

Model:TLPA2.9G3.1G-50-50-HS
Power Amplifier
2.9-3.1GHz, Gain:50dB, Psat:50dBm
Feature:

- Frequency range: 2.9-3.1 GHz
- Gain: 50 dB Min
- Psat Output Power: 50 dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

电气特性 Electrical Specifications:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|-------------------------|---------|-----|------|----------|
| 频率范围 Frequency range | 2.9-3.1 | | | GHz |
| 小信号增益 Small Signal Gain | 50 | 52 | | dB |
| 增益平坦度 Gain Flatness | | ±1 | ±1.5 | dB |
| 饱和输出功率 Output Psat | 50 | 51 | | dBm |
| 杂散 Supurious | | | -60 | dBc |
| 谐波抑制 Harmonic | | -25 | -20 | dBc |
| 输入驻波 Input VSWR | | | 2.0 | :1 |
| 直流电压 DC Voltage | +28 | | | V DC |
| 直流电流 DC Supply Current | 15 | | | 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/N Female | |
| 直流偏置 DC Bias | D-SUB 9PIN | |
| 尺寸 Size | 200*130*20 | mm |

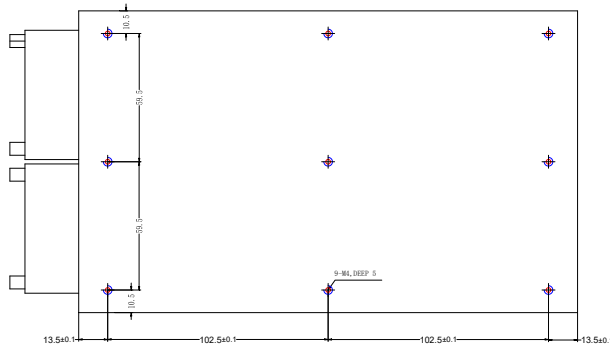
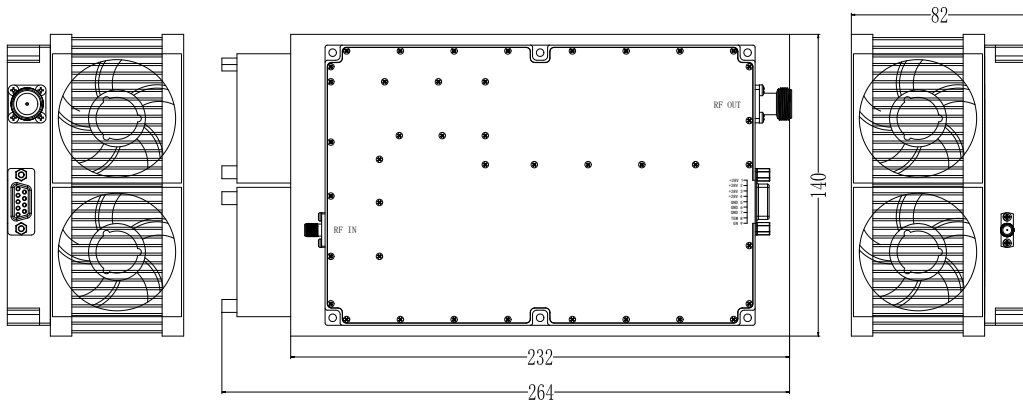
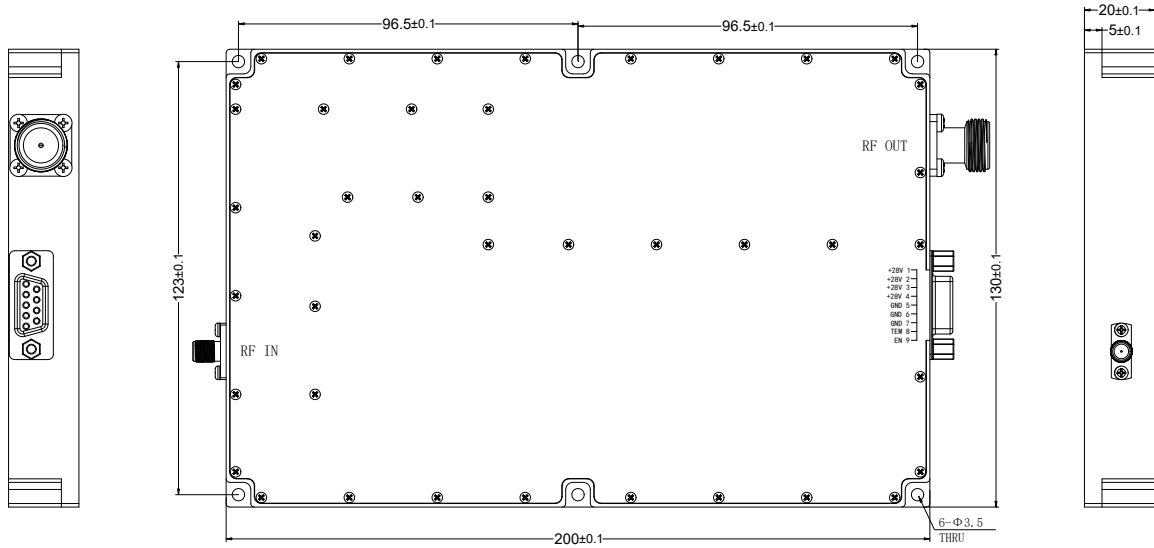
绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage | +30 V |
| 输入功率 RF Input Power | +5 dBm |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |


**Available 220V System
 Benchtop Amplifier**

外形尺寸 Outline Drawing:

Unit: mm



风扇供电 Fans Supply Current: 0.4A@24V



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

直流供电连接器 D-sub,9-Pin,Female:

| Pin # | Name | Function |
|-------|------------------|--|
| 1 | +28V | +26.0-30.0VDC |
| 2 | +28V | +26.0-30.0VDC |
| 3 | +28V | +26.0-30.0VDC |
| 4 | +28V | +26.0-30.0VDC |
| 5 | GND | Ground |
| 6 | GND | Ground |
| 7 | GND | Ground |
| 8 | Over Temperature | When the temperature of the case exceeds 70 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 60 °C, the power amplifier will return to normal operation, and this pin will be pulled low. |
| 9 | EN | Amplifier Enable: TTL High (5V) (Internally Pulled-High) |

温度环境 Environmental Conditions:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|------------------------------------|--|-----|-----|----------|
| 操作温度 Operating Temperature* | -20 | | +50 | °C |
| 存储温度 Non-operating Temperature* | -30 | | +60 | °C |
| 相对湿度 Relative humidity | | 95 | | % |
| 海拔 Altitude | 10,000 | | | feet |
| 震动 Shock / Vibration(MIL-STD-810F) | 20g,11ms,saw-tooth | | | |
| 冲击 Shock(non operating) | 20G for 11msc half sin wave,3 axis both directions | | | |

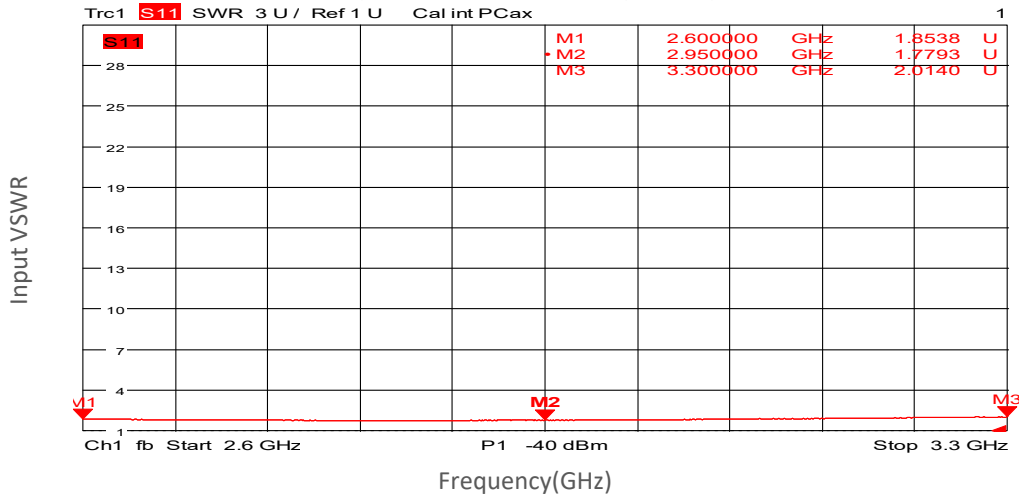
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

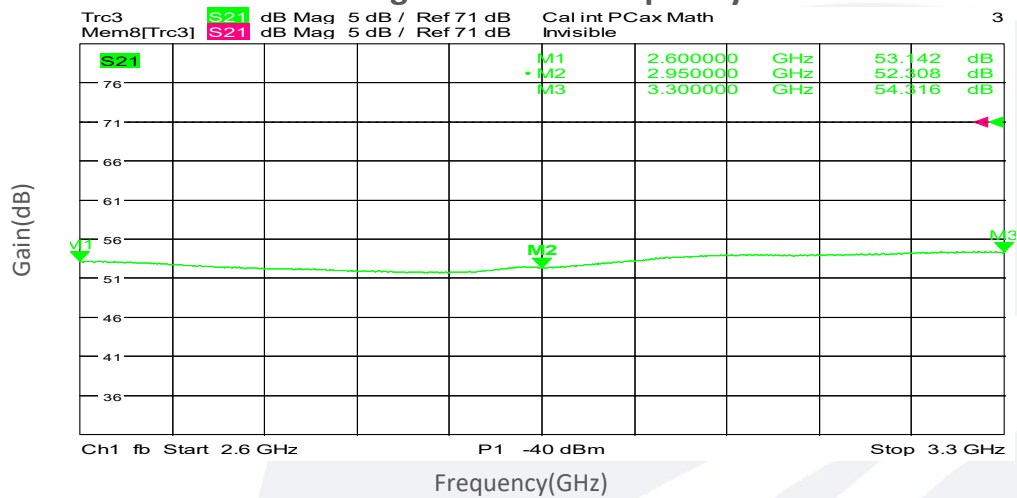
| 标准型号 Part Number | 描述 Description | 版本号 Revision |
|-----------------------|--|--------------|
| TLPA2.9G3.1G-50-50 | Power amplifier 2.9-3.1GHz,Gain:50dB,Psat:50dBm, +28V DC,Without Heatsink | Rev.1.0 |
| TLPA2.9G3.1G-50-50-HS | Power amplifier 2.9-3.1GHz,Gain:50dB,Psat:50dBm, +28V DC,With Heatsink | Rev.1.0 |

典型曲线 Typical Performance Data:

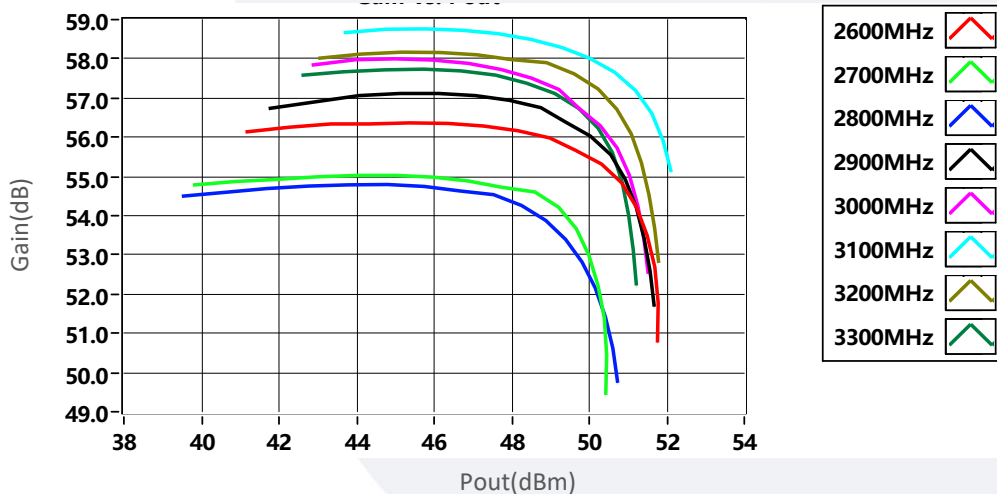
Input VSWR vs Frequency



Small Signal Gain vs Frequency



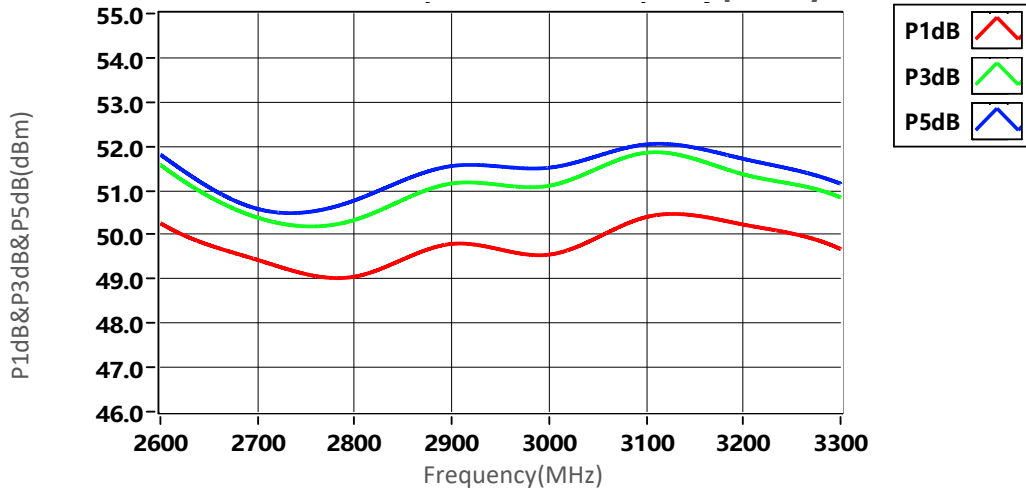
Gain vs Output Power



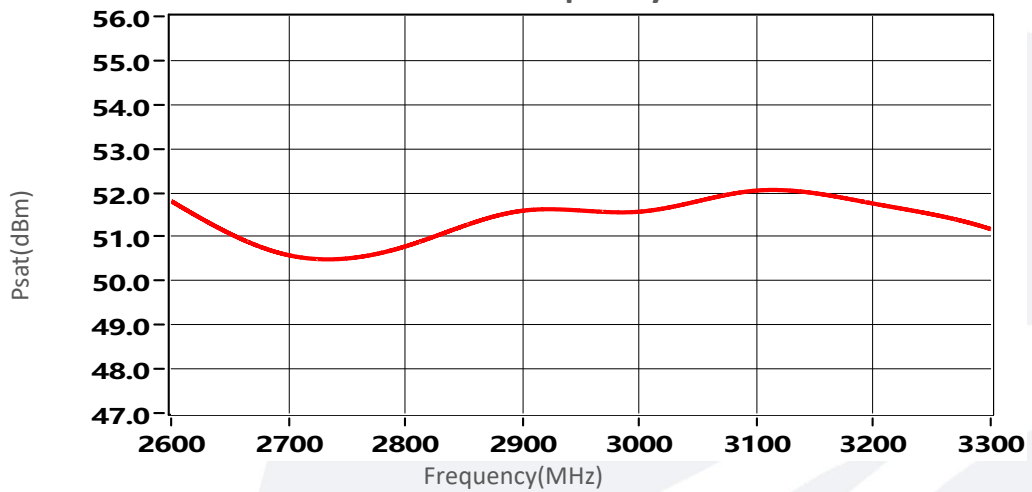
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

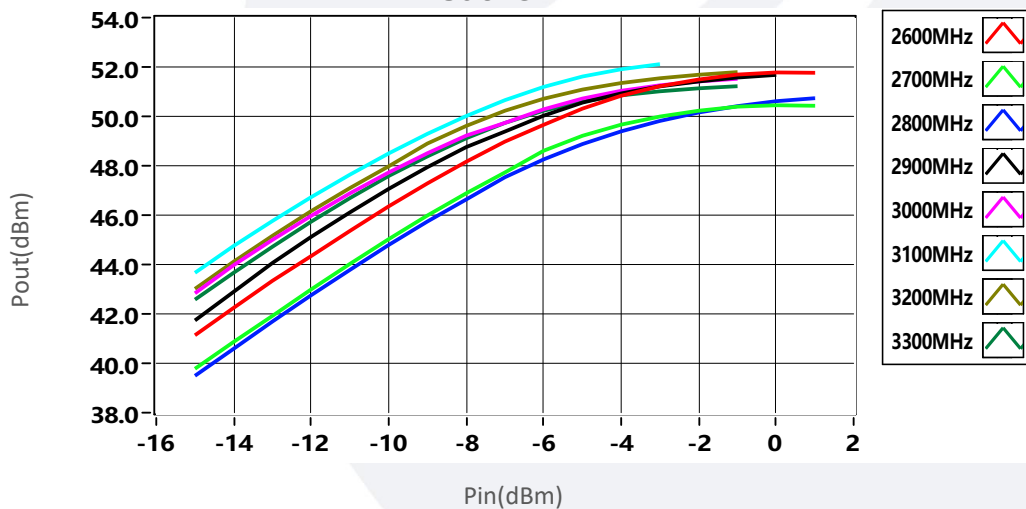
P1dB&P3dB&P5dB vs Frequency



Psat vs Frequency



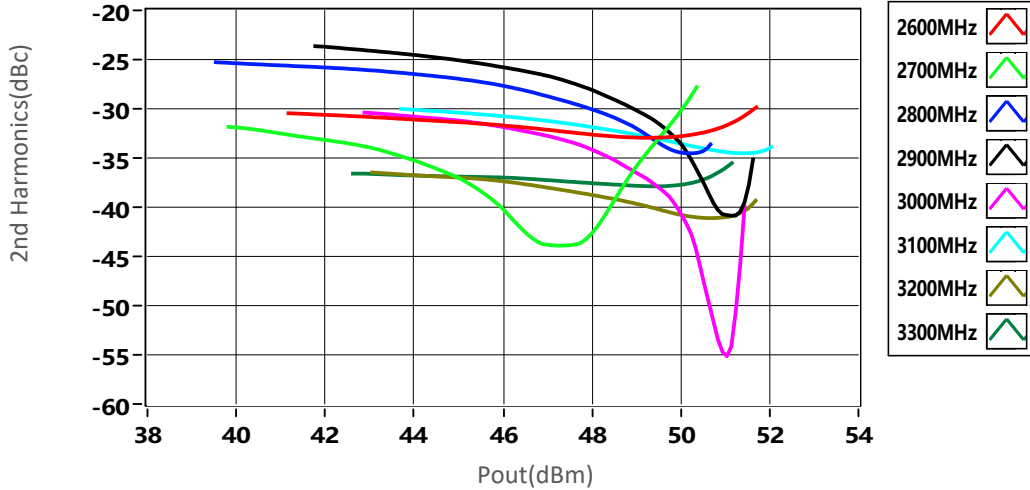
Pout vs Pin



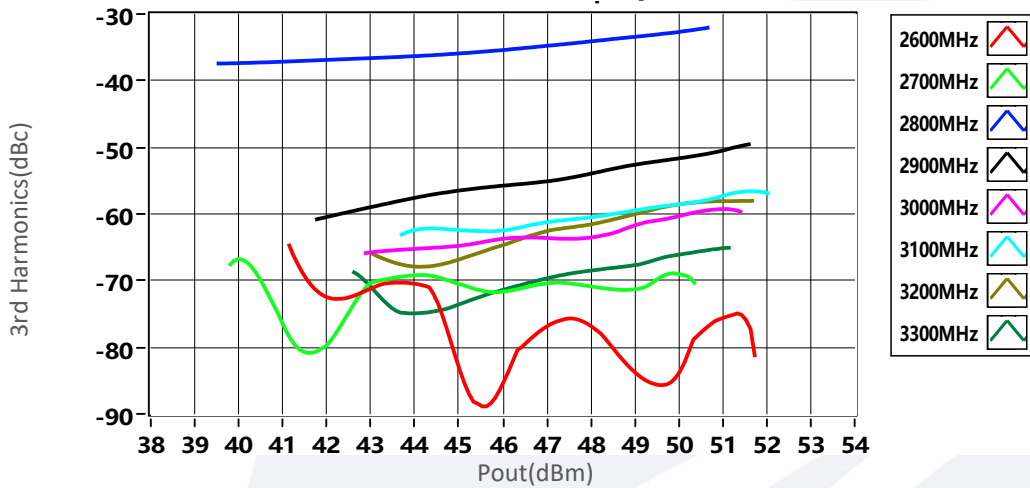
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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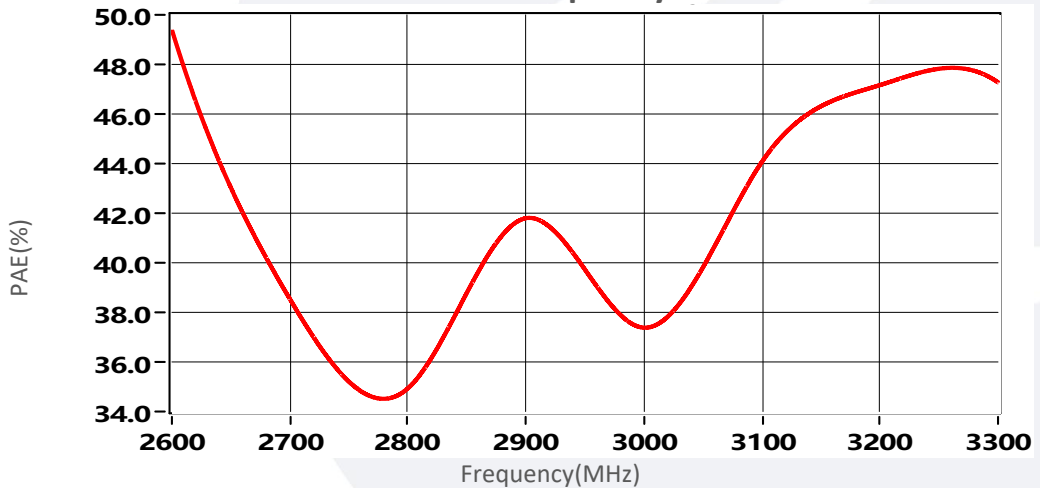
2nd Harmonics vs Output Power



3rd Harmonics vs Output Power



PAE vs Frequency



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