

35 dBm IP3, 4 dB NF, 22 dBm P1dB, 1 MHz to 3 GHz,
Low Noise Broadband Amplifier, 21 dB Gain, SMA

PE15A3309



Features

- 1 MHz to 3 GHz Frequency Range
- P1dB: +20 dBm
- Small Signal Gain: 16 dB
- Gain Flatness: ± 1.5 dB
- 50 Ohm Input and Output Matched
- Output IP3: +35 dBm
- Advanced InGaP GaAs HBT Design
- -40 to +85°C Operating Temperature
- +15V / 110mA DC Positive Supply
- SMA Female Connectors
- Designed to meet MIL-STD-202 Test Conditions

Applications

- Laboratory Applications
- R&D Labs
- Test Instrumentation
- Military & Space
- Communication Systems
- Satellite Communications
- Wireless Communications
- Unmanned Systems
- Microwave Radio Systems
- Low Noise Amplifier
- General Purpose Amplification
- RF Front Ends

Description

The PE15A3309 is a broadband coaxial power amplifier, operating in the 1 MHz to 3 GHz frequency range. Impressive broadband typical performance includes 4 dB noise figure, 16 dB small signal gain, +20 dBm P1dB, and an output 3rd order intercept point of +35 dBm. This exceptional technical performance is achieved through the use of hybrid MIC design and advanced InGaP GaAs HBT devices. The low noise amplifier requires a +15V 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.

Electrical Specifications (TA= 25°C, VDC = 15 Vdc)

Description	Min	Typ	Max	Unit
Frequency Range	0.001		3	GHz
Gain	16	21		dB
Gain Flatness		± 1.5	± 2	dB
P1dB f = 1500 MHz	+20	+22		dBm
IP3	+33	+35		dBm
Reverse Isolation	-20	-23		dB
Noise Figure		4	4.5	dB
Input VSWR f = 1500 MHz		1.5:1	2:1	
Output VSWR f = 1500 MHz		2:1	2.5:1	
Operating DC Voltage	14	15	16	Vdc
Operating DC Current		110	130	mA
Operating DC Current at P1dB		22		mA
Operating Temperature Range (OTR)	0		+50	°C

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Absolute Maximum Rating

Parameter	Rating	Units
Supply Voltage	+16	V
RF Input Power	+10	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	1.25 in [31.75 mm]
Width	1.25 in [31.75 mm]
Height	0.563 in [14.3 mm]
Weight	0.093 lbs [42.18 g]
Input Connector	SMA Female
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	0 to +50 deg C
Storage Range	-40 to +100 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)

CE Certification

Plotted and Other Data

Notes:

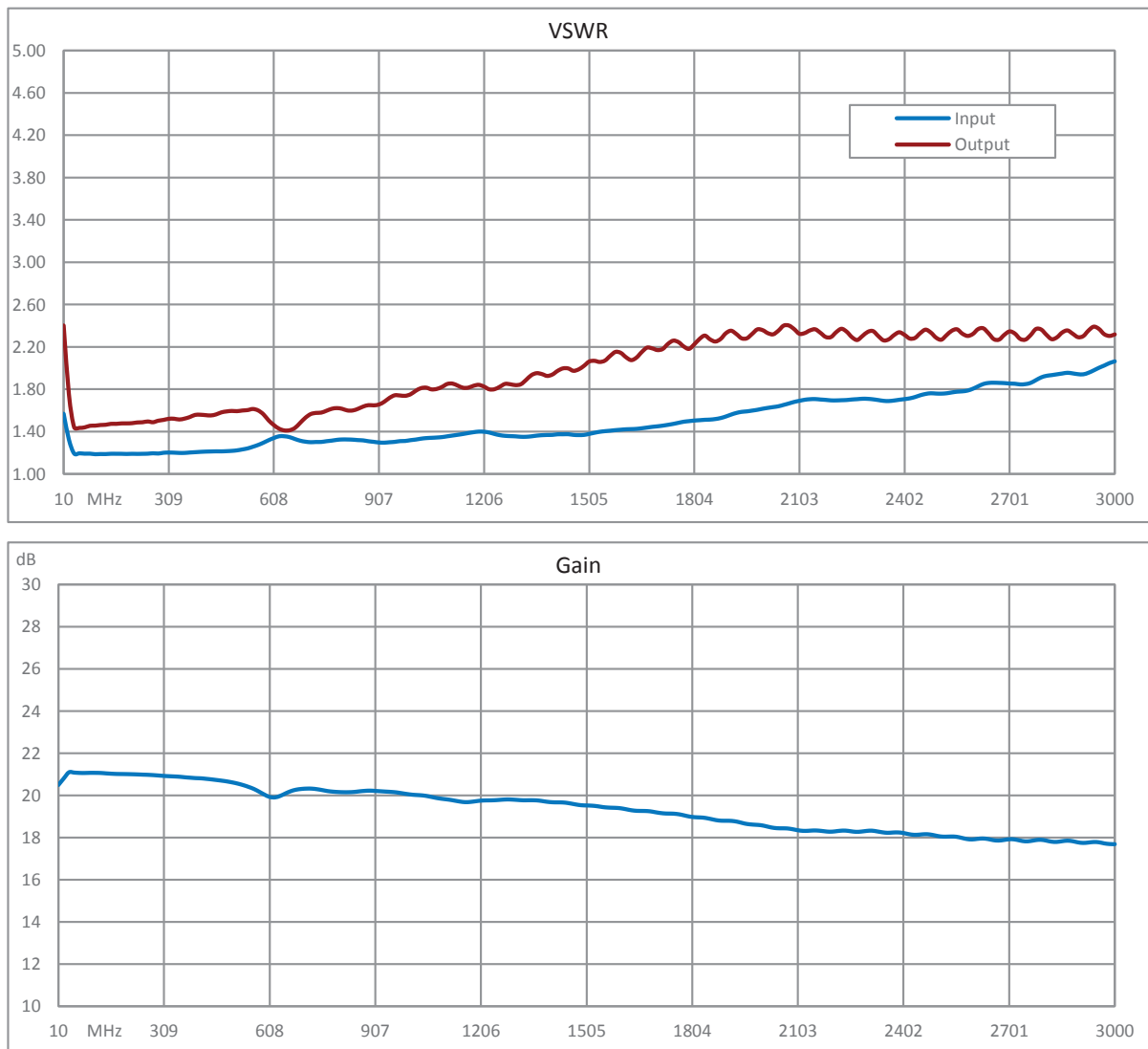
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Functional Block Diagram

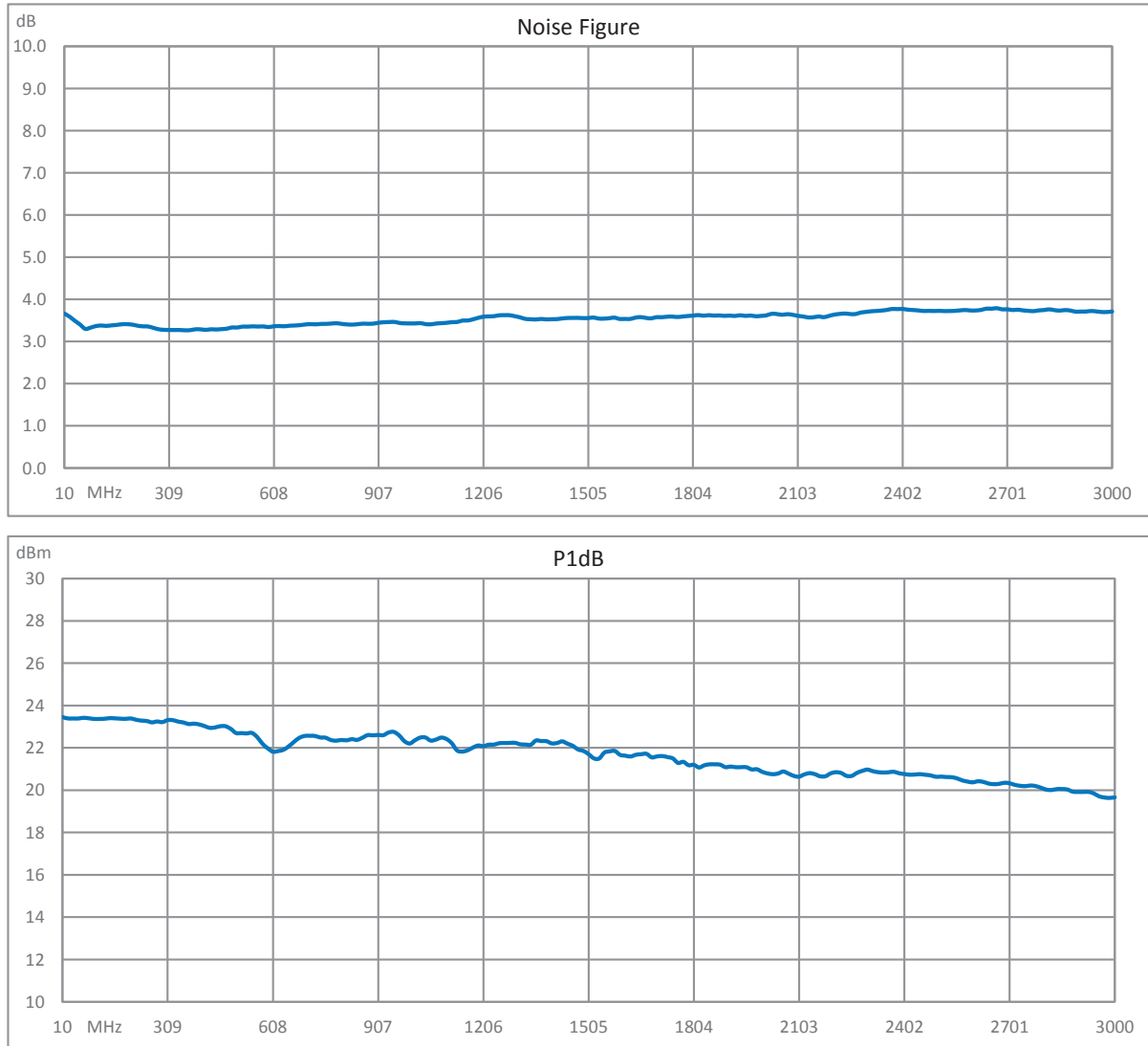
Typical Performance Data Parameter, Typ Performance



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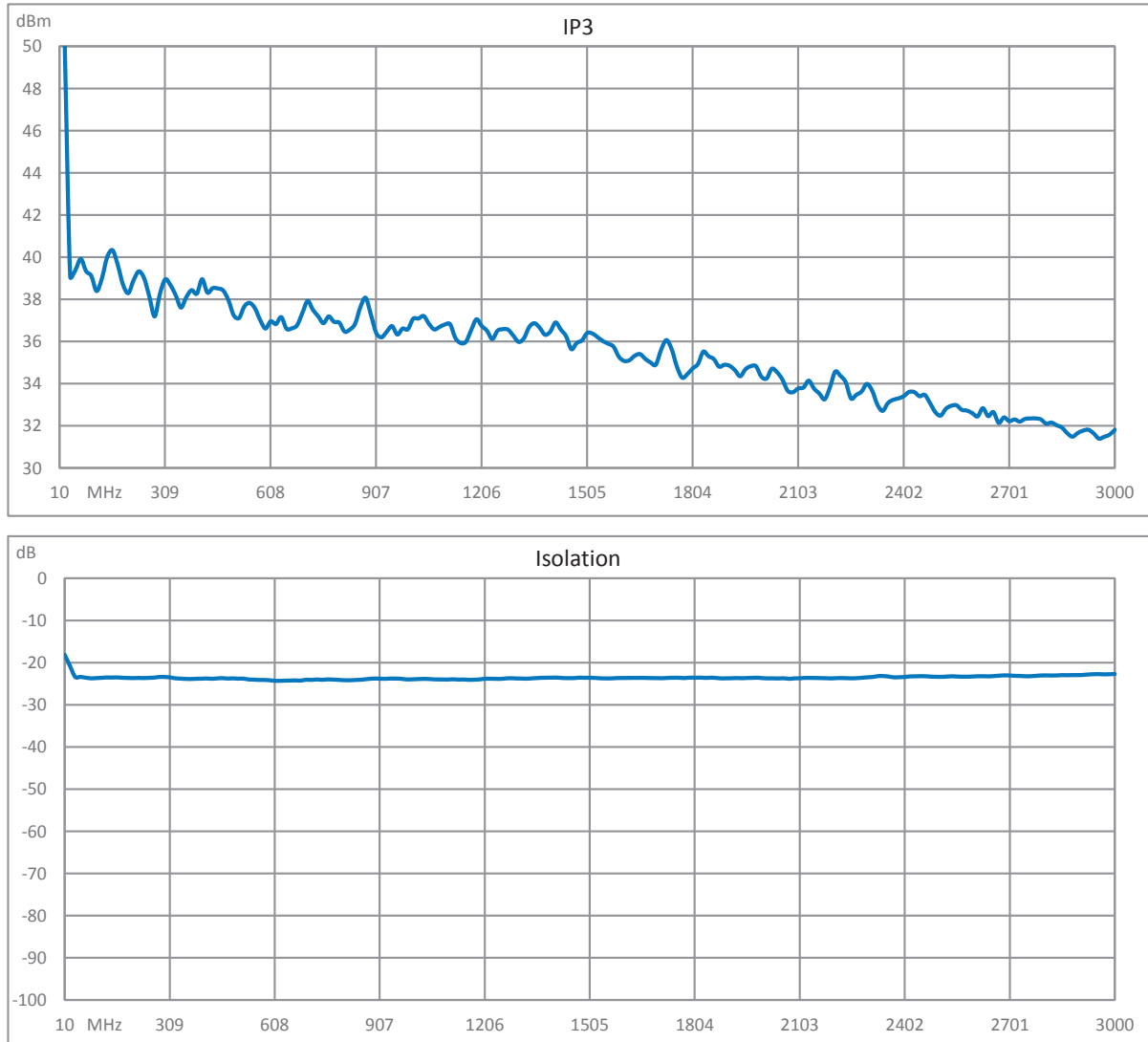
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35 dBm IP3, 4 dB NF, 22 dBm P1dB, 1 MHz to 3 GHz, Low Noise Broadband Amplifier, 21 dB Gain, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [35 dBm IP3, 4 dB NF, 22 dBm P1dB, 1 MHz to 3 GHz, Low Noise Broadband Amplifier, 21 dB Gain, SMA PE15A3309](https://www.pasternack.com/35-dbm-ip3-4-db-nf-22-dbm-p1db-1-mhz-to-3-ghz-low-noise-broadband-amplifier-21-db-gain-sma-pe15a3309-p.aspx)

URL: <https://www.pasternack.com/35-dbm-ip3-4-db-3-ghz-low-noise-broadband-amplifier-21-db-gain-sma-pe15a3309-p.aspx>

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PE15A3309 CAD Drawing

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