PASTERNACK®
THE ENGINEER'S RF SOURCE

50 dB Gain, 28 dBm IP3, 1 dB NF, 18 dBm P1dB, 10 MHz to 1,000 MHz, Low Noise High Gain Amplifier SMA

TECHNICAL DATA SHEET PE15A1013

PE15A1013 is a wideband low noise RF coaxial power amplifier operating in the 10 MHz to 1 GHz frequency range. The amplifier offers 1 dB typical noise figure, 18 dBm of P1dB and 50 dB small signal gain with gain flatness of ±1.25 dB. This exceptional technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. The low noise amplifier requires typically a +12V DC power supply. The connectorized SMA module is unconditionally stable and includes built-in voltage regulation, bias sequencing, and reverse bias protection for added reliability. The amplifier operates over the temperature range of -40°C and +85°C.

Features

- 10 MHz to 1 GHz Frequency Range
- P1dB: 18 dBm
- Flat Small Signal Gain: 50 dB
- Gain Flatness: ±1 .25 dB
- Gain Variance over OTR: ±1 .5 dB
- Noise Figure: 1 dB typ
- Reverse Isolation: 65 dB
- 50 Ohm Input and Output Matched
- -40 to 85°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in Voltage Regulator

Applications

- Laboratory Applications
- R&D Labs
- Military Radio
- Radar Systems
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Wireless Communication
- Microwave Radio Systems
- Cellular Base Stations
- Low Noise Amplifier
- General Purpose Amplification
- General Purpose Wireless
- Wideband Gain Block
- IF Amplifier/RF Driver Amplifier
- RF Wideband Front Ends
- RF Pre-amplification

Electrical Specifications (TA = +25°C, DC Voltage = 12Volts, DC Current = 130mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	10		1,000	MHz
Small Signal Gain	47	50	54	dB
Gain Flatness		±1.25	±1.5	dB
Gain Variance at OTR*		±1.5		dB
Output at 1 dB Compression Point	+16	+18		dBm
Output at 1 dB Compression Point	+16	+18		dBm
Output 3rd Intercept Point	+26	+28		dBm
Noise Figure (50 MHz to 1,000 MHz)		1	1.1	dB
Input VSWR		1.5:1	1.7:1	
Output VSWR		1.6:1	1.8:1	
Reverse Isolation	60	65		dB
Spurious			-60	dBc
Operating DC Voltage	10	12	15	Volts
Operating DC Current	100	130	160	mA
Operating Temperature Range	-40		+85	°C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 50 dB Gain, 28 dBm IP3, 1 dB NF, 18 dBm P1dB, 10 MHz to 1,000 MHz, Low Noise High Gain Amplifier SMA PE15A1013

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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*OTR= Base Plate Operating Temperature Range

Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+15	Volts
RF input Power	+13	dBm
Operating Temperature (base-plate)	-55 to +125	°C
Storage Temperature	-40 to +85	°C

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

Mechanical Specifications

Size

Length	1.5 in [38.1 mm]
Width	0.85 in [21.59 mm]
Height	0.375 in [9.53 mm]
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 (visit www.Pasternack.com for current document)

RoHS Compliant

Plotted and Other Data

Notes:

- Values at +25 °C, sea level
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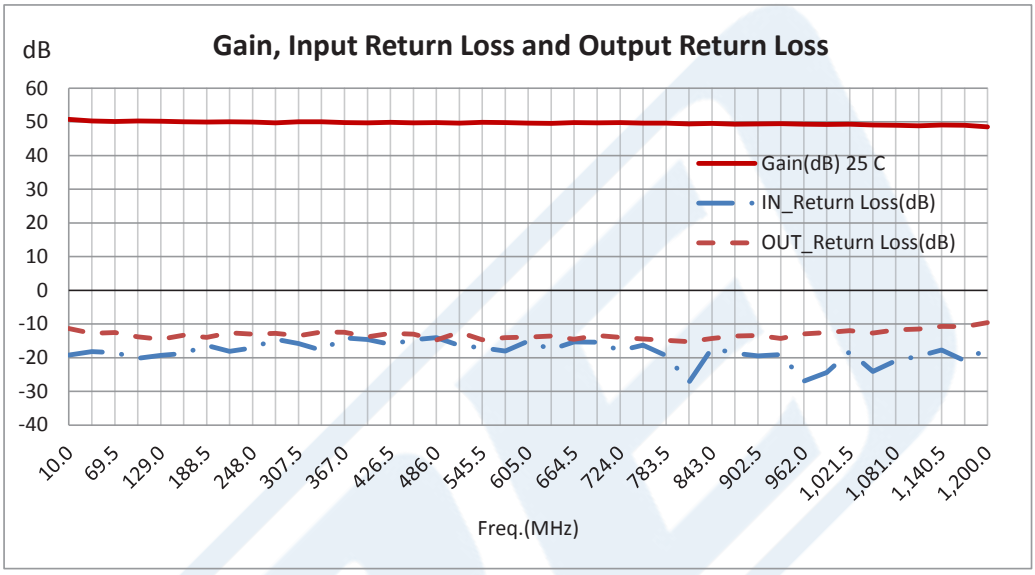
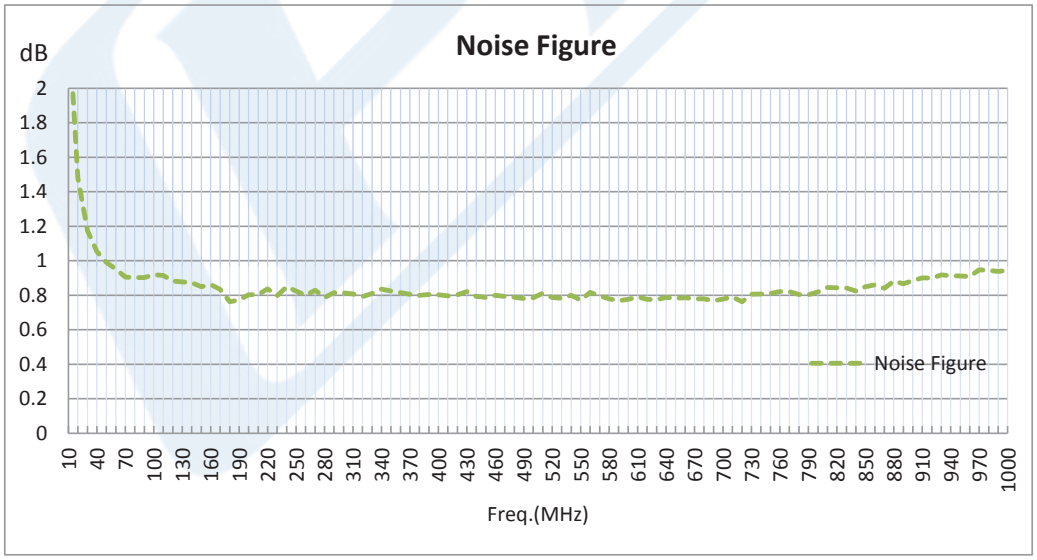
Typical Performance Data





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50 dB Gain, 28 dBm IP3, 1 dB NF, 18 dBm P1dB, 10 MHz to 1,000 MHz, Low Noise High Gain Amplifier SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

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URL: http://www.pasternack.com/50-db-gain-1000-mhz-low-noise-high-gain-amplifier-sma-pe15a1013-p.aspx

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PE15A1013 CAD Drawing

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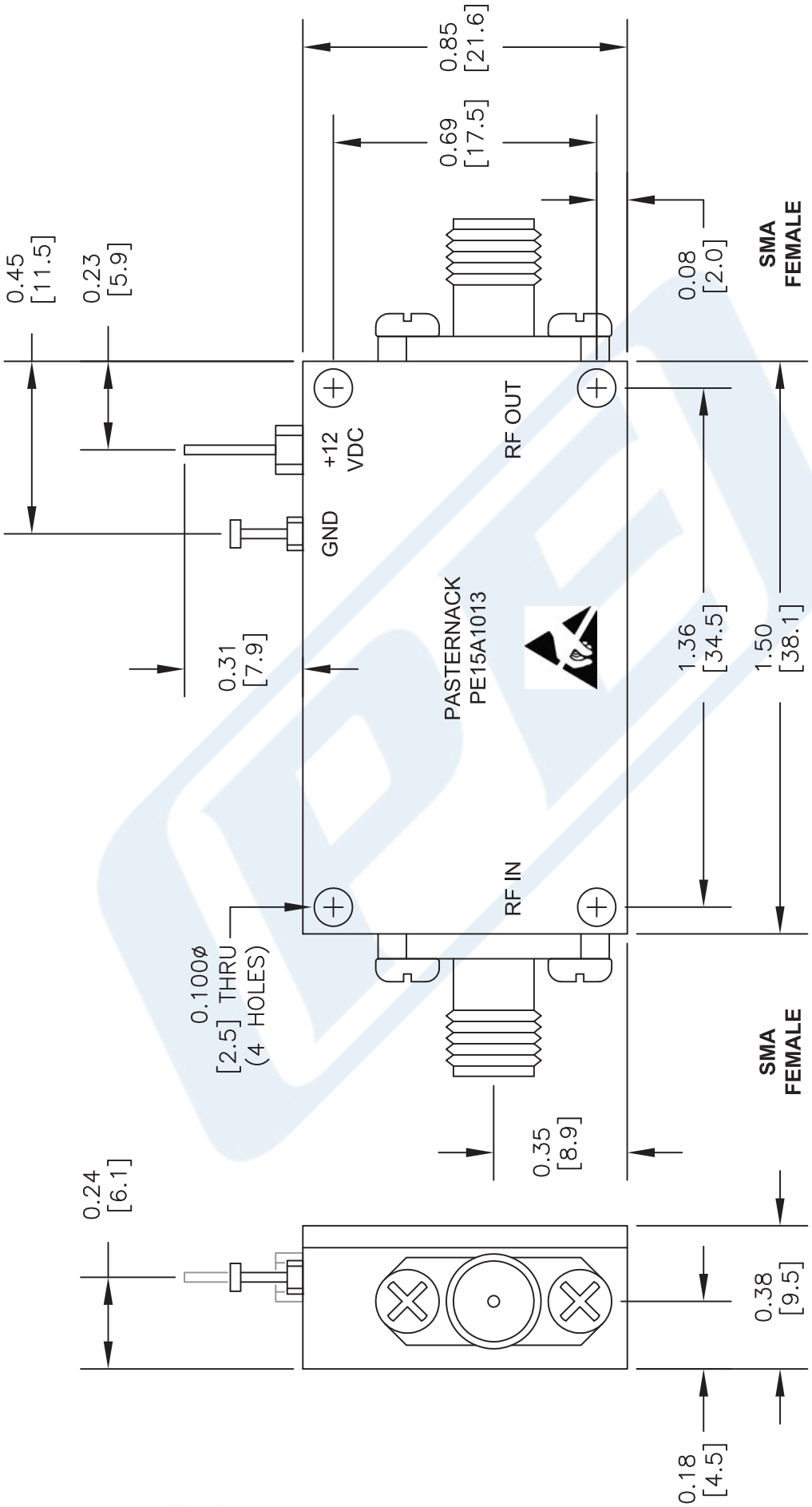

NOTES:
1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.
2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.
3. DIMENSIONS ARE IN INCHES [mm].

CAD FILE	021714	SCALE N/A	SIZE A	2233

DWG TITLE: **PE15A1013**

FSCM NO. 53919

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