PASTERNACK®
THE ENGINEER'S RF SOURCE

25 dBm P1dB, 500 MHz to 10 GHz, Medium Power Broadband Amplifier, 32 dB Gain, 33 dBm IP3, 3 dB NF, SMA

TECHNICAL DATA SHEET PE15A3005

PE15A3005 is a broadband GaAs PHEMT MMIC-based 300 mW coaxial low noise amplifier, operating in the 0.5 to 10 GHz frequency range. The amplifier offers 32 dBm of P1dB and 32 dB small signal gain, with the excellent gain flatness of ±1 dB, along with a 33 dBm of IP3 performance. This power amplifier requires only a single positive DC supply, is unconditionally stable, operates over the temperature range of -45°C to 75°C, and characterized by a light weight (25 g) and small size (1.5"x1.0"x0.4").

Features

- 0.5 to 10 GHz Frequency Range
- P1dB: 25 dBm
- Small Signal Gain: 32 dB
- Gain Flatness: ±1 dB
- Gain Variation Over the Temperature Range: ±2.5 dB
- Output IP3: 33 dBm
- Noise Figure: 3 dB
- Reverse Isolation: 51 dB
- 50 Ohm Input and Output Matched
- -45 to +75°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, DC Voltage = 12Volts, DC Current = 375mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.5		10	GHz
Gain	28	32	36	dB
Gain Flatness		±1	±1.5	dB
Gain Variance at OTR*		±2.5		dB
Output at 1 dB Compression Point	+24	+25		dBm
Output 3rd Intercept Point	+30	+33		dBm
Reverse Isolation	45	51		dB
Spurious			-60	dBc
Noise Figure		3	5	dB
Input VSWR		1.8:1	2:1	
Output VSWR		1.8:1	2:1	
Operating DC Voltage	10		12	Volts
Operating DC Current	350	375	400	mA
Operating Temperature Range (OTR)	-45		+75	°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: 25 dBm P1dB, 500 MHz to 10 GHz, Medium Power Broadband Amplifier, 32 dB Gain, 33 dBm IP3, 3 dB NF, SMA PE15A3005

Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
Phone: (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451
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Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+13	Volts
RF input Power	+0	dBm
Operating Temperature (base-plate)	-55 to +125	°C
Storage Temperature	-40 to +75	°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.
- Heat Sink Required for Proper Operation, Unit is cooled by conduction to heat sink.

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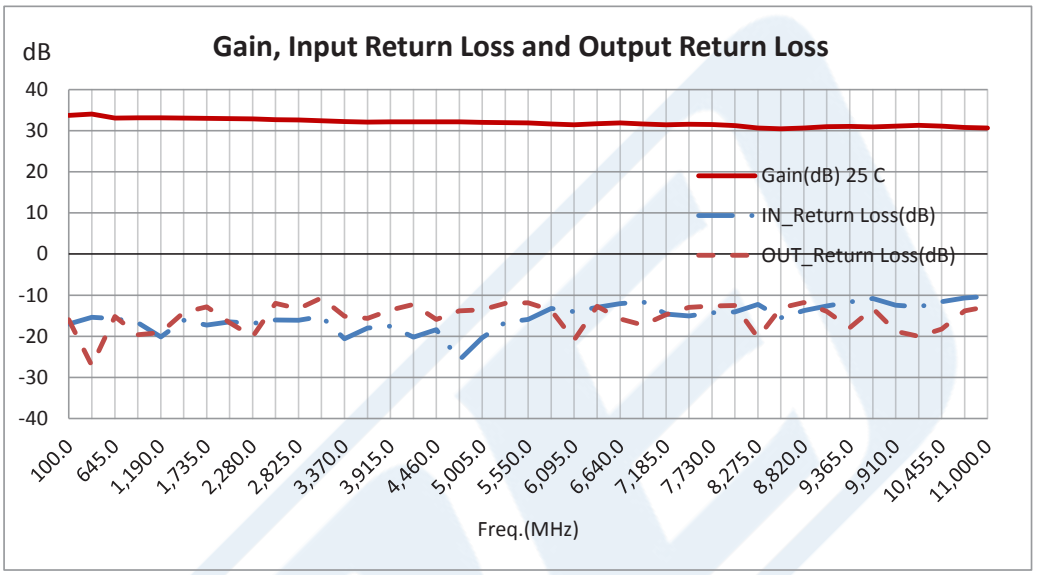
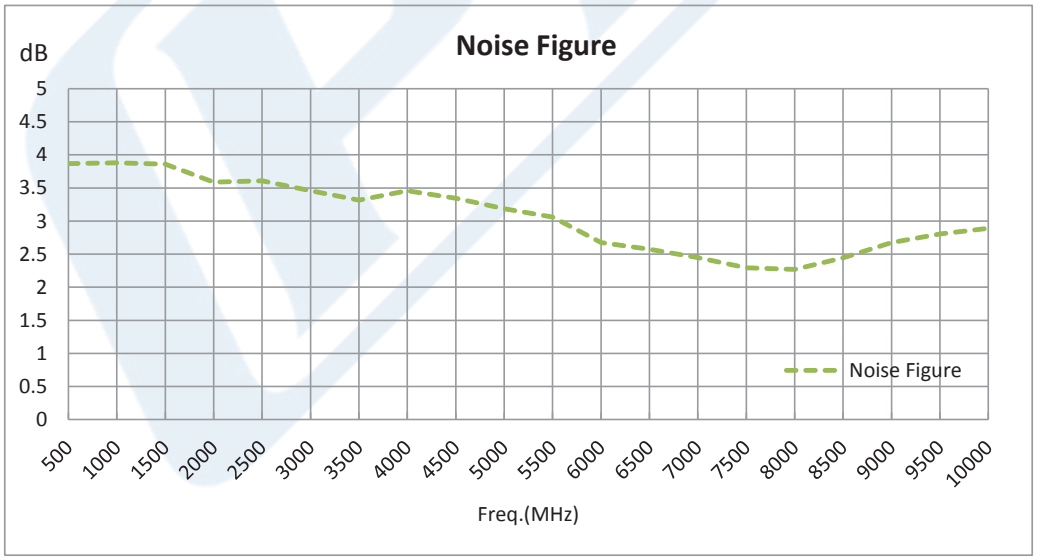
Power Data





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25 dBm P1dB, 500 MHz to 10 GHz, Medium Power Broadband Amplifier, 32 dB Gain, 33 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% availability and are part of the broadest selection in the industry.

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URL: http://www.pasternack.com/10-ghz-medium-power-broadband-amplifier-32-db-gain-3-db-sma-pe15a3005-p.aspx

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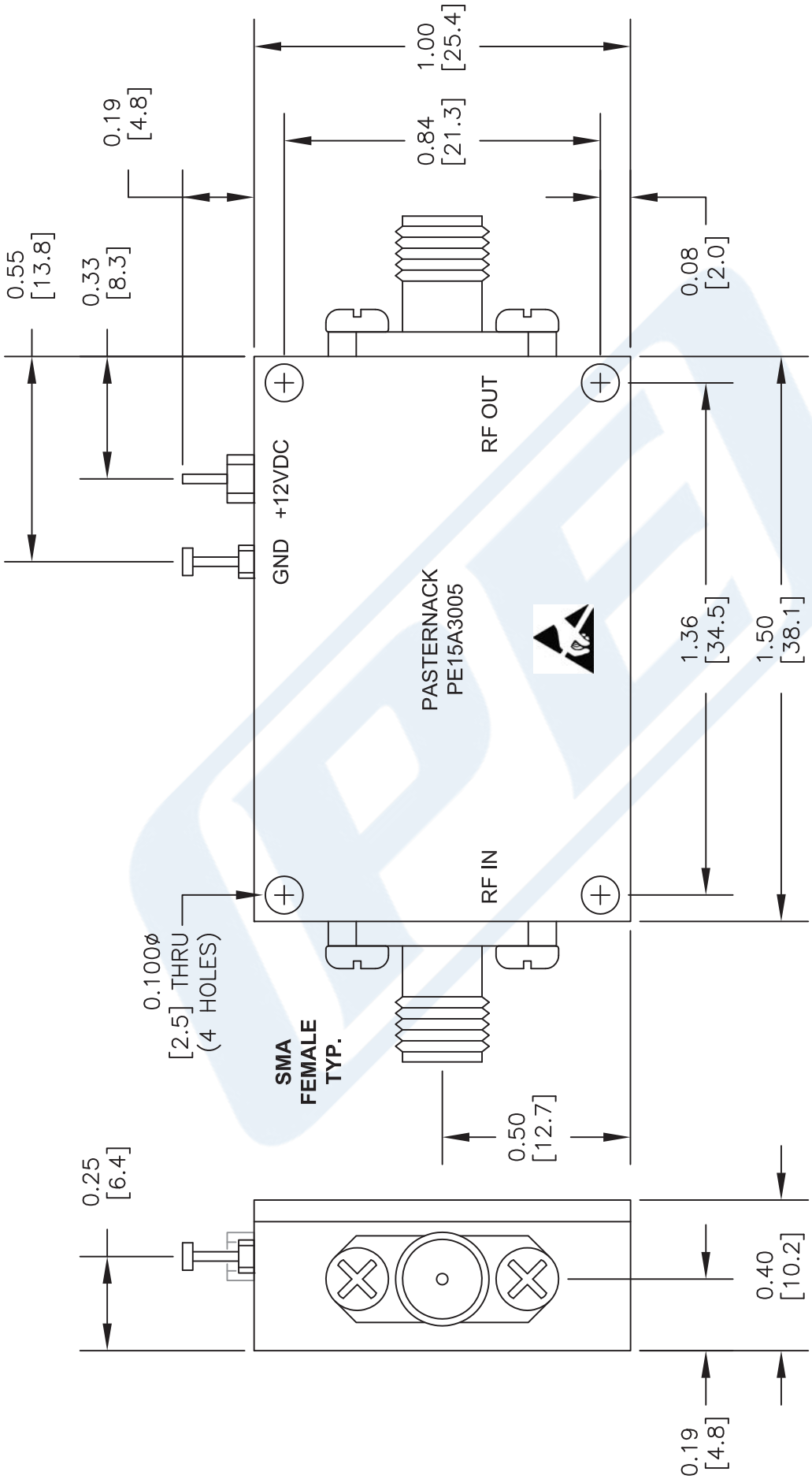
PE15A3005 CAD Drawing

25 dBm P1dB, 500 MHz to 10 GHz, Medium Power Broadband Amplifier, 32 dB Gain, 33 dBm IP3, 3 dB NF, SMA



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].

CAD FILE	041714	SCALE N/A	SIZE A	2233

DWG TITLE: **PE15A3005**

FSCM NO. 53919

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