



50 dB Gain, 50 Watt Psat, 1 GHz to 3 GHz, High Power High Gain Amplifier, GaN, 10 dB NF, SMA

TECHNICAL DATA SHEET

PE15A5026

The PE15A5026 is a 50W high gain power coaxial amplifier operating in the 1 to 3 GHz frequency range. The amplifier offers 47 dBm typ of saturated power and 50 dB minimum small signal gain with gain flatness of ± 1.25 dB typical. This excellent technical performance is achieved through the use of advanced GaN devices. The amplifier requires typically a +28V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation, bias sequencing, DC On/Off TTL Logic control, current monitoring and over temp shutdown at +90°C for added reliability. The amplifier operates over the temperature range of -40°C and +85°C. The RF Input/Output Connectors are SMA Female. Along with a 15 Pin Micro-D Female Control Socket.

Features

- GaN High Power Amplifier
- 1 GHz to 3 GHz Frequency Range
- Psat 46 dBm min
- Small Signal Gain: 50 dB min
- Gain Flatness ± 1.25 dB typical
- CW Operation
- 50 Ohms Input and Output Matched
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Current Monitoring
- Mismatch Handling 5.0:1 max
- Over Temp Shutdown

Applications

- Military Radio
- Communication Systems
- High Gain Driver Power Amplifier
- High Gain Output Power Amplifier

Electrical Specifications (TA = +25°C, DC Voltage = 45Volts, DC Current = 4,000mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	1		3	GHz
Small Signal Gain	50			dB
Psat	+46	+47		dBm
Efficiency (PAE)		25		%
Harmonics @50 Watts		-15		dBc
Noise Figure			10	dB
Spurious @50 Watts		-70		dBc
Input VSWR		2:1		
Output VSWR		2:1		
TTL Control	"1": Off, "0": On (Blanking), Enable: 0V, Disable: 5V			
Operating DC Voltage		45		Volts
Operating DC Current		4,000		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: [50 dB Gain, 50 Watt Psat, 1 GHz to 3 GHz, High Power High Gain Amplifier, GaN, 10 dB NF, SMA PE15A5026](#)



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Mechanical Specifications

Size

Length	2.5 in [63.5 mm]
Width	2.75 in [69.85 mm]
Height	0.45 in [11.43 mm]

Input Connector	SMA Female
Output Connector	SMA Female
Cooling	HEATSINK REQUIRED use PE15A5990

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-40 to +85 deg C

Humidity	IAW MIL-STD-810F, up to 95% Non-Condensing
Shock	IAW MIL-STD-202G method 214, condition C
Vibration	IAW MIL-STD-810F, Method 514.5, Table
Altitude	up to 30,000 ft feet Above Sea Level
Salt Fog	5%, +35°C 96 hrs IAW MIL-STD- 810G method
Fungus	IAW MIL-STD-810G method 508.6

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

Not 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.
- Heat Sink Required for Proper Operation, Unit is cooled by conduction to heat sink.



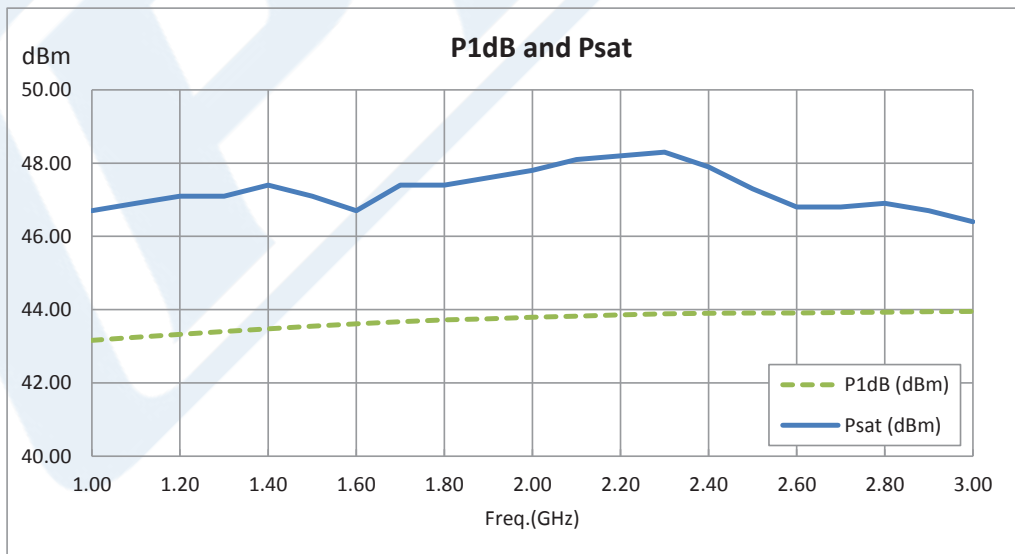
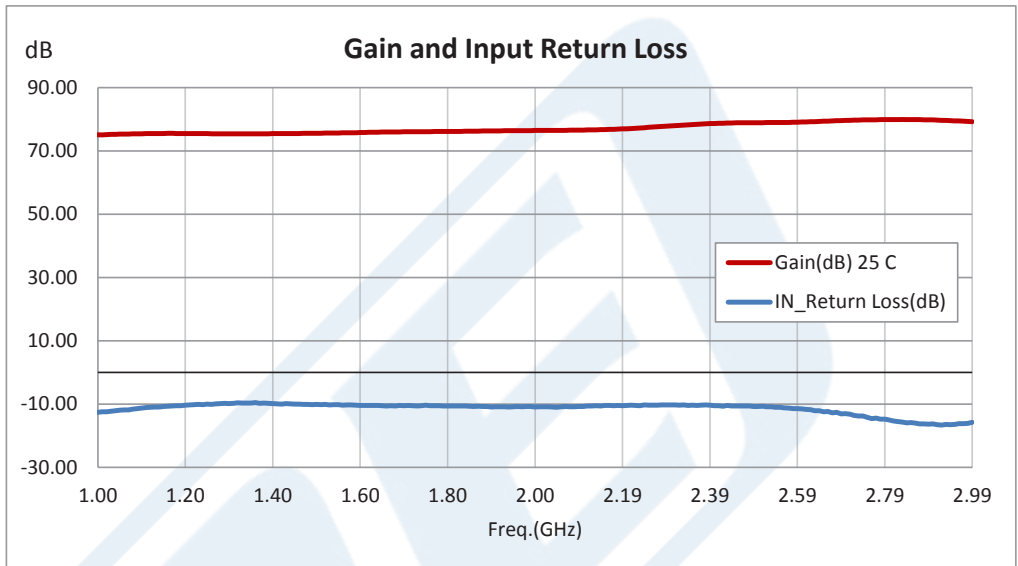
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Typical Performance Data



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50 dB Gain, 50 Watt Psat, 1 GHz to 3 GHz, High Power High Gain Amplifier, GaN, 10 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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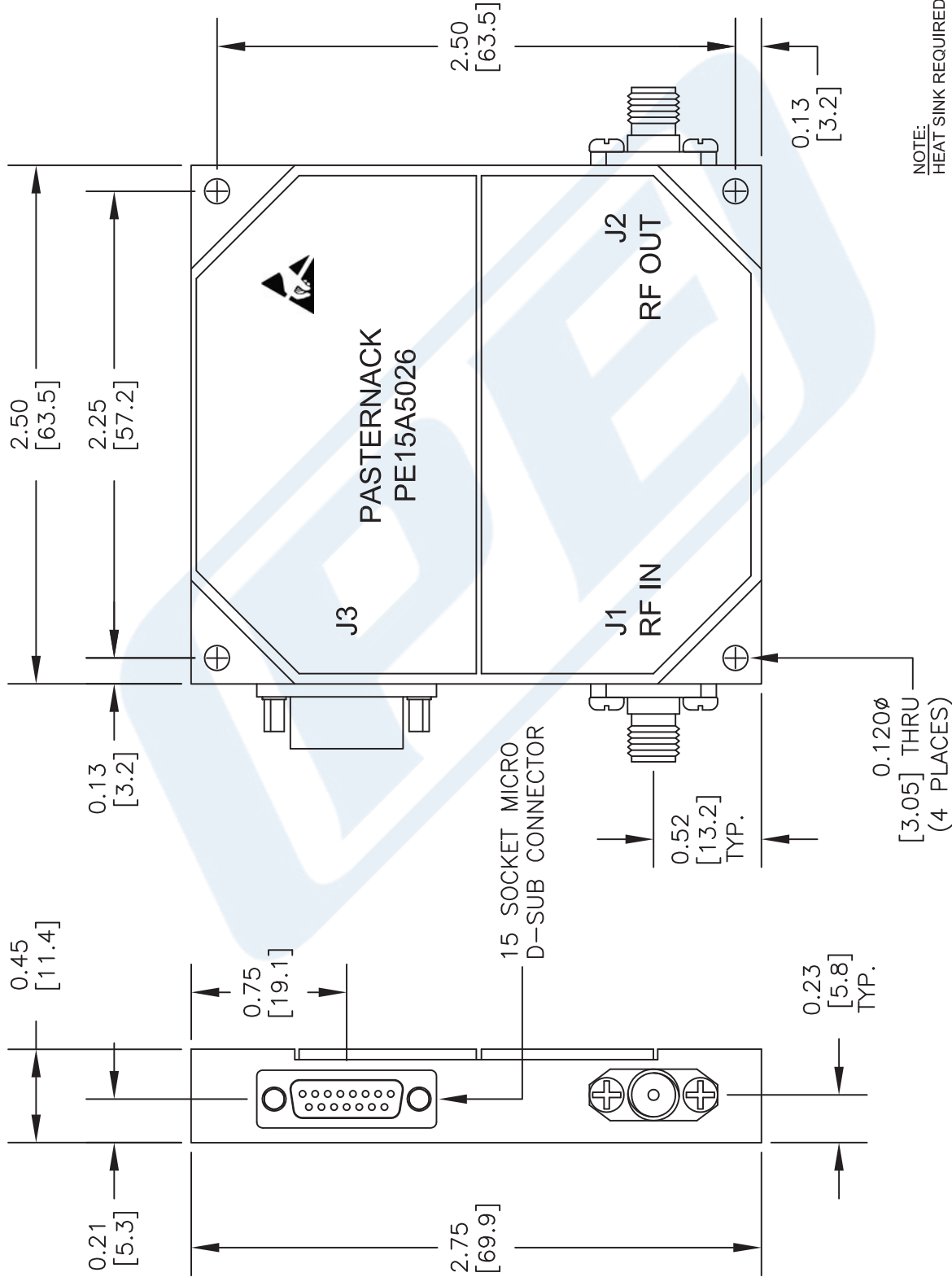
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PE15A5026 CAD Drawing

50 dB Gain, 50 Watt Psat, 1 GHz to 3 GHz, High Power
High Gain Amplifier, GaN, 10 dB NF, SMA

PIN	DESCRIPTION
1	+28V
2	+28V
3	GND
4	GND
5	N/C
6	N/C
7	OVER-CURRENT BIT
8	BLANKING TTL
9	+28V
10	+28V
11	GND
12	GND
13	N/C
14	N/C
15	OVER-TEMP BIT



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

PE15A5026

PE PASTERNAK
THE ENGINEER'S RF SOURCE

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FSCM NO. 53919

CAD FILE 080614

SCALE N/A

SIZE A

150