

Power Amplifier

100KHz-250MHz/50dB Gain/50dBm Psat

Model: TLPA100K250M-50-50

TLPA100K250M-50-50 is a power amplifier with a minimum small signal gain of 50 dB and a minimum Psat of 50 dBm across the frequency range of 100KHz to 250 MHz. The DC power requirement for the amplifier is +28 VDC/1.8 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 100KHz-250MHz
- Gain: 50dB Min
- Output Power Psat: 50dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

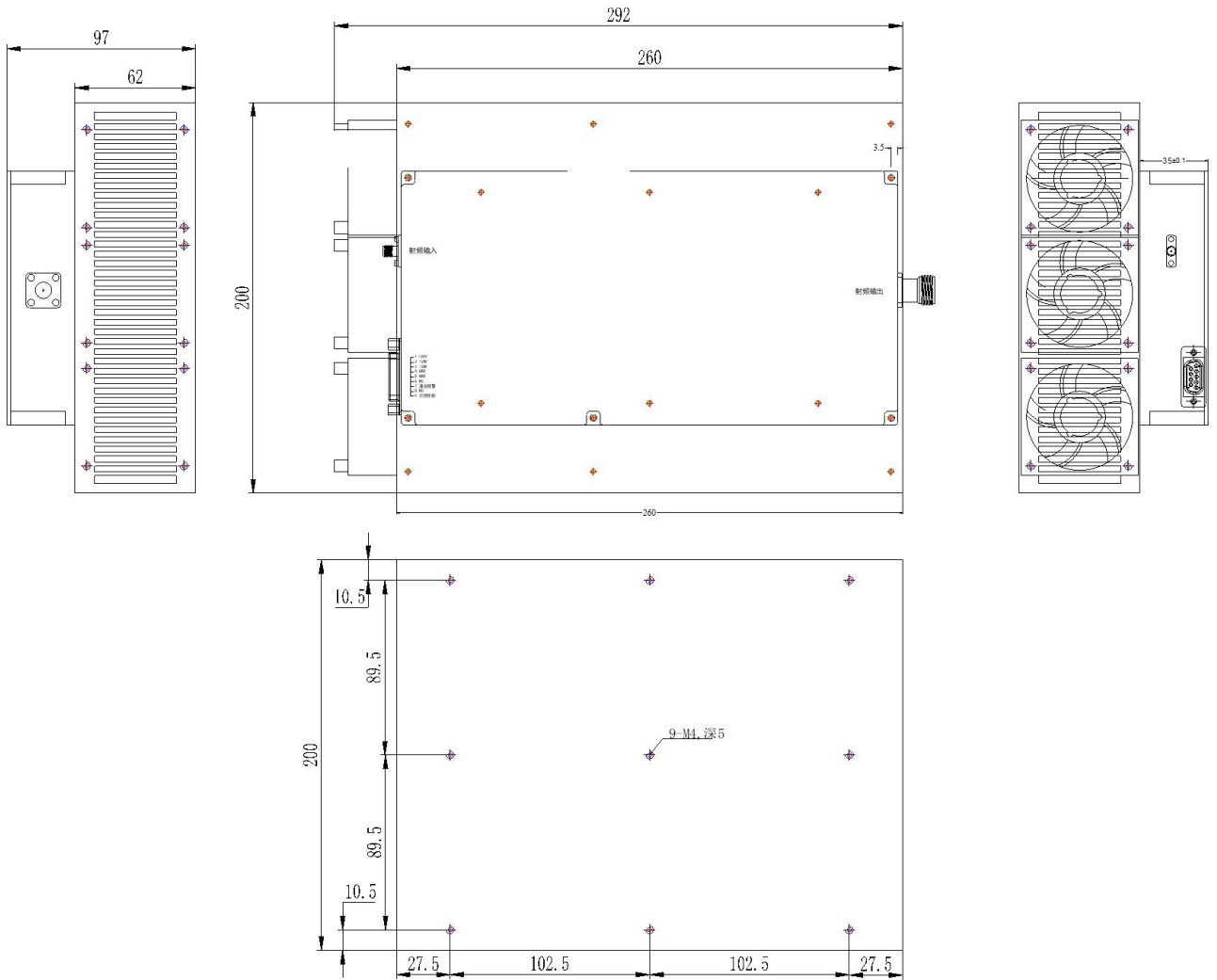
- Cellular
- PCN
- GSM
- ISM
- Lab Test

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	100KHz		250MHz	
小信号增益 Small Signal Gain	50	52		dB
增益平坦度 Gain Flatness		±3	±5	dB
饱和输出功率 Output Psat	50	51		dBm
谐波抑制 Harmonic@Pout=50dBm		-12		dBc
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		1.8	18	A
阻抗 Impedance		50		Ohms

外形图 Outline Drawing:

Unit:mm



风扇供电 Fan power supply

Red line	Power supply positive, +24VDC DC current: 0.2A
Black line	Ground

直流供电接口 DC Supply Connector (DSUB-9 Female):

引脚 Pin	名称 Name	功能 Function
1	+28V	Power supply positive,+26.0-30.0VDC
2	+28V	Power supply positive,+26.0-30.0VDC
3	+28V	Power supply positive,+26.0-30.0VDC
4	GND	Power supply negative
5	GND	Power supply negative
6	NC	Not connected
7	Over TEM	When the temperature of the case exceeds 85 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
8	NC	Not connected
9	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground

Notes: 1,TTL is 5V. 2,Optional radiator fan power supply, 24V/0.2A

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)	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			

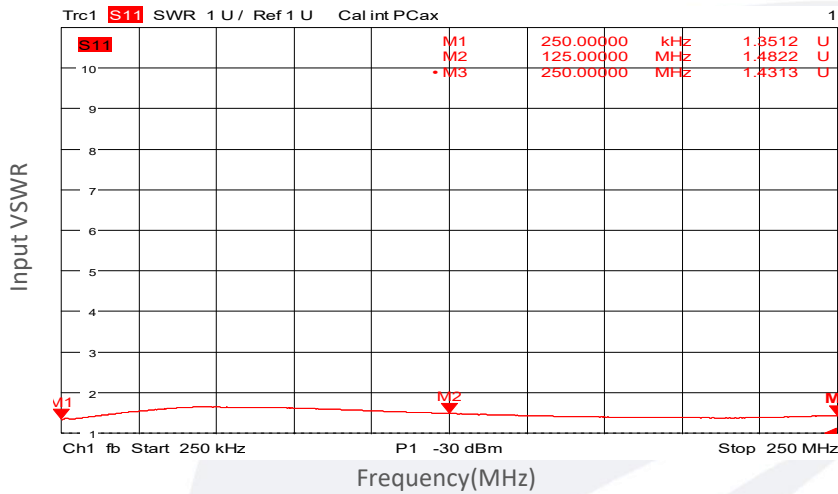
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

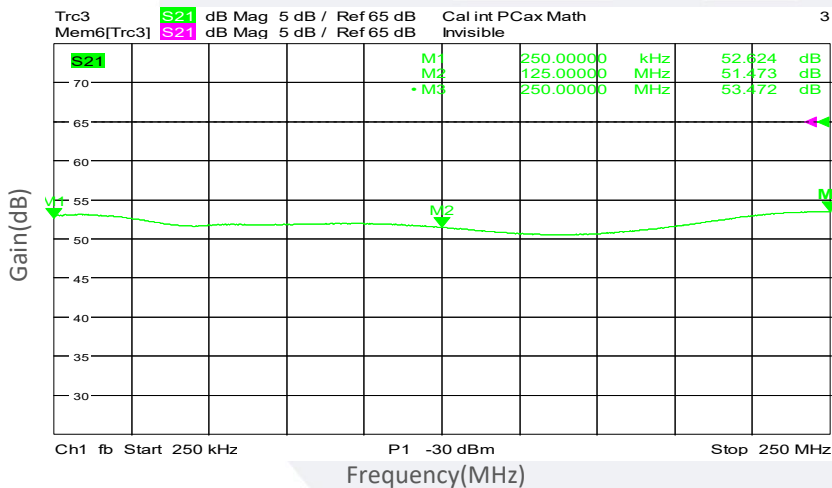
标准型号 Base Number	描述 Description	版本号 Revision
TLPA100K250M-50-50	Power amplifier 100KHz-250MHz, Gain:50dB,Psat:50dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA100K250M-50-50-HS	Power amplifier 100KHz-250MHz, Gain:50dB,Psat:50dBm,+28V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

Input VSWR vs Frequency



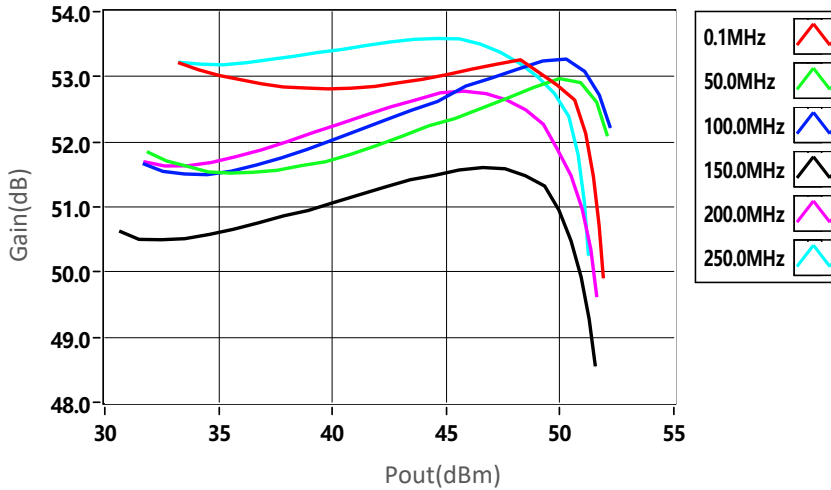
Small Signal Gain vs Frequency



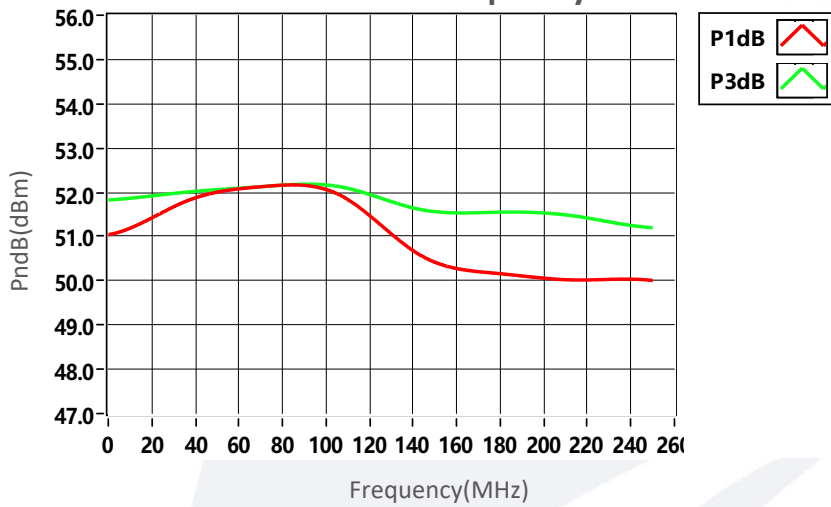
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

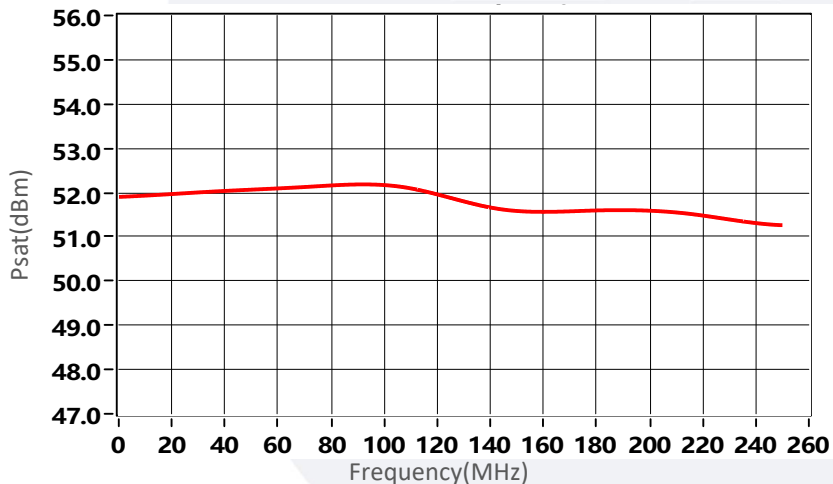
Gain vs Output Power



PndB vs Frequency



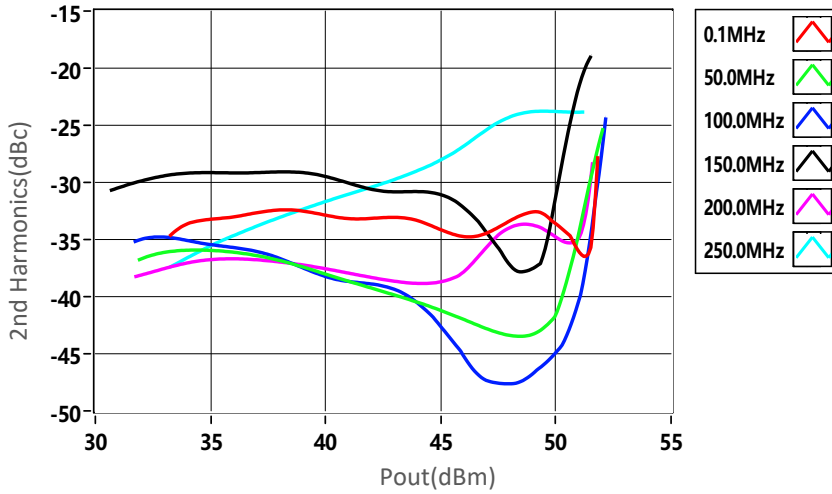
Psat vs Frequency



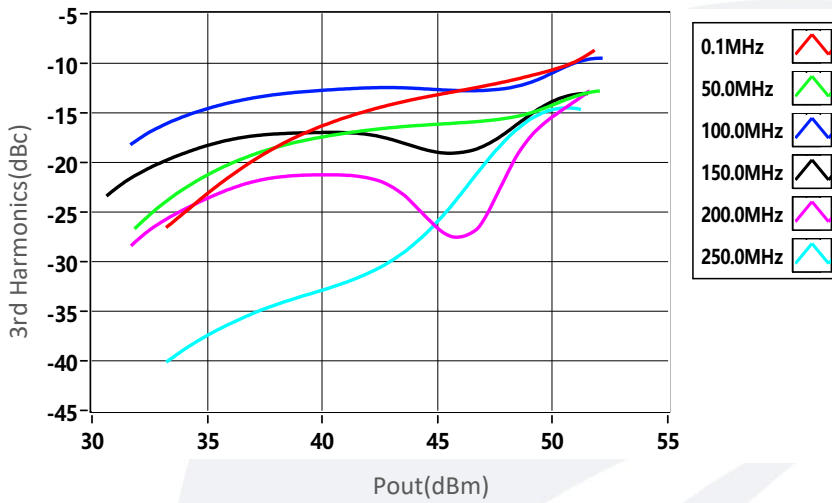
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典型曲线 Typical Performance Data:

2nd Harmonics vs Output Power



3rd Harmonics vs Output Power



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