

Power Amplifier

100MHz-2GHz/30dB Gain/30dBm P1dB

Model: TLPA100M2G-30-30

TLPA100M2G-30-30 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 100MHz to 2 GHz. The DC power requirement for the amplifier is +15 VDC/700 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 100MHz-2GHz
- 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 | 100MHz | | 2GHz | |
| 小信号增益 Small Signal Gain | 27 | 30 | | dB |
| 增益平坦度 Gain Flatness | | ±0.5 | ±0.75 | dB |
| 线性输出功率 Output P1dB | 30 | 31 | | dBm |
| 谐波 Harmonic | | -25 | -20 | dBc |
| 输入驻波 Input VSWR | | 1.5 | 2.0 | :1 |
| 直流电压 DC Voltage | | +15 | +16 | V DC |
| 直流电流 DC Supply Current | | 700 | 1000 | 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 | SMA Female/SMA Female | |
| 直流偏置 DC Bias | Solder Pin | |
| 尺寸 Size | 120*70*15 | mm |
| 重量 Weight | 200 | g |

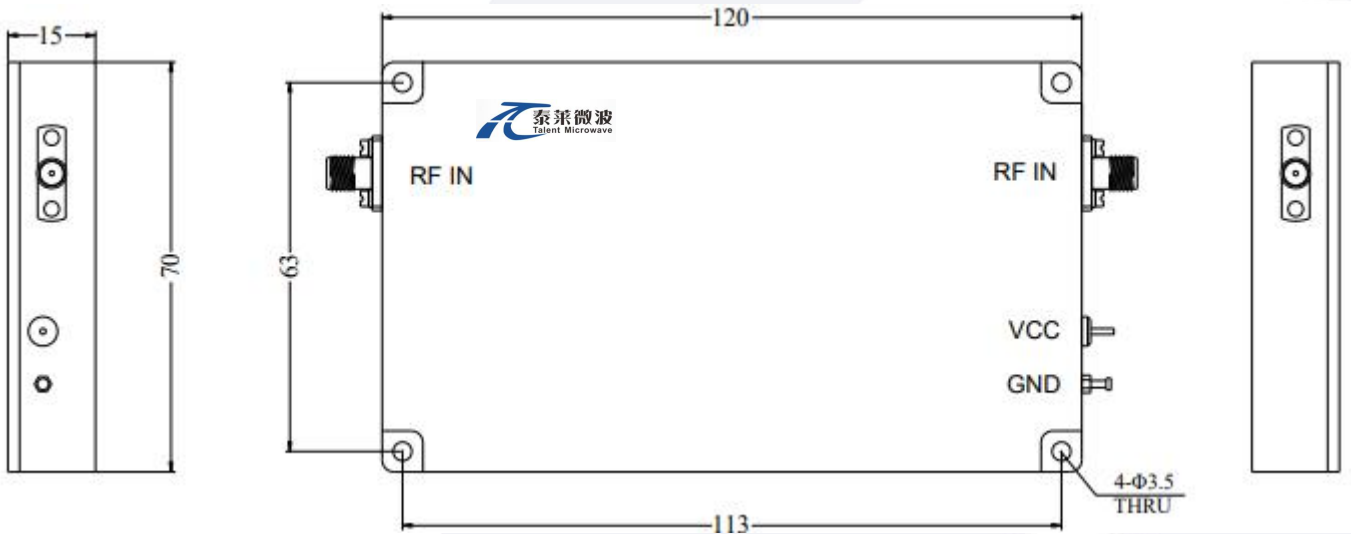
绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage | +16 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



*****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 | °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 | | | |

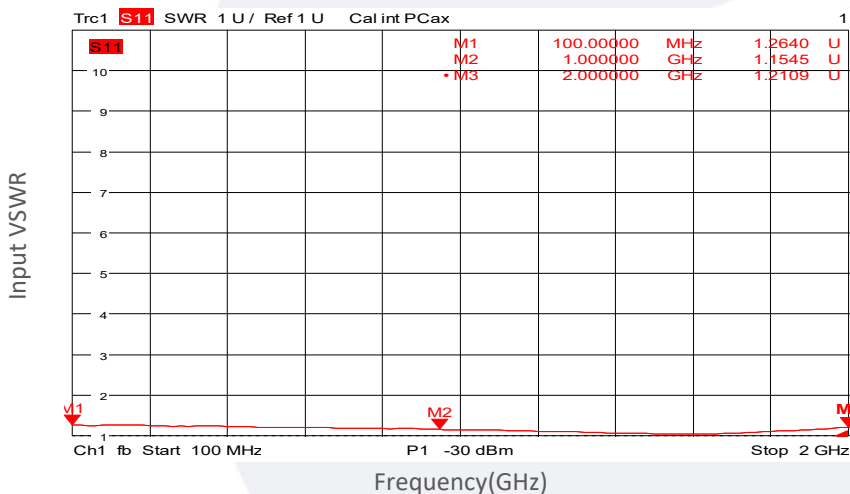
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

| 标准型号 Base Number | 描述 Description | 版本号 Revision |
|---------------------|--|--------------|
| TLPA100M2G-30-30 | Power amplifier 100MHz-2GHz, Gain:30dB,P1dB:30dBm,+15V DC,Without Heatsink. | Rev.1.1 |
| TLPA100M2G-30-30-HS | Power amplifier 100MHz-2GHz, Gain:30dB,P1dB:30dBm,+15V DC,With Heatsink. | Rev.1.1 |

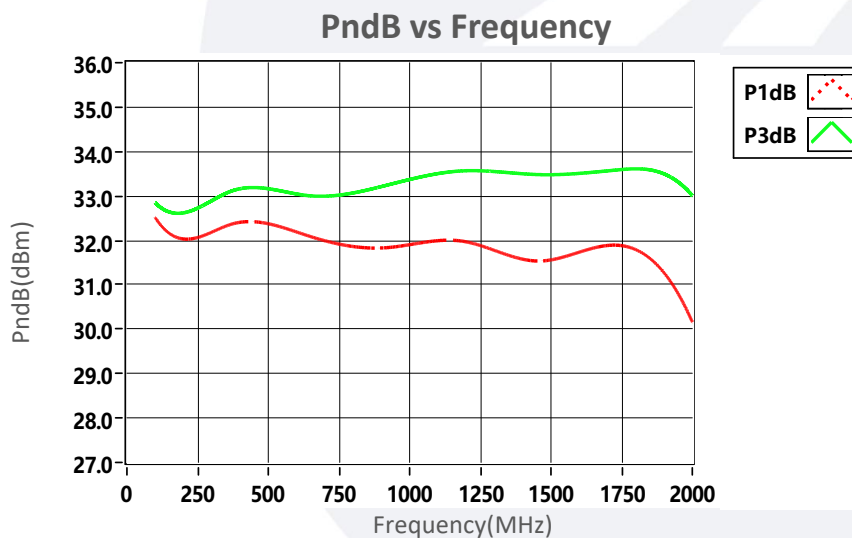
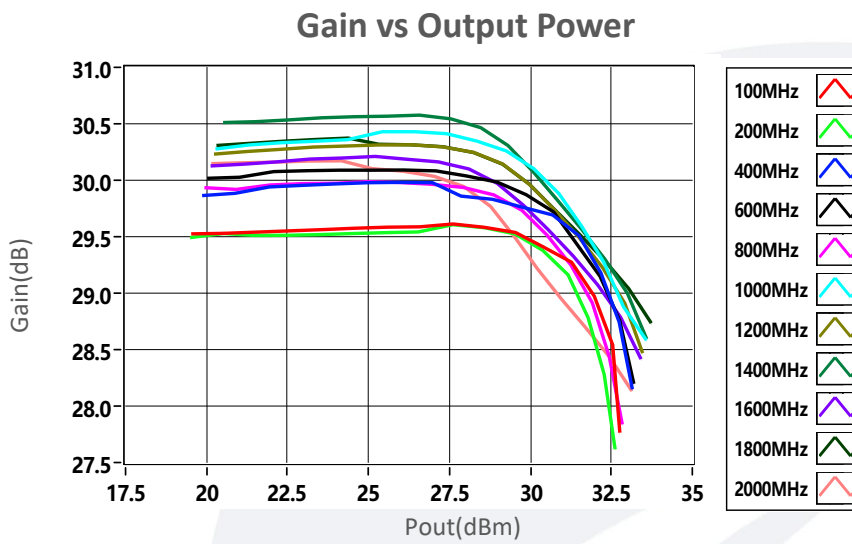
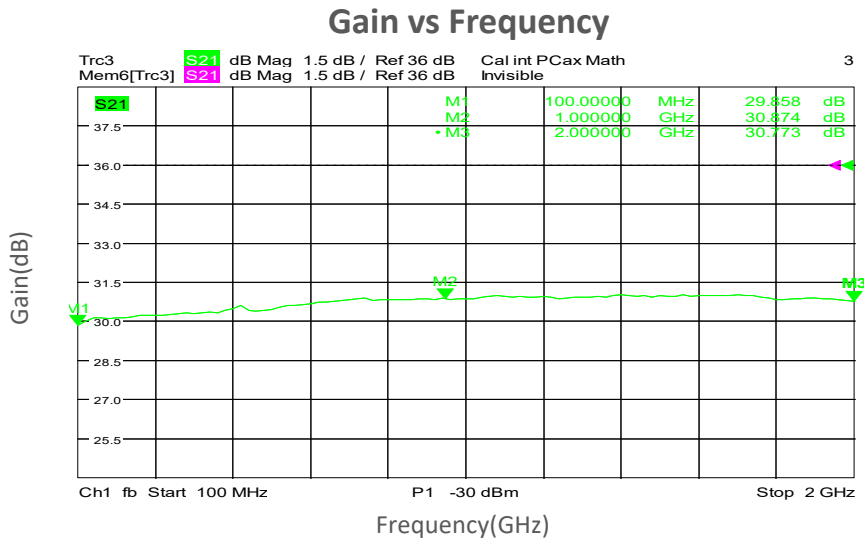
典型曲线 Typical Performance Data:

Input VSWR 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.

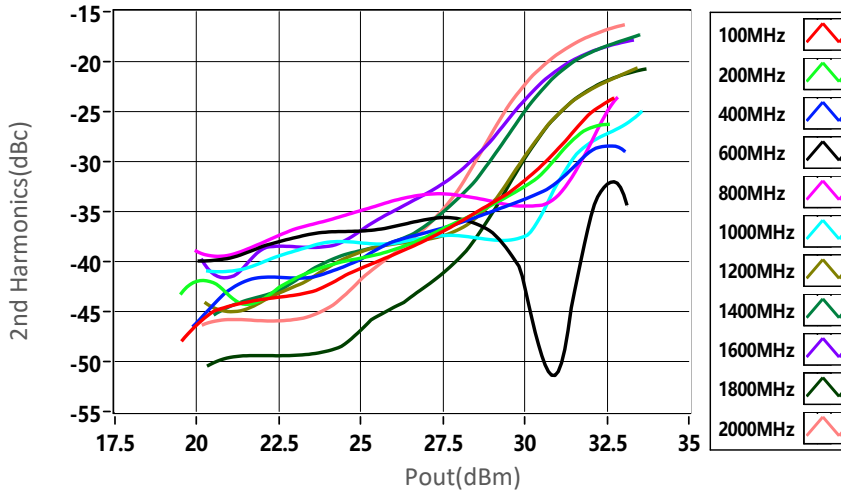
典型曲线 Typical Performance Data:



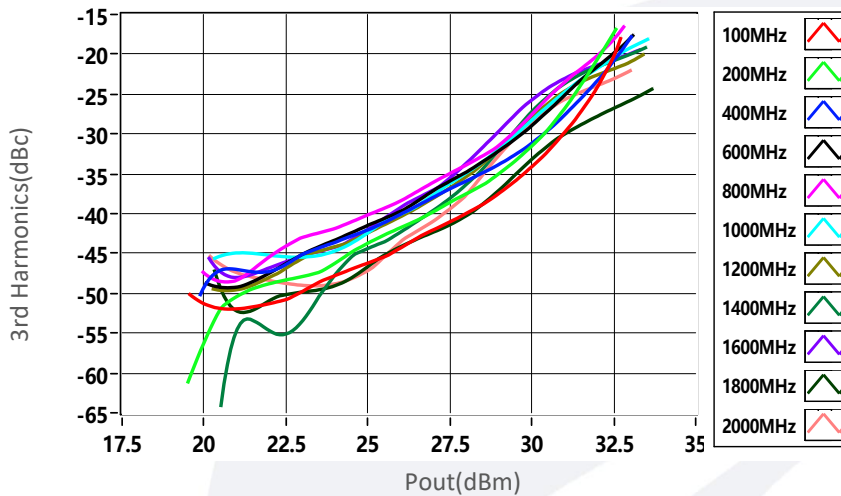
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

2nd Harmonics VS Output Power



3rd Harmonics 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.