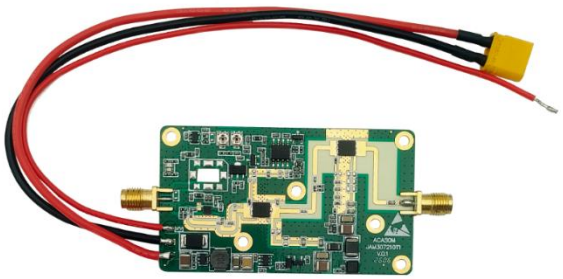
# 10W Broadband RF Power Amplifier
# Model:EP-AB082S

## 1. Product Overview



The EP-AB081S-10W PCBA+wire is a high-performance broadband RF power amplifier designed for wireless communication signal enhancement applications.

It supports 100MHz – 7200MHz segmented frequency customization, delivering up to 40dBm (10W) output power with high efficiency. The device significantly improves signal strength, transmission range, and link stability across RF communication systems.

## 2. Key Features

- Supports **100MHz–7200MHz segmented frequency customization**
- High output power: **Up to 40dBm (10W)**
- High gain: **38dB ±1dB**
- High efficiency: **Up to 45%**
- Wide RF input range: **-13dBm to 10dBm**
- Compact PCBA design
- External power control support (**3–28V**)
- Industrial operating temperature range

## 3. Working Frequency

Supports segmented frequency bands (custom bands available):

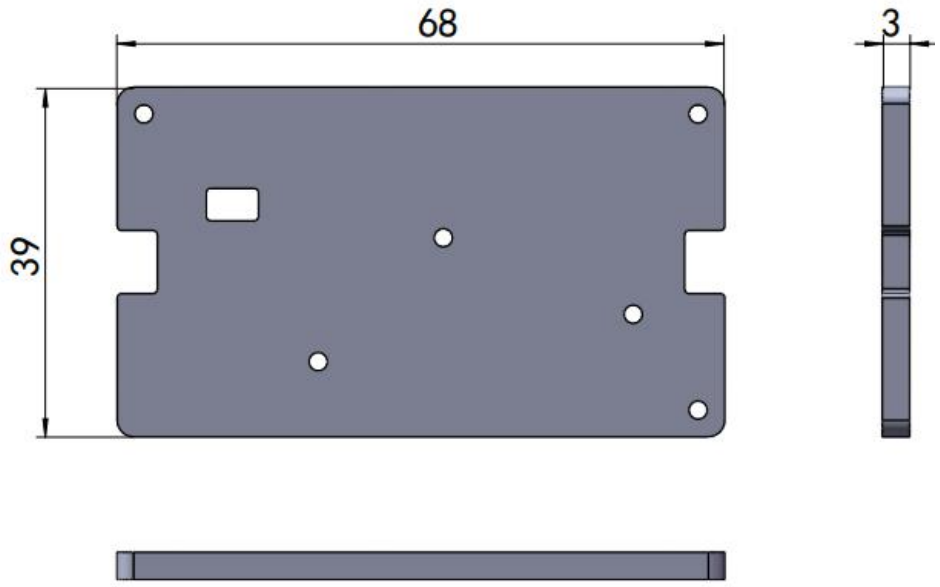
- 100 – 1000 MHz
- 1000 – 2000 MHz
- 2000 – 3000 MHz
- 3000 – 4000 MHz
- 4000 – 5000 MHz
- 5000 – 6000 MHz
- 6000 – 7200 MHz

## 4. Electrical Specifications

| Number | Items | Specifications |
|---|---|---|
| 1 | Frequency Range | 100-1000MHz； 1000-2000MHz；<br>2000-3000MHz， 3000-4000MHz； |

| | | |
|---|---|---|
| | | 4000-5000MHz；5000-6000MHz；<br>6000-7200MHz； |
| 2 | Operating Voltage | 24-28V |
| 3 | Gain(S21) | 38±1dB |
| 4 | Input Return Loss(S11) | ≤-15dB |
| 5 | RFin Power | -13～10dBm |
| 6 | Output Power | 40dBm |
| 7 | Current | 0.8A @28V, 40dBm |
| 8 | Efficiency | 45%@40dBm |
| 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

- Wireless communication signal amplification
- WiFi 5 / WiFi 6 / WiFi 7 systems
- RF signal enhancement (Sub-7GHz systems)
- Wireless data transmission systems
- RF laboratory and testing environments

## 6. Performance & Installation Guidelines

- Output power reaches **40dBm** when input power is **3–4dBm** (default gain: **38dB**)
- Use a **24–28V / ≥1A regulated power supply** (28V recommended for full output performance)
- Ensure adequate heat dissipation:
    - Heat sink is required
    - Cooling fan is recommended for continuous operation
- Installation sequence must be strictly followed:
    1. Connect the antenna first
    2. Then connect the power supply
    3. Finally connect the RF input signal
- Do **NOT operate without antenna connected**
- Ensure RF input power remains within the specified range (**-13dBm to 10dBm**)