

500 mW P1dB, 2 GHz to 6 GHz, Medium Power Broadband Amplifier, 22 dB Gain, 37 dBm IP3, 5.4 dB NF, SMA



## PE15A4041

### Features

- 2.0 to 6.0 GHz Frequency Range
- P1dB: 27 dBm min
- Small Signal Gain: 22 dB typ
- Gain Flatness:  $\pm 0.6$  dB typ
- 50 Ohm Input and Output Matched
- -30 to +70°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in DC Voltage Regulator

### Applications

- Laboratory Applications
- R&D Labs
- Test Instrumentation
- Military & Space
- Communication Systems
- Satellite Communications
- Wireless Communications
- Unmanned Systems
- Microwave Radio Systems
- Low Noise Amplifier
- General Purpose Amplification
- RF Front Ends

### Description

The PE15A4041 is a broadband coaxial power amplifier, operating in the 2.0 to 6.0 GHz frequency range. The amplifier offers 27 dBm of P1dB min and 22 dB small signal gain typ, with the gain flatness of  $\pm 0.6$  dB typ. This power amplifier requires only a single positive DC supply, is unconditionally stable, operates over the temperature range of -30°C to 70°C, and is Hermetically sealed.

### Electrical Specifications (TA= 25°C, VDC = 12 Vdc)

Description	Min	Typ	Max	Unit
Frequency Range	2		6	GHz
Gain	20	22		dB
Gain Flatness		$\pm 0.6$		dB
P1dB	+27			dBm
Input Power			+17	dBm
IP3		+37		dBm
Noise Figure		5.4		dB
Input VSWR			2:1	
Output VSWR			2:1	
Operating DC Voltage	11	12	15	Vdc
Operating DC Current		420		mA
Operating DC Current at Quiescent		504		mA
Operating Temperature Range (OTR)	-30		+70	°C

Electrical Specification Notes:

Start-Up DC Current: 10% to 20%

\*OTR= Base Plate Operating Temperature Range

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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.

### 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	0.082 lbs [37.19 g]
Input Connector	SMA Female
Output Connector	SMA Female
Cooling	ADEQUATE HEATSINK REQUIRED

### Environmental Specifications

#### Temperature

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

CE Certification

### Plotted and Other Data

Notes:

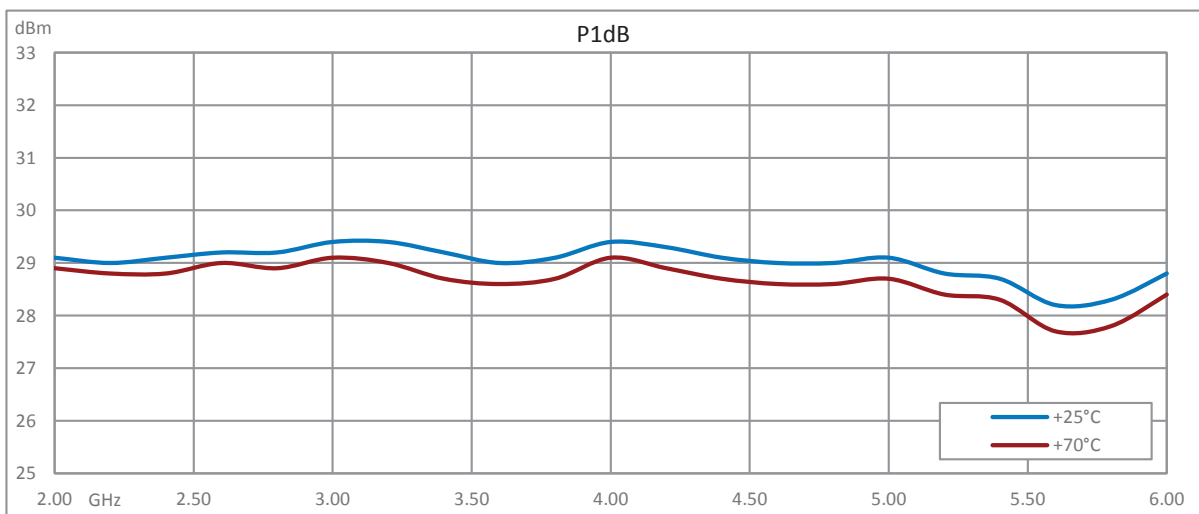
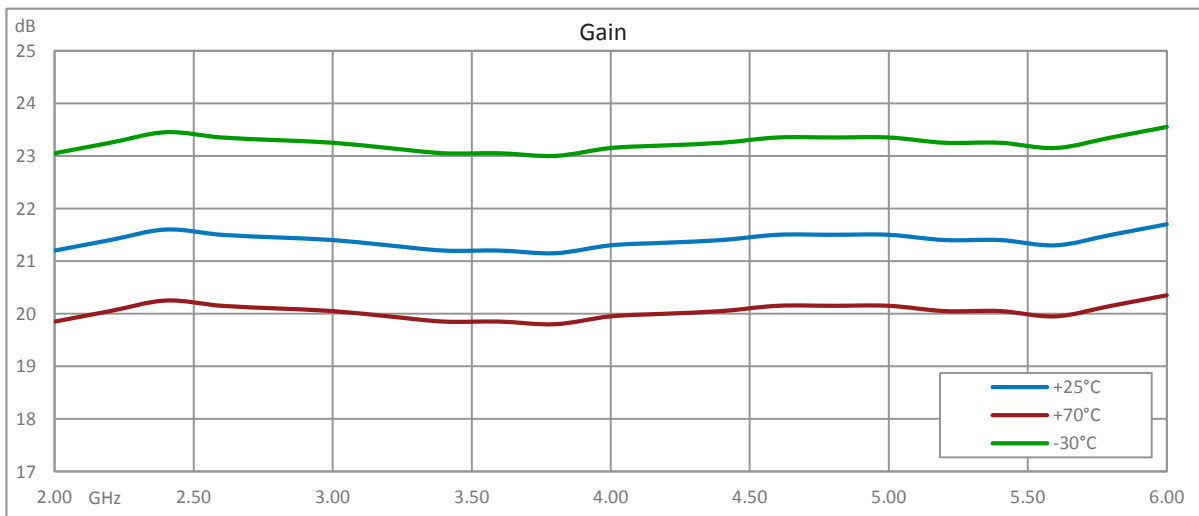
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### Functional Block Diagram

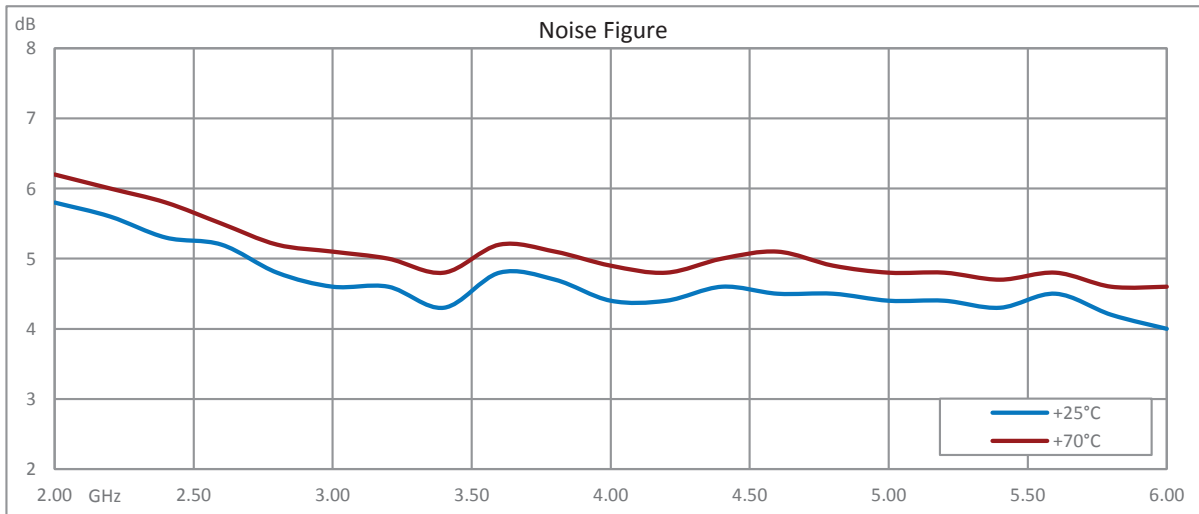
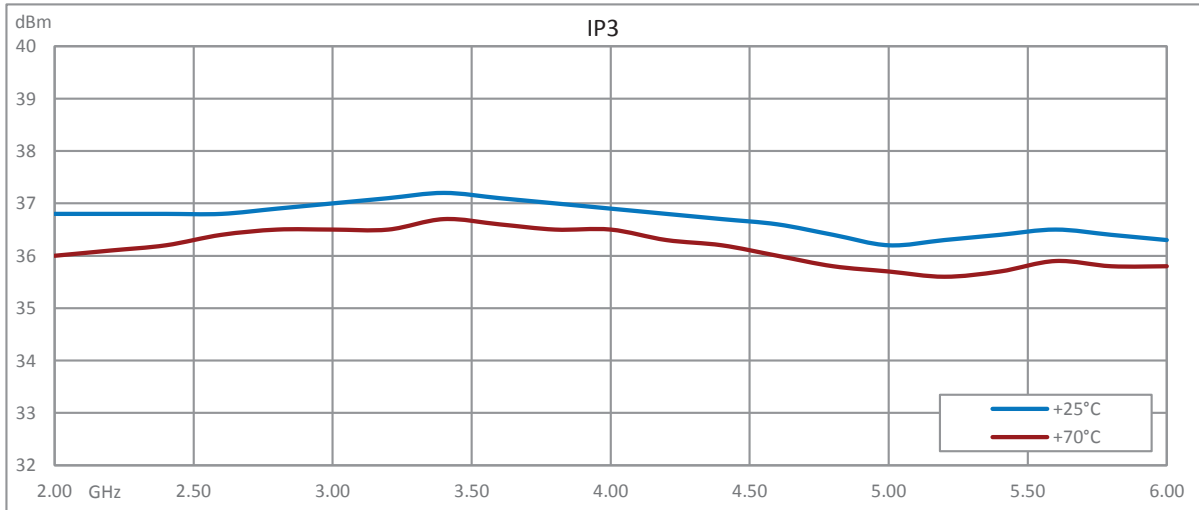
Typical Performance Data Parameter, Typ Performance



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500 mW P1dB, 2 GHz to 6 GHz, Medium Power Broadband Amplifier, 22 dB Gain, 37 dBm IP3, 5.4 dB NF, 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.

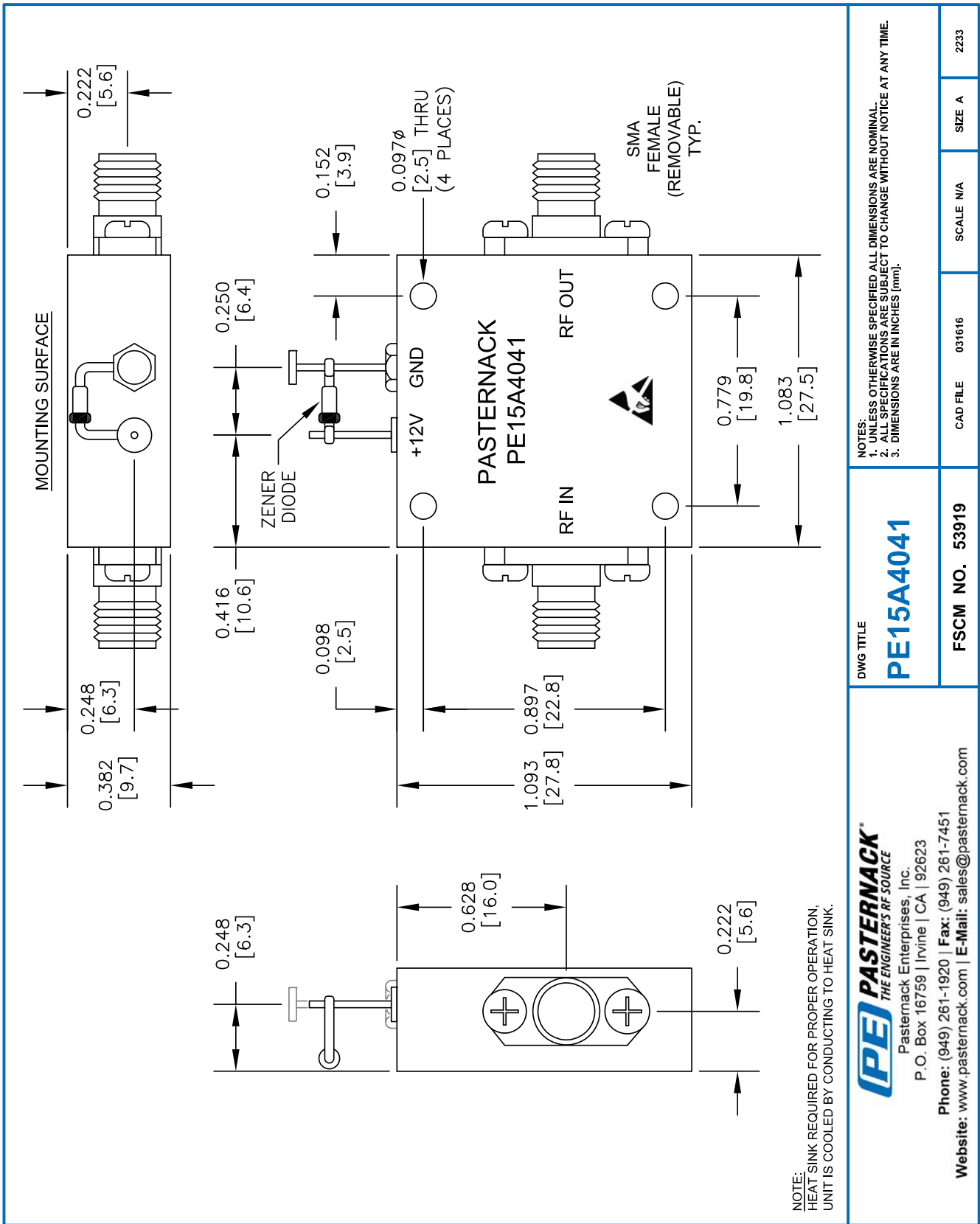
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 500 mW P1dB, 2 GHz to 6 GHz, Medium Power Broadband Amplifier, 22 dB Gain, 37 dBm IP3, 5.4 dB NF, SMA PE15A4041

URL: <https://www.pasternack.com/6-ghz-medium-power-broadband-amplifier-22-db-gain-5.4-db-sma-pe15a4041-p.aspx>

The information contained within 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 impliment improvements. Pasternack Enterprises reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack Enterprises does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack Enterprises does not assume liability arising out of the use of any part or document.

# PE15A4041 CAD Drawing

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DWG TITLE

**PE15A4041**

FSCM NO. 53919

CAD FILE 031616

SCALE N/A

SIZE A

2233



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