



## 32 dBm IP3, 1 dB NF, 16 dBm P1dB, 50 MHz to 1 GHz, Low Noise Amplifier, 18 dB Gain, SMA

### TECHNICAL DATA SHEET

PE15A1050

The PE15A1050 is a low noise coaxial amplifier operating in the 50 MHz to 1000 MHz frequency range. Impressive broadband typical performance includes 1 dB noise figure, 18 dB small signal gain, +16 dBm P1dB, and an output 3rd order intercept point of +32 dBm. This exceptional technical performance is achieved through the use of a hybrid MIC design and advanced E-pHEMT devices. The low noise amplifier requires a +12V DC power supply, and operates over a temperature range of -40°C to +75°C. The rugged and compact package supports SMA Female connectors and RFI and Ground pins. And for highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for Humidity, Shock, Vibration, and Altitude.

#### Features

- 50 MHz to 1000 MHz Frequency Range
- Low Noise Figure: 1 dB
- High Dynamic Range
- Efficient GaAs pHEMT Design
- Small Signal Gain: 18 dB
- Output P1dB: +16 dBm
- Output IP3: +32 dBm
- Operating Temperature: -40°C to +75°C
- 50 Ohm Input and Output Matched
- DC Power Supply: +12V / 70 mA
- SMA Female Connectors
- Designed to meet MIL-STD-202 Test Conditions

#### Applications

- Test & Measurement
- R&D Labs
- General Purpose Amplification
- Aerospace & Defense
- Wireless Infrastructure
- Communication Systems

#### Electrical Specifications (TA = +25°C, DC Voltage = 12Vdc, DC Current = 70mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	50		1,000	MHz
Small Signal Gain	17	18		dB
Gain Flatness			±0.5	dB
Output at 1 dB Compression Point	+16	+16		dBm
Output 3rd Intercept Point	+30	+32		dBm
Noise Figure	1	1.2		dB
Input VSWR	1.8:1		2.2:1	
Output VSWR	1.4:1		2:1	
Reverse Isolation	-24			dB
Operating DC Voltage	10	12	18	Volts
Operating DC Current		70	80	mA
Operating Temperature Range	-40		+75	°C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [32 dBm IP3, 1 dB NF, 16 dBm P1dB, 50 MHz to 1 GHz, Low Noise Amplifier, 18 dB Gain, SMA PE15A1050](#)



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### Absolute Maximum Rating

Parameter	Rating	Units
Supply Voltage	+25	V
RF Input Power	+15	dBm
Operating Temperature	-40 to +85	°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

Input Connector  
Output Connector

SMA Female  
SMA Female

### Environmental Specifications

#### Temperature

Operating Range  
Storage Range

-40 to +75 deg C  
-55 to +125 deg C

Humidity  
Shock  
Vibration  
Altitude

MIL-STD-202F, Method 103B, Condition B  
MIL-STD-202F, Method 213B, Condition B  
MIL-STD-202F, Method 204D, Condition B  
MIL-STD-202F, Method 105C, Condition B

### 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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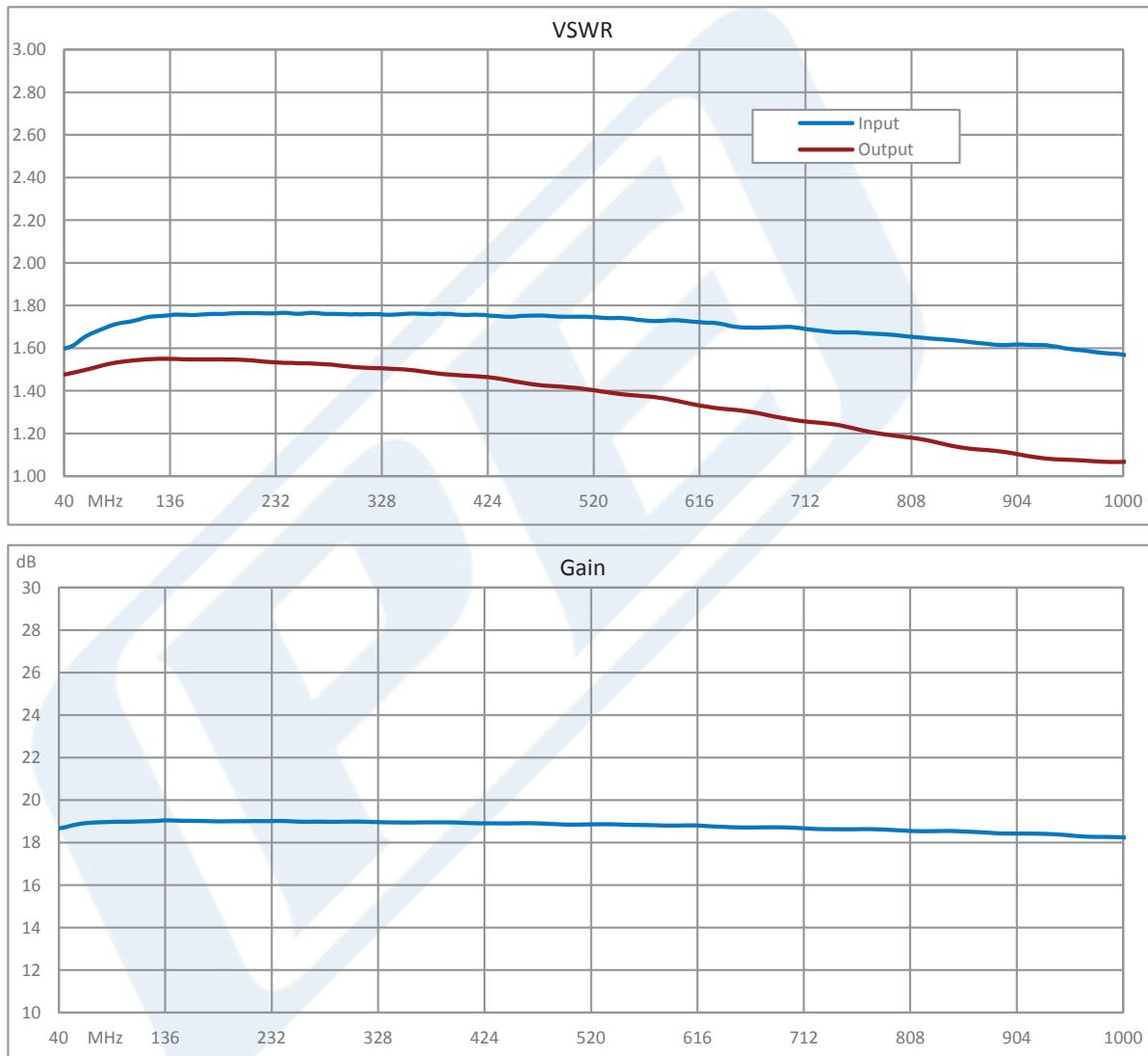


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### Typical Performance Data



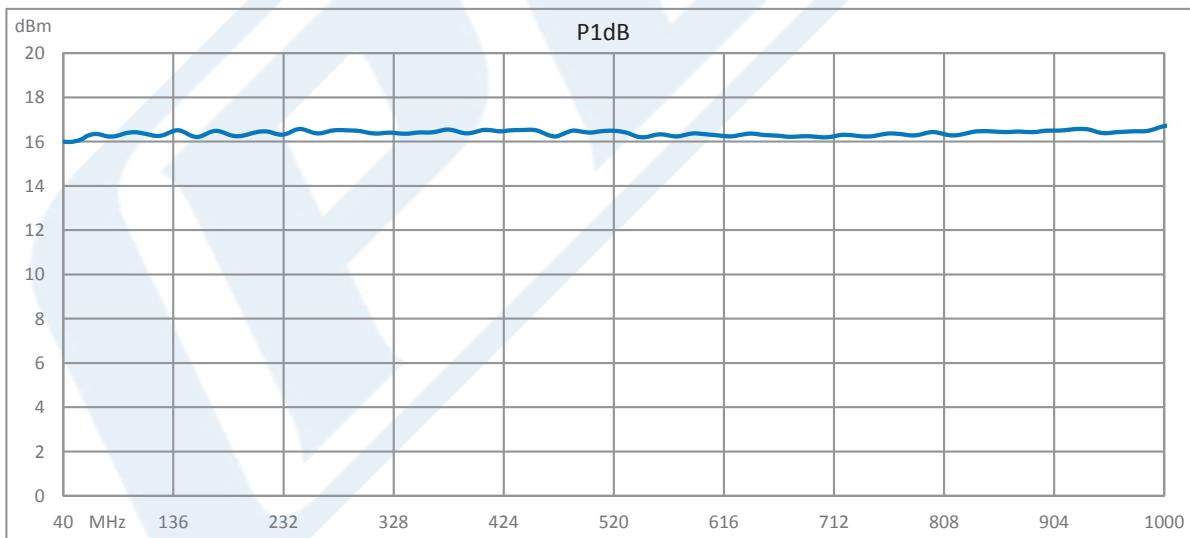
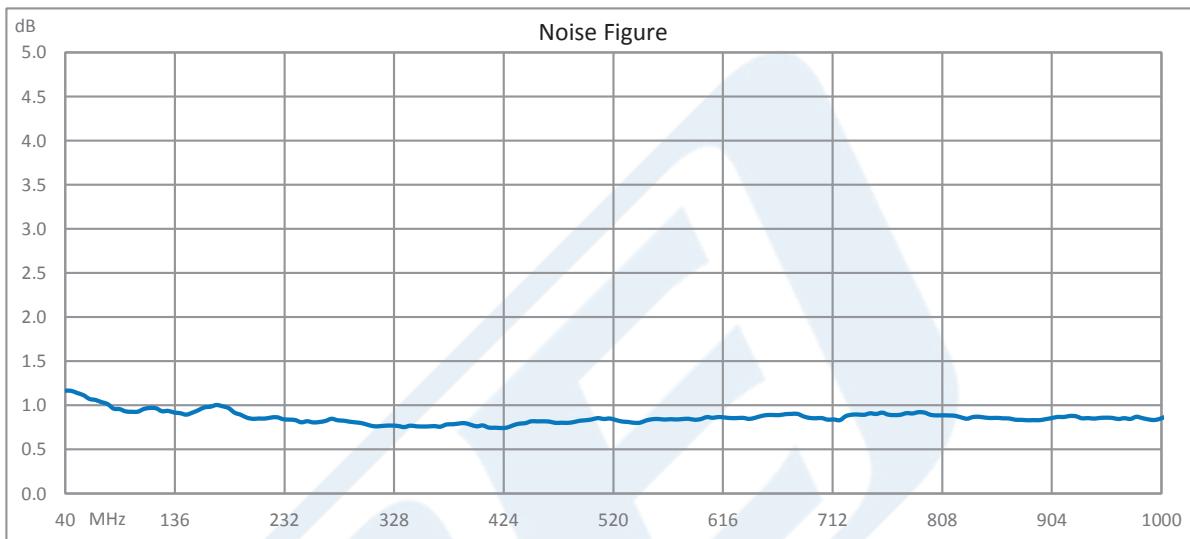
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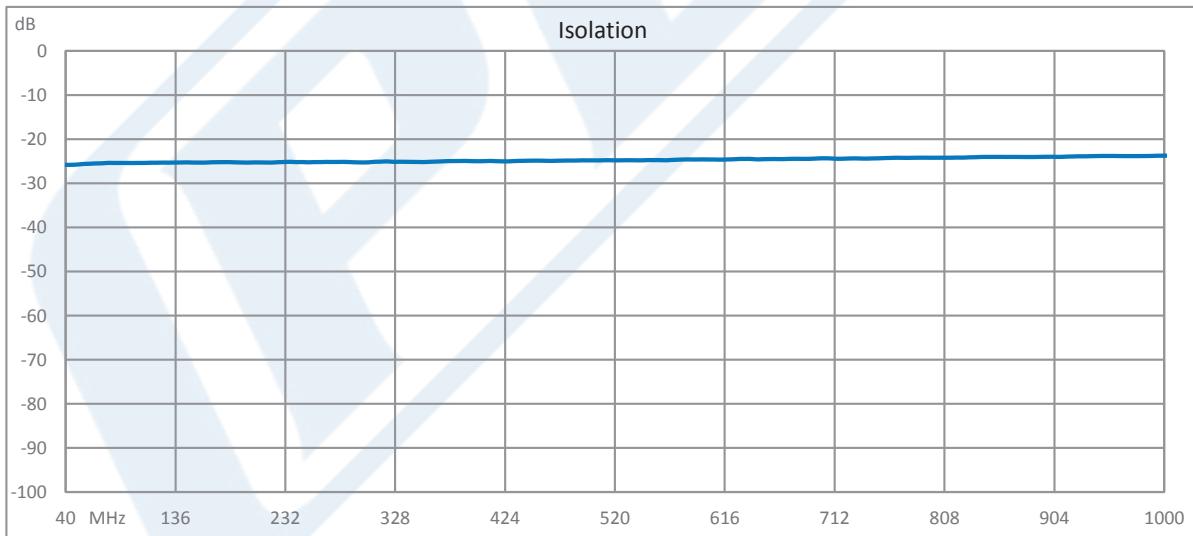
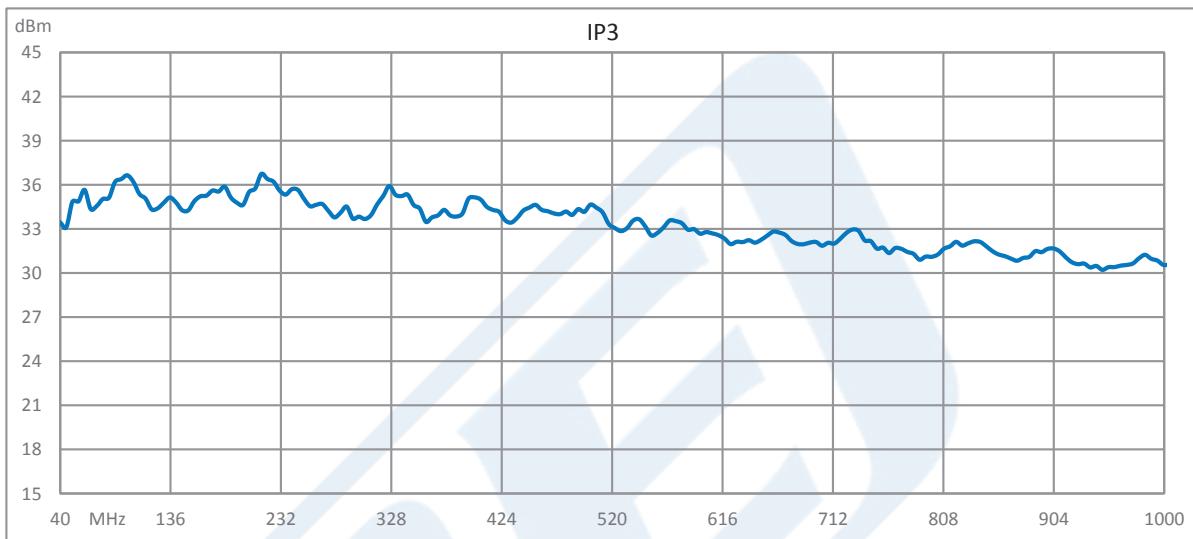
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32 dBm IP3, 1 dB NF, 16 dBm P1dB, 50 MHz to 1 GHz, Low Noise Amplifier, 18 dB Gain, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

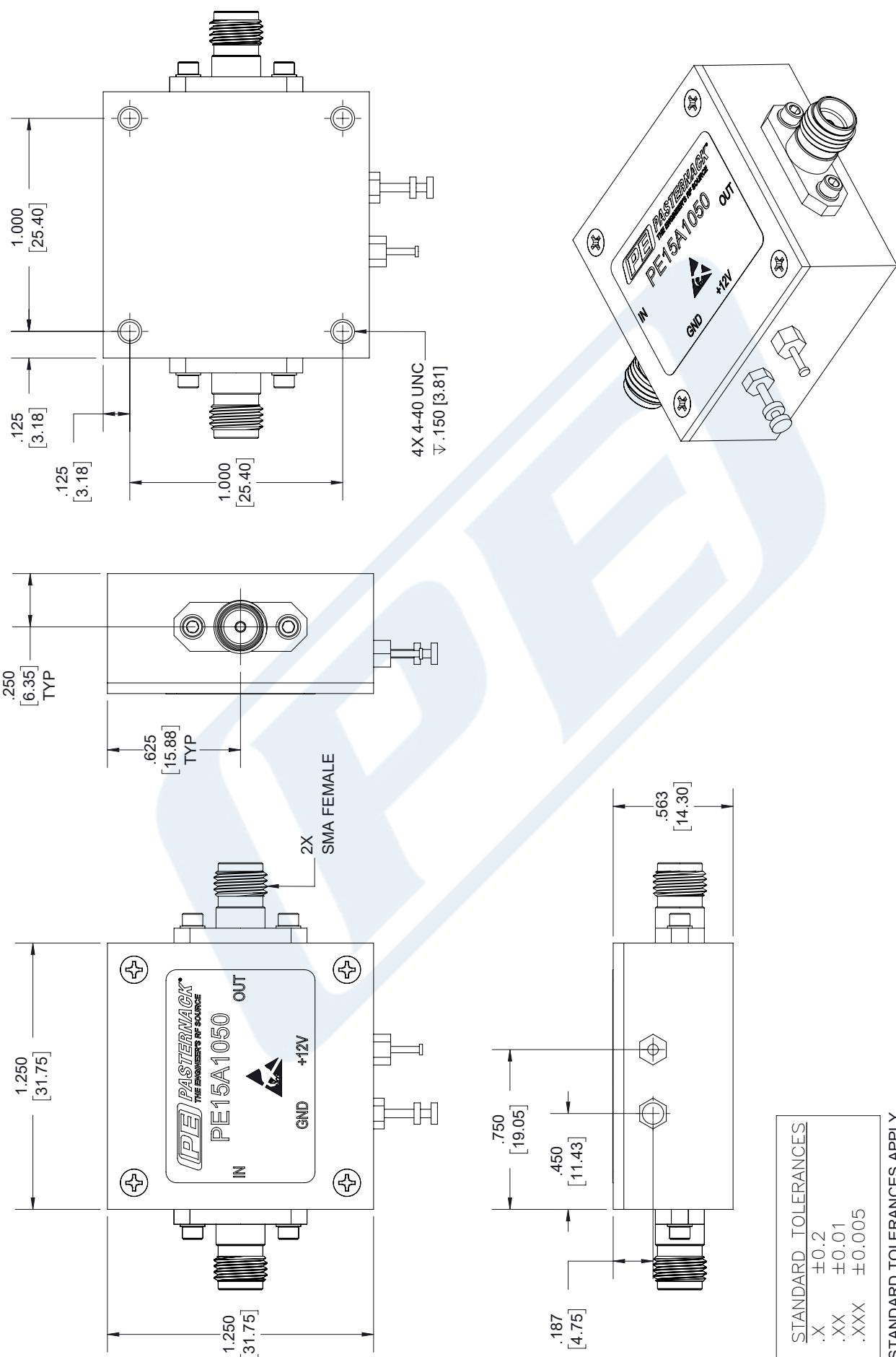
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URL: <https://www.pasternack.com/1-db-1-ghz-low-noise-amplifier-18-db-gain-sma-pe15a1050-p.aspx>

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# PE15A1050 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].

PASTERNACK <sup>®</sup> THE ENGINEER'S RESOURCE	DWG TITLE	PE15A1050	CAGE CODE	53919	CAD FILE	04/23/18	SCALE	NA	SIZE	A
Pasternack Enterprises, Inc. P.O. Box 16759   Irvine   CA   92623 Phone: (949) 261-1920   Fax: (949) 261-7451 Website: <a href="http://www.pasternack.com">www.pasternack.com</a>   E-Mail: <a href="mailto:sales@pasternack.com">sales@pasternack.com</a>										7361

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