1. Key features

- Operating Frequency: 0.8-2GHz
- Rated Power Output: 50W (CW)
- Class AB
- Built-in Over-temperature and Over-current Protection
- Continuous Wave and Pulse



P2147A-PDS-F01

Figure.1: Appearance

2. Product Introduction

This manual applies to P2147A solid-state power amplifier, designed for 0.8-2GHz, providing 50W saturated output power; P2147 is developed using GaAs and GaN devices, which has the characteristics of high temperature resistance, high reliability and high efficiency, and can adapt to continuous wave, pulse, broadband signal and other signal modes; The device has built-in over-temperature and over-current protection circuit, when over-temperature or over-current occurs, the internal power supply will be cut off. The equipment features air cooling for heat dissipation, ensuring stable operation at full power output; The equipment adopts a modular internal design for simplified maintenance. It is widely applied in microwave communications, radar systems, satellite communications, test & measurement systems, and electronic countermeasures.

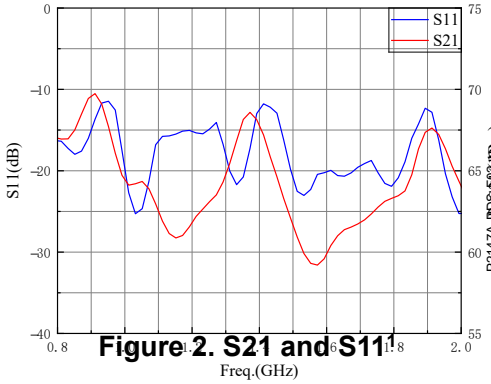


Figure 2. S21 and S11[1]

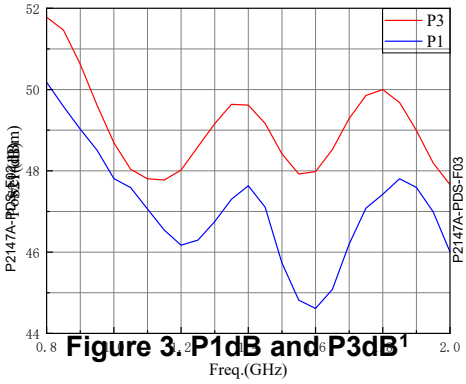


Figure 3. P1dB and P3dB[1]

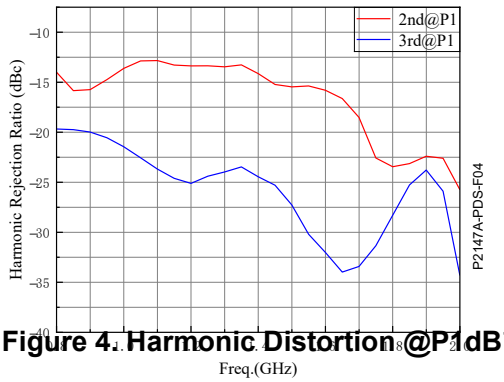


Figure 4. Harmonic Distortion@P1dB[1]

[1] Test conditions: AC220V; 50ohm matching device;25°C.

3. Specifications*

Table1. Electrical Specifications

Parameter	Min.	Typ.	Max.	Unit
Operating Frequency	0.8	-	2	GHz
Gain (Small Signal)	-	65	-	dB
Flatness	-	±5	-	dB
Power Input	-	-	-13	dBm
Power Output@1dB Compression	-	47	-	dBm
Power Output@3dB Compression	-	49	-	dBm
Rated Power Output	-	49.5	-	dBm
Reflectance Input Port	-	-20	-	dB
Harmonic Distortion@P1dB	-	-20	-	dBc
Spurious@P1dB	-	-70	-	dBc
AC Power (50Hz)	-	220	-	V
Power Consumption	-	-	200	W
Ambient Temperature	0	-	40	℃
Storage Temperature	-25	-	50	℃

* Test results for CW status

Table 2. Mechanical Specifications

Parameter	Nominal	Unit
Weight	7	kg
Dimensions	1U for 19” Rack, 400mm depth	
Cooling	Forced air	

4. Dimensions

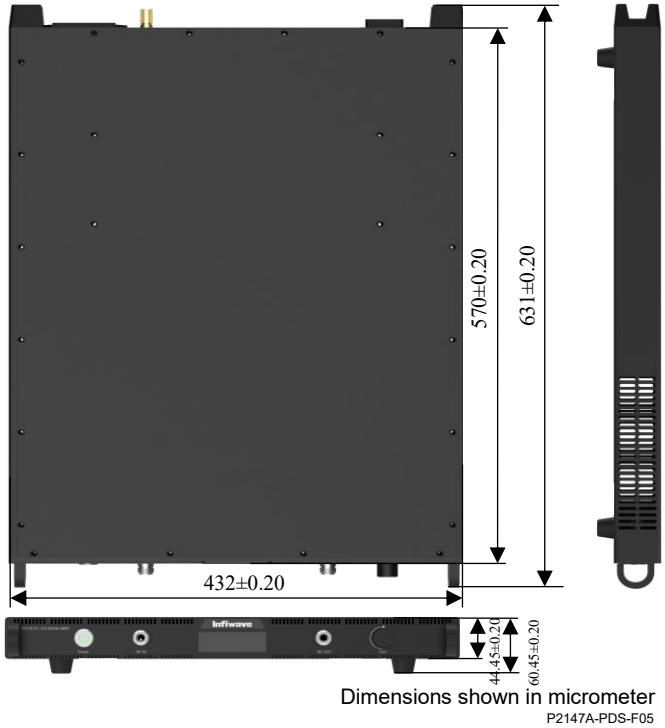


Figure 5. Dimensions

5. Contact Information

For the latest specifications, additional product information, technical support and sales support, please contact:

- **Email:** RF.support@raytrontek.com
- **Web:** www.raytrontek.com

6. Disclaimer

The information provided here is believed to be reliable at the time of publication. Raytron reserves the right to make changes to its products, specifications and product descriptions at any time without notice. Raytron assumes no responsibility for the use of this information and all such information should entirely be at the user's own risk. Raytron makes no warranty about the suitability of its products for specific purpose or application and disclaims all liability, including without limitation consequential and incidental damages. Raytron does not authorize or warrant any Raytron products for use in the life support devices or systems.

Raytron Microwave

Copyright @ Raytron Technology Co.,Ltd.