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1.3 dB NF Low Noise Amplifier, Operating from 20 MHz to 1 GHz with 30 dB Gain, 18 dBm P1dB and SMA

TECHNICAL DATA SHEET PE15A1051

The PE15A1051 is a low noise coaxial amplifier operating in the 20 MHz to 1000 MHz frequency range. impressive broadband typical performance includes 1.3 dB noise figure, 30 dB small signal gain, +18 dBm P1dB, and an output 3rd order intercept point of +32 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 +75°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

- 20 MHz to 1000 MHz Frequency Range
- Low Noise Figure: 1.3 dB
- High Dynamic Range
- Efficient GaAs pHEMT Design
- Small Signal Gain: 30 dB
- Output P1dB: +18 dBm
- Output IP3: +32 dBm
- Operating Temperature: -40°C to +75°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	20		1,000	MHz
Small Signal Gain	27	30		dB
Gain Flatness		±0.5	±0.8	dB
Output at 1 dB Compression Point	+18	+18		dBm
Output 3rd Intercept Point	+30	+32		dBm
Noise Figure		1.3	1.7	dB
Input VSWR		1.4:1		
Output VSWR		1.4:1		
Reverse Isolation		-57		dB
Operating DC Voltage	10	12	18	Volts
Operating DC Current		140	160	mA
Operating Temperature Range	-40		+75	°C

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 1.3 dB NF Low Noise Amplifier, Operating from 20 MHz to 1 GHz with 30 dB Gain, 18 dBm P1dB and SMA PE15A1051

Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
Phone: (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451
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Absolute Maximum Rating

Parameter	Rating	Units
Supply Voltage	+25	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	1.25 in [31.75 mm]
Width	1.25 in [31.75 mm]
Height	0.563 in [14.3 mm]
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
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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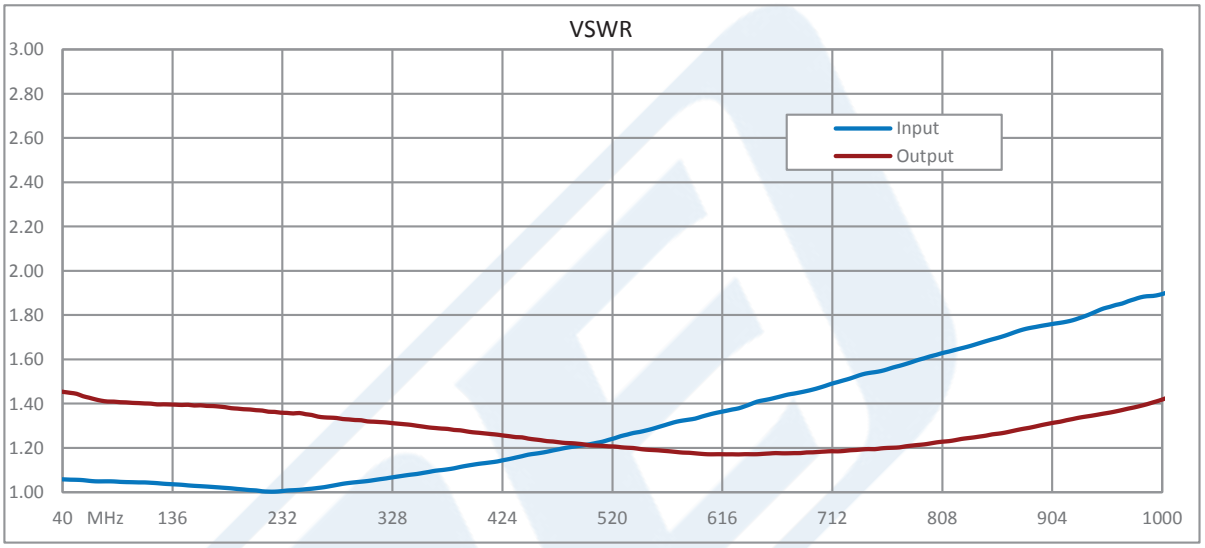
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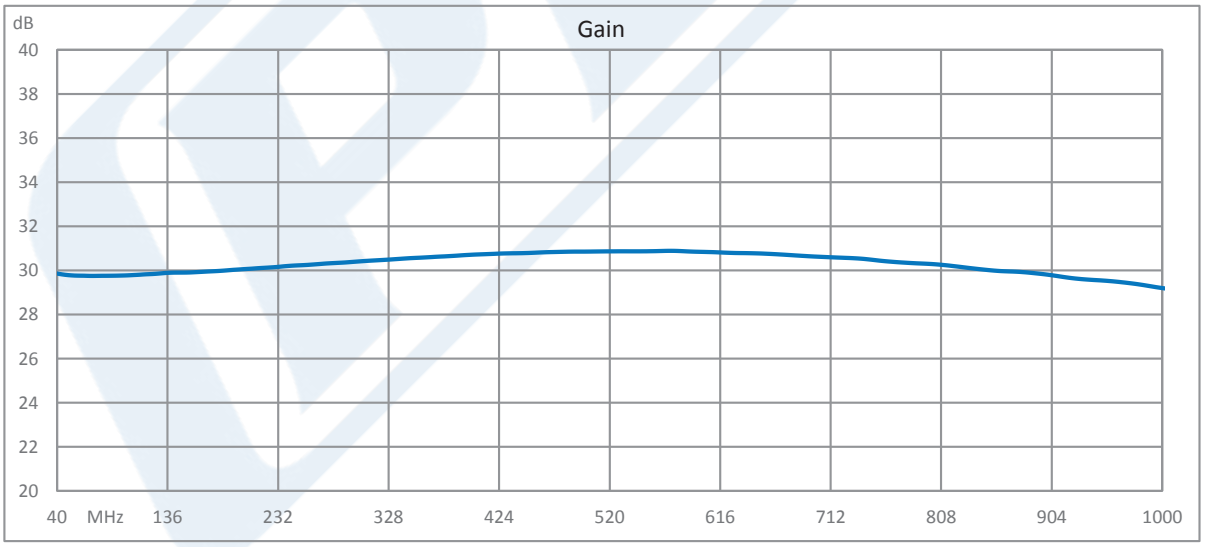


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Typical Performance Data





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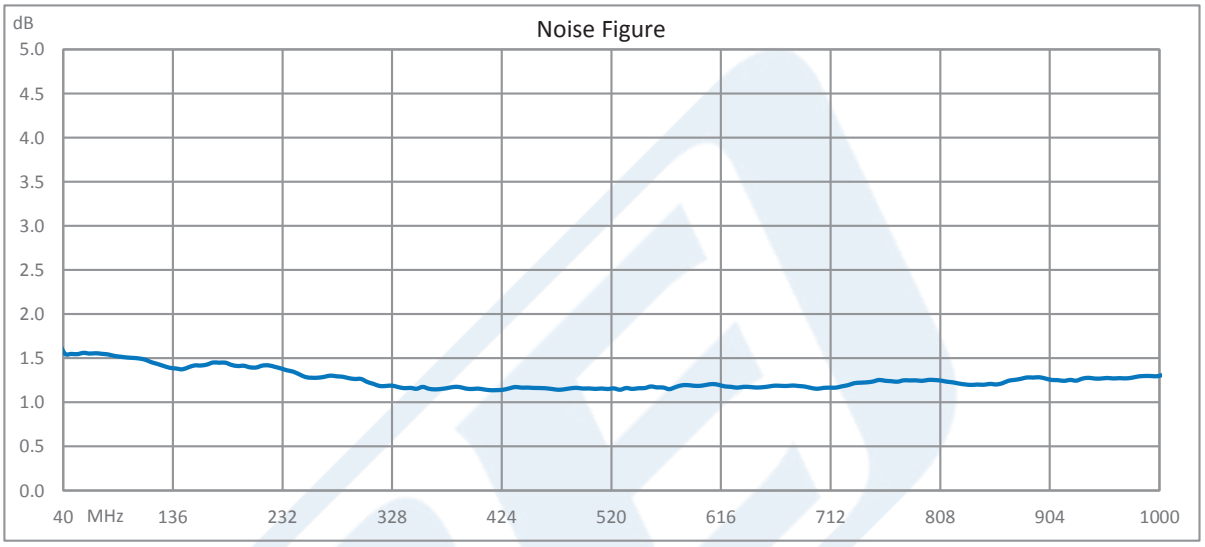
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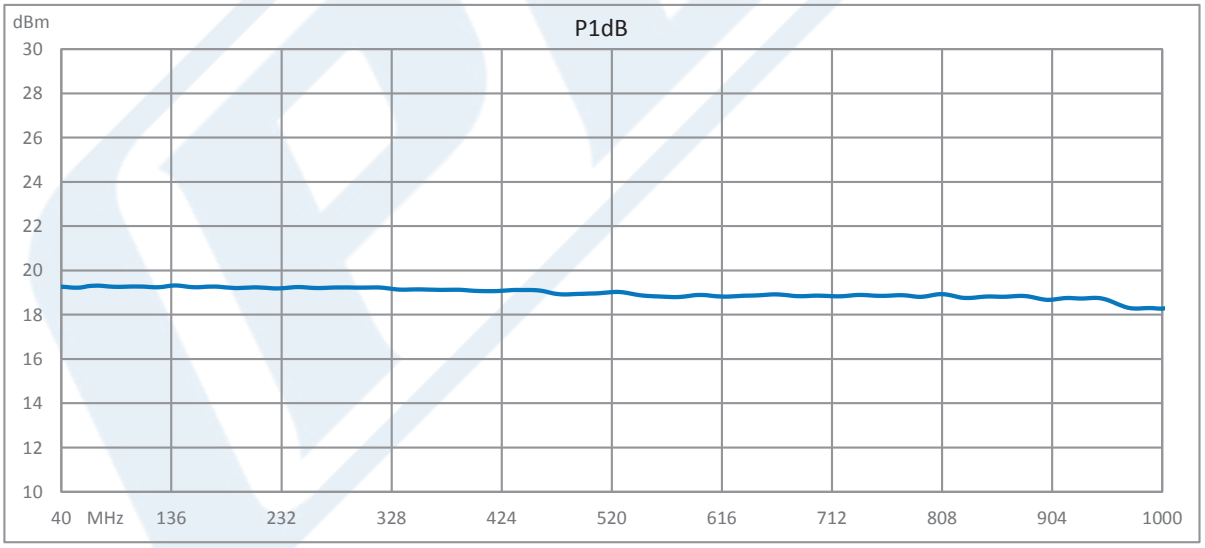
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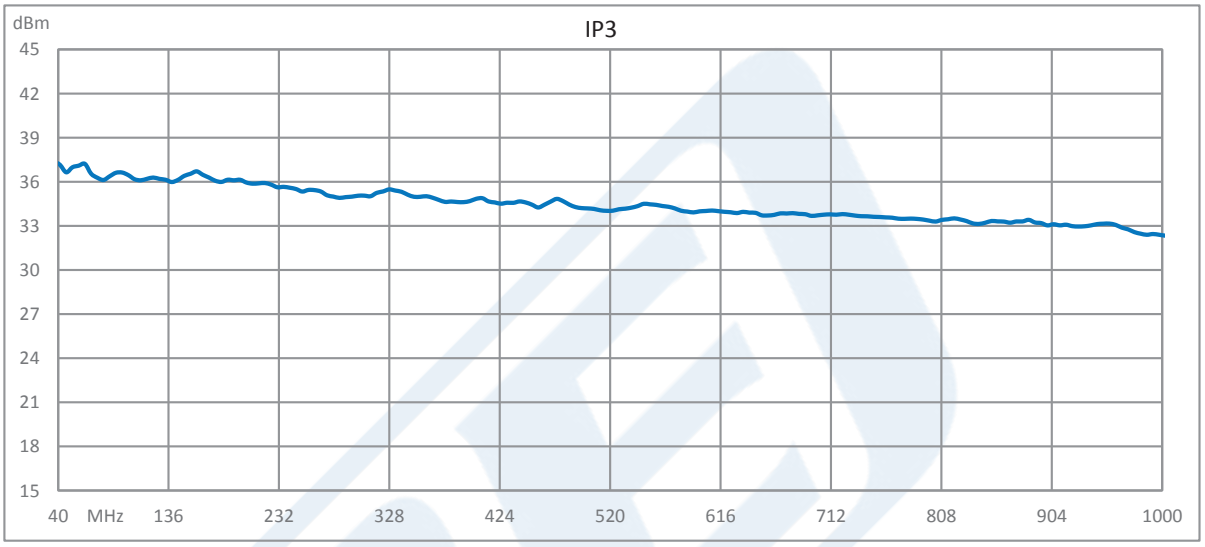
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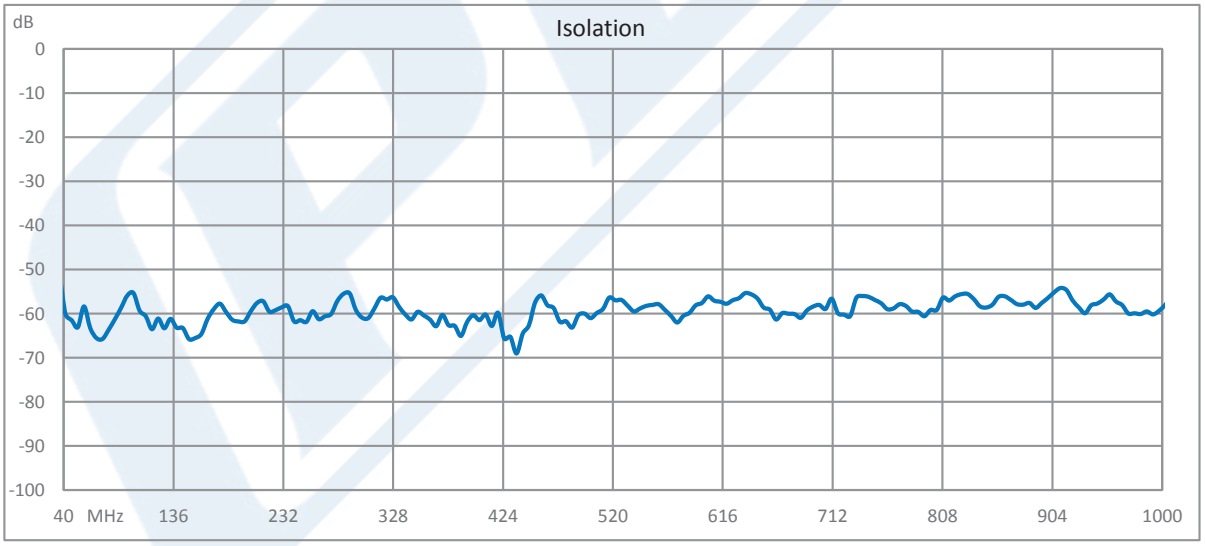
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URL: https://www.pasternack.com/1.3-db-1-ghz-low-noise-amplifier-30-db-gain-sma-pe15a1051-p.aspx

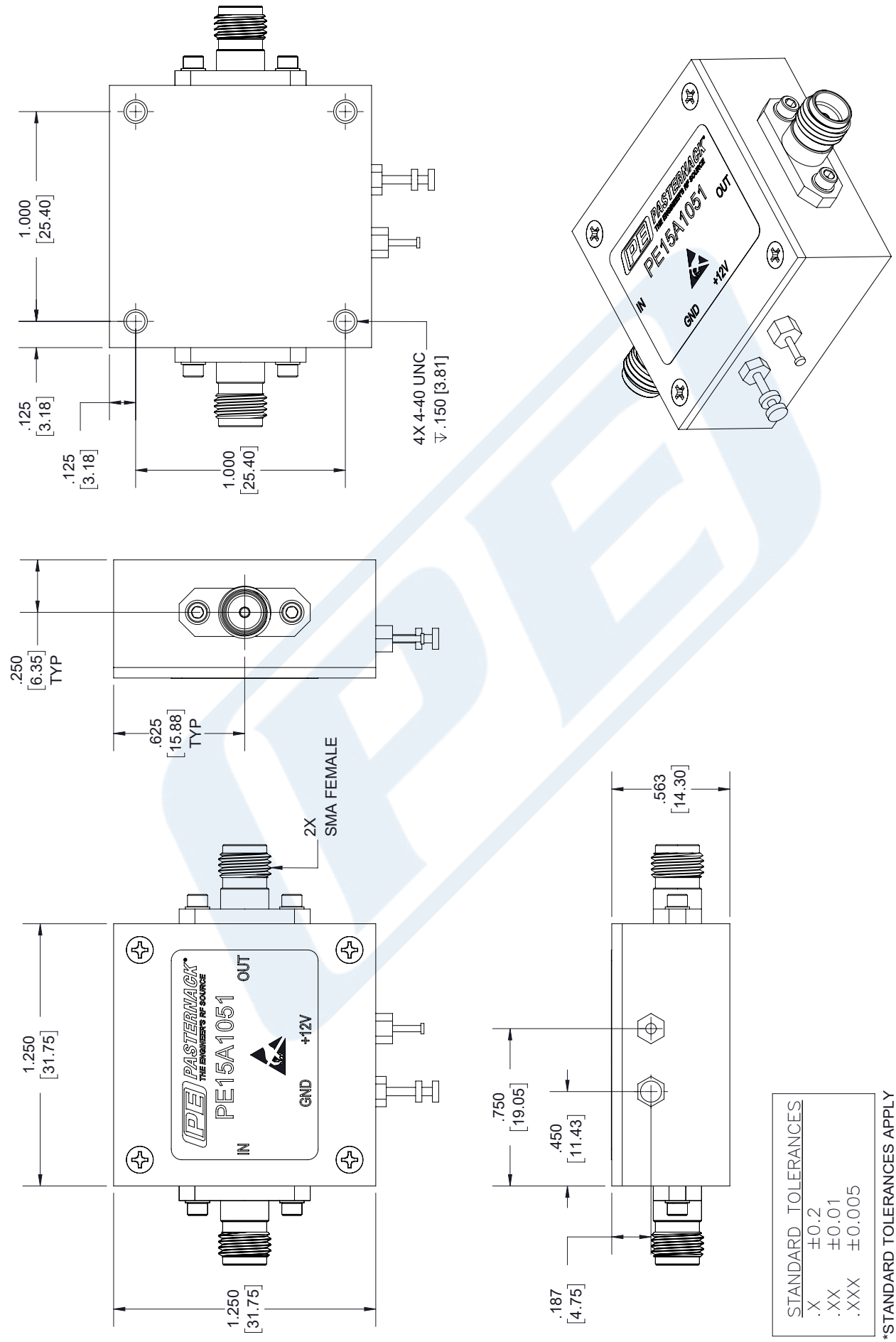
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PE15A1051 CAD Drawing

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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: PE15A1051

CAD FILE 04/26/18 | SCALE N/A | SIZE A | 7361

CAGE CODE 53919

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