



34 dBm IP3, 2.6 dB NF, 20 dBm P1dB, 500 MHz to 3 GHz, Low Noise Amplifier, 29 dB Gain, SMA

## TECHNICAL DATA SHEET

PE15A1018

The PE15A1018 is a low noise RF coaxial power amplifier operating in the 500 MHz to 3 GHz frequency range. The amplifier offers Noise Figure of 2.6 dB typ, 20 dBm min of P1dB and 29 dB typ of small signal gain. This exceptional technical performance is achieved through the use of hybrid MIC design and advanced GaAs E-pHEMT devices. The low noise amplifier requires an operating voltage between +5 VDC and +12VDC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation, bias sequencing.

### Features

- 500 MHz to 3 GHz Frequency Range
- P1dB: 20 dBm typ
- Small Signal Gain: 29 dB typ
- Noise Figure: 2.6 dB typ
- 50 Ohm Input and Output Matched
- Unconditionally Stable
- Single DC Positive Supply
- Built-in Voltage Regulator

### Applications

- Laboratory Applications
- R&D Labs
- Radar Systems
- Telecom Infrastructure
- Test Instrumentation
- 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 = 190mA)

| Description                      | Minimum | Typical | Maximum | Units |
|----------------------------------|---------|---------|---------|-------|
| Frequency Range                  | 0.5     |         | 3       | GHz   |
| Small Signal Gain                |         | 29      |         | dB    |
| Gain Flatness                    |         | ±1      |         | dB    |
| Output at 1 dB Compression Point |         | +20     |         | dBm   |
| Output 3rd Intercept Point       | +31     | +34     |         | dBm   |
| Noise Figure                     |         | 2.6     | 3       | dB    |
| Input VSWR                       | 1.93:1  |         |         |       |
| Output VSWR                      | 1.93:1  |         |         |       |
| Operating DC Voltage             | 5       |         | 12      | Volts |
| Operating DC Current             |         | 190     |         | mA    |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [34 dBm IP3, 2.6 dB NF, 20 dBm P1dB, 500 MHz to 3 GHz, Low Noise Amplifier, 29 dB Gain, SMA PE15A1018](#)



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### Mechanical Specifications

#### Size

|                  |                     |
|------------------|---------------------|
| Length           | 3.15 in [80.01 mm]  |
| Width            | 2.56 in [65.02 mm]  |
| Height           | 0.493 in [12.52 mm] |
| Input Connector  | SMA Female          |
| Output Connector | SMA Female          |

### 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.



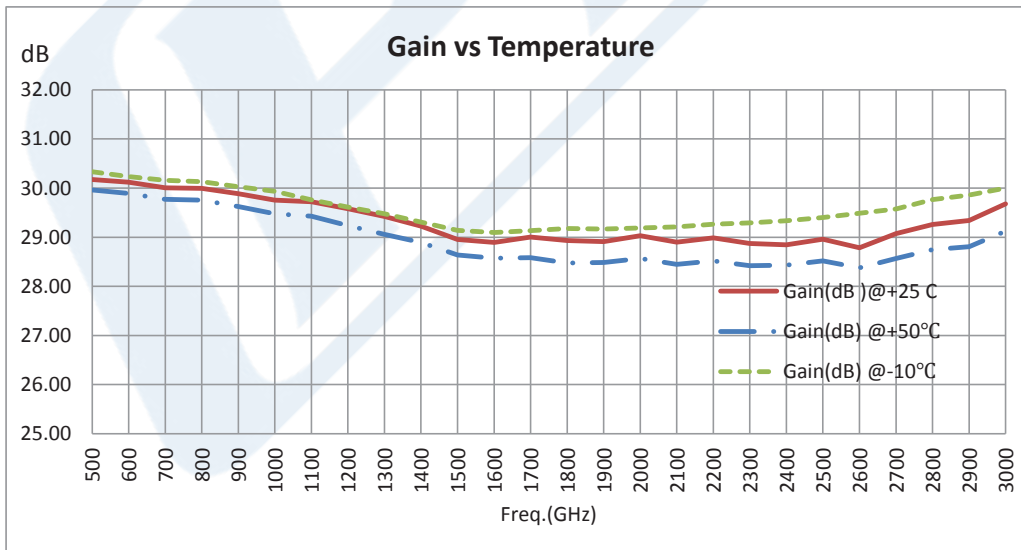
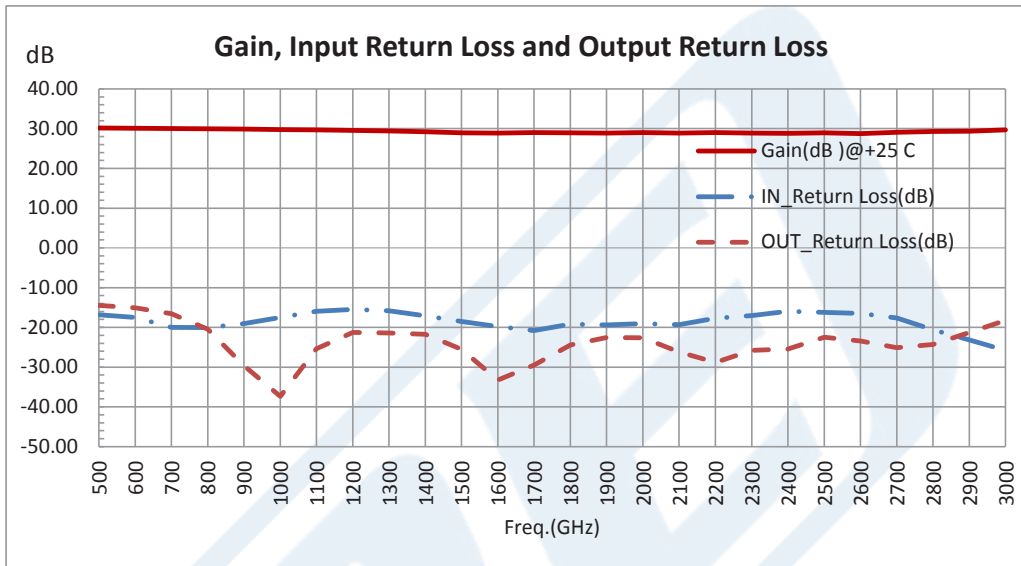
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Typical Performance Data



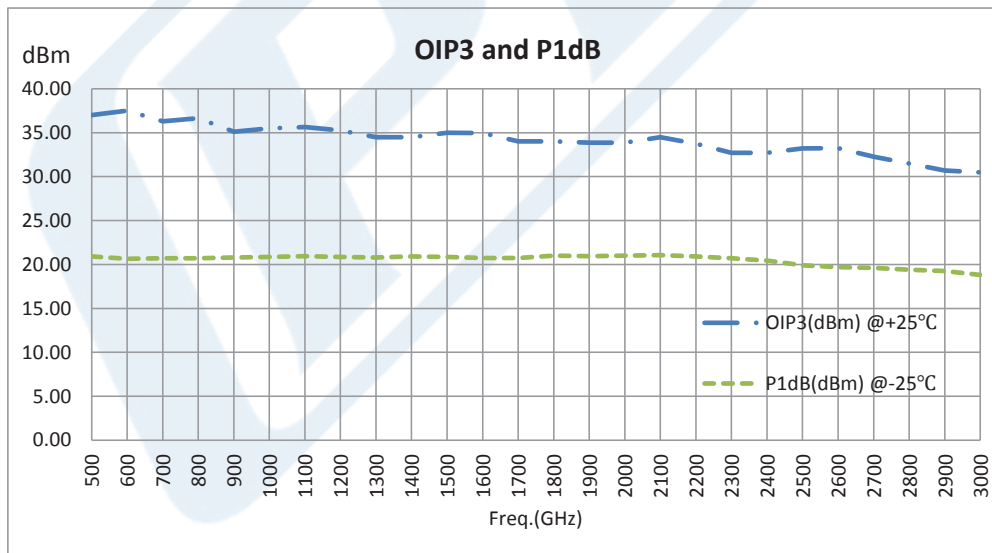
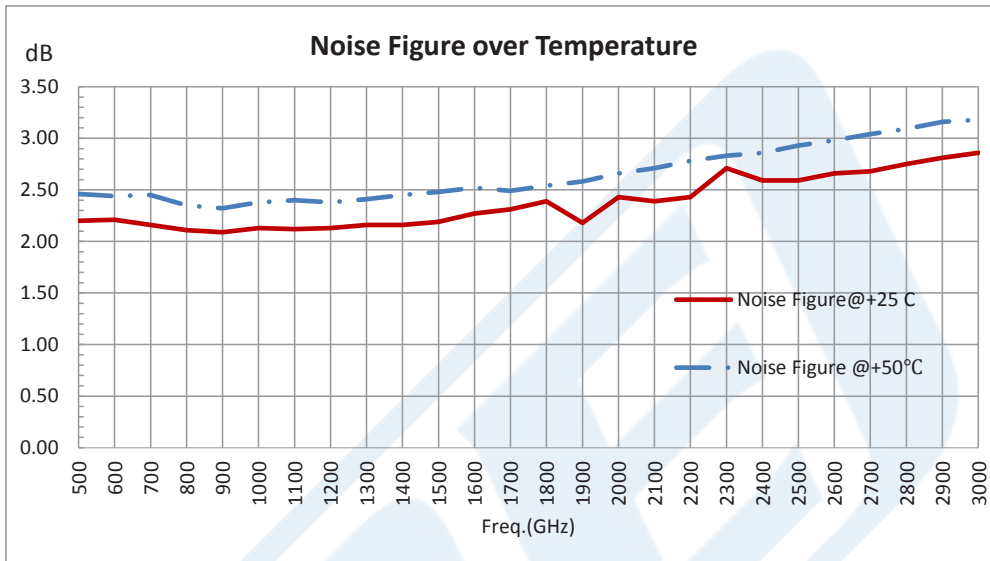
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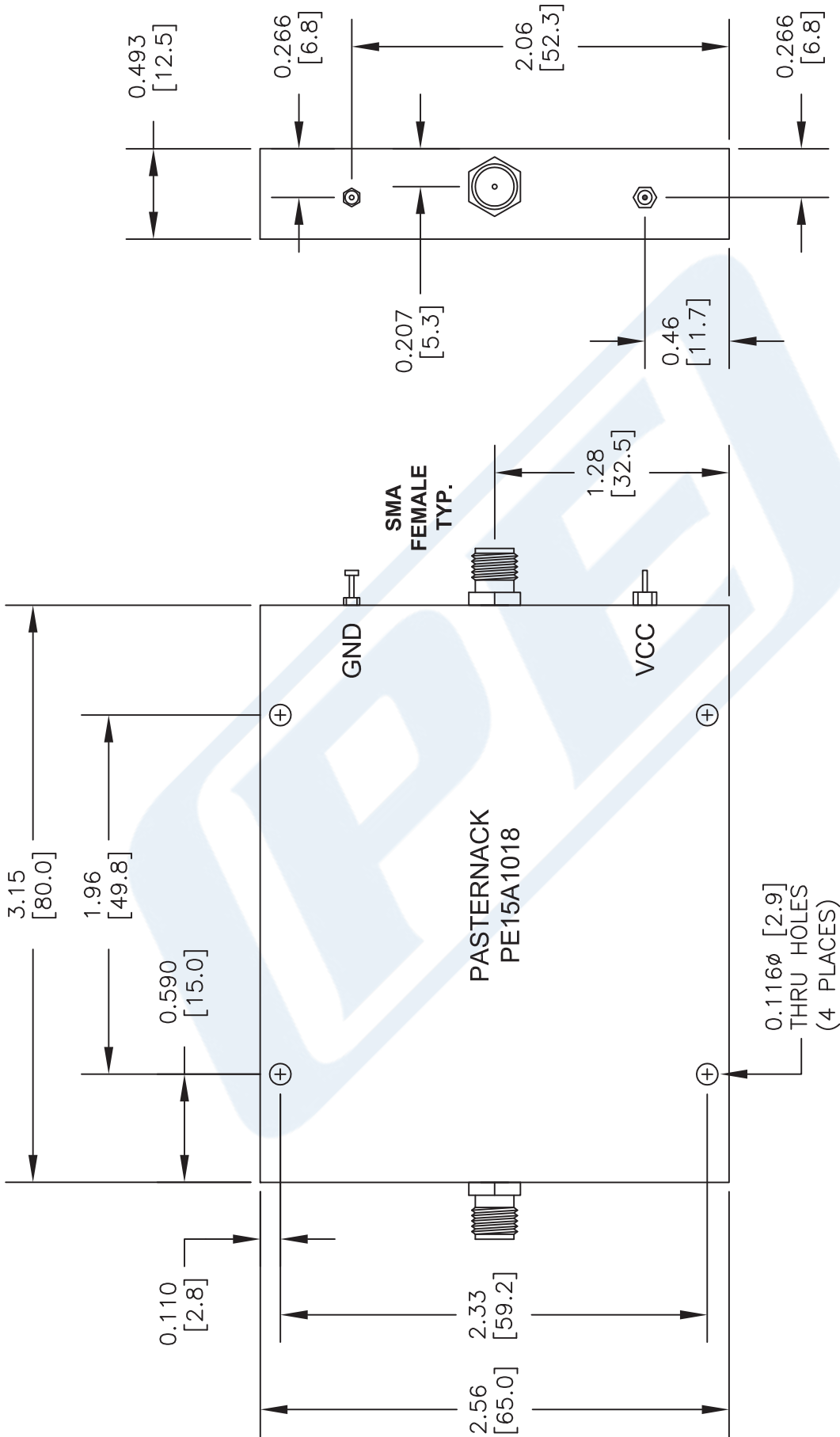
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE15A1018 CAD Drawing

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Low Noise Amplifier, 29 dB Gain, SMA



DWG TITLE

**PE15A1018**

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].

FSCM NO. 53919

CAD FILE 072814

SCALE N/A

SIZE A

150

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