



Power Amplifier

Model: PA-2G9-3G1-50

2.9-3.1GHz 50W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 2.9-3.1GHz
- High output power at saturation, 50W Min.
- High gain, 47 dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-2G9-3G1-50 is a power amplifier with a minimum gain of 47 dB and a minimum Psat of 50W across the frequency range of 2.9 to 3.1 GHz. The DC power requirement for the amplifier is +28 VDC/10 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.



Electrical Specifications at 25°C:

| Parameter | Min | Typ | Max | Units |
|-------------------|-----|-----|------|-------|
| Frequency range | 2.9 | | 3.1 | GHz |
| Small Signal Gain | 47 | 50 | | dB |
| Gain Flatness | | ±1 | ±1.5 | dB |
| Output Psat | 47 | 48 | | dBm |
| Spurious | | | -60 | dBc |
| Harmonic | | -25 | -17 | dBc |
| Input VSWR | | | 2.0 | :1 |
| DC Voltage | | +28 | | V DC |
| DC Supply Current | | 10 | | A |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

| Parameter | Value | Notes |
|---------------------------------|--|-------|
| Operating Temperature* | -20°C to +50°C | |
| Non-operating Temperature* | -30°C to +60°C | |
| Relative humidity | 95 | % |
| RF Input/Output Connector | SMA Female/N Female | |
| DC Bias | D-SUB 9Pin | |
| Altitude | 10,000 | feet |
| Shock / Vibration(MIL-STD-810F) | 20g,11ms,saw-tooth | |
| Shock(non operating) | 20G for 11msc half sin wave,3 axis both directions | |
| Dimensions W x H x D | 200*130*20 | mm |

*Note: For a wider temperature range, please consult the manufacturer.

Absolute Maximum Ratings:

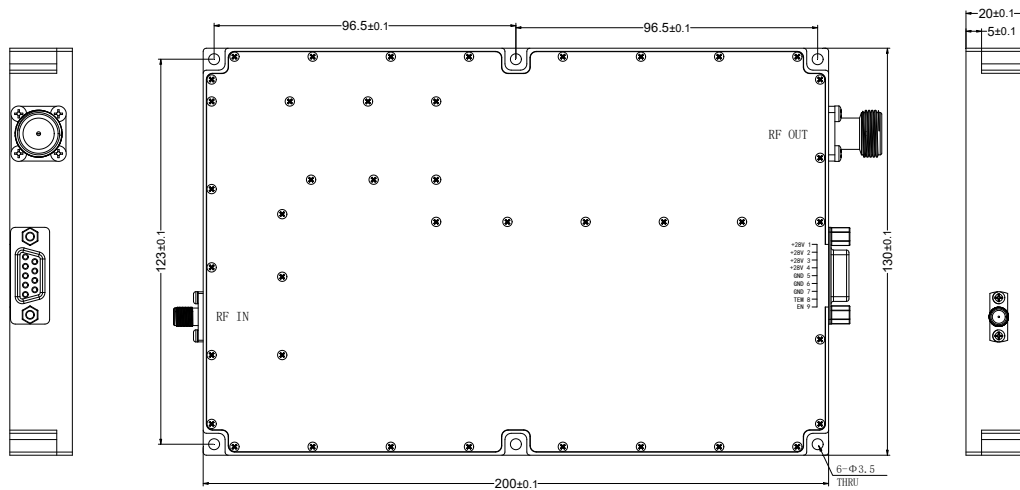
| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +30 V |
| RF Input Power | +5 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |



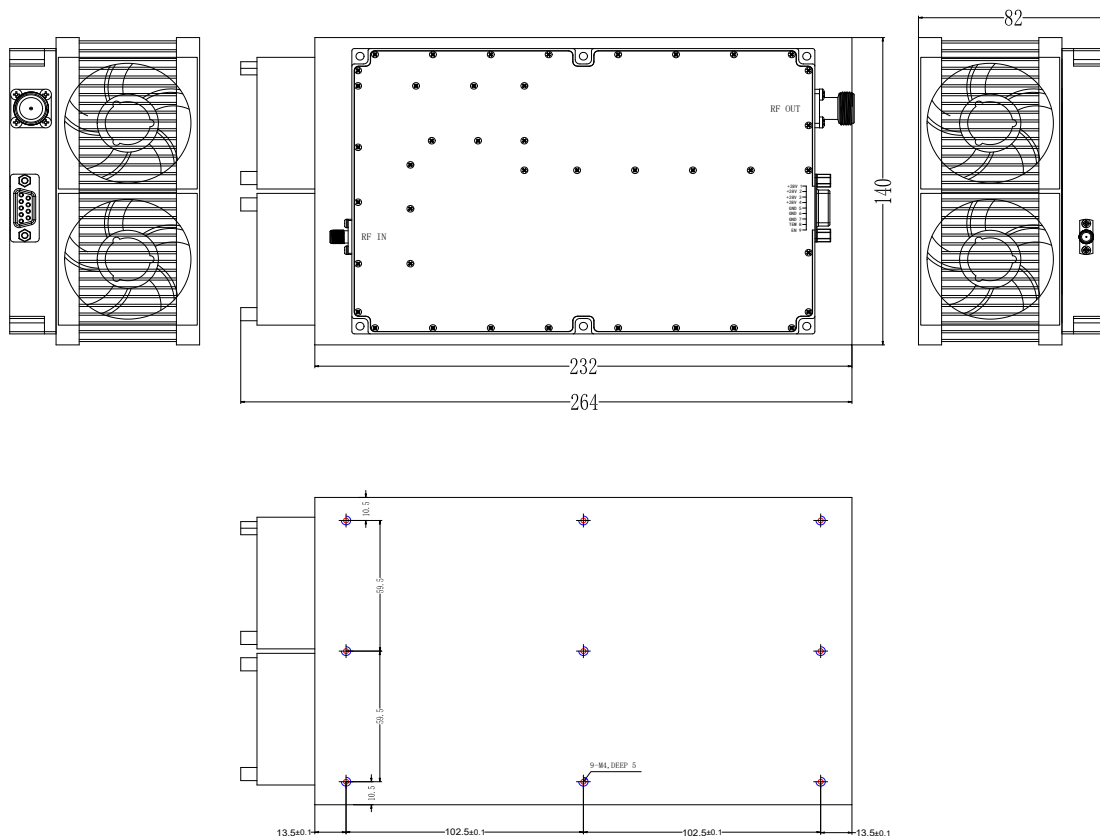
Outline Drawing:

Unit:mm

PA-2G9-3G1-50



PA-2G9-3G1-50-HS





Fans Supply Current:

| Fan power supply | |
|------------------|--|
| Red line | Power supply positive,+24VDC DC current: 0.4A |
| Black line | Ground |

DC Supply Connector(DSUB-9 Female):

| Pin | Name | Function |
|-----|------------------|--|
| 1 | +28V | +26.0-30.0VDC |
| 2 | +28V | +26.0-30.0VDC |
| 3 | +28V | +26.0-30.0VDC |
| 4 | +28V | +26.0-30.0VDC |
| 5 | GND | Ground |
| 6 | GND | Ground |
| 7 | GND | Ground |
| 8 | Over Temperature | When the temperature of the case exceeds 70 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 60 °C, the power amplifier will return to normal operation, and this pin will be pulled low. |
| 9 | EN | Amplifier Enable: TTL High (5V) (Internally Pulled-High) |

Ordering Information:

| Base Number | Description | Optional |
|------------------|--|------------------|
| PA-2G9-3G1-50 | Power Amplifier, 2.9-3.1GHz, Gain:47dB,Psat:50W,+28V DC | Without Heatsink |
| PA-2G9-3G1-50-HS | Power Amplifier, 2.9-3.1GHz, Gain:47dB,Psat:50W,+28V DC | With Heatsink |