泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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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

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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	
直流供电接口 DC Supply Connector	DB9	
尺寸 Size	255*130*35(Without Heatsink) 292*200*97(With Heatsink)	mm
重量 Weight	500	g

绝对最大值 Absolute Maximum Ratings:

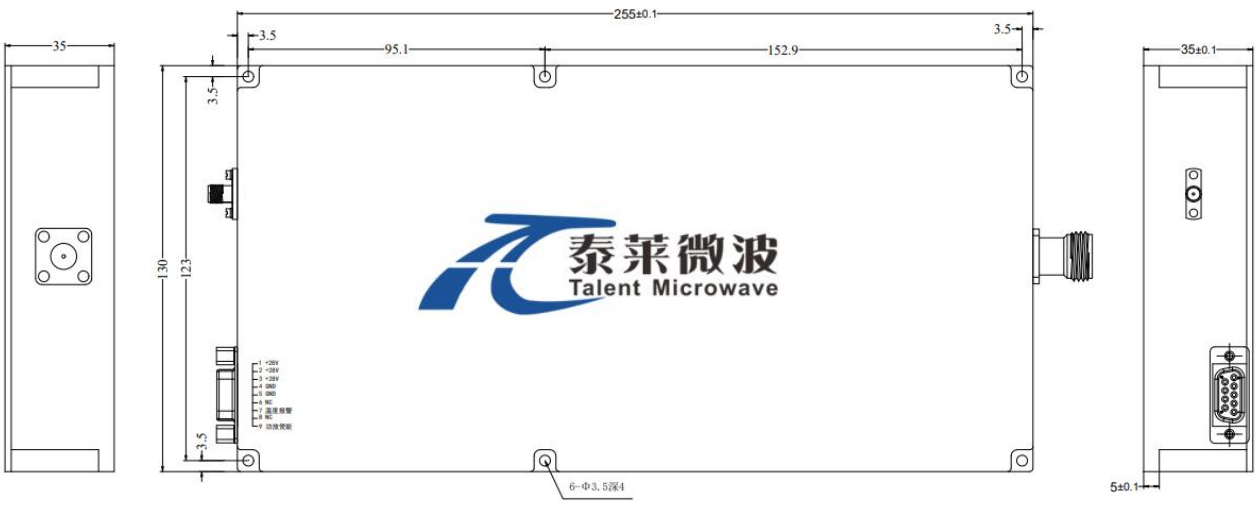
参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+30 V
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



Simple 220V System
Available SAC option

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



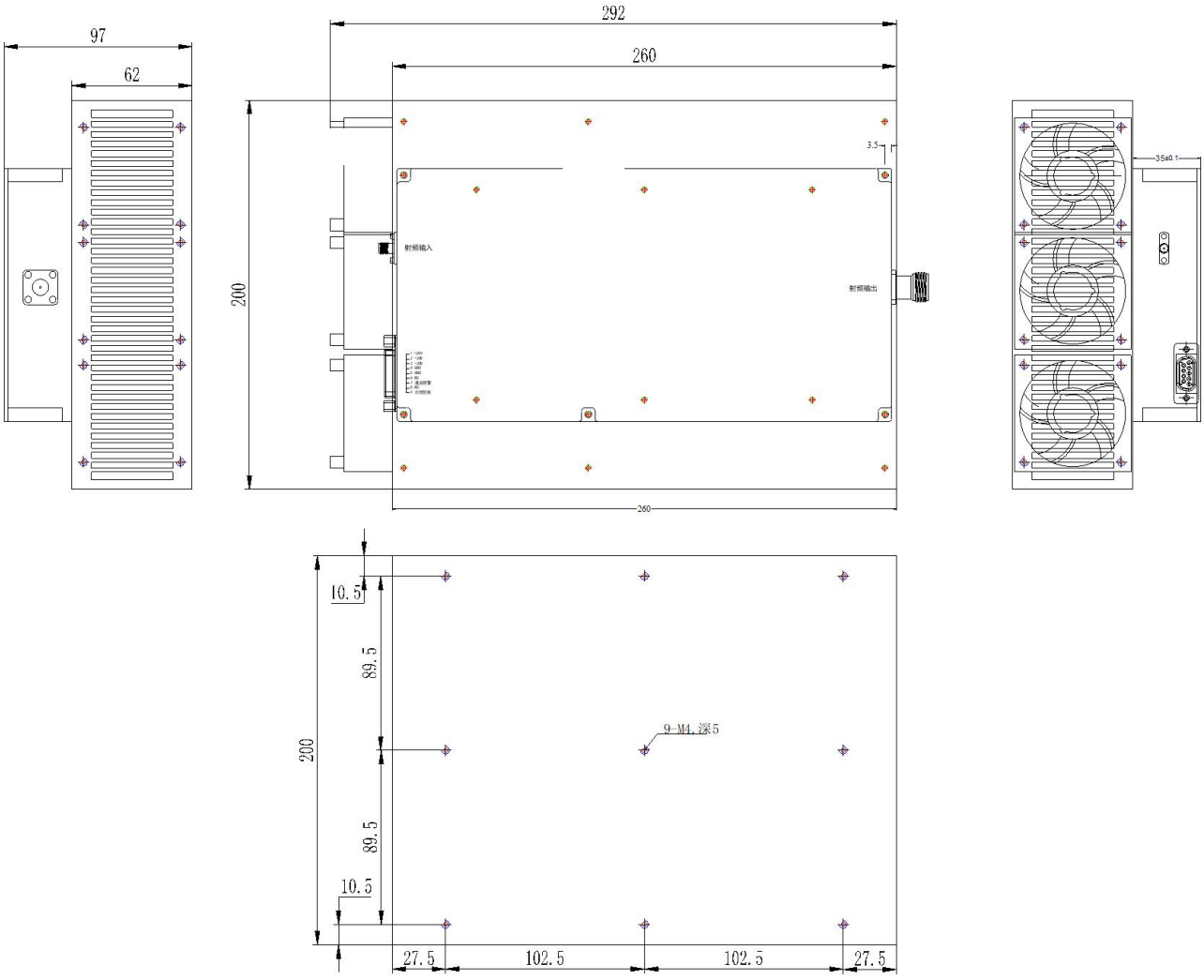
***Heat Sink Required During Operation

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

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外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



风扇供电 Fan power supply	
Red line	Power supply positive,+24VDC DC current: 0.2A
Black line	Ground

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

引脚 Pin	名称 Name	功能 Function
1	+28V	电源正极,+26.0-30.0VDC
2	+28V	电源正极,+26.0-30.0VDC
3	+28V	电源正极,+26.0-30.0VDC
4	GND	地
5	GND	地
6	NC	未连接
7	Over TEM	当外壳温度超过85℃时，功率放大器关闭，此引脚拉高。如果机箱温度降至70℃，功率放大器将恢复正常工作，此引脚将拉低。
8	NC	未连接
9	EN	放大器使能：TTL高(5V)(内拉高) 放大器禁用：接地

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

使用说明 Instruction Manual:

开机 Power on	
1	连接地和射频输入端口。
2	将射频输出端口与负载连接(负载的驻波比应小于3:1)。
3	给风扇加电。
4	给功放加电。
5	打开射频信号，确保输入信号不超过5dBm。

关机 Power off	
1	关闭射频信号。
2	给功放断电。
3	给风扇断电。
4	移除输入端信号源。

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温度环境 Environmental Conditions:

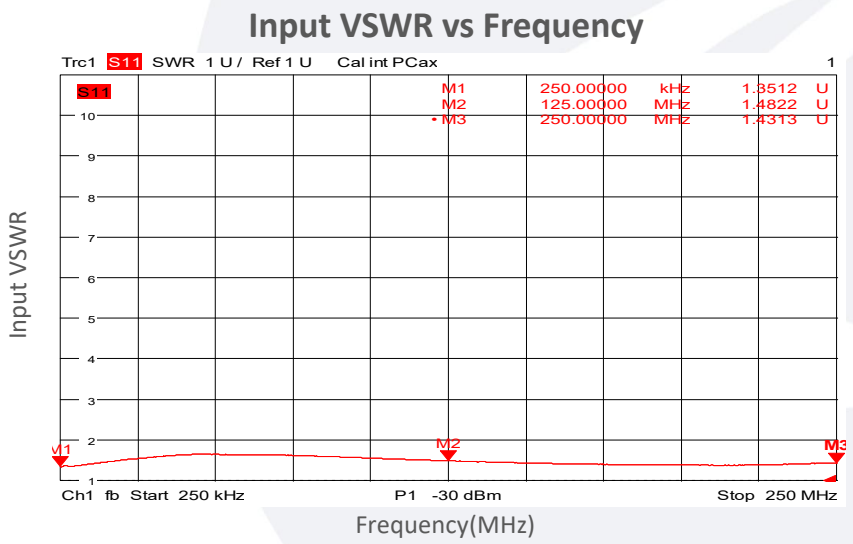
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+50	℃
存储温度 Non-operating Temperature*	-30		+60	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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:

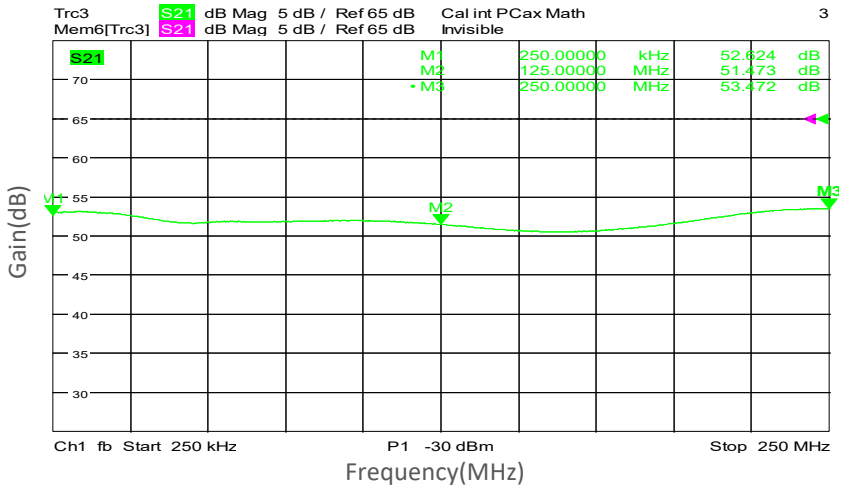


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

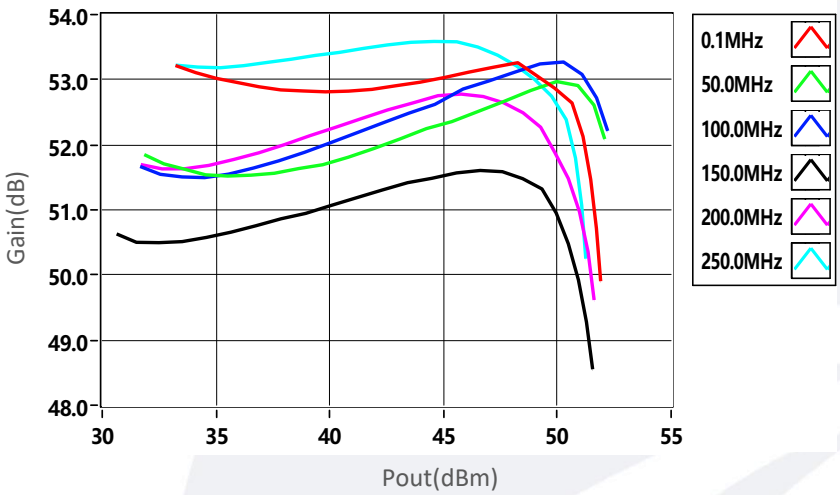
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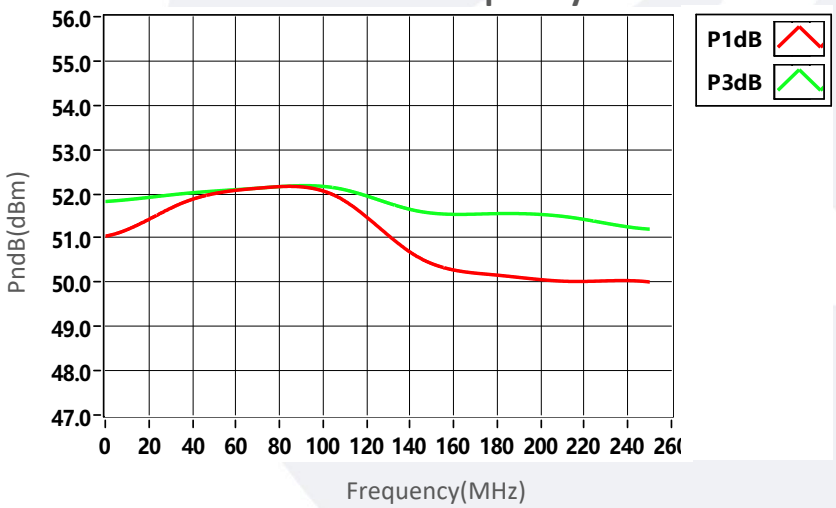
Small Signal Gain vs Frequency



Gain vs Output Power



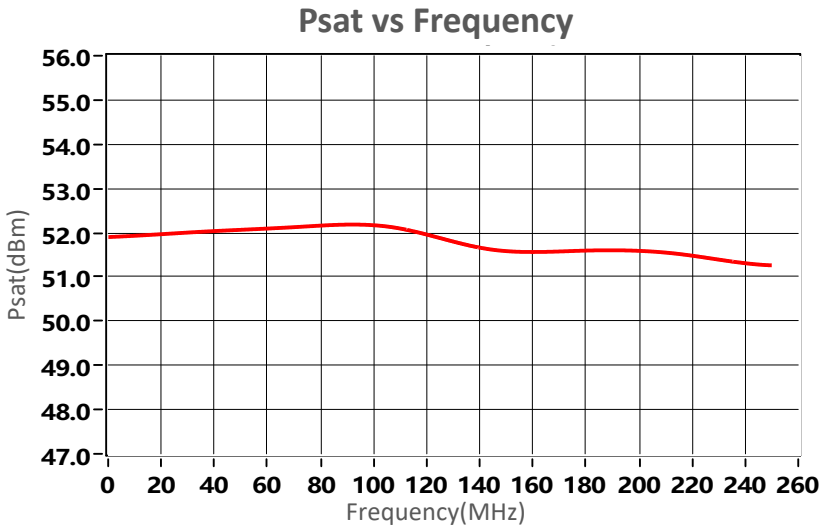
PndB vs Frequency

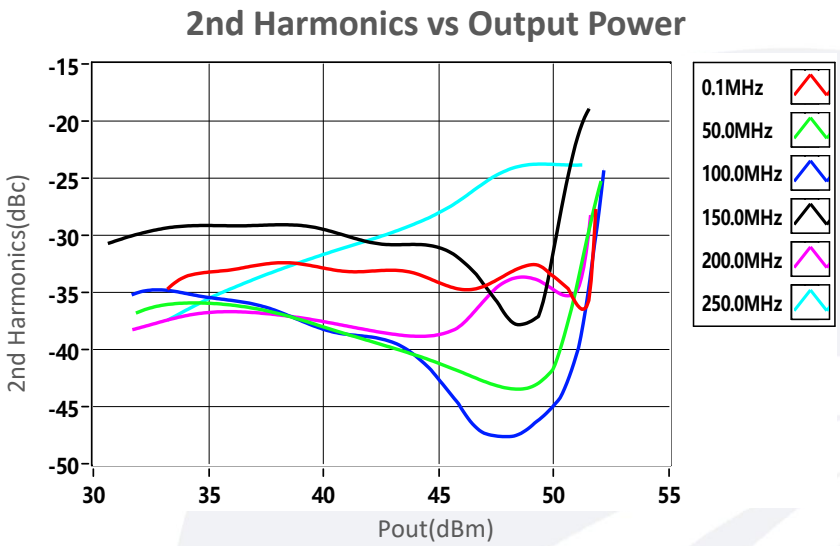


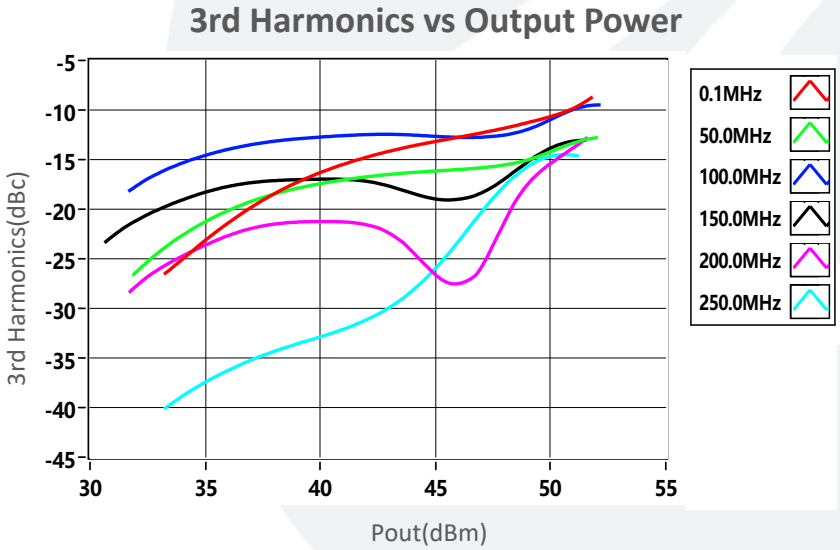
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典型曲线 Typical Performance Data:







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