PASTERNACK®
THE ENGINEER'S RF SOURCE



0.5 dB NF, 16 dBm P1dB, 1.215 GHz to 1.4 GHz, Low Noise Amplifier, 35 dB Gain, SMA

TECHNICAL DATA SHEET PE15A1040

PE15A1040 is a low noise RF coaxial amplifier operating in the 1215MHz to 1400 MHz frequency range. The design incorporates an integrated Band Pass Filter that rejects out-of-band interference which is ideal for 1.4 GHz WMTS (Wireless Medical Telemetry Band) applications such as Hospital Patient Monitoring Systems. The amplifier offers 0.5 dB typical noise figure, 16 dBm typical P1dB and high 35 dB minimum small signal gain with gain flatness of ±0.75dB typical. This exceptional technical performance is achieved through the use of hybrid MIC design and advanced SiGe Bipolar 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. This low noise amplifier requires only a single positive supply, is unconditionally stable and operates over the temperature range of -40°C and +75°C.

Features

- 1215 MHz to 1400 MHz Frequency Range
- P1dB: 16 dBm
- High Small Signal Gain: 35 dB typical
- Gain Flatness: ±0.75 dB
- Gain Variance: ±1 dB
- Noise Figure: 0.5dB typ
- Integrated Band Pass Filter rejects out of band interference
- Reverse Isolation: 45 dB typical
- 50 Ohm Input and Output Matched
- -40 to 75°C Operating Temperature
- Unconditionally Stable
- Single DC Positive Supply
- Built-in Voltage Regulator

Applications

- Laboratory Applications
- R&D Labs
- 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
- Fixed and Land Mobile

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

Description	Minimum	Typical	Maximum	Units
Frequency Range	1.215		1.4	GHz
Small Signal Gain	33	35	37	dB
Gain Flatness		±0.75	±1	dB
Gain Variance at OTR*		±1		dB
Output at 1 dB Compression Point	+16	+16		dBm
Noise Figure		0.5	0.6	dB
Input VSWR		1.5:1	1.8:1	
Output VSWR		1.5:1	1.8:1	
Reverse Isolation	50	55		dB
Rejection at 1000 MHz and 1.825 GHz	18	25		dBc
Operating DC Voltage		12		Volts

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 0.5 dB NF, 16 dBm P1dB, 1.215 GHz to 1.4 GHz, Low Noise Amplifier, 35 dB Gain, SMA PE15A1040

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Operating DC Current	100	130	160	mA
Operating Temperature Range	-40		+75	°C

*OTR= Base Plate Operating Temperature Range

Mechanical Specifications

Size

Length	2.32 in [58.93 mm]
Width	2.32 in [58.93 mm]
Height	0.71 in [18.03 mm]
Weight	0.155 lbs [70.31 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +75 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
- ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in approved ESD Workstation.

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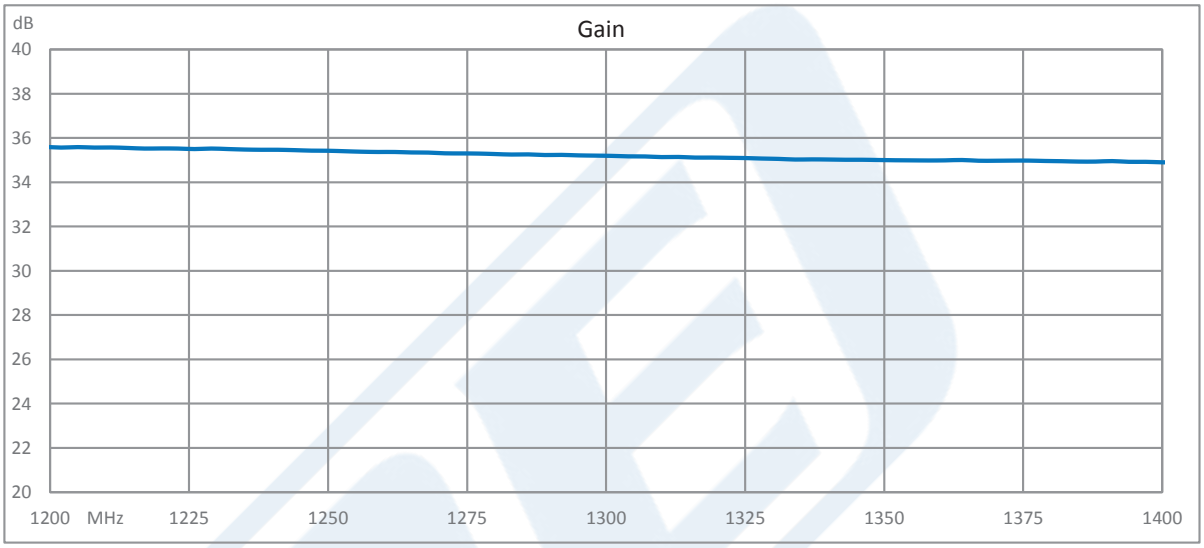
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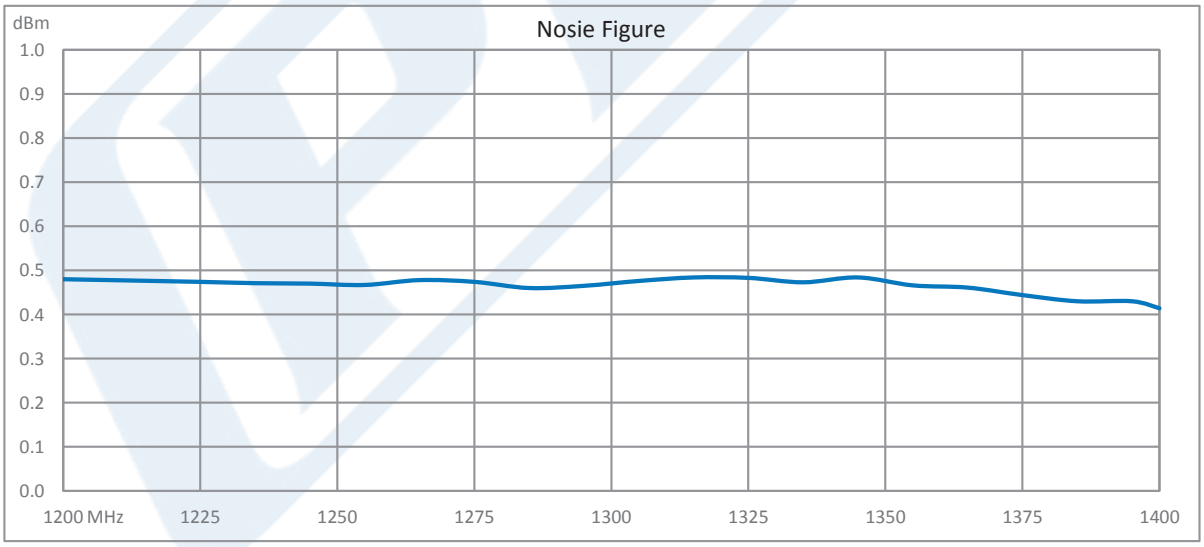


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Typical Performance Data





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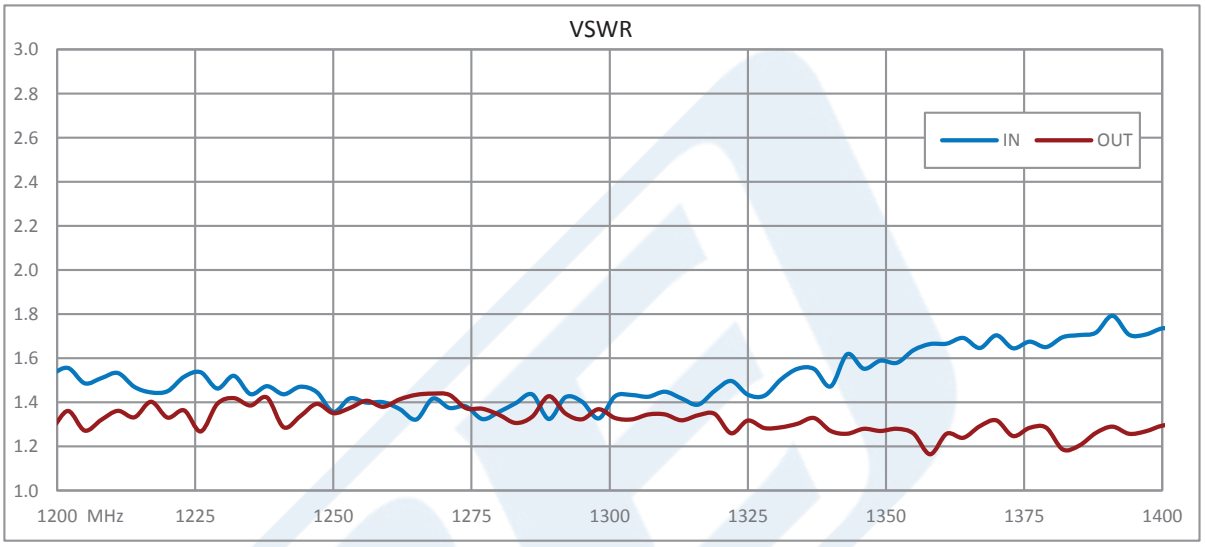
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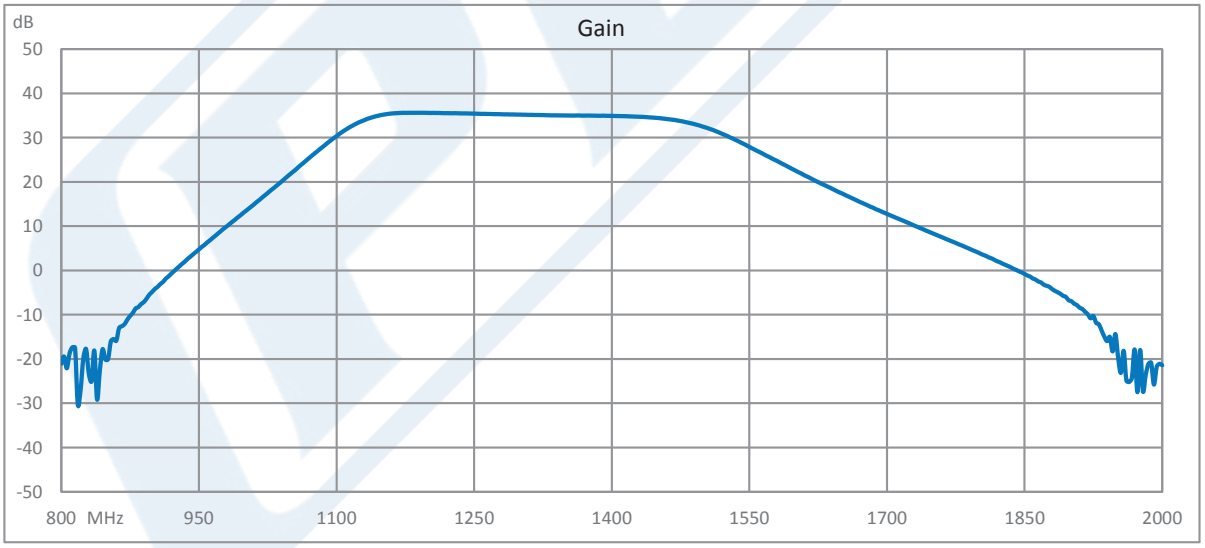
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URL: https://www.pasternack.com/0.5-db-1.4-ghz-low-noise-amplifier-35-db-gain-sma-pe15a1040-p.aspx

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.

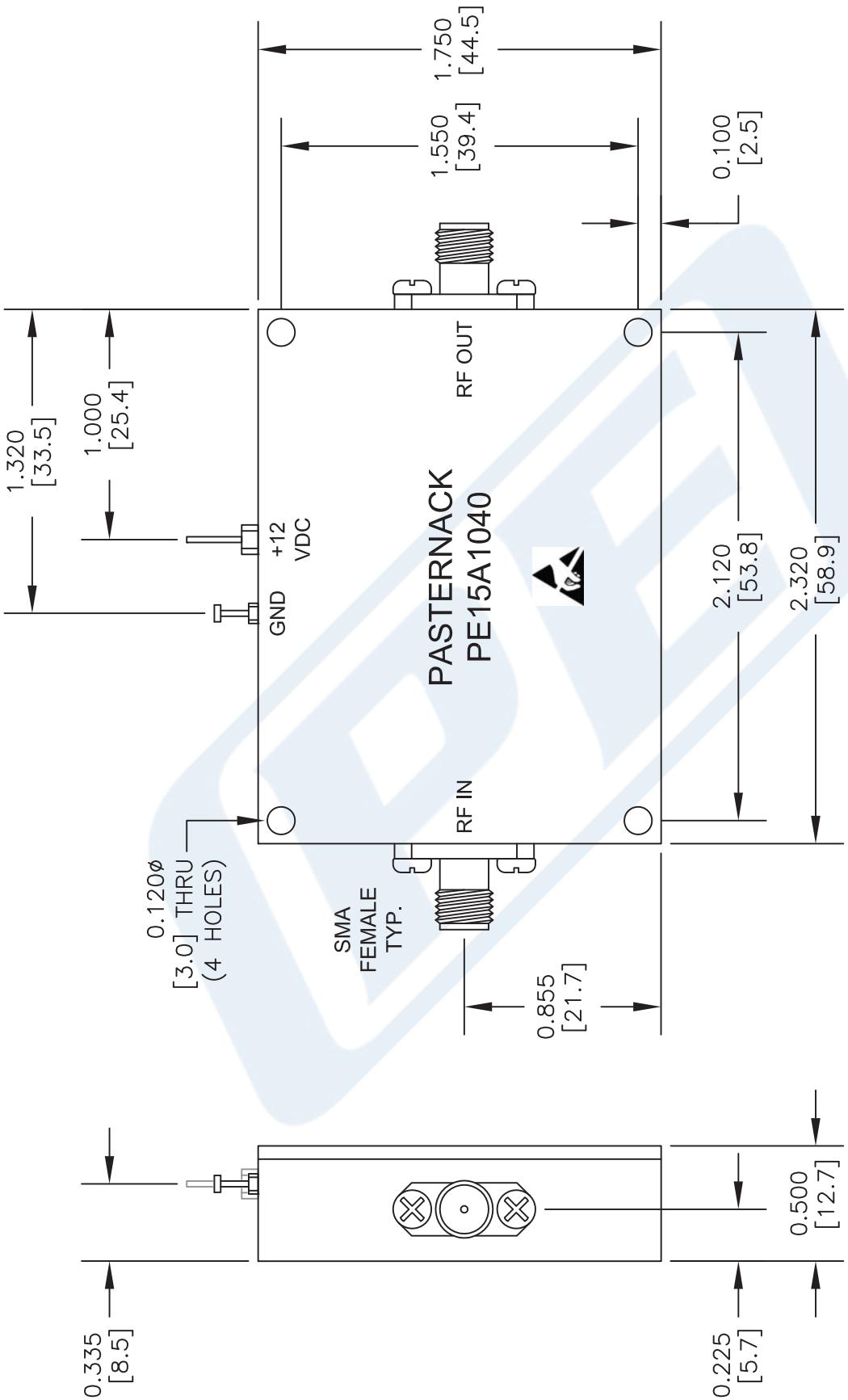
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PE15A1040 CAD Drawing

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NOTE:
HEAT SINK REQUIRED FOR PROPER OPERATION,
UNIT IS COOLED BY CONDUCTING TO HEAT SINK.

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
PE15A1040

CAD FILE 060916 | SCALE N/A | SIZE A | 2233

FSCM NO. 53919

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