



# Power Amplifier

## Model: PA-12G-13G-20

12-13GHz 20W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 12-13GHz
- High output power at saturation, 20W Min.
- High gain, 43 dB Min.
- 50 Ohm Matched Input / Output.

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Product Overview:

The PA-12G-13G-20 is a power amplifier with a minimum power gain of 43 dB and a minimum Psat of 20 W across the frequency range of 12 to 13 GHz. The DC power requirement for the amplifier is +24 VDC/4 A. The input and output port configuration offers coax adapter structure with SMA female.



## Electrical Specifications at 25°C:

| Parameter           | Min      | Typ | Max | Units |
|---------------------|----------|-----|-----|-------|
| Frequency range     | 12       |     | 13  | GHz   |
| Working Mode        | CW/Pulse |     |     |       |
| Power Gain          | 43       |     |     | dB    |
| Power Gain Flatness |          | ±2  |     | dB    |
| Output Psat         | 43       |     |     | dBm   |
| Spurious@Pout=43dBm |          |     | -60 | dBc   |
| Harmonic@Pout=43dBm |          |     | -15 | dBc   |
| Input VSWR          |          |     | 2   | :1    |
| DC Voltage          |          | 24  | 28  | V DC  |
| DC Supply Current   |          |     | 4   | A     |
| Impedance           | 50       |     |     | Ohms  |

## Mechanical Specifications:

| Parameter                       | Value                                                    | Notes |
|---------------------------------|----------------------------------------------------------|-------|
| Operating Temperature*          | -40°C to +50°C                                           |       |
| Non-operating Temperature*      | -50°C to +60°C                                           |       |
| Relative humidity               | 95                                                       | %     |
| RF Input/Output Connector       | SMA Female/SMA Female                                    |       |
| DC Bias                         | Feedthru Capacitor                                       |       |
| Altitude                        | 10,000                                                   | feet  |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis      |       |
| Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions       |       |
| Dimensions W x H x D            | 60*60*11(Without heatsink)<br>188*125*146(With heatsink) | mm    |
| Weight                          | ≤200(Without heatsink)                                   | g     |

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

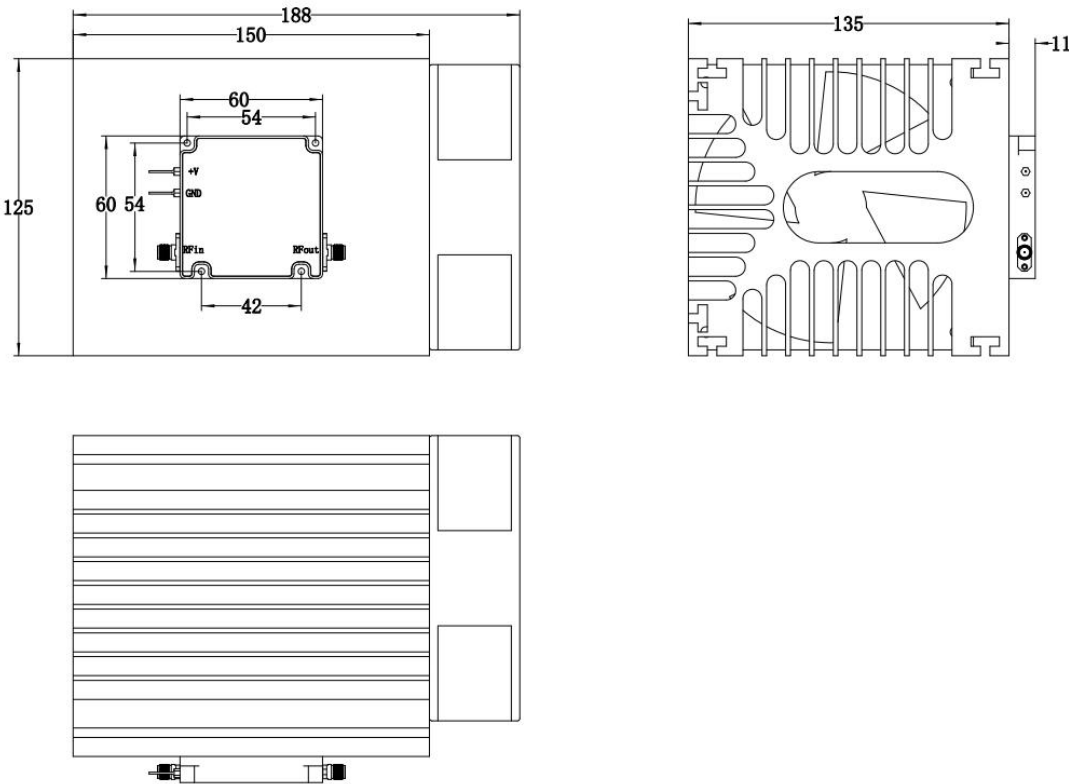


Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +29 V                |
| RF Input Power        | +5 dBm               |
| ESD sensitivity (HBm) | Class 0, passed 150V |

Outline Drawing: Unit:mm

PA-12G-13G-20-HS



Ordering Information:

| Base Number      | Description                                              | Optional         |
|------------------|----------------------------------------------------------|------------------|
| PA-12G-13G-20    | Power Amplifier, 12-13GHz,<br>Gain:43dB,Psat:20W,+24V DC | Without Heatsink |
| PA-12G-13G-20-HS | Power Amplifier, 12-13GHz,<br>Gain:43dB,Psat:20W,+24V DC | With Heatsink    |