



500 MHz to 4 GHz, Log Amplifier, 25 mV/
dB Log Slope, 70 dBm Log Range, SMA

TECHNICAL DATA SHEET

PE15A2000

The PE15A2000 is a SDLVA (Successive Detection Logarithmic Video Amplifier) designed to operate over the 500MHz to 4 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
- 500 MHz to 4 GHz Frequency Range
- 55 dB Gain Typ
- Designed for MIL-STD-202F Conditions
- 70 dBm Log Range
- 5 ns Typ Rise Time
- 40 ns Typ Recovery Time
- TSS -73 dB Typ

Applications

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

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.5		4	GHz
Small Signal Gain		55		dB
DC Offset (+50 mV)		50		V
Video Flatness Over Frequency			±50	mV
Tangential Signal Sensitivity		-73	-71	dB
Input Power CW			+17	dBm
Saturation Output Power		+7		dBm
Log Range	-70		+0	dBm
Log Linearity			±2.5	dB
Log Slope (± 10% Tolerance)		25		mV/dB
Pulse Range To CW	30			ns
Rise Time (10% to 90%)		5	10	ns
Recovery Time		40	60	ns
Input VSWR			2:1	
Positive Power Supply (@350 mA Typ)*	12		15	Volts
Negative Power Supply (@180 mA Typ)*	-12		-15	Volts
Operating Temperature Range	-40		+75	deg C
Storage Temperature Range	-65		+125	deg C

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

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [500 MHz to 4 GHz, Log Amplifier, 25 mV/dB Log Slope, 70 dBm Log Range, SMA PE15A2000](#)



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Mechanical Specifications

Size

Length	3.2 in [81.28 mm]
Width	1.8 in [45.72 mm]
Height	0.4 in [10.16 mm]

Environmental Specifications

Humidity	MIL-STD-202F, METHOD 103B COND. B
Shock	MIL-STD-202F, METHOD 213B COND. B
Vibration	MIL-STD-202F, METHOD 204D COND. B
Altitude	MIL-STD-202F, METHOD 105C COND. B
Temperature Cycle	MIL-STD-202F, METHOD 107
Salt Fog	MIL-STD-202F, METHOD 107D COND. A
Fungus	MIL-STD-810C, METHOD 508.2

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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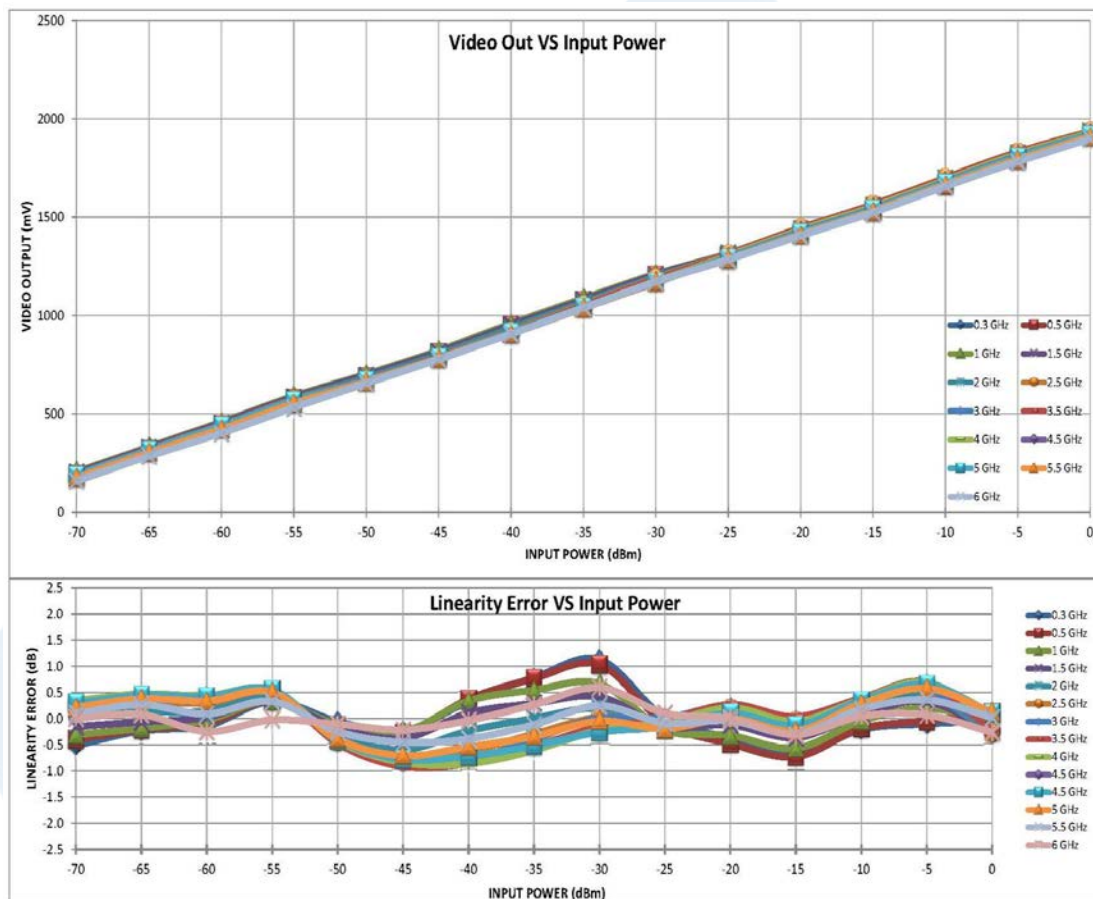
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Typical Performance Data

PE15A2000 (2D-Plots) @ -40°C



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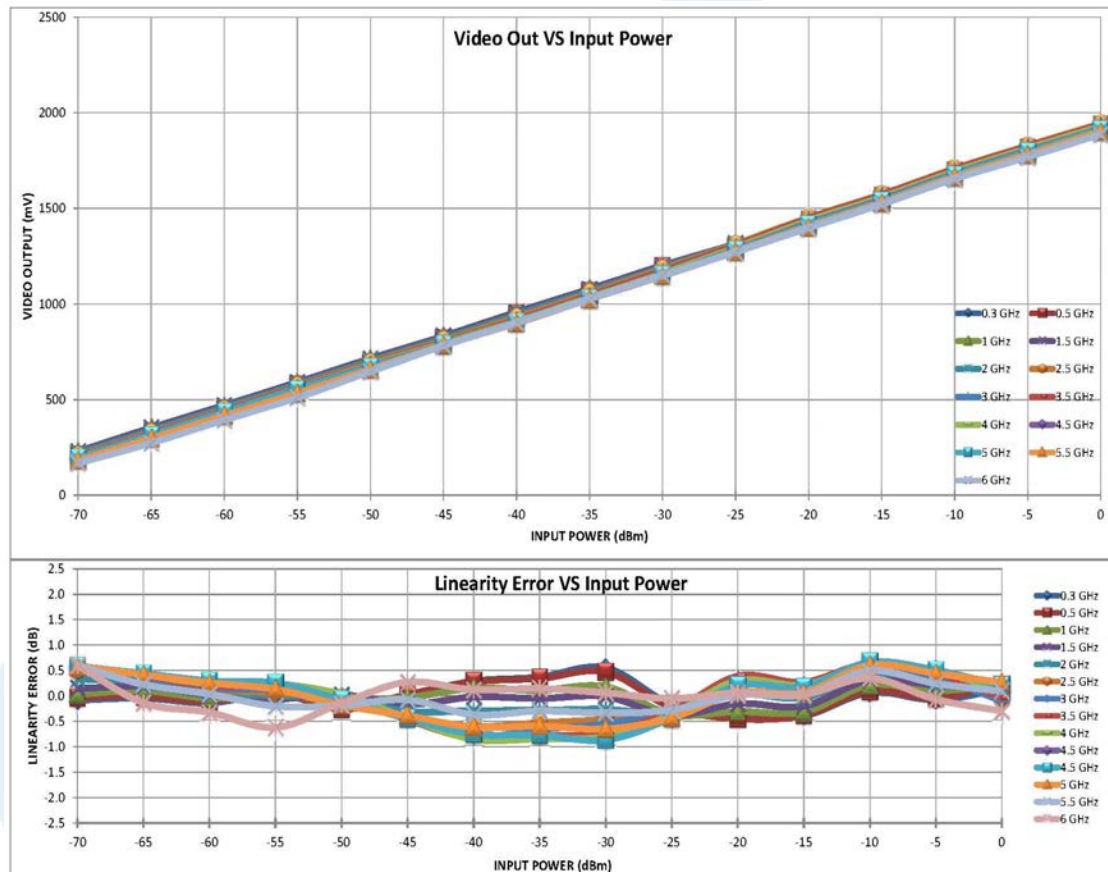


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PE15A2000 (2D-Plots) @ 25°C



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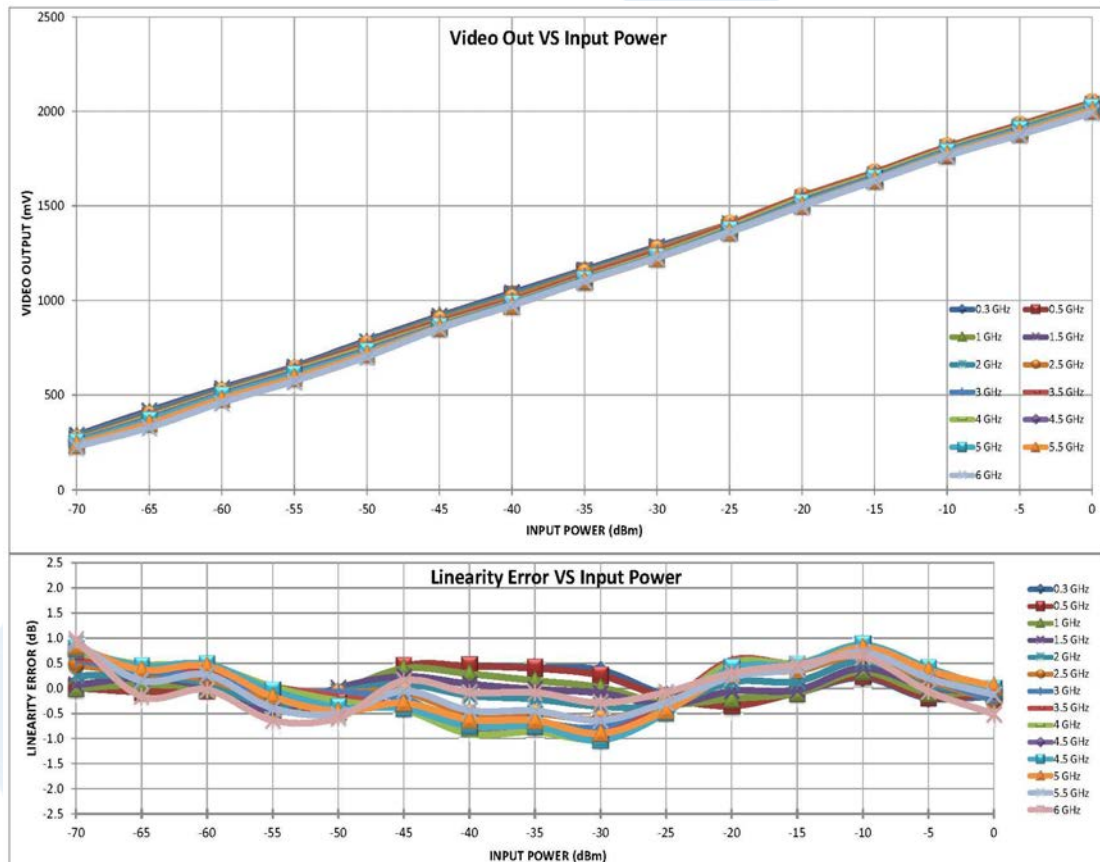


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PE15A2000 (2D-Plots) @ 75°C



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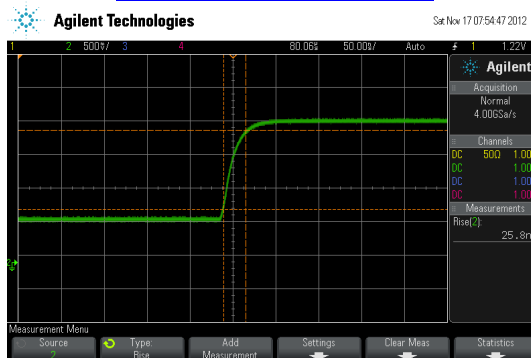


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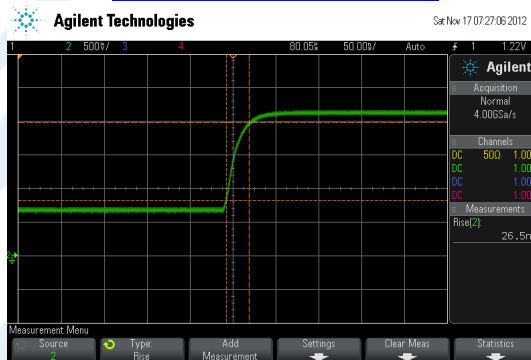
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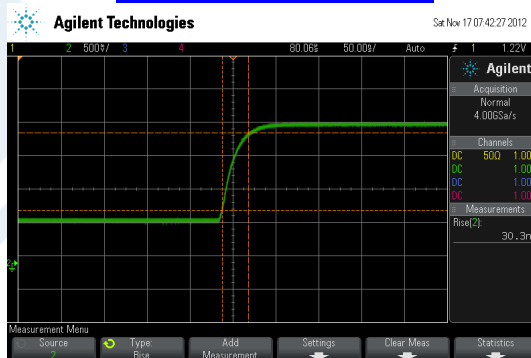
Rise Time, 18GHz @ 25°C



Rise Time, 18GHz @ -35°C



Rise Time, 18GHz @ 90°C



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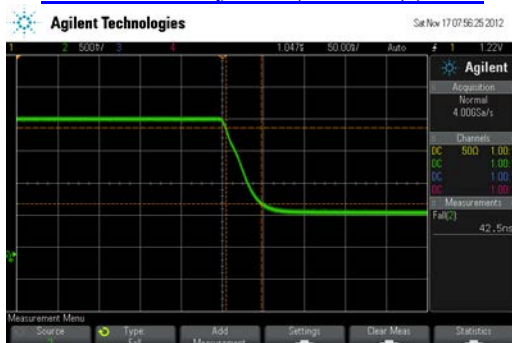


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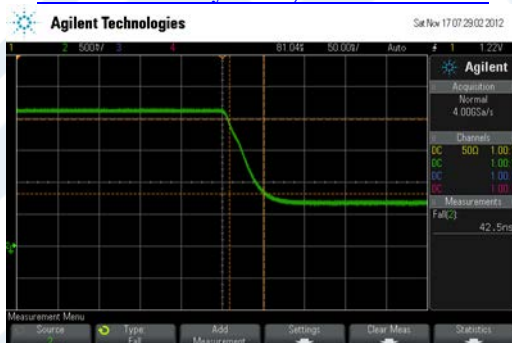
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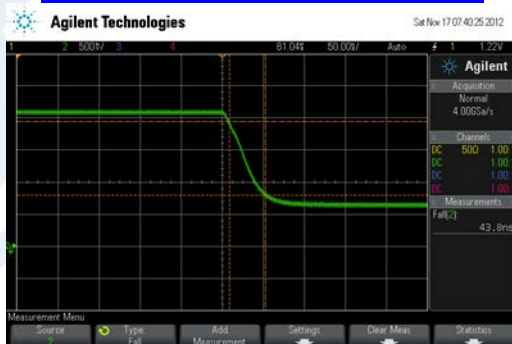
Fall & Recovery Time, 18GHz @ 25°C



Fall & Recovery Time, 18GHz @ -35°C



Fall & Recovery Time, 18GHz @ 90°C



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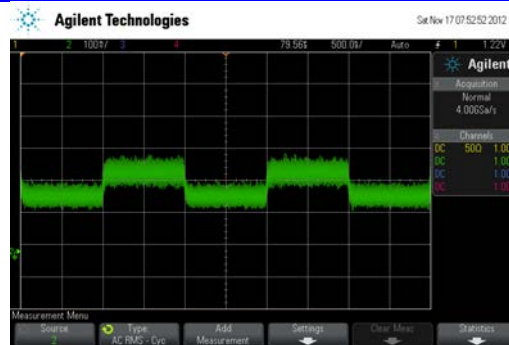


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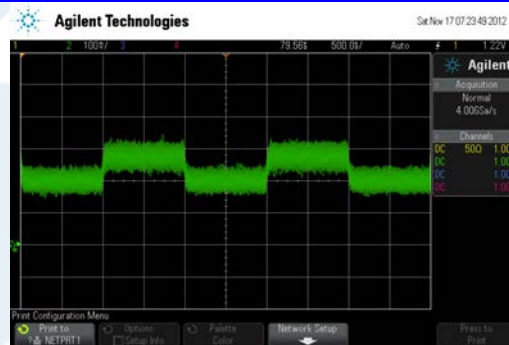
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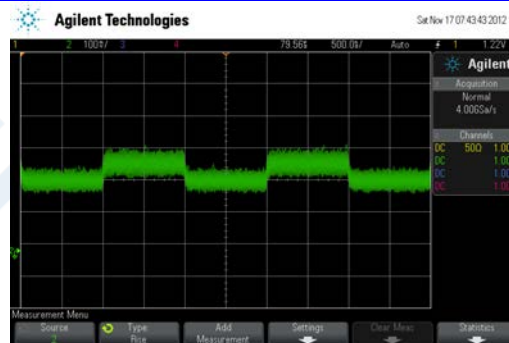
Tangential Signal Sensitivity (TSS), 18GHz, -74dBm @ 25°C



Tangential Signal Sensitivity (TSS), 18GHz, -74dBm @ -35°C



Tangential Signal Sensitivity (TSS), 18GHz, -74dBm @ 90°C



500 MHz to 4 GHz, Log Amplifier, 25 mV/dB Log Slope, 70 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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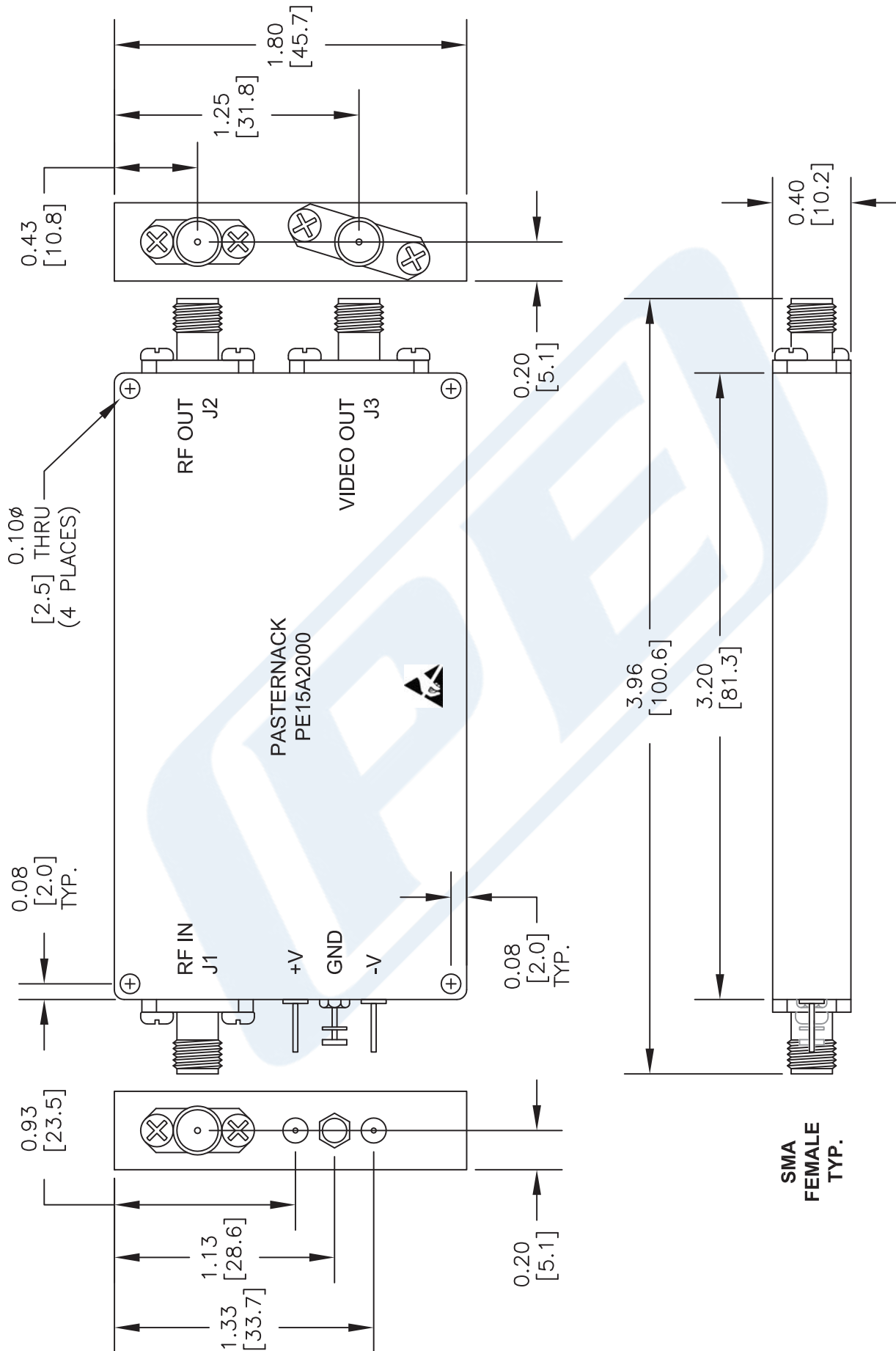
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.

PE15A2000 CAD Drawing

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DWG TITLE

PE15A2000

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].

PE PASTERNAK®
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Pasternack Enterprises, Inc.
P.O. Box 16759 | Irvine | CA | 92623
Phone: (949) 261-1920 | Fax: (949) 261-7451
Website: www.pasternack.com | E-Mail: sales@pasternack.com

FSCM NO. 53919

CAD FILE 011215

SCALE N/A

SIZE A

2233