PASTERNACK
an INFINITE brand

0.85 dB NF Input Protected Low Noise Amplifier, Operating from 2 GHz to 2.6 GHz with 30 dB Gain, 12 dBm P1dB and SMA

TECHNICAL DATA SHEET PE15A63007

PE15A63007 is an Input Protected Low Noise RF coaxial amplifier operating in the 2 GHz to 2.6 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 30 dB small signal gain +/- 0.35 dB flatness, 1.35:1 VSWR, and +12.5 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 -40°C to +85°C. This model is RoHS compliant and has an EAR99 export classification.

Features

- 2 GHz to 2.6 GHz Frequency Range
- P1dB: 12.5 dBm
- High Small Signal Gain: 30 dB typical
- Gain Flatness: ±0.35 dB
- Noise Figure: 0.85 dB typical
- 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	2		2.6	GHz
Small Signal Gain	28	30	33	dB
Gain Flatness		±0.35	±0.55	dB
Gain Variance at OTR*			±1	dB
Output at 1 dB Compression Point	+10	+12		dBm
Noise Figure		0.85	1.2	dB
Input VSWR		1.35:1	1.5:1	
Output VSWR		1.35:1	1.5:1	
Reverse Isolation		45		dB
Spurious			-70	dBc
Input Power (CW)			+30	dBm
Operating DC Voltage	10	12	15	Volts
Operating DC Current	90	110	130	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: 0.85 dB NF Input Protected Low Noise Amplifier, Operating from 2 GHz to 2.6 GHz with 30 dB Gain, 12 dBm P1dB and SMA PE15A63007

Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
Phone: (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451
Sales@Pasternack.com • Techsupport@Pasternack.com

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Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+30	dBm
Operating Temperature (base-plate)	-40 to +85	°C
Storage Temperature	-55 to +125	°C

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

Mechanical Specifications

Size

Length	1.7 in [43.18 mm]
Width	0.95 in [24.13 mm]
Height	0.375 in [9.53 mm]
Weight	0.0605 lbs [27.44 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 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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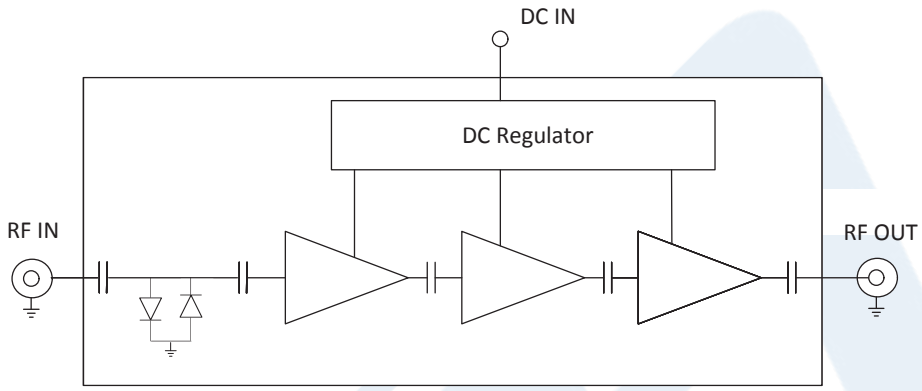
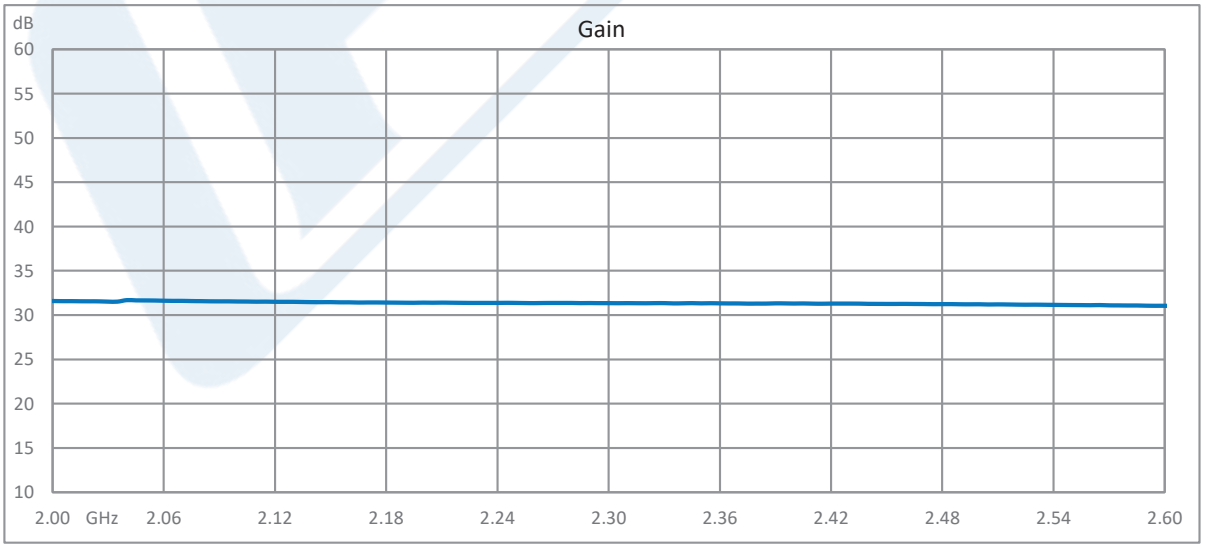
Functional Block Diagram



Typical Performance Data



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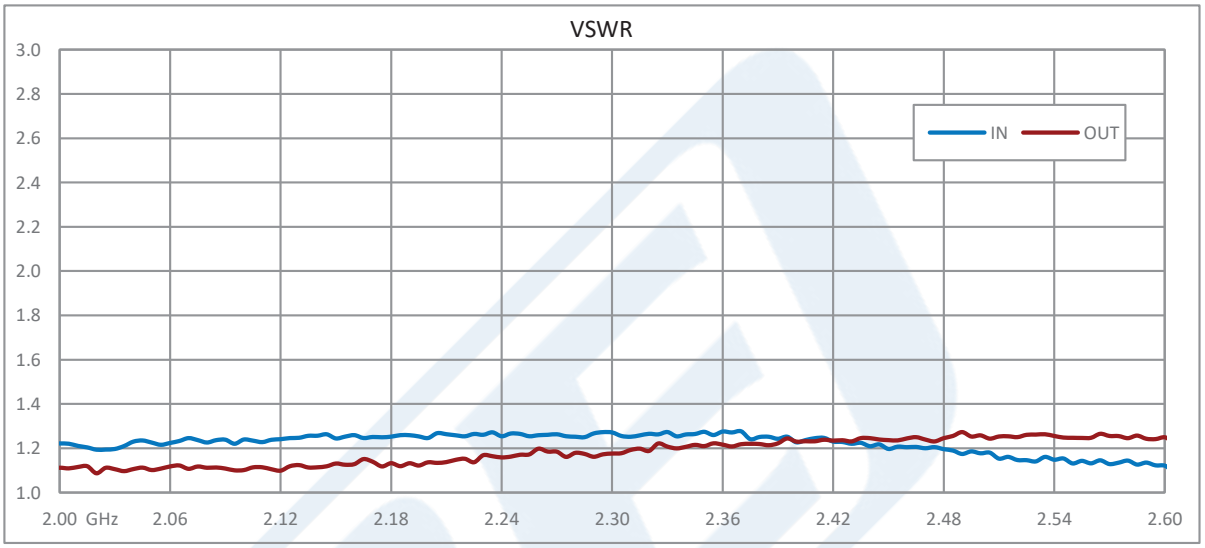

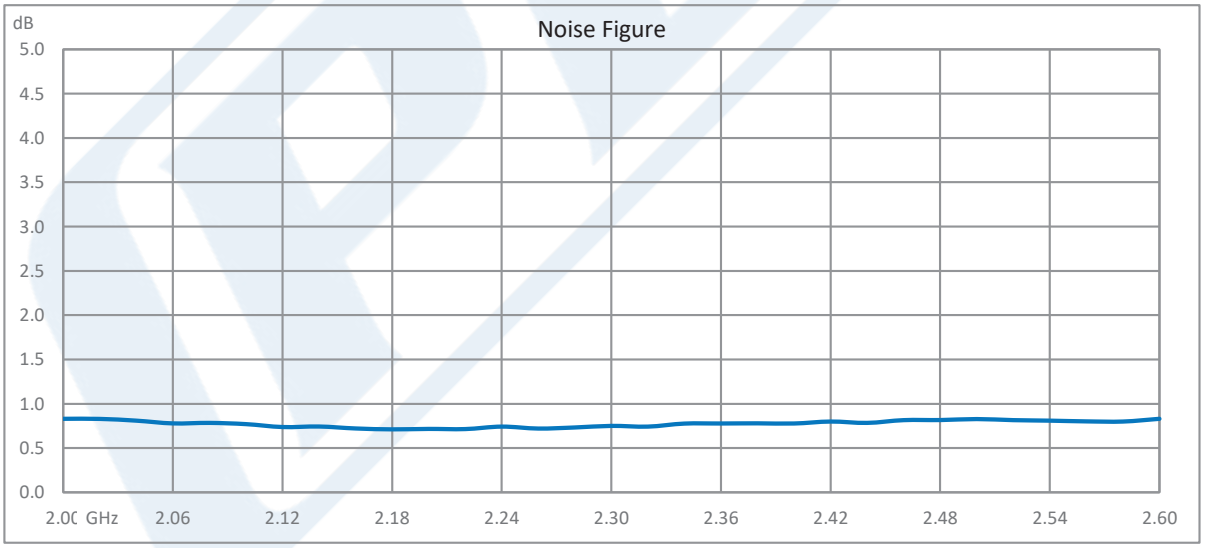

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URL: https://www.pasternack.com/0.85-db-2.6-ghz-low-noise-amplifier-30-db-gain-sma-pe15a63007-p.aspx

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PE15A63007 CAD Drawing

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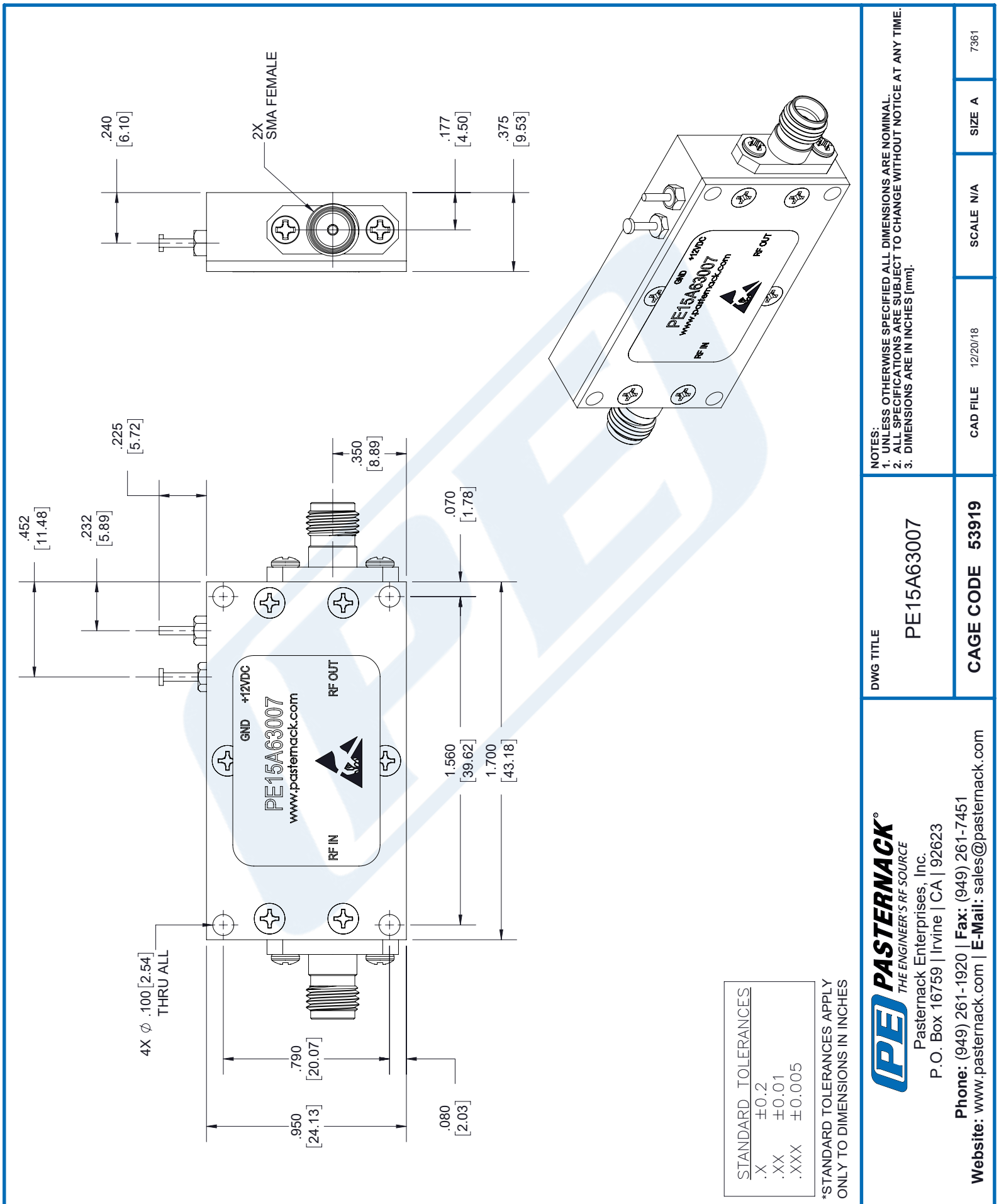

STANDARD TOLERANCES
.X ±0.2
.XX ±0.01
.XXX ±0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

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].

DWG TITLE: PE15A63007

CAD FILE 12/20/18 | SCALE N/A | SIZE A | 7361

CAGE CODE 53919

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