



60 dB Gain, 80 mW, 1 GHz to 2 GHz, Limiting  
Amplifier, -40 to 10 dBm Pin, SMA

TECHNICAL DATA SHEET

PE15A6002

Model Number PE15A6002 is a 1 to 2 GHz high gain limiting coaxial amplifier. The model operates with an input power range of -40 to +10 dBm and maintains a limited output of +19 dBm minimum. This amplifier offers a flat high 60 dB gain and a gain flatness of  $\pm 2.5$  dB independent of the input. This excellent technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices, and supplied the power typically from a +12V DC power supply. The connectorized SMA module includes built-in voltage regulation, bias sequencing, and reverse bias protection for added reliability. The module is hermetically sealed for extreme environmental conditions.

**Features**

- 1 GHz to 2 GHz Frequency Range
- Wide Input Dynamic Range: -40 to +10 dBm
- Psat: 19dBm Min.
- High Small Signal Gain: 60 dB Min.
- Gain Flatness:  $\pm 2.5$  dB max
- Noise Figure: 2.5 dB maximum
- VSWR (In/Out): 2:1
- 50 Ohm Input and Output Matched
- -30 to 70°C Operating Temperature
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

**Applications**

- Electronic Warfare
- Test & Measurements
- Military & Space
- Military Communication Systems
- Broadband Communication
- Microwave Receivers
- Instantaneous Frequency Measurement Receivers

**Electrical Specifications** (TA = +25°C, DC Voltage = 12Volts, DC Current = 250mA)

| Description                 | Minimum | Typical   | Maximum | Units |
|-----------------------------|---------|-----------|---------|-------|
| Frequency Range             | 1       |           | 2       | GHz   |
| Small Signal Gain           | 60      |           |         | dB    |
| Gain Flatness               |         | $\pm 2.5$ |         | dB    |
| Input Power                 | -40     |           | +10     | dBm   |
| Psat                        | +19     |           |         | dBm   |
| Psat Flatness               |         |           | $\pm 1$ | dB    |
| Noise Figure                |         |           | 2.5     | dB    |
| Input VSWR                  |         | 2:1       |         |       |
| Output VSWR                 |         | 2:1       |         |       |
| Operating DC Voltage        | 11      | 12        | 13      | Volts |
| Operating DC Current        |         |           | 250     | 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: [60 dB Gain, 80 mW, 1 GHz to 2 GHz, Limiting Amplifier, -40 to 10 dBm Pin, SMA PE15A6002](#)





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**Absolute Maximum Rating**

| Parameter                          | Rating     | Units |
|------------------------------------|------------|-------|
| Source Voltage                     | +15        | Volts |
| RF input Power                     | +17        | dBm   |
| Operating Temperature (base-plate) | -30 to +70 | °C    |
| Storage Temperature                | -55 to +85 | °C    |



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

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)  
RoHS Compliant

**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.
- Heat Sink Required for Proper Operation, Unit is cooled by conduction to heat sink.

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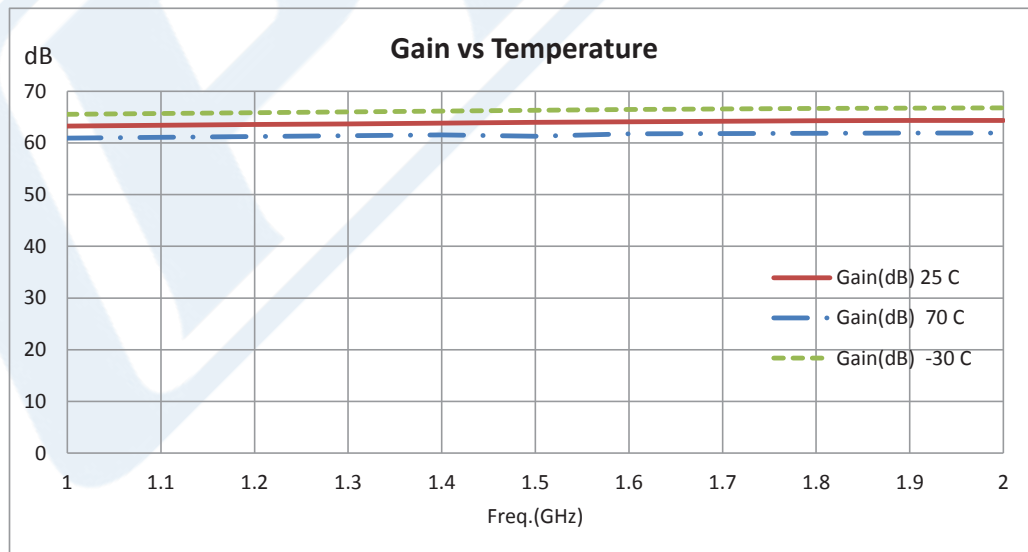
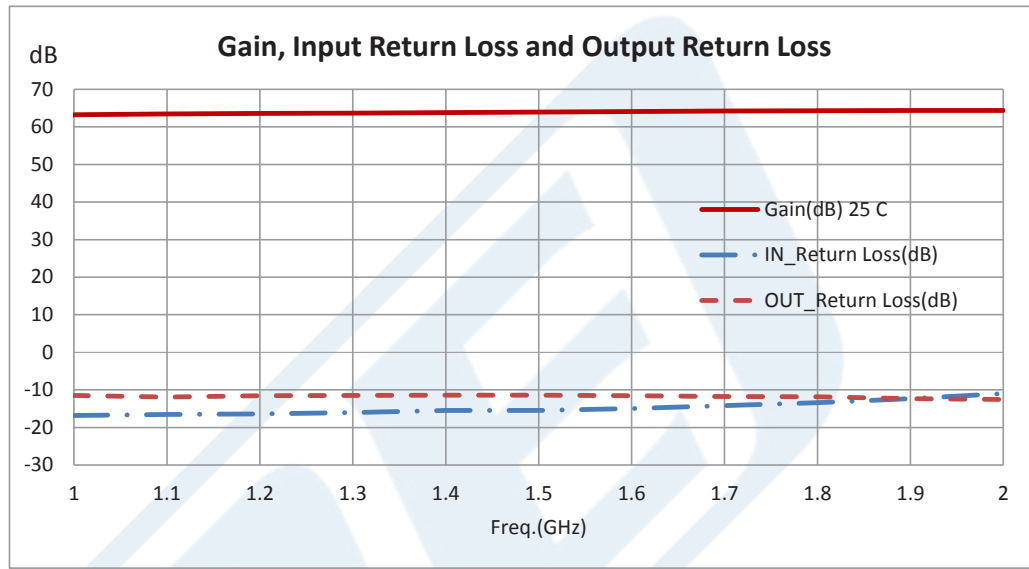


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Power Data



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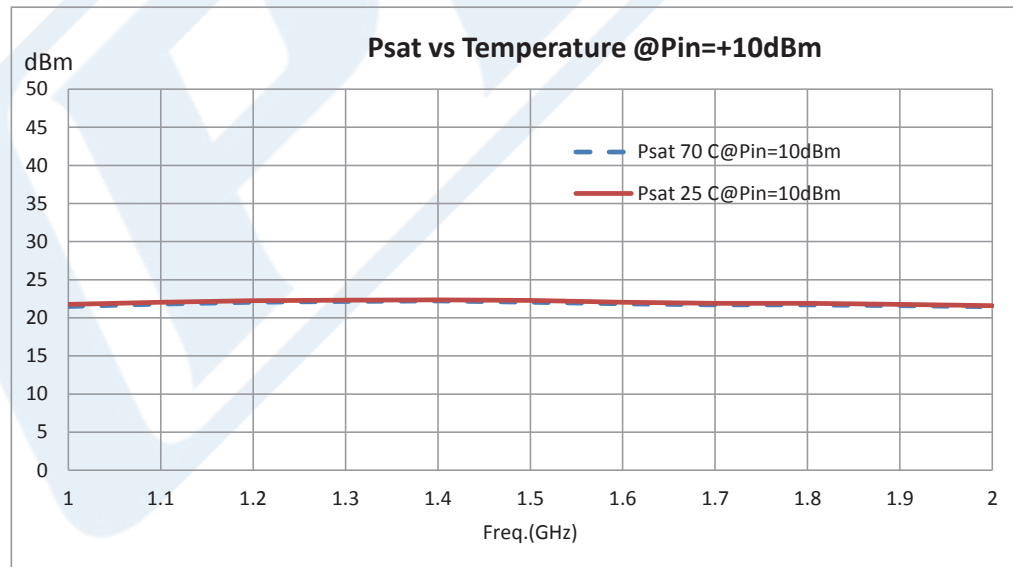
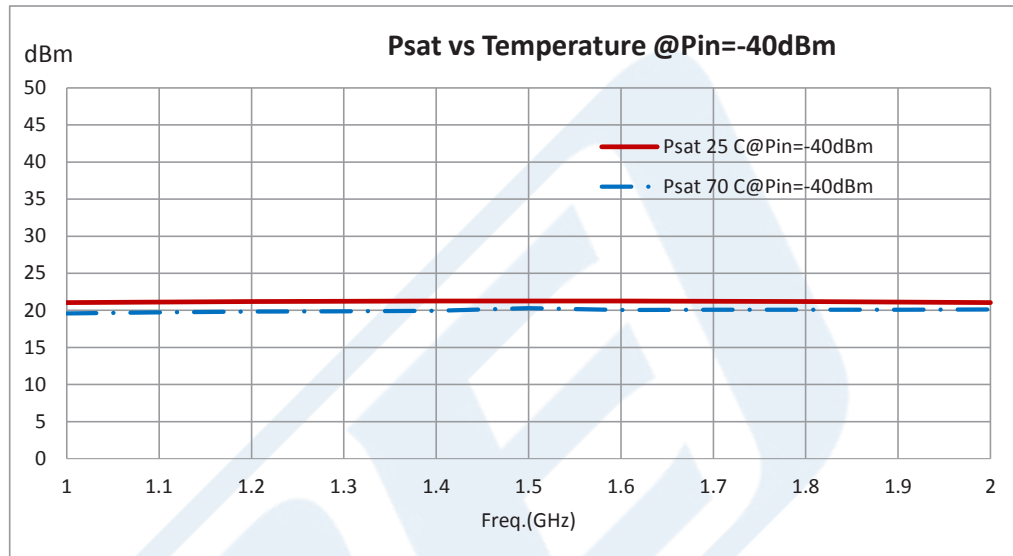




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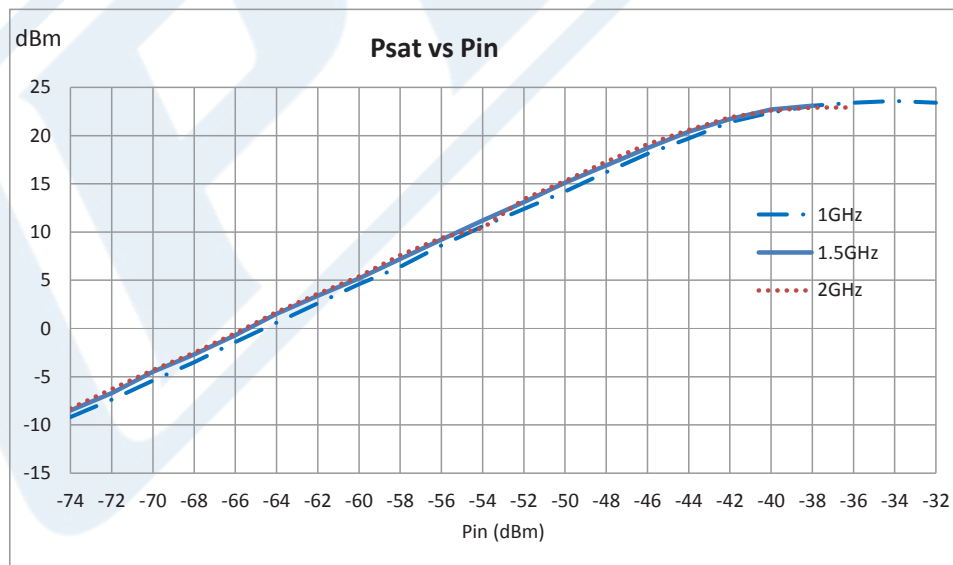
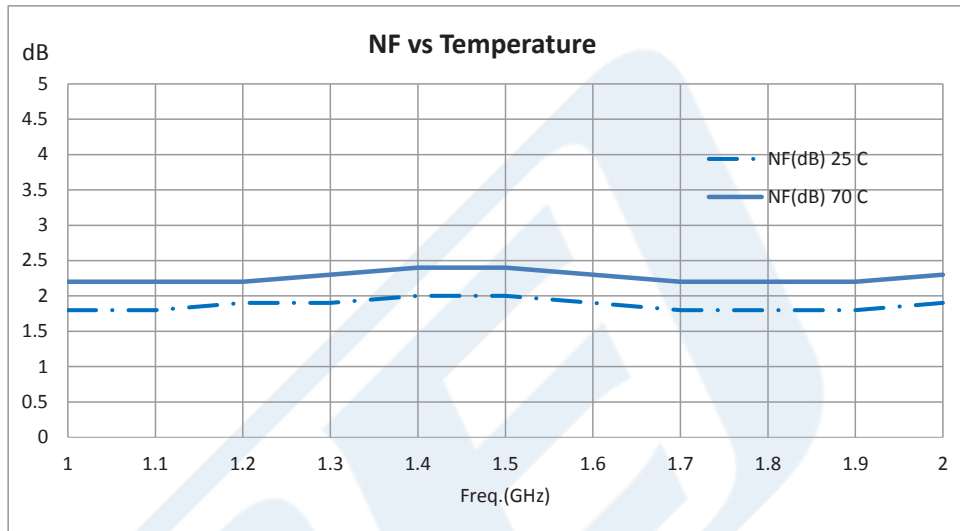
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60 dB Gain, 80 mW, 1 GHz to 2 GHz, Limiting Amplifier, -40 to 10 dBm Pin, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and

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are part of the broadest selection in the industry.

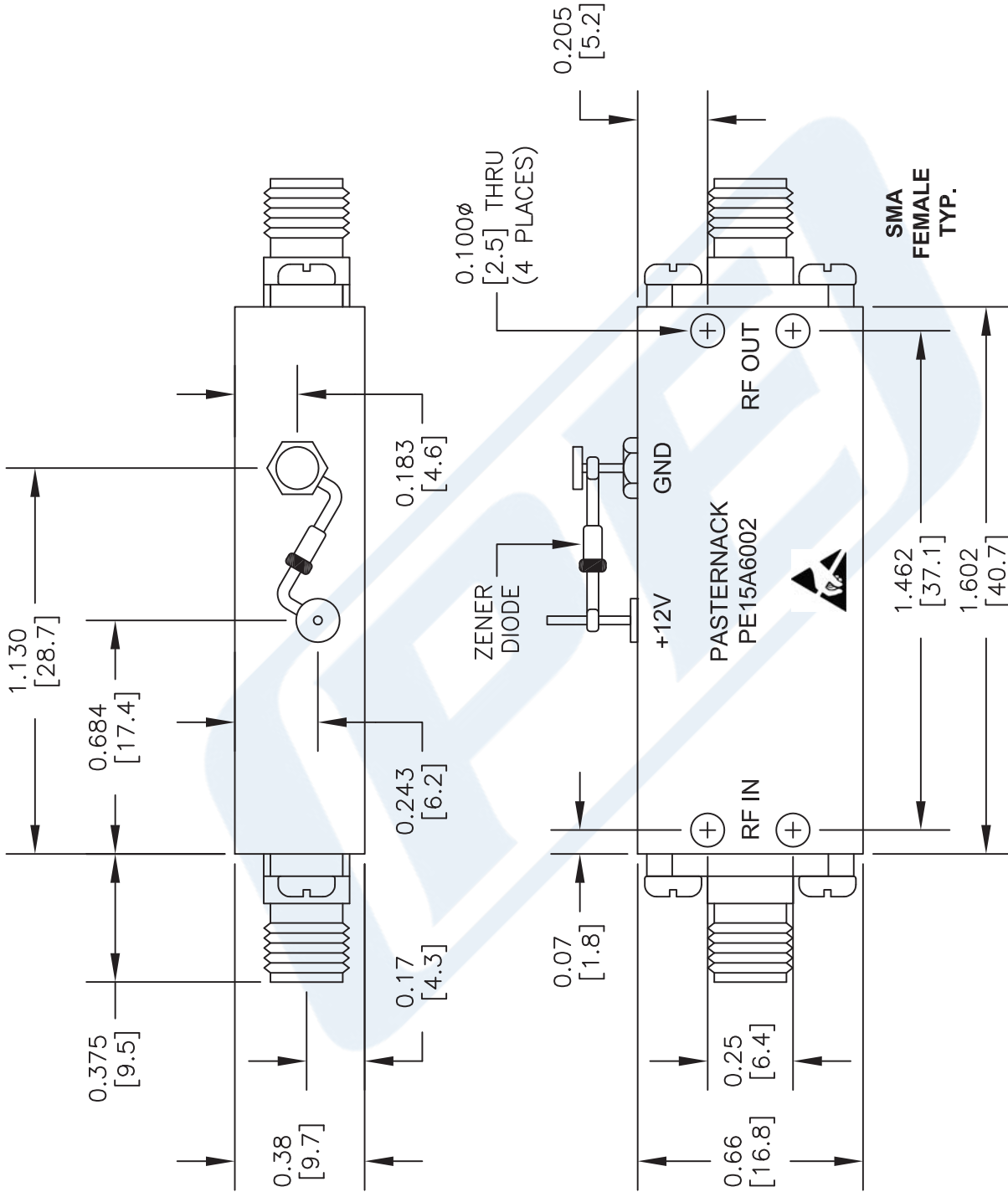
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# PE15A6002 CAD Drawing

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NOTE:  
HEAT SINK REQUIRED FOR PROPER OPERATION,  
UNIT IS COOLED BY CONDUCTING TO HEAT SINK.

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

**PE15A6002**

FSCM NO. 53919

CAD FILE 041114

SCALE N/A

SIZE A

233



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