



## 2 GHz to 6 GHz, Log Amplifier, 40 mV/dB Log Slope, 75 dBm Log Range, SMA

### TECHNICAL DATA SHEET

PE15A2001

The PE15A2001 is a SDLVA (Successive Detection Logarithmic Video Amplifier) designed to operate over the 2 GHz to 6 GHz Frequency Range. The SDLVA utilizes GaAs Technology which is beneficial for High speed Applications while maintaining flatness and accuracy through the band of operation.

#### Features

- Ultra-High Speed Applications
- 2 GHz to 6 GHz Frequency Range
- 70 dB Dynamic Range
- Designed for MIL-STD-202F Conditions
- Log slope 40 mV/dB
- 75 dBm Log Range
- 15 ns Typ Rise Time
- Video Bandwidth 20 MHz

#### Applications

- Electronic Warfare
- Test & Measurement
- Military & Space
- Radar
- Military Communications Systems

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	2		6	GHz
Frequency Flatness		±1.2		dB
Small Signal Gain		70		dB
Dynamic Range	+65		+5	dBm
Video Output			3.5	V
DC Offset		0.15		V
Output RF Power			+5	dBm
Log Range	-70		+5	dBm
Log Accuracy			±1.75	dB
Log Linearity			±1.75	dB
Log Slope (± 10% Tolerance)		40		mV/dB
Log Slope Variation with Frequency		±1.5		mV/dB
Log Slope Variation with Temperature		±1.2		mV/dB
Output Coupling		DC		
Pulse Range To CW	100			ns
Rise Time (10% to 90%)		15	25	ns
Fall Time (90% to 10%)		25	30	ns
Output Video Load (± 10%)			50	Ohm
Positive Power Supply (@300 mA Typ)*	12		15	Volts
Negative Power Supply (@190 mA Typ)*	-12		-15	Volts
Operating Temperature Range	-40		+71	deg C
Storage Temperature Range	-65		+100	deg C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [2 GHz to 6 GHz, Log Amplifier, 40 mV/dB Log Slope, 75 dBm Log Range, SMA PE15A2001](#)

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## Mechanical Specifications

Length  
Width  
Height

3.75 in [95.25 mm]  
1.5 in [38.1 mm]  
0.5 in [12.7 mm]

Humidity  
Shock  
Vibration  
Altitude  
Temperature Cycle

MIL-STD-202F, METHOD 103B COND. B  
MIL-STD-202F, METHOD 213B COND. B  
MIL-STD-202F, METHOD 204D COND. B  
MIL-STD-202F, METHOD 105C COND. B  
MIL-STD-202F, METHOD 107D COND. A

Not RoHS Compliant

Notes:

- Values at +25 °C, sea level

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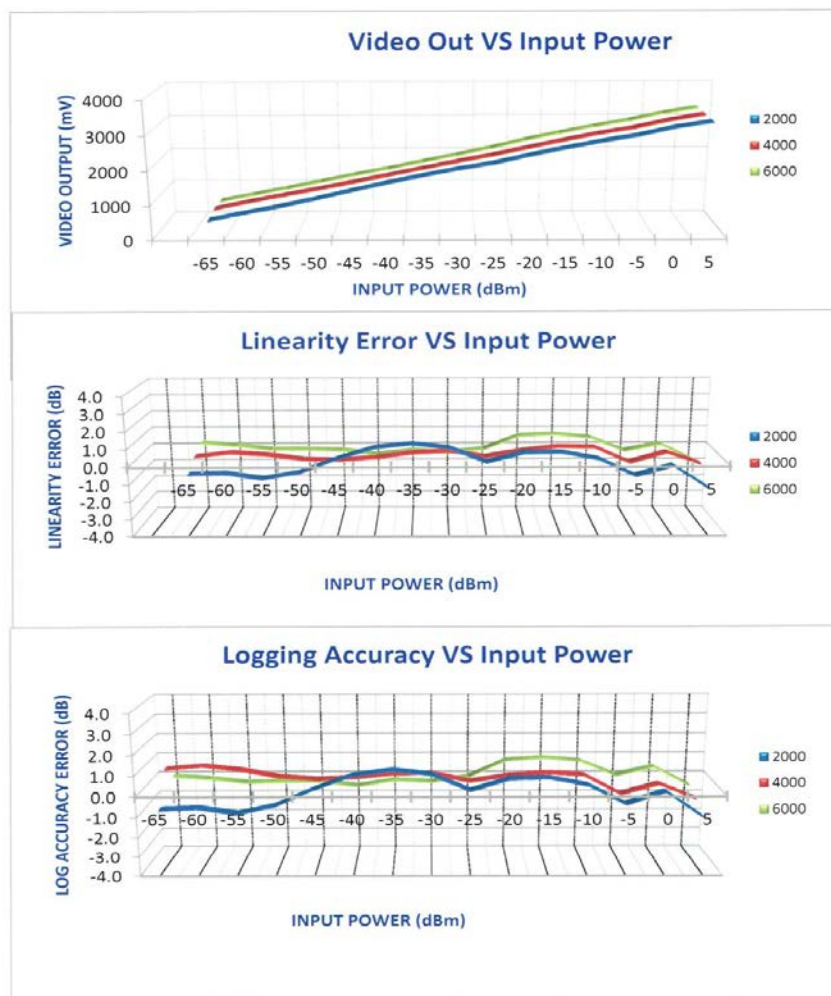
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### Typical Performance Data

#### Logging Accuracy, Linearity, Slope @ +25°



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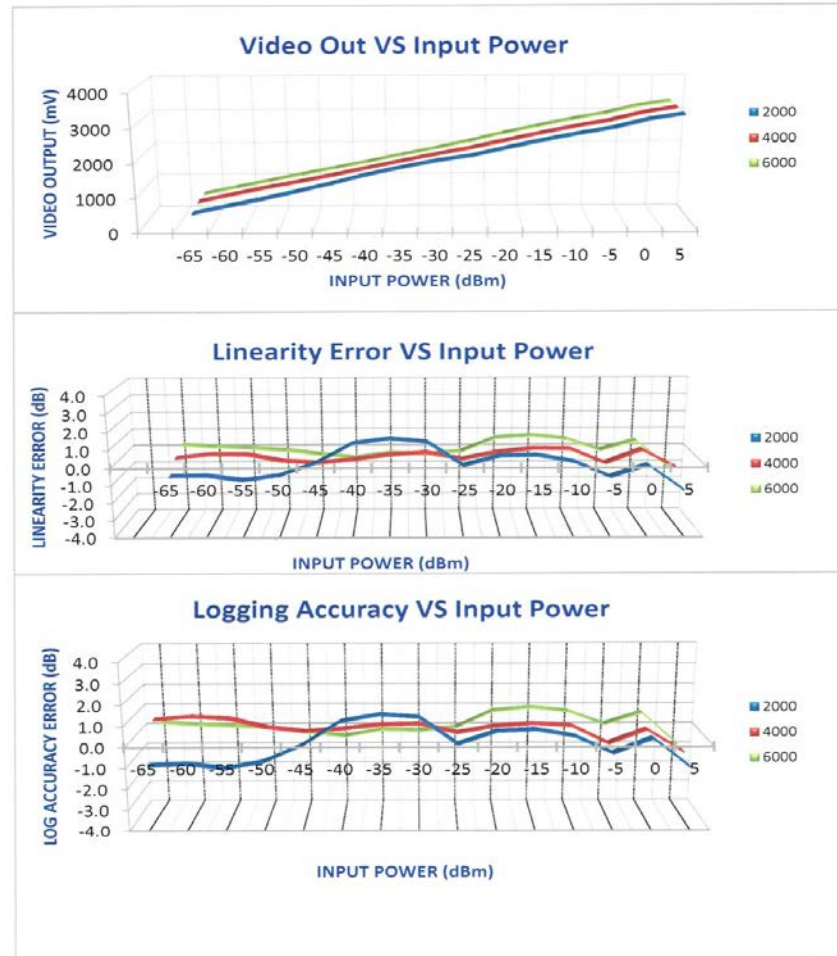


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TECHNICAL DATA SHEET

PE15A2001

Logging Accuracy, Linearity, Slope @ -40°C



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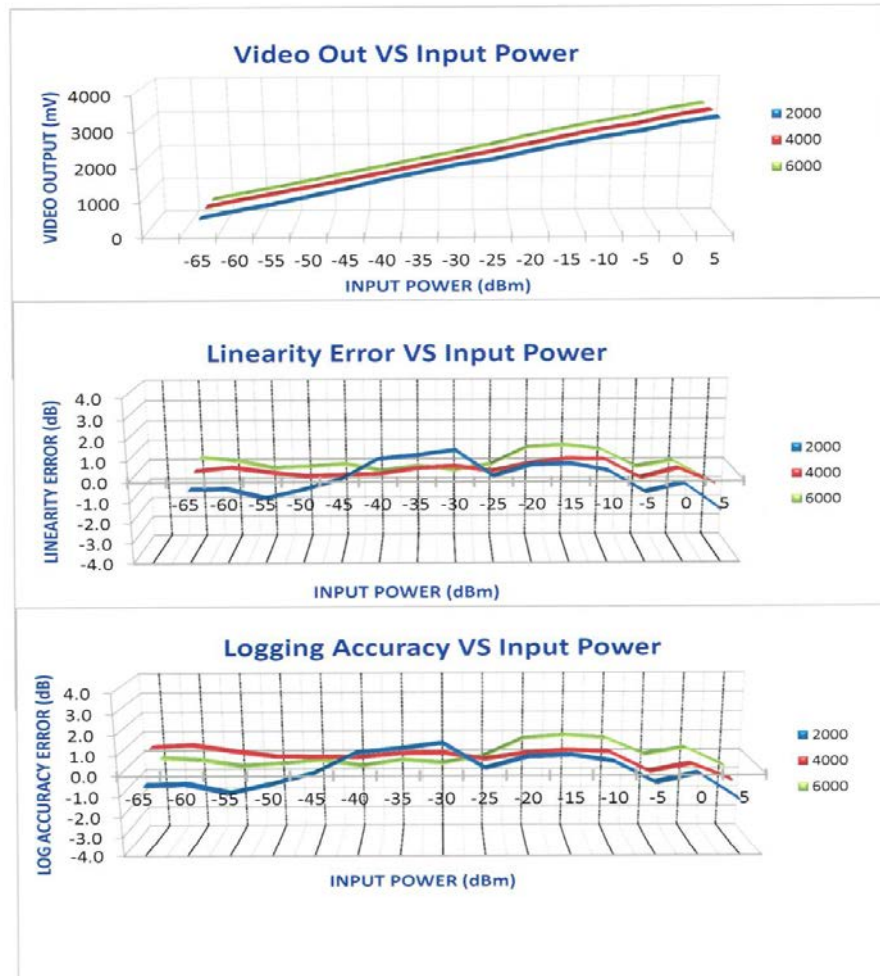


2 GHz to 6 GHz, Log Amplifier, 40 mV/dB Log  
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TECHNICAL DATA SHEET

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Logging Accuracy, Linearity, Slope @ +71°C



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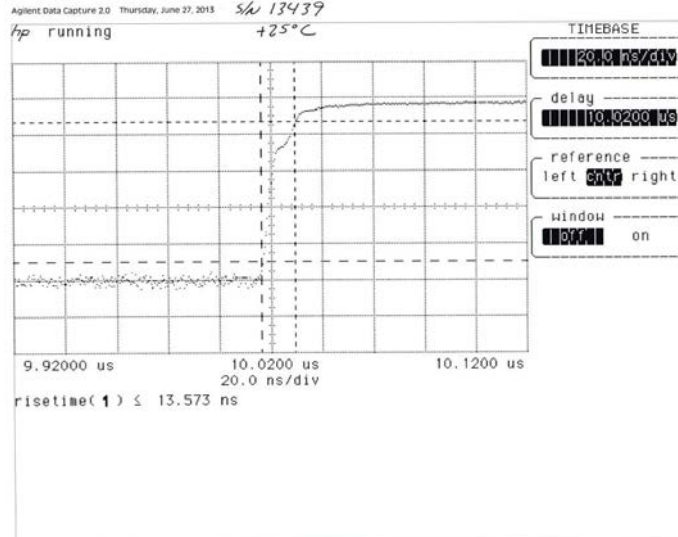


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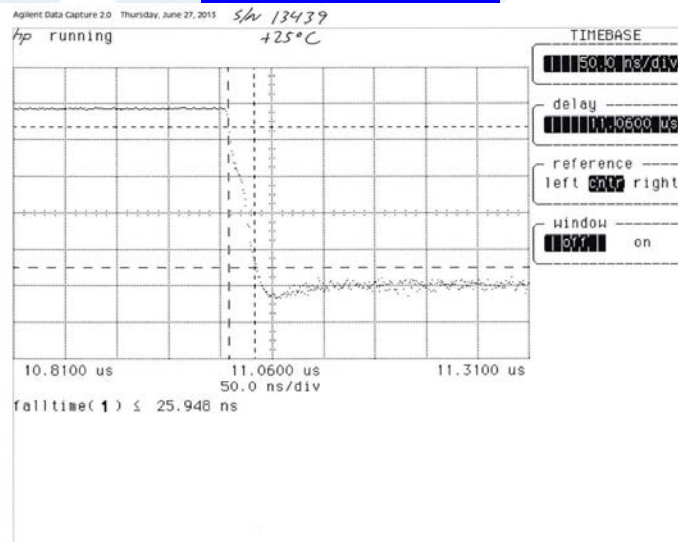
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### Rise Time, 4 GHz @ 25°C



### Fall Time, 4 GHz @ 25°C



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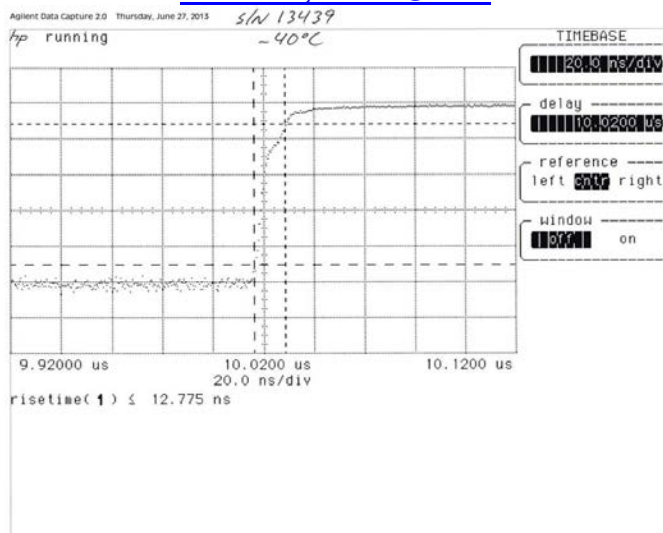


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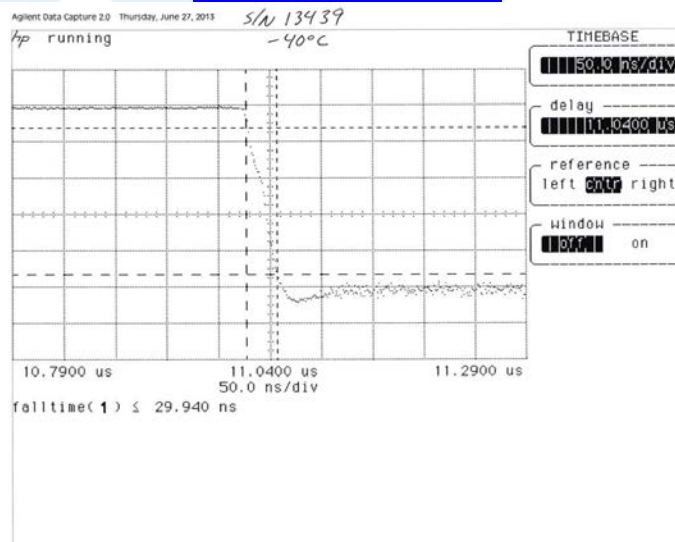
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### Rise Time, 4 GHz @ -40°C



### Fall Time, 4 GHz @ -40°C



2 GHz to 6 GHz, Log Amplifier, 40 mV/dB Log Slope, 75 dBm Log Range, 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.

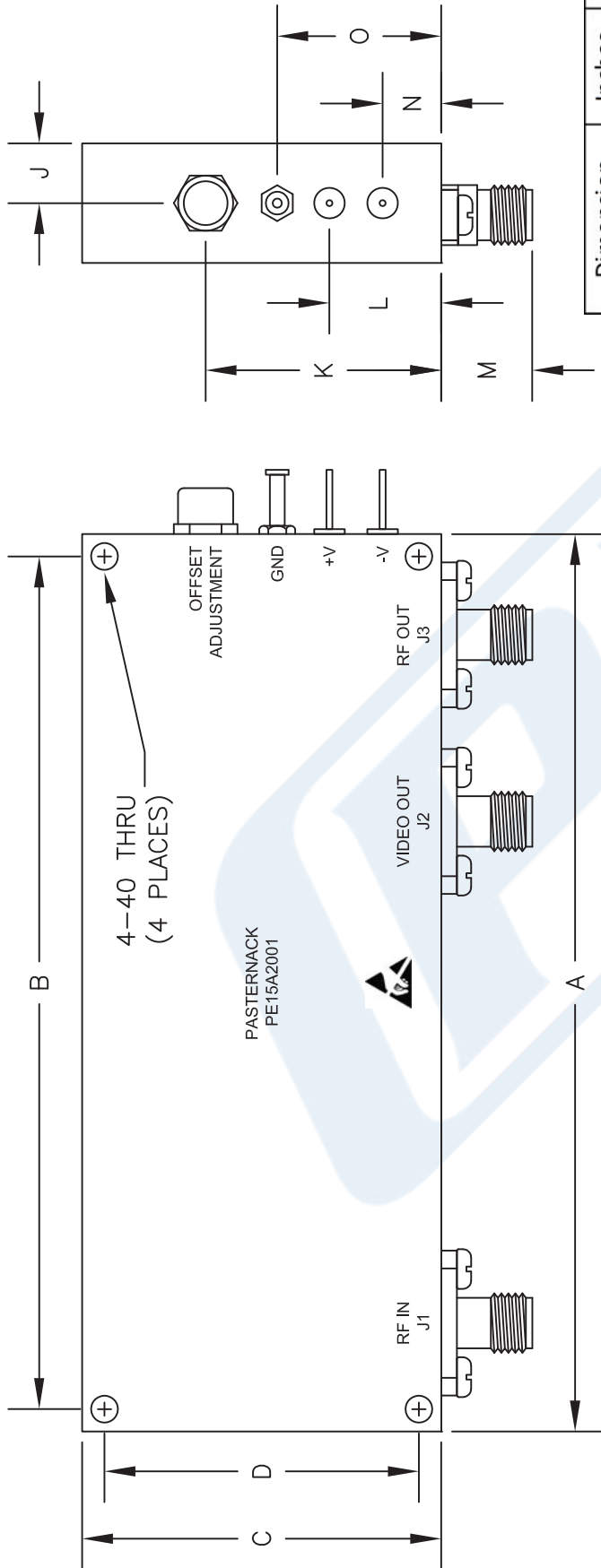
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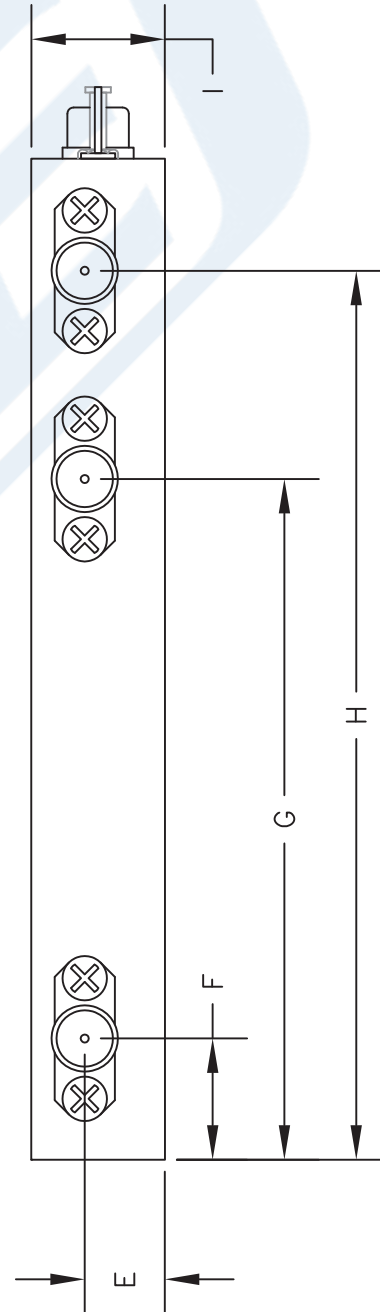


# PE15A2001 CAD Drawing

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Dimension	Inches	mm
A	3.750	95.25
B	3.563	90.50
C	1.500	38.10
D	1.313	33.35
E	0.300	7.62
F	0.453	11.51
G	2.549	64.74
H	3.239	82.27
I	0.500	12.70
J	0.250	6.35
K	0.984	24.99
L	0.467	11.86
M (TYP)	0.375	9.53
N	0.245	6.22
O	0.685	17.40



## 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

**PE15A2001**

**[PE] PASTERNAK®**  
THE ENGINEER'S RF SOURCE

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FSCM NO. 53919

CAD FILE 032714

SCALE N/A

SIZE A

2233