



MODEL NUMBER:  
**PA50G**

**BROADBAND AMPLIFIER, 10 MHZ TO 50 GHZ,  
25 DB GAIN, +18 DBM P1DB**

**DESCRIPTION:**

Model PA50G is a broadband benchtop driver amplifier with a typical small signal gain of 25 dB and a nominal P1dB of +18 dBm across the frequency range of 10 MHz to 50 GHz. The power supply required is a single phase AC voltage in the range of 100 to 240 VAC, which can be supplied by a wall outlet. The LED light helps to indicate the working status of the amplifier. The input and output port configurations are both female K connectors.

**FEATURES:**

- Ultra-Broadband Coverage
- Good Gain Flatness

**APPLICATIONS:**

- Bench Top Power Amplification
- Antenna Range
- Power Boosting

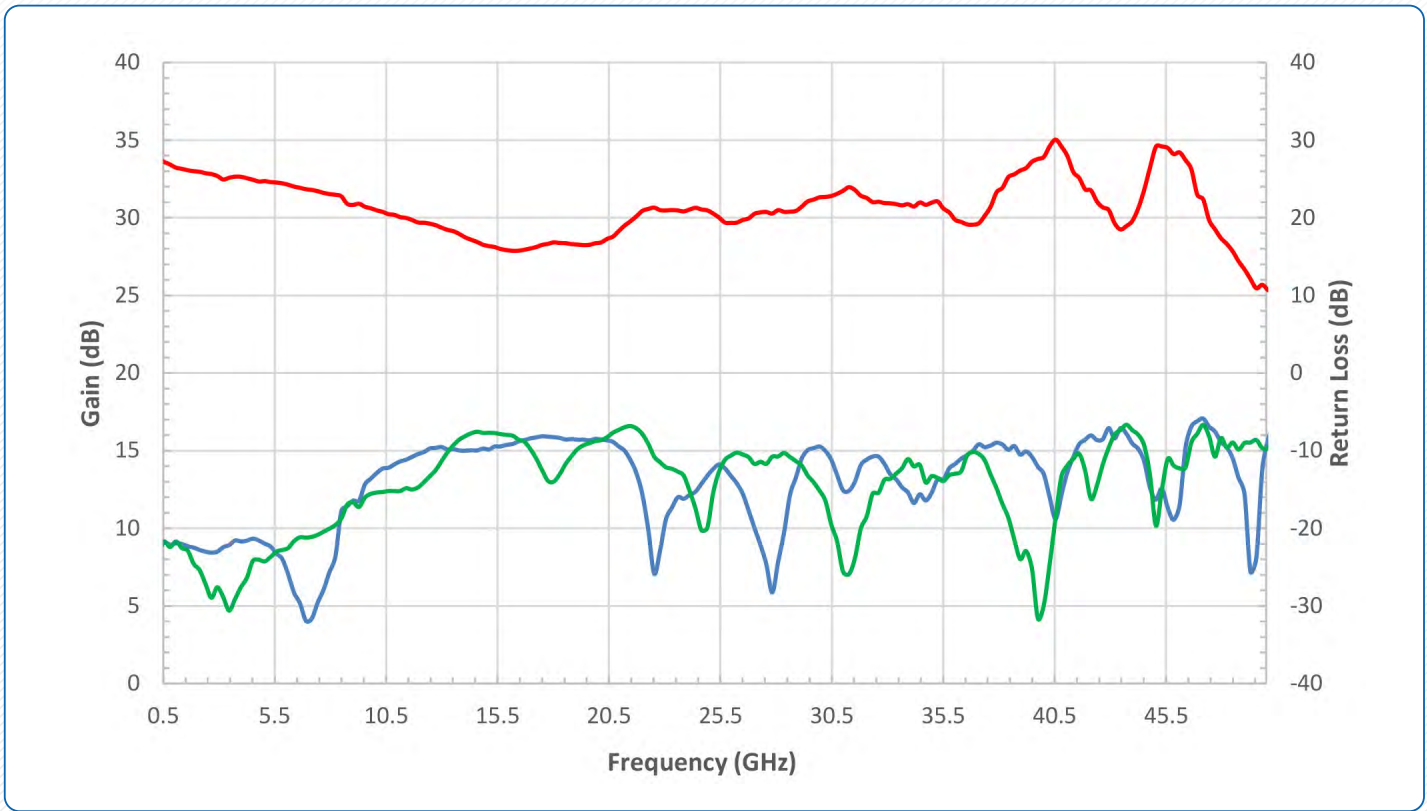
**ELECTRICAL SPECIFICATIONS:**

PARAMETER	MINIMUM	TYPICAL	MAXIMUM
Frequency	0.01 GHz		50.00 GHz
Gain		25 dB	
P <sub>1dB</sub>		+18 dBm	
P <sub>sat</sub>		+19 dBm	
Noise Figure		6.0 dB	
RF Input Damage Level			0 dBm
Input Return Loss		6 dB	
Output Return Loss		6 dB	
Power Supply (AC Adapter Provided)	100 V <sub>AC</sub>		240 V <sub>AC</sub>
Specification Temperature		+25 °C	
Case Temperature	0 °C		+50 °C

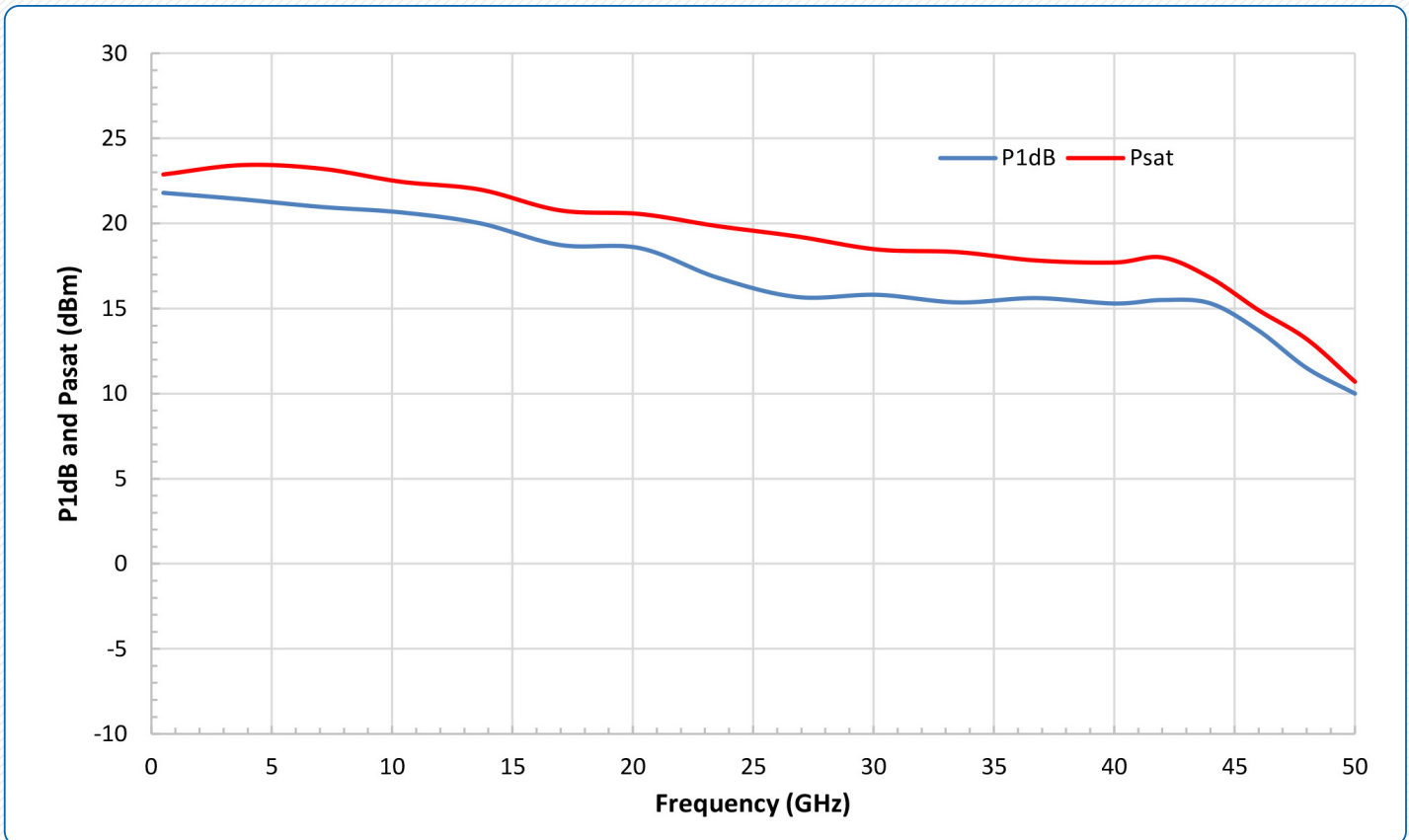
**MECHANICAL SPECIFICATIONS:**

ITEM	SPECIFICATION
Input	2.4 mm (F)
Output	2.4 mm (F)
DC Bias	2.5 mm DC Jack (AC-to-DC power converter included)
DC Bias Switch	On-Off Rocker Switch with Indicator Light
Enclosure Material	Extruded Aluminum
Finish	Black Anodized
Weight	3 lbs
Size	4.72" (W) x 5.51" (L) x 2.81" (H)
Outline	TB-SC

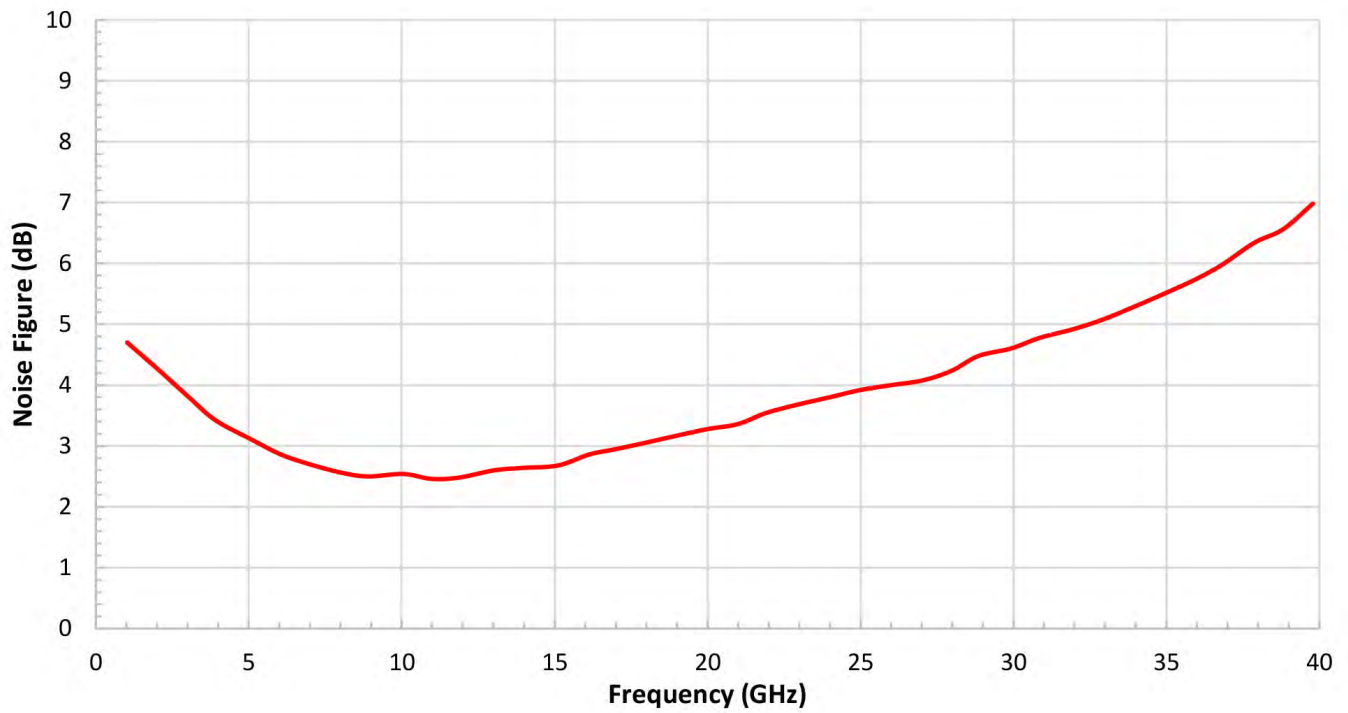
## TYPICAL PERFORMANCE VS. FREQUENCY



## TYPICAL OUTPUT POWER VS. FREQUENCY

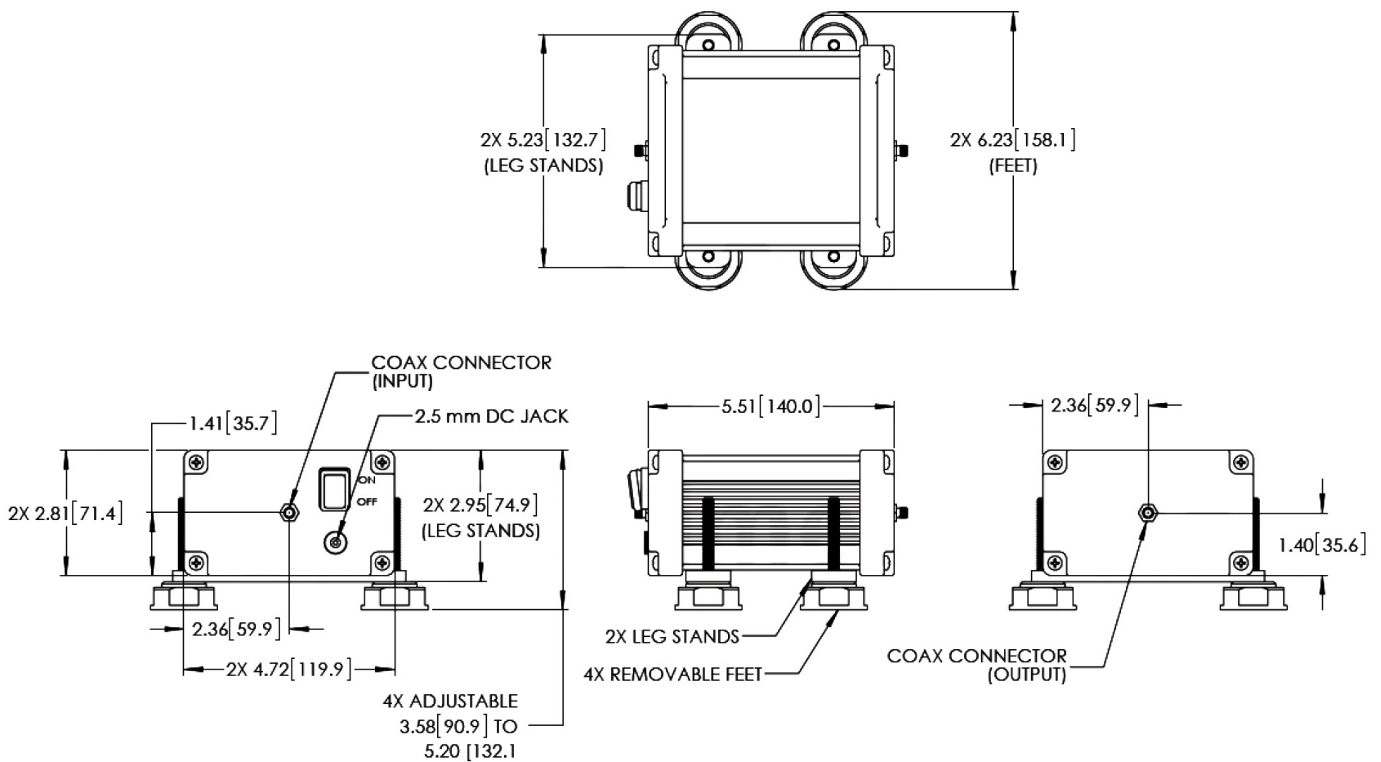


## TYPICAL NOISE FIGURE VS. FREQUENCY



## MECHANICAL OUTLINE:

(Unless otherwise specified, all dimensions are in inches [millimeters])



## **NOTE:**

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25 °C case temperature.
- AC-to-DC power converter with cord is included.
- Other mechanical configurations are available under different model numbers.
- The EMC Shop, LLC reserves the right to change the information presented without notice.

## **CAUTION:**

- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed +50 °C. Use proper heatsink or fan if necessary.
- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.92 \pm 0.05$  Nm), should be applied.

