



900 mW P1dB, 10 MHz to 6 GHz, Medium Power
Broadband Amplifier, 24 dB Gain, 5 dB NF, SMA

TECHNICAL DATA SHEET

PE15A4032

The PE15A4032 two stage amplifier operates across a wide frequency range from 10 MHz to 6 GHz. The design utilizes GaAs PHEMT MMIC technology for high efficiency and high linearity. Typical performance includes 24 dB of small signal gain, +42 dBm output IP3, and up to +30 dBm of Saturated Power. The design exhibits a very flat gain response across a wide frequency band. Input/output ports are matched for 50 ohms and are DC blocked. The design also incorporates integrated bias sequencing circuitry and voltage regulators to allow for flexible biasing for both the negative and positive voltage supplies. The drop-in package is hermetically sealed with field replaceable SMA connectors. And for added confidence, this rugged package assembly is designed to meet MIL-STD-883 test conditions for Hermeticity and Temperature Cycle.

Features

- Driver Amplifier
- Wide Frequency Band
- GaAs PHEMT MMIC Technology
- Spurious-Free Operation
- Gain 13 dB
- High Output IP3 +40 dBm
- Saturated Output Power up to + 30 dBm typical
- Regulated Supply and Bias Sequencing
- Hermetically Sealed Module
- Mil Spec Compliant
- Field Replaceable SMA Connectors
- -55°C to +85°C Operating Temperature

Applications

- Electronic Warfare
- Electronic Countermeasures
- Microwave Radio
- VSAT
- Radar
- Fiber Optic
- Space Systems
- Test Instrumentation
- Telecom Infrastructure

Electrical Specifications (TA= 25°C, VDC1 = 15 Vdc, VDC2 = -5 Vdc)

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.01		6	GHz
Gain		24		dB
Output at 1 dB Compression Point		+29.5		dBm
Noise Figure		5		dB
Operating DC Voltage 1		15		Volts
Operating DC Voltage 2		-5		Volts
Operating Temperature Range (OTR)	-55		+85	°C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [900 mW P1dB, 10 MHz to 6 GHz, Medium Power Broadband Amplifier, 24 dB Gain, 5 dB NF, SMA PE15A4032](#)



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Performance by Frequency

Description	Min.	Typ.	Max.	Units
Frequency Range		0.01 - 6		GHz
Gain	21	24		dB
Gain Flatness		0.75		dB
Gain Variation Over Temperature		0.044		dB/ °C
Input Return Loss		15		dB
Output Return Loss		18		dB
Output Power For 1 dB Compression (P1dB)	27.5	29.5		dBm
Saturated Output Power (Psat)		30		dBm
Output Third Order Intercept (IP3)		42		dBm
Noise Figure		5		dB
Supply Current (+15V)		740	800	mA
Supply Current (-5V)		5		mA

Mechanical Specifications

Size

Length	2.305 in [58.55 mm]
Width	2.6 in [66.04 mm]
Height	0.54 in [13.72 mm]
Weight	0.305 lbs [138.35 g]

Connector Option
Input Connector
Output Connector

Field Replaceable
SMA Female
SMA Female

Environmental Specifications

Temperature

Operating Range	-55 to +85 deg C
Storage Range	-65 to +150 deg C

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Temperature Cycling
Hermetic Seal

ESD Sensitivity



MIL-STD-883, Method 101C, Cond B
Gross Leak MIL-STD-883 Method 1014C1/Fine Leak
MIL-STD-883, Method 1014A2, 5 x 10-8 atm cc
ESD Sensitive Material, Transport material in Approved
ESD bags. Handle only in ESD Workstation.

Compliance Certifications (visit www.Pasternack.com for current document)

RoHS Compliant

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

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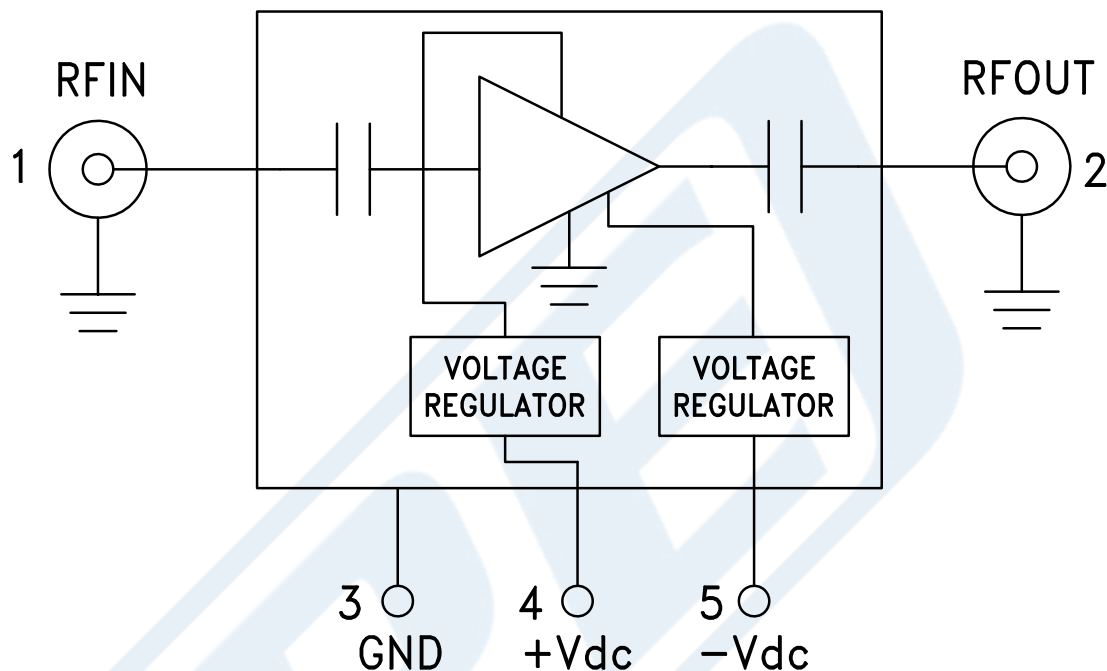


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Functional Block Diagram



900 mW P1dB, 10 MHz to 6 GHz, Medium Power Broadband Amplifier, 24 dB Gain, 5 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.

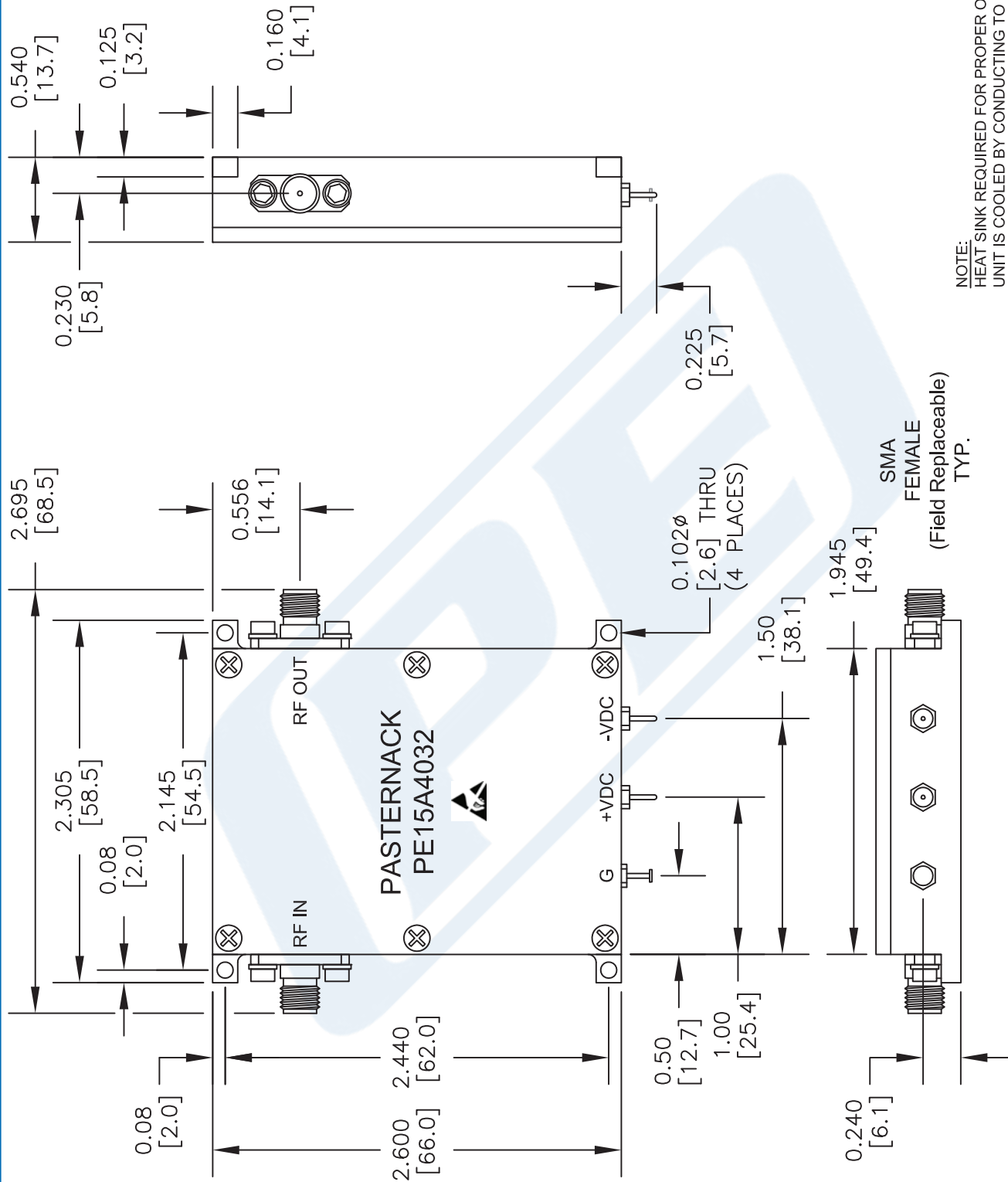
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE15A4032 CAD Drawing

900 mW P1dB, 10 MHz to 6 GHz, Medium Power Broadband
Amplifier, 24 dB Gain, 5 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].

DWG TITLE

PE15A4032

PE PASTERNAK
THE ENGINEER'S RF SOURCE

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CAD FILE 051816

SCALE N/A

SIZE A

2233