



29 dB Gain, 20 dBm P1dB, 0.01 GHz to
40 GHz, Broadband AC Low Noise Amplifier, Bench-
Top, 110/220VAC, 5 dB Noise Figure, 2.92mm

TECHNICAL DATA SHEET

PE15A63026

The PE15A63026 is an AC powered Bench-Top Low Noise Amplifier that operates across an ultra wideband frequency range from 10 MHz to 40 GHz. This 50 Ohm highly linear design exhibits impressive typical performance that includes 29 dB gain, 5 dB noise figure, +20 dBm P1dB, and +30 dBm output IP3. Maximum RF input power (CW) is 0 dBm. The rugged MIL Grade aluminium package is finished in gray paint and has 2.92mm Female connectors at the RF input and output ports, and an indicator light on the front panel. The rear panel includes an IEC 320-C14 AC power socket (IEC 320-C13 plug required), a fuse compartment, an On/Off switch, and a package common ground connector. The module supports a wide operating AC voltage range from 110VAC to 220VAC with 55 mA supply current. Designed for high reliability, the package supports an integrated heatsink and cooling fan and is suitable for outdoor operation (moisture exposure dependent on temperature and humidity conditions). The amplifier has an operational temperature range from -40°C to +85°C and meets a series of environmental test conditions including Altitude, Vibration, Humidity, and Shock.

Features

- AC Powered Bench-Top Low Noise Amplifier/10 MHz to 40 GHz
- High Linearity
- Small Signal Gain 29 dB typ
- Low Noise Figure 5 dB typ
- VSWR 1.9:1 typ
- Output P1dB +20 dBm typ
- Output Psat +22 dBm typ
- Output IP3 +30 dBm typ
- AC Supply 110-220VAC @ 55 mA
- Max RF Input Power (CW) 0 dBm
- 50 Ohm Design
- Integrated Heatsink and Cooling Fan
- RF Input and Output 2.92mm Female Connectors
- On/Off Switch and Indicator Light
- Operational Temperature Range -40°C to +85°C
- Rugged MIL Grade Aluminum Package Design with Gray Paint finish
- Guaranteed Environmental Test Conditions Altitude, Vibration, Humidity, Shock

Applications

- Test & Measurement
- 5G Communication
- Wireless Infrastructure
- Military & Commercial Communications
- Military Electronic Systems
- Research & Development
- Microwave Radio
- VSAT
- Fiber Optics

Electrical Specifications (TA= 25°C)

Description	Minimum	Typical	Maximum	Units
Frequency Range	0.01		40	GHz
Gain	26	29		dB
Gain Flatness		±1.5		dB
Gain Variation over Temp.		±1		dB/°C
Output at 1 dB Compression Point	+16	+20		dBm
Saturation Output Power		+22		dBm
Output 3 rd Intercept Point		+30		dBm
Reverse Isolation		-50		dB
Noise Figure		5		dB
Input VSWR		1.9:1		
Output VSWR		1.9:1		

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Operating AC Voltage	110 to 220	VAC
Supply Current (AC 110-220V)	55	mA
Operating Temperature Range (OTR)	-40	+85 °C

Performance by Frequency

Biasing Up Procedure		Power OFF Procedure	
Step 1	Connect input and output with 50 Ohm source and load with in band return loss better than 10dB.	Step 1	Flip switch to "OFF" position
Step 2	Connect AC Plug	Step 2	Remove AC Plug
Step 3	Flip switch to "ON" position	Step 3	Remove RF Connection

Absolute Maximum Rating

Parameter	Rating
Supply Voltage	110V to 240V AC
RF Input Power (RFIN)*	0dBm

*Note: Maximum RF input power is defined to protect the amplifier from damage. Input power may be increased at the users ownrisk to achieve the full output power of the amplifier. Please reference gain and power curves and monitor the temperature.

Mechanical Specifications

Size	
Length	6.46 in [164.08 mm]
Width	5.83 in [148.08 mm]
Height	2.28 in [57.91 mm]
Weight	2.5 lbs [1.13 kg]
Input Connector	2.92mm Female
Output Connector	2.92mm Female

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Environmental Specifications

Temperature

Operating Range

-40 to +85 deg C

Storage Range

-50 to +105 deg C

Humidity

100% RH at 35°C, 95%RH at 40°C

Shock

20G for 11msec half sine wave, 3 axis both directions

Vibration

25g RMS (15 degrees 2KHz) endurance, 1 hour per axis

Altitude

30,000 ft.

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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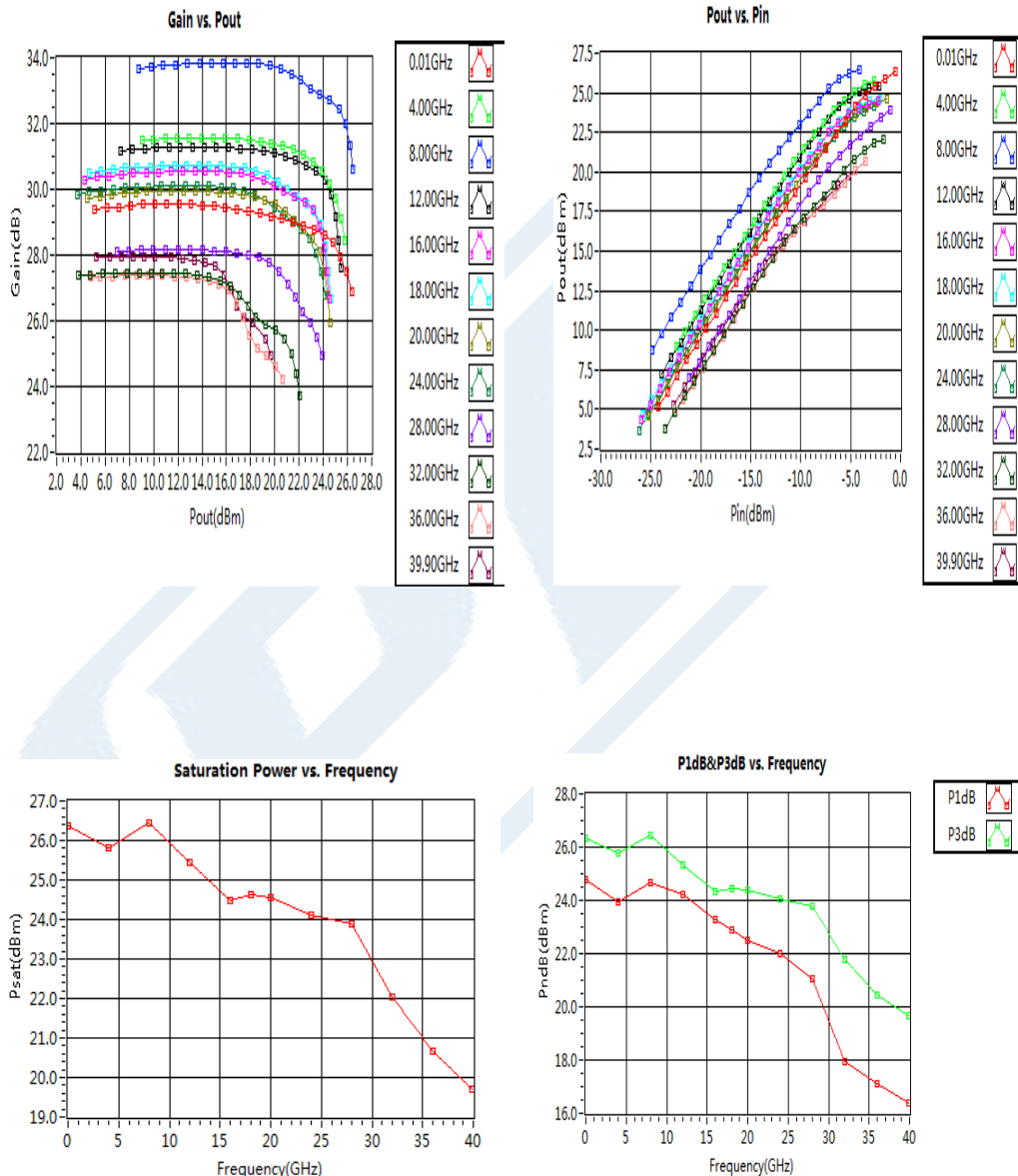


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Typical Performance Data



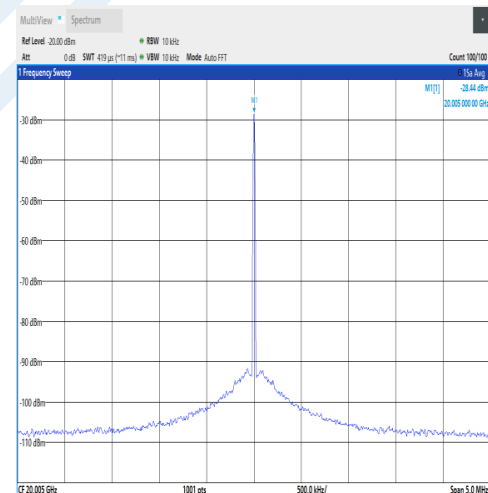
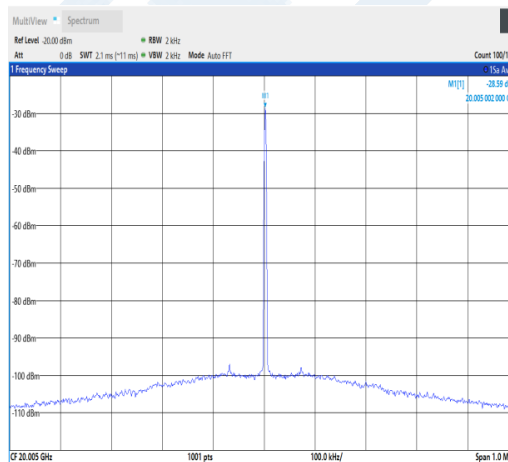
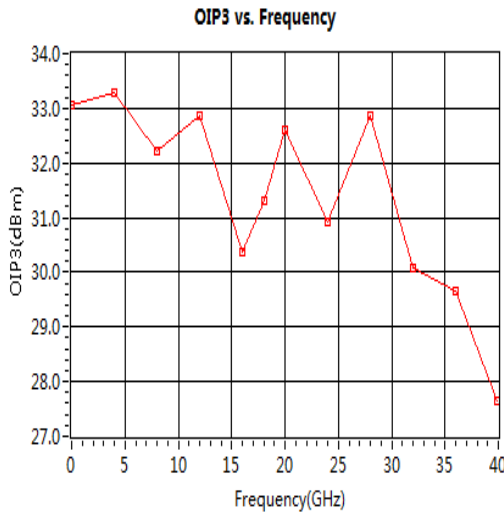
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29 dB Gain, 20 dBm P1dB, 0.01 GHz to 40 GHz, Broadband AC Low Noise Amplifier, Bench-Top, 110/220VAC, 5 dB Noise Figure, 2.92mm from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

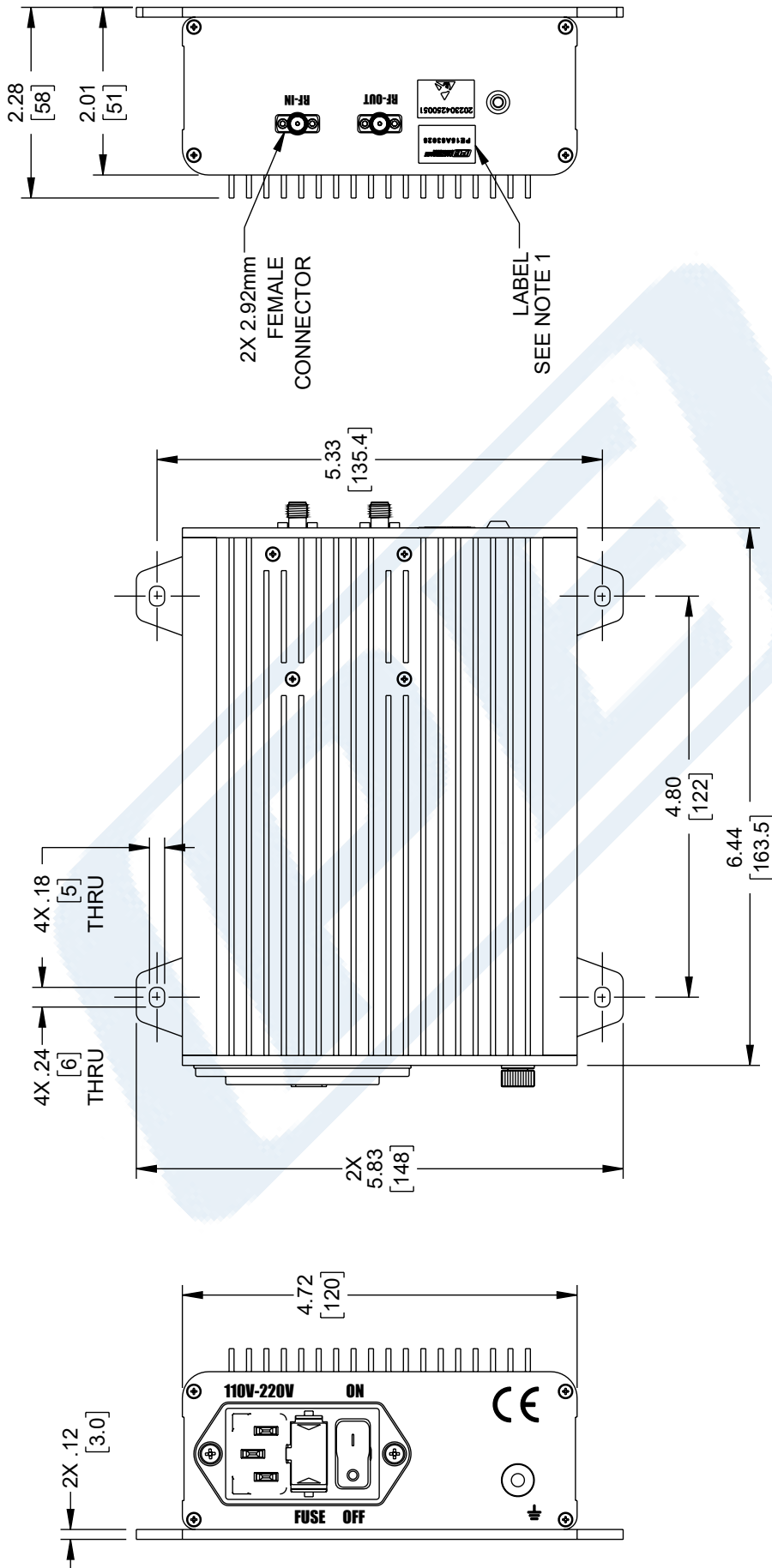
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PE15A63026 CAD Drawing

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PE PASTERNAK an INFINIT@ brand		 INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5	
Website: www.Pasternack.com Phone: 1.866.727.8376 1.949.261.1920		SCALE: NONE SHEET: 1 OF 1	
UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS TOLERANCES: .X = ±.2 [5] .XX = ±.02 [0.5] .XXX = ±.005 [0.13] FRACTIONS: ± 1/32 ANGLES ± 1° CABLE LENGTH TOLERANCES: ≤12 [305] = ±1 [25] / -0 >12 [305] ≤60 [1524] = +2 [51] / -0 >60 [1524] ≤120 [3048] = +4 [102] / -0 >120 [3048] ≤300 [7620] = +6 [152] / -0 >300 [7620] = +8% / -0 ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE. UN-DIMENSIONED NON-CRITICAL FEATURES MAY VARY IN SIZE AND LOCATION.		DESCRIPTION: 29 dB GAIN, 20 dBm P1dB, 0.01 - 40 GHz, BROADBAND AC LOW NOISE GaAs AMPLIFIER, BENCH-TOP, 115/220VAC, 5 dB NOISE FIGURE, 2.92mm	
SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	DZINN	PE15A63026
REV	B		

- NOTES:
- LABEL PER ILS-100-02. FOR INTERNAL REFERENCE ONLY.
LABEL LOCATION FOR REFERENCE ONLY

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