



3 dB NF, 18 dBm Psat, 100 MHz to 18 GHz, Low Noise Broadband Amplifier, 14 dB Gain, SMA

TECHNICAL DATA SHEET

PE15A3255

PE15A3255 is a broadband GaAs PHEMT MMIC-based coaxial low noise amplifier, operating in the 0.1 to 18 GHz frequency range. The amplifier offers 16 dBm of P1dB and 14 dB small signal gain, with the excellent gain flatness of ± 1.5 dB, along with 28 dBm of IP3 performance. This low noise amplifier requires only a single positive DC supply, is unconditionally stable, operates over the temperature range of -40°C to 85°C , and characterized by a light weight (0.8 g) and small size (1.2"x1.0"x0.4").

Features

- 0.1 to 18 GHz Frequency Range
- P1dB: 16 dBm
- Small Signal Gain: 14 dB
- Gain Flatness: ± 1.5 dB
- Gain Variation Over the Temperature Range: ± 1 dB
- Output Psat: 18 dBm
- P1dB: 16 dBm
- IP3: 28 dBm
- Noise Figure Range: 3-4 dB
- Reverse Isolation: 40 dB
- 50 Ohm Input and Output Matched
- -40 to $+85^{\circ}\text{C}$ Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in DC Voltage Regulator
- Small Size & Light Weight

Applications

- Laboratory Applications
- R&D Labs
- Radar Systems
- Electronic Warfare
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Satellite Communications
- Wireless Communications
- Unmanned Systems
- Microwave Radio Systems
- Low Noise Amplifier
- General Purpose Amplification
- RF Front Ends

Electrical Specifications (TA= 25°C, VDC1 = 12 Vdc)

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.1		18	GHz
Gain	12	14	16	dB
Gain Flatness		± 1.5		dB
Gain Variation over OTR*		± 1		dB
Output at 1 dB Compression Point	+14	+16		dBm
Saturation Output Power	+16	+18		dBm
Output 3 rd Intercept Point	+27	+28		dBm
Reverse Isolation	28	40		dB
Spurious		-60		dBc
Noise Figure		3		dB
Noise Figure at 0.1 to 2 GHz		4	5	dB
Noise Figure at 2 to 15 GHz		3	4	dB
Noise Figure at 15 to 18 GHz		3.5	4.5	dB
Input VSWR		1.5:1	2:1	
Output VSWR		1.7:1	2:1	
Operating DC Voltage 1	10	12	15	Volts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [3 dB NF, 18 dBm Psat, 100 MHz to 18 GHz, Low Noise Broadband Amplifier, 14 dB Gain, SMA PE15A3255](#)



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Operating DC Current	65	80	95	mA
Operating Temperature Range (OTR)	-40		+85	°C

*OTR= Base Plate Operating Temperature Range

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+10	dBm
Operating Temperature (base-plate)	-55 to +125	°C
Storage Temperature	-40 to +85	°C



ESD Sensitive Material,
Transport material in
Approved ESD bags.
Handle only in approved
ESD Workstation.

Mechanical Specifications

Size

Length	1.2 in [30.48 mm]
Width	1 in [25.4 mm]
Height	0.4 in [10.16 mm]
Weight	0.057 lbs [25.85 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +85 deg C

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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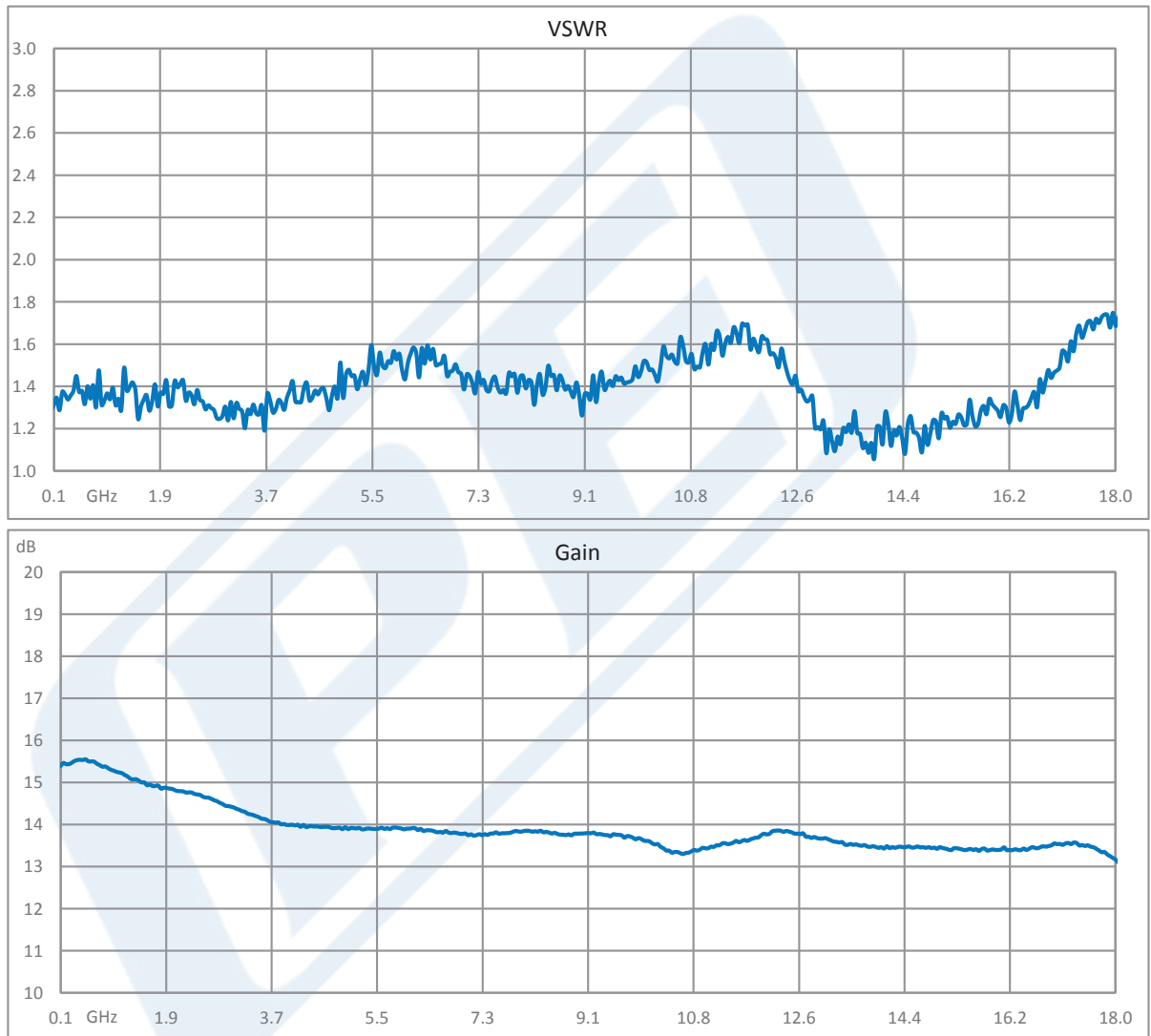


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Typical Performance Data



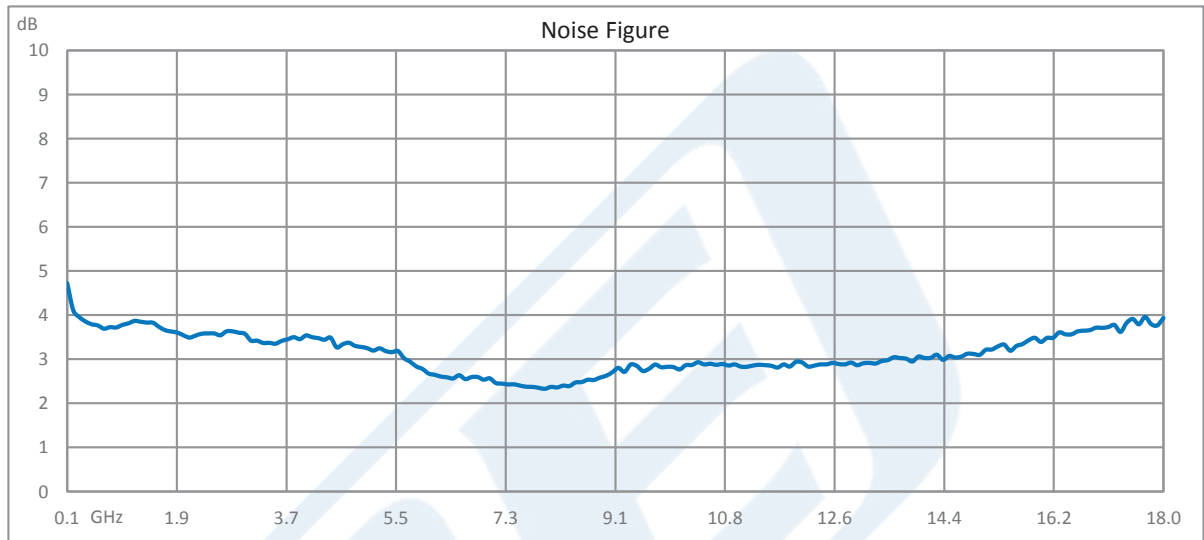
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3 dB NF, 18 dBm Psat, 100 MHz to 18 GHz, Low Noise Broadband Amplifier, 14 dB Gain, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

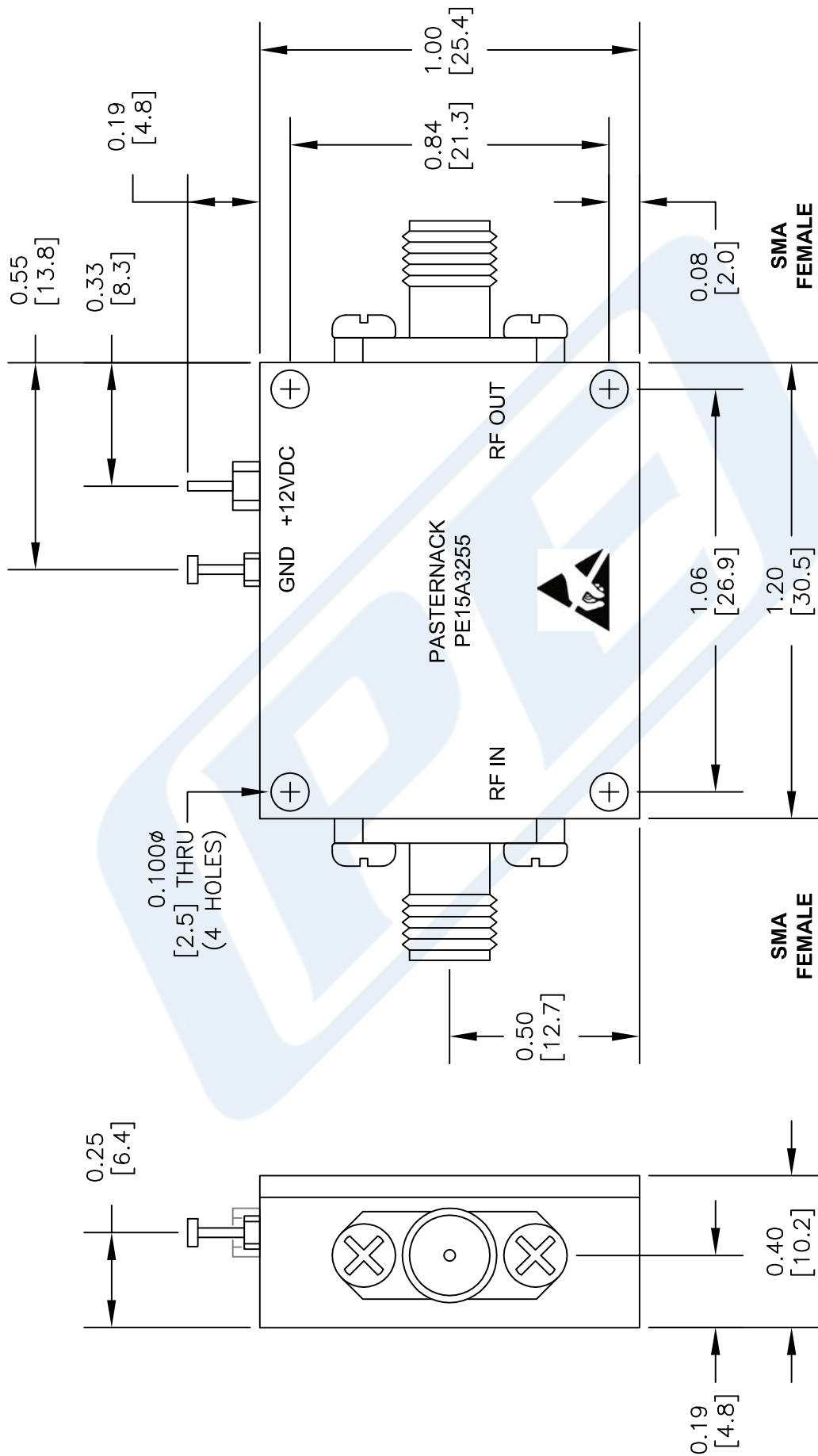
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URL: <https://www.pasternack.com/28-dbm-ip3-3-db-18-ghz-low-noise-broadband-amplifier-14-db-gain-sma-pe15a3255-p.aspx>

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.

PE15A3255 CAD Drawing

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DWG TITLE

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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).

FSCM NO. 53919

CAD FILE 011414

SCALE N/A

SIZE A

2233



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