



0.85 dB NF Input Protected Low Noise Amplifier, Operating from 3.1 GHz to 3.5 GHz with 35 dB Gain, 13 dBm P1dB and SMA

TECHNICAL DATA SHEET

PE15A63011

PE15A63011 is an Input Protected Low Noise RF coaxial amplifier operating in the 3.1 MHz to 3.5 GHz frequency range. The amplifier has a 0.85 dB typical noise figure and can handle up to 1 Watt CW input power without damage. Additional typical performance includes 35 dB small signal gain, 1.45:1 VSWR, and +13 dBm P1dB. The exceptional technical performance is achieved through the use of a 4 stage hybrid MIC assembly that incorporates a low loss input Pin Diode Limiter protective circuit followed by gain stages that use Enhancement Mode (Emode) GaAs pHEMT devices. The 50 Ohm SMA connectorized module is unconditionally stable, includes built-in DC voltage regulation, and supports DC blocking Capacitors on the RF ports. The Amplifier operates with a bias voltage of +12V typical and over the temperature range of -10°C to +60°C. This model is RoHS compliant and has an EAR99 export classification.

Features

- 3.1 MHz to 3.5 GHz Frequency Range
- P1dB: 13 dBm
- High Small Signal Gain: 35 dB typical
- Gain Flatness: ± 1 dB
- Noise Figure: .85 dB typ
- 50 Ohm Input and Output Matched
- -10°C to +60°C Operating Temperature
- Single DC Positive Supply
- Maximum CW Input Power: 1W
- DC Blocking Capacitors

Applications

- R&D Labs
- Radar Systems
- Test Instrumentation
- Communication Systems
- IF Amplifier/RF Driver Amplifier
- RF Wideband Front Ends

Electrical Specifications (TA = +25°C, DC Voltage = 12Vdc, DC Current = 100mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	3.1		3.5	GHz
Small Signal Gain		35		dB
Gain Flatness			± 1	dB
Gain Variance at OTR*		± 1		dB
Output at 1 dB Compression Point	+13			dBm
Noise Figure		0.85	1	dB
Input VSWR		1.4:1	1.5:1	
Output VSWR		1.5:1	1.8:1	
Spurious			-60	dBc
Input Power (CW)			+30	dBm
Operating DC Voltage		12		Volts
Operating DC Current		100		mA
Operating Temperature Range	-10		+60	°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: [0.85 dB NF Input Protected Low Noise Amplifier, Operating from 3.1 GHz to 3.5 GHz with 35 dB Gain, 13 dBm P1dB and SMA PE15A63011](#)



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Mechanical Specifications

Size

Length	1.7 in [43.18 mm]
Width	0.95 in [24.13 mm]
Height	0.4 in [10.16 mm]
Weight	0.061 lbs [27.67 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-10 to +60 deg C
Storage Range	-50 to +85 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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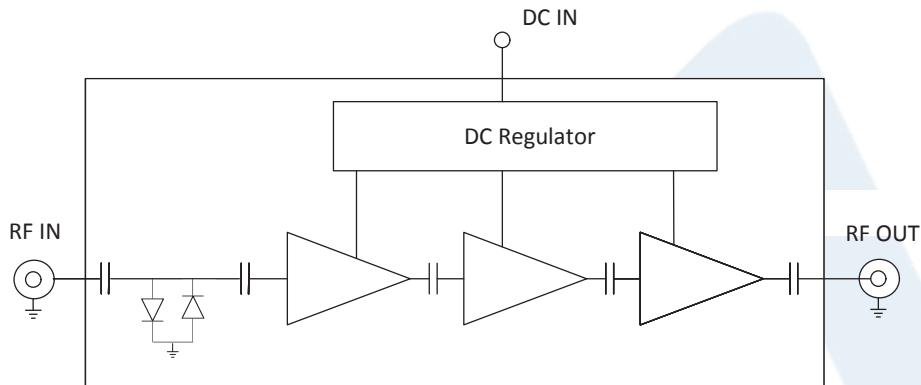


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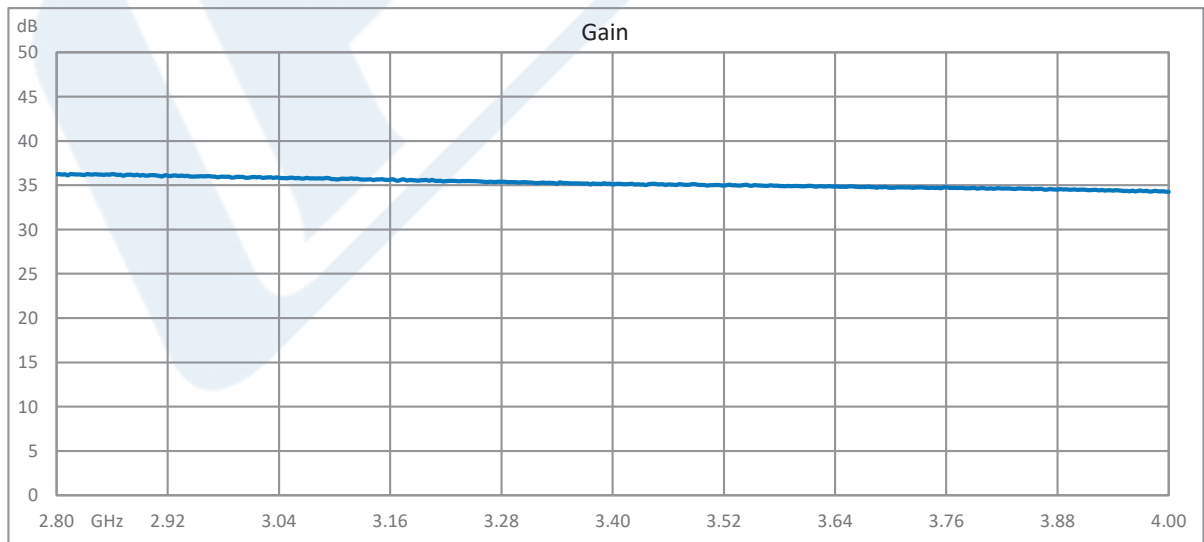
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Functional Block Diagram



Typical Performance Data



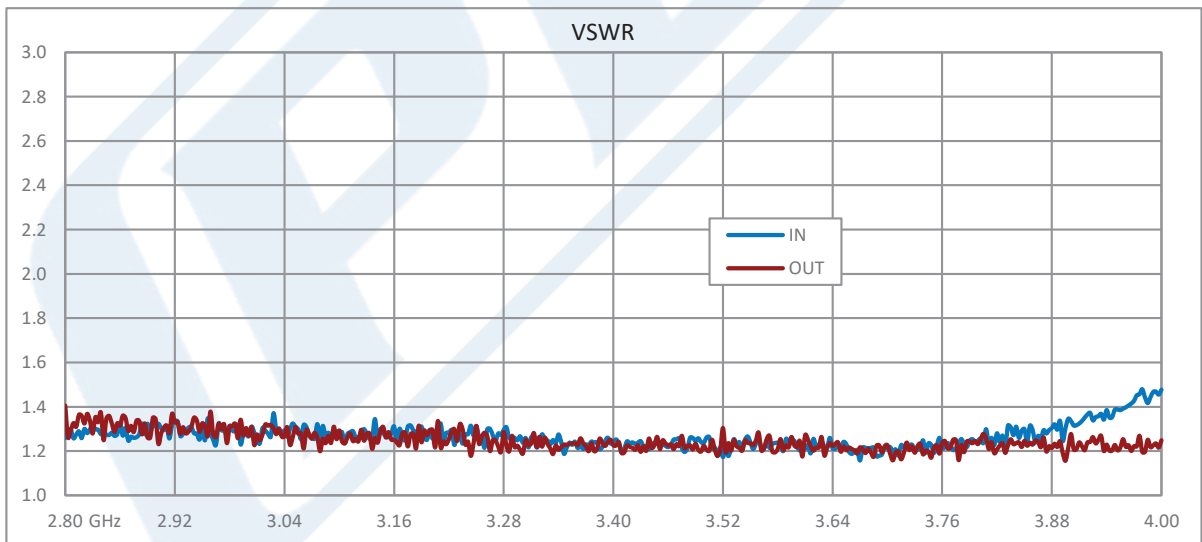
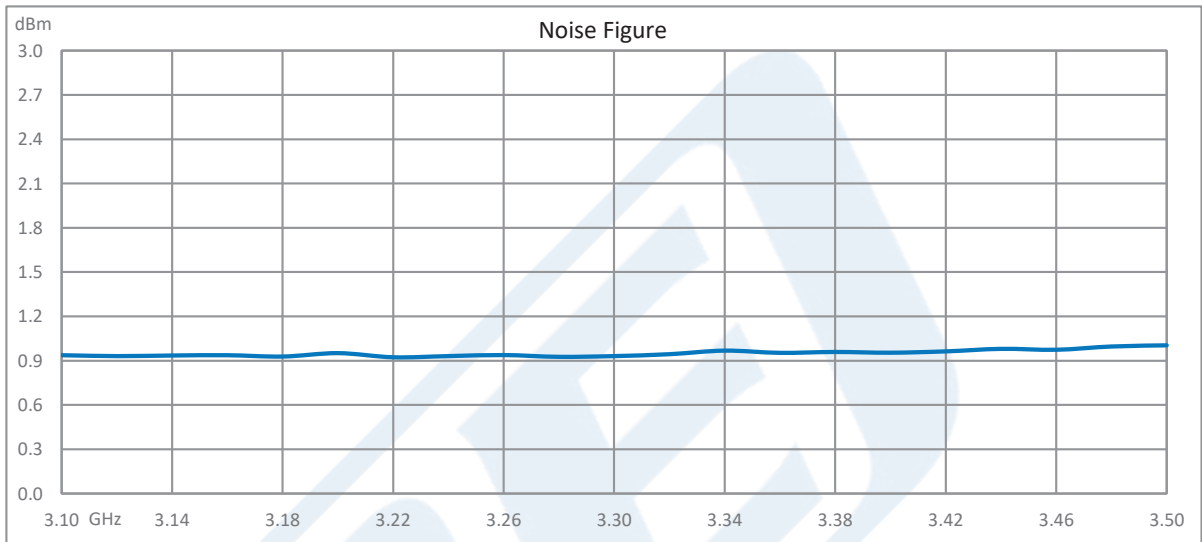
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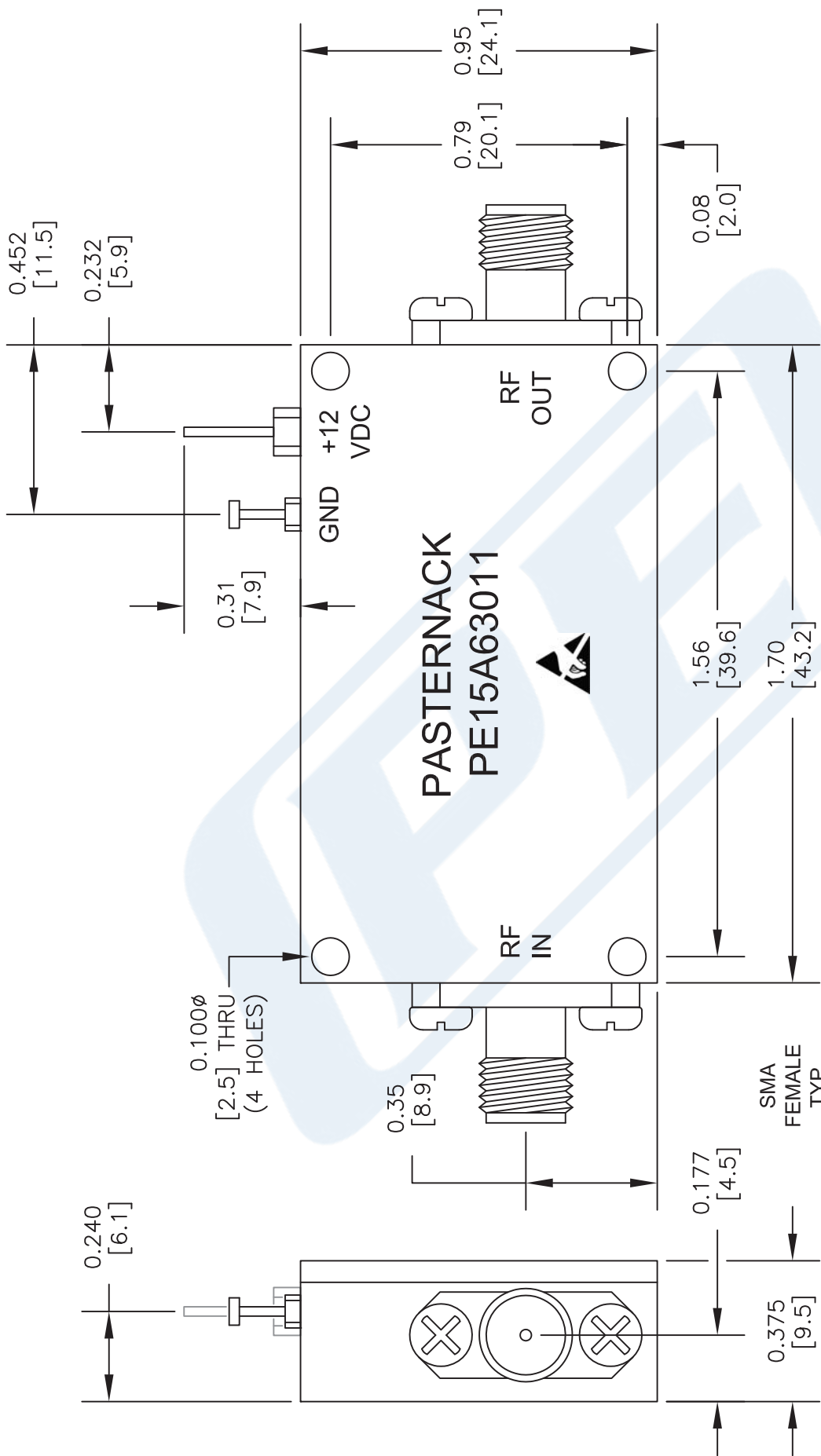
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PE15A63011 CAD Drawing

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STANDARD TOLERANCES
 .X ±0.2
 .XX ±0.1
 .XXX ±0.05

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

DWG TITLE PE15A63011		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].	
CAGE CODE 53919		CAD FILE 041917	SCALE N/A
PE PASTERNAK® THE ENGINEER'S RF SOURCE Pasternack Enterprises, Inc. P.O. Box 16759 Irvine CA 92623 Phone: (949) 261-1920 Fax: (949) 261-7451 Website: www.pasternack.com E-Mail: sales@pasternack.com		SIZE A	2233