

## Model:TLPA1G2G-40-45

## Power Amplifier

1GHz-2GHz,Gain:40dB,Psat:45dBm

### Feature:

- Wide Band: 1GHz-2GHz
- Gain: 40dB Min
- P1dB Output Power: 43 dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Electrical Specifications:

| Parameter              | Min | Typ | Max  | Units |
|------------------------|-----|-----|------|-------|
| Frequency range        | 1-2 |     |      | GHz   |
| Gain                   | 40  | 43  |      | dB    |
| Gain Flatness          |     | ±1  | ±1.5 | dB    |
| Output P1dB            | 43  | 44  |      | dBm   |
| Output Psat            | 44  | 45  |      | dBm   |
| IMD3@ 37dBm/Tone, 7MHz | 30  |     |      | dBc   |
| Harmonics @Pout=43dBm  |     | -17 | -15  | dBc   |
| Input VSWR             |     | 1.3 | 1.5  | :1    |
| DC Voltage             | 34  | 36  | 38   | V DC  |
| DC Supply Current      |     | 1.2 | 5    | A     |
| Impedance              | 50  |     |      | Ohms  |

### Mechanical Specifications:

| Parameter               | Value      | Units |
|-------------------------|------------|-------|
| Input /Output Connector | SMA Female |       |
| Bias                    | Solder Pin |       |
| Size                    | 139*97*20  | mm    |
| Weight                  | 700        | g     |



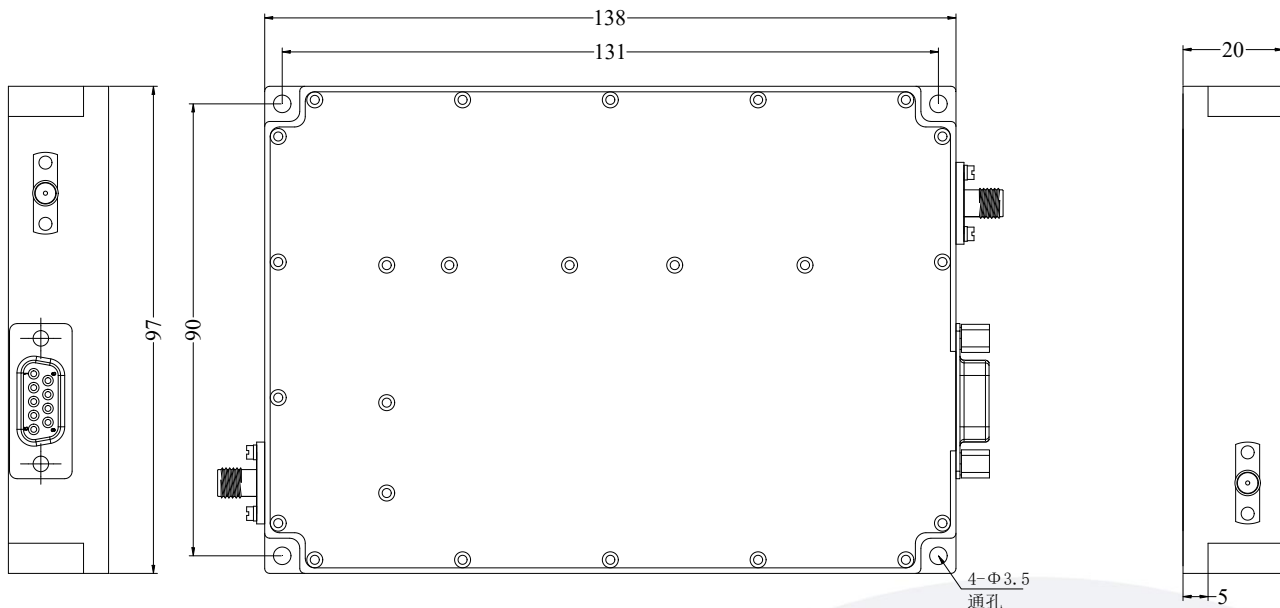
Available 220V System  
Benchtop Amplifier

### Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | 30V                  |
| RF INPUT POWER        | 10dBm                |
| ESD sensitivity (HBm) | Class 0, passed 150V |

## Outline Drawing:

Unit: mm



**\*\*\*Heat Sink Required During Operation**



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

## Environmental Conditions:

| Parameter                       | Min                                                 | Typ | Max  | Units |
|---------------------------------|-----------------------------------------------------|-----|------|-------|
| Operating Temperature           | -45                                                 |     | +70  | °C    |
| Non-operating Temperature       | -55                                                 |     | +125 | °C    |
| Relative humidity               |                                                     | 95  |      | %     |
| Altitude                        | 30,000                                              |     |      | 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  |     |      |       |

## Ordering Information:

| Part Number       | Description                                                                | Revision |
|-------------------|----------------------------------------------------------------------------|----------|
| TLPA1G2G-40-45    | Power amplifier 1GHz-2GHz,Gain:40dB,P1dB:43dBm,36V DC,<br>Without Heatsink | Rev.1.0  |
| TLPA1G2G-40-45-HS | Power amplifier 1GHz-2GHz,Gain:40dB,P1dB:43dBm,36V DC,<br>With Heatsink    | Rev.1.0  |

J30J-9ZKW-J(J30J-9TJL):

| Pin | Identification | Type  | Function specification                                                                                                                                                                                                                               |
|-----|----------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | VCC            | Input | Power supply positive +34.0-38.0VDC                                                                                                                                                                                                                  |
| 2   | VCC            | Input | Power supply positive +34.0-38.0VDC                                                                                                                                                                                                                  |
| 3   | VCC            | Input | Power supply positive +34.0-38.0VDC                                                                                                                                                                                                                  |
| 4   | GND            | Input | Power supply negative                                                                                                                                                                                                                                |
| 5   | GND            | Input | Power supply negative                                                                                                                                                                                                                                |
| 6   | NC             |       |                                                                                                                                                                                                                                                      |
| 7   | Over TEM       | Input | When the temperature exceeds 70°C, the power amplifier is automatically turned off, and the output of this pin is high level. When the temperature drops to 60°C, the power amplifier will be turned on automatically, and this pin is at low level. |
| 8   | NC             |       |                                                                                                                                                                                                                                                      |
| 9   | +28V           | Input | (or suspended) turn on the power amplifier and turn it off at low level.                                                                                                                                                                             |

Notes: TTL is 5V