

## Power Amplifier

**18-40GHz/32dB Gain/29dBm Psat**

**Model: TLPA18G40G-32-29**

TLPA18G40G-32-29 is a power amplifier with a typical small signal gain of 32 dB and a nominal Psat of 29 dBm across the frequency range of 18 to 40 GHz. The DC power requirement for the amplifier is +12 VDC/2.2 A. The input and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Frequency range: 18-40GHz
- Gain: 32dB Typ
- Output Power Psat: 29dBm Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Electrical Characteristics:

| Parameter         | Min | Typ  | Max | Units |
|-------------------|-----|------|-----|-------|
| Frequency range   | 18  |      | 40  | GHz   |
| Small Signal Gain | 30  | 32   |     | dB    |
| Gain Flatness     |     | ±2.5 |     | dB    |
| Output P1dB       | 27  | 28   |     | dBm   |
| OutputPsat        |     | 29   |     | dBm   |
| Input VSWR        |     | 2    |     | :1    |
| Output VSWR       |     | 2    |     | :1    |
| DC Voltage        |     | +12  |     | V DC  |
| DC Supply Current |     | 2.2  |     | A     |
| Impedance         |     | 50   |     | Ohms  |

## Mechanical Specifications:

| Parameter               | Value                       | Units |
|-------------------------|-----------------------------|-------|
| Input /Output Connector | 2.92mm Female/2.92mm Female |       |
| DC Bias                 | Solder Pin                  |       |
| Size                    | 60*50*12                    | mm    |

## Absolute Maximum Ratings:

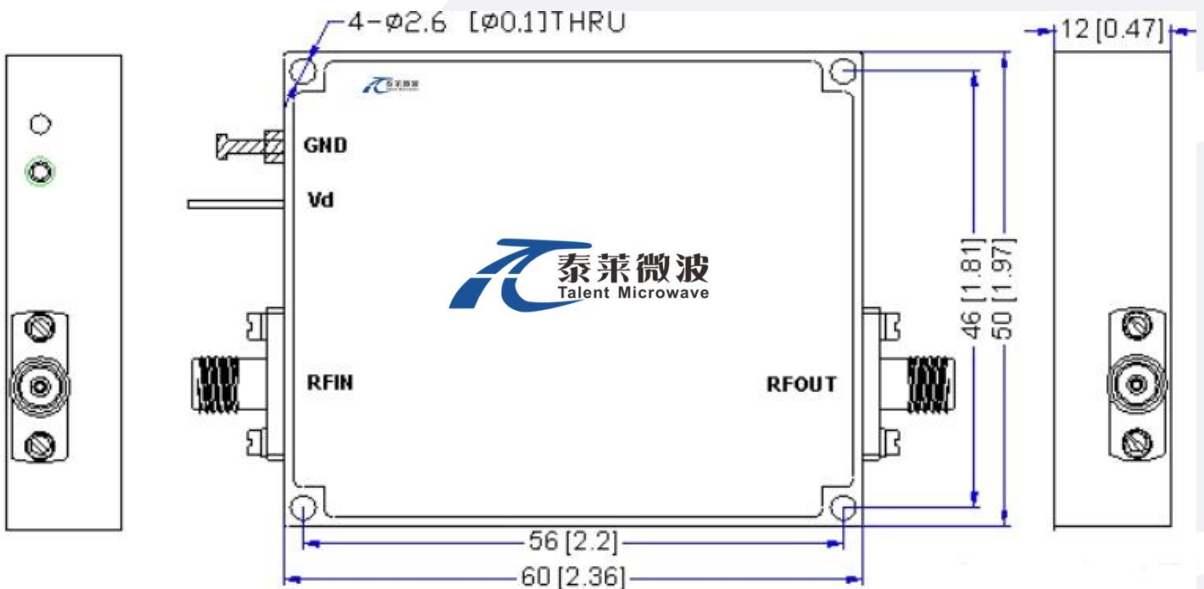
| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | TBD                  |
| RF Input Power        | 0 dBm                |
| ESD sensitivity (HBm) | Class 0, passed 150V |



Simple 220V System  
Available SAC option

## Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

## Environmental Conditions:

| Parameter                       | Min                                                 | Typ | Max | Units |
|---------------------------------|-----------------------------------------------------|-----|-----|-------|
| Operating Temperature*          | -40                                                 |     | +60 | °C    |
| Non-operating Temperature*      | -50                                                 |     | +70 | °C    |
| Relative humidity               | 95                                                  |     |     | %     |
| 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  |     |     |       |

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

## Ordering Information:

| Base Number         | Description                                                                | Revision |
|---------------------|----------------------------------------------------------------------------|----------|
| TLPA18G40G-32-29    | Power amplifier 18-40GHz,<br>Gain:32dB,Psat:29dBm,+12V DC,Without Heatsink | Rev.1.1  |
| TLPA18G40G-32-29-HS | Power amplifier 18-40GHz,<br>Gain:32dB,Psat:29dBm,+12V DC,With Heatsink    | Rev.1.1  |