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1.2 dB NF Input Protected Low Noise Amplifier, Operating from 1 GHz to 1.4 GHz with 30 dB Gain, 10 dBm P1dB and SMA

TECHNICAL DATA SHEET PE15A63006

PE15A63006 is an Input Protected Low Noise RF coaxial amplifier operating in the 1 GHz to 1.4 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, 1.5:1 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 +85°C. This model is RoHS compliant and has an EAR99 export classification.

Features

- 1 GHz to 1.4 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 +85°C Operating Temperature
- Single DC Positive Supply
- 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 = 110mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	1		1.4	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	2:1	
Output VSWR		1.5:1	2:1	
Spurious			-60	dBc
Input Power (CW)			+30	dBm
Operating DC Voltage		12		Volts
Operating DC Current		110		mA
Operating Temperature Range	-40		+85	°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 1 GHz to 1.4 GHz with 30 dB Gain, 10 dBm P1dB and SMA PE15A63006

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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	0.052 lbs [23.59 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-50 to +125 deg C

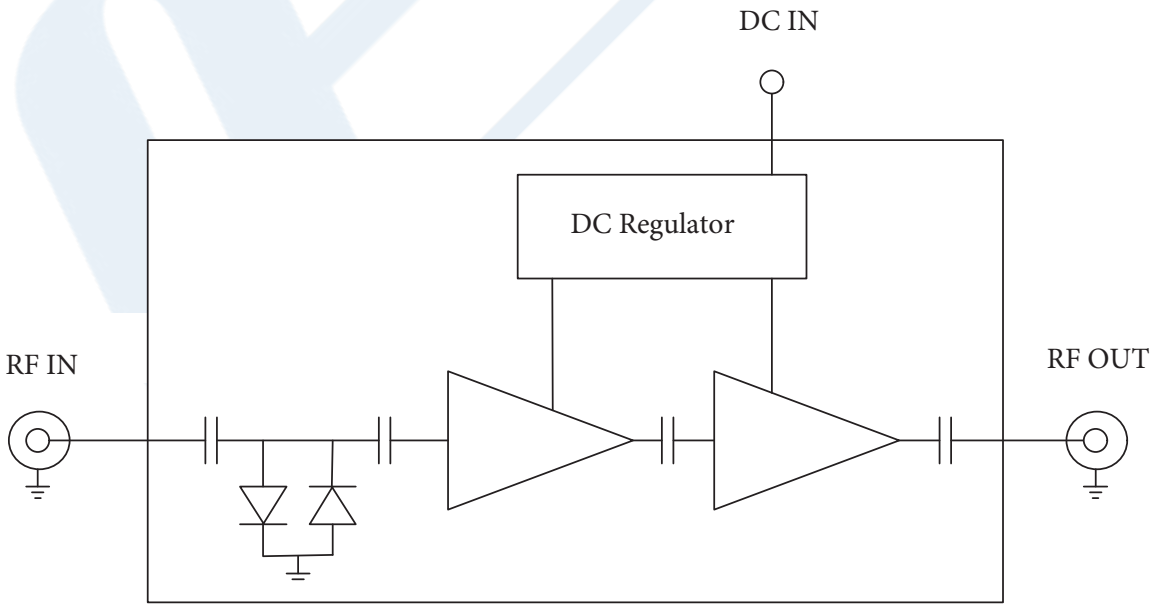
Compliance Certifications (see product page for current document)

Plotted and Other Data

Notes:

- Values at +25 °C, sea level

Functional Block Diagram



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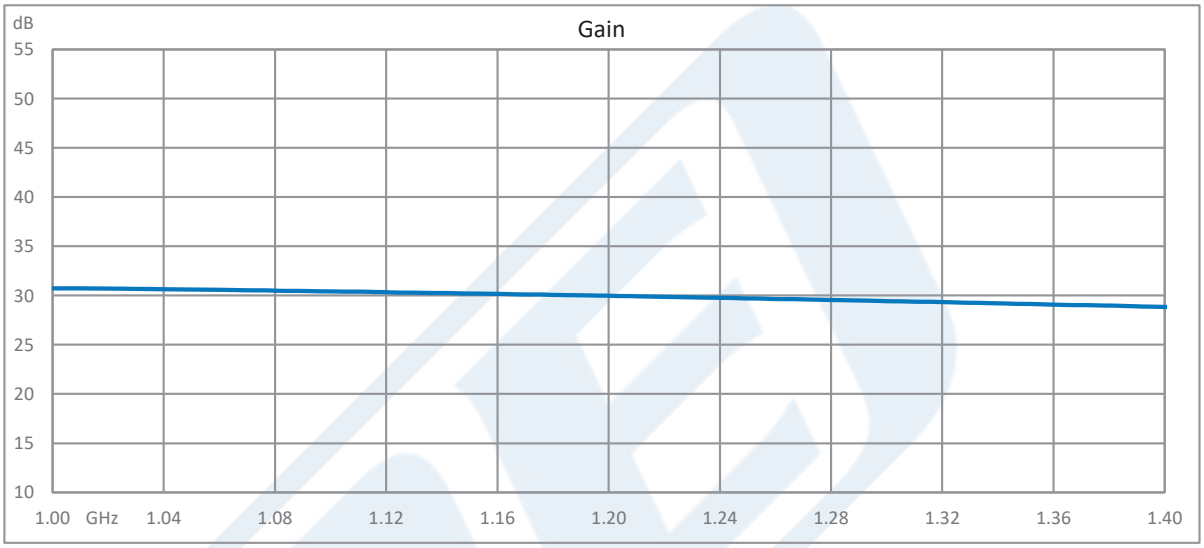
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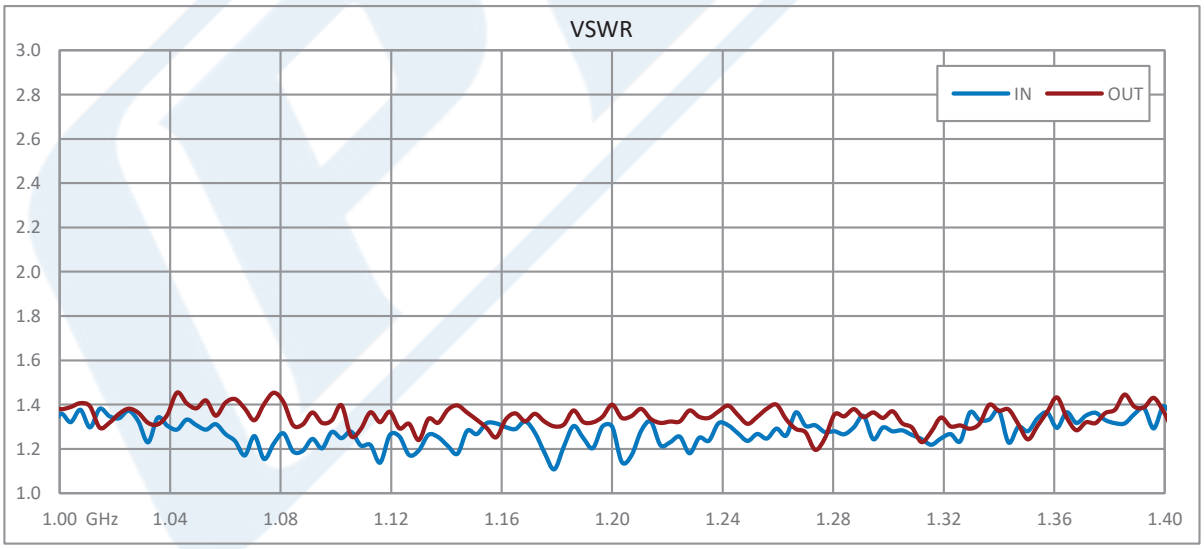


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Typical Performance Data





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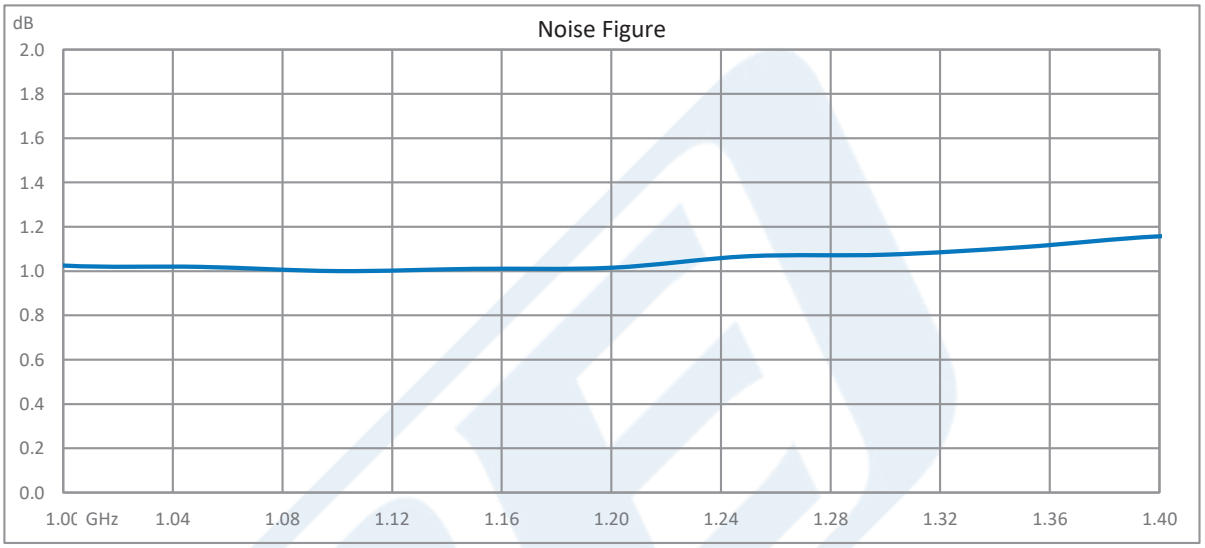
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1.2 dB NF Input Protected Low Noise Amplifier, Operating from 1 GHz to 1.4 GHz with 30 dB Gain, 10 dBm P1dB and SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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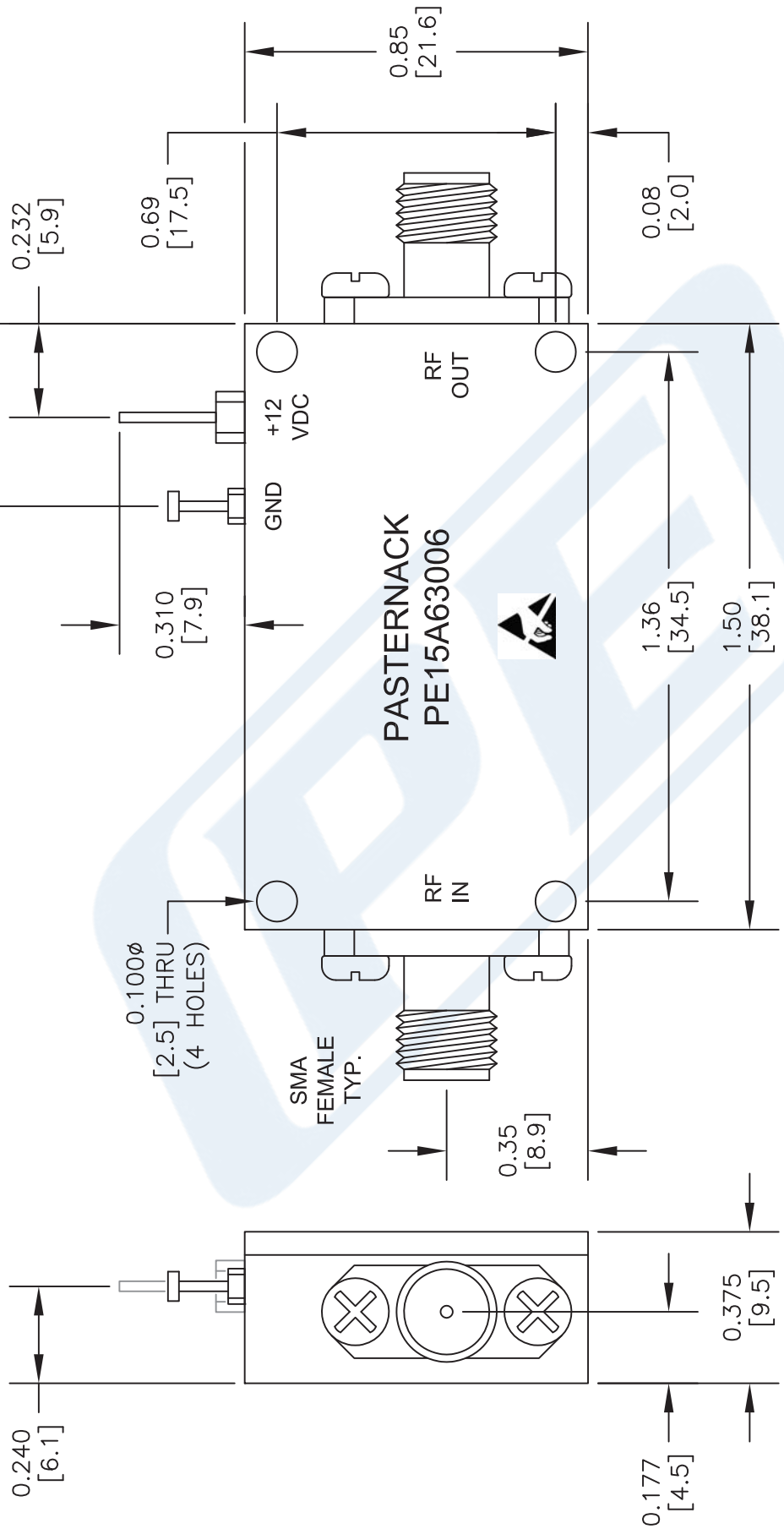
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PE15A63006 CAD Drawing

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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].

CAD FILE	071916	SCALE N/A	SIZE A	2233

DWG TITLE: **PE15A63006**

FSCM NO. 53919

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