泰莱微波 Talent Microwave

Suzhou Talent Microwave,Inc
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Power Amplifier

50-500MHz /40dB Gain/33 dBm Psat Model: TLPA50M500M-40-33

TLPA50M500M-40-33 is a power amplifier with a typical small signal gain of 40 dB and a nominal Psat of 33 dBm across the frequency range of 50 to 500 MHz. The DC power requirement for the amplifier is +15 VDC/0.8 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Wide Band: 50-500MHz
- Gain: 42dB Typ
- Output Power Psat: 34dBm 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		50-500		MHz
小信号增益 Small Signal Gain	40	42		dB
增益平坦度 Gain Flatness		±2	±3	dB
噪声系数 Noise Figure		4	5	dB
线性输出功率 Output P1dB	33	34		dBm
饱和输出功率 Output Psat	34	35		dBm
输入驻波 Input VSWR		1.5	2.0	:1
输出驻波 Output VSWR				:1
直流电压 DC Voltage		15	16	V DC
静态电流 I(q)		0.8		A
饱和电流I(psat)		0.85	0.9	A
阻抗 Impedance		50		Ohms

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机械特性 Mechanical Specifications:

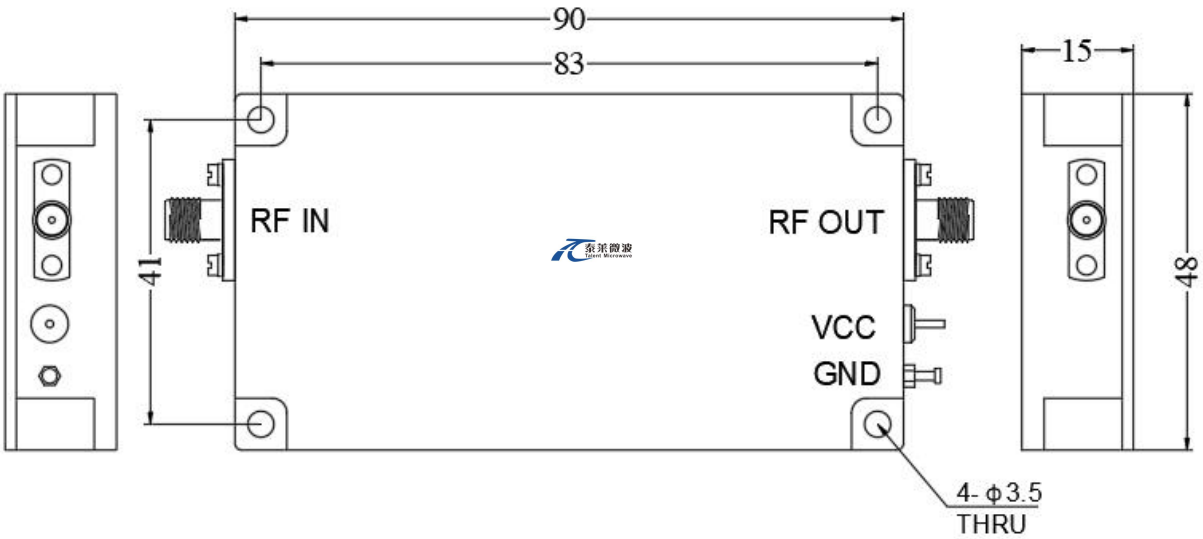
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	90X48X15	mm
重量 Weight	150	g

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+18 V
输入功率 RF Input Power	0dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



***Heat Sink Required During Operation



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

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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*	-45		+85	℃
存储温度 Non-operating Temperature*	-55		+125	℃
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			

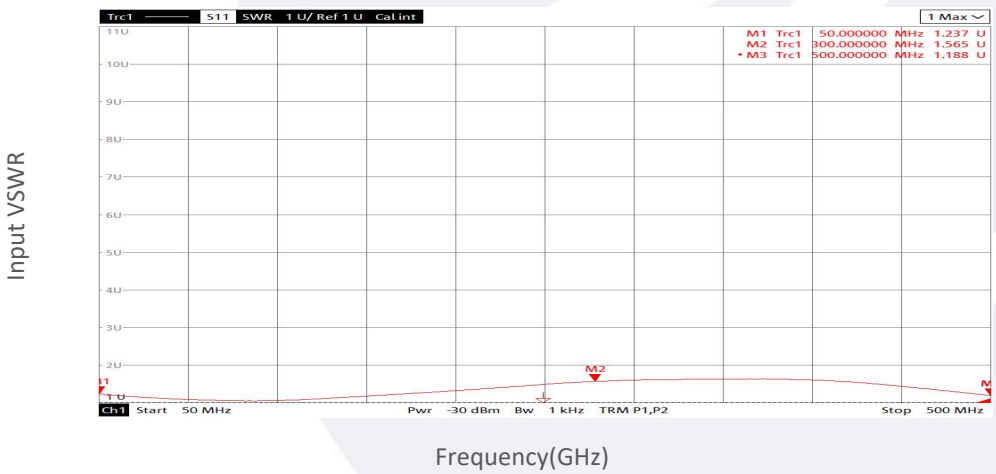
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

标准型号 Base Number	描述 Desciption	版本号 Revision
TLPA50M500M-40-33	Power amplifier 50-500MHz,Gain:40dB,Psat:33dBm, +15V DC,Without Heatsink	Rev.1.0
TLPA50M500M-40-33-HS	Power amplifier 50-500MHz,Gain:40dB,Psat:33dBm, +15V DC,With Heatsink	Rev.1.0

典型曲线 Typical Performance Data:

Input VSWR vs Frequency

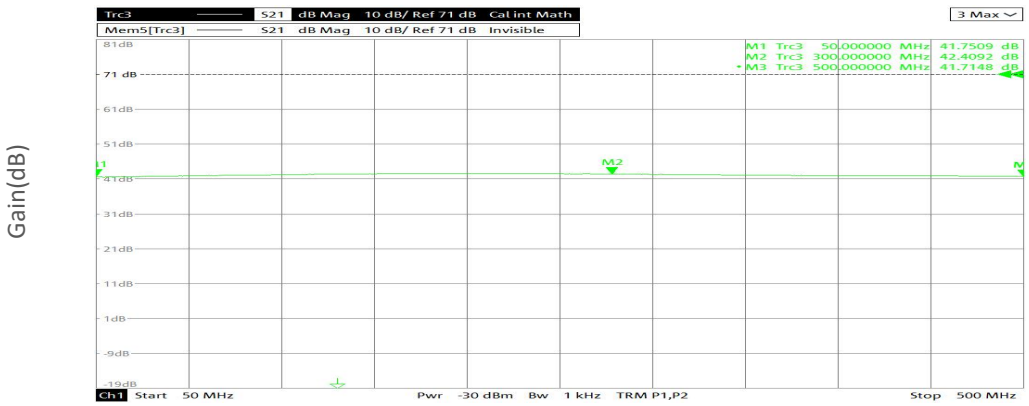


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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典型曲线 Typical Performance Data:

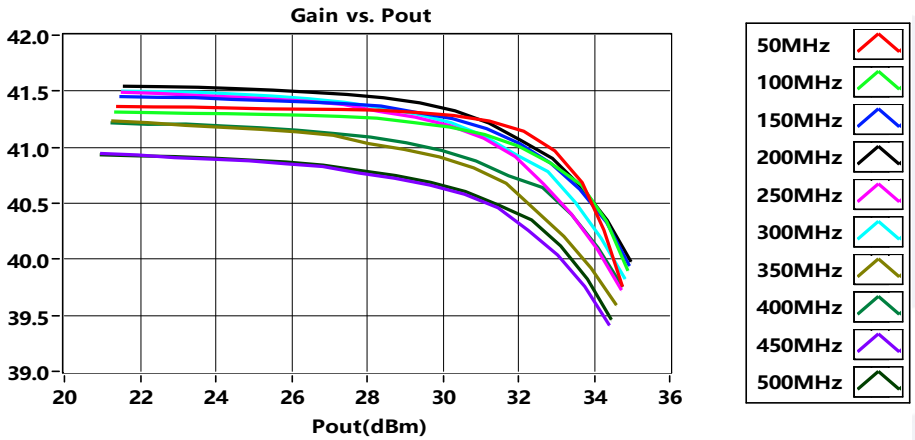
Small Signal Gain vs Frequency



Gain(dB)

Frequency(GHz)

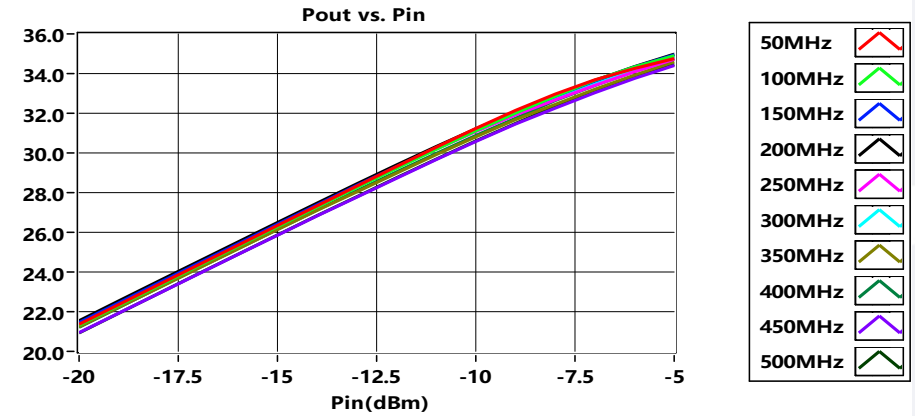
Gain vs Output Power



Gain(dB)

Pout(dBm)

PndB vs Frequency



P1dB&P3dB&P5dB(dBm)

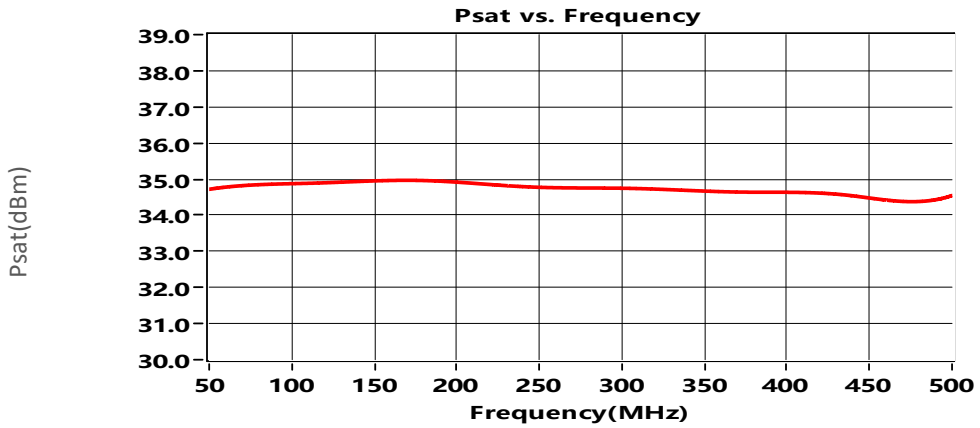
Frequency(MHz)

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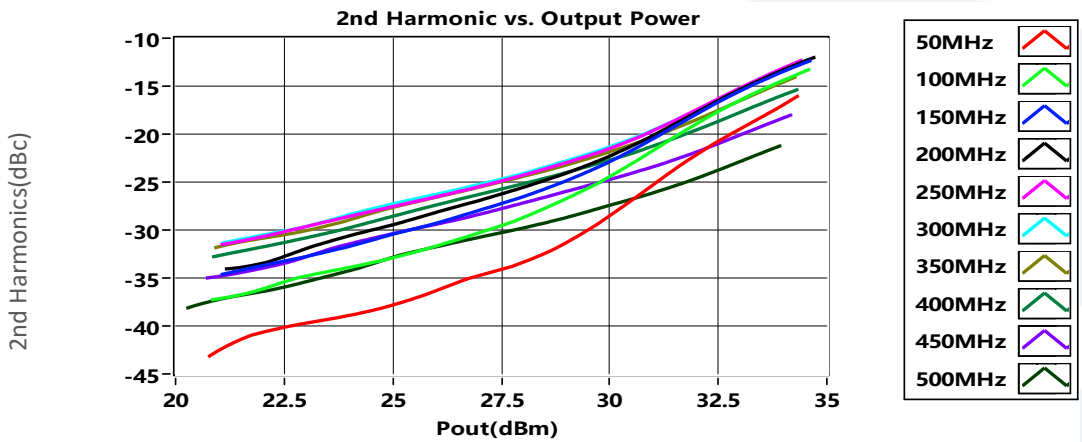
典型曲线 Typical Performance Data:

Psat vs Frequency



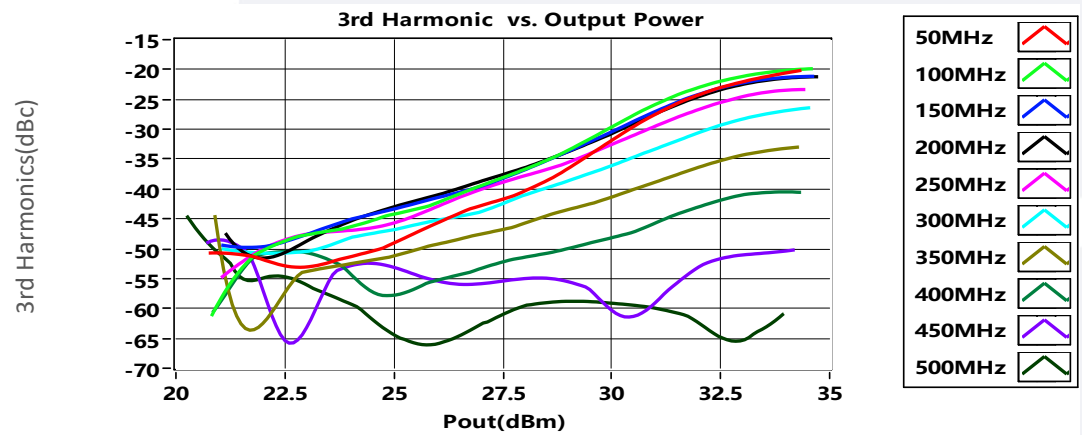
Frequency(MHz)

2nd Harmonics vs Output Power



Pout(dBm)

3rd Harmonics vs Output Power

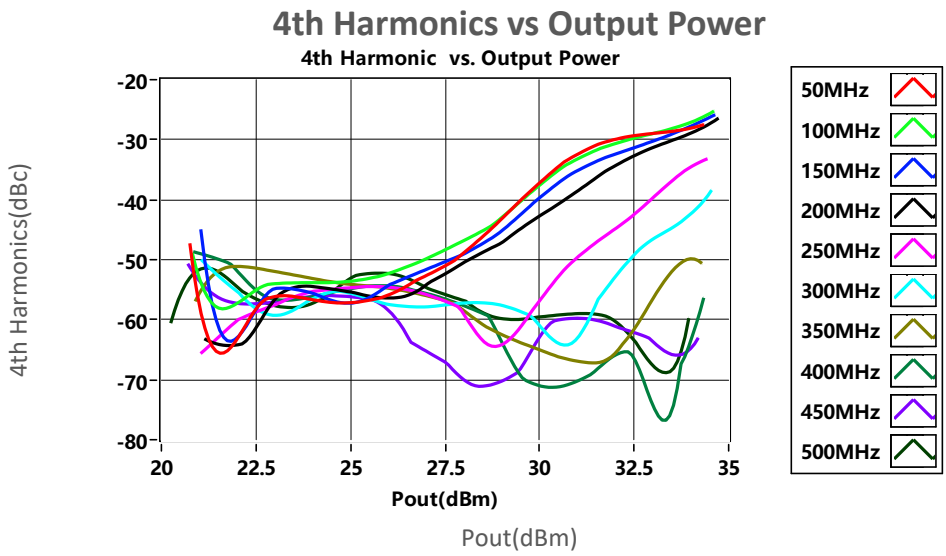


Pout(dBm)

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