PASTERNACK®
THE ENGINEER'S RF SOURCE

6 GHz to 18 GHz, Log Amplifier, 25 mV/dB Log Slope, 70 dBm Log Range, SMA

TECHNICAL DATA SHEET PE15A2002

The PE15A2002 is a SDLVA (Successive Detection Logarithmic Video Amplifier) designed to operate over the 6 GHz to 18 GHz Frequency Range. The SDLVA is designed for ultra high speed applications while maintaining flatness and accuracy though the band of operation.

Features

- Ultra-High Speed Applications
- 6 GHz to 18 GHz Frequency Range
- 70 dBm Log Range
- 25 mV/dB Log Slope
- ± 4 dB Max Log Accuracy
- 50 ns Typ Rise Time
- 70 ns Typ Recovery Time
- TSS -72 dB Min
- Designed for MIL-STD-202F Conditions

Applications

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

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	6		18	GHz
Video Output Range @ 50 Ohms Load	0		2.2	V
Video Output			2.4	V
Tangential Signal Sensitivity	-72			dB
Input Power			+20	dBm
Log Range	-70		+0	dBm
Log Accuracy			±4	dB
Log Slope (± 10% Tolerance)		25		mV/dB
Log Slope Intercept Point @ -70 dBm RF Input	350			mV
Pulse Range To CW	100			ns
Rise Time (10% to 90%)			50	ns
Overshoot with 50 Ohms Load			1	dB
Fall Time (90% to 10%)			70	ns
Recovery Time			70	ns
Propagation Delay Time			15	dB
Input VSWR			3:1	
Positive Power Supply 400 mA			12	Volts
Negative Power Supply 250 mA			-12	Volts
Operating Temperature Range	-35		+90	deg C
Storage Temperature Range	-65		+125	deg C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 6 GHz to 18 GHz, Log Amplifier, 25 mV/dB Log Slope, 70 dBm Log Range, SMA PE15A2002

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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*Note: Do Not Supply +V Without -V Supplied, As Well As This May Destroy The Unit.

Mechanical Specifications

Size

Length	3.2 in [81.28 mm]
Width	2.05 in [52.07 mm]
Height	0.4 in [10.16 mm]

Environmental Specifications

Humidity	MIL-STD-810, METHOD 507
Shock	MIL-STD-810, METHOD 516, Fig. 5a,5b,5c,8a,8b,8c,9
Vibration	MIL-STD-810, METHOD 514, Fig. 3, 4a, 4b
Altitude	0-31,000 Feet
Temperature Cycle	MIL-STD-202F, METHOD 107
Salt Fog	MIL-STD-202F, METHOD 107D COND. A
Fungus	MIL-STD-810C, METHOD 508, (Notes:A, B, & C)
Acceleration	MIL-STD-810, METHOD 513, (NON-OPERATIONAL)
Explosive Atmosphere	MIL-STD-810, METHOD 511

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

Not RoHS Compliant

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

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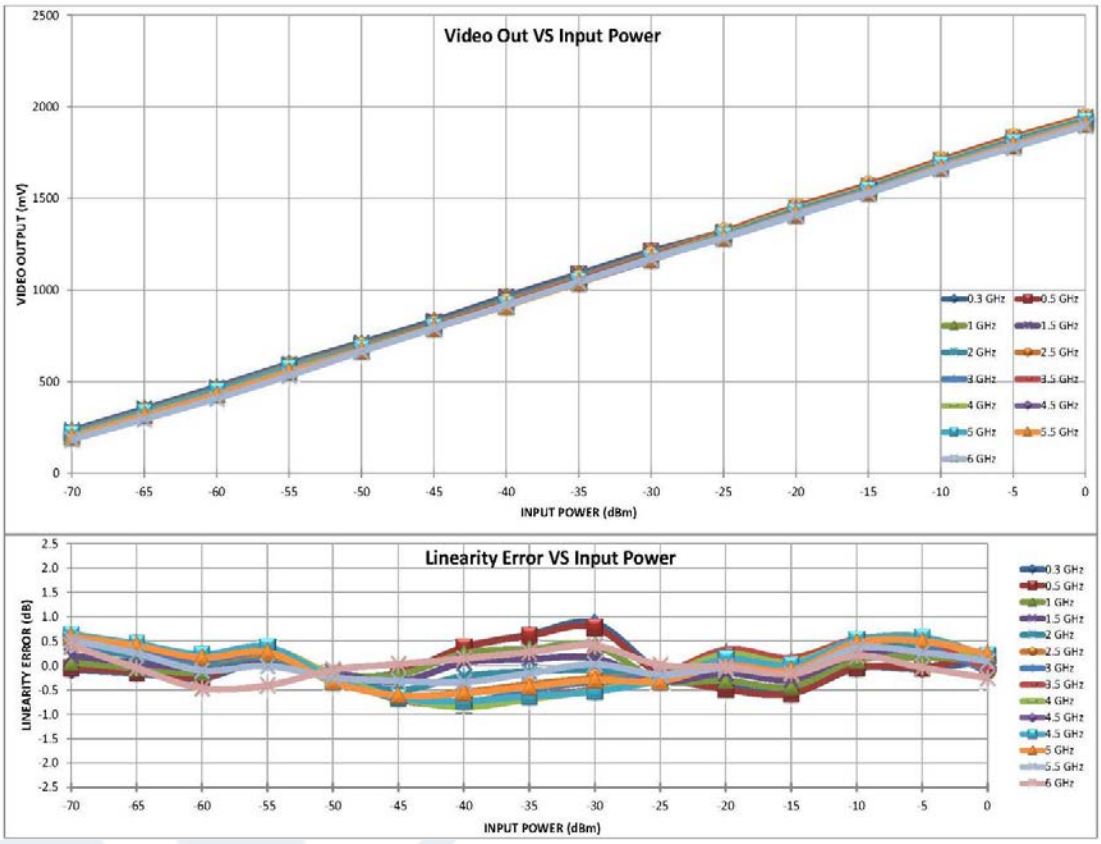
Typical Performance Data



PE15A2002 (2D Data) @ -40˚C

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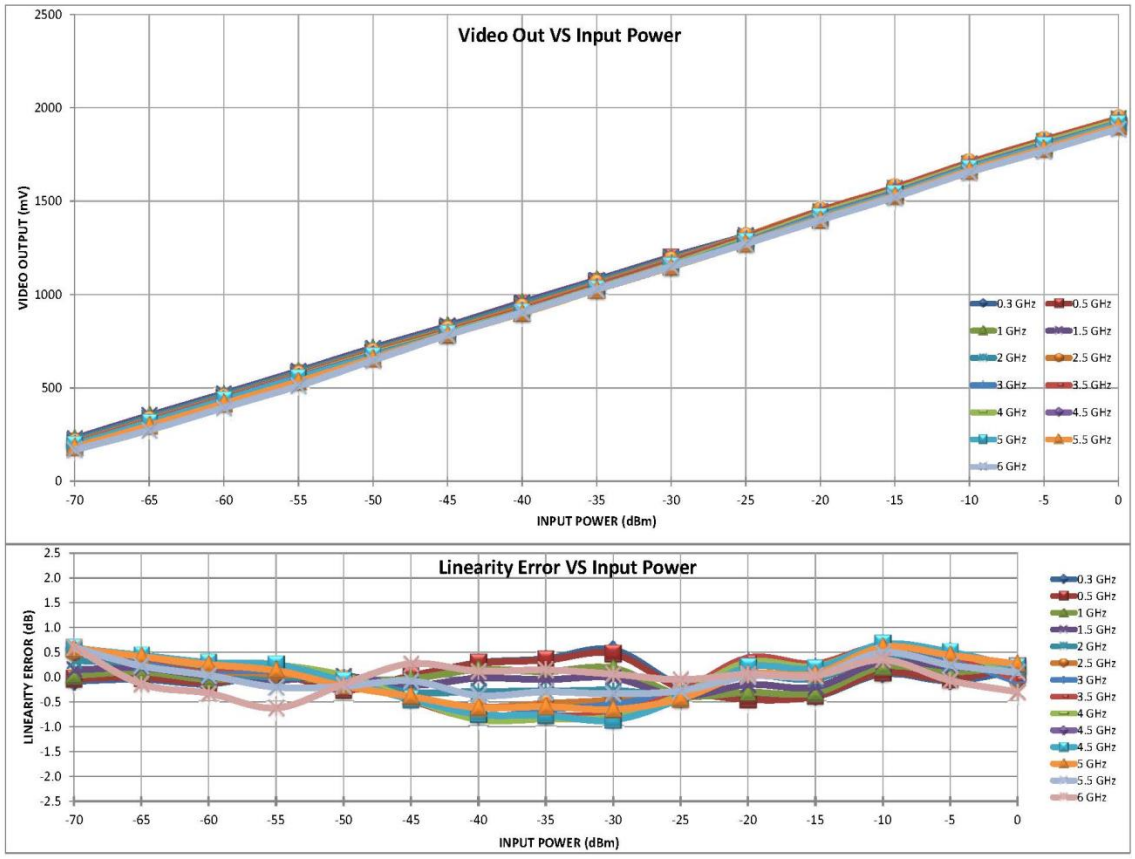

PE15A2002 (2D-Plots) @ 25˚C

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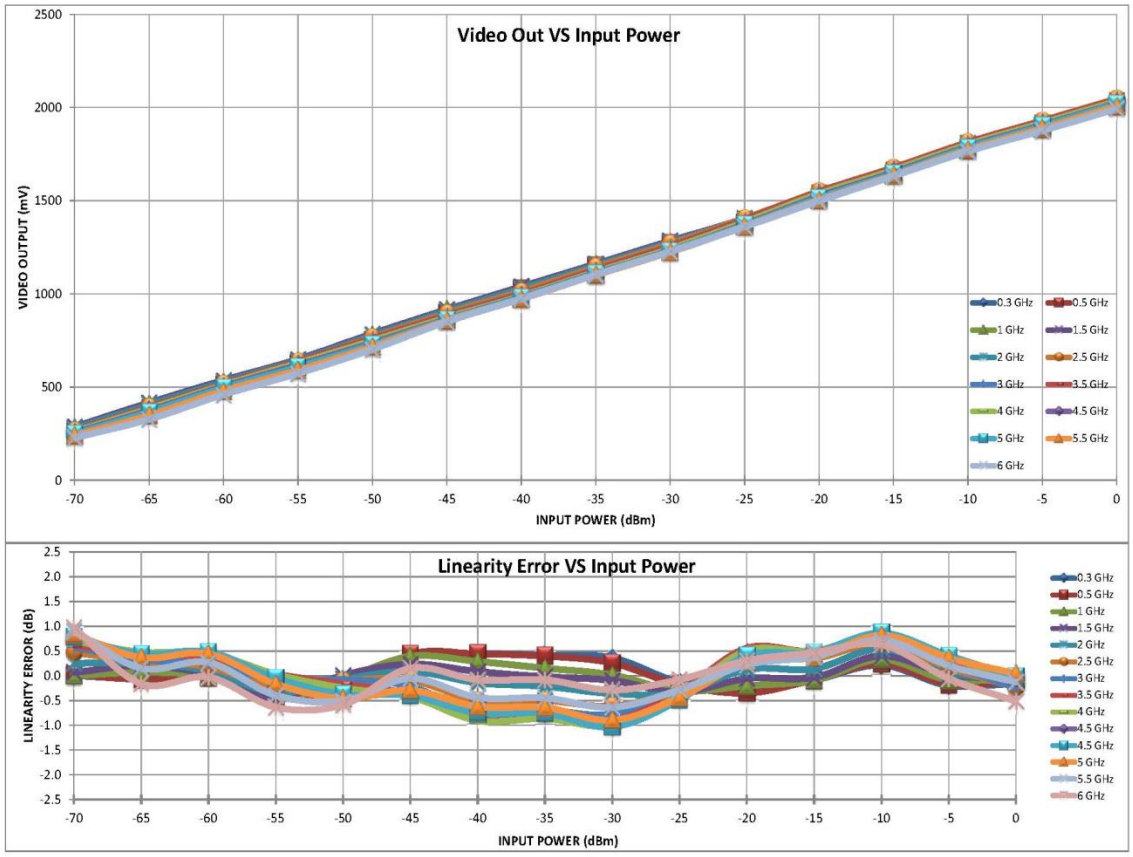

PE15A2002 (2D-Plots) @ 75˚C

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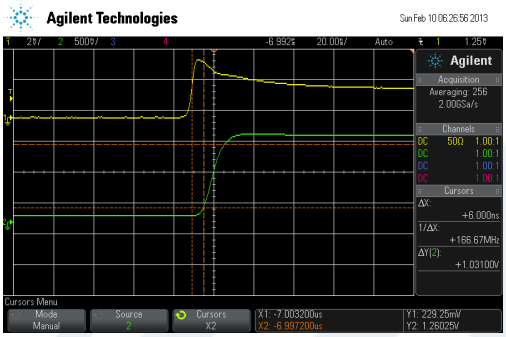
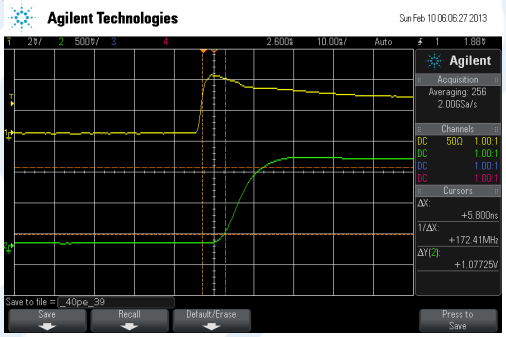
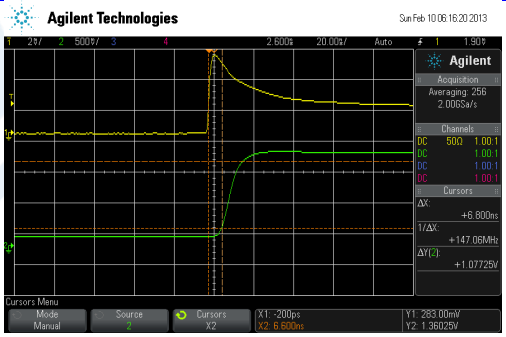
Delay Time (50%RF to 10%Video), 3GHz @ 25˚C



Delay Time (50%RF to 10%Video), 3GHz @ -40˚C



Delay Time (50%RF to 10%Video), 3GHz @ 75˚C



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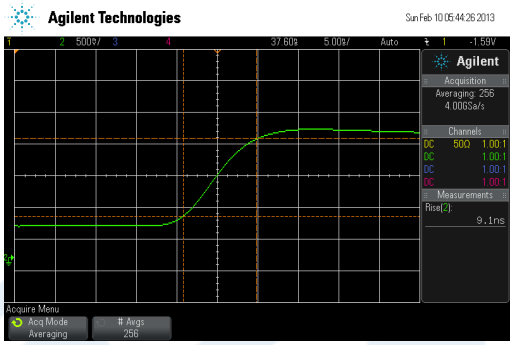
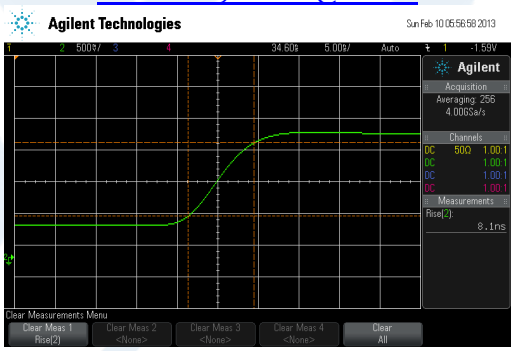
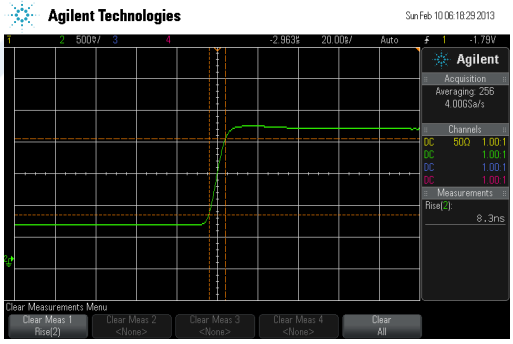
Rise Time, 3GHz @ 25°C



Rise Time, 3GHz @ -40°C



Rise Time, 3GHz @ 75°C



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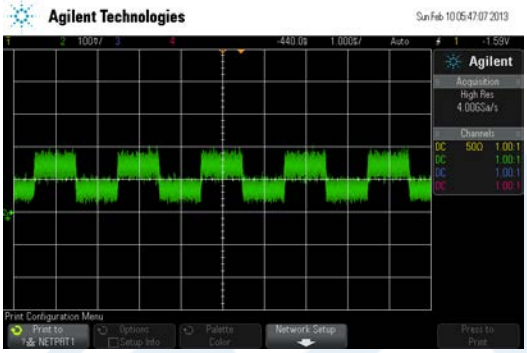
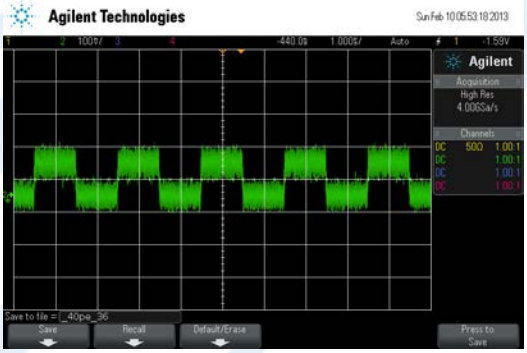
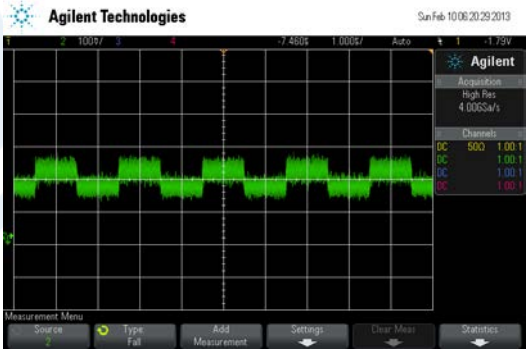
Tangential Signal Sensitivity (TSS), 3GHz, -73dBm @ 25˚C



Tangential Signal Sensitivity (TSS), 3GHz, -73dBm @ -40˚C



Tangential Signal Sensitivity (TSS), 3GHz, -73dBm @ 75˚C



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URL: http://www.pasternack.com/6-18-ghz-log-amplifier-25-mv-db-70-dbm-sma-pe15a2002-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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PE15A2002 CAD Drawing

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