



3 dB NF, 15 dBm P1dB, 2 GHz to 18 GHz, Low Noise Broadband Amplifier, 33 dB Gain, SMA

TECHNICAL DATA SHEET

PE15A3258

PE15A3258 is a Broadband High Gain GaAs PHEMT MMIC-based coaxial Low Noise Amplifier, operating in the 2 to 18 GHz frequency range. The amplifier offers 3 dB Noise Figure, +15 dBm of P1dB and 33 dB small signal gain, with the gain flatness of ± 1.0 dB, along with +25 dBm pf IP3 performance. This low noise amplifier requires only a single positive DC supply, unconditionally stable, operates over the temperature range of -40°C to $+85^{\circ}\text{C}$, and characterized by a light weight (28 g) and small size (1.5"x1.0"x0.4").

Features

- 2 to 18 GHz Frequency Range
- Noise Figure: 3dB typ
- Small Signal Gain: 33 dB
- Gain Flatness: ± 1.0 dB
- Gain Variation Over the Temperature Range: ± 1.5 dB
- P1dB: +15 dBm
- IP3: +25 dBm
- 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
- 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	2		18	GHz
Gain	30	33	38	dB
Gain Flatness		± 1	± 1.5	dB
Gain Variation over OTR*		± 1.5		dB
Output at 1 dB Compression Point at 2 to 14 GHz	+13	+15		dBm
Output at 1 dB Compression Point at 14 to 18 GHz	+11	+13		dBm
Output 3 rd Intercept Point		+25		dBm
Output 3 rd Intercept Point at 2 to 14 GHz	+22	+25		dBm
Output 3 rd Intercept Point at 14 to 18 GHz	+20	+22		dBm
Reverse Isolation	35	55		dB
Spurious		-60		dBc
Noise Figure		3	4.2	dB
Input VSWR		1.7:1	2.2:1	
Output VSWR		1.8:1	2.5:1	
Operating DC Voltage 1	10	12	15	Volts
Operating DC Current	160	180	220	mA

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, 15 dBm P1dB, 2 GHz to 18 GHz, Low Noise Broadband Amplifier, 33 dB Gain, SMA PE15A3258](#)



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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	+15	dBm
Operating Temperature (base-plate)	-40 to +85	°C
Storage Temperature	-55 to +125	°C



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

Mechanical Specifications

Size

Length	1.5 in [38.1 mm]
Width	1 in [25.4 mm]
Height	0.4 in [10.16 mm]
Weight	0.068 lbs [30.84 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-45 to +125 deg C

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

Plotted and Other Data

Notes:

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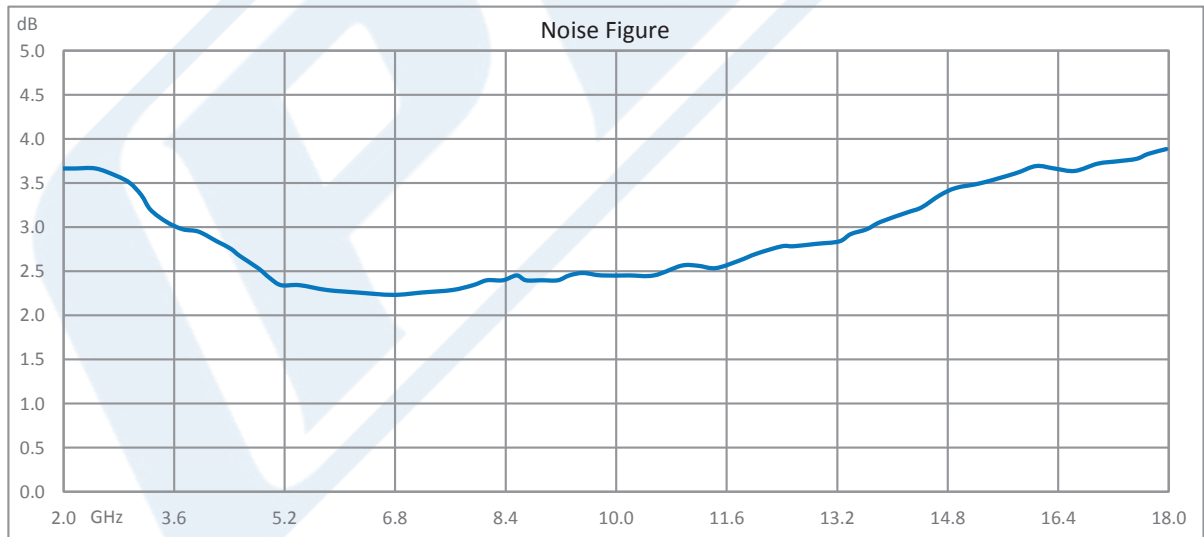
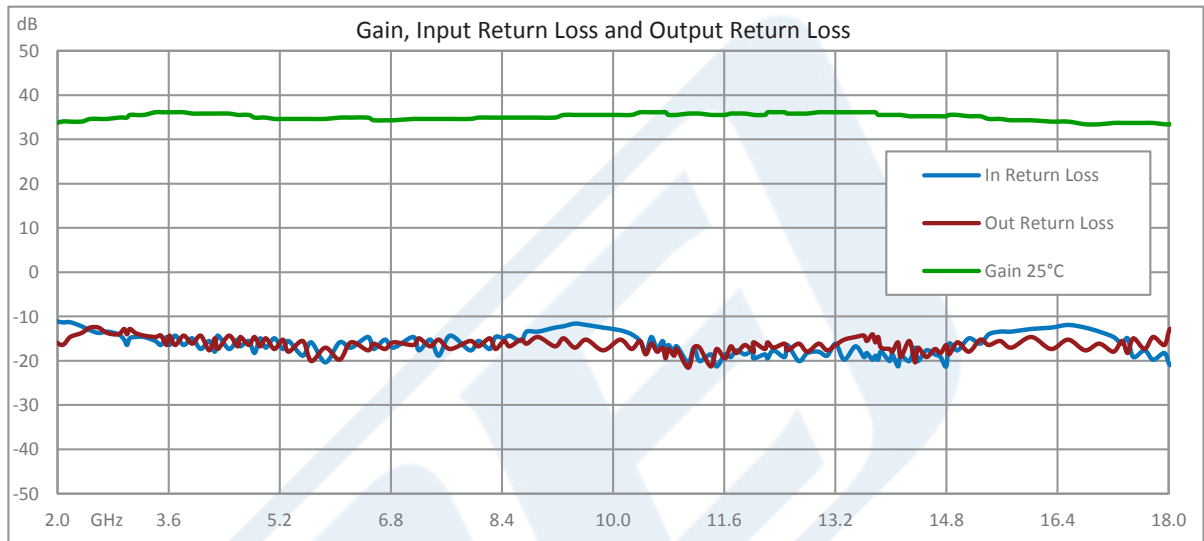


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Typical Performance Data



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3 dB NF, 15 dBm P1dB, 2 GHz to 18 GHz, Low Noise Broadband Amplifier, 33 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.

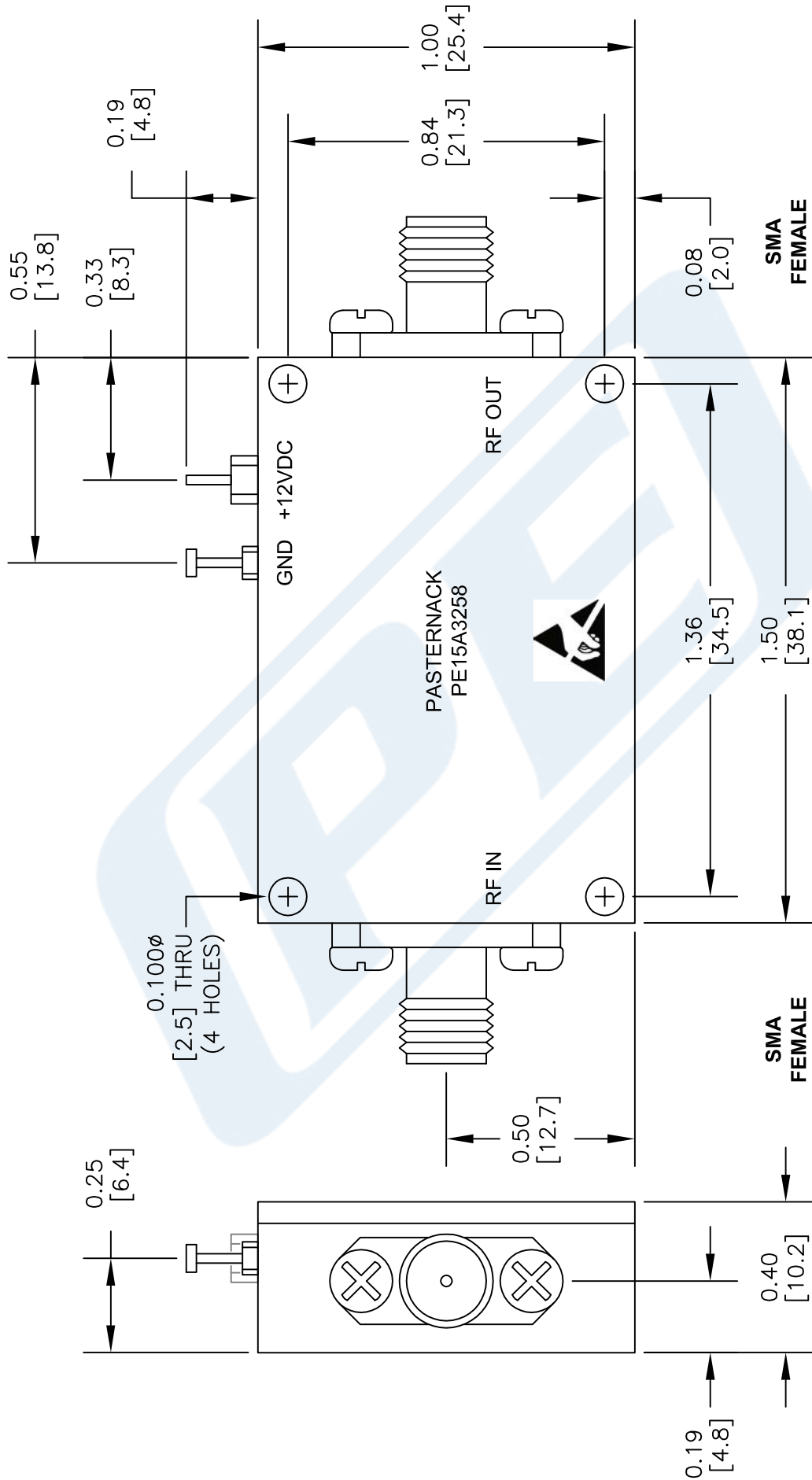
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE15A3258 CAD Drawing

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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).

DWG TITLE
PE15A3258

FSCM NO. 53919

CAD FILE 011414

SCALE N/A

SIZE A

2233

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