



25 dBm P1dB, 500 MHz to 18 GHz, Medium Power Broadband
Amplifier, 27 dB Gain, 35 dBm IP3, 3 dB NF, SMA

TECHNICAL DATA SHEET

PE15A3008

PE15A3008 is a broadband GaAs PHEMT MMIC-based coaxial power amplifier, operating in the 0.5 to 18 GHz frequency range. The amplifier offers 25 dBm of P1dB and 27 dB small signal gain, with gain flatness of ± 2.5 dB along with an outstanding 35 dBm of IP3 performance. This power amplifier requires only a single positive DC supply, is unconditionally stable, operates over the temperature range of -40°C to 75°C , and characterized by a light weight (28 g) and small size (1.5"x1.0"x0.4").

Features

- 0.5 to 18 GHz Frequency Range
- P1dB: 25 dBm
- Small Signal Gain: 27 dB
- Gain Flatness: ± 2.5 dB
- Gain Variation Over the Temperature Range: ± 2 dB
- Output IP3: 35 dBm
- Noise Figure Range: 2.5-4 dB
- 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
- Radar Systems
- Electronic Warfare
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Satellite Communications
- Wireless Communications
- Unmanned Systems
- Microwave Radio Systems
- Power Amplifier
- Low Noise Amplifier
- General Purpose Amplification
- RF Front Ends

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.5		18	GHz
Gain	23	27	30.5	dB
Gain Flatness		± 2.5	± 2.75	dB
Gain Variation over OTR*		± 2	± 2.5	dB
Output at 1 dB Compression Point	+23	+25		dBm
Output 3 rd Intercept Point	+30	+35		dBm
Spurious			-60	dBc
Noise Figure		3		dB
Noise Figure at 500 to 700 MHz		4	4.5	dB
Noise Figure at 0.7 to 18 GHz		2.5	3.5	dB
Input VSWR		1.8:1	2.5:1	
Output VSWR		1.5:1	2:1	
Operating DC Voltage 1		12		Volts
Operating DC Current	300	330	500	mA

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [25 dBm P1dB, 500 MHz to 18 GHz, Medium Power Broadband Amplifier, 27 dB Gain, 35 dBm IP3, 3 dB NF, SMA PE15A3008](#)



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Operating Temperature Range (OTR) -40 +75 °C

*OTR= Base Plate Operating Temperature Range

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+13	Volts
RF input Power	+15	dBm
Operating Temperature	-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.

Mechanical Specifications

Size

Length	1.5 in [38.1 mm]
Width	1 in [25.4 mm]
Height	0.4 in [10.16 mm]
Weight	0.065 lbs [29.48 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +75 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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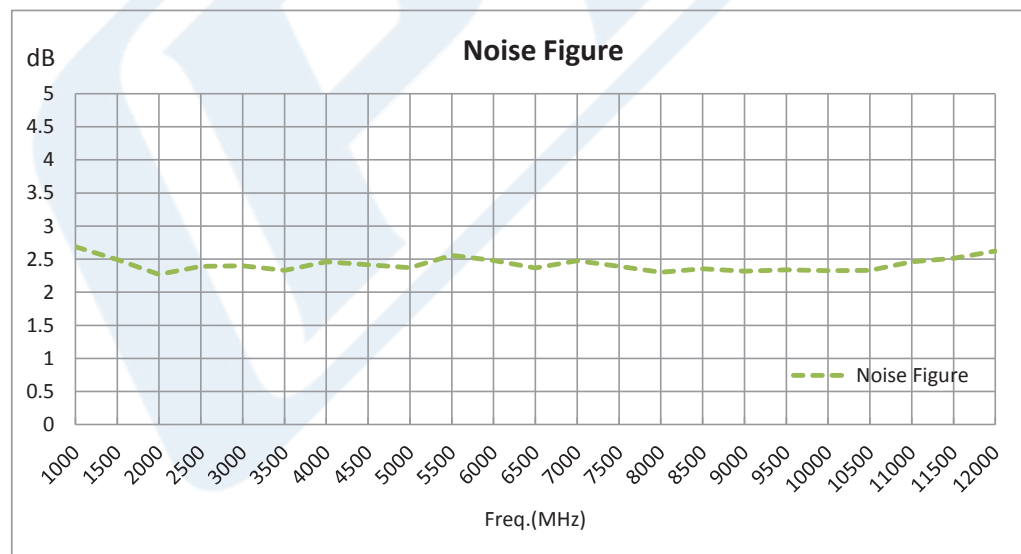
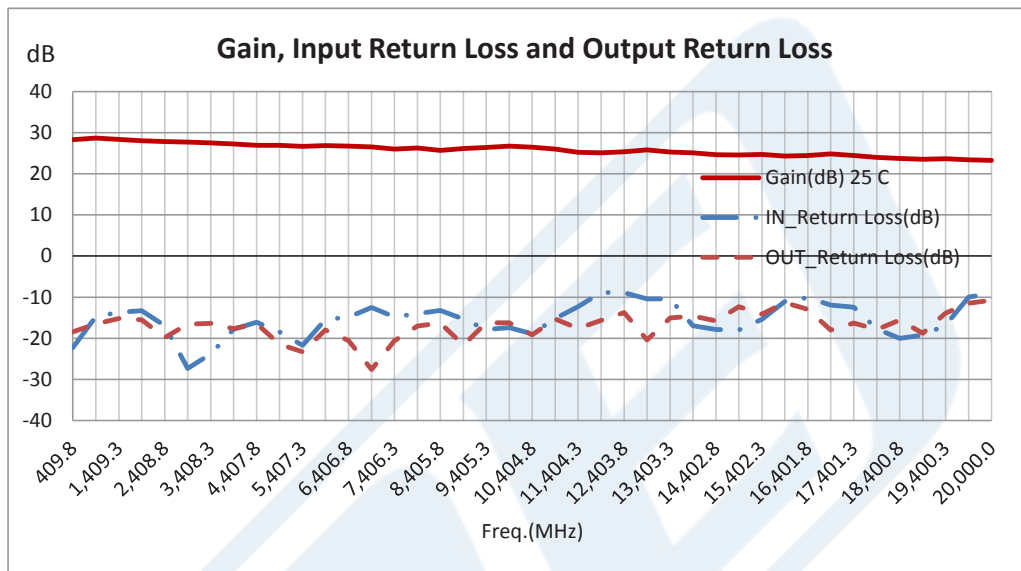


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Typical Performance Data



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25 dBm P1dB, 500 MHz to 18 GHz, Medium Power Broadband Amplifier, 27 dB Gain, 35 dBm IP3, 3 dB NF, 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.

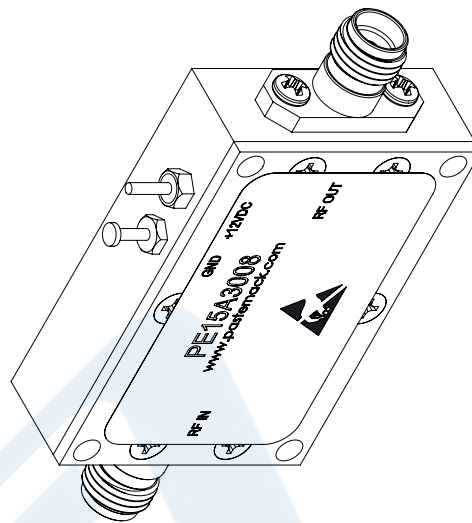
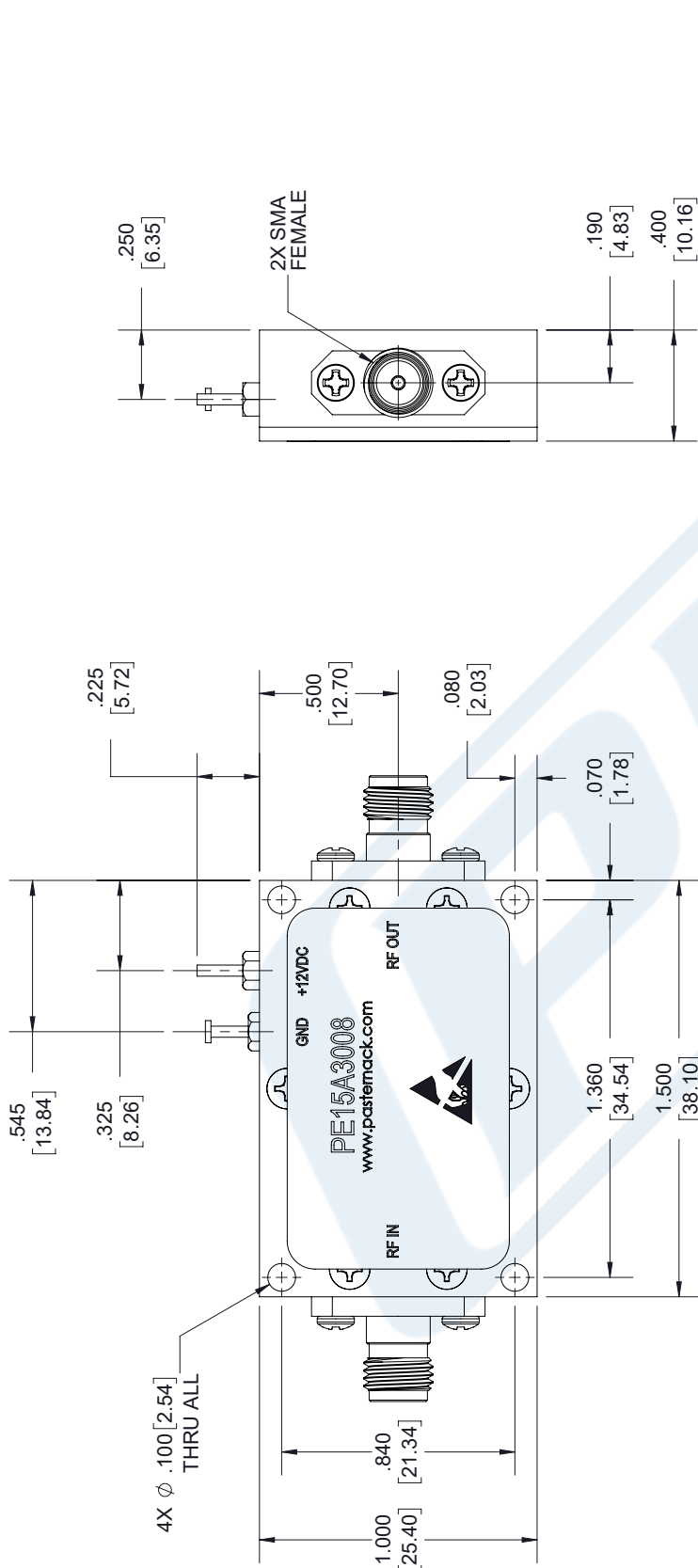
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PE15A3008 CAD Drawing

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STANDARD TOLERANCES

.X ±0.2
.XX ±0.01
.XXX ±0.005

*STANDARD TOLERANCES APPLY
ONLY TO DIMENSIONS IN INCHES



THE ENGINEER'S RF SOURCE

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DWG TITLE

PE15A3008

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].

CAGE CODE 53919

CAD FILE 11/19/18

SCALE N/A

SIZE A

7361