PASTERNACK®
THE ENGINEER'S RF SOURCE

58 dB Gain, 20 Watt Psat, 6.4 GHz to 7.1 GHz, High Power High Gain Amplifier, GaN, SMA

TECHNICAL DATA SHEET PE15A5016

PE15A5016 is a Wideband GaN amplifier that is ideal for linear application including 5 W of Linear COFDM Power for video and UAV/UGV data links. The amplifier can provide over 20 W of analog FM power. The high gain power coaxial amplifier operating in the 6.4 to 7.1 GHz frequency range and high 58 dB typical small signal gain with the gain flatness of ±2 dB typical. The driver amplifier requires typically a +33V 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 -10°C and +85°C.

Features

- 6.4 GHz to 7.1 GHz Frequency Range
- Psat 20 W Typ
- Linear COFDM Power Output 5 W
- Small Signal Gain: 58 dB min
- Gain Flatness: ±2 typical
- 50 Ohms Input and Output Matched
- Unconditionally Stable
- Regulated Supply & Bias Sequencing
- Overvoltage Protection
- Thermal Protection

Applications

- COFDM Video
- Analog FM Communications
- UAV/UGV Data Link
- L-band Military Radar
- Communication Systems
- High Gain Driver Power Amplifier
- High Gain Output Power Amplifier

Electrical Specifications (TA = +25°C, DC Voltage = 33Volts)

Description	Minimum	Typical	Maximum	Units
Frequency Range	6.4		7.1	GHz
Small Signal Gain		58		dB
Gain Flatness		±2		dB
Psat		+43		dBm
Linear COFDM Power Output		+37		dBm
Input Return Loss		-15	-14	dB
Operating DC Voltage			33	Volts
Quiescent Current		750		mA
Operating Current at		2,300		mA
Operating Temperature Range	-10		+85	°C

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: 58 dB Gain, 20 Watt Psat, 6.4 GHz to 7.1 GHz, High Power High Gain Amplifier, GaN, SMA PE15A5016

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

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Protections

Protections	
Description	**Value**
Max RF Input	+10 dBm
Load VSWR @ 20 Watts	∞ at all amplitudes / phase angles
Thermal Shutdown	Unit will shut down if case temperature exceeds +85° C, will automatically turn back on when case temperature falls ~ 10° C from shutdown.
Over Voltage	Unit will shut down if input voltage exceeds +33 VDC
Under Voltage	Unit requires a minimum of +9 VDC to enable. Unit will also shut down if VDC falls below +9 V during operation.
True Reverse	Unit will not enable and the unit will not draw current if +VDC and Ground are reversed[3]

Mechanical Specifications

Size

Length	6 in [152.4 mm]
Width	2.5 in [63.5 mm]
Height	1.06 in [26.92 mm]
Weight	1 lbs [453.59 g]
Input Connector	SMA Female
Output Connector	SMA Female
Cooling	HEATSINK REQUIRED use PE15C5013 or PE15G5011F

Environmental Specifications

Temperature

Operating Range	-10 to +85 deg C
Storage Range	-55 to +100 deg C
Humidity	95% Non-Condensing
Shock	MIL-STD-810F Method 516.5
Vibration	MIL-STD-810F Method 516.5
Altitude	MIL-STD-810F Method 500.4 feet Above Sea Level

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Compliance Certifications (visit www.Pasternack.com for current document)

Not RoHS Compliant

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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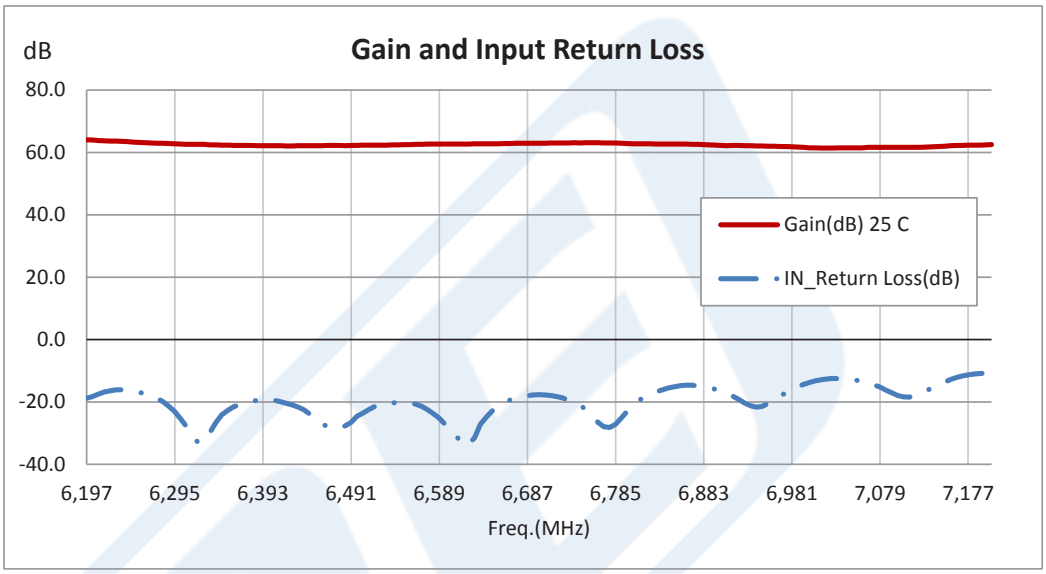
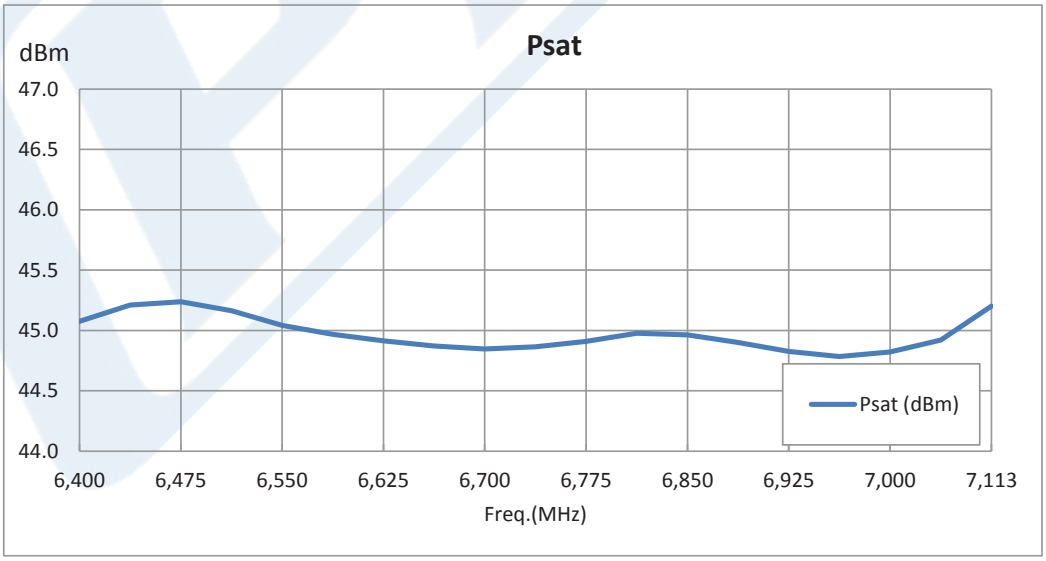
Typical Performance Data





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58 dB Gain, 20 Watt Psat, 6.4 GHz to 7.1 GHz, High Power High Gain Amplifier, GaN, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

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URL: http://www.pasternack.com/58-db-gain-7.1-ghz-high-power-high-gain-amplifier-sma-pe15a5016-p.aspx

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

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PE15A5016 CAD Drawing

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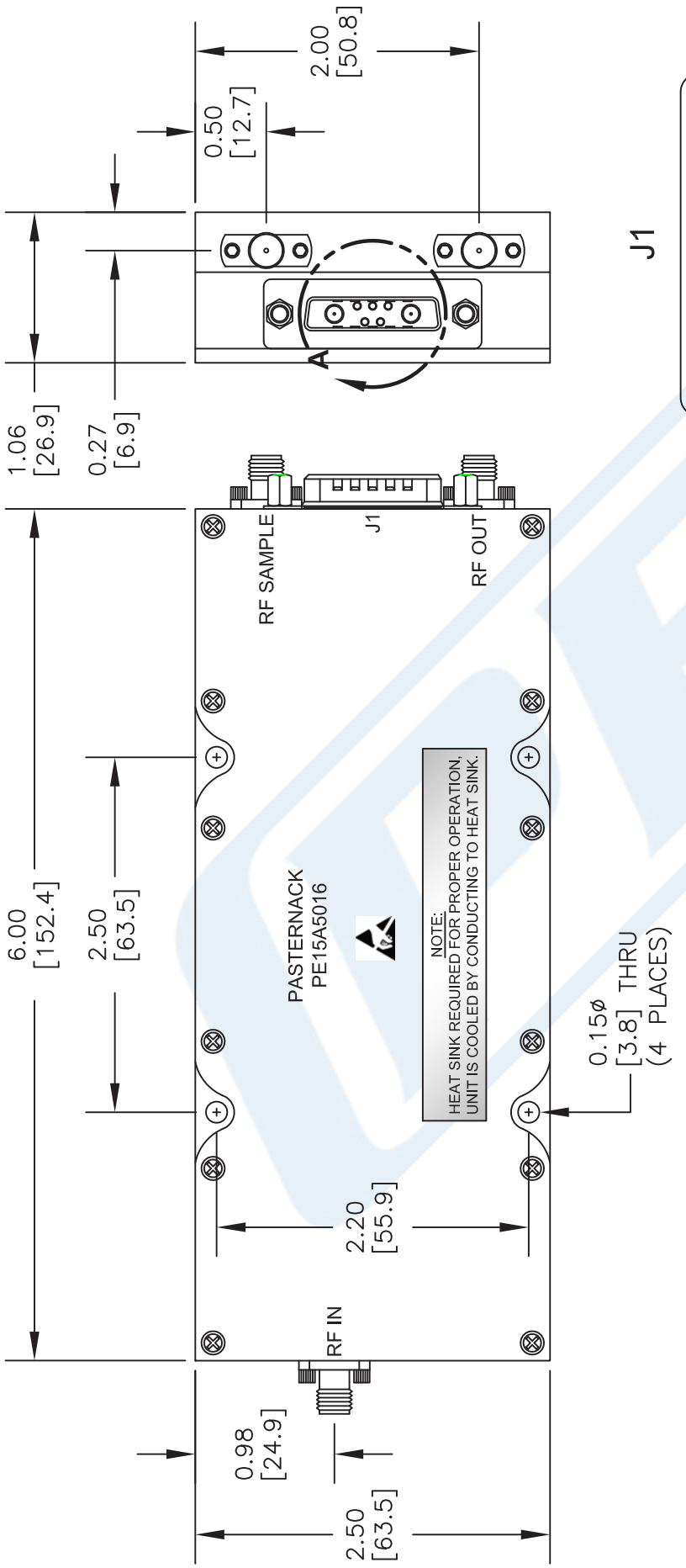

NOTE:
HEAT SINK REQUIRED FOR PROPER OPERATION,
UNIT IS COOLED BY CONDUCTING TO HEAT SINK.

PIN	DESCRIPTION	SPECIFICATION
A1	Ground	VDC Ground
A2	+VDC	+9 to +33 VDC
1	Temperature Sensor	.75V at +25°C, 1V at +50°C, 1.25V at +75° (±0.05V)
2	Amplifier Enable	Enable: +5V TTL High, Disable: 0V TTL Low (±5.5V Max)
3	Reverse Power Detection	+2.5V @ +35 dBm in Open Condition
4	Ground	VDC Ground
5	Forward Power Detection	+2.5V @ +35 dBm

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	110614	SCALE N/A	SIZE A	2233

DWG TITLE
PE15A5016

FSCM NO. 53919

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