



High Power Bi-Directional Amplifier, 5/20 Watts, 2.4 GHz to 2.5 GHz, 1 us switching, 20 dB Gain, SMA

TECHNICAL DATA SHEET

PE15B5000

PE15B5000 is an S-Band bi-directional module that delivers high quality TX signals while amplifying the RX signal with an advanced LNA to produce the highest possible data rates. The amplifier operating in the 2.4 to 2.5 GHz frequency range and offers 5 Watts typ Power for 802.11g and 20 Watts typ Power for 802.11b. High efficiency devices and advanced switching technology meets the requirements of some of the most demanding RF radio systems. The module provides 20 dB typical small signal gain with the gain flatness of ± 0.5 dB typical. The connectorized SMA module is unconditionally stable, requires typically a +28V DC and operates over the temperature range of -40°C and +80°C.

Features

- 2.4 GHz to 2.5 GHz Frequency Range
- 20 Watts typ Power for 802.11b
- 5 Watts typ Power for 802.11g
- Small Signal Gain: 20 dB min
- Gain Flatness: ± 0.5 typical
- 50 Ohms Input and Output Matched
- Unconditionally Stable

Applications

- L-band Military Radio
- Communication Systems
- High Gain Driver Power Amplifier
- High Gain Output Power Amplifier
- Unmanned Aerial Vehicles (UAV)
- Unmanned Ground Vehicles
- L and S Band Radar
- Commercial Air Traffic Control
- Weather and Earth Observation
- Satellites

Electrical Specifications (TA = +25°C, DC Voltage = 28Volts DC Current = 2,400mA)

Transmit

Description	Minimum	Typical	Maximum	Units
Frequency Range	2.4		2.5	GHz
Power for 802.11b		20		Watts
Power for 802.11g		5		Watts
Gain	19	20	21	dB
Gain Flatness		± 0.5	± 1.3	dB
Input Return Loss		-12		dB
Operating DC Voltage	24	28	30	Volts
Current Draw 802.11b		2,400		mA
Current Draw 802.11g		900		mA
Switching Time		1	2	uSec

Receive

Description	Minimum	Typical	Maximum	Units
1 dB Compression Point		+0		dBm
Gain		11		dB
Gain Flatness		± 0.5	± 1.3	dB
Input Return Loss		-10		dB
Noise Figure		2.5		dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [High Power Bi-Directional Amplifier, 5/20 Watts, 2.4 GHz to 2.5 GHz, 1 us switching, 20 dB Gain, SMA PE15B5000](#)



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Current Draw	50	70	mA
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Mechanical Specifications

Size

Length
Width
Height
Weight

3.33 in [84.58 mm]
2.69 in [68.33 mm]
0.69 in [17.53 mm]
0.812 lbs [368.32 g]

Environmental Specifications

Temperature

Operating Range
Storage Range

-40 to +80 deg C
-65 to +150 deg C

Altitude
Weatherproofing

0-30,000
IP 64 Rating

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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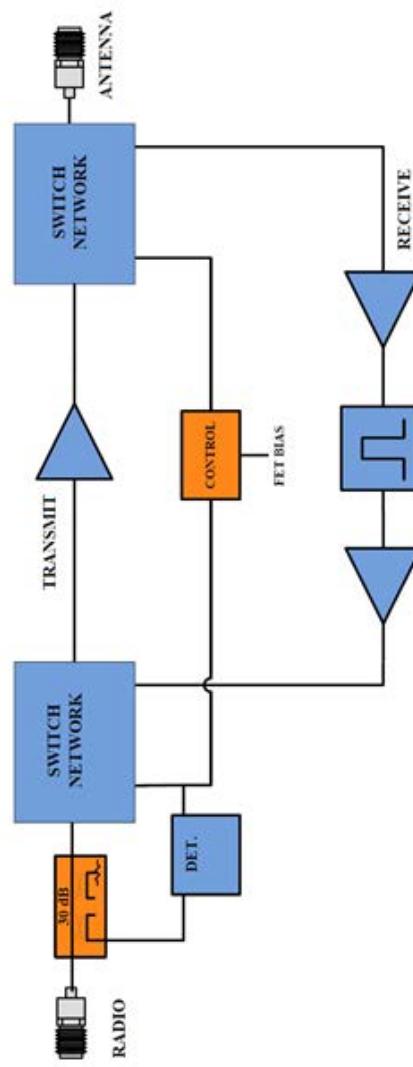


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Block Diagram



PE15B5000 Block Diagram

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Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623

Phone: (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451

Sales@Paternack.com • Techsupport@Paternack.com

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PE15B5000 REV 1.0

ISO 9001 : 2008 Registered



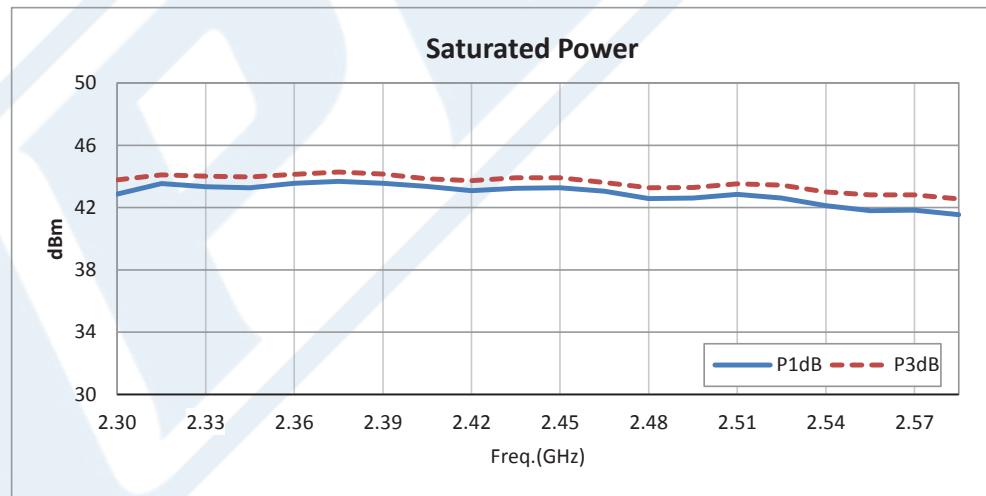
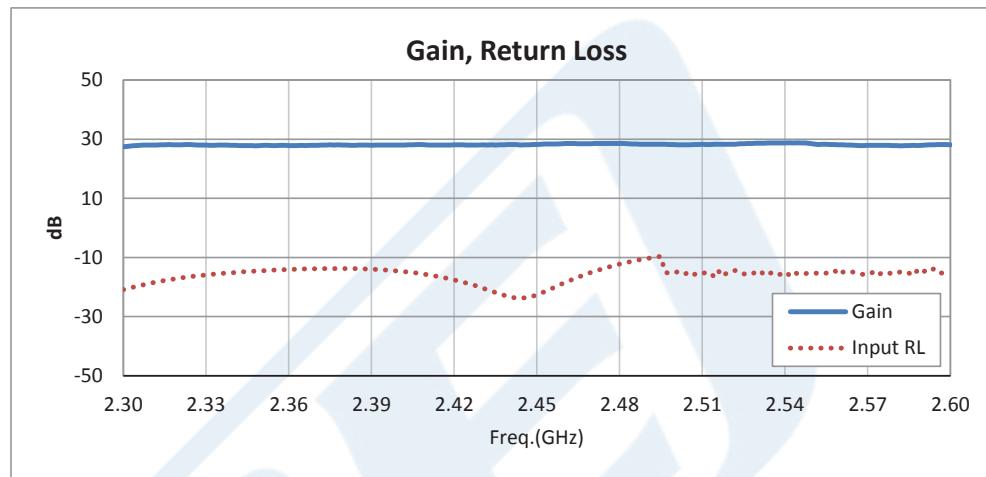


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Typical Performance Data



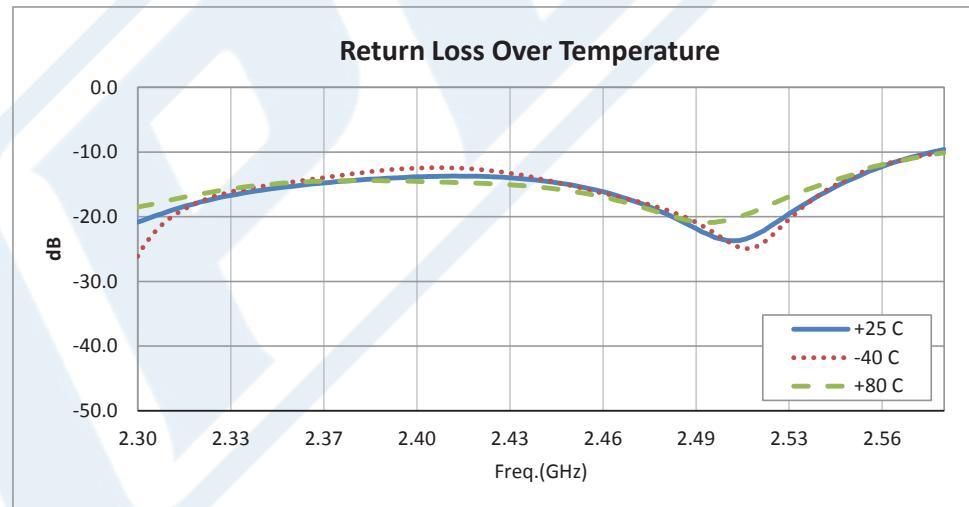
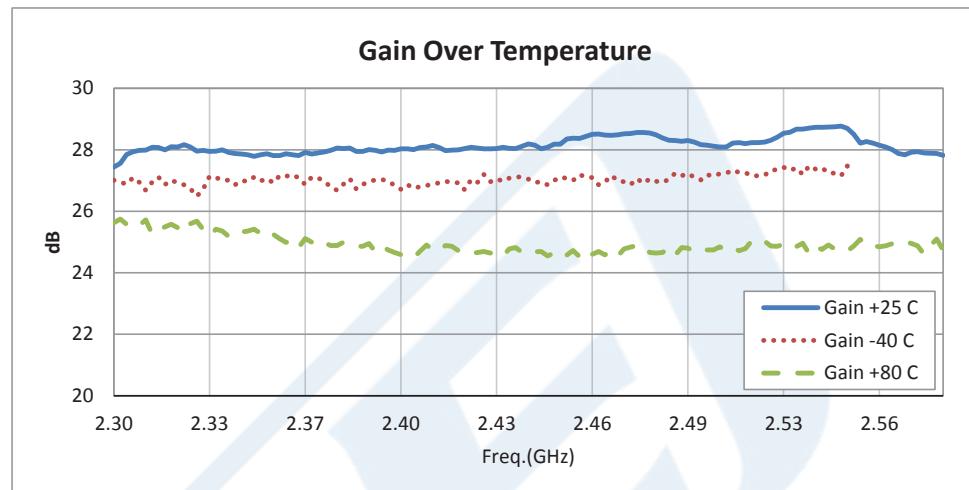
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High Power Bi-Directional Amplifier, 5/20 Watts, 2.4 GHz to 2.5 GHz, 1 us switching, 20 dB Gain, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [High Power Bi-Directional Amplifier, 5/20 Watts, 2.4 GHz to 2.5 GHz, 1 us switching, 20 dB Gain, SMA PE15B5000](http://www.pasternack.com/high-power-bi-directional-amplifier-5-20-watts-2.4-ghz-2.5-ghz-1-us-switching-20-dB-gain-sma-pe15b5000-p.aspx)

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PE15B5000 CAD Drawing

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