



45 dB Gain, 10 Watt, 3.1 GHz to 3.5 GHz, High
Power High Gain Amplifier, 4 dB NF, SMA

TECHNICAL DATA SHEET

PE15A5002

PE15A5002 is a 10W S-band high gain, high power coaxial amplifier operating in the 3.1 to 3.5 GHz frequency range. The amplifier offers 40 dBm of saturated output power and high 45 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 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 +60°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: 4 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°C, DC Voltage = 15Volts, DC Current = 5,000mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	3.1		3.5	GHz
Small Signal Gain	43	45		dB
Gain Flatness			± 1.5	dB
Saturation Output Power	+40			dBm
Noise Figure		4		dB
Input VSWR		1.7:1	2:1	
Output VSWR		1.7:1	2:1	
Operating DC Voltage	12		15	Volts
Operating DC Current			5,000	mA
Operating Temperature Range	-10		+60	°C

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-10 to +60	°C
Storage Temperature	-55 to +85	°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: [45 dB Gain, 10 Watt, 3.1 GHz to 3.5 GHz, High Power High Gain Amplifier, 4 dB NF, SMA PE15A5002](#)

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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.

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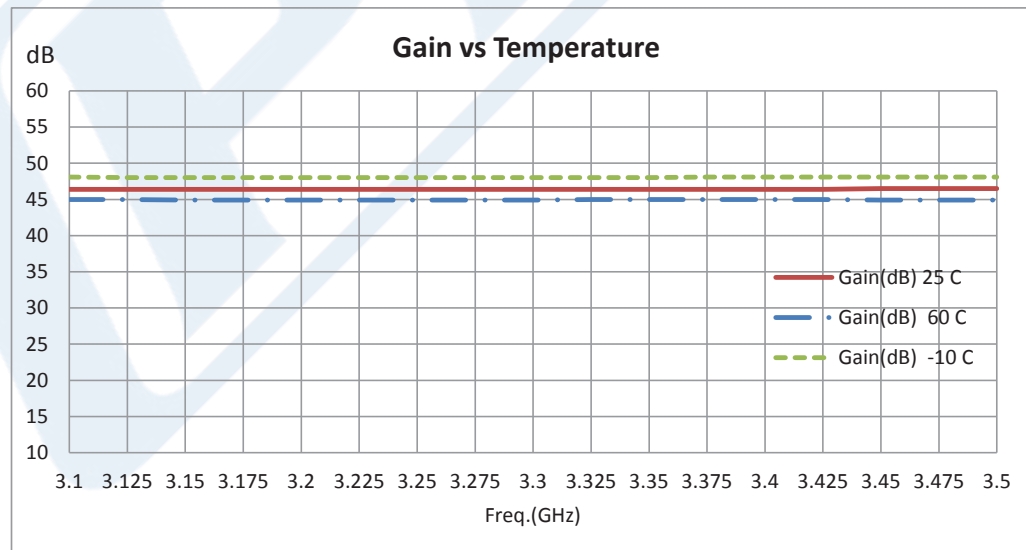
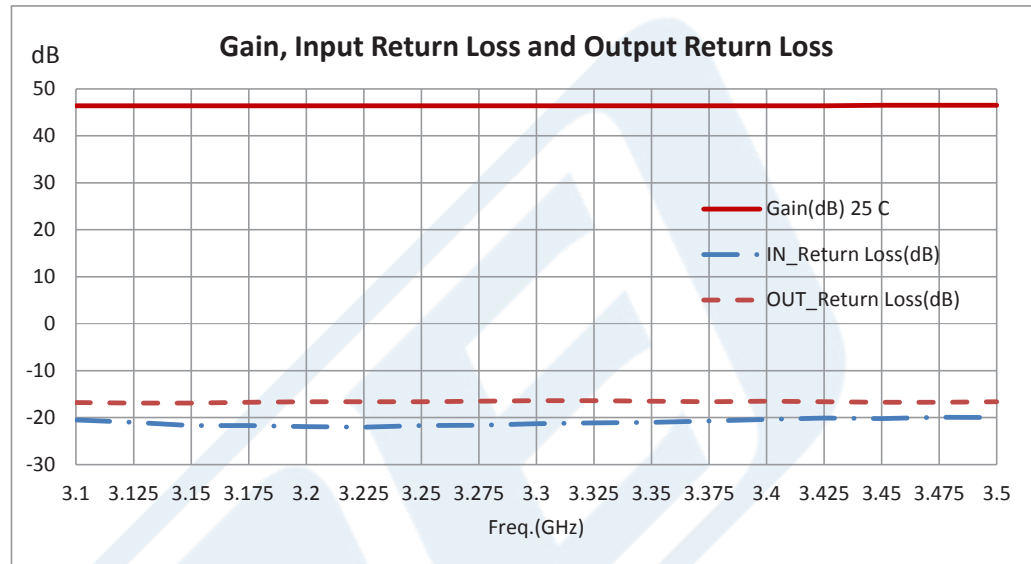


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Power Data



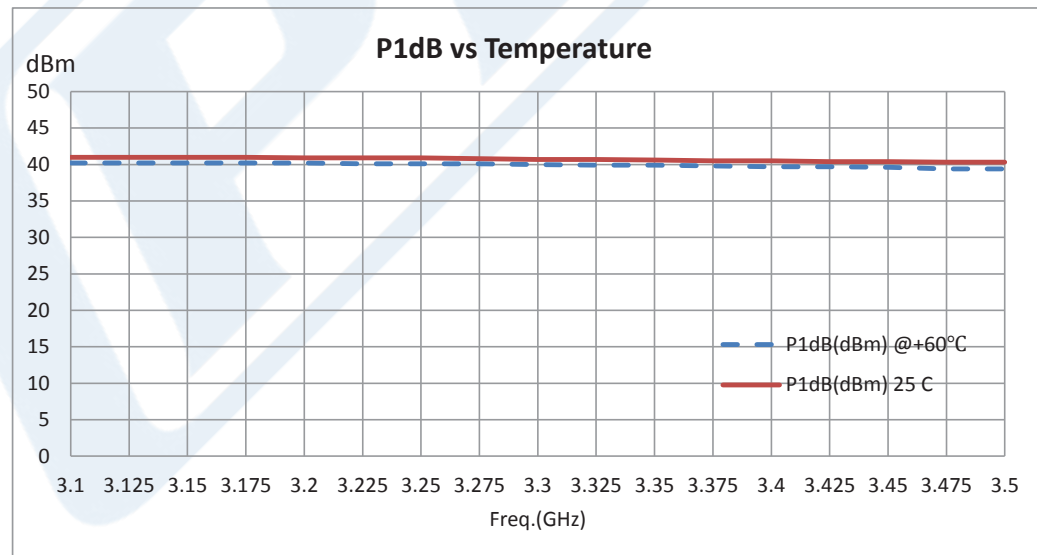
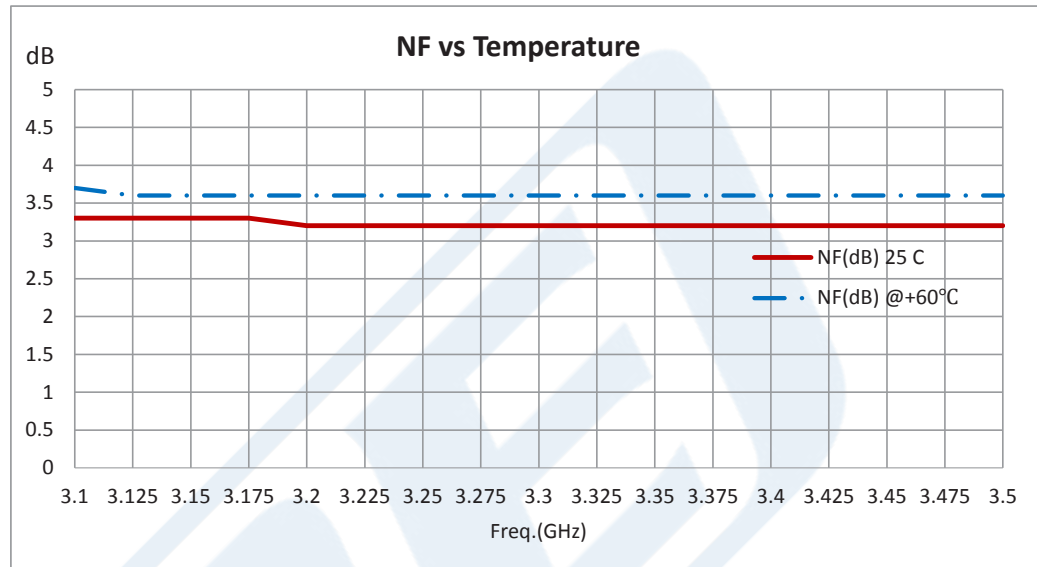
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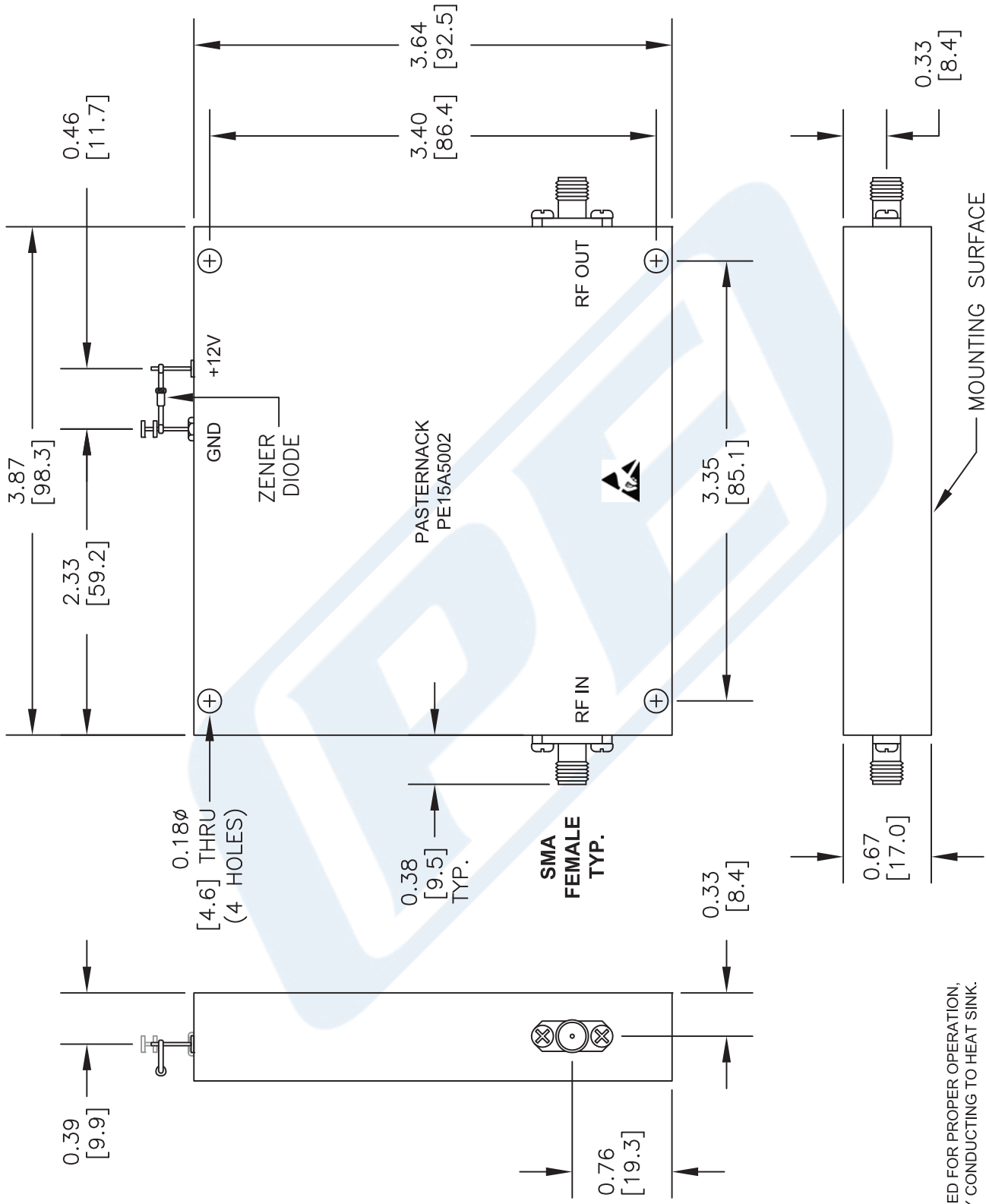


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PE15A5002

PE15A5002 CAD Drawing

45 dB Gain, 10 Watt, 3.1 GHz to 3.5 GHz, High Power High Gain Amplifier, 4 dB NF, SMA



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

DWG TITLE

PE15A5002

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 032514

SCALE N/A

SIZE A

150