

Power Amplifier

50-500MHz/50dB Gain/33dBm P1dB

Model: TLP50M500M-50-33

TLP50M500M-50-33 is a power amplifier with a minimum small signal gain of 50 dB and a nominal Psat of 35 dBm across the frequency range of 50 to 500 MHz. The DC power requirement for the amplifier is +15 VDC/1 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 50-500MHz
- Gain: 50dB Min
- Output Power Psat: 35dBm 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	50	52		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
直流电压 DC Voltage		+15		V DC
直流电流 DC Supply Current		1		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/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	90*48*15	mm
重量 Weight	150	g

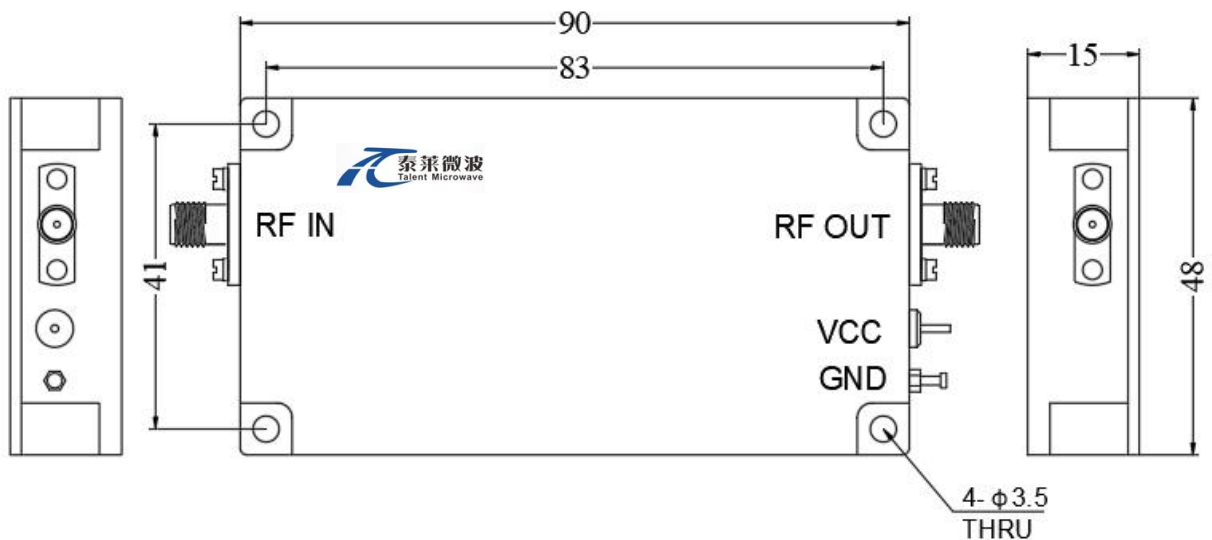
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+18 V
输入功率 RF Input Power	-15 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.

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+60	°C
存储温度 Non-operating Temperature*	-50		+70	°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			

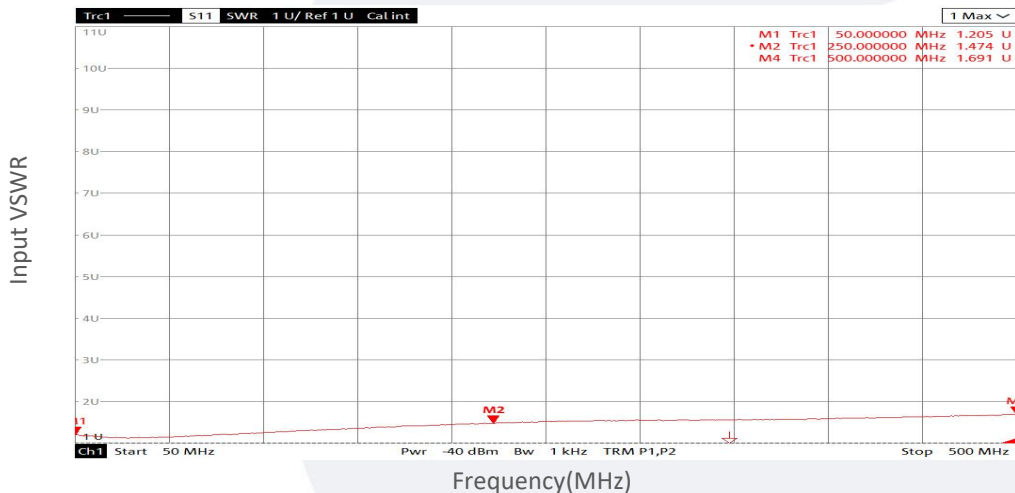
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA50M500M-50-33	Power amplifier 50-500MHz, Gain:50dB,Psat:35dBm,+15V DC,Without Heatsink	Rev.1.0
TLPA50M500M-50-33-HS	Power amplifier 50-500MHz, Gain:50dB,Psat:35dBm,+15V DC,With Heatsink	Rev.1.0

典型曲线 Typical Performance Data:

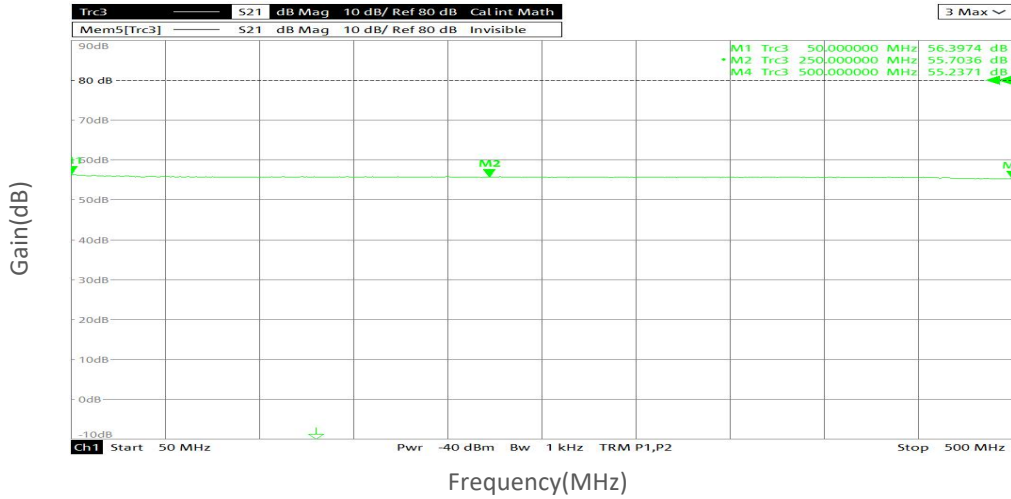
Input VSWR vs Frequency



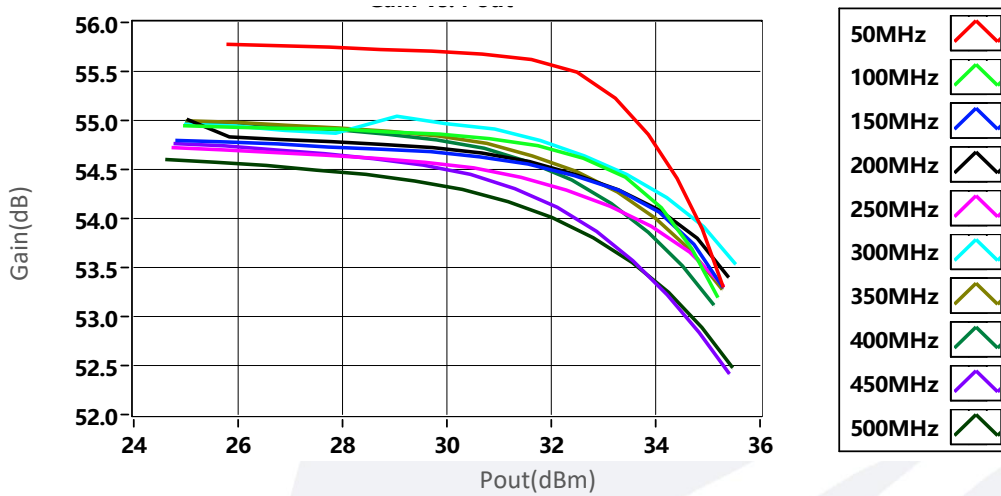
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

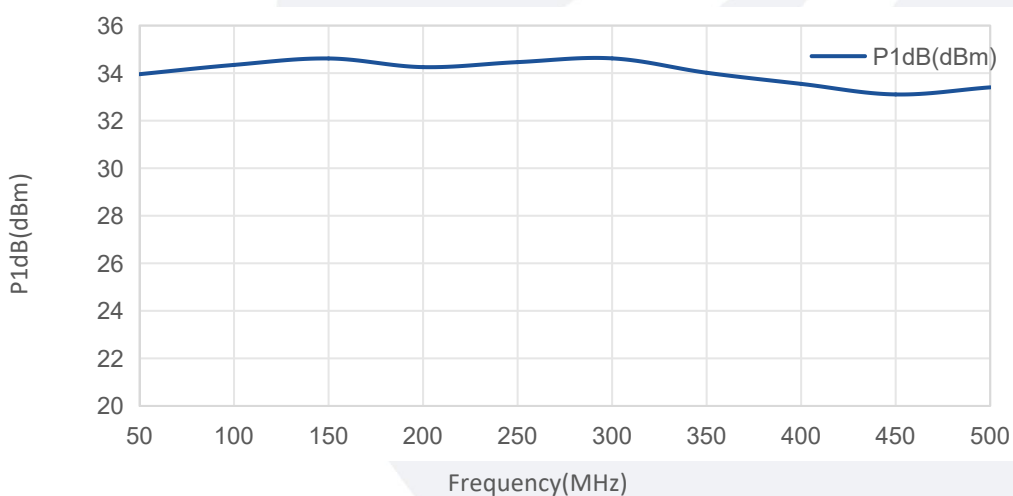
Gain vs Frequency



Gain vs Output Power



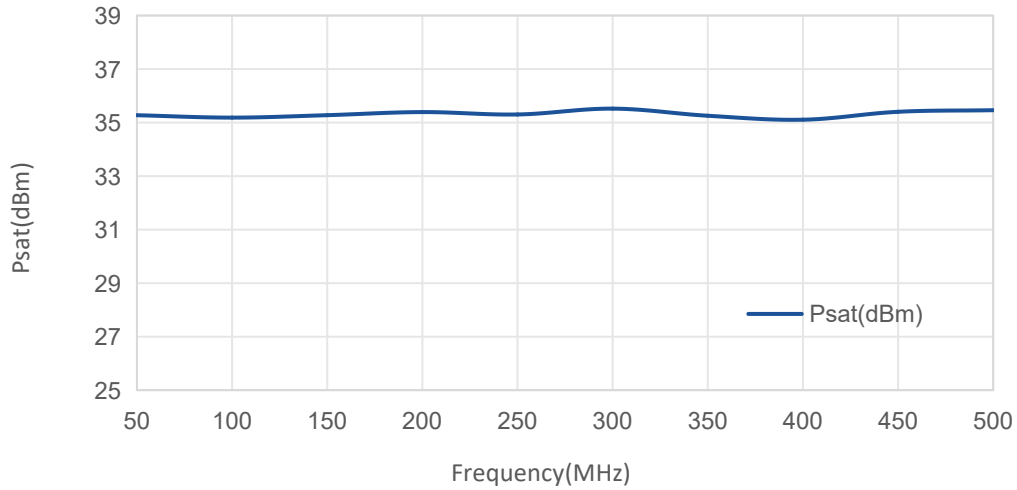
P1dB vs Frequency



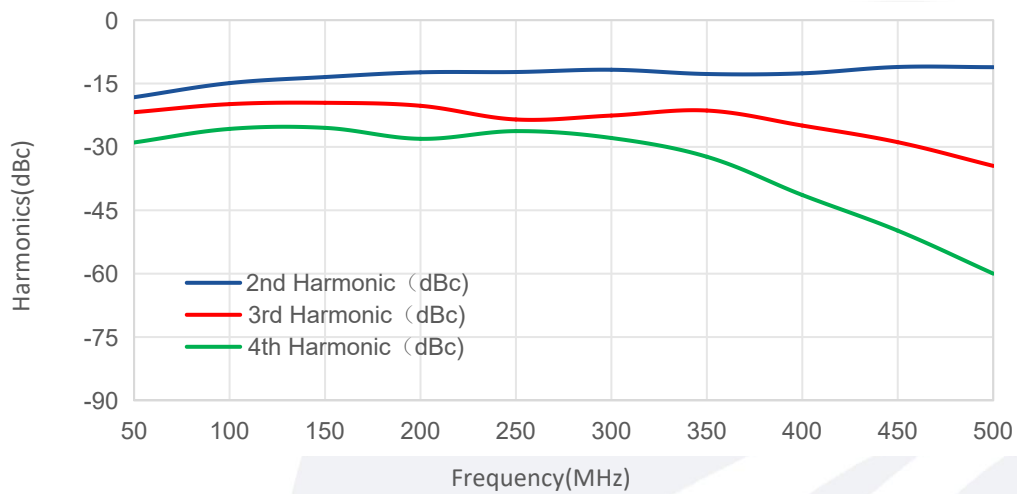
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典型曲线 Typical Performance Data:

Psat vs Frequency



Harmonics vs Output Power



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