

Power Amplifier 18-40GHz/35dB Gain/31dBm Psat

TLPA18G40G-35-31

TURPA18G40G-3531 is a power amplifier with a typical small signal gain of 40 dB and a nominal Psat of 31 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: 40dB Typ
- Output Power Psat: 31dBm 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 | 35 | 40 | | dB |
| 增益平坦度 Gain Flatness | | ±3 | | dB |
| 线性输出功率 Output P1dB | 27 | 29 | | dBm |
| 饱和输出功率 Output Psat | | 31 | | dBm |
| 输入驻波 Input VSWR | | 2 | | :1 |
| 输出驻波 Output VSWR | | 2 | | :1 |
| 直流电压 DC Voltage | | 12 | | V DC |
| 直流电流 DC Supply Current | | 2.2 | | A |
| 阻抗 Impedance | | 50 | | Ohms |

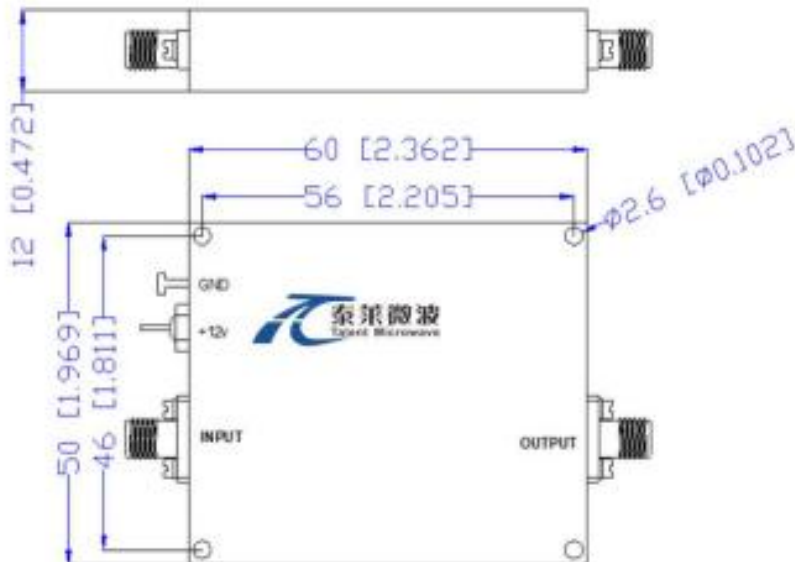
机械特性 Mechanical Specifications:

| 参数 Parameter | 指标 Value | 单位 Units |
|---------------------------------|-----------------------------|----------|
| 输入/输出接口 Input /Output Connector | 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 | TBD |
| 输入功率 RF Input Power | +3 dBm |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

外形图 Outline Drawing: Unit:mm



温度环境 Environmental Conditions:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|------------------------------------|---|-----|-----|----------|
| 操作温度 Operating Temperature* | -40 | | +60 | °C |
| 存储温度 Non-operating Temperature* | -50 | | +70 | °C |
| 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-3531 | Power amplifier 18-40GHz,Gain:35dB,Psat:31dBm,+12V DC,Without Heatsink. | Rev.1.1 |
| TURPA18G40G-3531 HS | Power amplifier 18-40GHz,Gain:35dB,Psat:31dBm,+12V DC,With Heatsink. | Rev.1.1 |

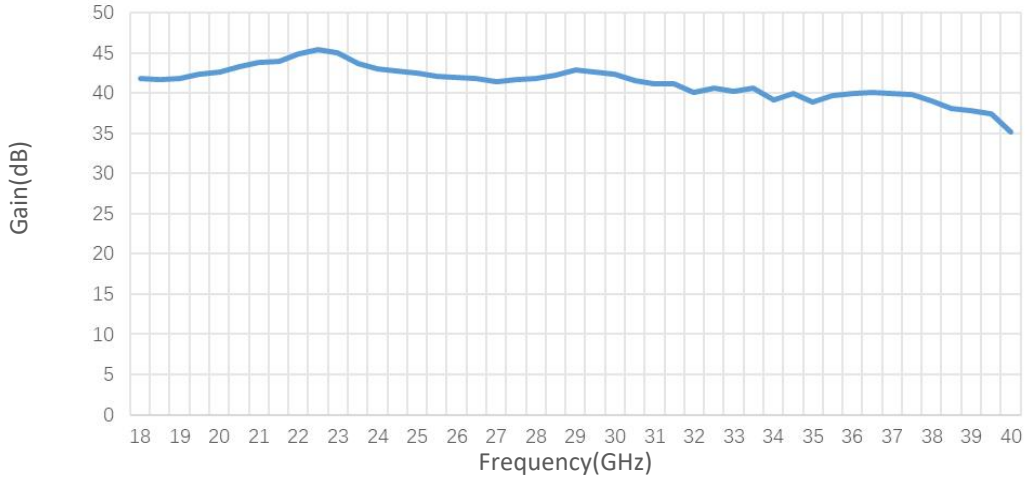
典型曲线 Typical Performance Data:

Input VSWR vs Frequency

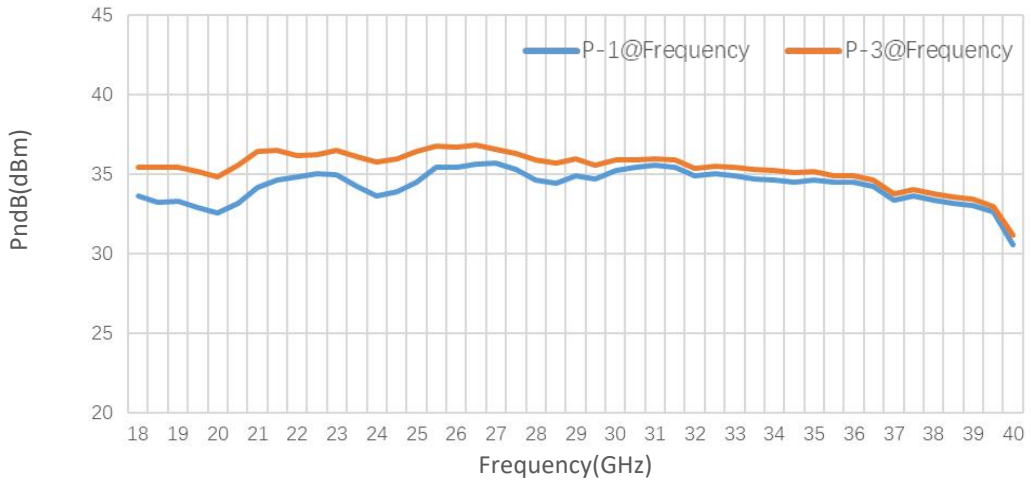
Input VSWR

典型曲线 Typical Performance Data:

Small Signal Gain vs Frequency



PndB vs Frequency

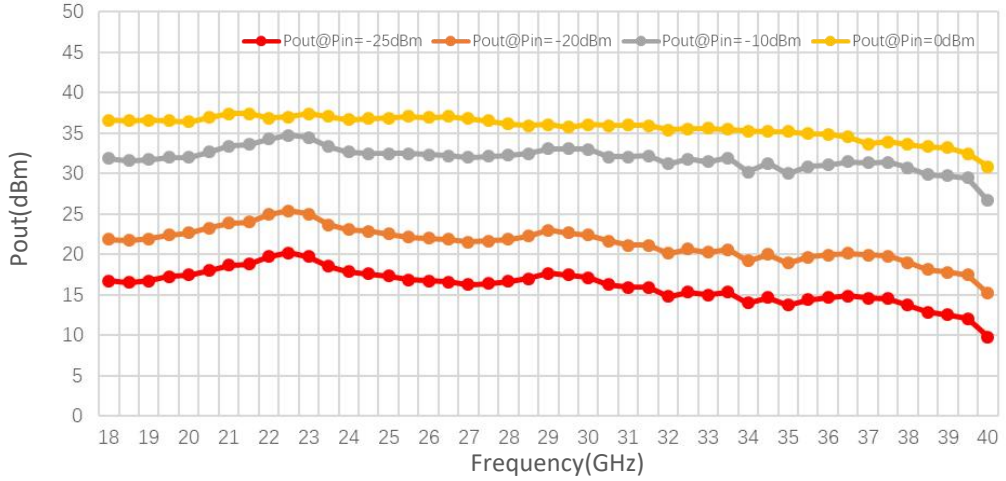


Pout@Pin

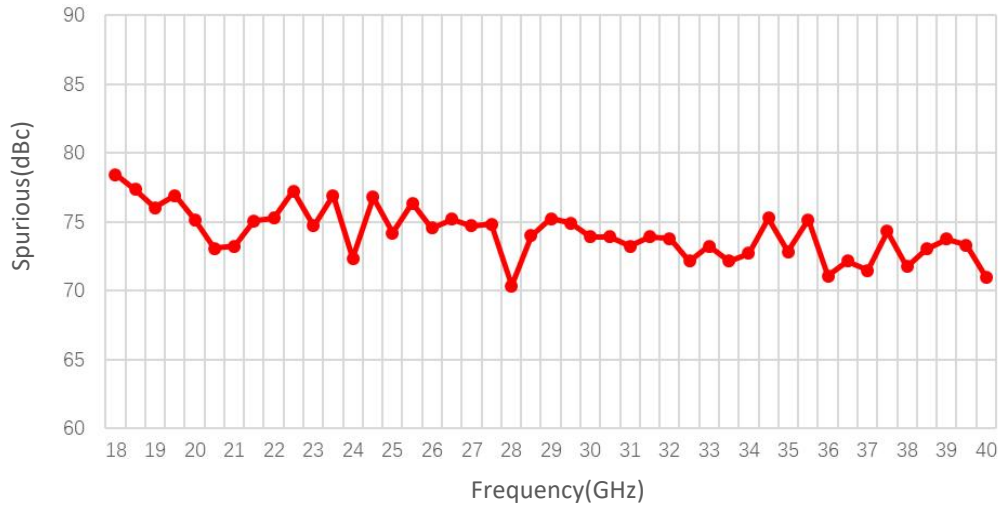


典型曲线 Typical Performance Data:

Pout@Equal_Pin



Spurious vs Frequency



Harmonic vs Frequency

Harmonic (dBc)