONNECTS TO PE3C2850 FOR REMOTE CONTROL.



Serial Cable PE3C2850
(6-Foot)

DWG TITLE

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