



2 dB NF, 20 mW, 4 GHz to 8 GHz, Low
Noise Amplifier, 38 dB Gain, SMA

TECHNICAL DATA SHEET

PE15A1002

PE151002 is a C-band coaxial low noise amplifier operating in the 4 to 8 GHz frequency range. The amplifier offers 2 dB noise figure, 13 dBm minimum of saturated power and high 38 dB minimal small signal gain with the excellent gain flatness of ± 1.0 dB max. This technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. The low noise 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 -40°C and +85°C.

Features

- 4 GHz to 8 GHz Frequency Range
- Psat: 13 dBm min
- High Small Signal Gain: 38 dB
- Gain Flatness: ± 1.0 dB max
- Noise Figure: 2.2 dB
- 50 Ohms Input and Output Matched
- -40 to 85°C Operating Temperature
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

Applications

- Laboratory Applications
- R&D Labs
- Radar Systems
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Microwave Radio Systems
- Satellite Communication
- Low Noise Amplifier
- General Purpose Amplification
- Gain Block

Electrical Specifications (TA = +25°C, DC Voltage = 12Volts, DC Current = 250mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	4		8	GHz
Small Signal Gain	38			dB
Minimum Psat	+13			dBm
Noise Figure		2		dB
Input VSWR			2:1	
Output VSWR			2:1	
Operating DC Voltage	11	12	13	Volts
Operating DC Current			250	mA
Operating Temperature Range	-40		+85	°C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [2 dB NF, 20 mW, 4 GHz to 8 GHz, Low Noise Amplifier, 38 dB Gain, SMA PE15A1002](#)



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Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-40 to +85	°C
Storage Temperature	-55 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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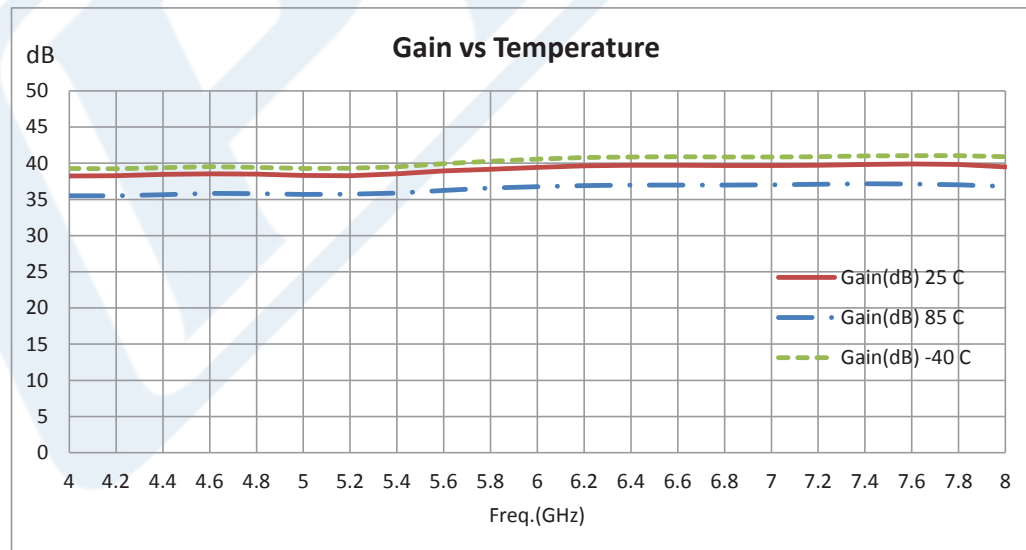
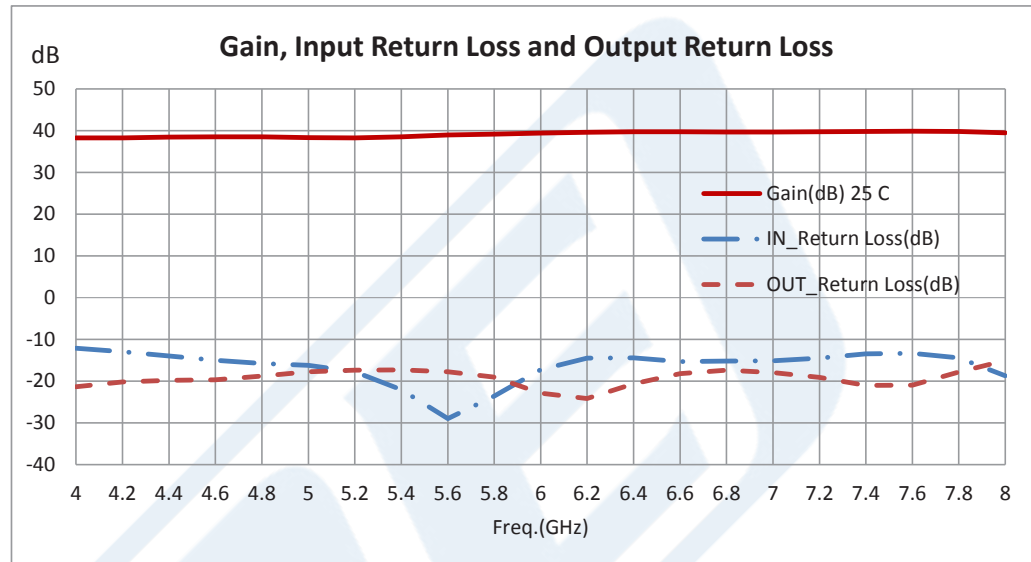


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Power Data



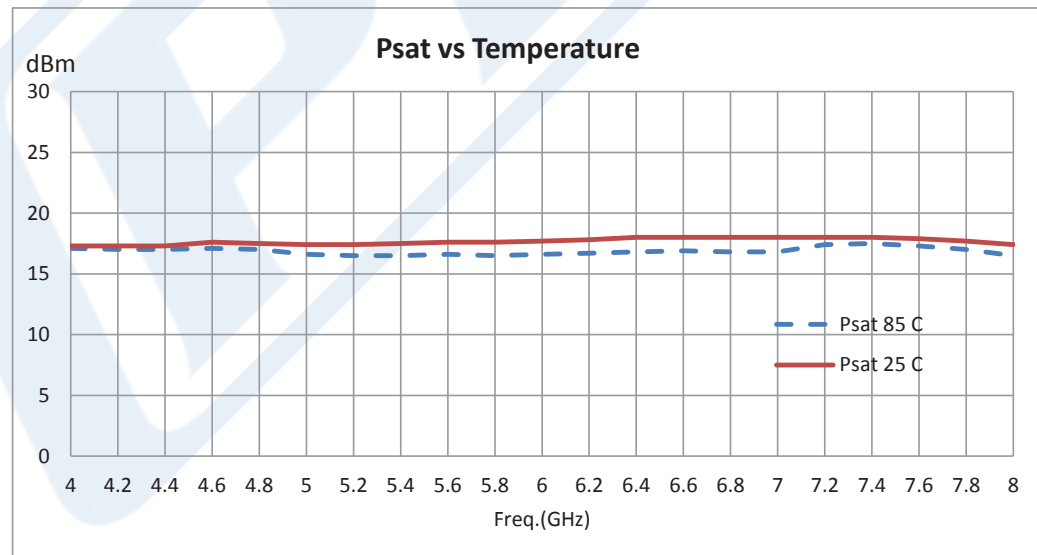
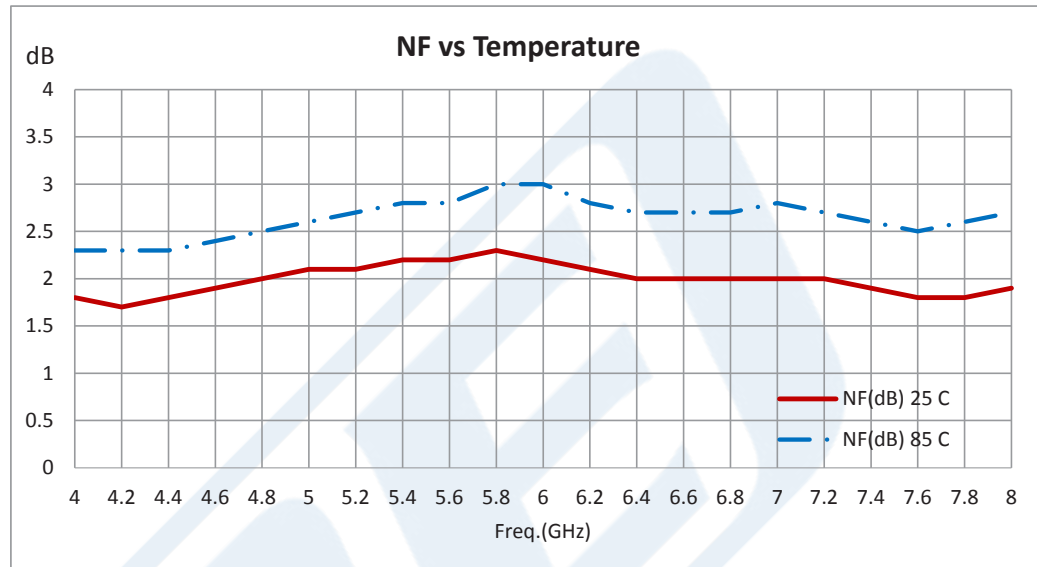
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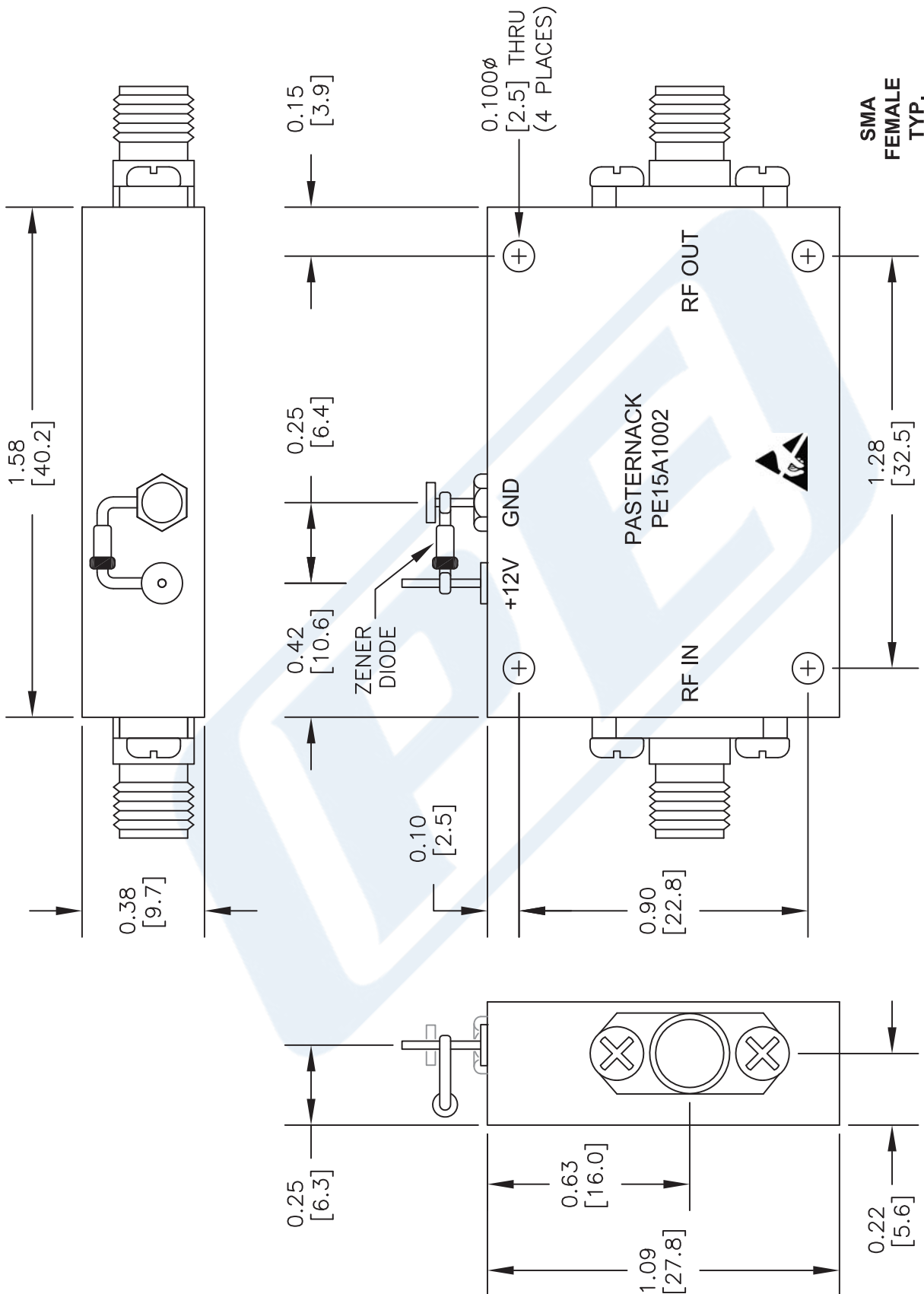
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PASTERNAK ENTERPRISES, INC.
UL
REGISTERED FIRM
CERTIFICATE NO. 1005857-0000
ISSUED: 01-01-2008

PE15A1002 CAD Drawing

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DWG TITLE

PE15A1002

- 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].

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FSCM NO. 53919

CAD FILE 041414

SIZE A

2233