

## Model: TLPA100K400M-52-52

## Power Amplifier 0.1-400MHz, Gain: 52dB, Psat: 52dBm

### Feature:

- Ultra Wide Band: 0.1-400MHz
- Gain: 52 dB Typ
- Psat Output Power: 52 dBm Typ
- 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	0.1-400			MHz
小信号增益 Small Signal Gain	49	52		dB
增益平坦度 Gain Flatness		±3	±5	dB
线性输出功率 Output P1dB	49	50		dBm
饱和输出功率 Output Psat	50	52		dBm
谐波 Harmonic@Pout=50dBm		-12		dBC
输入驻波 Input VSWR		1.5	2.0	:1
直流电压 DC Voltage	+26	+28	+30	V DC
直流电流 DC Supply Current		10	20	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	DB9	
尺寸 Size	255*130*35	mm
重量 Weight	2500	g

### 绝对最大值 Absolute Maximum Ratings:

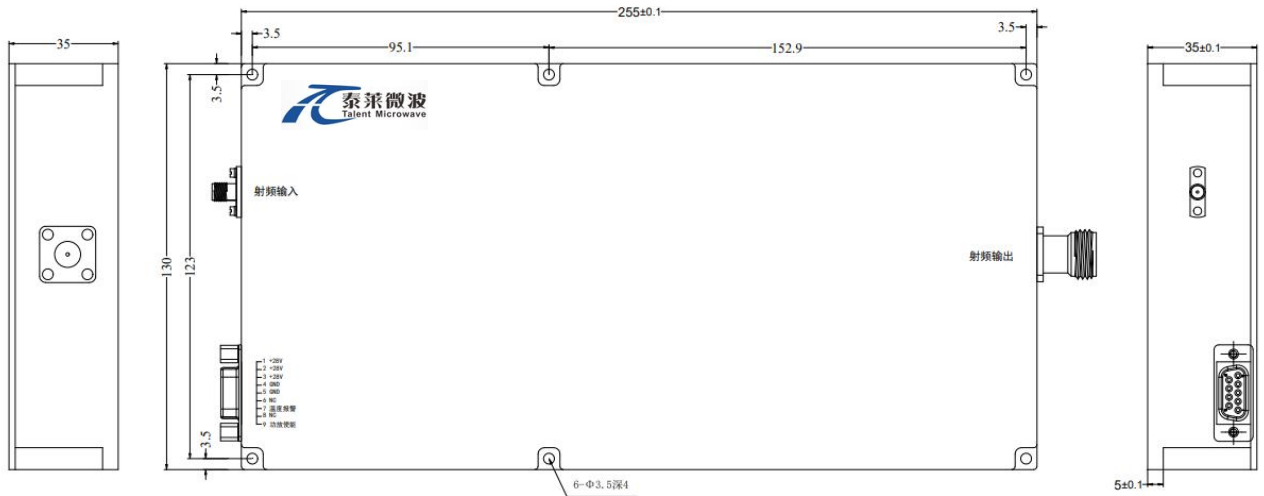
参数Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+30 V
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



Available 220V System  
Benchtop Amplifier

外形尺寸 Outline Drawing:

Unit: mm



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



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

温度环境 Environmental Conditions:

参数Parameter	Min	Typ	Max	单位Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	30,000			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			

订货信息 Ordering Information:

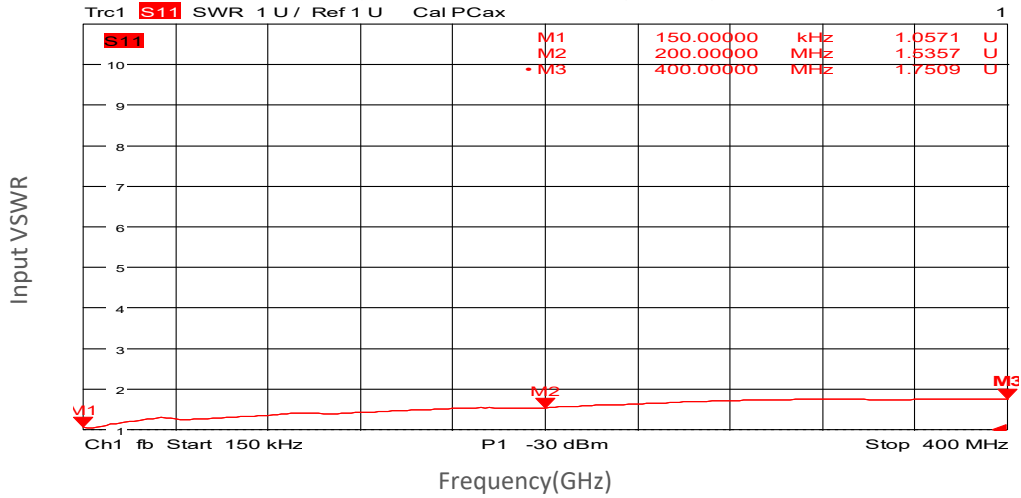
标准型号 Part Number	描述 Description	版本号Revision
TLPA100K400M-52-52	Power amplifier 0.1-400MHz,Gain:52dB,Psat:52dBm,+28V DC,Without Heatsink	Rev.1.2
TLPA100K400M-52-52-HS	Power amplifier 0.1-400MHz,Gain:52dB,Psat:52dBm,+28V DC,With Heatsink	Rev.1.2

DC Interface Connector D-sub, 9-Pin, Female

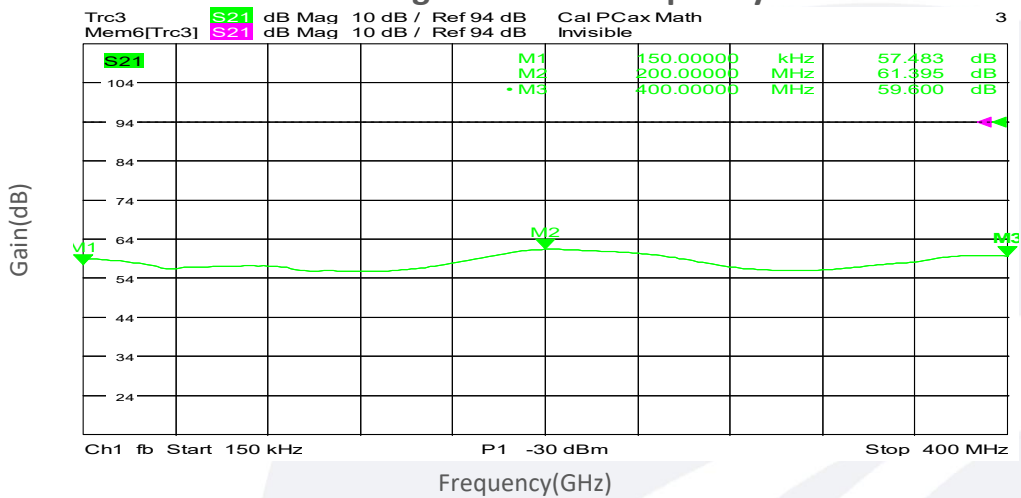
Pin #	Name	Function
1	+28V	+26.0-30.0VDC
2	+28V	+26.0-30.0VDC
3	+28V	+26.0-30.0VDC
4	GND	Ground
5	GND	Ground
6	NC	Not connected
7	Over Temperature	When the temperature of the case exceeds 85 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °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

典型曲线 Typical Performance Data:

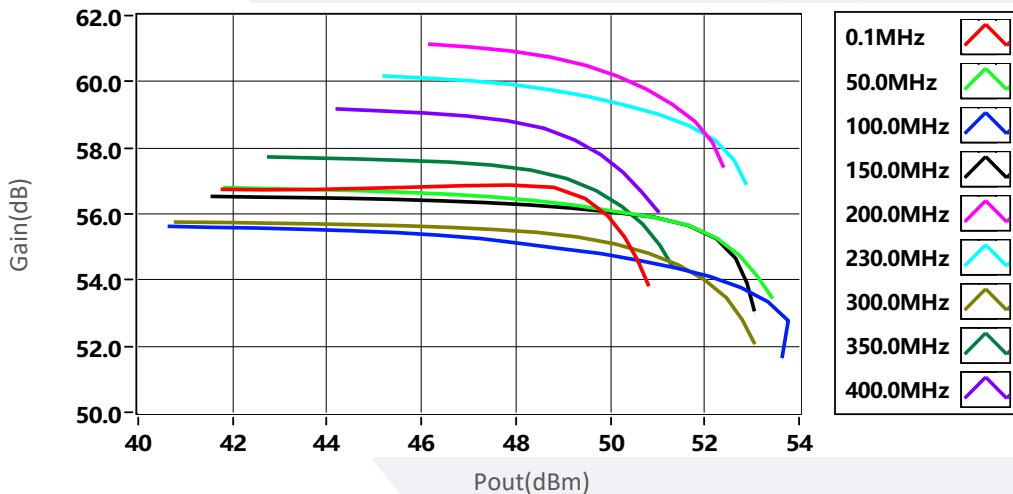
Input VSWR vs Frequency



Small Signal Gain vs Frequency



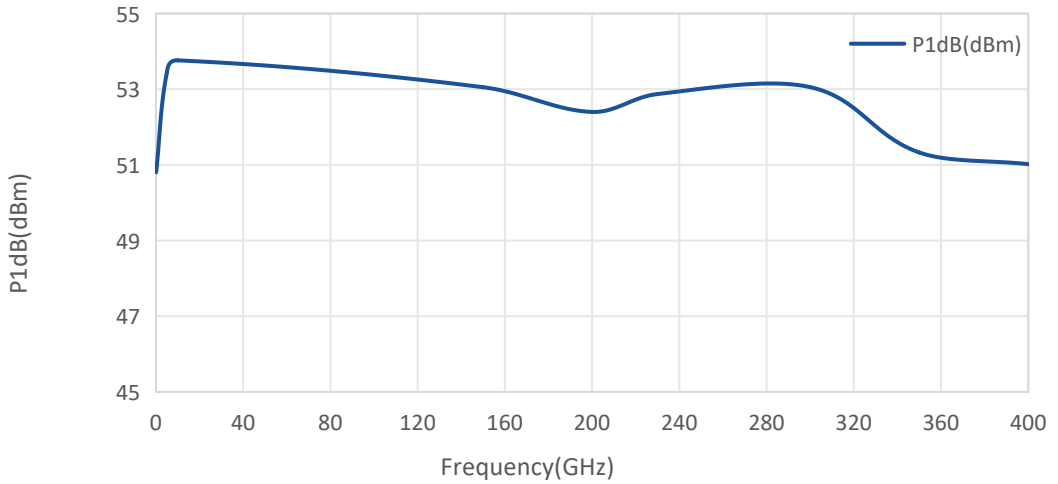
Gain vs Output Power



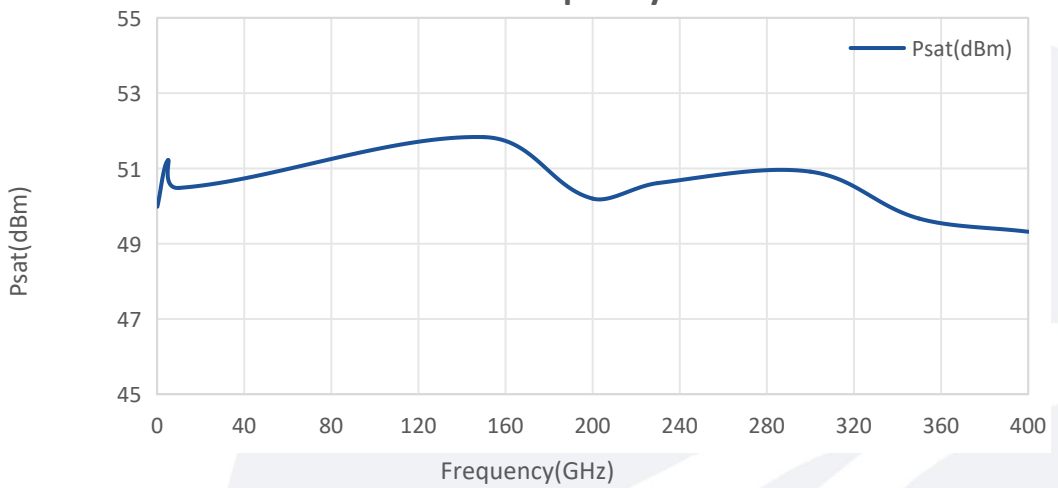
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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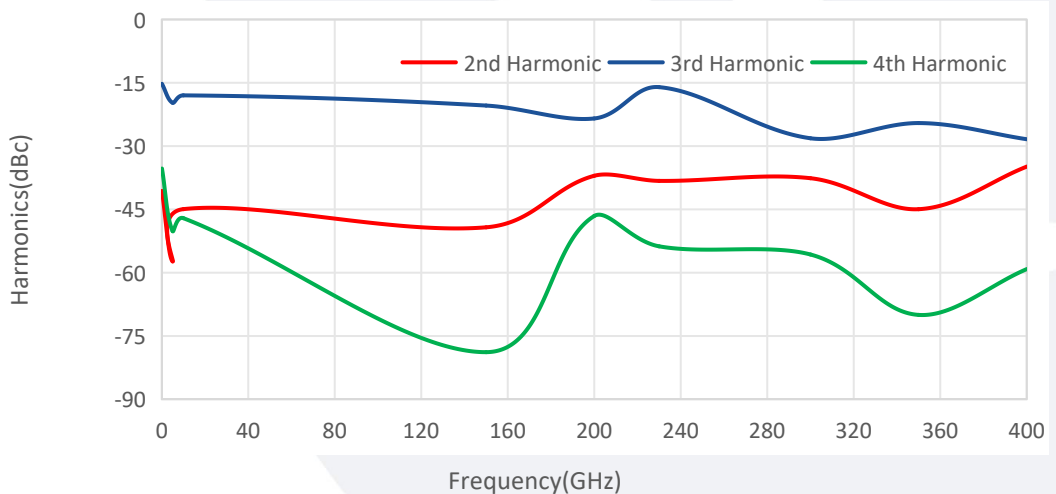
**P1dB vs Frequency**



**Psat vs Frequency**



**Harmonics vs Frequency**



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