PASTERNACK
an INFINITE brand

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink

TECHNICAL DATA SHEET PE15A5033F

The PE15A5033F is a 100 W high gain Class A/AB GaN Linear Power Amplifier operating in the 0.7 to 2.7 GHz frequency range. The amplifier offers 100 Watts typical saturated power and 45 dB minimum small signal gain with ±1.5 dB typical gain flatness. The amplifier requires typically a +30V DC power supply. The SMA connectorized module is unconditionally stable and operates over the temperature range of 0°C and +50°C. The unit comes with a Heatsink and Fan.

Features

- 0.7 GHz to 2.7 GHz Frequency Range
- Psat 100 Watts typ
- Small Signal Gain: 45 dB min
- Gain Flatness ±1.5 dB typ
- Switching Time 5 usec max
- 50 Ohms Input and Output Matched
- Unconditionally Stable
- Regulated Supply
- RF Input Signal Format: CW/AM/FM/Pulse
- Efficiency (PAE) 30% Typical
- Heatsink and Fan

Applications

- Military Radio
- Communication Systems
- High Gain Driver Power Amplifier
- High Gain Output Power Amplifier

Electrical Specifications (TA = +25°C)

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.7		2.7	GHz
Small Signal Gain	45			dB
Gain Flatness @ Psat		±1.5	±2	dB
Input Power (CW)		+7	+10	dBm
Pout at Sat.	+49.5	+50		dBm
Efficiency (PAE) ()	25	30		%
Harmonics		-20	-15	dBc
Spurious		-70	-60	dBc
Impedance (Input)		50		Ohms
Impedance (Output)		50		Ohms
Input VSWR			2:1	
Switching Speed for On/Off Switch Gate			5	uS
TTL Control	“1”: On, “0”: Off, Enable: 5V, Disable: 0V			
Operating DC Voltage		+30		Volts
Operating DC Current		8.733	16.666	A
DC Consumption		262	500	Watts
Operating Temperature Range	0		+50	°C

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink PE15A5033F

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

PASTERNACK
an INFINITE brand

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink

TECHNICAL DATA SHEET PE15A5033F

Mechanical Specifications

Size

Length	10.75 in [273.05 mm]
Width	7 in [177.8 mm]
Height	3.75 in [95.25 mm]
Weight	9.5 lbs [4.31 kg]
Input Connector	SMA Female
Output Connector	SMA Female
Cooling	Adequate Airflow Required

Environmental Specifications

Temperature

Operating Range	0 to +50 deg C
Humidity	95
Shock	Normal Truck Transport
Vibration	Normal Truck Transport
Altitude	10000

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.

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink PE15A5033F

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

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink

Amplifier Power-up Precautions

1.) Confirm that proper ESD precautions and controls are always in place before handling any Amplifier module.

2.) Confirm adequate thermal management is in place to effectively dissipate heat away from the Amplifier package. The Amplifier operational baseplate temperature must be within the operational temperature range stated in the Amplifier datasheet. Depending on the design and thermal requirements, using a heatsink with cooling fan is always recommended for safe reliable operation. A heat sink without a cooling fan may also be used. Damage caused from overheating will void the warranty.

3.) Confirm adequate system grounding is established. The DC power supply and Amplifier must have a common ground in order to operate properly.

4.) Power Amplifiers may require additional DC Current when initially powered-up. Depending on the design, the input current draw could range from an additional 10% to 100% above the maximum rated DC current of the Amplifier. This varies based on product part number.

5.) Confirm the DC power supply, if limited, is set to allow for additional start-up current that's rated for the Power Amplifier.

6.) Confirm the system is designed and calibrated for 50 ohms. Any impedance mismatch may cause performance issues.

7.) Perform a CALIBRATION (if required) with the loads before connecting the Amplifier to the Network Analyzer to ensure proper performance.

8.) Use a fixed attenuator between the signal source and input port of the Amplifier to optimize the input VSWR match.

9.) Confirm the input power level at the input port of the amplifier does not exceed the maximum rated limit for input power (as stated in the Amplifier datasheet).
P_{in} for Small Signal Gain = P1dB-SSG-10 dB
P_{in} for P1dB = P1dB-SSG+1 dB

10.) Confirm the Network Analyzer is always connected to the Amplifier first before DC power is applied to the Amplifier.

11.) As long as the input and output ports of the amplifier are connected to a 50Ohm load and RF signal power is applied, the Amplifier can be powered up with DC voltage.

12.) Confirm the Amplifier output load is matched for a 50 Ohm impedance and will not exceed the maximum rated VSWR or Return Loss limit for the Amplifier. Exceeding the maximum rated VSWR or Return Loss limit will result in reflected signal power that could damage the Amplifier and void the warranty.

13.) **Power Amplifier connected to an Antenna for signal transmission** - It's strongly recommended to use a high power fixed attenuator pad or an Isolator between the output port of the Amplifier and input port to the antenna. Any reflected signal power due to impedance mismatch will likely damage the Amplifier and void the warranty.

14.) The attenuator or isolator used at the output port of the Amplifier must be rated to handle the output power level and operational frequency band of the amplifier.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink PE15A5033F

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

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink

Power Up Sequence

For Turn On:

1. Initially, NO RF INPUT
2. On/Off and Blanking Pins set to Ground (Logic 0). This will keep the module in the Disable and blanked condition (no amplification) during Voltage (+30VDC) turn on.
3. Turn the Voltage (+30VDC) on.
4. Turn on Voltage (TTL +5VDC or +3.3VDC) to On/Off and Blanking Pins. This will enable and un-blank the module (amplification).
5. Turn on the Signal Source (-25dBm) on the RF input.

For Turn Off:

1. Turn off the Signal Source on the RF input.
2. On/Off and Blanking Pins set to Ground (Logic 0). This will keep the module in the Disable and blanked condition (no amplification during Voltage (+30VDC) turn off.
3. Turn off the Voltage (+30VDC).

Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink PE15A5033F

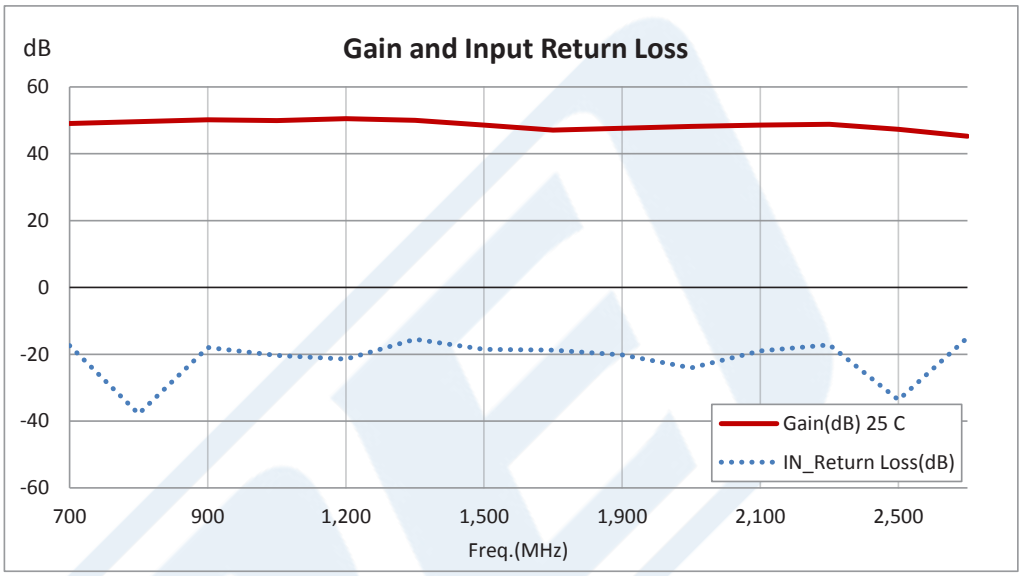
Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
Phone: (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451
Sales@Pasternack.com • Techsupport@Pasternack.com

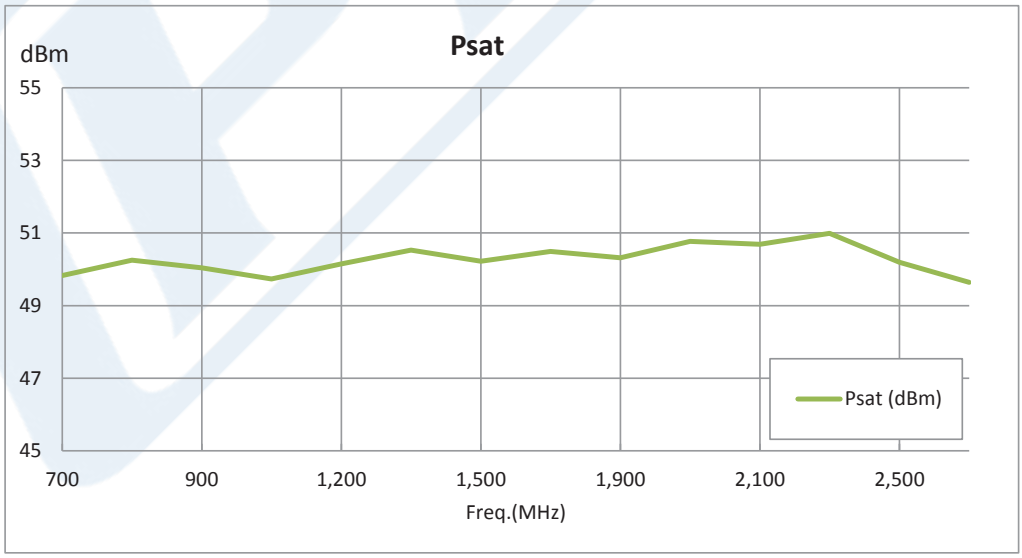
PASTERNACK
an INFINITE brand

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink

TECHNICAL DATA SHEET PE15A5033F

Typical Performance Data





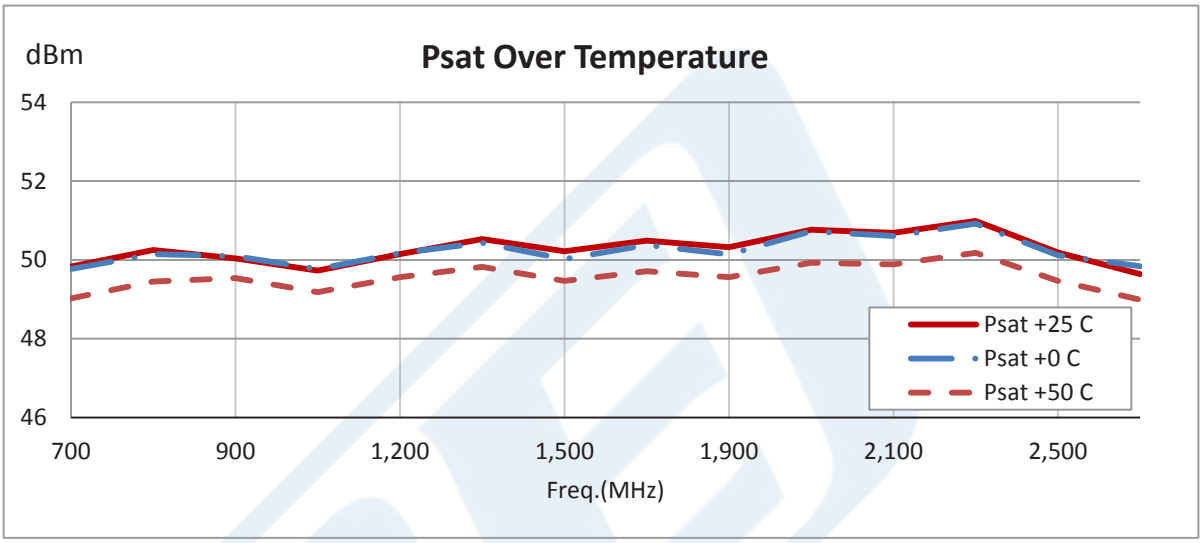
Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink PE15A5033F

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

PASTERNACK
an INFINITE brand

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink

TECHNICAL DATA SHEET PE15A5033F



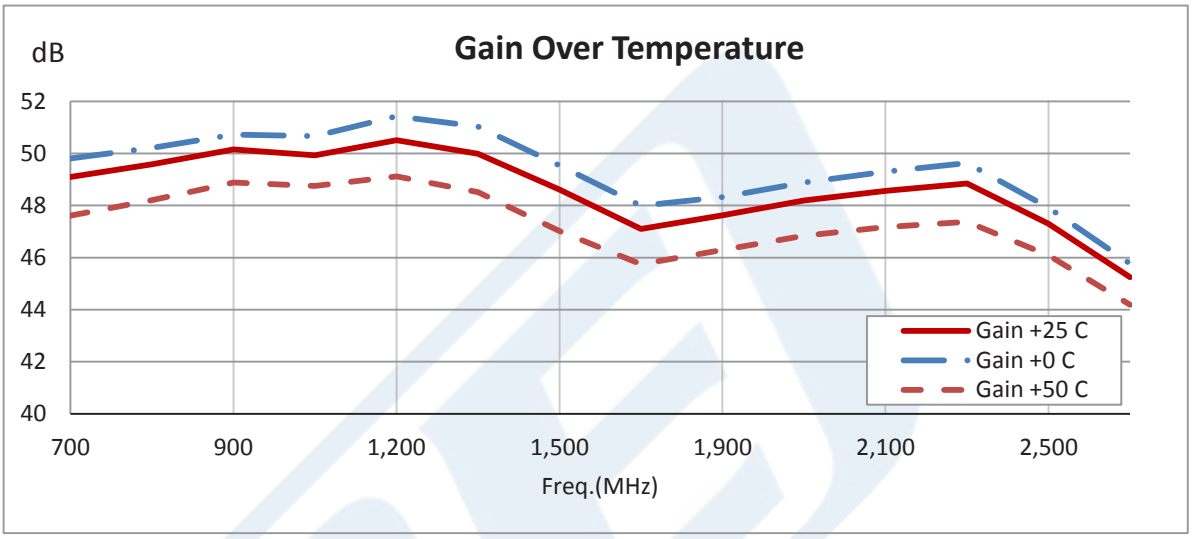
Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink PE15A5033F

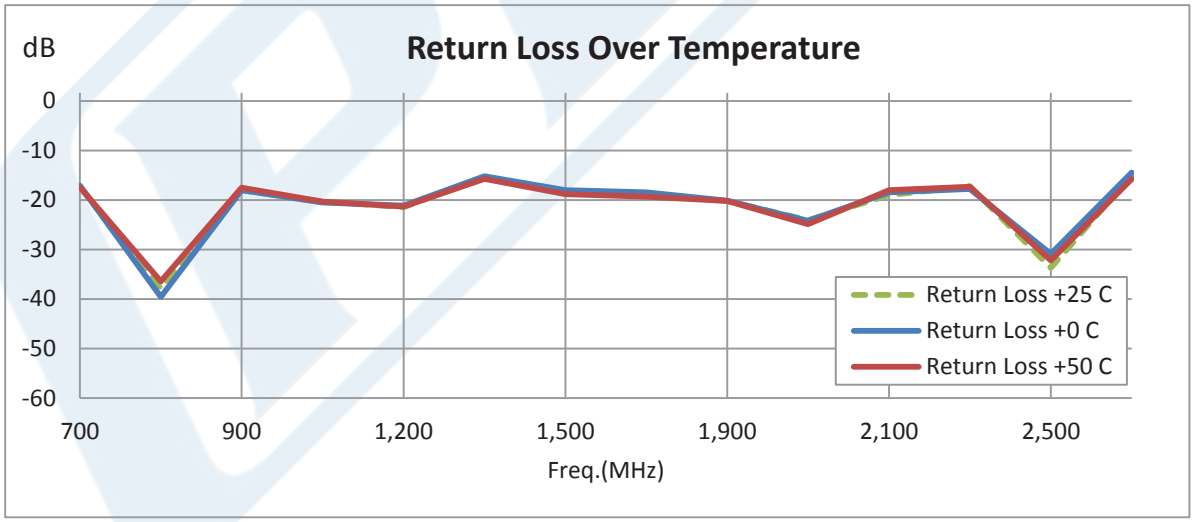
Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
Phone: (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451
Sales@Pasternack.com • Techsupport@Pasternack.com

PASTERNACK
an INFINITE brand

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink

TECHNICAL DATA SHEET PE15A5033F





Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink PE15A5033F

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

PASTERNACK
an INFINITE brand

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink

TECHNICAL DATA SHEET PE15A5033F

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink 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.

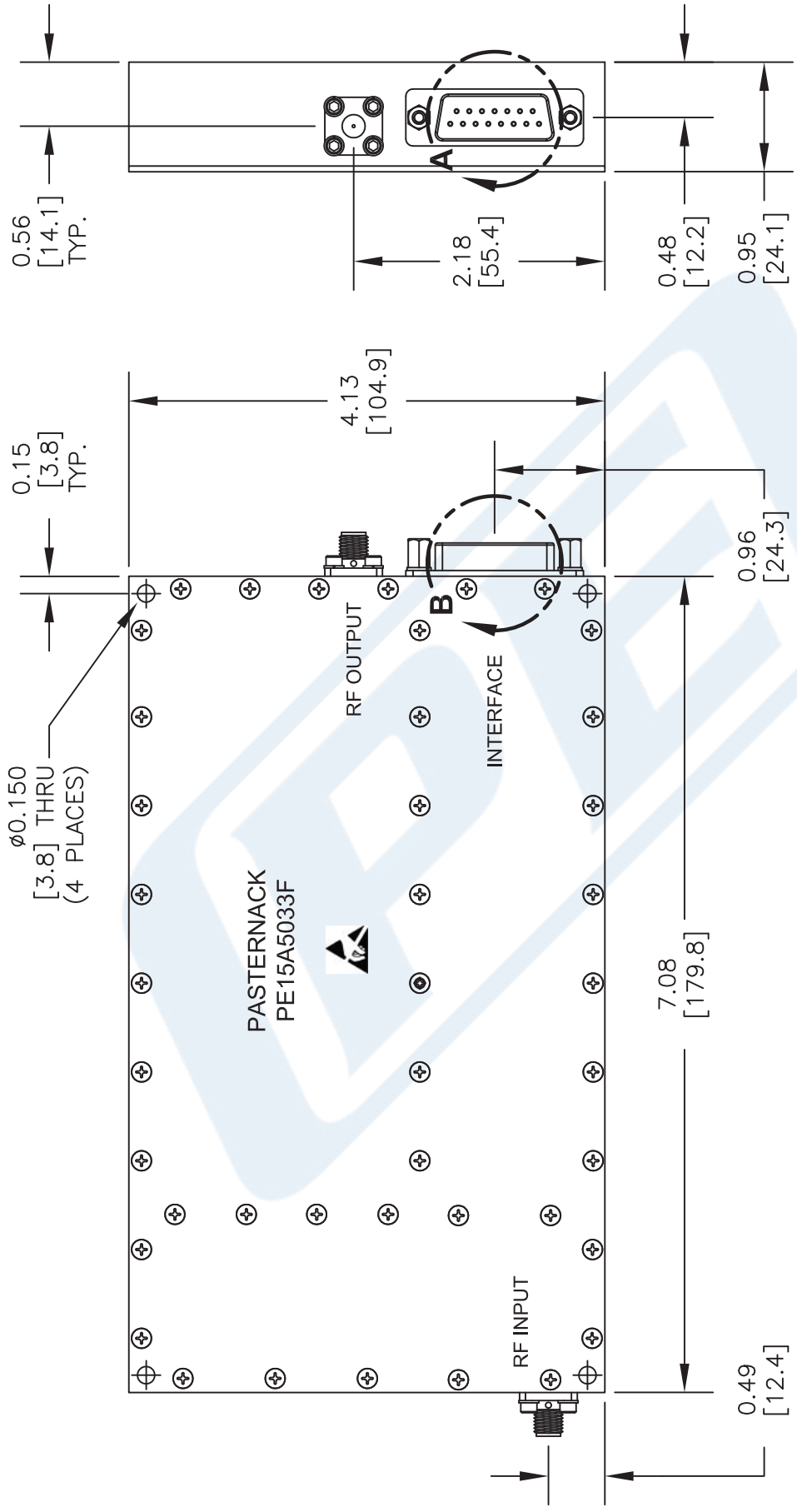
Click the following link (or enter part number in “SEARCH” on website) to obtain additional part information including price, inventory and certifications: 45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink PE15A5033F

URL: https://www.pasternack.com/45-db-gain-2.7-ghz-high-power-high-gain-amplifier-sma-pe15a5033f-p.aspx

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

PE15A5033F CAD Drawing

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink



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].

CAD FILE	052015	SCALE N/A	SIZE A	2233

DWG TITLE: **PE15A5033F**

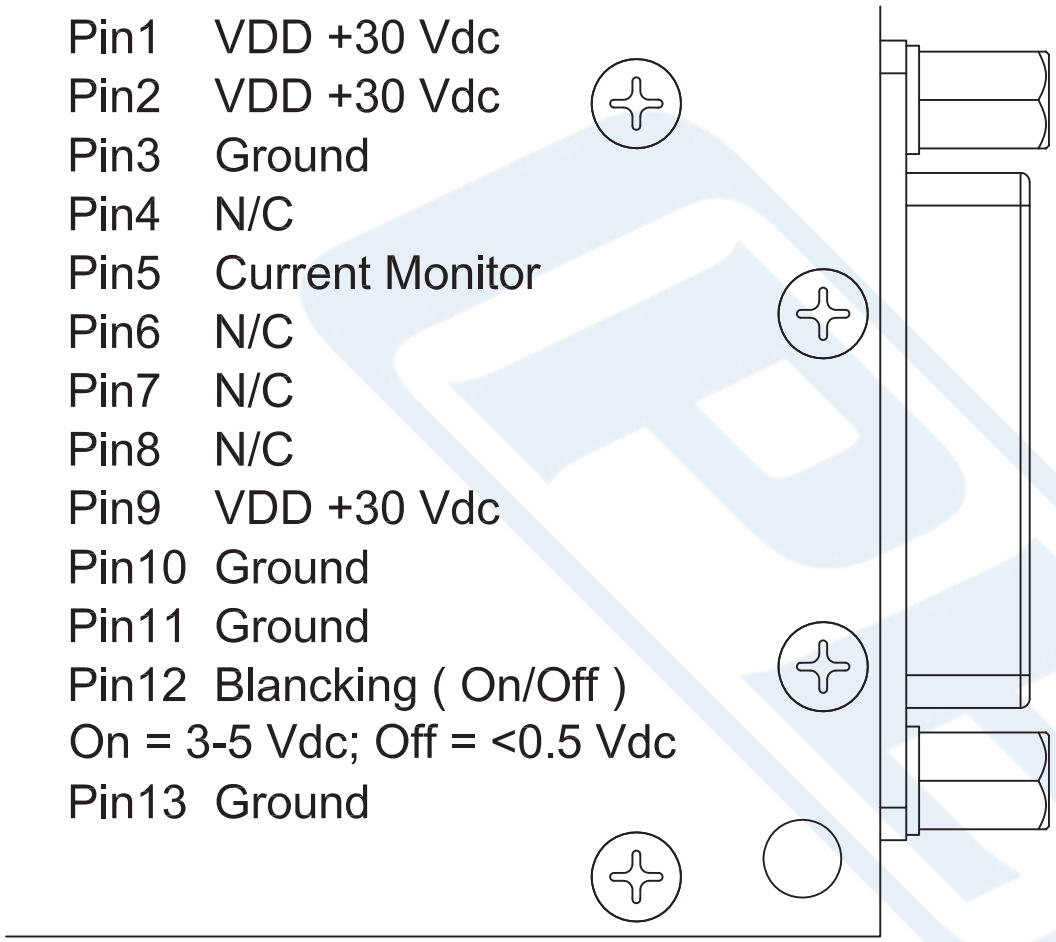
FSCM NO. 53919

PASTERNACK® THE ENGINEER'S RF SOURCE
Pasternack Enterprises, Inc.
P.O. Box 16759 | Irvine | CA | 92623
Phone: (949) 261-1920 | **Fax:** (949) 261-7451
Website: www.pasternack.com | **E-Mail:** sales@pasternack.com

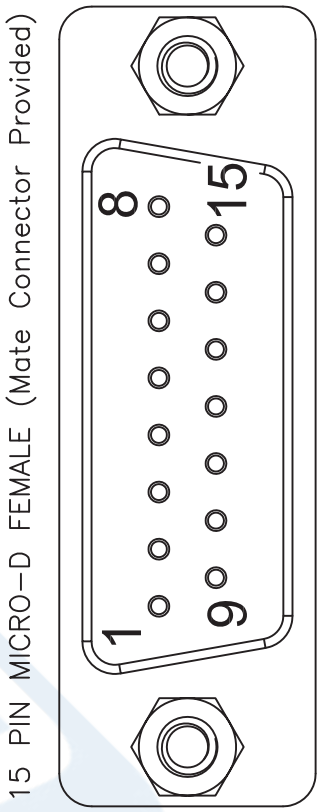
PE15A5033F CAD Drawing

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink

Pin1	VDD +30 Vdc
Pin2	VDD +30 Vdc
Pin3	Ground
Pin4	N/C
Pin5	Current Monitor
Pin6	N/C
Pin7	N/C
Pin8	N/C
Pin9	VDD +30 Vdc
Pin10	Ground
Pin11	Ground
Pin12	Blancking (On/Off)
	On = 3-5 Vdc; Off = <0.5 Vdc
Pin13	Ground



View B



View A

PASTERNACK
THE ENGINEER'S RF SOURCE
Pasternack Enterprises, Inc.
P.O. Box 16759 | Irvine | CA | 92623
Phone: (949) 261-1920 | **Fax:** (949) 261-7451
Website: www.pasternack.com | **E-Mail:** sales@pasternack.com

DWG TITLE

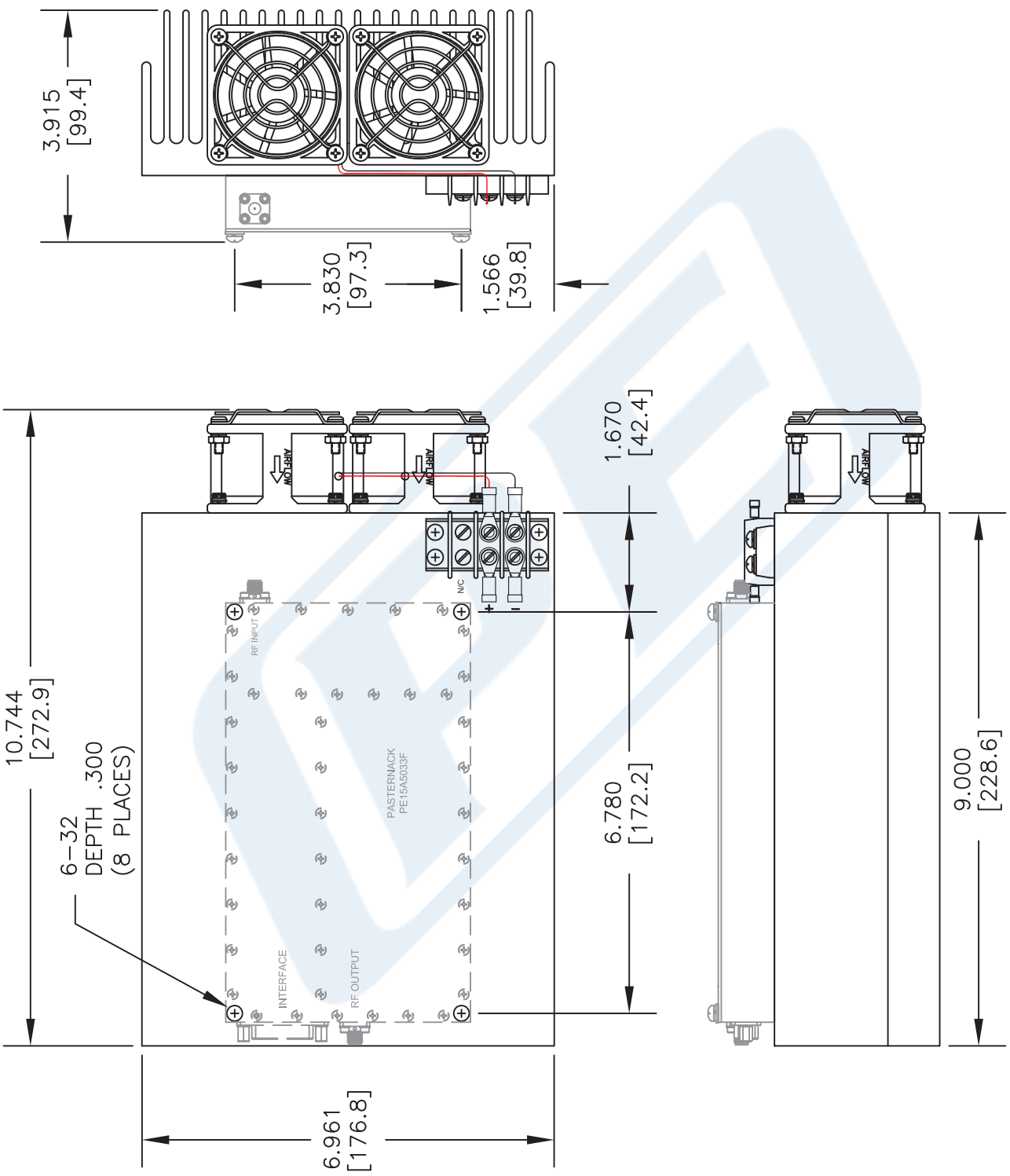
PE15A5033F

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].

FSCM NO. 53919	CAD FILE 052015	SCALE N/A	SIZE A	2233

PE15A5033F CAD Drawing

45 dB Gain, 100 Watt Psat, 700 MHz to 2.7 GHz, High Power GaN Amplifier, SMA Input, SMA Output, Class A/AB, with Heatsink



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].

CAD FILE	052015	SCALE N/A	SIZE A	2233

DWG TITLE **PE15A5033F**

FSCM NO. 53919

PASTERNACK® THE ENGINEER'S RF SOURCE
Pasternack Enterprises, Inc.
P.O. Box 16759 | Irvine | CA | 92623
Phone: (949) 261-1920 | **Fax:** (949) 261-7451
Website: www.pasternack.com | **E-Mail:** sales@pasternack.com

单击下面可查看定价，库存，交付和生命周期等信息

>>PASTERNACK