PASTERNACK®
THE ENGINEER'S RF SOURCE



32 dBm IP3, 1.5 dB NF, 17 dBm P1dB, 10 MHz to 1,000 MHz, Low Noise Amplifier, 30 dB Gain, SMA

TECHNICAL DATA SHEET PE15A63000

The PE15A63000 is a Input Protected Low Noise RF coaxial amplifier operating in the 10 MHz to 1 GHz frequency range. The amplifier offers 1 Watt input protection, 1.5 dB typical noise figure, 17 dBm typical P1dB and high 30 dB small signal gain with gain flatness of ±0.7 dB typical. The low noise amplifier requires typically a 12V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation. This low noise amplifier requires only a single positive supply, is unconditionally stable and operates over the temperature range of -40°C and 75°C.

Features

- 10 MHz to 1 GHz Frequency Range
- 1 Watt input protection
- P1dB: 17 dBm
- High Small Signal Gain: 30 dB typical
- Gain Flatness: ±0.7 dB
- Gain Variance: ±1 dB
- Noise Figure: 1.5 dB typ
- 50 Ohm Input and Output Matched
- -40 to 75°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in Voltage Regulator

Applications

- Laboratory Applications
- R&D Labs
- Radar Systems
- Test Instrumentation
- Communication Systems
- Low Noise Amplifier
- General Purpose Amplification
- Wideband Gain Block
- IF Amplifier/RF Driver Amplifier
- RF Wideband Front Ends
- Fixed and Land Mobile

Electrical Specifications (TA = +25°C, DC Voltage = 12Vdc, DC Current = 120mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	10		1,000	MHz
Small Signal Gain	28	30	32	dB
Gain Flatness		±0.7	±1	dB
Gain Variance at OTR*		±1		dB
Output at 1 dB Compression Point	+16	+17		dBm
Output 3rd Intercept Point	+29	+32		dBm
Noise Figure		1.5	3	dB
Input VSWR		1.3:1	1.5:1	
Output VSWR		1.3:1	1.5:1	
Reverse Isolation	45	50		dB
Spurious			-70	dBc
Input Power (CW)			+30	dBm
Operating DC Voltage	10	12	15	Volts
Operating DC Current	90	120	130	mA
Operating Temperature Range	-40		+75	°C

*OTR= Base Plate Operating Temperature Range

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 32 dBm IP3, 1.5 dB NF, 17 dBm P1dB, 10 MHz to 1,000 MHz, Low Noise Amplifier, 30 dB Gain, SMA PE15A63000

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RF Characteristic

Description	Band 1	Band 2	Band 3	Units
Frequency Range	0.01 to 0.05	0.05 to 1		GHz
Noise Figure	1.5	1		dB

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+30	dBm
Operating Temperature	-40 - +75	°C
Storage Temperature	-55 - +125	°C



ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

Mechanical Specifications

Size

Length	1.2 in [30.48 mm]
Width	0.85 in [21.59 mm]
Height	0.375 in [9.53 mm]
Weight	0.05 lbs [22.68 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +75 deg C
Storage Range	-55 to +125 deg C

Compliance Certifications (see product page for current document)

Plotted and Other Data

Notes:

- Values at +25 °C, sea level
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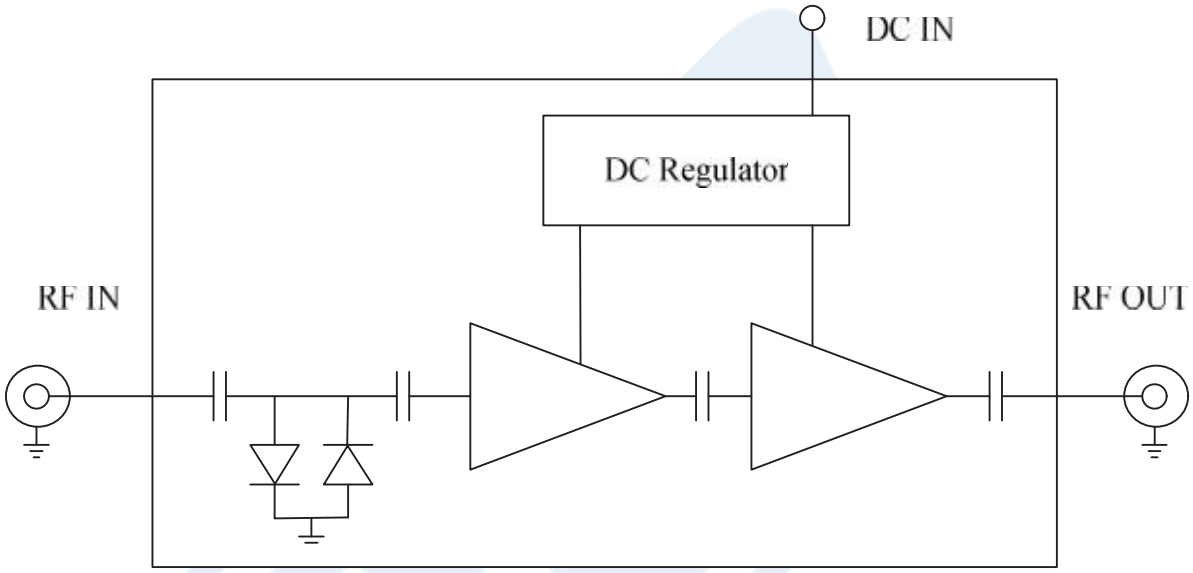
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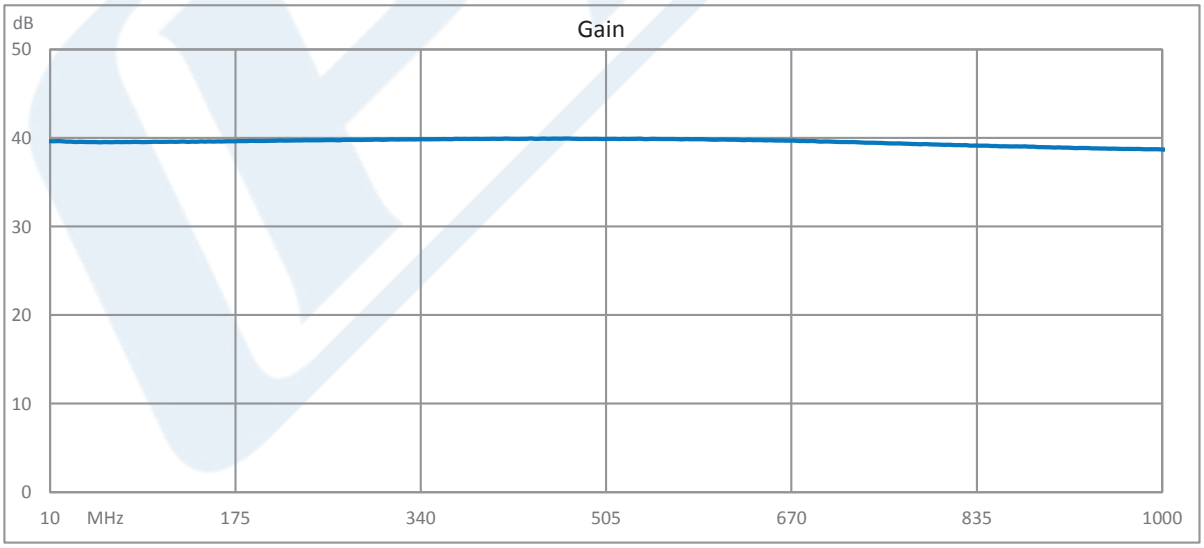
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Functional Block Diagram



Typical Performance Data



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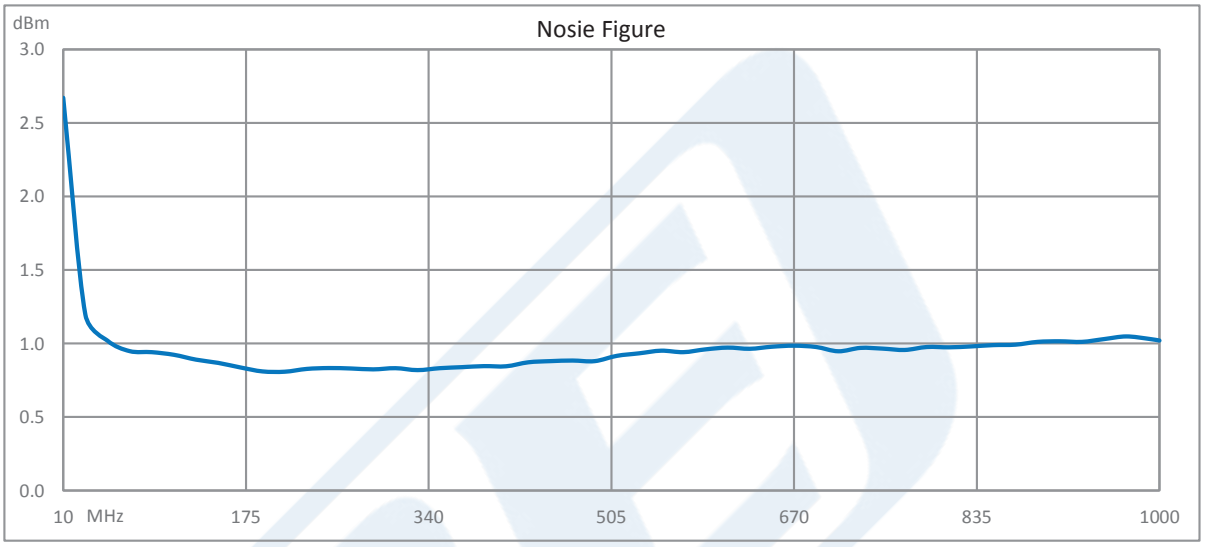
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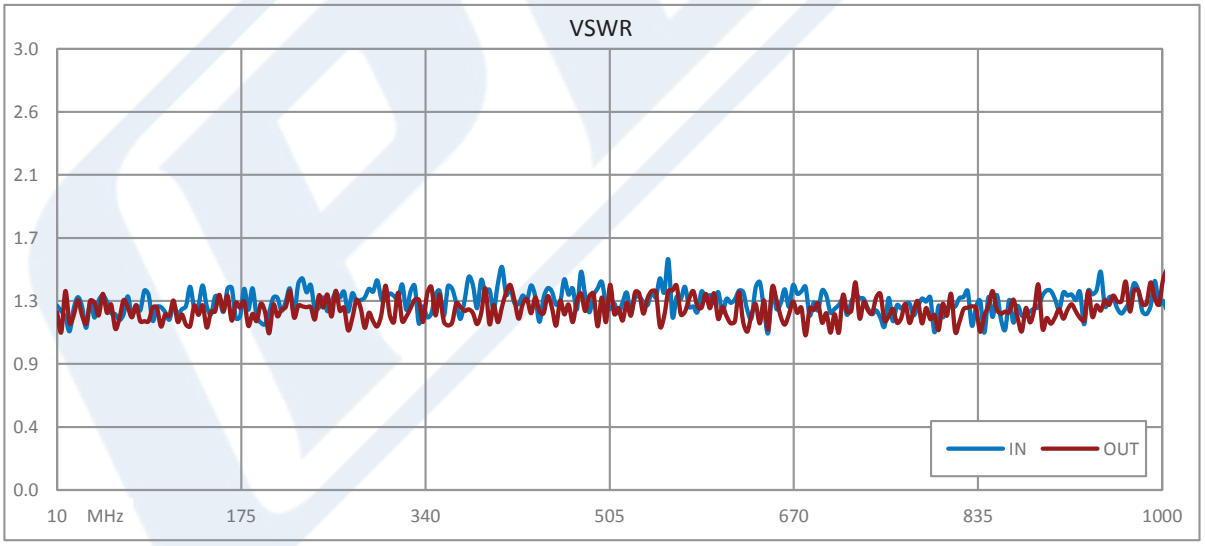
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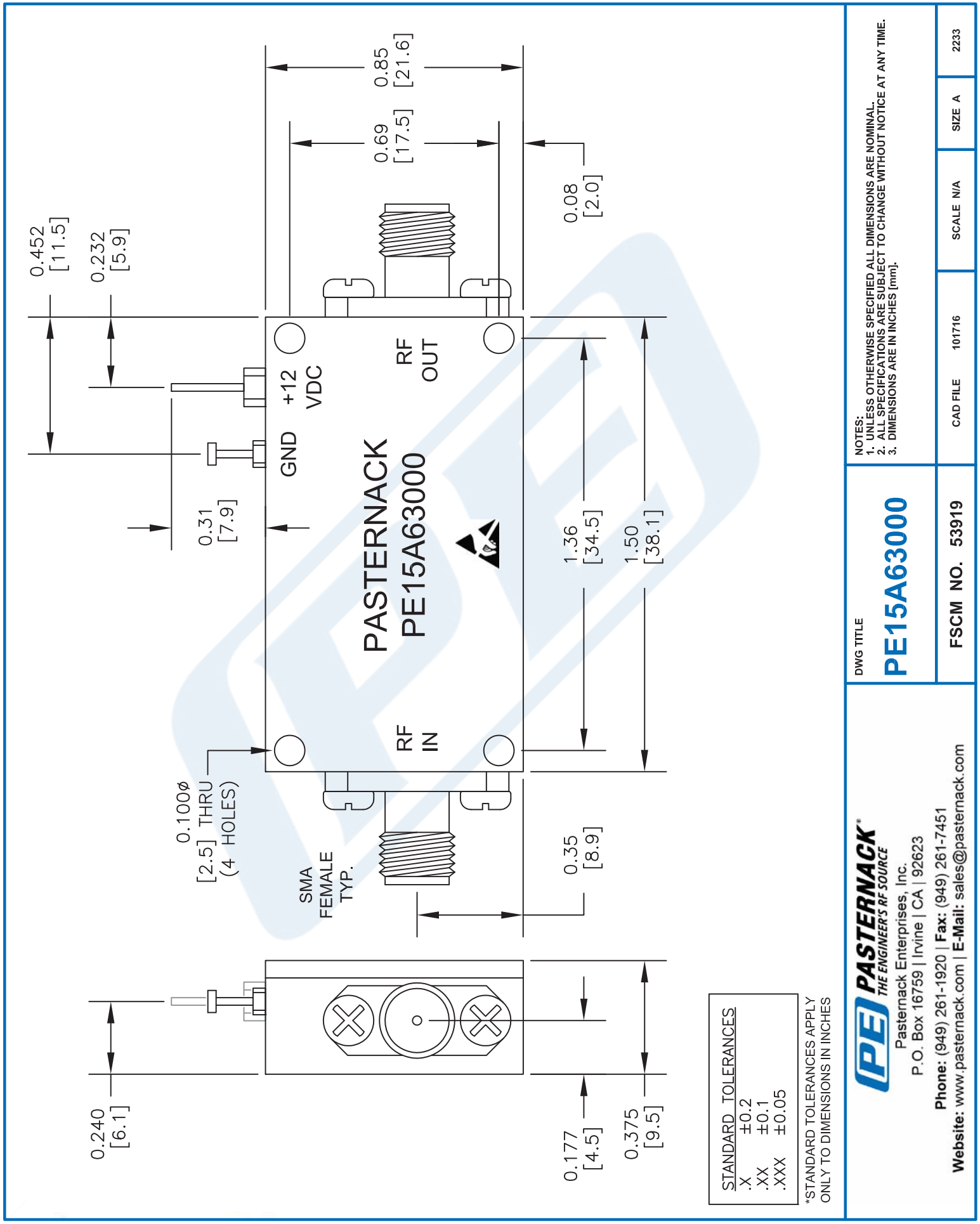
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PE15A63000 CAD Drawing

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