



18 dBm, 100 MHz to 18 GHz, Low Noise Broadband Amplifier, 28 dB Gain, 28 dBm IP3, SMA

TECHNICAL DATA SHEET

PE15A3256

PE15A3256 is a broadband high gain 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, unconditionally stable, operates over the temperature range of -40°C to 85°C , and characterized by a light weight (25 g) and small size (1.2"x1.0"x0.4").

Features

- 0.1 to 18 GHz Frequency Range
- P1dB: 16 dBm
- Small Signal Gain: 28 dB
- Gain Flatness: ± 2.5 dB
- Gain Variation Over the Temperature Range: ± 1.5 dB
- Output Psat: 18 dB
- IP3: 28 dBm
- Noise Figure: 3dB typ
- Reverse Isolation: 50 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 = $+25^{\circ}\text{C}$, DC Voltage = 12Volts, DC Current = 160mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.1		18	GHz
Gain	25	28	31	dB
Gain Flatness		± 2.5	± 3	dB
Gain Variance at OTR*		± 1.5		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	40	50		dB
Spurious		-60		dBc
Noise Figure at 0.1 to 2.5 GHz		4	4.5	dB
Noise Figure at 2.5 to 16.5 GHz		3	3.5	dB
Noise Figure at 16.5 to 18 GHz		3.5	4	dB
Input VSWR		1.5:1	2:1	
Output VSWR		1.7:1	2:1	
Operating DC Voltage	10	12	15	Volts
Operating DC Current	130	160	190	mA
Operating Temperature Range (OTR)	-40		+85	$^{\circ}\text{C}$

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [18 dBm, 100 MHz to 18 GHz, Low Noise Broadband Amplifier, 28 dB Gain, 28 dBm IP3, SMA PE15A3256](#)



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*OTR= Base Plate Operating Temperature Range

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+18	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.

Compliance Certifications (visit 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.

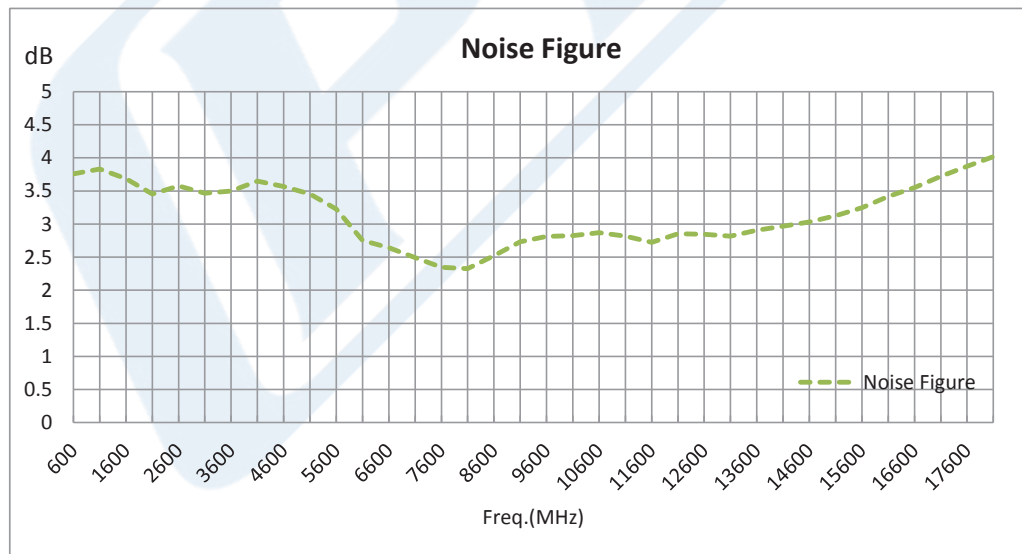
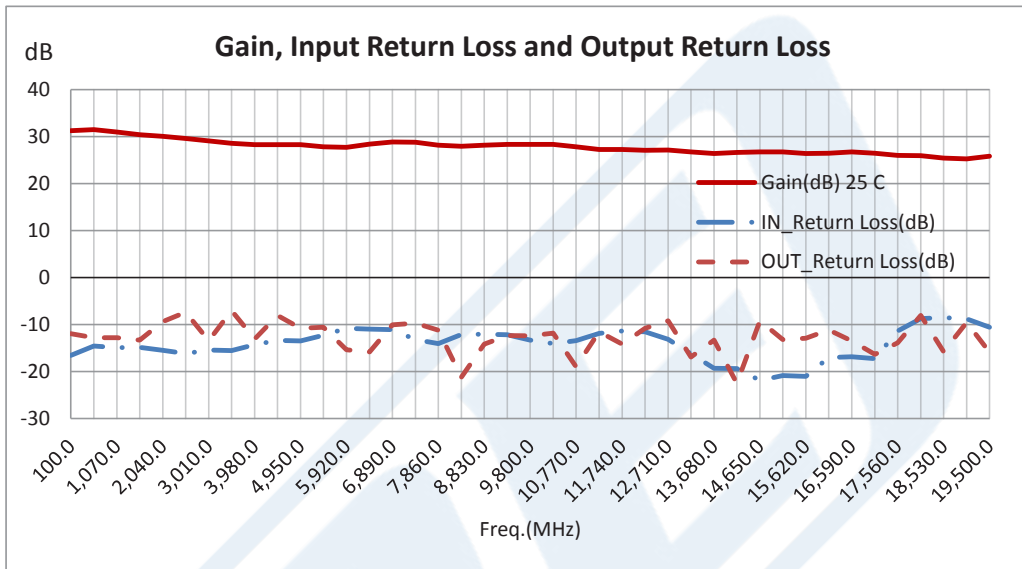
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Power Data



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Amplifier, 28 dB Gain, 28 dBm IP3, SMA

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18 dBm, 100 MHz to 18 GHz, Low Noise Broadband Amplifier, 28 dB Gain, 28 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.

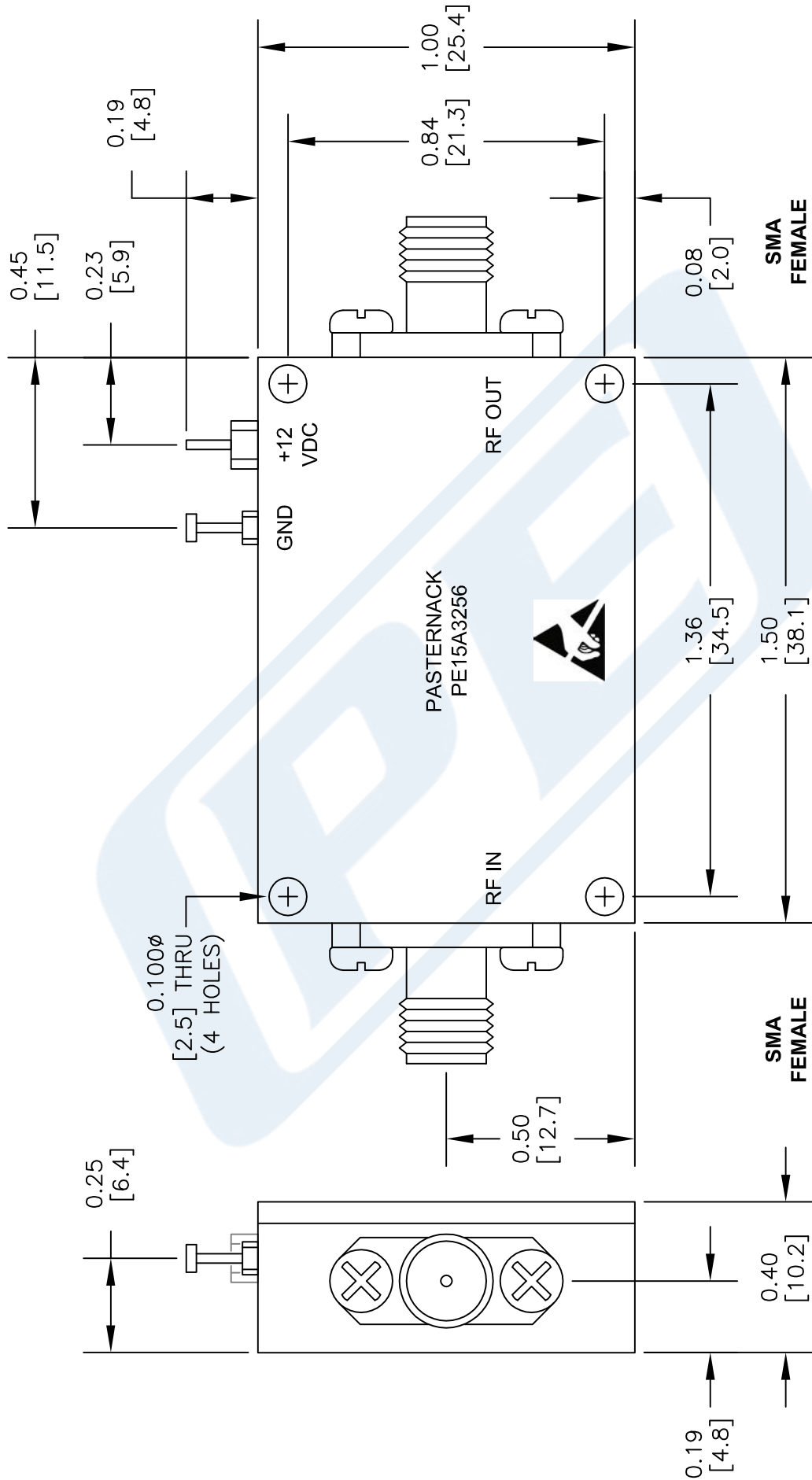
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [18 dBm, 100 MHz to 18 GHz, Low Noise Broadband Amplifier, 28 dB Gain, 28 dBm IP3, SMA PE15A3256](http://www.pasternack.com/4-db-18-ghz-low-noise-broadband-amplifier-28-db-gain-sma-pe15a3256-p.aspx)

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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.

PE15A3256 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
PE15A3256

FSCM NO. 53919

CAD FILE 011414

SCALE N/A

SIZE A

2233

PE PASTERNAK
 THE ENGINEER'S RF SOURCE
 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