

Power Amplifier

0.1-18GHz/30dB Gain/30 dBm P1dB

Model: TLPA0.1G18G-31-32

TLPA0.1G18G-31-32 is a power amplifier with a typical small signal gain of 30 dB and a minimum P1dB of 30 dBm across the frequency range of 0.1 to 18 GHz. The DC power requirement for the amplifier is +18 VDC/0.9 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.1-18GHz
- Gain: 30dB Typ
- Output Power P1dB: 30dBm 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 | 0.1-18 | | | GHz |
| 小信号增益 Small Signal Gain* | 28 | 30 | | dB |
| 增益平坦度 Gain Flatness | | ±5 | | dB |
| 线性输出功率 Output P1dB | 30 | | | dBm |
| 杂散 Spurious | | -60 | | dBc |
| 输入驻波 Input VSWR | | | 2.2 | :1 |
| 直流电压 DC Voltage | | 18 | | V DC |
| 直流电流 DC Supply Current | | 0.9 | | A |
| 阻抗 Impedance | 50 | | | Ohms |

*Note: This parameters reaches 32~40dBm within the frequency range of 100Mhz to 1GHz.

机械特性 Mechanical Specifications:

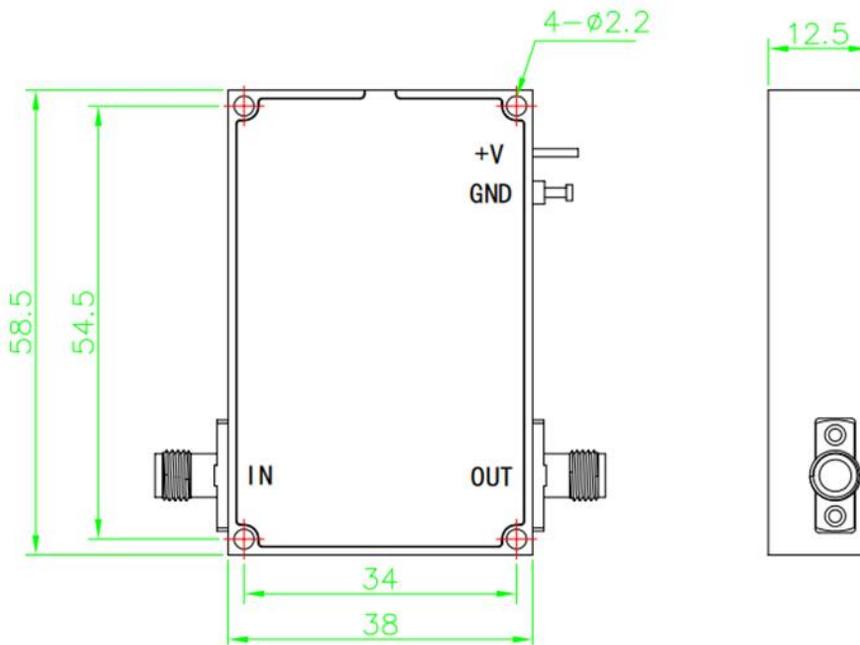
| 参数 Parameter | 指标 Value | 单位 Units |
|---------------------------------|-----------------------|----------|
| 输入/输出接口 Input /Output Connector | SMA Femlae/SMA Female | |
| 直流偏置 DC Bias | Solder Pin | |
| 尺寸 Size | 38*58.5*12.5 | mm |
| 重量 Weight | 200 | g |

绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage | +18 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



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 |
|----------------------|---|--------------|
| TLPA0.1G18G-31-32 | Power amplifier 0.1-18GHz,Gain:30dB,P1dB:30dBm, +18V DC,Without Heatsink | Rev.1.1 |
| TLPA0.1G18G-31-32-HS | Power amplifier 0.1-18GHz,Gain:30dB,P1dB:30dBm, +18V DC,With Heatsink | Rev.1.1 |

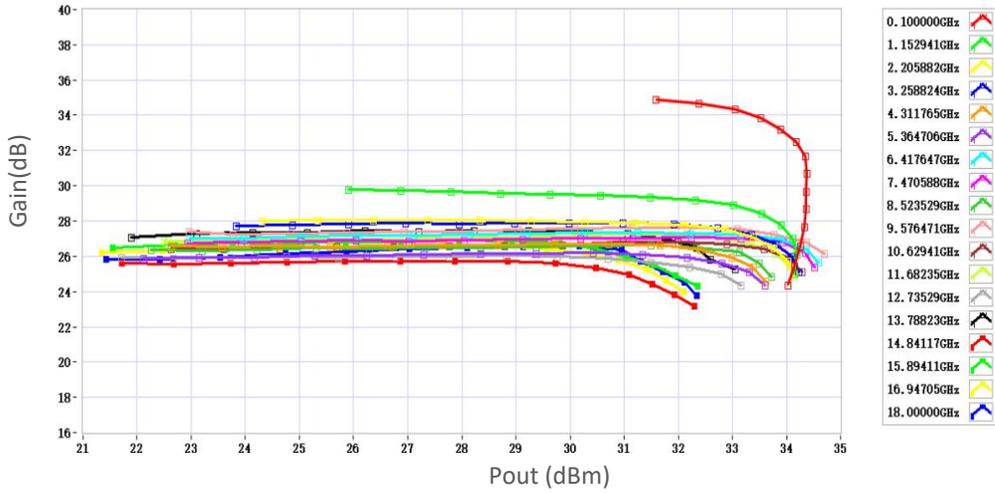
典型曲线 Typical Performance Data:

VSWR&Gain vs Frequency

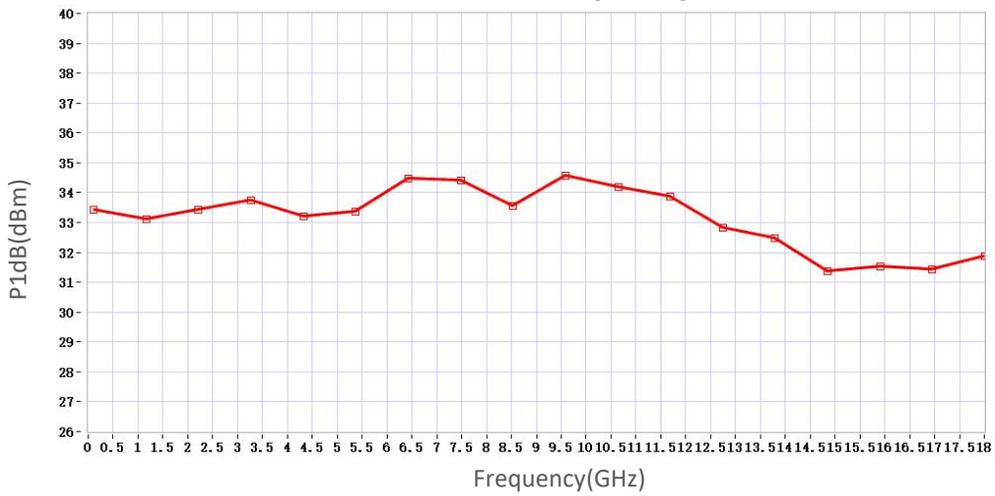
VSWR&Gain

典型曲线 Typical Performance Data:

Gain vs Output Power



P1dB vs Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.