

# Power Amplifier

## 18-40GHz/28dB Gain/23dBm Psat

TLPA18G40G-28-20

TURPA18G40G-2820 is a power amplifier with a typical small signal gain of 28 dB and a nominal Psat of 23 dBm across the frequency range of 18 to 40 GHz. The DC power requirement for the amplifier is +12 VDC/255 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 18-40GHz
- Gain: 28dB Typ
- Output Power Psat: 23dBm Typ
- 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    | 18  |     | 40  | GHz      |
| 小信号增益 Small Signal Gain | 26  | 28  |     | dB       |
| 增益平坦度 Gain Flatness     |     | ±2  |     | dB       |
| 线性输出功率 Output P1dB      | 20  | 22  |     | dBm      |
| 饱和输出功率 Output Psat      |     | 23  |     | dBm      |
| 杂散 Spurious             |     | -60 |     | dBc      |
| 噪声系数 Noise Figure       |     | 6   |     | dB       |
| 驻波 VSWR                 |     | 1.7 | 2.3 | :1       |
| 直流电压 DC Voltage         |     | 12  |     | V DC     |
| 直流电流 DC Supply Current  |     | 255 |     | mA       |
| 阻抗 Impedance            | 50  |     |     | Ohms     |

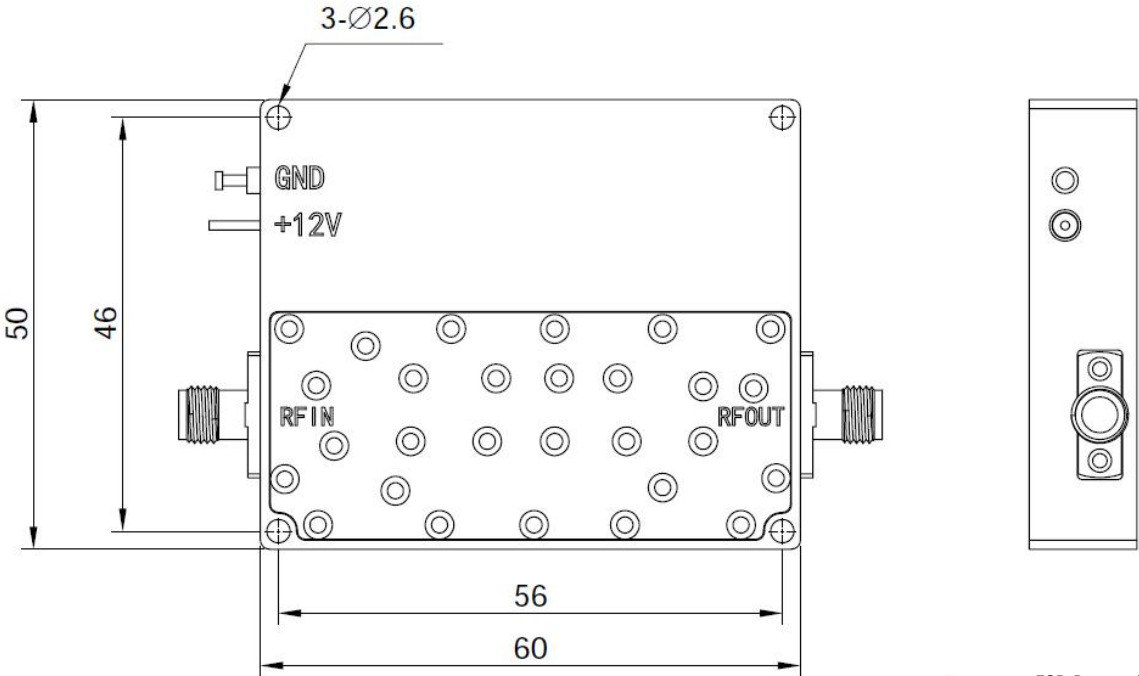
机械特性 Mechanical Specifications:

| 参数 Parameter                    | 指标 Value                    | 单位 Units |
|---------------------------------|-----------------------------|----------|
| 输入/输出接口 Input /Output Connector | 2.92mm Female/2.92mm Female |          |
| 直流偏置 DC Bias                    | Solder Pin                  |          |
| 尺寸 Size                         | 60*50*12                    | mm       |

绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage   | +13 V                |
| 输入功率 RF Input Power          | +10 dBm              |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

外形图 Outline Drawing: Unit:mm



\*\*\*Heat Sink Required During Operation



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                                                 |     | +60 | ℃        |
| 存储温度 Non-operating Temperature*    | -50                                                 |     | +70 | ℃        |
| 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 |
|---------------------|----------------------------------------------------------------------------|--------------|
| TURPA18G40G-2820    | Power amplifier 18-40GHz,<br>Gain:28dB,Psat:23dBm,+12V DC,Without Heatsink | Rev.1.2      |
| TURPA18G40G-2820 HS | Power amplifier 18-40GHz,<br>Gain:28dB,Psat:23dBm,+12V DC,With Heatsink    | Rev.1.2      |

典型曲线 Typical Performance Data:

