



2.5 dB NF, 22 dBm P1dB, 6 GHz to 18 GHz, Low Noise Broadband Amplifier, 38 dB Gain, 30 dBm IP3, SMA

TECHNICAL DATA SHEET PE15A3259

PE15A3259 is a Broadband High Gain GaAs PHEMT MMIC-based coaxial Low Noise Amplifier, operating in the 6 to 18 GHz frequency range. The amplifier offers 2.5 dB Noise Figure, +22 dBm of P1dB and 38 dB small signal gain, with the gain flatness of  $\pm 2.0$  dB, along with +30 dBm of IP3 performance. This low noise amplifier requires only a single positive DC supply, unconditionally stable, operates over the temperature range of  $-40^{\circ}\text{C}$  to  $+75^{\circ}\text{C}$ , and characterized by a light weight (25 g) and small size (1.2"x1.0"x0.4").

**Features**

- 6 to 18 GHz Frequency Range
- Noise Figure: 2.5dB typ
- Small Signal Gain: 38 dB
- Gain Flatness:  $\pm 2.0$  dB
- Gain Variation Over the Temperature Range:  $\pm 2.0$  dB
- P1dB: +22 dBm
- IP3: +30 dBm
- 50 Ohm Input and Output Matched
- $-40$  to  $+75^{\circ}\text{C}$  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 =  $+25^{\circ}\text{C}$ , DC Voltage = 12Volts, DC Current = 280mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	6		18	GHz
Gain	35	38	41	dB
Gain Flatness		$\pm 2$	$\pm 2.5$	dB
Gain Variance at OTR*		$\pm 2$		dB
Output at 1 dB Compression Point	+20	+22		dBm
Output 3 <sup>rd</sup> Intercept Point	+27	+30		dBm
Reverse Isolation	40	45		dB
Spurious			-60	dBc
Noise Figure		2.5	3	dB
Input VSWR		1.8:1	2.5:1	
Output VSWR		1.8:1	2.5:1	
Operating DC Voltage	10	12	15	Volts
Operating DC Current	250	280	320	mA
Operating Temperature Range (OTR)	-40		+75	$^{\circ}\text{C}$

\*OTR= Base Plate Operating Temperature Range

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [2.5 dB NF, 22 dBm P1dB, 6 GHz to 18 GHz, Low Noise Broadband Amplifier, 38 dB Gain, 30 dBm IP3, SMA PE15A3259](#)



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**Absolute Maximum Rating**

Parameter	Rating	Units
Source Voltage	+16.5	Volts
RF input Power	+10	dBm
Operating Temperature (base-plate)	-40 to +75	°C
Storage Temperature	-55 to +125	°C



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

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

RoHS Compliant

**Plotted and Other Data**

Notes:

- Values at +25 °C, sea level
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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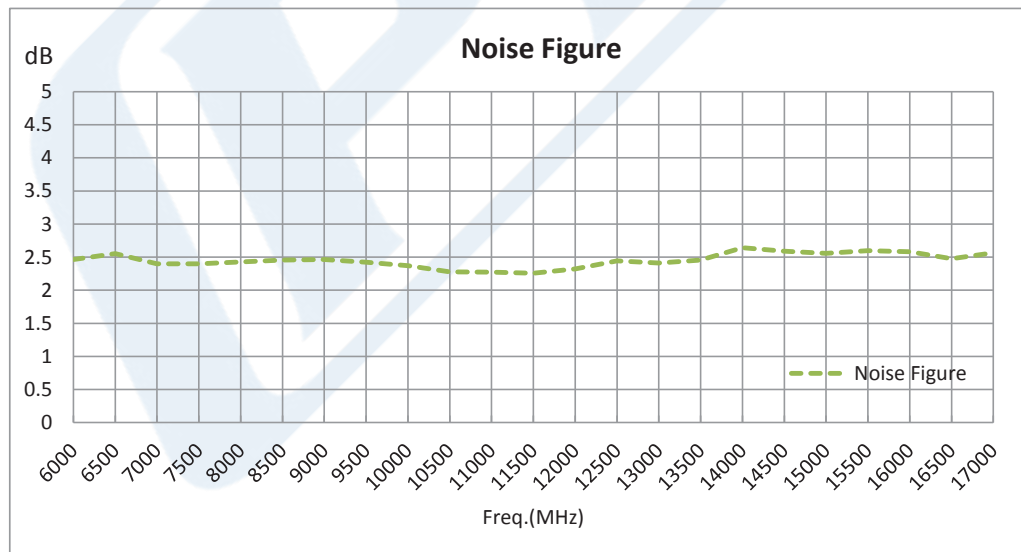
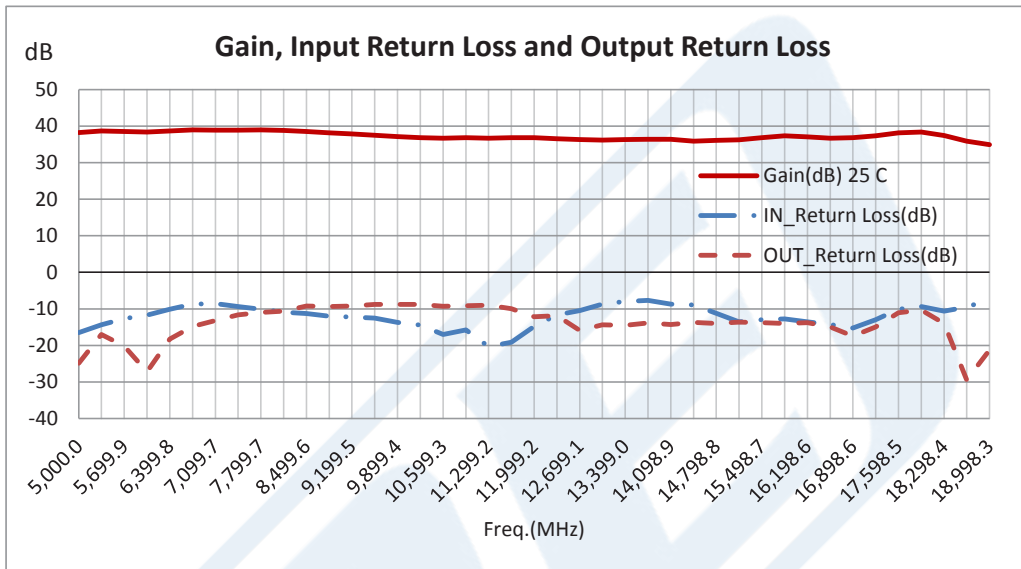


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Power Data



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2.5 dB NF, 22 dBm P1dB, 6 GHz to 18 GHz, Low Noise Broadband Amplifier, 38 dB Gain, 30 dBm IP3, 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.

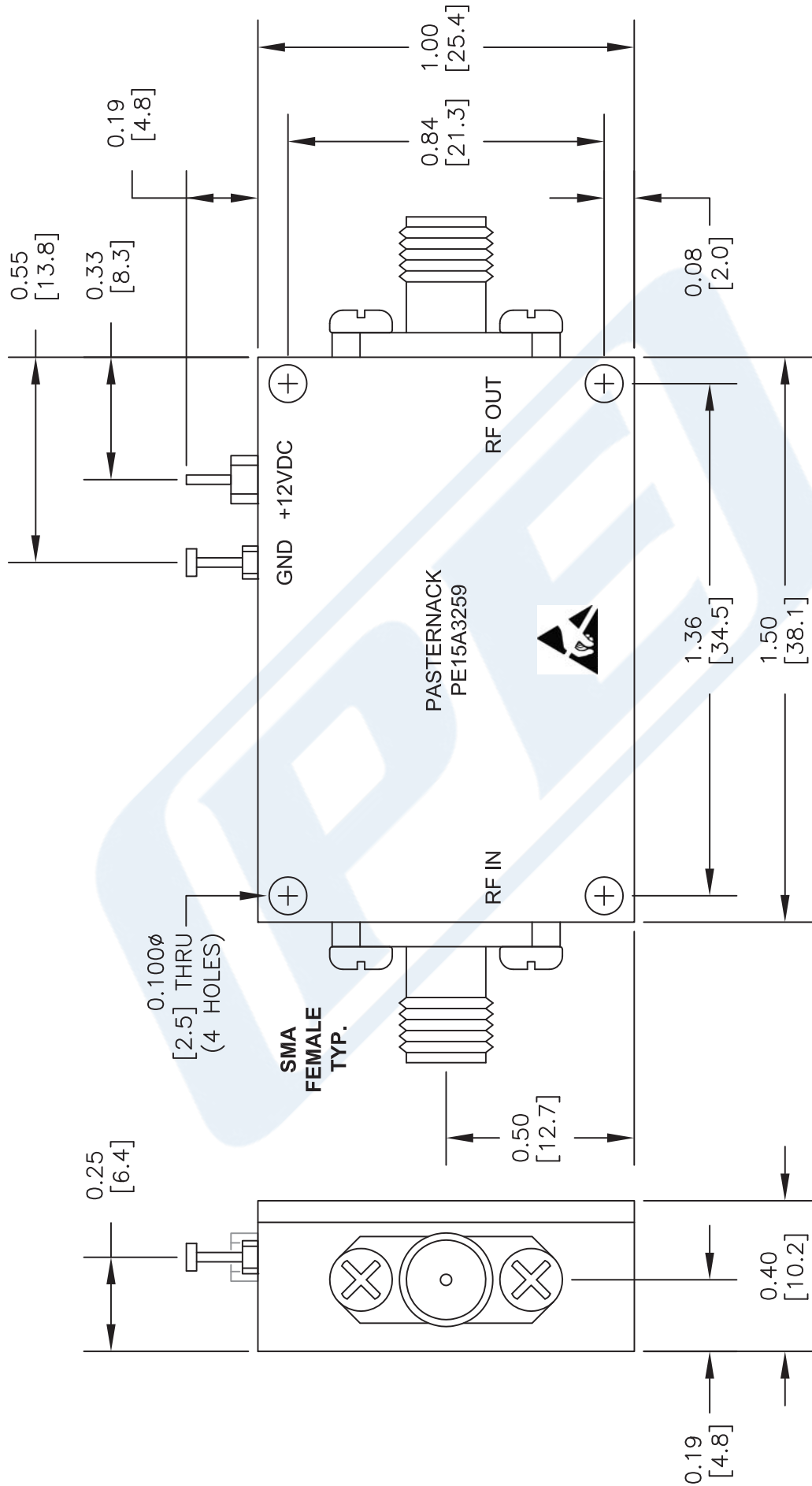
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

# PE15A3259 CAD Drawing

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NOTE:  
HEAT SINK REQUIRED FOR PROPER OPERATION,  
UNIT IS COOLED BY CONDUCTING TO HEAT SINK.

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

**PE15A3259**

FSCM NO. 53919

CAD FILE 041114

SCALE N/A

SIZE A

2233



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