PASTERNACK®
THE ENGINEER'S RF SOURCE

14 dBm P1dB, 10 MHz to 6 GHz, Gain Block Amplifier, 14.5 dB Gain, 26 dBm IP3, 4.5 dB NF, SMA

TECHNICAL DATA SHEET PE15A8001

The PE15A8001 is wideband general purpose RF coaxial gain block amplifier operating in the 0.01 GHz to 6 GHz frequency range. The amplifier offers 14 dBm typ of P1dB, 14.5 dB typ of Gain, OIP3 typ of 16 dBm. This exceptional technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. This gain block amplifier requires only a single positive supply, typically a +12V DC power supply and includes built-in voltage regulation, is unconditionally stable and operates over the temperature range of -40°C and +75°C.

Features

- 10 MHz to 6 GHz Frequency Range
- P1dB: 14 dBm
- Small Signal Gain: 14.5 dB
- OIP3: 26 dBm
- 50 Ohm Input and Output Matched
- -40 to +75°C Operating Temperature
- Unconditionally Stable
- Single 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

Electrical Specifications (TA = +25°C, DC Voltage = 12Volts, DC Current = 50mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.01		6	GHz
Small Signal Gain	13.5	14.5	16	dB
Gain Flatness		±0.35	±0.5	dB
Gain Variance at OTR*			±0.75	dB
Output at 1 dB Compression Point	+12	+14		dBm
Output 3rd Intercept Point	+24	+26		dBm
Noise Figure		4.5	5.5	dB
Input VSWR		1.5:1	2:1	
Output VSWR		1.5:1	2:1	
Reverse Isolation	40	43		dB
Operating DC Voltage	9	12	15	Volts
Operating DC Current		50	65	mA
Operating Temperature Range	-40		+75	°C

*OTR= Base Plate Operating Temperature Range

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 14 dBm P1dB, 10 MHz to 6 GHz, Gain Block Amplifier, 14.5 dB Gain, 26 dBm IP3, 4.5 dB NF, SMA PE15A8001

Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
Phone: (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451
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Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+10	dBm
Operating Temperature (base-plate)	-40 to +75	°C
Storage Temperature	-55 to +125	°C

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

Mechanical Specifications

Size

Length	1.2 in [30.48 mm]
Width	0.85 in [21.59 mm]
Height	0.375 in [9.53 mm]
Weight	0.044 lbs [19.96 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +75 deg C
Storage Range	-55 to +125 deg C

Compliance Certifications (see product page 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.

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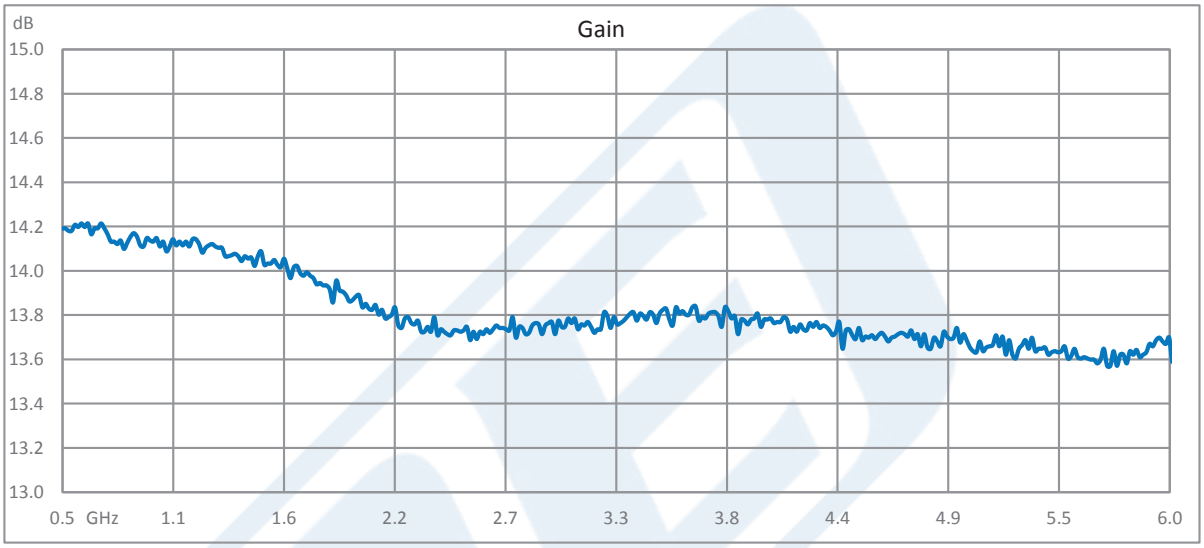
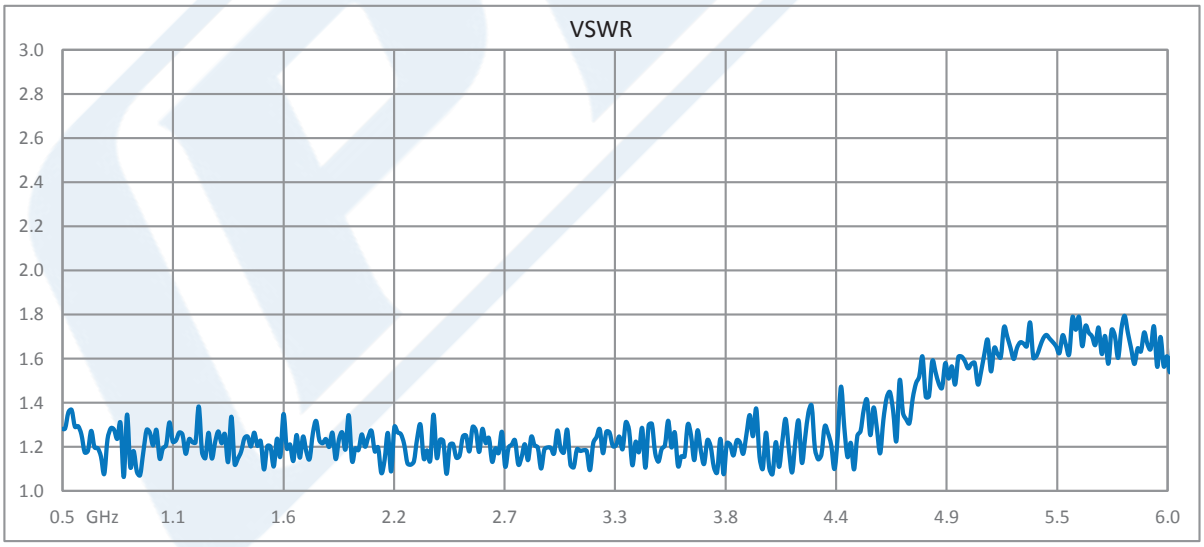
Typical Performance Data





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14 dBm P1dB, 10 MHz to 6 GHz, Gain Block Amplifier, 14.5 dB Gain, 26 dBm IP3, 4.5 dB NF, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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URL: https://www.pasternack.com/6-ghz-gain-block-amplifier-14.5-db-gain-26-dbm-ip3-sma-pe15a8001-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.

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PE15A8001 CAD Drawing

14 dBm P1dB, 10 MHz to 6 GHz, Gain Block Amplifier,
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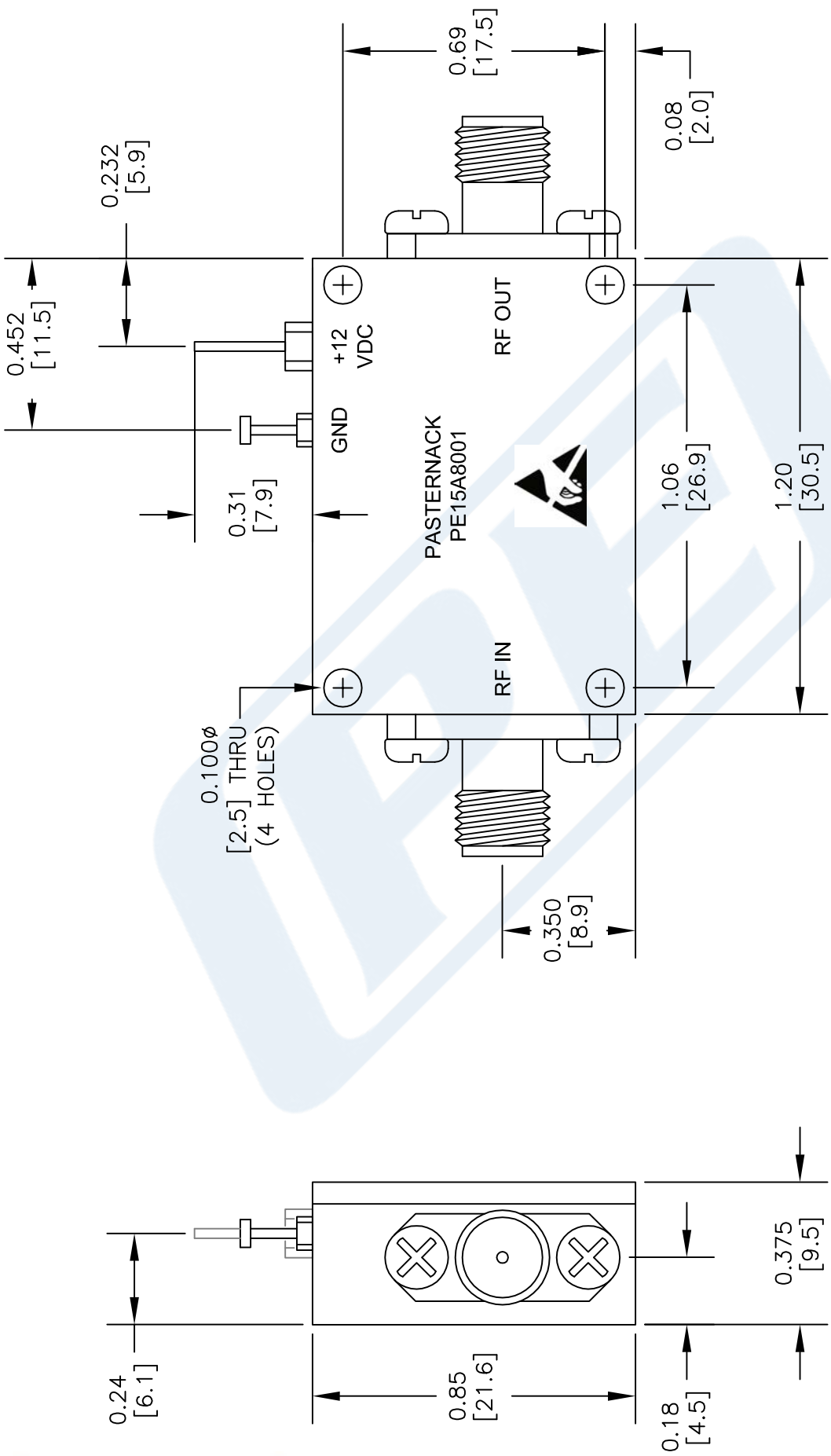

NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

CAD FILE	XXXXXX	SCALE N/A	SIZE A	150

DWG TITLE: **PE15A8001**

FSCM NO. 53919

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