PASTERNACK®
THE ENGINEER'S RF SOURCE



1 Watt Psat, DC to 10 GHz, Medium Power Broadband Amplifier, 12.5 dB Gain, 38 dBm IP3, 6.5 dB NF, SMA

TECHNICAL DATA SHEET PE15A3001

PE15A3001 is a broadband multi-octave GaAs PHEMT MMIC-based 1W coaxial power amplifier, operating in the DC to 10 GHz frequency range. The amplifier offers 30 dBm of output saturated power at 10 GHz, and 12 dB minimum small signal gain, along with the excellent gain flatness of ±1.0 dB max and outstanding IP3 performance of 38 dBm. This performance is achieved through the use of advanced GaAs PHEMT MMIC circuitry. This power amplifier requires only a single positive DC supply, unconditionally stable,and operates over the temperature range of -40°C to 85°C, and characterized by a light weight (21 g) and small size (1.55"x1.37"x0.55").

Features

- DC to 10 GHz Frequency Range
- Psat: 30 dBm min
- Small Signal Gain: 12 dB min @10GHz
- Gain Flatness: ±01 dB
- Gain Variation Over Temperature: 0.005 dB/°C
- High Output IP3: 38 dBm
- Noise Figure: 6.5 dB
- 50 Ohm Input and Output Matched
- -40 to +85°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Suppy
- Built-in DC Voltage Regulator
- Small Size & Light Weight

Applications

- Laboratory Applications
- R&D Labs
- Radar Systems
- Electronic Warfare
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Satellite Communications
- Wireless Communications
- Microwave Radio Systems
- Power Amplifier
- General Purpose Amplification
- RF Front Ends

Electrical Specifications (TA = +25°C, DC Voltage = 12Volts, DC Current = 300mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		10	GHz
Gain	12	12.5		dB
Gain Flatness		±1	±1.3	dB
Gain Variance at OTR*			±0.005	dB
Saturation Output Power		+30.5		dBm
Output 3rd Intercept Point		+38		dBm
Noise Figure		6.5		dB
Input VSWR	1.7:1	1.3:1		
Output VSWR	1.7:1	1.3:1		
Operating DC Voltage		12		Volts
Operating DC Current		300		mA
Operating Temperature Range (OTR)	-40		+85	°C

*OTR= Base Plate Operating Temperature Range

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 1 Watt Psat, DC to 10 GHz, Medium Power Broadband Amplifier, 12.5 dB Gain, 38 dBm IP3, 6.5 dB NF, SMA PE15A3001

Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
Phone: (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451
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Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+14	Volts
RF input Power	+20	dBm
Operating Temperature (base-plate)	-40 to +85	°C
Storage Temperature	-55 to +100	°C



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

Compliance Certifications (visit 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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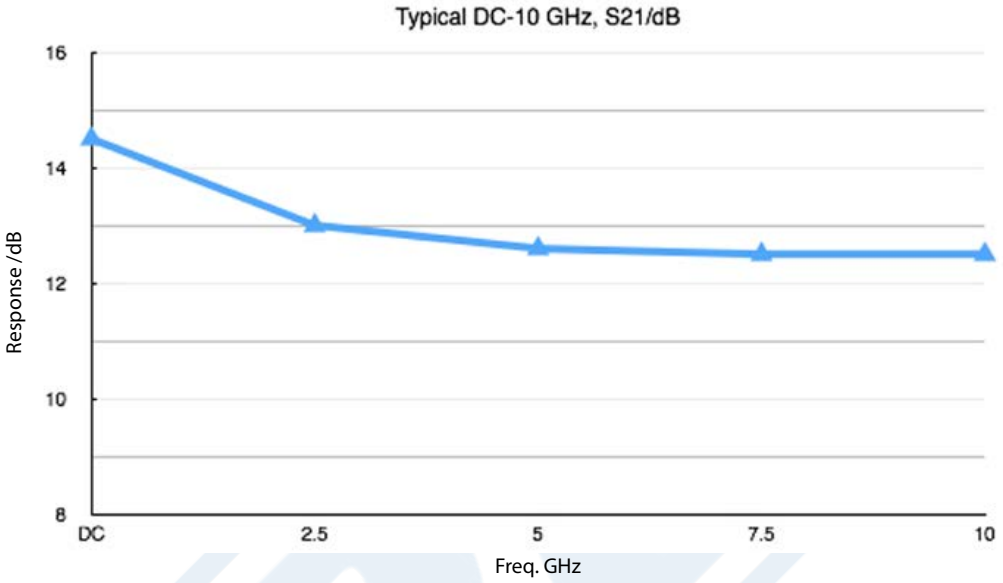
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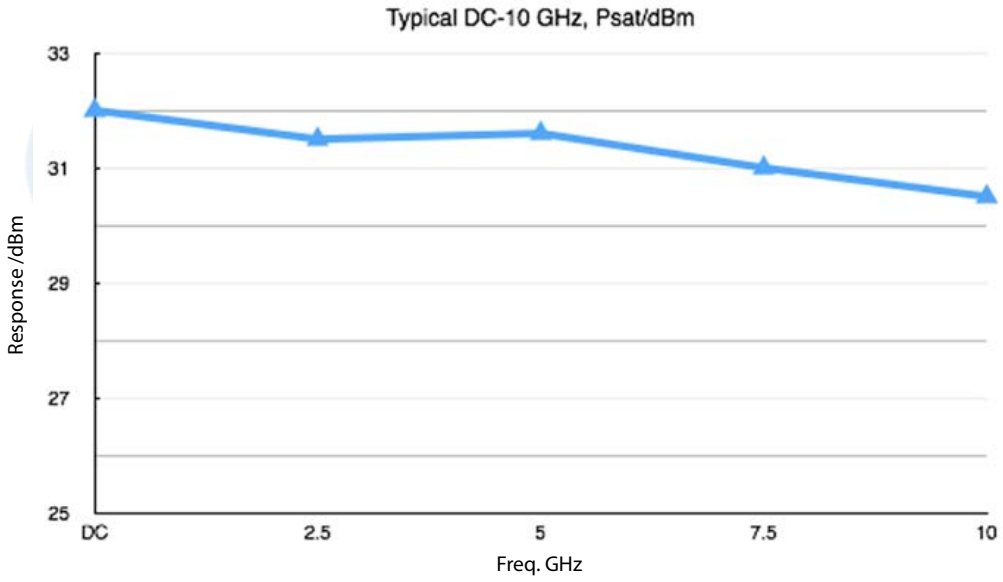


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Power Data





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1 Watt Psat, DC to 10 GHz, Medium Power Broadband Amplifier, 12.5 dB Gain, 38 dBm IP3, 6.5 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% availability and are part of the broadest selection in the industry.

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URL: http://www.pasternack.com/10-ghz-medium-power-broadband-amplifier-12.5-db-gain-6.5-db-sma-pe15a3001-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.

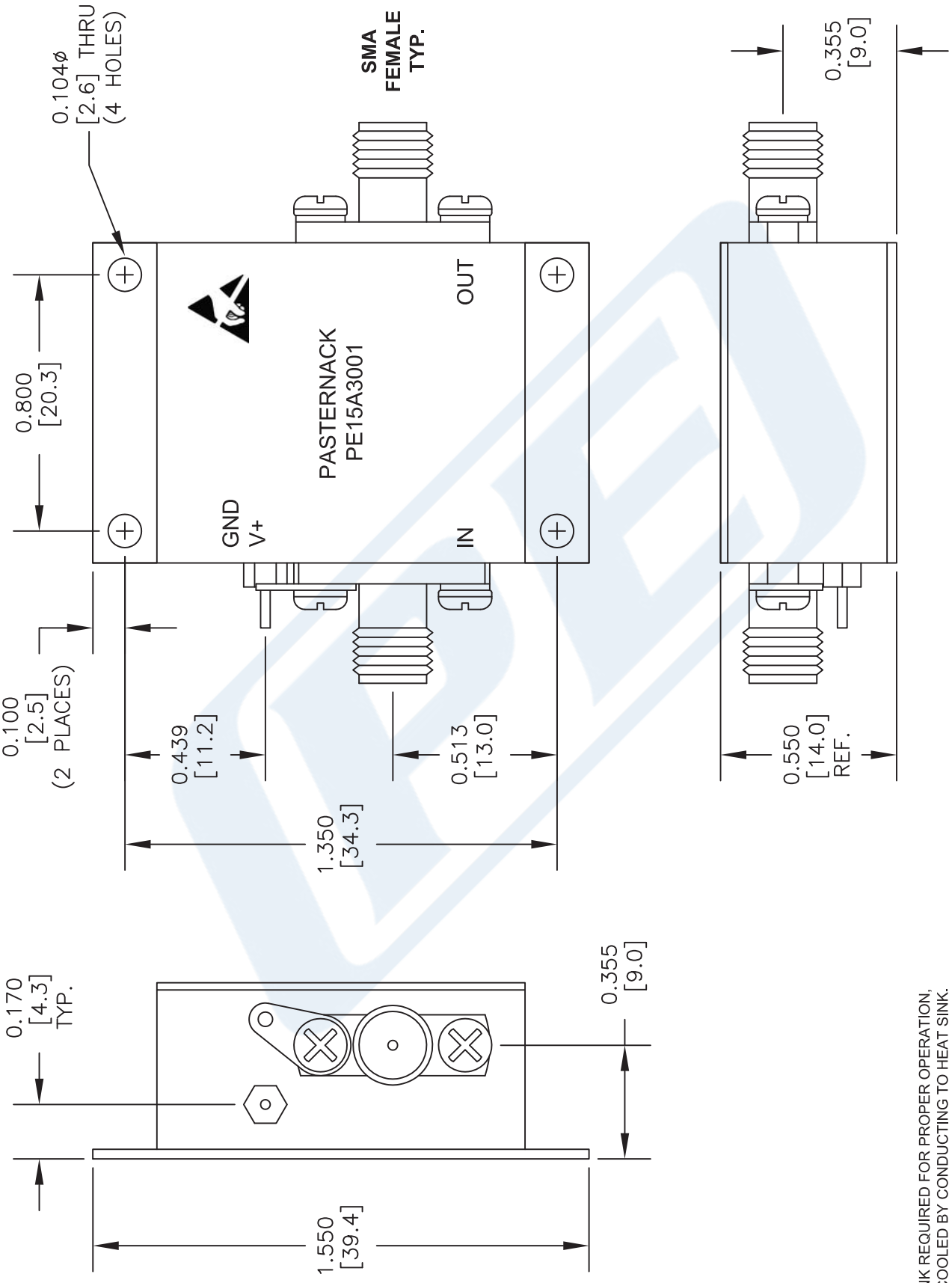
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PE15A3001 CAD Drawing

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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: PE15A3001

CAD FILE 032614 | SCALE N/A | SIZE A | 2233

FSCM NO. 53919

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