



1.5 dB NF, 10 mW, 1 GHz to 2 GHz, Low
Noise Amplifier, 35 dB Gain, SMA

TECHNICAL DATA SHEET

PE15A1000

PE151000 is a L-band coaxial low noise amplifier operating in the 1 to 2 GHz frequency range. The amplifier offers 1.5 dB noise figure, 10 dBm minimum of saturated power and high 35 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 $+85^{\circ}\text{C}$.

Features

- 1 GHz to 2 GHz Frequency Range
- Psat: 10 dBm min
- High Small Signal Gain: 35 dB
- Gain Flatness: ± 1.0 dB max
- Noise Figure: 1.5 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
- Satellite Communications
- Wireless Communications
- Microwave Radio Systems
- Low Noise Amplifier
- General Purpose Amplification
- Gain Block

Electrical Specifications (TA = $+25^{\circ}\text{C}$, DC Voltage = 12Volts, DC Current = 200mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	1		2	GHz
Small Signal Gain	35			dB
Minimum Psat	+10			dBm
Noise Figure		1.5		dB
Input VSWR			2:1	
Output VSWR			2:1	
Operating DC Voltage	11	12	13	Volts
Operating DC Current			200	mA
Operating Temperature Range	-40		+85	$^{\circ}\text{C}$

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [1.5 dB NF, 10 mW, 1 GHz to 2 GHz, Low Noise Amplifier, 35 dB Gain, SMA PE15A1000](#)



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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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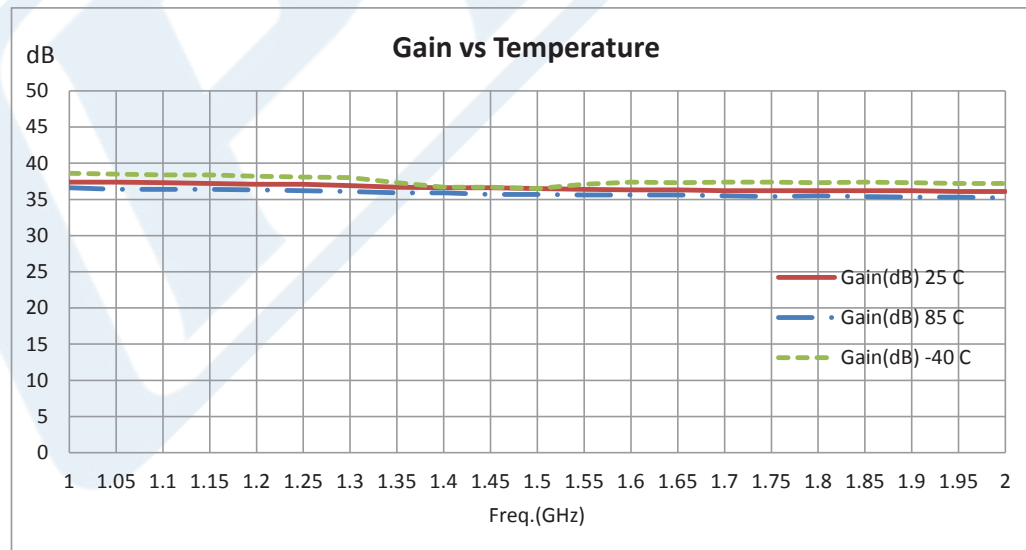
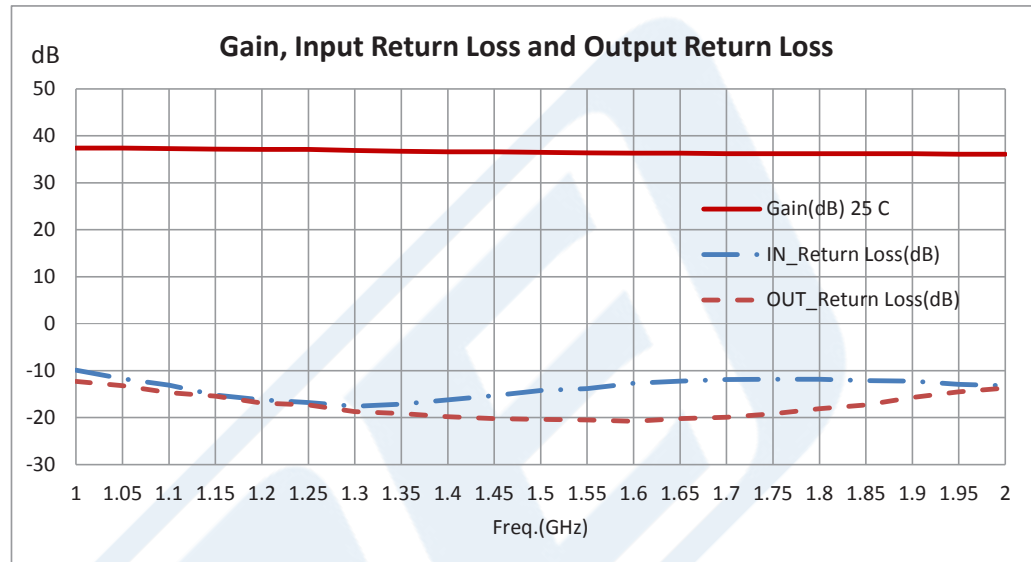


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Power Data



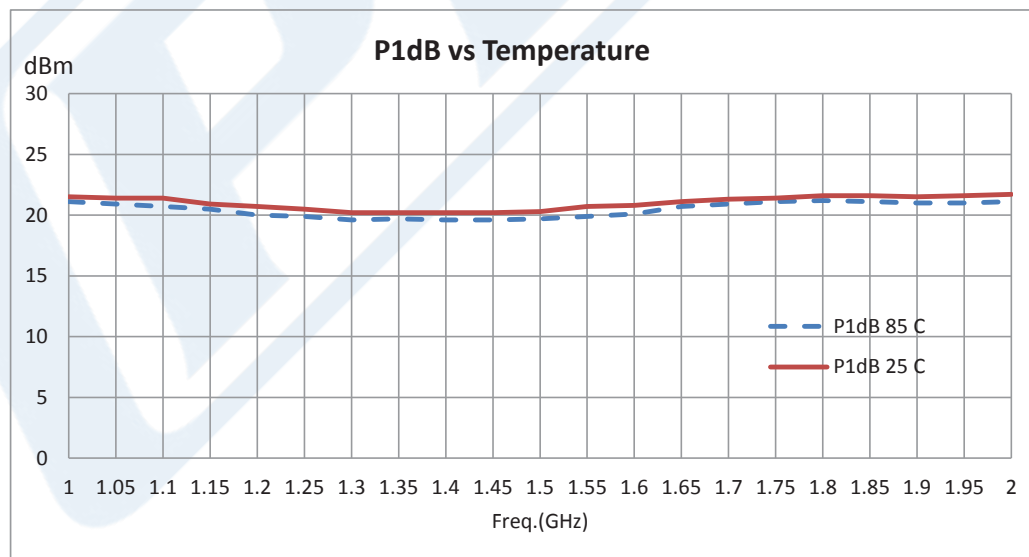
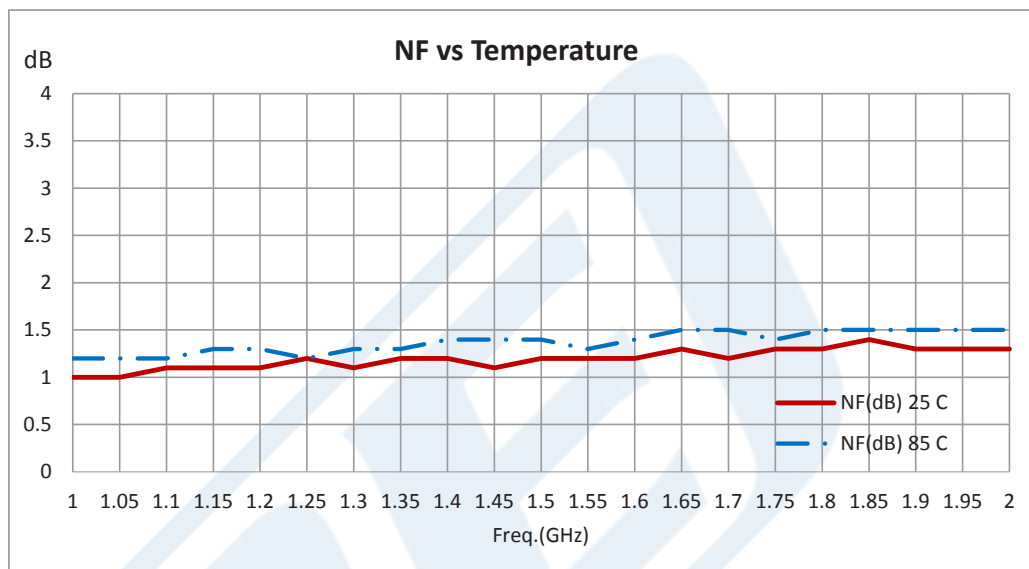
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1.5 dB NF, 10 mW, 1 GHz to 2 GHz, Low Noise Amplifier, 35 dB Gain, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

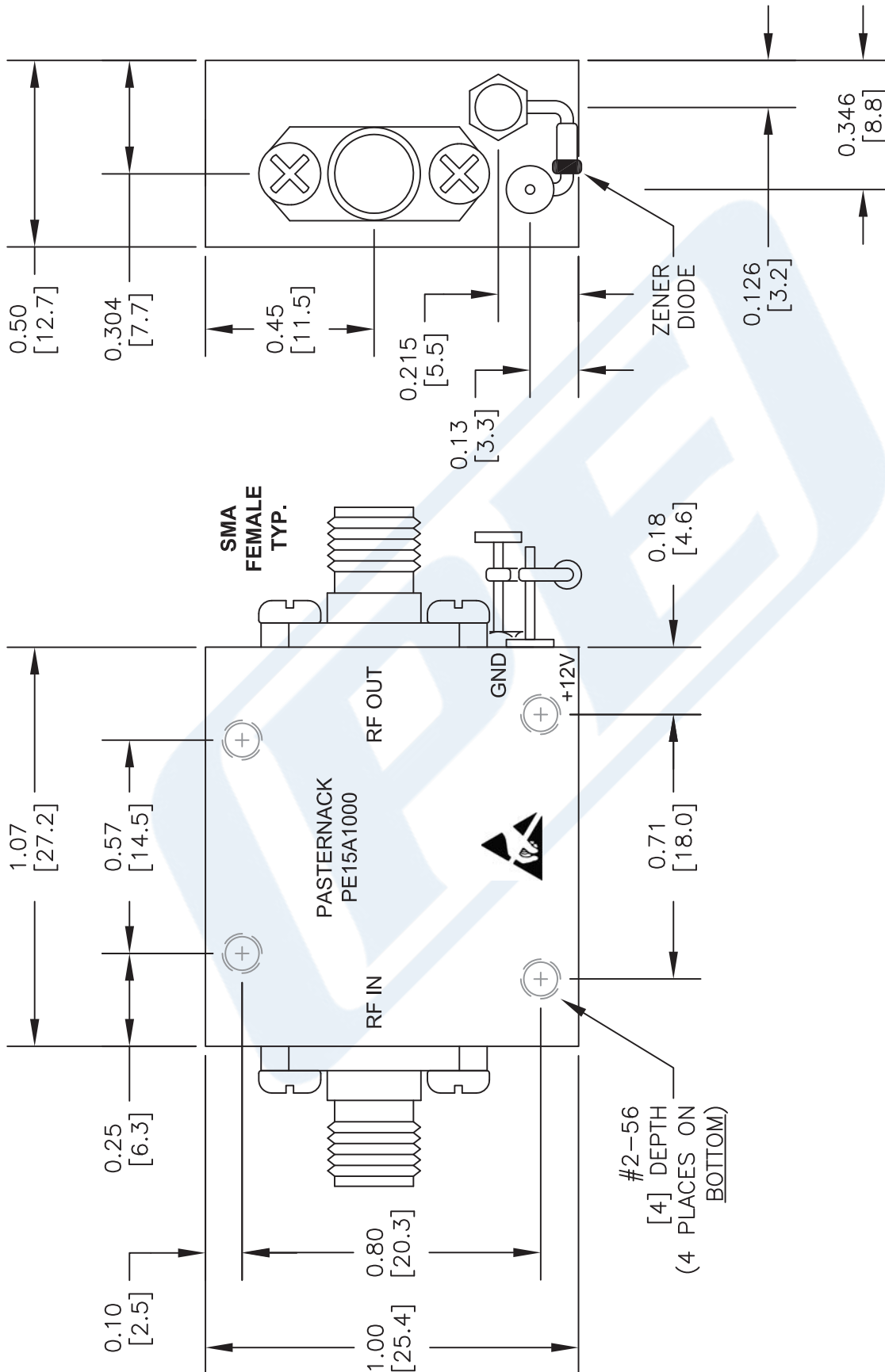
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PE15A1000 CAD Drawing

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DWG TITLE

PE15A1000

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

SCALE N/A

SIZE A

2233