



36 dBm IP3, 18 dBm P1dB, 50 MHz to 1,000 MHz,  
 Low Noise Amplifier, 19 dB Gain, SMA

## TECHNICAL DATA SHEET

PE15A1014

PE15A1014 is a low noise RF coaxial power amplifier operating in the 50 MHz to 1 GHz frequency range. The amplifier offers Noise Figure of 0.6 dB typ, 18 dBm min of P1dB and 19 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

- 50 MHz to 1 GHz Frequency Range
- P1dB: 18 dBm typ
- Small Signal Gain: 19 dB typ
- Noise Figure: 0.6 dB typ
- GaAs E-pHEMT Technology
- 50 Ohm Input and Output Matched
- Unconditionally Stable
- Single DC Positive Supply With EMI Filter
- Built-in Voltage Regulator
- Compact Aluminum Case

### Applications

- Laboratory Applications
- R&D Labs
- Military Radio
- Radar Systems
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Wireless Communication (GSM,UMTS)
- 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
- RFID

### Electrical Specifications (TA = +25°C, DC Voltage = 12Vdc, DC Current = 90mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	50		1,000	MHz
Small Signal Gain		19		dB
Output at 1 dB Compression Point		+18		dBm
Output 3rd Intercept Point		+36		dBm
Operating DC Voltage	5		12	Volts
Operating DC Current		90		mA
Operating Temperature Range	-40		+60	°C

### RF Characteristic

Description	Band 1	Band 2	Band 3	Units
Frequency Range	0.05 to 0.5	0.5 to 1		GHz
Small Signal Gain	24	19		dB
Input Return Loss	10	13		dB
Output Return Loss	15	13		dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [36 dBm IP3, 18 dBm P1dB, 50 MHz to 1,000 MHz, Low Noise Amplifier, 19 dB Gain, SMA PE15A1014](#)



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Output at 1 dB Compression Point	18	20	dBm
Output 3rd Intercept Point	35	36	dBm
Noise Figure	0.6	0.5	dB

### Mechanical Specifications

#### Size

Length	1.38 in [35.05 mm]
Width	0.5 in [12.7 mm]
Height	1.2 in [30.48 mm]
Weight	0.076 lbs [34.47 g]
Input Connector	SMA Female
Output Connector	SMA Female

### Environmental Specifications

#### Temperature

Operating Range	-40 to +60 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.

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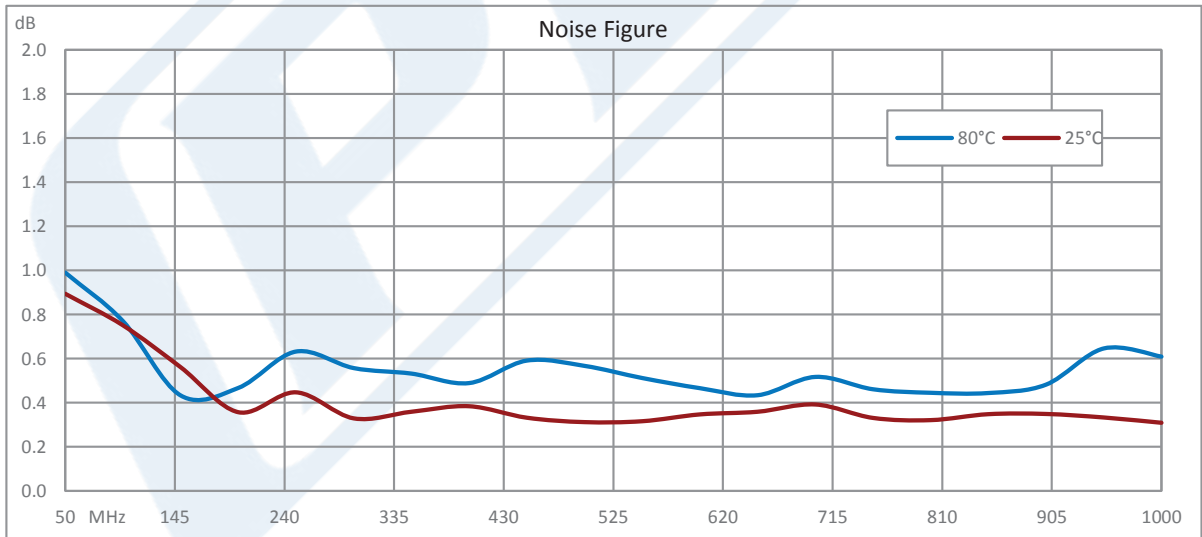
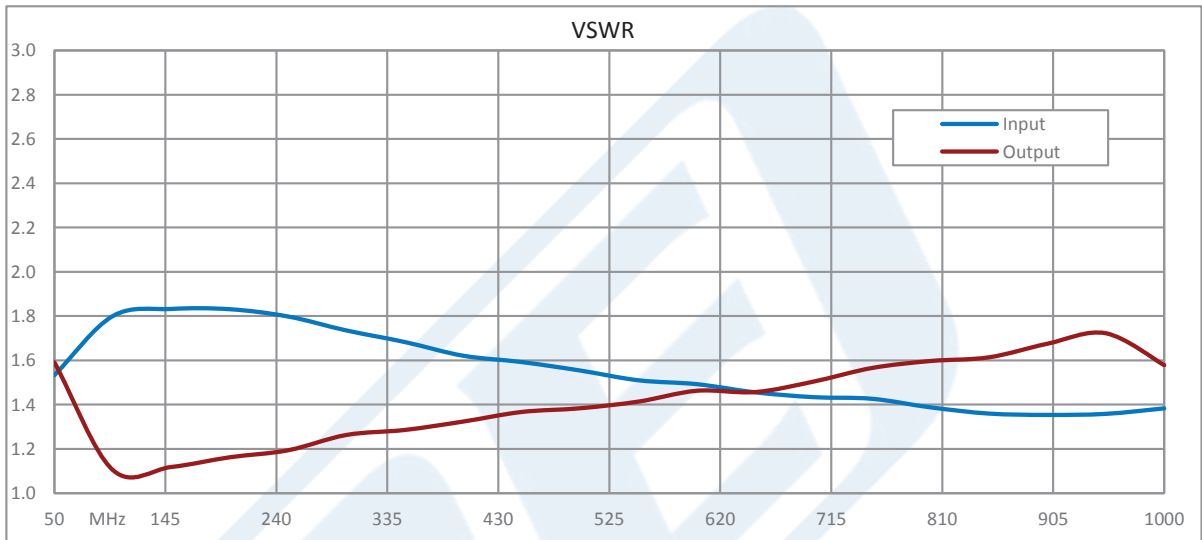


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Typical Performance Data



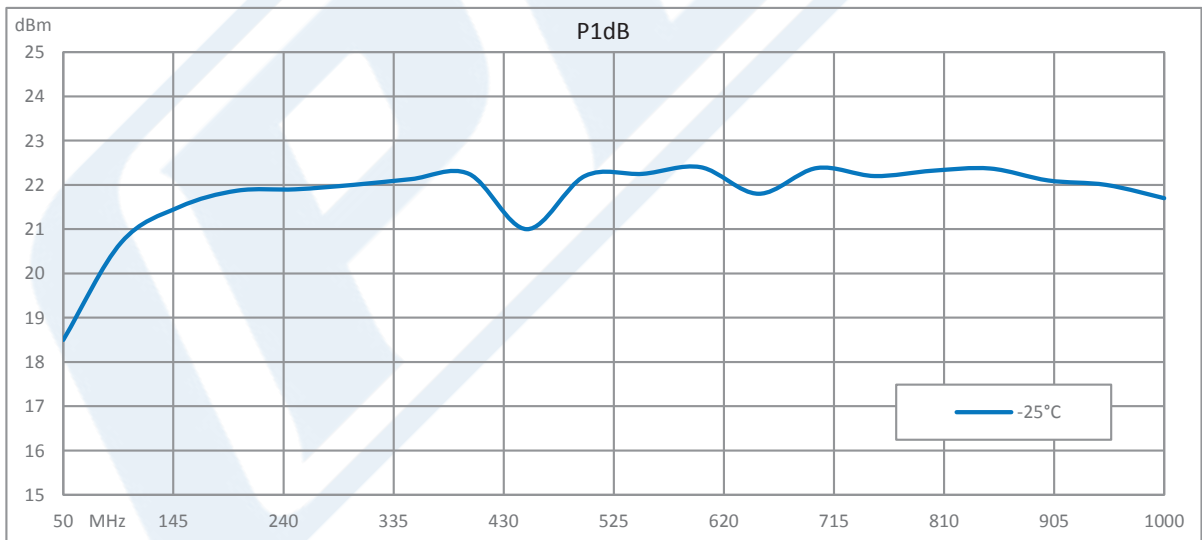
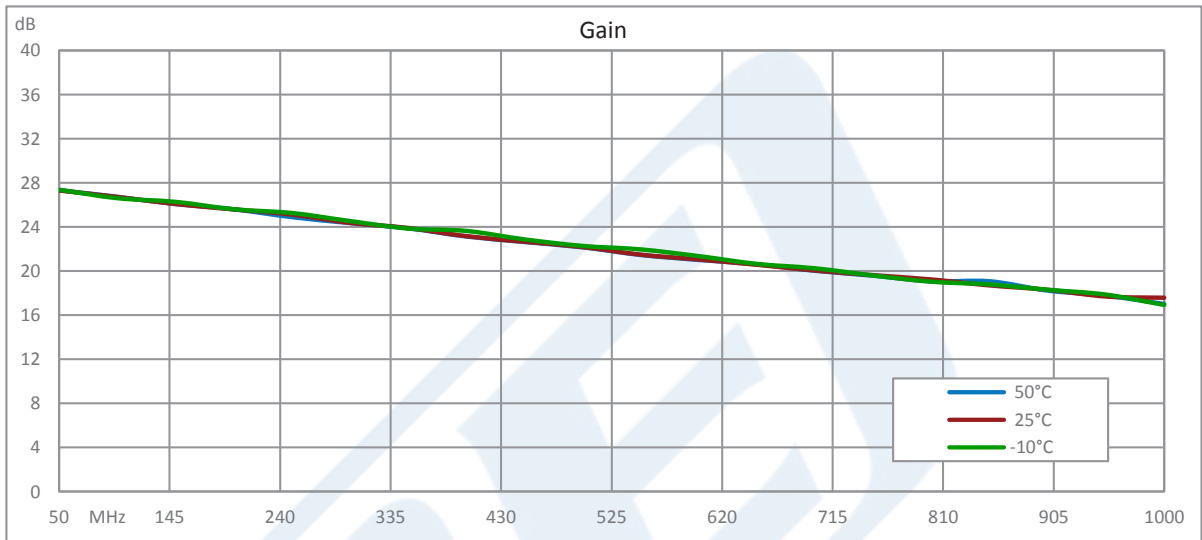
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36 dBm IP3, 18 dBm P1dB, 50 MHz to 1,000 MHz, Low Noise Amplifier, 19 dB Gain, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

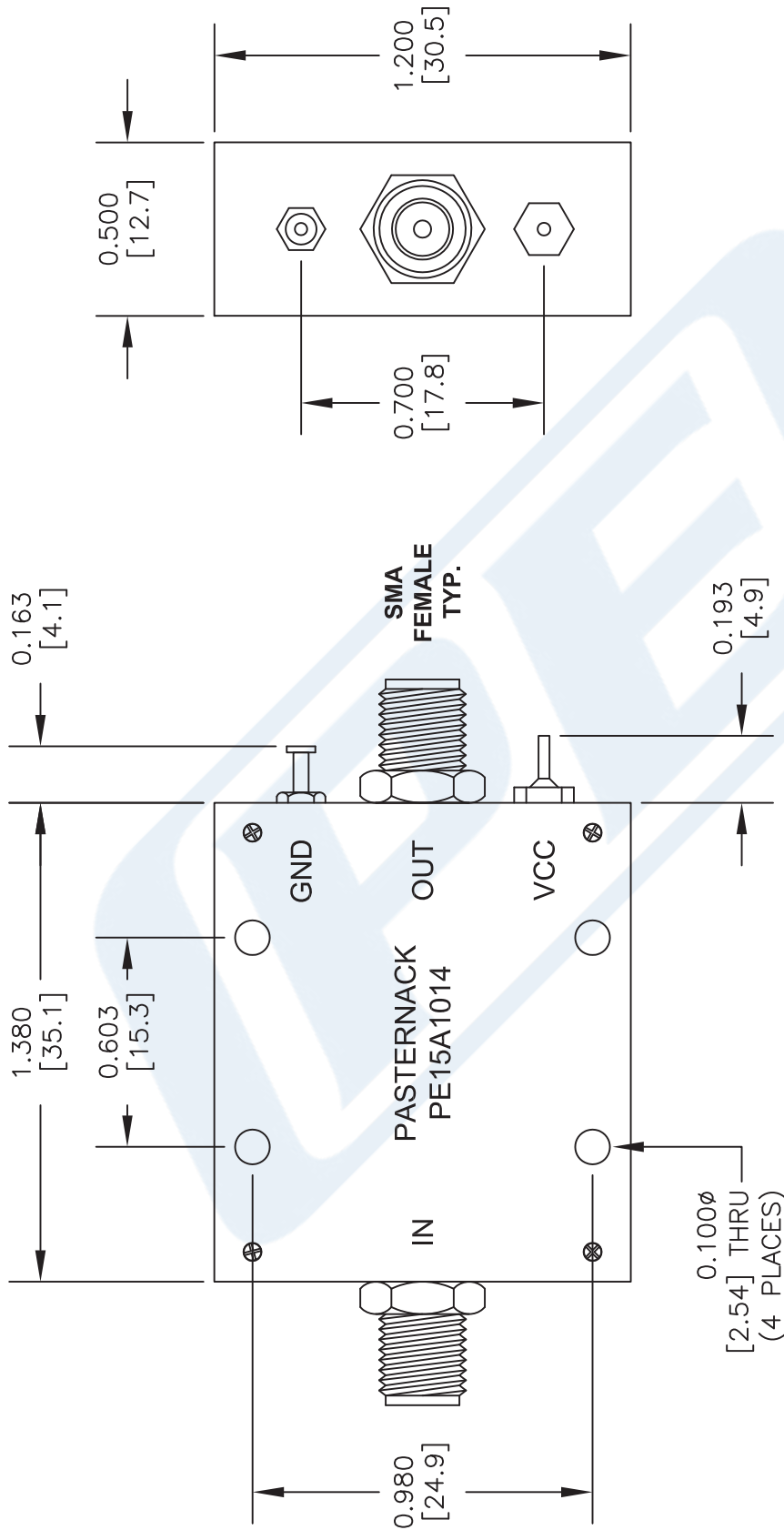
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URL: <https://www.pasternack.com/36-dbm-ip3-1000-mhz-low-noise-amplifier-sma-pe15a1014-p.aspx>

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.

# PE15A1014 CAD Drawing

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DWG TITLE

**PE15A1014**

FSCM NO. 53919

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 032715

SCALE N/A

SIZE A

2233



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