

## Power Amplifier

12-13GHz/43dB Gain/43dBm Psat

Model: TLPA12G13G-43-43

TLPA12G13G-43-43 is a power amplifier with a minimum power gain of 43 dB and a minimum Psat of 43 dBm 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.

### Features:

- Frequency range: 12-13GHz
- Gain: 43dB Min
- Output Power Psat: 43dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### 电气特性 Electrical Characteristics:

| 参数 Parameter           | Min | Typ      | Max | 单位 Units |
|------------------------|-----|----------|-----|----------|
| 频率范围 Frequency range   | 12  |          | 13  | GHz      |
| 工作模式 Working Mode      |     | CW/Pulse |     |          |
| 功率增益 Power Gain        | 43  |          |     | dB       |
| 增益平坦度 Gain Flatness    |     | ±2       |     | dB       |
| 饱和输出功率 Output Psat     | 43  |          |     | dBm      |
| 杂散 Spurious@Pout=43dBm |     |          | -60 | dBc      |
| 谐波 Harmonic@Pout=43dBm |     |          | -15 | dBc      |
| 输入驻波 Input VSWR        |     |          | 2   | :1       |
| 直流电压 DC Voltage        |     | 24       | 28  | V DC     |
| 直流电流 DC Supply Current |     |          | 4   | A        |
| 阻抗 Impedance           | 50  |          |     | Ohms     |

## 机械特性 Mechanical Specifications:

| 参数 Parameter                    | 指标 Value                                                 | 单位 Units |
|---------------------------------|----------------------------------------------------------|----------|
| 输入/输出接口 Input /Output Connector | SMA Female/SMA Female                                    |          |
| 直流偏置 DC Bias                    | Feedthru Capacitor                                       |          |
| 尺寸 Size                         | 60*60*11(Without heatsink)<br>188*125*146(With heatsink) | mm       |
| 重量 Weight                       | ≤200(Without heatsink)                                   | g        |

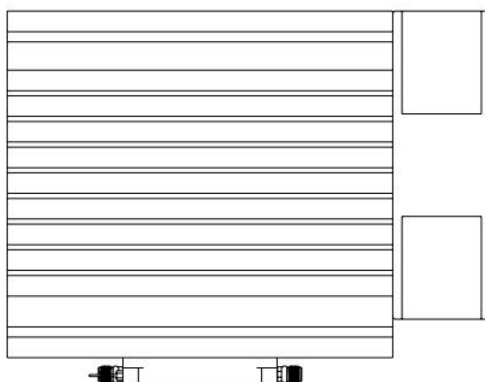
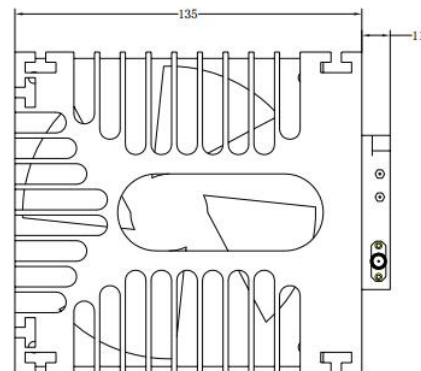
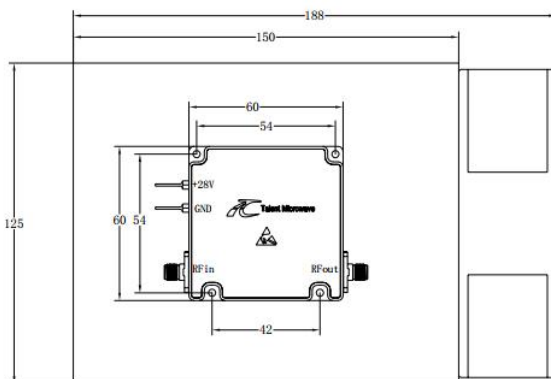
## 绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage   | +29 V                |
| 输入功率 RF Input Power          | +5 dBm               |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |



## 外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

温度环境 Environmental Conditions:

| 参数 Parameter                       | Min                                                 | Typ | Max | 单位 Units |
|------------------------------------|-----------------------------------------------------|-----|-----|----------|
| 操作温度 Operating Temperature*        | -40                                                 |     | +50 | ℃        |
| 存储温度 Non-operating Temperature*    | -50                                                 |     | +60 | ℃        |
| 相对湿度 Relative humidity             |                                                     | 95  |     | %        |
| 海拔 Altitude                        | 10,000                                              |     |     | feet     |
| 震动 Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |     |     |          |
| 冲击 Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions  |     |     |          |

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

订货信息 Ordering Information:

| 标准型号 Base Number    | 描述 Description                                                             | 版本号 Revision |
|---------------------|----------------------------------------------------------------------------|--------------|
| TLPA12G13G-43-43    | Power amplifier 12-13GHz,<br>Gain:43dB,Psat:43dBm,+24V DC,Without Heatsink | Rev.1.0      |
| TLPA12G13G-43-43-HS | Power amplifier 12-13GHz,<br>Gain:43dB,Psat:43dBm,+24V DC,With Heatsink    | Rev.1.0      |