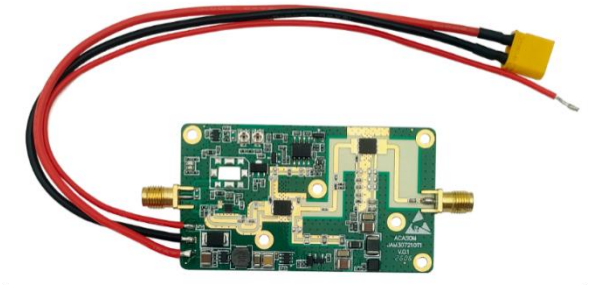
5W Broadband RF Power Amplifier
Model:EP-AB081S

1. Product Overview



The EP-AB081S PCBA+wire is a high-performance broadband RF power amplifier designed for long-range wireless transmission and signal enhancement applications.

It supports 100MHz – 7200MHz segmented frequency customization, delivering up to 37dBm (5W) output power with high efficiency. The amplifier significantly improves signal strength, coverage range, and link stability across various RF systems.

2. Key Features

- Supports 100MHz–7200MHz segmented frequency customization
- High output power: Up to 37dBm (5W)
- High gain: 35dB ±1dB
- High efficiency: Up to 45%
- Wide input power range: -13dBm to 10dBm
- Compact and lightweight design
- External power control support (3–28V)
- Wide operating temperature range

3. Frequency Options

Supports the following standard bands (custom bands available):

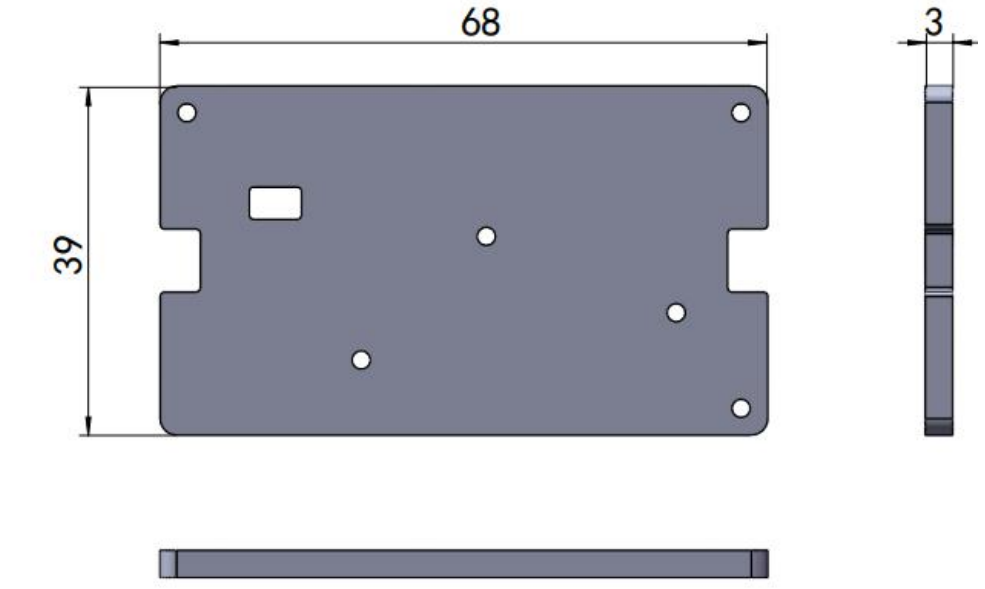
- 100 – 1000 MHz
- 1000 – 2000 MHz
- 2000 – 3000 MHz
- 3000 – 4000 MHz
- 4000 – 5000 MHz
- 5000 – 6000 MHz
- 6000 – 7200 MHz

4. Electrical Specifications

Number	Items	Specifications
1	Frequency Range	100-1000MHz；1000-2000MHz；2000-3000MHz，3000-4000MHz； 4000-5000MHz；

		5000-6000MHz；6000-7200MHz
2	Operating Voltage	22-28V
3	Gain(S21)	35±1dB
4	Input Return Loss(S11)	≤-15dB
5	RF Input Power	-13～10dBm
6	Output Power	37dBm
7	Current	0.45A @24V, 37dBm
8	Efficiency	45%@37dBm
9	LED State	Red
10	Operating Temperature	-30℃～85℃
11	Storage Temperature	-40℃～150℃
12	Operating Humidity	＜95%RH
13	RF Connector	Input: SMA-K; Output: SMA-K
14	DC Connector	XT-30 AWG18 20cm red/black wire
15	Power Control	3-28V 20cm red wire
16	Heat Sink	3mm Aluminum
17	PCBA Size	69*38*4mm（69*38*7mm if add heat sink）
18	Net Weight	20g（if add heat sink 38g ）

Heat Sink Dimensions：



5. Applications

- Long-range wireless communication systems
- WiFi 5 / WiFi 6 / WiFi 7 signal enhancement
- RF signal boosting (Sub-7GHz systems)
- Wireless data transmission systems
- Laboratory and RF testing environments

6. Performance & Installation Guidelines

Use a 24V / ≥1A power supply.
Adequate heat dissipation is required; it is recommended to use a heat sink or cooling fan.

Installation sequence must be followed:

- Screw on the antenna first
- Connect the power supply
- Then connect the RF device

Output power can reach **37dBm** when input power is **3–4dBm** (default gain: **35dB**).