PASTERNACK®
THE ENGINEER'S RF SOURCE



41 dBm IP3, 0.8 dB NF, 22 dBm Psat, 1 GHz to 4 GHz, Low Noise Amplifier, 20 dB Gain, SMA

TECHNICAL DATA SHEET PE15A1070

The PE15A1070 is a low noise coaxial amplifier operating in the 1000 MHz to 4000 MHz frequency range. impressive broadband typical performance includes 0.8 dB noise figure, 20 dB small signal gain, +20 dBm P1dB, and an output 3rd order intercept point of +41 dBm. This exceptional technical performance is achieved through the use of a hybrid MIC design and advanced E-pHEMT devices. The low noise amplifier requires a +12V DC power supply, and operates over a temperature range of -40°C to +85°C. The rugged and compact package supports SMA Female connectors and RFI and Ground pins. And for highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for Humidity, Shock, Vibration, and Altitude.

Features

- 1000 MHz to 4000 MHz Frequency Range
- Low Noise Figure: 0.8 dB
- High Dynamic Range
- Efficient GaAs pHEMT Design
- Small Signal Gain: 20 dB
- Output P1dB: +20 dBm
- Output IP3: +41 dBm
- Operating Temperature: -40°C to +85°C
- 50 Ohm Input and Output Matched
- DC Power Supply: +12V / 120 mA
- SMA Female Connectors
- Designed to meet MIL-STD-202 Test Conditions

Applications

- Test & Measurement
- R&D Labs
- General Purpose Amplification
- Aerospace & Defense
- Wireless Infrastructure
- Communication Systems

Electrical Specifications (TA = +25°C, DC Voltage = 12Vdc, DC Current = 120mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	1		4	GHz
Small Signal Gain	16.5	20		dB
Gain Flatness		±1.2	±1.5	dB
Gain Variation Over Temperature		0.02		dB/°C
Output at 1 dB Compression Point	+20	+20		dBm
Saturated Output Power (Psat)	+20	+22		dBm
Output 3rd Intercept Point	+39	+41		dBm
Noise Figure		0.8	1	dB
Input VSWR		1.6:1	2:1	
Output VSWR		1.5:1	2:1	
Reverse Isolation		-30		dB
Operating DC Voltage	9	12	15	Volts
Operating DC Current		120	140	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: 41 dBm IP3, 0.8 dB NF, 22 dBm Psat, 1 GHz to 4 GHz, Low Noise Amplifier, 20 dB Gain, SMA PE15A1070

Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
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Absolute Maximum Rating

Parameter	Rating	Units
Supply Voltage	+18	V
RF Input Power	+20	dBm
Operating Temperature	-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

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

Humidity	MIL-STD-202F, Method 103B, Condition B
Shock	MIL-STD-202F, Method 213B, Condition B
Vibration	MIL-STD-202F, Method 204D, Condition B
Altitude	MIL-STD-202F, Method 105C, Condition B

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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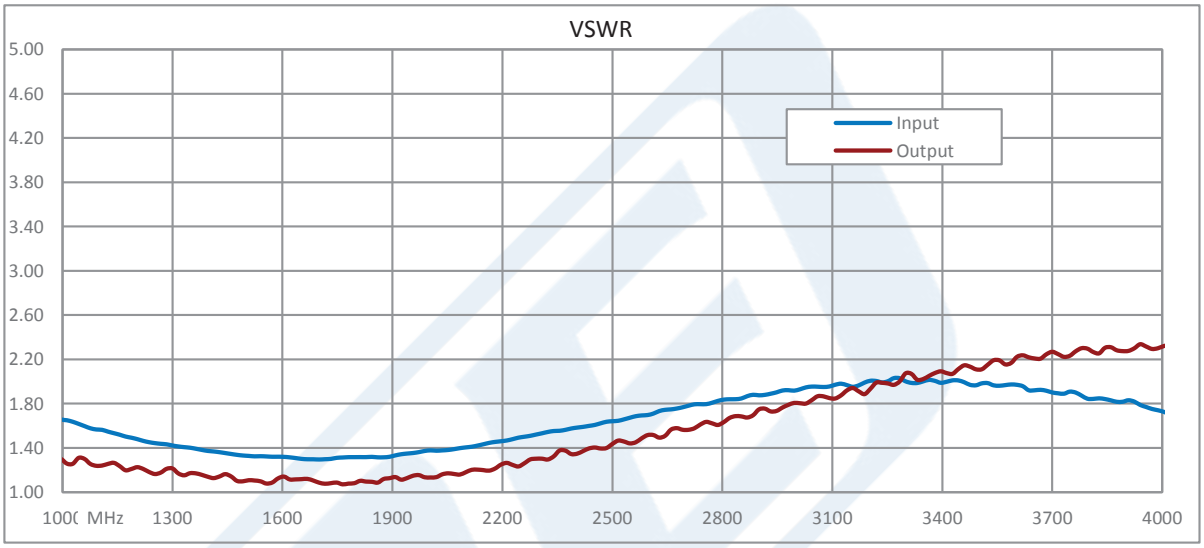
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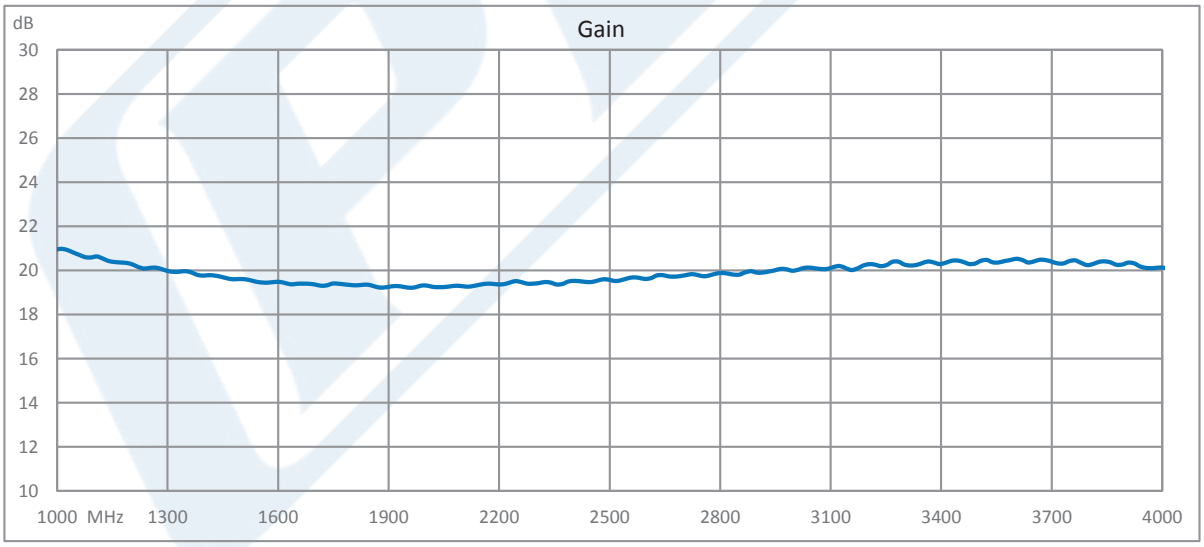


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Typical Performance Data





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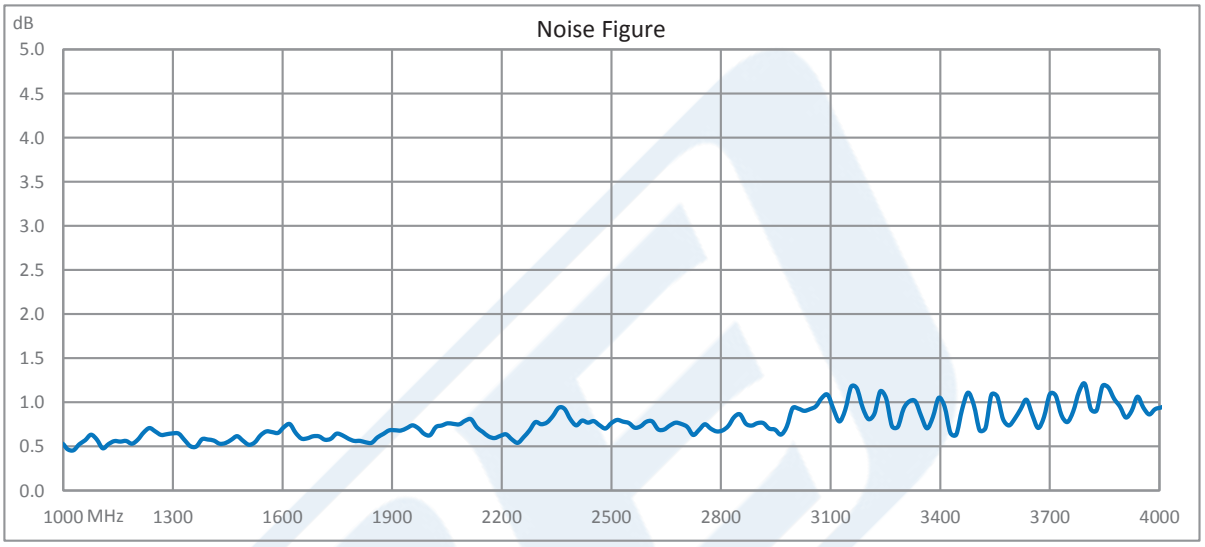
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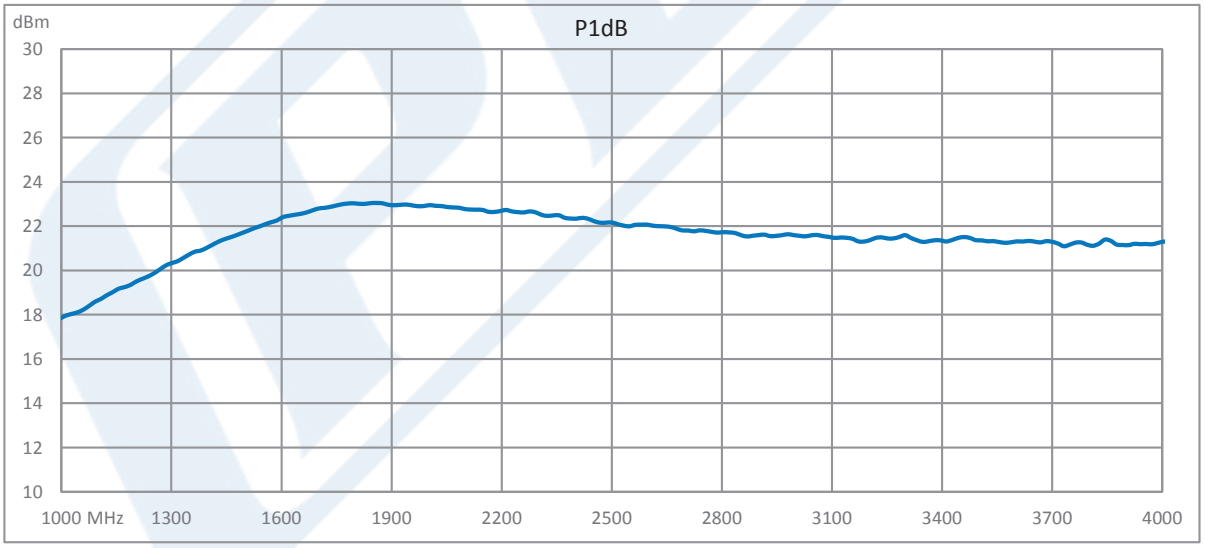
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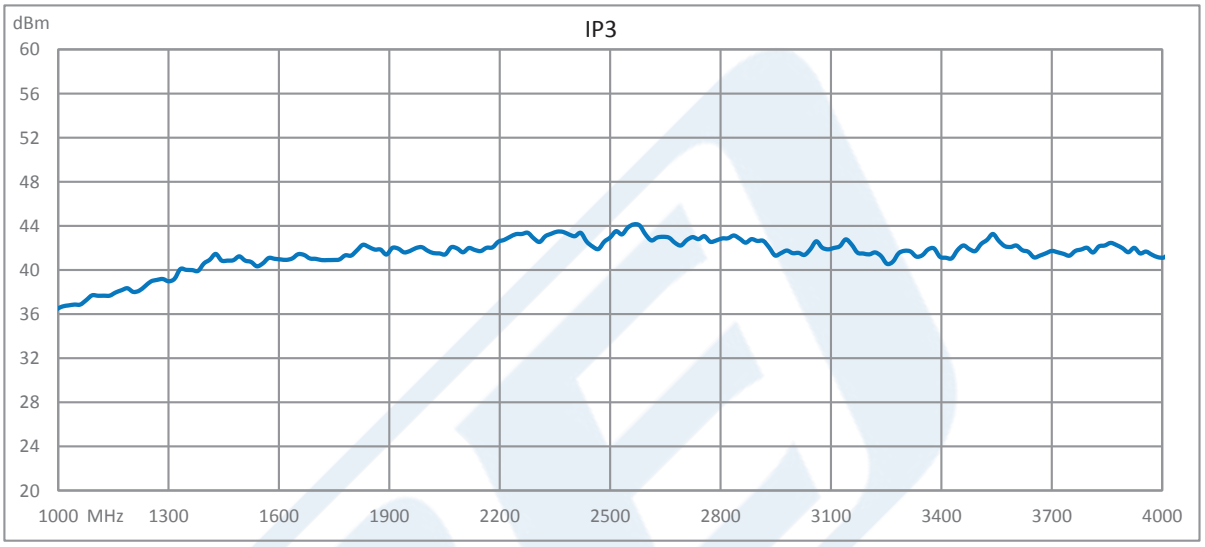
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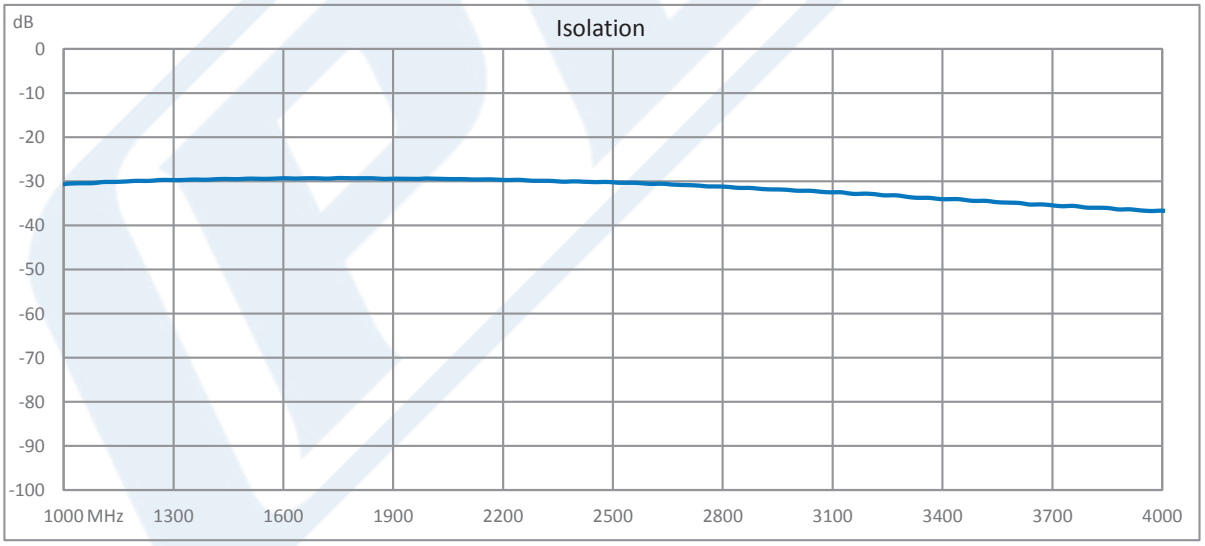
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URL: https://www.pasternack.com/0.8-db-4-ghz-low-noise-amplifier-20-db-gain-sma-pe15a1070-p.aspx

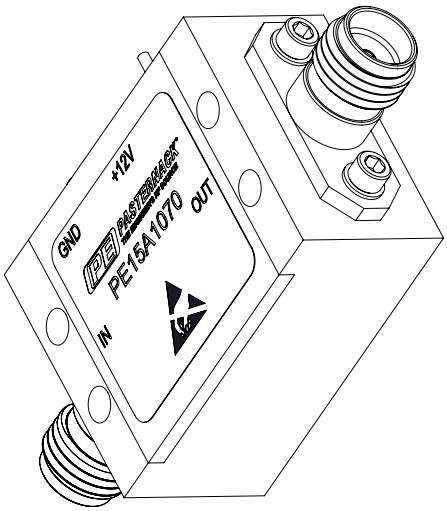
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PE15A1070 CAD Drawing

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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: PE15A1070

CAD FILE 04/23/18 | SCALE N/A | SIZE A | 7361

CAGE CODE 53919

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