



40.5 dB Gain, 34 dBm IP3, 0.9 dB NF, 20 dBm Psat,
 10 MHz to 600 MHz, Low Noise Amplifier, SMA

TECHNICAL DATA SHEET

PE15A1063

The PE15A1063 is a low noise coaxial amplifier operating in the 10 MHz to 600 MHz frequency range. Impressive broadband typical performance includes 0.9 dB noise figure, 40.5 dB small signal gain, +19 dBm P1dB, and an output 3rd order intercept point of +34 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

- 10 MHz to 600 MHz Frequency Range
- Low Noise Figure: 0.9 dB
- High Dynamic Range
- Efficient GaAs pHEMT Design
- Small Signal Gain: 40.5 dB
- Output P1dB: +19 dBm
- Output IP3: +34 dBm
- Operating Temperature: -40°C to +85°C
- 50 Ohm Input and Output Matched
- DC Power Supply: +12V / 140 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 = 140mA)

Description	Minimum	Typical	Maximum	Units
Frequency Range	10		600	MHz
Small Signal Gain	38.5	40.5		dB
Gain Flatness		±0.8	±1.2	dB
Gain Variation Over Temperature		0.02		dB/°C
Output at 1 dB Compression Point	+19	+19		dBm
Saturated Output Power (Psat)	+18	+20		dBm
Output 3rd Intercept Point	+31	+34		dBm
Noise Figure		0.9	1.1	dB
Input VSWR		1.6:1	2:1	
Output VSWR		1.3:1	2:1	
Reverse Isolation		-55		dB
Operating DC Voltage	9	12	15	Volts
Operating DC Current		140	160	mA
Operating Temperature Range	-40		+85	°C

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Absolute Maximum Rating

Parameter	Rating	Units
Supply Voltage	+20	V
RF Input Power	+15	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

Length	1.79 in [45.47 mm]
Width	1.1 in [27.94 mm]
Height	0.45 in [11.43 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

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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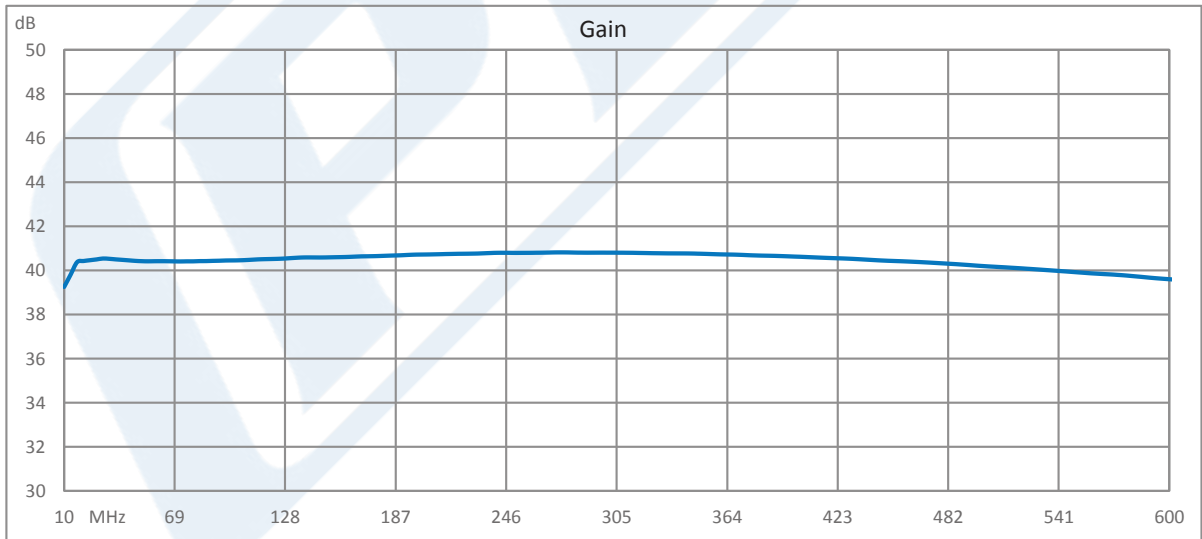
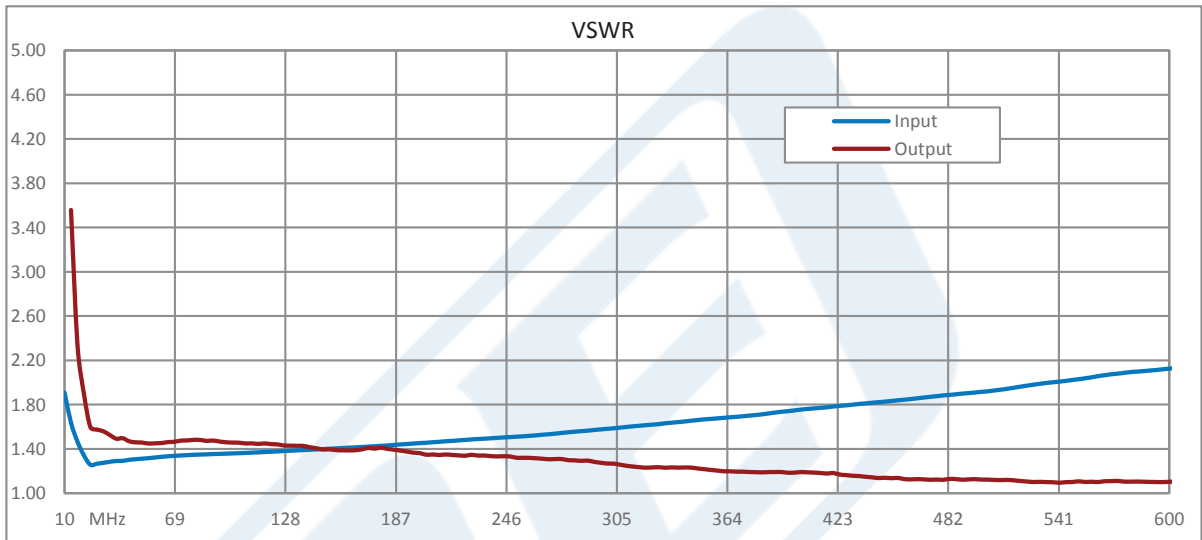


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Typical Performance Data



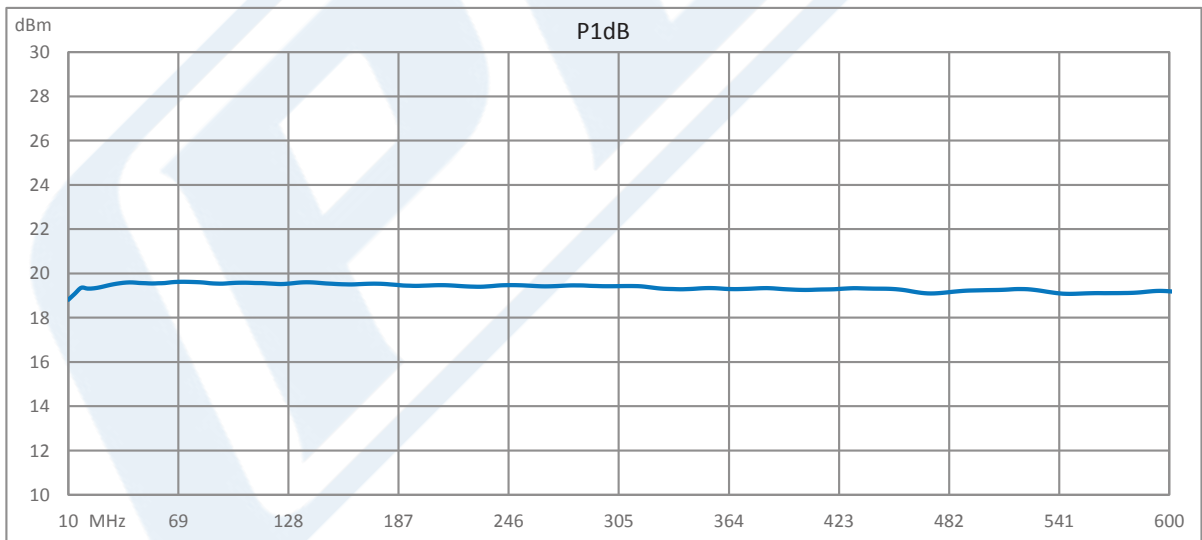
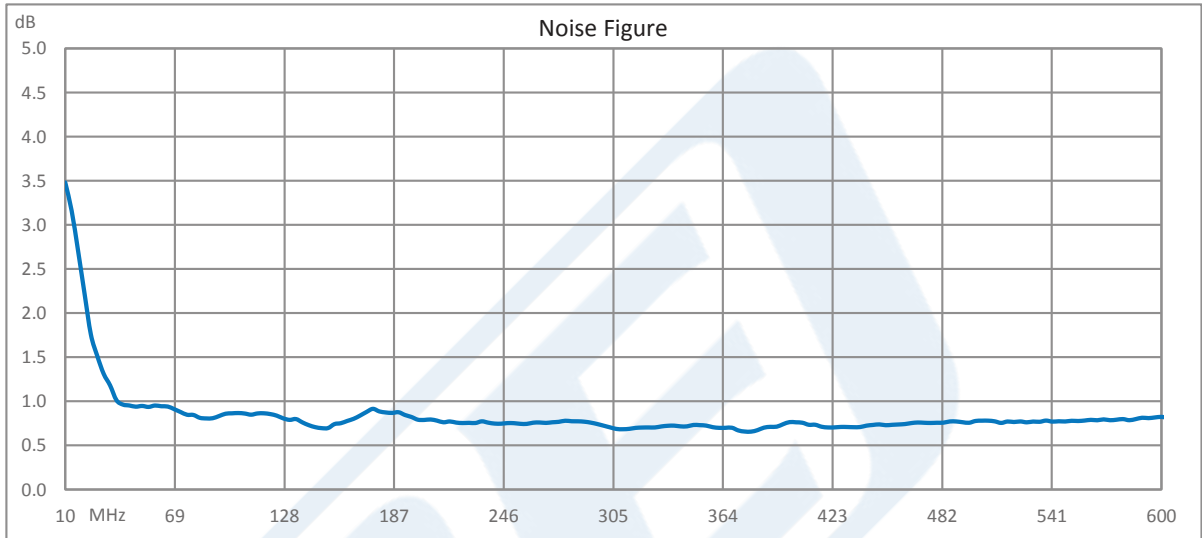
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [40.5 dB Gain, 34 dBm IP3, 0.9 dB NF, 20 dBm Psat, 10 MHz to 600 MHz, Low Noise Amplifier, SMA PE15A1063](#)



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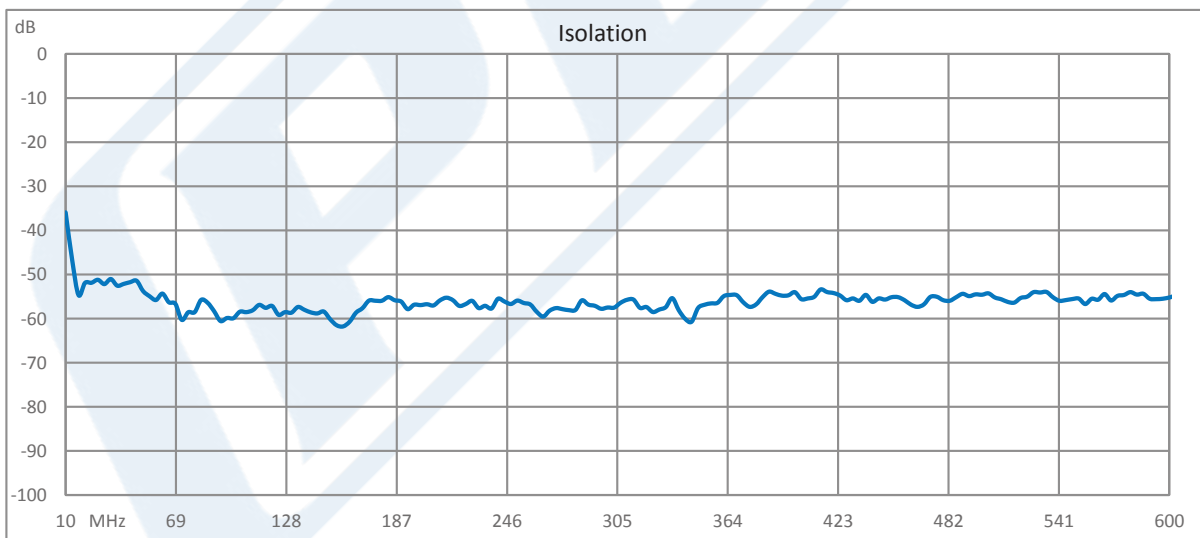
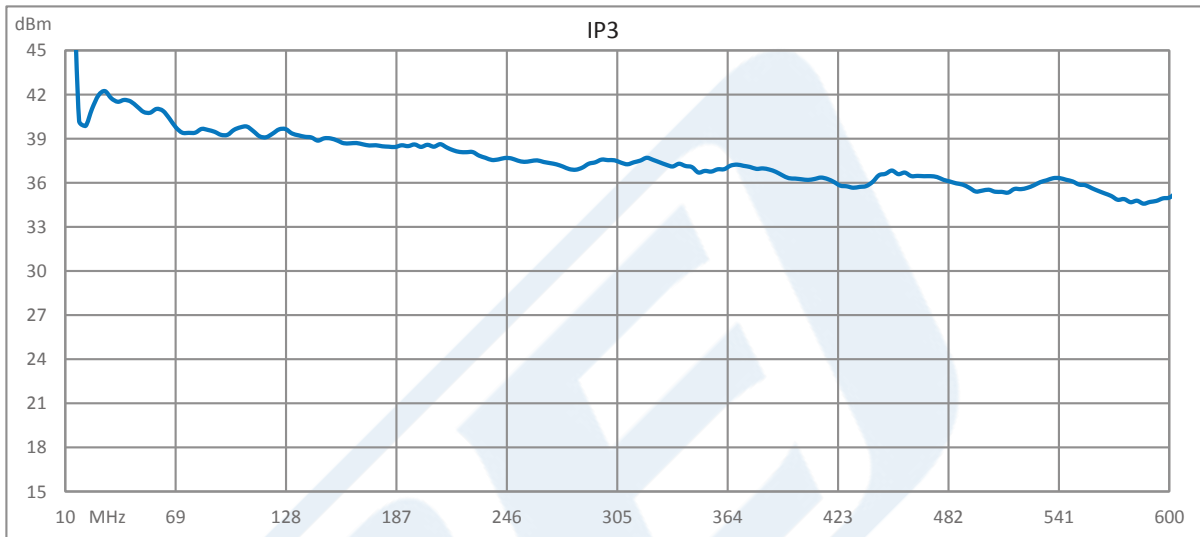
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40.5 dB Gain, 34 dBm IP3, 0.9 dB NF, 20 dBm Psat, 10 MHz to 600 MHz, Low Noise Amplifier, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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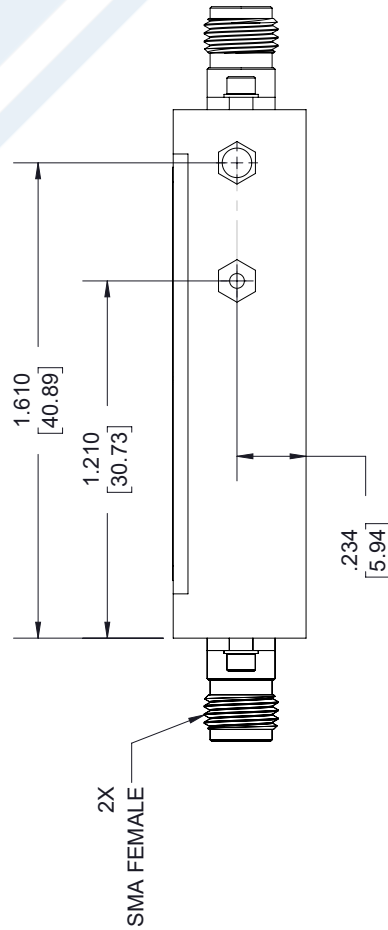
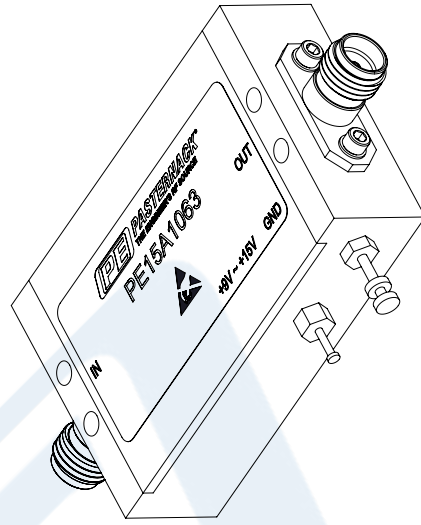
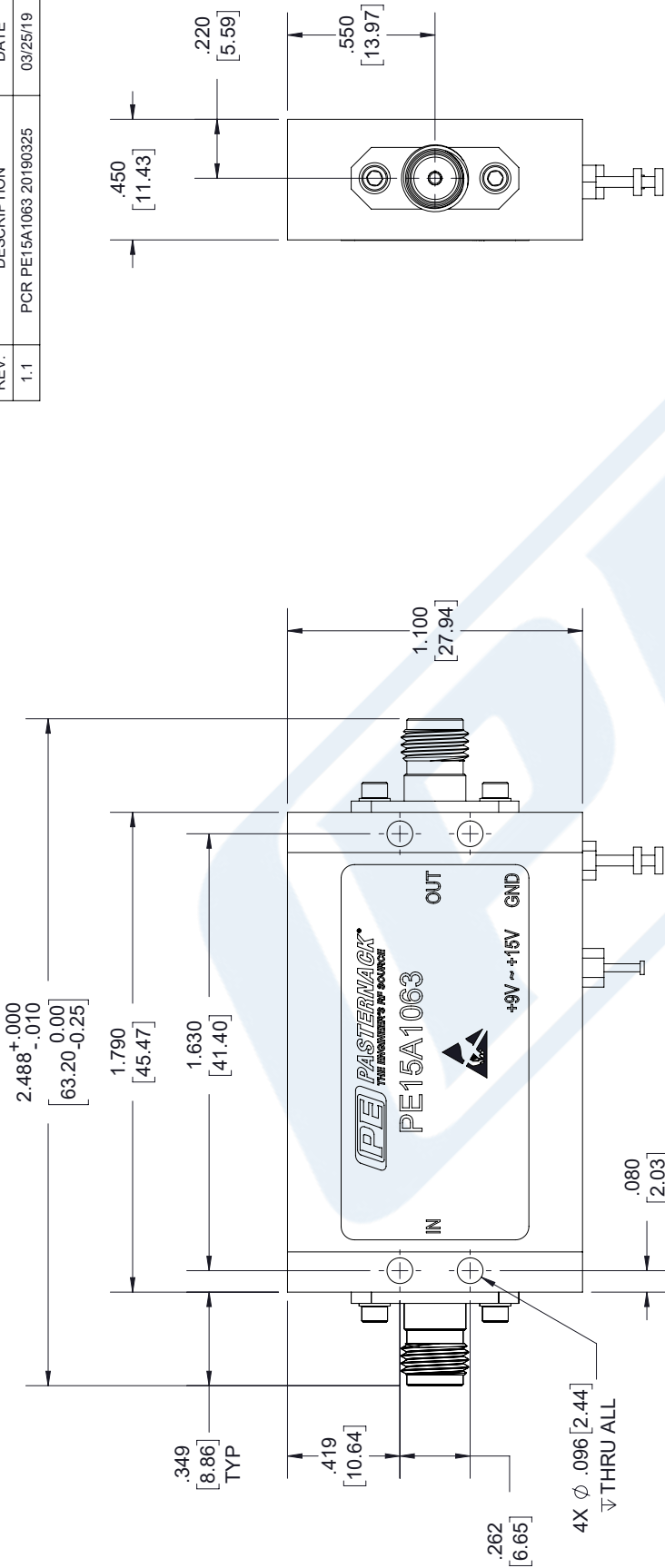
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PE15A1063 CAD Drawing

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1.1	PCR PE15A1063 20190325	03/25/19	T. GALLA



UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS	
TOLERANCES:	FRACTIONS
X±.2 [5.08]	±.132
.XX±.01 [0.25]	±.132
.XXX±.005 [0.13]	±.132
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.	
THIRD-ANGLE PROJECTION	

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SHEET 1	OF 1
SCALE	N/A
www.pasternack.com e-mail: sales@pasternack.com	
SIZE	A
CAGE	53919
DRAWN BY	K.DANG
PART NUMBER	PE15A1063
REV	A

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