

Power Amplifier

100KHz-400MHz/52dB Gain/52dBm Psat

Model: TLPA100K400M-52-52

TLPA100K400M-52-52 is a power amplifier with a typical small signal gain of 52 dB and a nominal Psat of 52 dBm across the frequency range of 100KHz to 400 MHz. The DC power requirement for the amplifier is +28 VDC/10 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N Female.

Features:

- Frequency range: 100KHz-400MHz
- Gain: 52dB Typ
- Output Power Psat: 52dBm 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	100KHz		400MHz	
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	
直流供电接口 DC Power Supply Connector	DB9	
尺寸 Size	255*130*35	mm
重量 Weight	2500	g

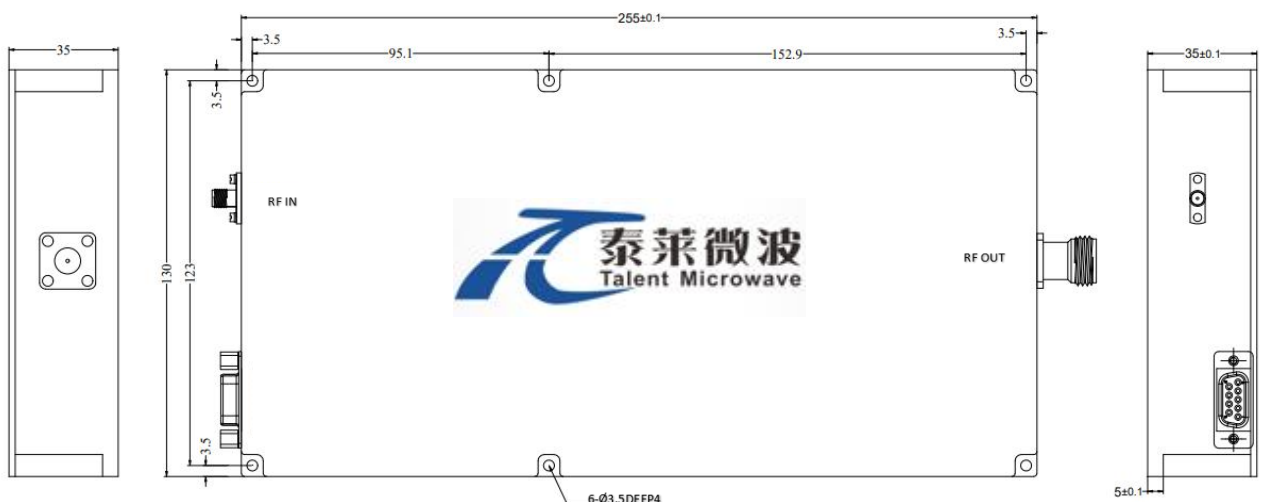
绝对最大值 Absolute Maximum Ratings:

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



外形图 Outline Drawing:

Unit:mm



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



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

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

引脚 Pin	名称 Name	功能 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

温度环境 Environmental Conditions:

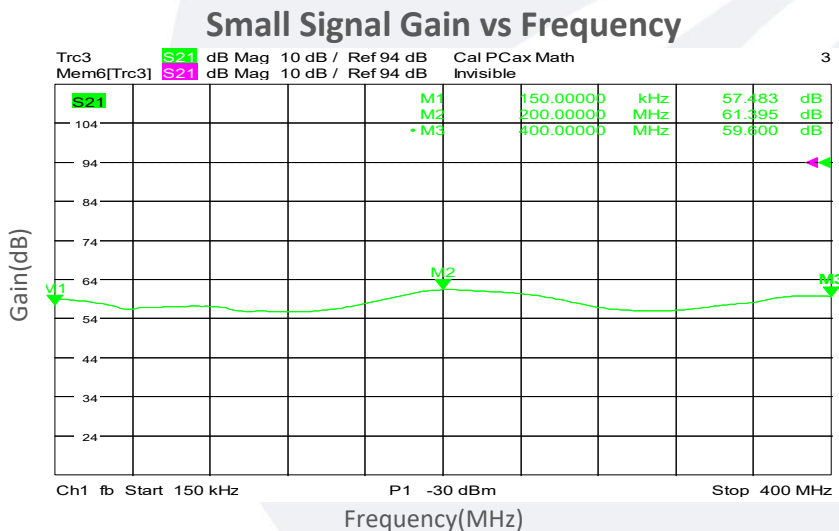
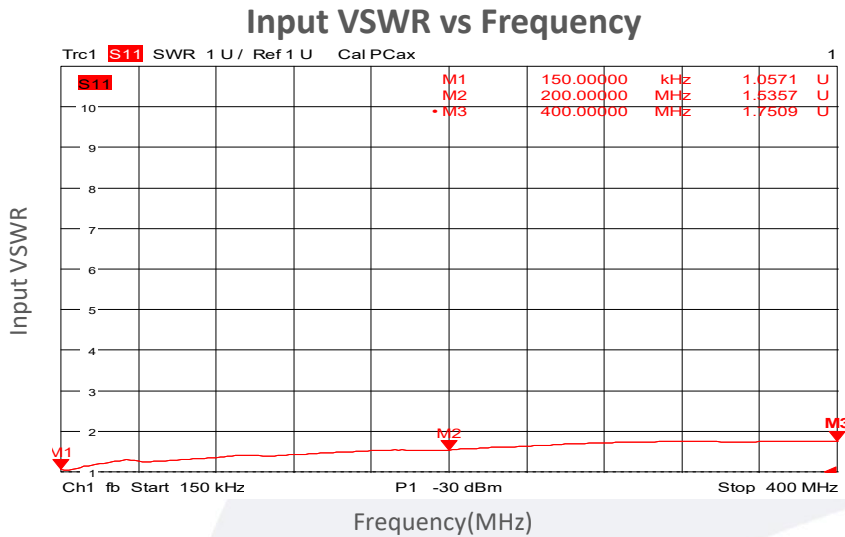
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+50	°C
存储温度 Non-operating Temperature*	-30		+60	°C
相对湿度 Relative humidity		95		%
海拔 Altitude		10,000		feet
震动 Shock / Vibration(MIL-STD-810F)		20g,11ms,saw-tooth		
冲击 Shock(non operating)		20G for 11msc half sin wave,3 axis both directions		

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

订货信息 Ordering Information:

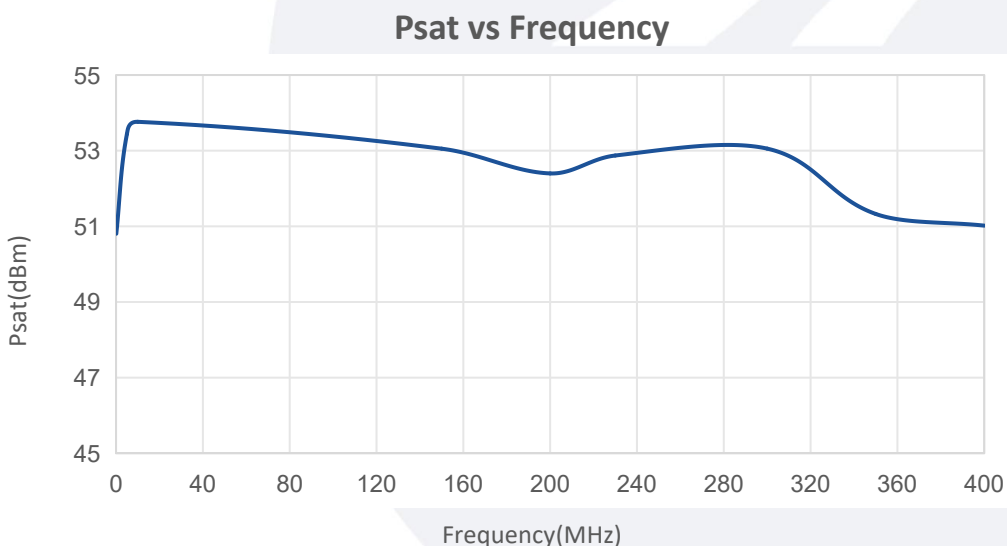
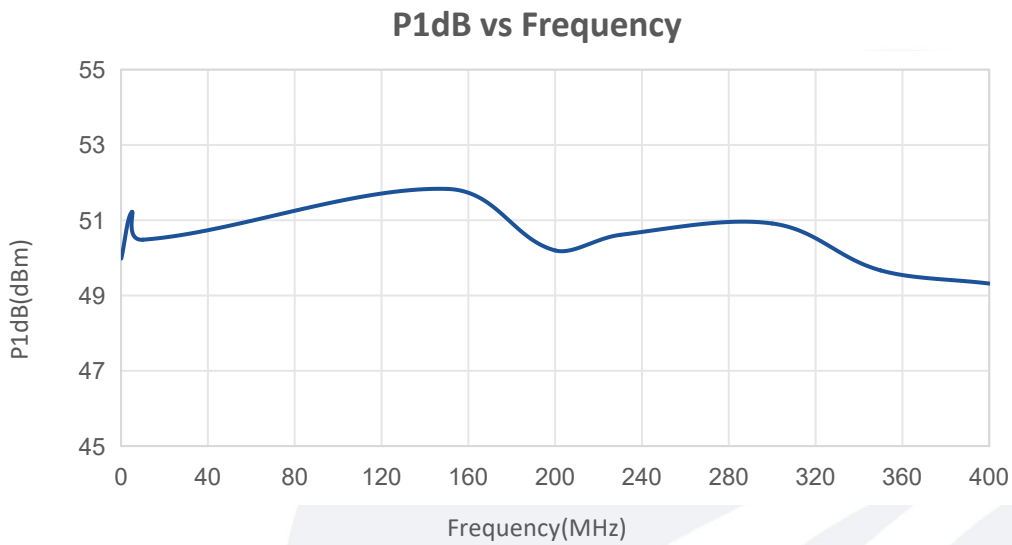
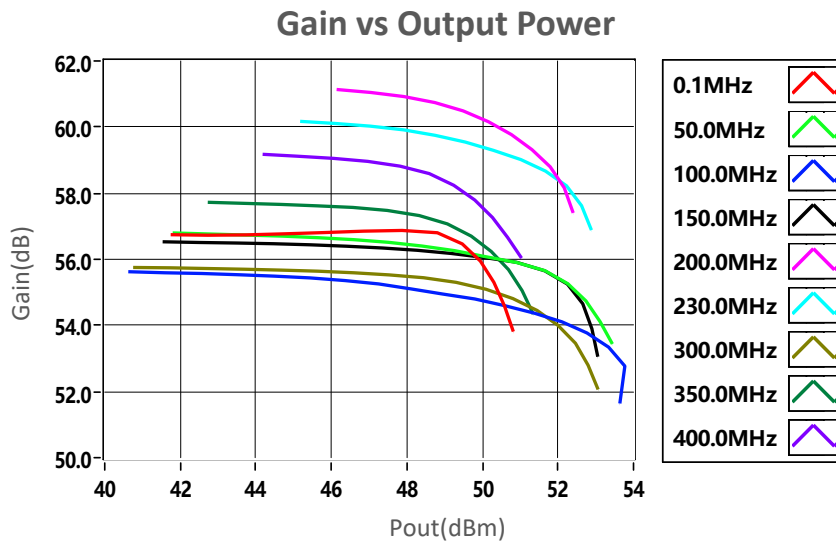
标准型号 Base Number	描述 Description	版本号 Revision
TLPA100K400M-52-52	Power amplifier 100KHz-400MHz, Gain:52dB,Psat:52dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA100K400M-52-52-HS	Power amplifier 100KHz-400MHz, Gain:52dB,Psat:52dBm,+28V DC,With Heatsink	Rev.1.1

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.

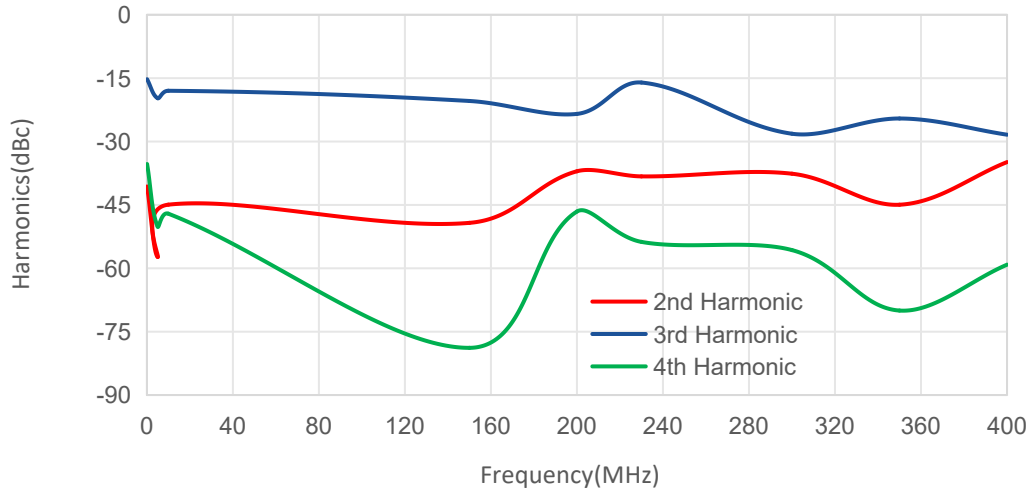
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典型曲线 Typical Performance Data:

Harmonics vs Frequency



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