

Power Amplifier

0.6-4.2GHz/46dB Gain/44dBm Psat

Model: TLPA0.6G4.2G-46-44

TLPA0.6G4.2G-46-44 is a power amplifier with a typical small signal gain of 46 dB and a nominal Psat of 44 dBm across the frequency range of 0.6 to 4.2 GHz. The DC power requirement for the amplifier is +28 VDC/3.5 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.6-4.2GHz
- Gain: 46dB Typ
- Output Power Psat: 44dBm 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 | 0.6 | | 4.2 | GHz |
| 小信号增益 Small Signal Gain | 41 | 46 | | dB |
| 增益平坦度 Gain Flatness | | ±2 | | dB |
| 线性输出功率 Output P1dB | 38 | 41 | | dBm |
| 饱和输出功率 Output Psat | 42 | 44 | | dBm |
| 噪声系数 Noise Figure | | 10 | | dB |
| 输入驻波 Input VSWR | | 1.5 | 2 | :1 |
| 直流电压 DC Voltage | 26 | 28 | 30 | V DC |
| 直流电流 DC Supply Current | | 3.5 | | 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/SMA Female | |
| 直流偏置 DC Bias | Solder Pin | |
| 尺寸 Size | 170*110*25(Without Heatsink) 264*140*87(With Heatsink) | mm |
| 重量 Weight | 150 | g |

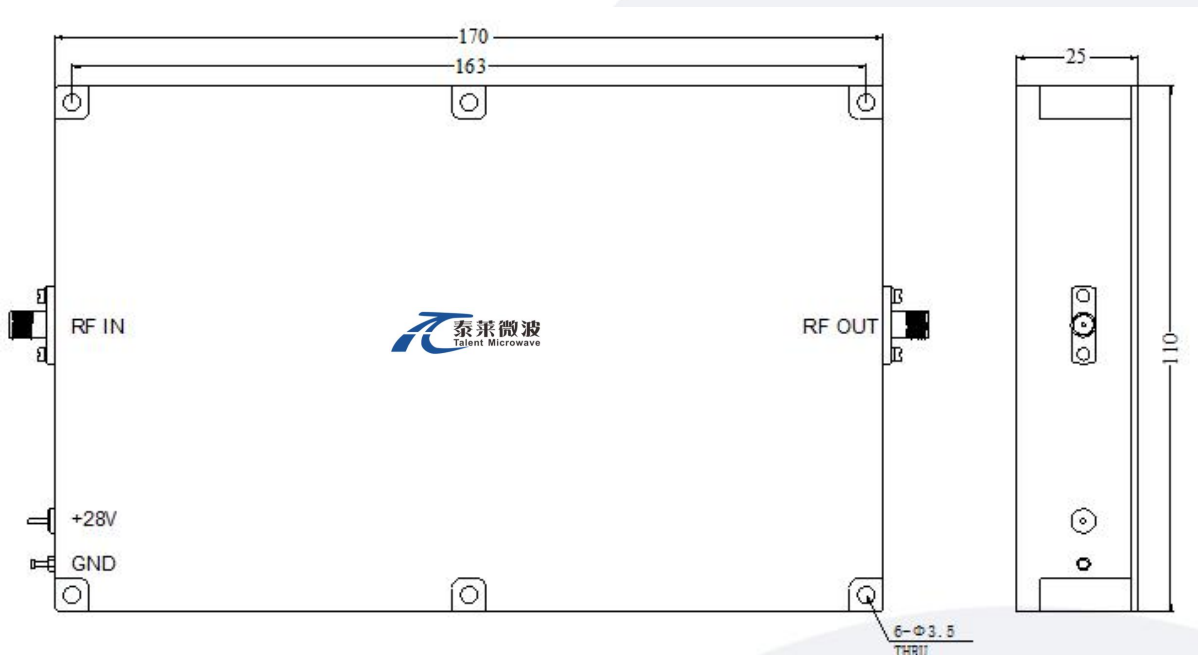
绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage | +30 V |
| 输入功率 RF Input Power | -3 dBm |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |



外形图 Outline Drawing:

Unit:mm



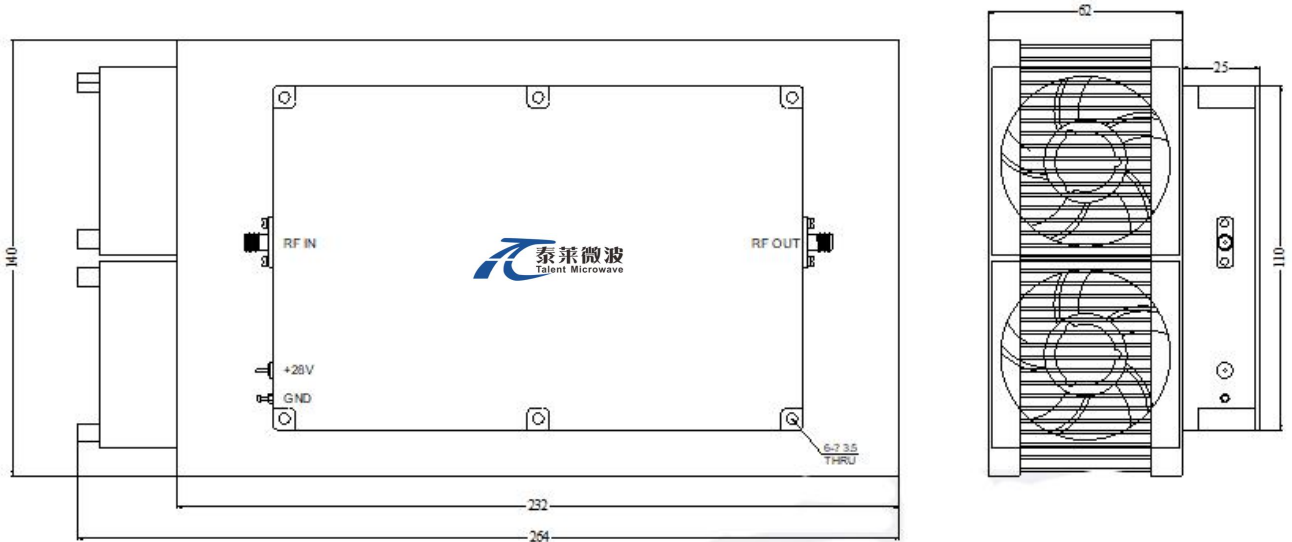
*****Heat Sink Required During Operation**



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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 | | | |

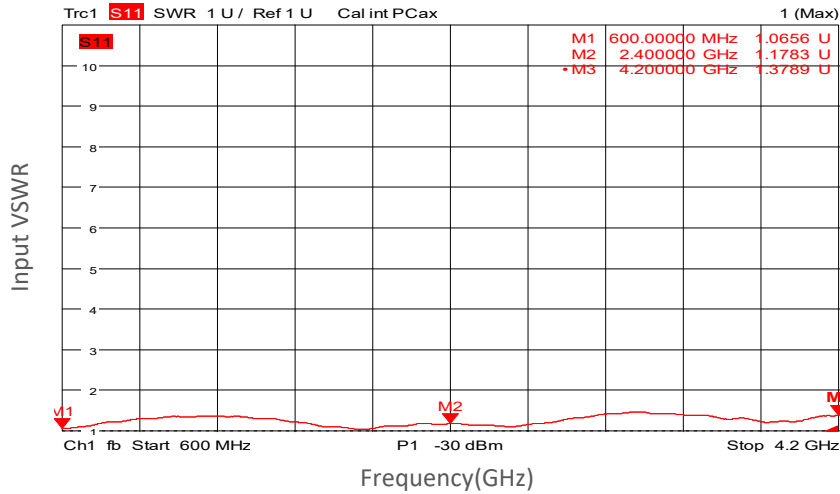
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

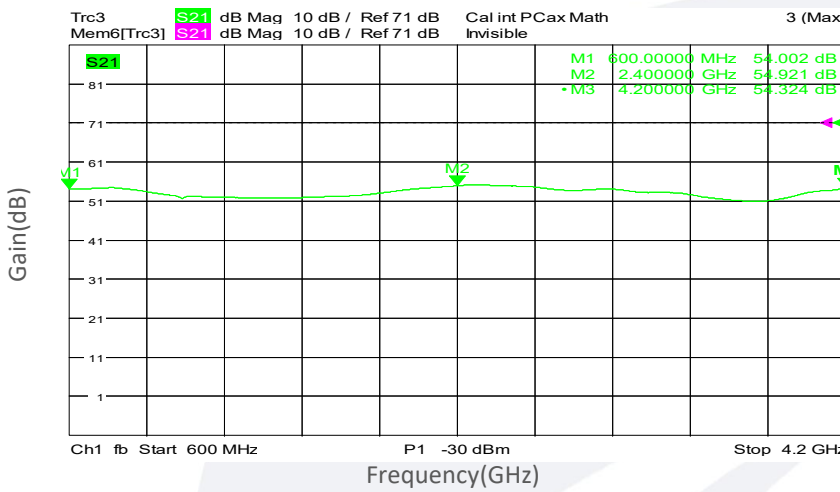
| 标准型号 Base Number | 描述 Description | 版本号 Revision |
|-----------------------|--|--------------|
| TLPA0.6G4.2G-46-44 | Power amplifier 0.6-4.2GHz, Gain:46dB,Psat:44dBm,+28V DC,Without Heatsink | Rev.1.1 |
| TLPA0.6G4.2G-46-44-HS | Power amplifier 0.6-4.2GHz, Gain:46dB,Psat:44dBm,+28V DC,With Heatsink | Rev.1.1 |

典型曲线 Typical Performance Data:

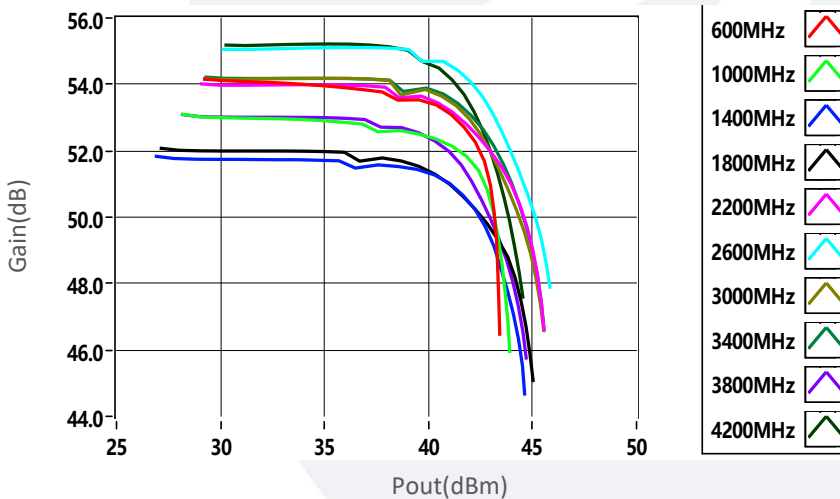
Input VSWR vs Frequency



Small Signal Gain vs Frequency

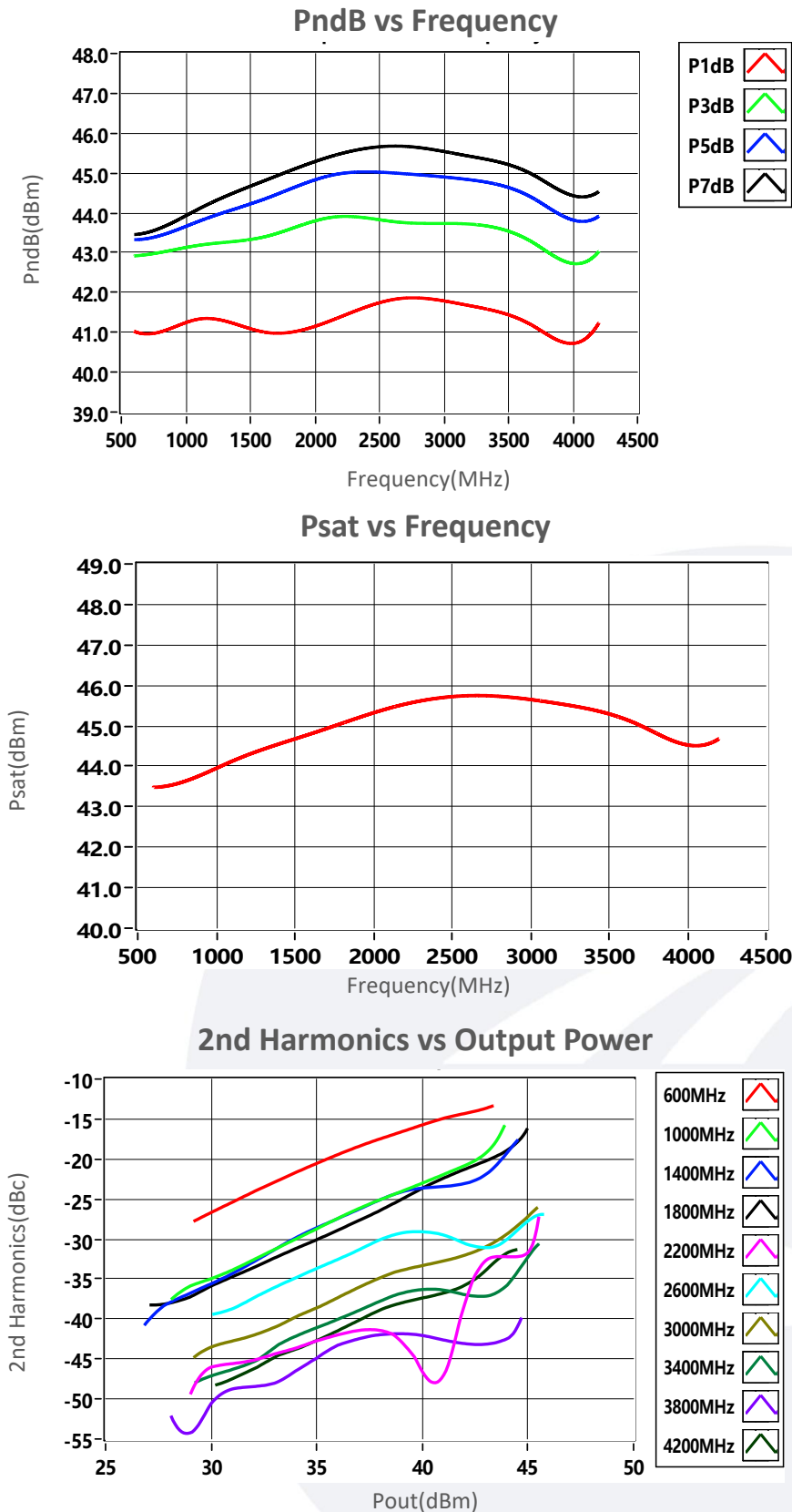


Gain vs Output Power



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.

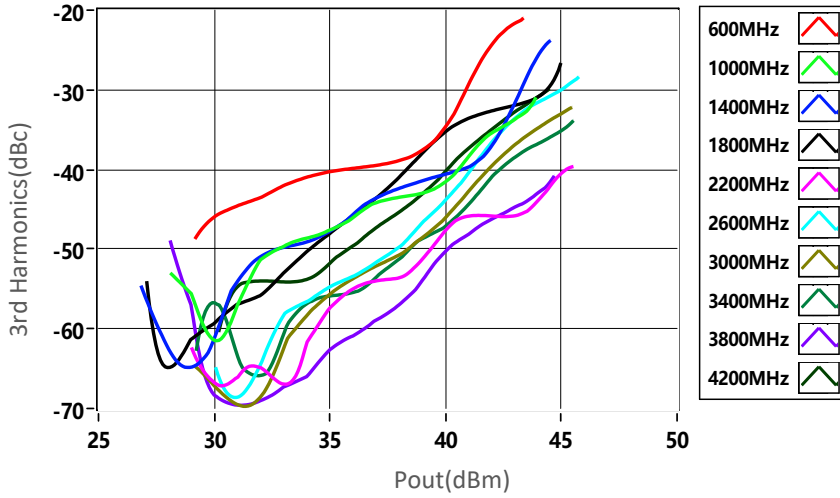
典型曲线 Typical Performance Data:



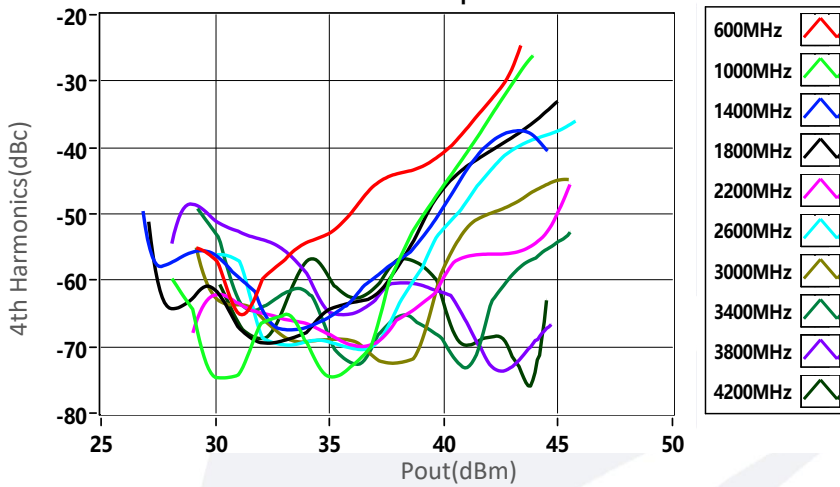
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典型曲线 Typical Performance Data:

3rd Harmonics vs Output Power



4th Harmonics vs Output Power



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