



## **TECHNICAL DATA SHEET**

The PE15A3901 is a broadband amplifier covering 50 MHz to 40 GHz. The amplifier has a 12 dB of typical Gain, +/- 2.5 dB typical flatness and a P1dB of +10 dBm typical. This amplifier is controlled and powered via USB 2.0 with driverless installation, so no external power supply is required.

#### Features

- 0.05 GHz to 40 GHz Frequency Range
- P1dB: 10 dBm typ
- Small Signal Gain: 12 dB typ
- Gain Flatness: ±2.5 dB typ
- Noise Figure: 4.5 dB typ to 20 GHz, 5.5 dB typ to 40 GHz

#### Applications

- Laboratory Applications
- R&D Labs
- Military Radio
- Radar Systems
- Telecom Infrastructure
- Test Instrumentation

Electrical Specifications (TA = +25°C)

- Military & Space
- Communication Systems
- Wireless Communication
- Microwave Radio Systems
- Cellular Base Stations
- Low Noise Amplifier

- 50 Ohm Input and Output Matched
- Unconditionally Stable
- USB type a plug DC Positive Supply
- Built-in Voltage Regulator
- 2.92 mm female Input/Output Connectors
  - General Purpose Amplification
  - General Purpose Wireless
  - Wideband Gain Block
  - IF Amplifier/RF Driver Amplifier
  - RF Wideband Front Ends
  - RF Pre-amplification

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.05		40	GHz
Gain		12		dB
Gain Flatness		±2.5		dB
Output at 1 dB Compression Point		+10		dBm
Noise Figure at 0.05 to 20 GHz		4.5		dB
Noise Figure at 20 to 40 GHz		5.5		dB
Input VSWR		2.3:1		
Output VSWR		2.3:1		
Operating Temperature Range (OTR)	-40		+85	°C

#### **Mechanical Specifications**

Input Connector	2.92mm
Output Connector	2.92mm

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 10 dBm P1dB, 50 MHz to 40 GHz, USB Controlled Broadband Amplifier, 12 dB Gain, 2.92mm PE15A3901

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

Sales@Pasternack.com • Techsupport@Pasternack.com

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## PE15A3901





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### **Environmental Specifications**

**Temperature** Operating Range Storage Range

-40 to +85 deg C -55 to +125 deg C

Compliance Certifications (visit www.Pasternack.com for current document)

Not 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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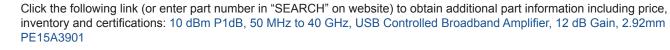


#### Typical Performance Data

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PE	<b>PASTERNACK</b> <sup>®</sup> THE ENGINEER'S RF SOURCE

	8:38:05 Oct		000 MU-		Marker
narker Fr	Mkr1 Mkr2	500.0000 50 MHz 500 MHz	5.192 dB 4.143 dB	12.171 dB 12.570 dB	Marke 1 <u>2</u> 3
9.000					State Normal
					Band Pail Ref Norma
NFIG Scale/				2	Trace Data Memory
dB					Search
-1.000					Marker
Start 50.00 MH [cold 304.65 K	Avgs	s3 F	itt 0/ dB Loss	p 500.00 MHz Off Corr	All Of
Start 50.00 MH Toold 304.65 K <b>Jser cal inva</b>	Avgs lidated, Fre		Att 0/ dB Loss	p 500.00 MHz Off Corr	
Start 50.00 MH Toold 304.65 K <b>Jser cal inva</b>	Avgs lidated, Fre 4:40:26 Oct Mkr1 Mkr2	3 F 29 outside ca 17, 2014 580 MHz 13.5 GHz	4.285 dB 2.768 dB	0ff Corr 12.450 dB 12.876 dB	All Of Frequency Freq Mode
Start 50.00 MH Toold 304.65 K <b>Jser cal inva</b>	Avgs lidated, Fre 4:40:26 Oct	s 3 F s <b>q outside ca</b> 17, 2014	Att 0/dB Loss Irange 4.285 dB	0ff Corr 12.450 dB	All Of Frequency Freq Mode Sweep Start Fre
Gtart 50.00 MH Cold 304.65 K Jser cal inva ★ Agilent 14	Avgs lidated, Fre 4:40:26 Oct 4:40:26 Oct Mkr1 Mkr2 Mkr3	3 F 29 outside ca 17, 2014 580 MHz 13.5 GHz 28 GHz	4.285 dB 2.768 dB 3.388 dB	0ff Corr 12.450 dB 12.876 dB	All Of Frequency Freq Mode Sweep Start Fre 500.000000 MH Stop Fre
Start 50.00 MH Cold 304.65 K Jser cal inva Agilent 1 9.000 NFIG Scale A	Avgs lidated, Fre 4:40:26 Oct 4:40:26 Oct Mkr1 Mkr2 Mkr3	3 F 29 outside ca 17, 2014 580 MHz 13.5 GHz 28 GHz	Att 0/ dB Loss I range 4.285 dB 2.768 dB 3.918 dB 3.918 dB 1.11111111111111111111111111111111111	0ff Corr 12.450 dB 12.876 dB	All Of Frequency Freq Mode Sweep Start Fre 500.000000 MH Stop Fre 26.5000000 GH Center Fre
Start 50.00 MH Foold 304.65 K Jser cal inva # Agilent 1 9.000	Avgs lidated, Fre 4:40:26 Oct 4:40:26 Oct Mkr1 Mkr2 Mkr3	3 F 29 outside ca 17, 2014 580 MHz 13.5 GHz 28 GHz	4.285 dB 2.768 dB 3.388 dB	0ff Corr 12.450 dB 12.876 dB	All Of
Start 50.00 MH Cold 304.65 K Jser cal inva Agilent 1 9.000 NFIG Scale 1.000	Avgs lidated, Fre 4:40:26 Oct 4:40:26 Oct Mkr1 Mkr2 Mkr3	3 F 29 outside ca 17, 2014 580 MHz 13.5 GHz 28 GHz	Att 0/ dB Loss I range 4.285 dB 2.768 dB 3.918 dB 3.918 dB 1.11111111111111111111111111111111111	0ff Corr 12.450 dB 12.876 dB	All Of Frequency Freq Mode Sweet Start Fre 500.000000 MH Stop Fre 26.5000000 GH Center Fre 13.5000000 GH Freq Spa



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10 dBm P1dB, 50 MHz to 40 GHz, USB Controlled Broadband Amplifier, 12 dB Gain, 2.92mm 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/40-ghz-broadband-usb-amplifier-12-db-gain-2.92mm-pe15a3901-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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# PE15A3901 CAD Drawing

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