



47 dB Gain, 20 Watt, 3.1 GHz to 3.5 GHz, High Power High Gain Amplifier, 3.5 dB NF, SMA

TECHNICAL DATA SHEET

PE15A5003

PE15A5003 is a 20W S-band high gain, high power coaxial amplifier operating in the 3.1 to 3.5 GHz frequency range. The amplifier offers 42 dBm minimum of saturated output power and high 47 dB typical small signal gain with the gain flatness of ± 1.5 dB. This excellent technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. The high power amplifier requires typically a +12V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation, bias sequencing, and reverse bias protection for added reliability. The amplifier operates over the temperature range of -10°C and $+50^{\circ}\text{C}$.

Features

- 3.1 GHz to 3.5 GHz Frequency Range
- Saturated Output Power: 40 dBm min
- Small Signal Gain: 45 dB typical
- Gain Flatness: ± 1.5 dB max
- Noise Figure: 3.5 dB
- 50 Ohms Input and Output Matched
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

Applications

- S-band Military Radar
- Commercial Air Traffic Control
- Radar & Communication Systems
- High Gain Driver Power Amplifier
- High Gain Output Power Amplifier

Electrical Specifications (TA = $+25^{\circ}\text{C}$, DC Voltage = 12Volts, DC Current = 9,000mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	3.1		3.5	GHz
Small Signal Gain	43	47		dB
Gain Flatness			± 1.5	dB
Output Power @ Pin = -3dBm	+42			dBm
Output at 1 dB Compression Point	+42	+43		dBm
Noise Figure			3.5	dB
Input VSWR		1.7:1	2:1	
Output VSWR		1.7:1	2:1	
Operating DC Voltage		12		Volts
Operating DC Current		9,000		mA
Operating Temperature Range	-10		+50	$^{\circ}\text{C}$
Fault Indication	RF Input > -3dBm; RF Output < +40dBm			

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-10 to +50	$^{\circ}\text{C}$
Storage Temperature	-55 to +85	$^{\circ}\text{C}$



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

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [47 dB Gain, 20 Watt, 3.1 GHz to 3.5 GHz, High Power High Gain Amplifier, 3.5 dB NF, SMA PE15A5003](#)

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RoHS Compliant

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.

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

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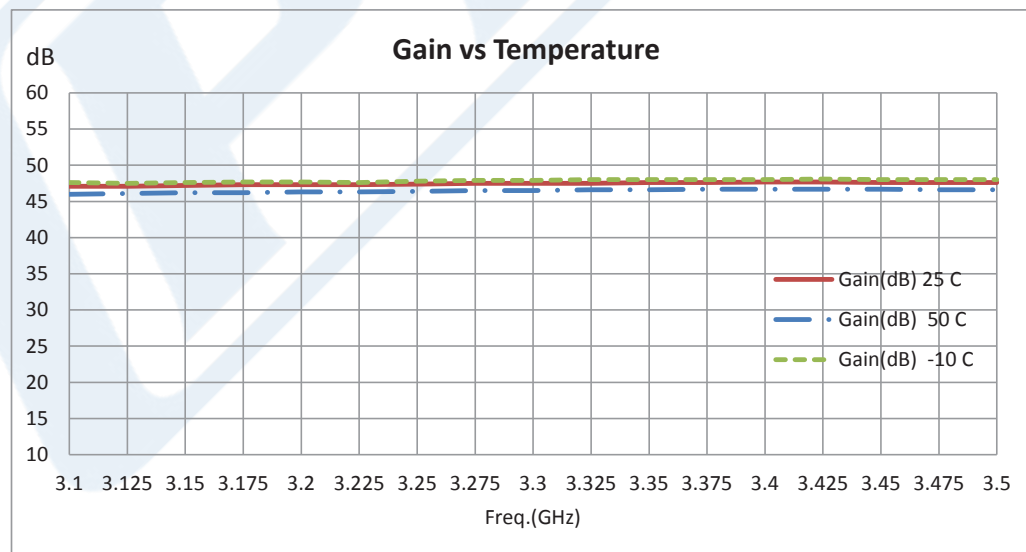
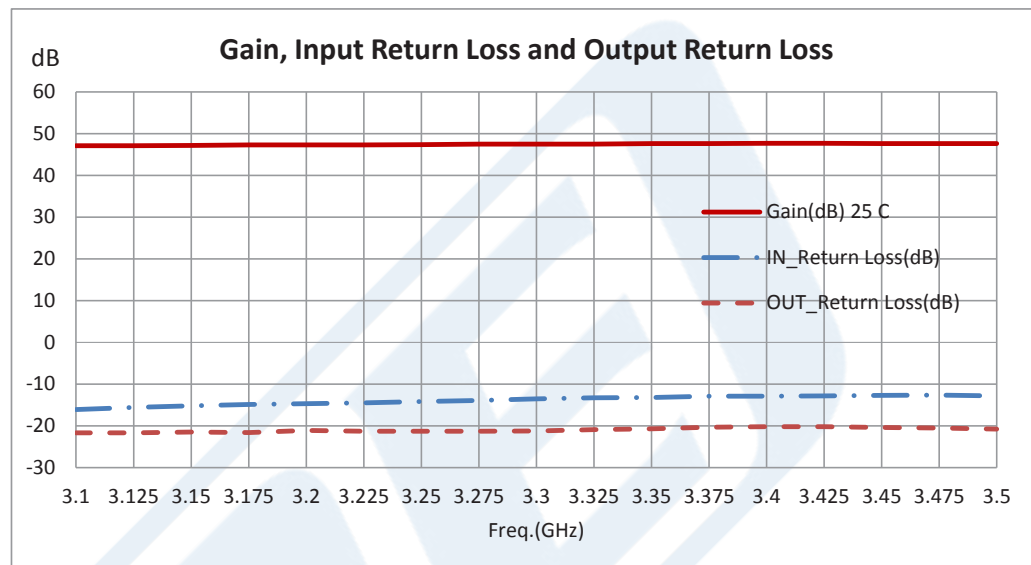


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Power Data



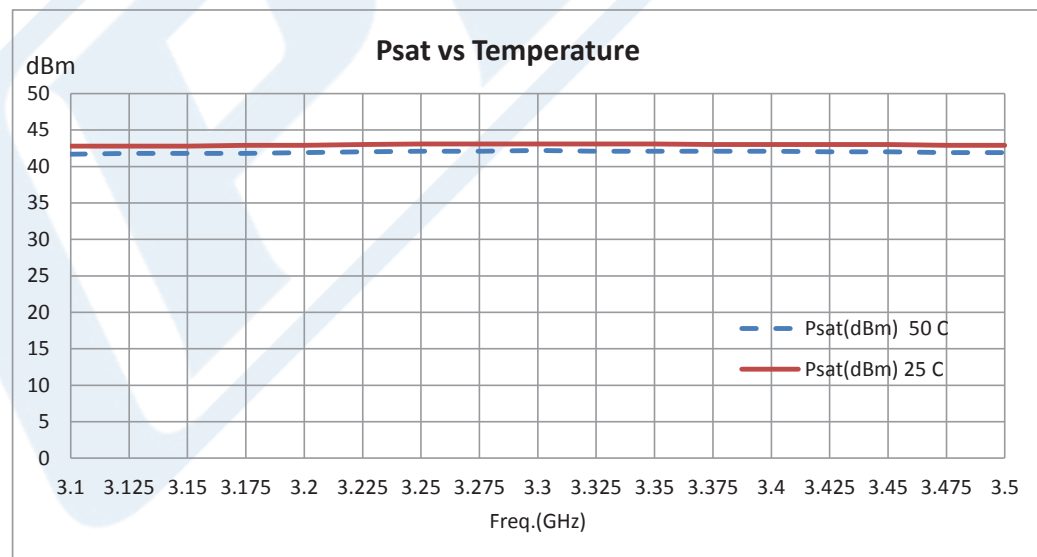
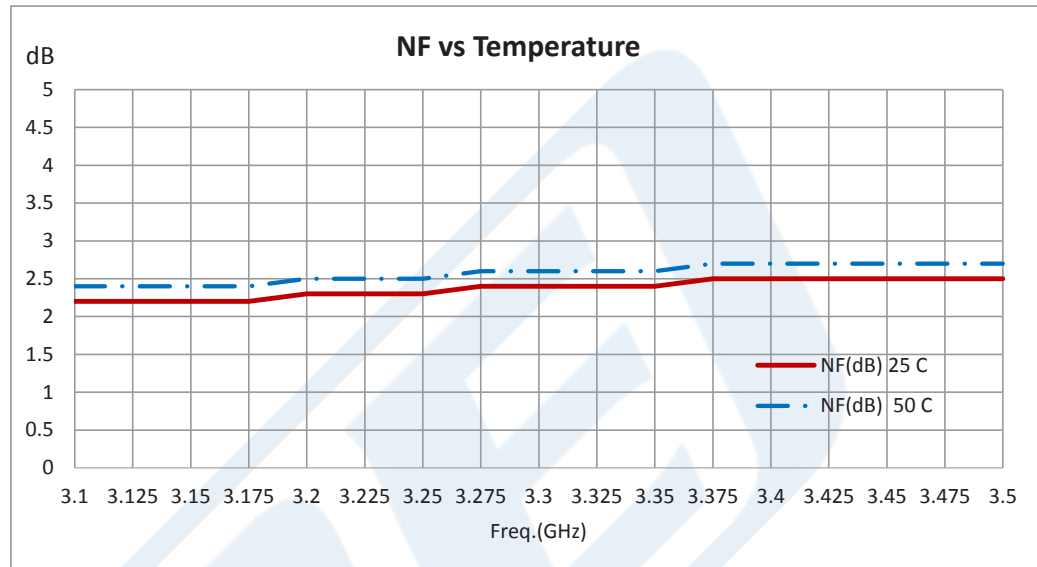
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47 dB Gain, 20 Watt, 3.1 GHz to 3.5 GHz, High Power High Gain Amplifier, 3.5 dB NF, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

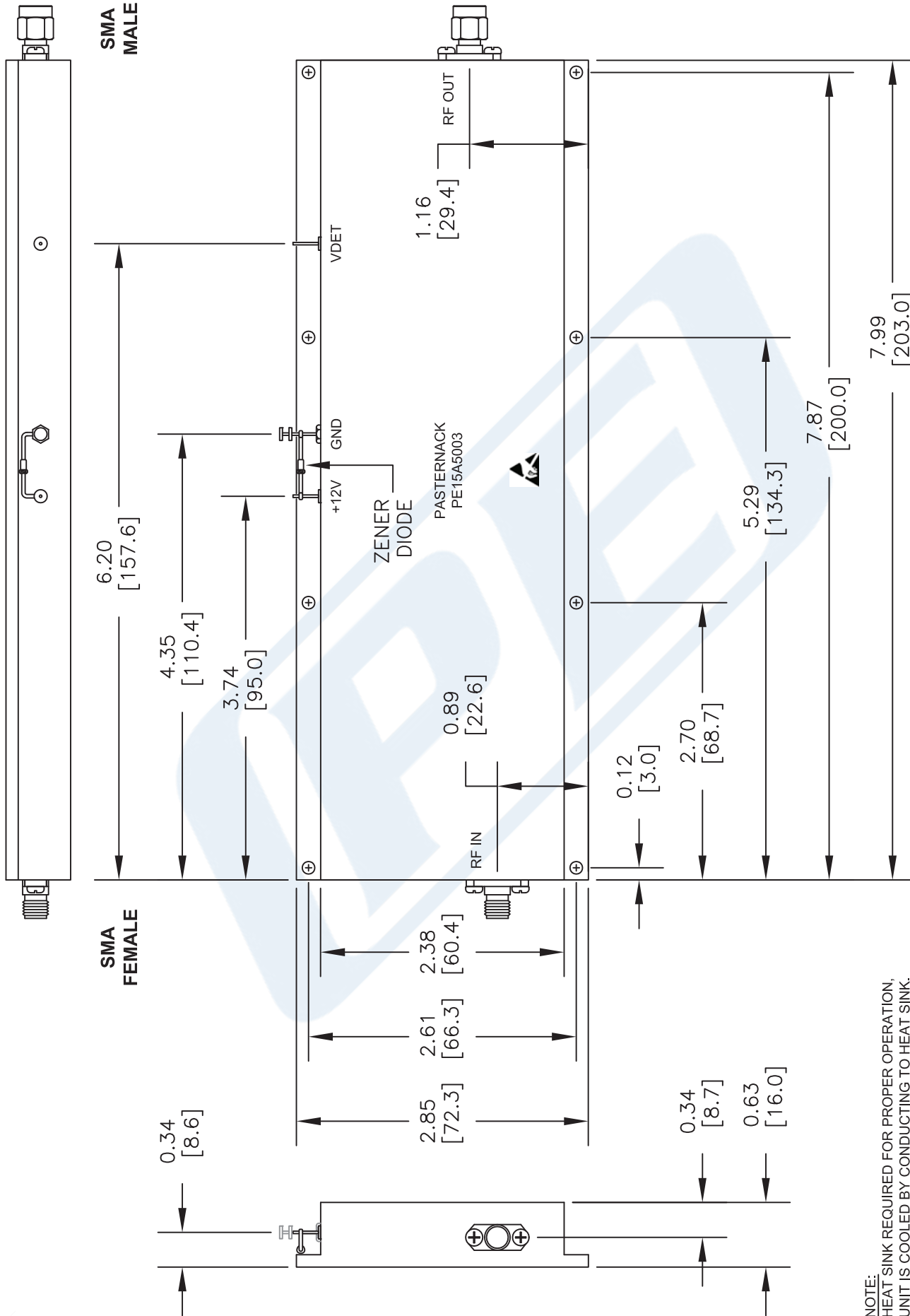
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URL: <http://www.pasternack.com/47-db-gain-3.5-ghz-high-power-high-gain-amplifier-sma-pe15a5003-p.aspx>

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PE15A5003 CAD Drawing

47 dB Gain, 20 Watt, 3.1 GHz to 3.5 GHz, High Power
High Gain Amplifier, 3.5 dB NF, SMA



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

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

DWG TITLE

PE15A5003

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].

FSCM NO. 53919

CAD FILE 032514

SCALE N/A

SIZE A

2233