



1.2 dB NF Input Protected Low Noise Amplifier, Operating from 900 MHz to 1.2 GHz with 30 dB Gain, 10 dBm P1dB and SMA

TECHNICAL DATA SHEET

PE15A63004

PE15A63004 is an Input Protected Low Noise RF coaxial amplifier operating in the 900 MHz to 1.2 GHz frequency range. The amplifier has a 1.2 dB typical noise figure and can handle up to 1 Watt CW input power without damage. Additional typical performance includes 30 dB small signal gain, 1.4:1 VSWR, and +10 dBm P1dB. The exceptional technical performance is achieved through the use of a 3 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 -40°C to +75°C. This model is RoHS compliant and has an EAR99 export classification.

Features

- 900 MHz to 1.2 GHz Frequency Range
- P1dB: 10 dBm
- High Small Signal Gain: 30 dB typical
- Gain Flatness: ± 1 dB
- Noise Figure: 1.2 dB typ
- 50 Ohm Input and Output Matched
- -40°C to +75°C Operating Temperature
- Single DC Positive Supply
- DC Blocking Capacitors

Applications

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

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.9		1.2	GHz
Small Signal Gain		30		dB
Gain Flatness		± 1		dB
Gain Variance at OTR*		± 1.5		dB
Output at 1 dB Compression Point	+10			dBm
Noise Figure		1.2	1.4	dB
Input VSWR		1.5:1	1.8:1	
Output VSWR		1.3:1	1.6:1	
Spurious			-60	dBc
Input Power (CW)			+30	dBm
Operating DC Voltage		12		Volts
Operating DC Current		100		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: [1.2 dB NF Input Protected Low Noise Amplifier, Operating from 900 MHz to 1.2 GHz with 30 dB Gain, 10 dBm P1dB and SMA PE15A63004](#)



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Mechanical Specifications

Size

Length	1.5 in [38.1 mm]
Width	0.85 in [21.59 mm]
Height	0.375 in [9.53 mm]
Weight	0.053 lbs [24.04 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +75 deg C
Storage Range	-50 to +85 deg C

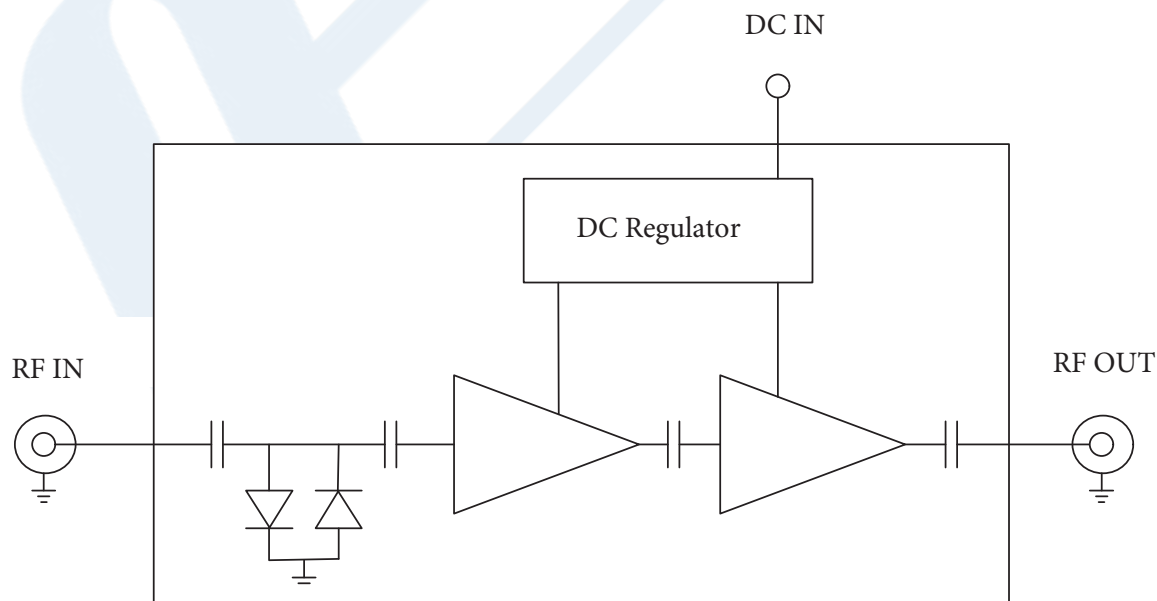
Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

Functional Block Diagram



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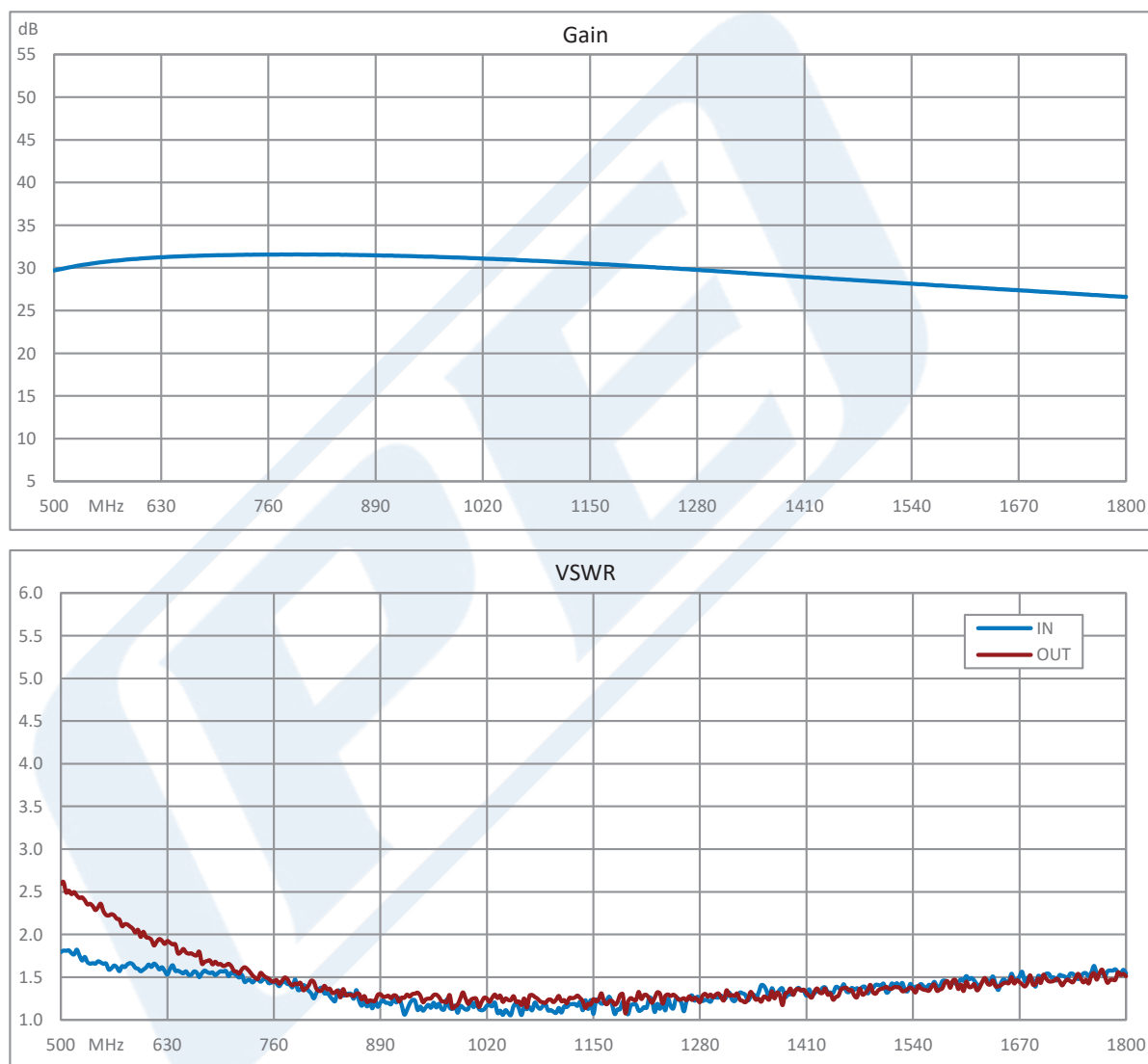


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Typical Performance Data



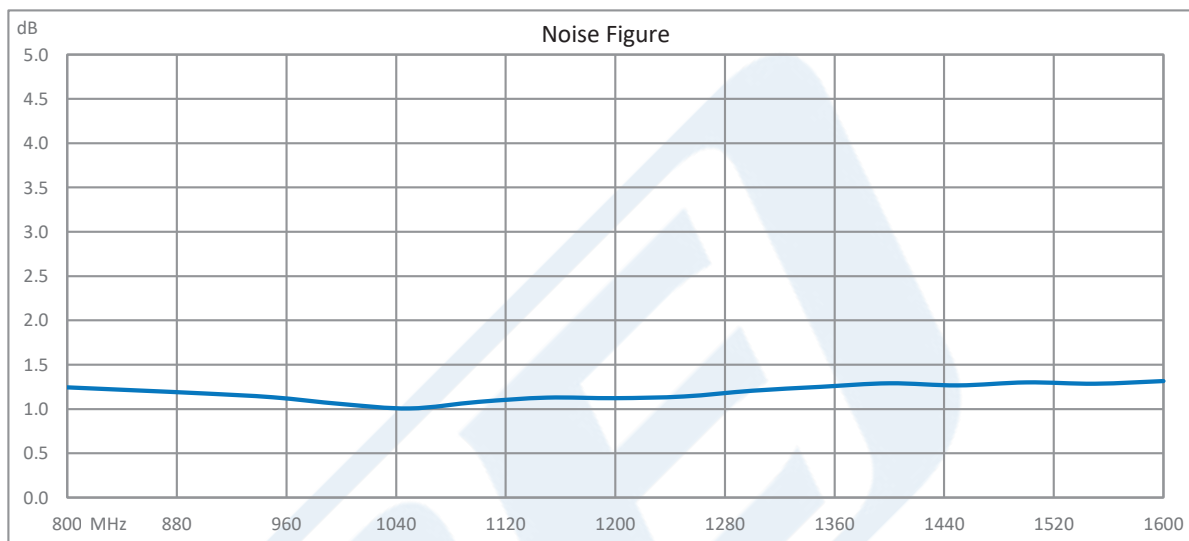
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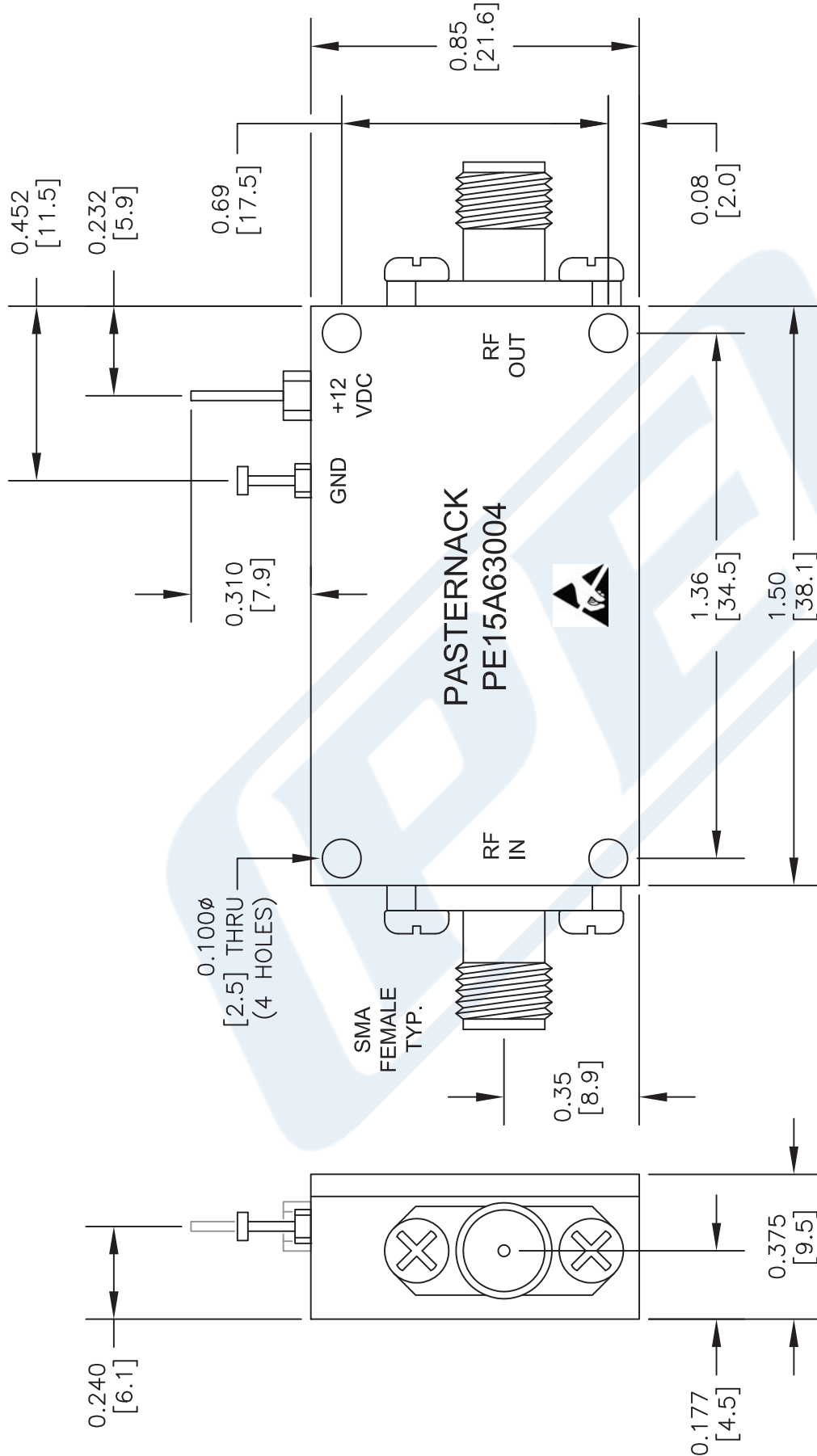
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

PE15A63004 CAD Drawing

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DWG TITLE

PE15A63004

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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CAD FILE 092216

SCALE N/A

SIZE A

2233