



50 dB Gain, 15 dBm P1dB, 500 MHz to 2 GHz,  
Gain Block Amplifier, 25 dBm IP3, SMA

## TECHNICAL DATA SHEET

PE15A8005

The PE15A8005 is general purpose RF coaxial gain block amplifier operating in the 0.5 GHz to 2 GHz frequency range. The amplifier offers 15 dBm min of P1dB, 50 dB typ of Gain, IP3 typ of 25 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 -30°C and +70°C.

### Features

- 500 MHz to 2 GHz Frequency Range
- P1dB: 15 dBm min
- Small Signal Gain: 14.5 dB
- IP3: 25 dBm
- 50 Ohm Input and Output Matched
- -30 to +70°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 = 180mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.5		2	GHz
Small Signal Gain	45	50		dB
Gain Flatness		±1.8		dB
Output at 1 dB Compression Point		+15		dBm
Output 3rd Intercept Point		+25		dBm
Input VSWR			2:1	
Output VSWR			2:1	
Operating DC Voltage	11	12	13	Volts
Operating DC Current		180		mA
Operating Temperature Range	-30		+70	°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, 15 dBm P1dB, 500 MHz to 2 GHz, Gain Block Amplifier, 25 dBm IP3, SMA PE15A8005](#)



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**Mechanical Specifications**

**Size**

Length	1.083 in [27.51 mm]
Width	1.093 in [27.76 mm]
Height	0.382 in [9.7 mm]
Weight	0.084 lbs [38.1 g]
Input Connector	SMA Female
Output Connector	SMA Female

**Environmental Specifications**

**Temperature**

Operating Range	-30 to +70 deg C
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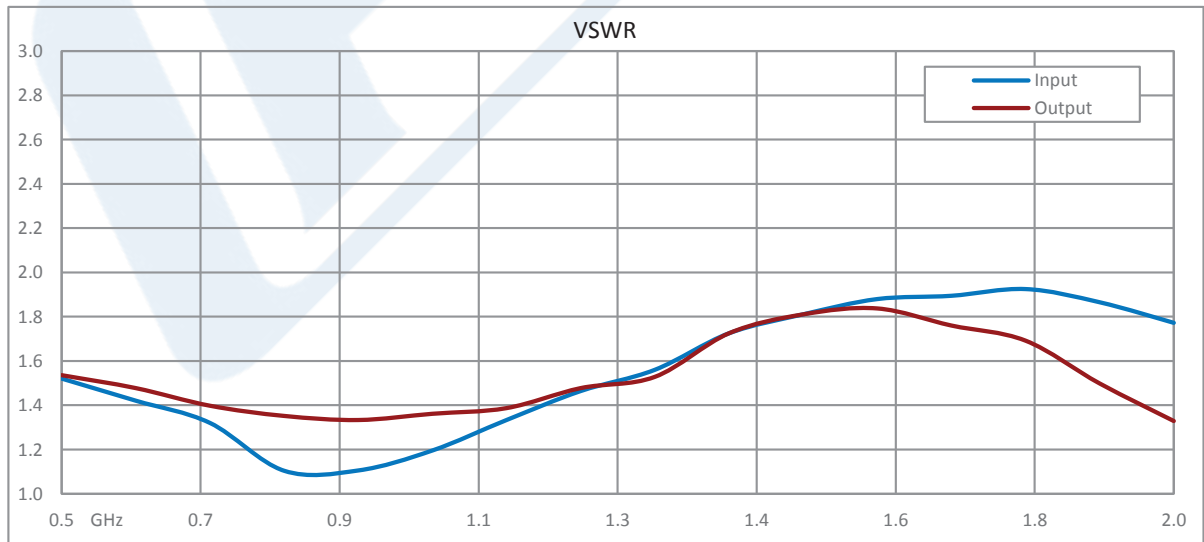
**Compliance Certifications** (see [product page](#) for current document)

**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.

**Typical Performance Data**



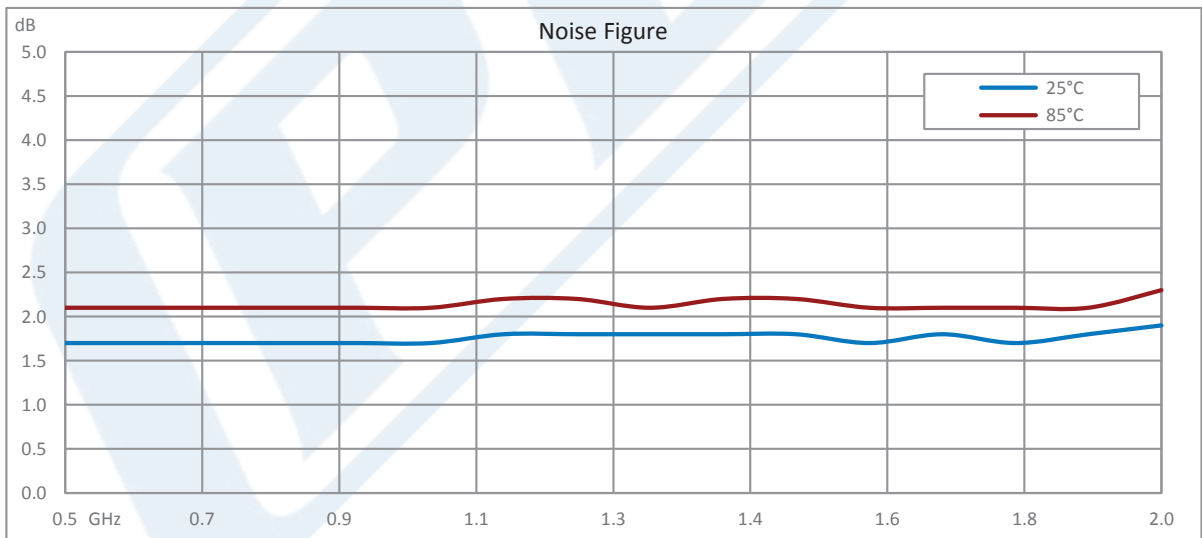
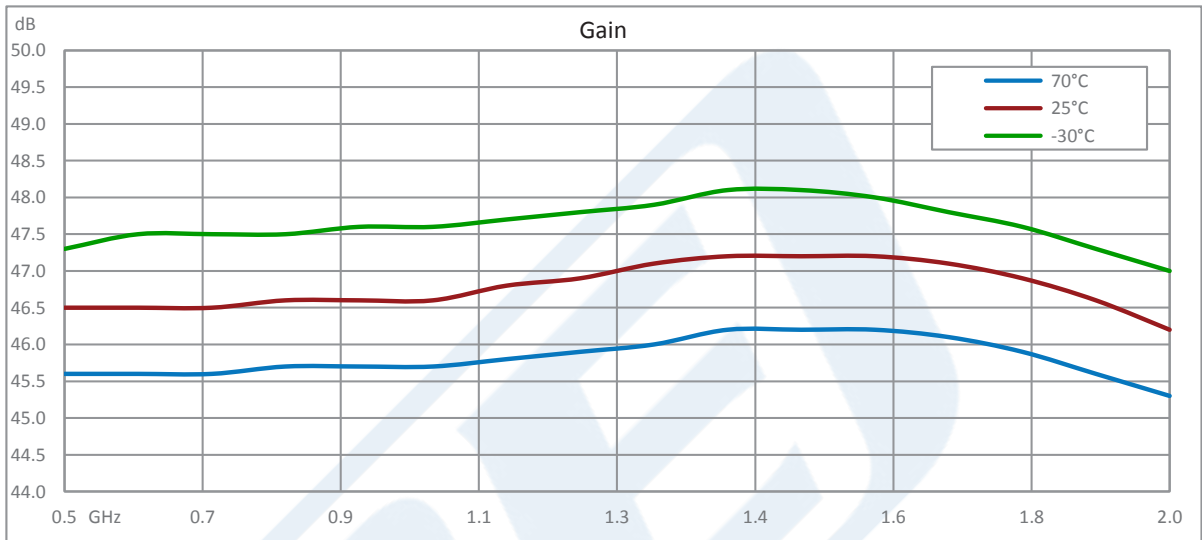
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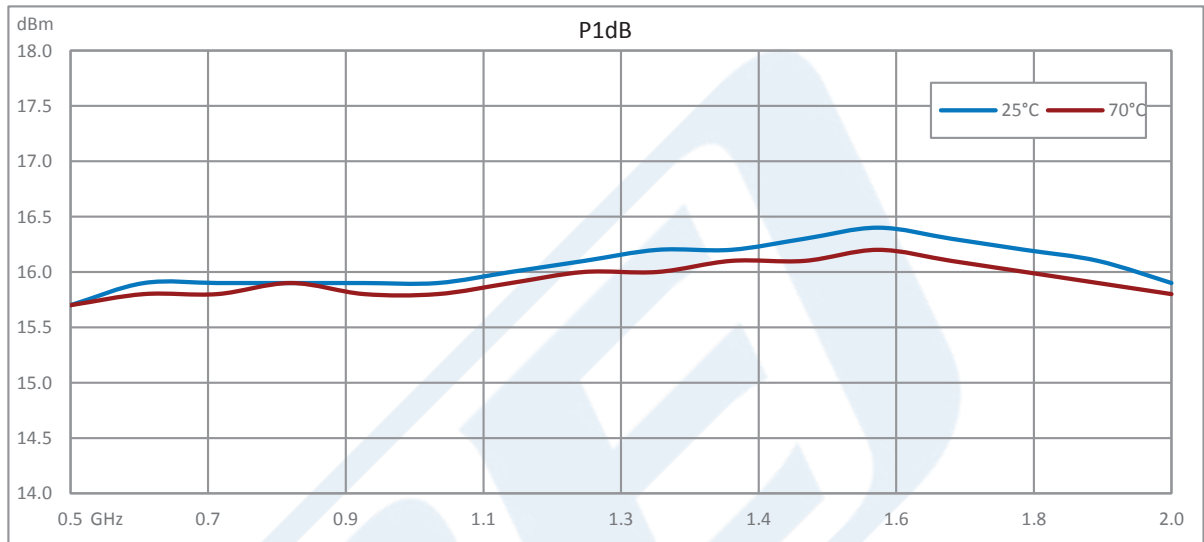
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50 dB Gain, 15 dBm P1dB, 500 MHz to 2 GHz, Gain Block Amplifier, 25 dBm IP3, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

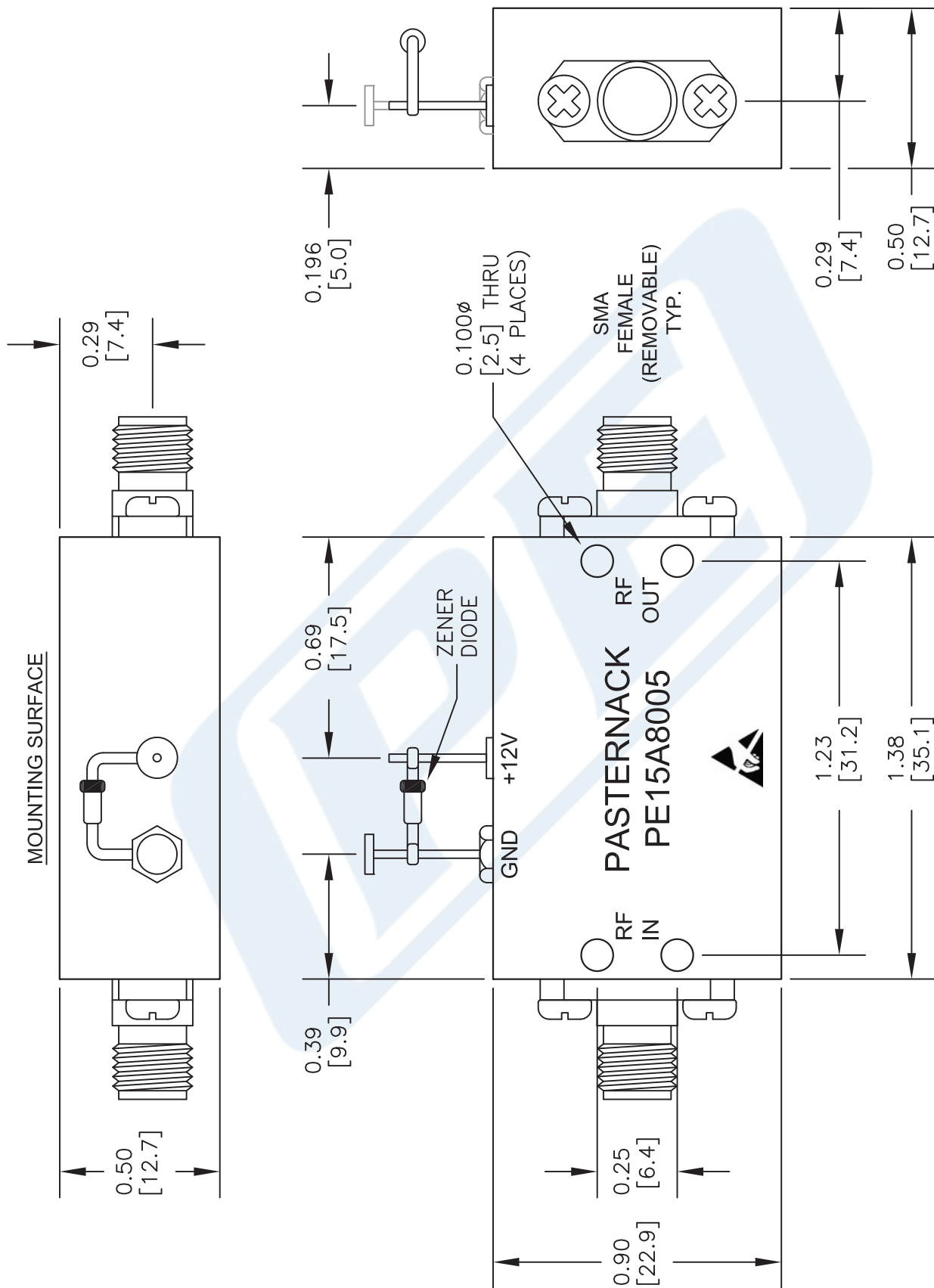
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.

# PE15A8005 CAD Drawing

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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].

DWG TITLE  
**PE15A8005**

CAGE CODE 53919

CAD FILE 012017

SCALE N/A

SIZE A

2233

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