



500 MHz to 18 GHz, Log Amplifier, 20 mV/
dB Log Slope, 70 dBm Log Range, SMA

TECHNICAL DATA SHEET

PE15A2003

The PE15A2003 is a DC Coupled Successive Detection Log Video Amplifier (SDLVA) that has a Dynamic Range of over 70 dB and operates over a 0.5 GHz to 18 GHz Frequency Range. The SDLVA uses planar diode detectors and integrated video circuitry for high speed performance and outstanding reliability. The SDLVA's use state of the art Hybrid MIC/MMIC Technology. The Input/Output Connectors are SMA Female.

Features

- 70 dB Successive Detection Log Video Amplifier
- Log Slope 20 mV/dB Typ
- Rise Time 20 ns Max
- Recovery Time 150 ns Typ
- TSS -65 dBm Min
- DC Coupled
- Small Size
- Weight: 7.2 Oz Typ
- 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	0.5		18	GHz
Frequency Flatness		±2		dB
Tangential Signal Sensitivity	-65			dB
Limited Output RF Power	10			dBm
Log Range	-65		+5	dBm
Log Linearity -65 dBm to +5 dBm			±1.75	dB
Log Slope (± 10% Tolerance)		20		mV/dB
Log Temperature Stability 0 to +60 Deg C			±1.75	dB
Rise Time (10% to 90%)			20	ns
Recovery Time -65 dBm to +5 dBm		150	250	ns
Output Video Load (± 10%)			50	Ohm
Input VSWR (@-20 dBm Pin)			3:1	
Positive Power Supply 600 mA			15	Volts
Negative Power Supply 200 mA			-15	Volts
Operating Temperature Range	-54		+85	deg C
Storage Temperature Range	-65		+100	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 18 GHz, Log Amplifier, 20 mV/dB Log Slope, 70 dBm Log Range, SMA PE15A2003](#)

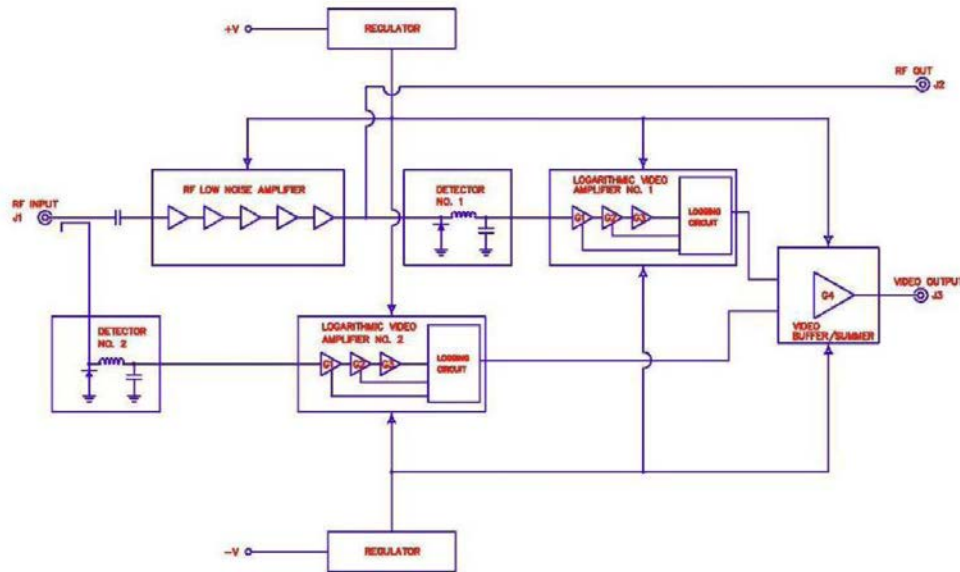


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Block Diagram



Mechanical Specifications

Size

Length

3 in [76.2 mm]

Width

3.5 in [88.9 mm]

Height

0.5 in [12.7 mm]

Weight

0.45 lbs [204.12 g]

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 107D COND. A

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

Not RoHS Compliant

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Notes:

- Values at +25 °C, sea level

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ISO 9001 : 2008 Registered





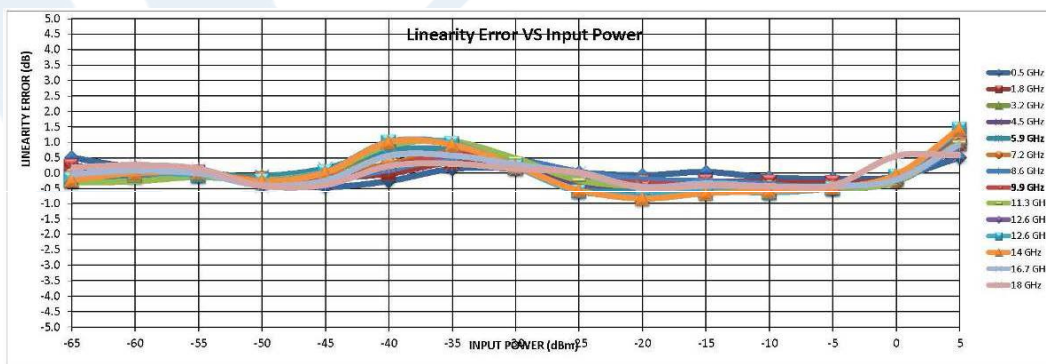
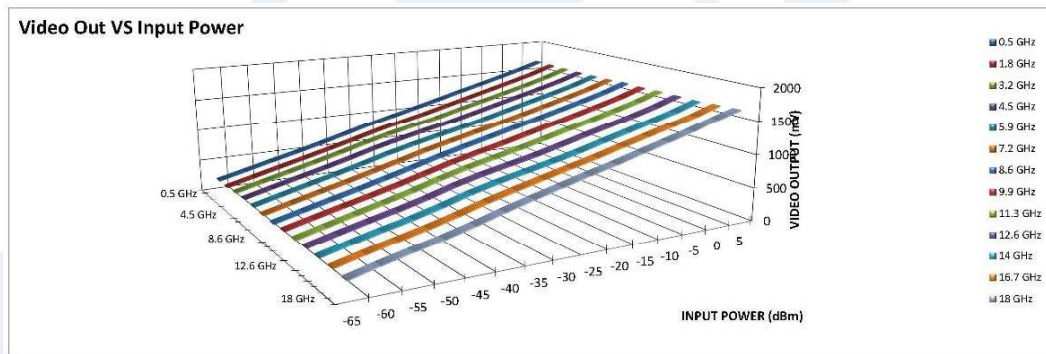
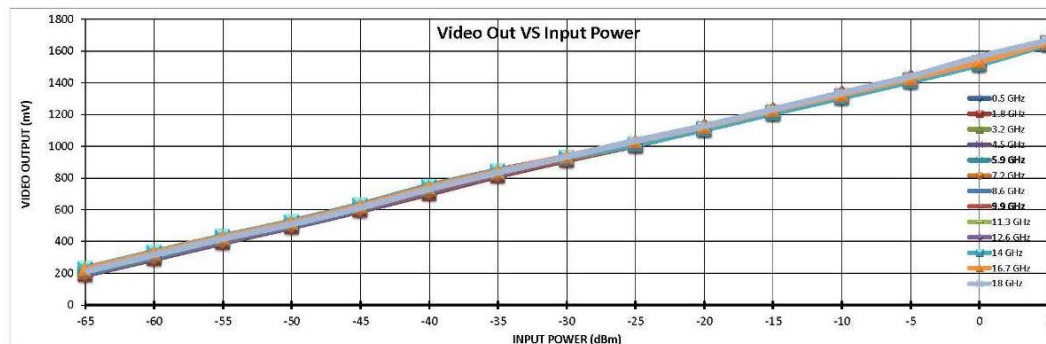
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Typical Performance Data

LOGGING CHARACTERISTICS @+25C



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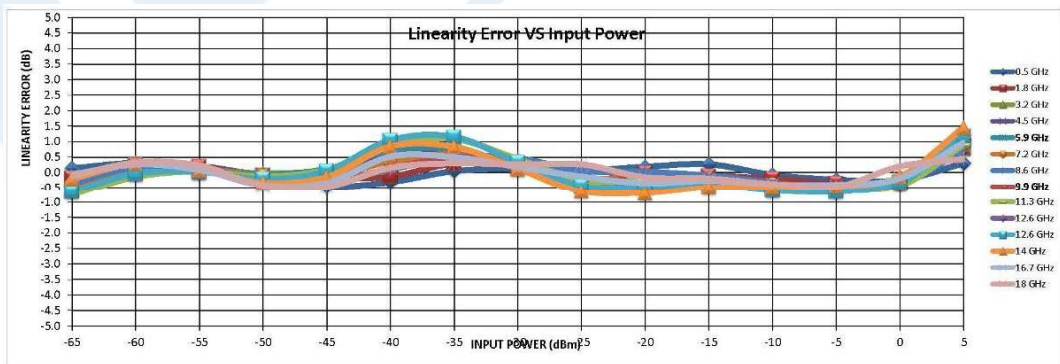
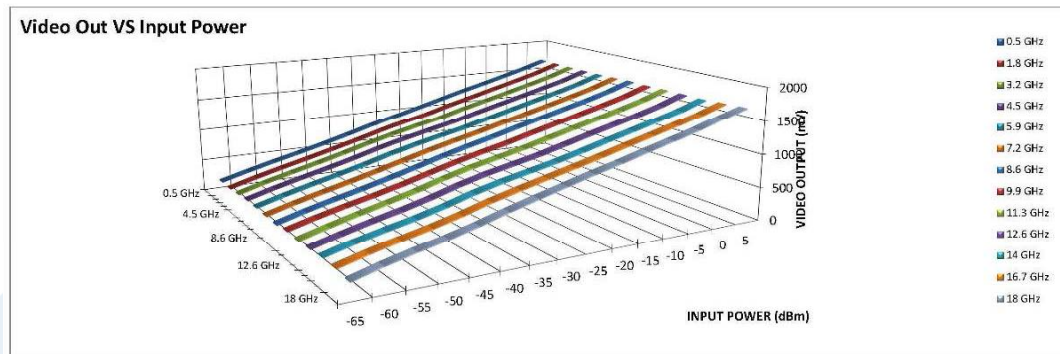
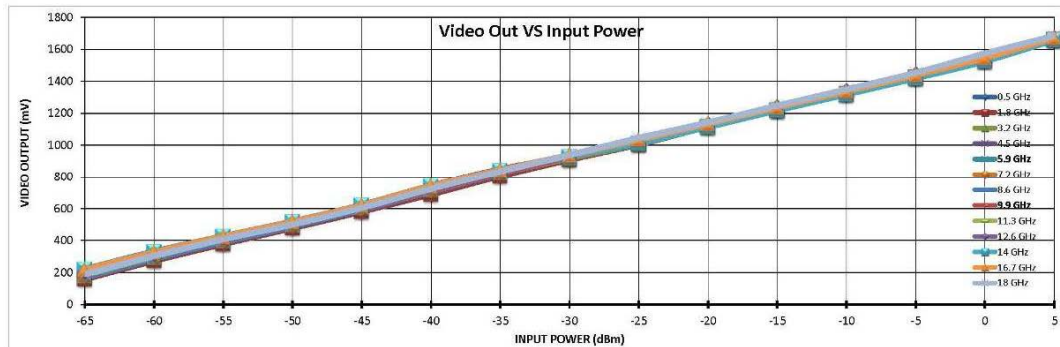


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LOGGING CHARACTERISTICS @ 0C



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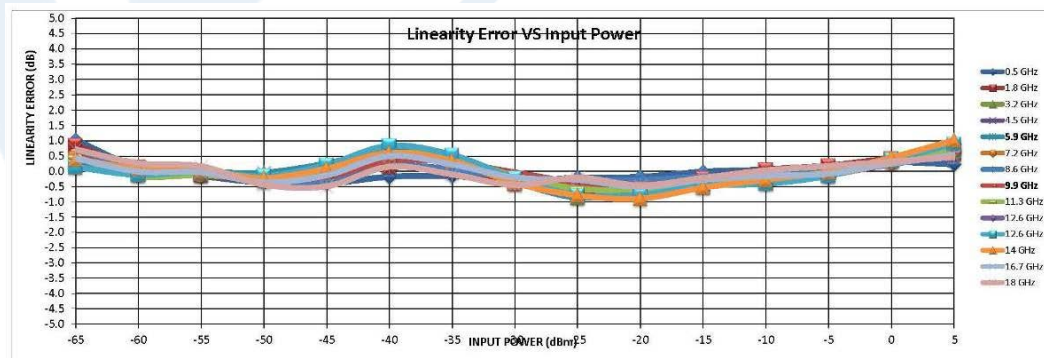
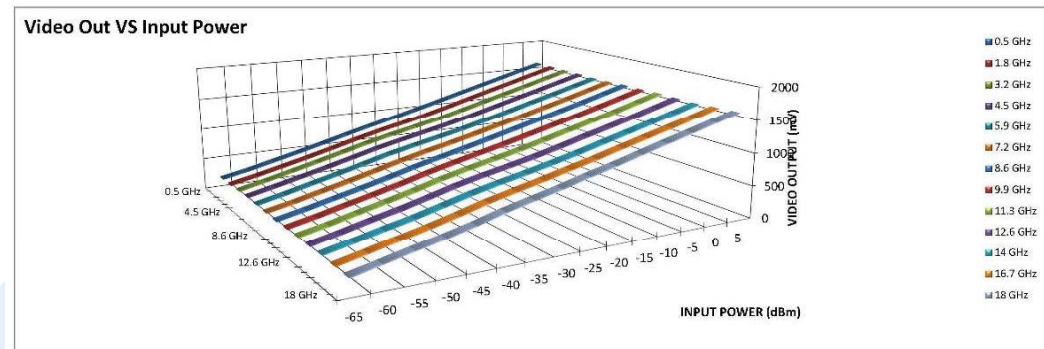
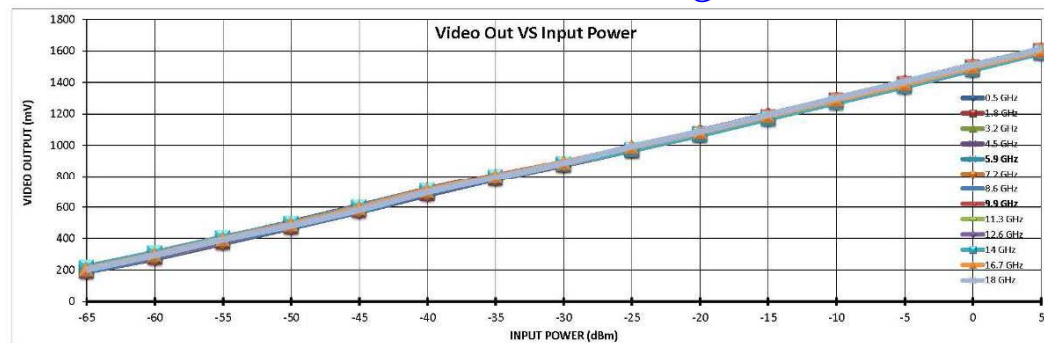


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LOGGING CHARACTERISTICS @ 60C



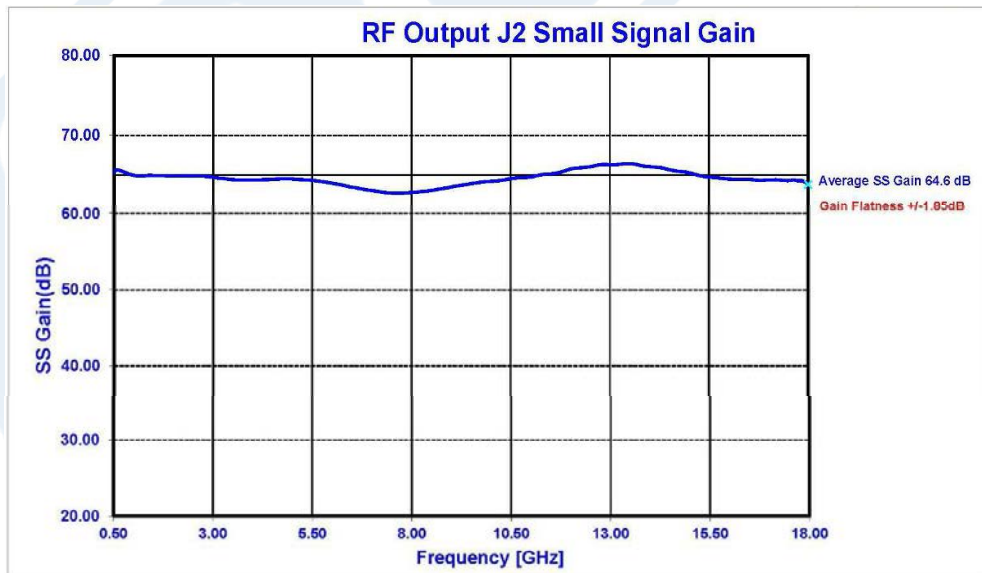
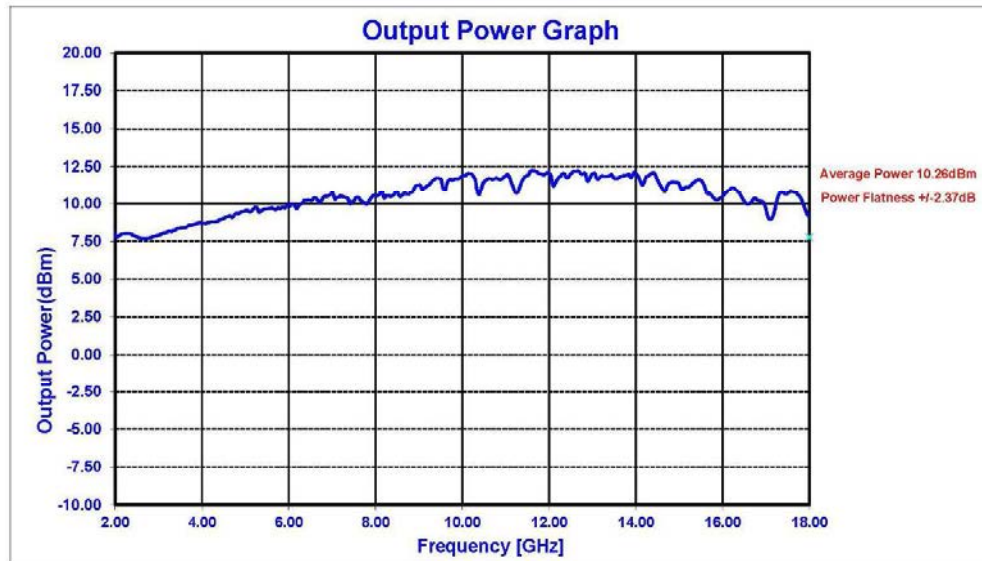
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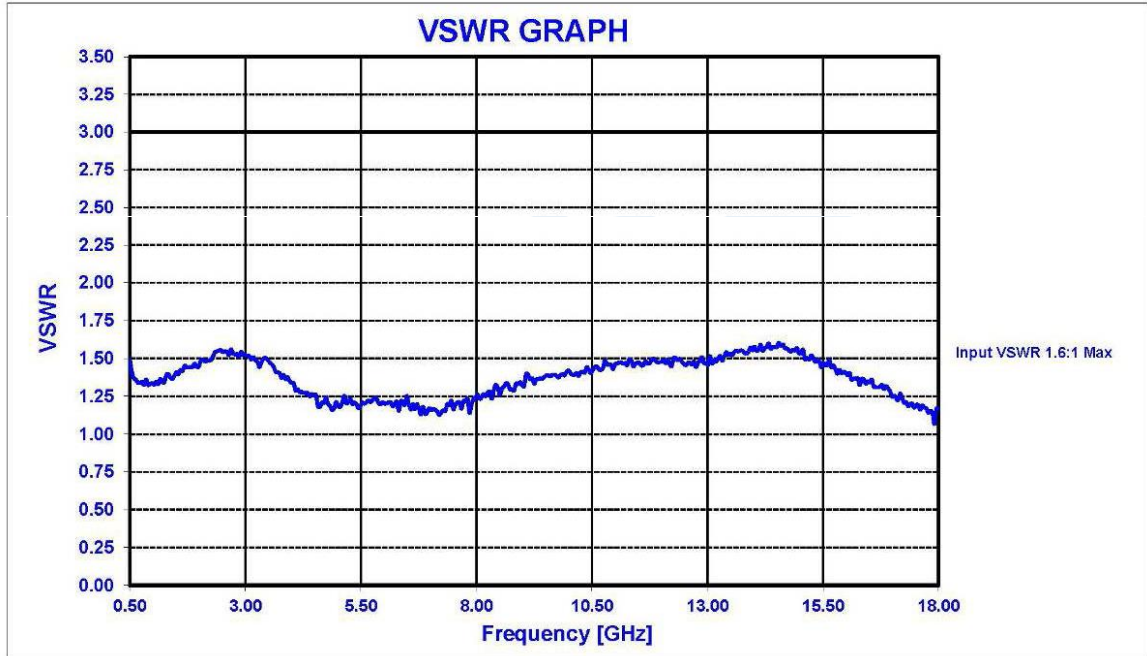
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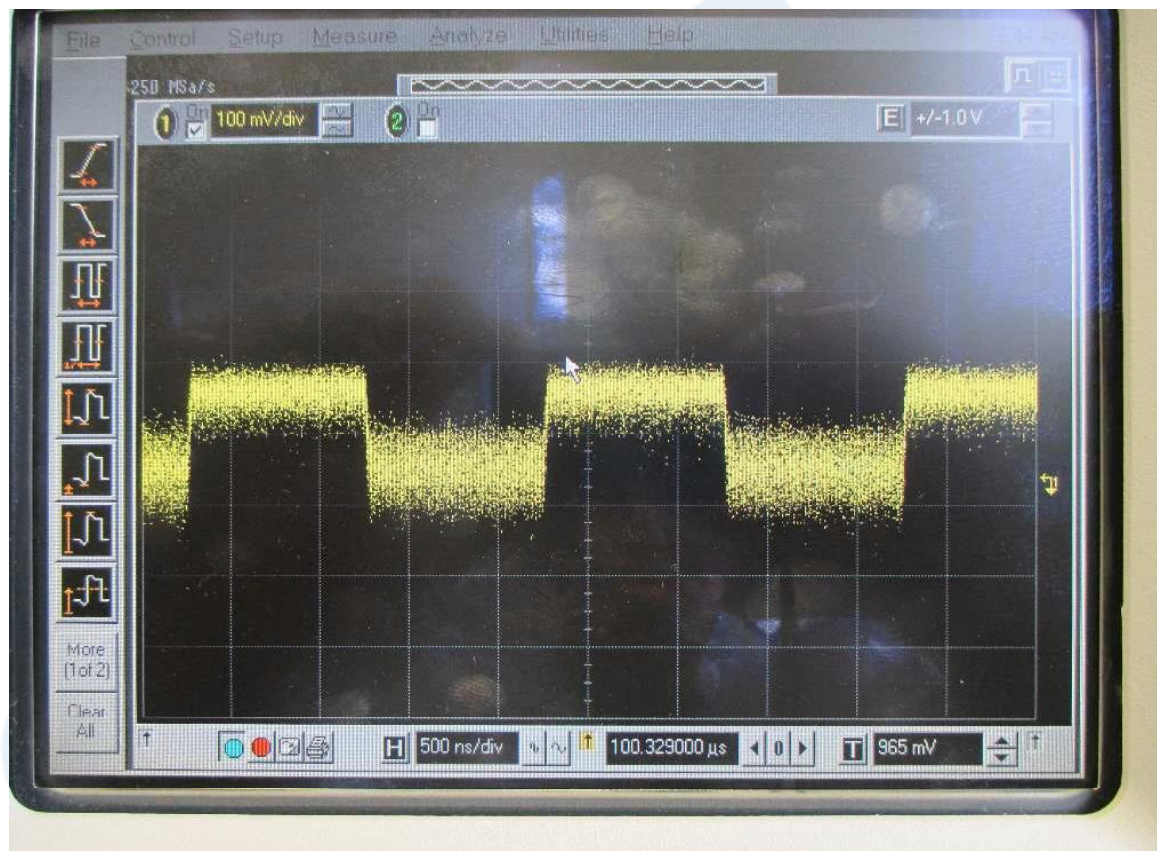


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TSS @ -68.5dBm



500 MHz to 18 GHz, Log Amplifier, 20 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.

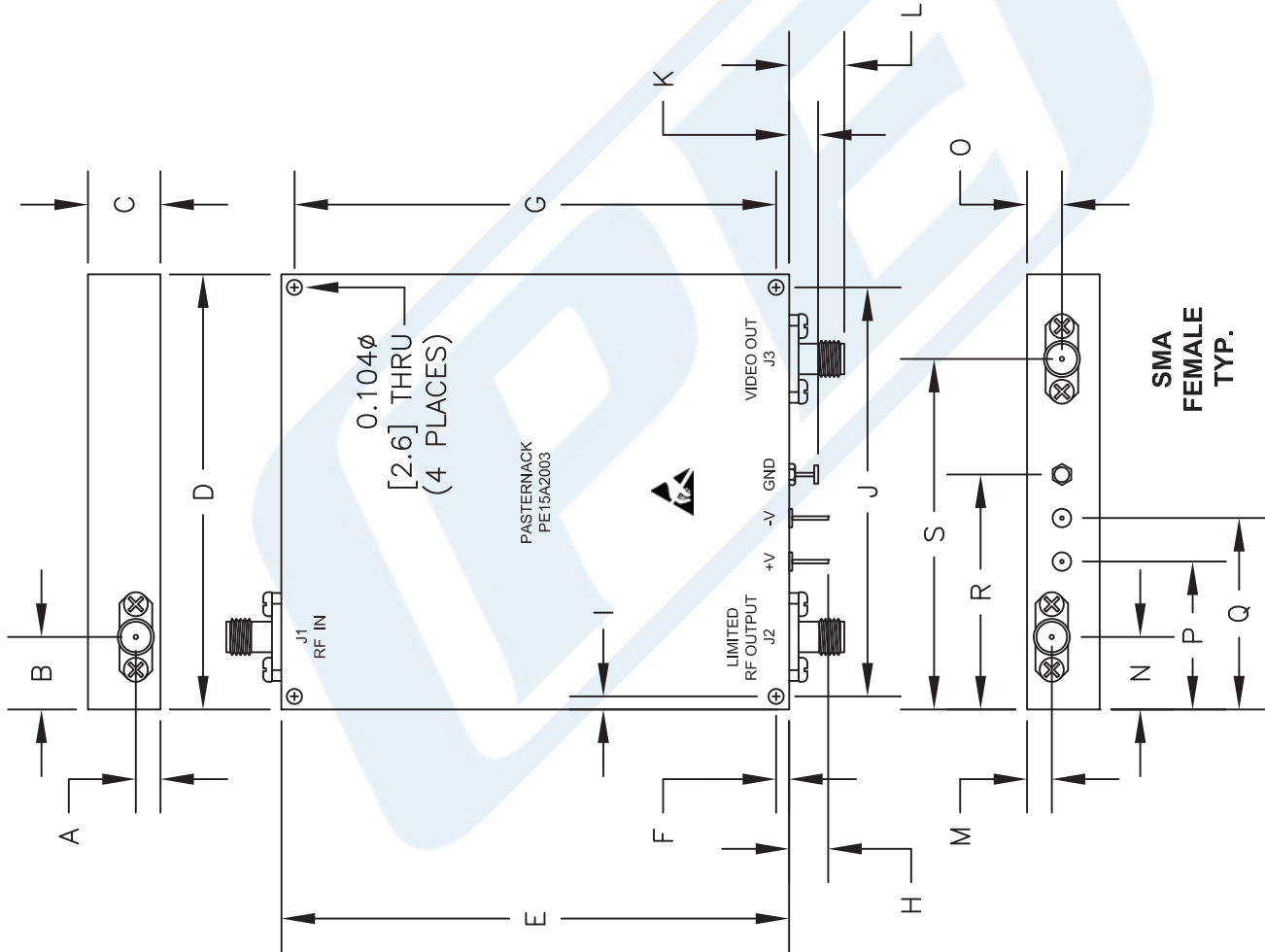
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. 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.

PE15A2003 CAD Drawing

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Dimension	Inches	mm
A	0.170	4.32
B	0.500	12.70
C	0.500	12.70
D	3.000	76.20
E	3.500	88.90
F	0.090	2.29
G	3.304	83.92
H	0.270	6.86
I	0.090	2.29
J	2.816	71.53
K	0.200	5.08
L	0.380	9.65
M	0.170	4.32
N	0.500	12.70
O	0.240	6.10
P	1.020	25.91
Q	1.320	33.53
R	1.620	41.15
S	2.417	61.39

DWG TITLE

PE15A2003

- 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
THE ENGINEER'S RF SOURCE

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FSCM NO. 53919

CAD FILE 032714

SCALE N/A

SIZE A

2233