



48 dB Gain, 1 Watt P1dB, 6 GHz to 12 GHz, Broadband High Gain Amplifier, 39 dBm IP3, 5 dB NF, SMA

TECHNICAL DATA SHEET

PE15A3505

PE15A3505 is a 1W wideband coaxial power amplifier operating in the 6 to 12 GHz frequency range. The amplifier offers 30 dBm min of P1dB and high 48 dB typical small signal gain with the excellent gain flatness of ± 1.0 dB max and an outstanding output IP3 performance of 39 dBm. This excellent technical performance is achieved through the use of hybrid MIC design and advanced GaAs PHEMT devices. The 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 -55°C and $+85^{\circ}\text{C}$.

Features

- 6 GHz to 12 GHz Frequency Range
- P1dB: 30 dBm min
- High Small Signal Gain: 48 dB typical
- Gain Flatness: ± 1.0 dB
- High output IP3: 39 dBm
- Noise Figure: 5 dB typical
- Reverse Isolation: 50 dB
- 50 Ohms Input and Output Matched
- -55 to $+85^{\circ}\text{C}$ Operating Temperature
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Hermetically Sealed Module
- Overvoltage External Protection for Easy Repair

Applications

- Electronic Warfare
- Electronic Countermeasures
- Radar Systems
- Telecom Infrastructure
- Test Instrumentation
- Military & Space
- Communication Systems
- Satellite Communication
- Microwave Radio Systems
- Driver Amplifier
- High Power Output Amplifier

Electrical Specifications (TA= 25°C)

Description	Minimum	Typical	Maximum	Units
Frequency Range	6		12	GHz
Gain		48		dB
Gain Flatness		± 1		dB
Output at 1 dB Compression Point	+30			dBm
Output 3 rd Intercept Point		+39		dBm
Reverse Isolation		50		dB
Noise Figure		5	5.5	dB
Input VSWR			2:1	
Output VSWR			2:1	
Operating DC Voltage 1	11		15	Volts
Operating DC Current		1,350		mA
Quiescent Current		1,500	1,620	mA
Operating Temperature Range (OTR)	-55		+85	$^{\circ}\text{C}$

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [48 dB Gain, 1 Watt P1dB, 6 GHz to 12 GHz, Broadband High Gain Amplifier, 39 dBm IP3, 5 dB NF, SMA PE15A3505](#)



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Absolute Maximum Rating

Parameter	Rating	Units
Source Voltage	+16	Volts
RF input Power	+17	dBm
Operating Temperature (base-plate)	-55 to +85	°C
Storage Temperature	-65 to +95	°C



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

Mechanical Specifications

Size

Length	2.36 in [59.94 mm]
Width	1.55 in [39.37 mm]
Height	0.65 in [16.51 mm]
Weight	0.2619 lbs [118.8 g]
Input Connector	SMA Female
Output Connector	SMA Female
Cooling	ADEQUATE HEATSINK REQUIRED

Environmental Specifications

Temperature

Operating Range	-55 to +85 deg C
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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.
- Heat Sink Required for Proper Operation, Unit is cooled by conduction to heat sink.

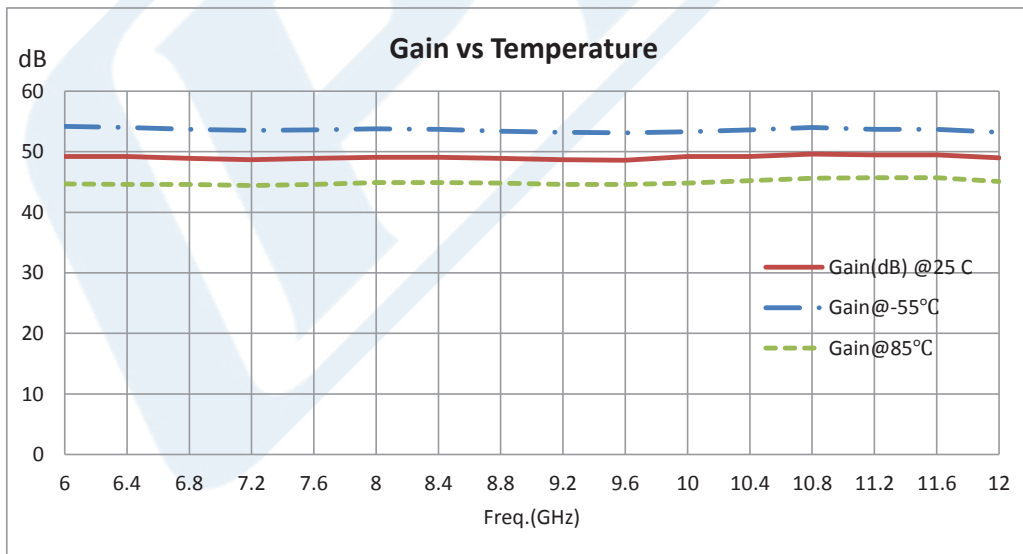
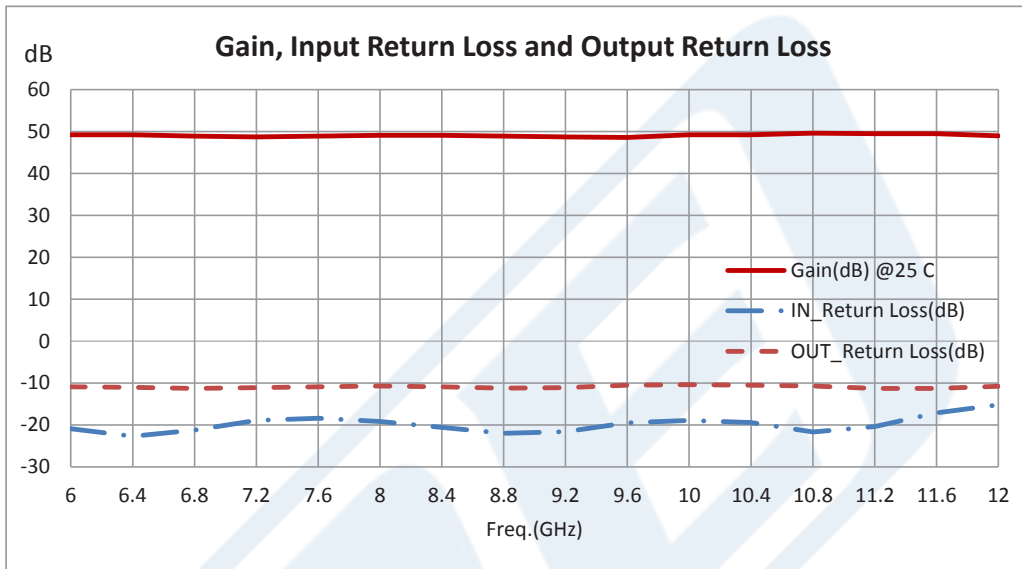
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Typical Performance Data



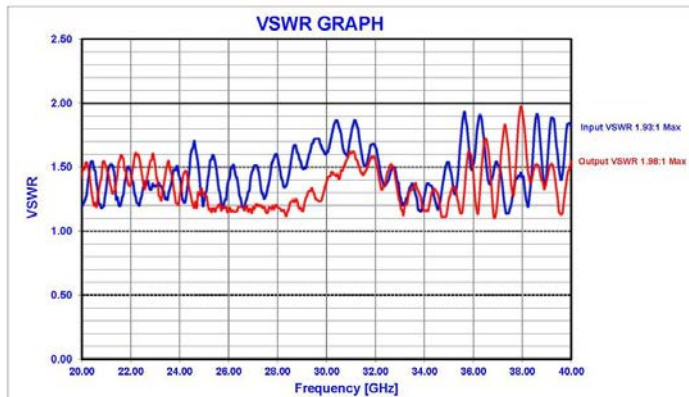
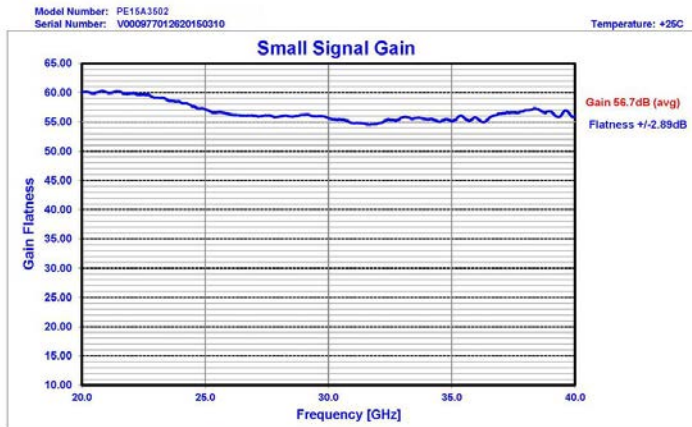
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48 dB Gain, 1 Watt P1dB, 6 GHz to 12 GHz, Broadband High Gain Amplifier, 39 dBm IP3, 5 dB NF, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

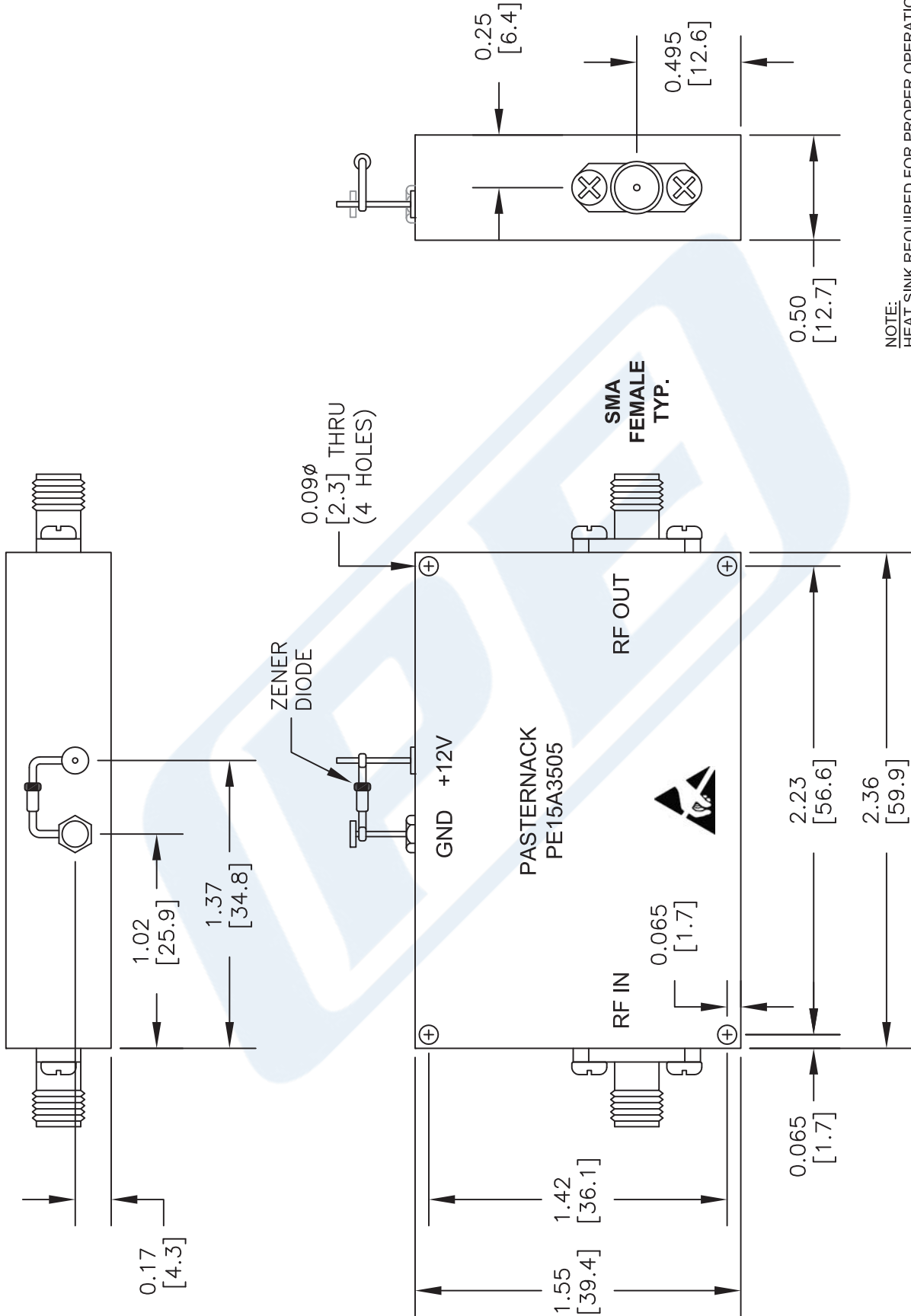
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URL: <https://www.pasternack.com/48-db-gain-12-ghz-broadband-high-gain-amplifier-5-db-sma-pe15a3505-p.aspx>

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PE15A3505 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

PE15A3505

FSCM NO. 53919

CAD FILE 031214

SCALE N/A

SIZE A

2233



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