Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Power Amplifier

10MHz-1GHz /50dB Gain/47 dBm Psat

Model: TLPA10M1G-47-47

TLPA10M1G-47-47 is a power amplifier with a typical small signal gain of 50 dB and a nominal Psat of 47 dBm across the frequency range of 10MHz to 1GHz. The DC power requirement for the amplifier is +28 VDC/12 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 10MHz-1GHz
- Gain: 50dB Typ
- Output Power Psat: 47dBm 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	10MHz		1GHz	
小信号增益 Small Signal Gain	47	50		dB
增益平坦度 Gain Flatness		±2	±3	dB
线性输出功率 Output P1dB		45		dBm
饱和输出功率 Output Psat	46	47		dBm
谐波 Harmonic@Pout=47dBm		-10		dBc
输入驻波 Input VSWR		1.5	2	:1
直流电压 DC Voltage		+28	+30	V DC
直流电流 DC Supply Current		1	12	A
阻抗 Impedance	50			Ohms

*Performance may degrade below 300 MHz. Please refer to below typical test plots

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

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	
直流供电接口 DC Power Supply Connector	D-SUB-9	
尺寸 Size	170*80*20	mm
重量 Weight	200	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.

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

直流供电连接器 DC Supply Interface(D-sub,9Pin Female):

引脚 Pin	名称 Name	功能 Function
1	+28V	Power supply positive +26.0-30.0VDC
2	+28V	Power supply positive +26.0-30.0VDC
3	+28V	Power supply positive +26.0-30.0VDC
4	GND	Power supply negative
5	GND	Power supply negative
6	NC	NC
7	TEM	When the temperature of the power amplifier housingis greater than 70° C, the power amplifier isclosed and this pin will output a high level. Whenthe temperature of the power shell is reduced to 60℃,the power amplifier returns to normal operation, and this pin will output a low level.
8	NC	NC
9	EN	A high (or suspended) level turns on the power amplifier, and a low level turns it off

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.

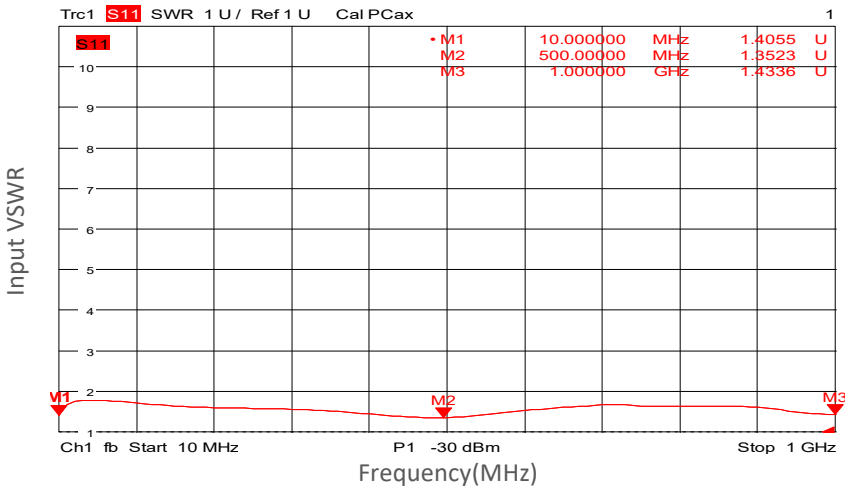
订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA10M1G-47-47	Power amplifier 10MHz-1GHz, Gain:50dB,Psat:47dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA10M1G-47-47-HS	Power amplifier 10MHz-1GHz, Gain:50dB,Psat:47dBm,+28V DC,,With Heatsink	Rev.1.1

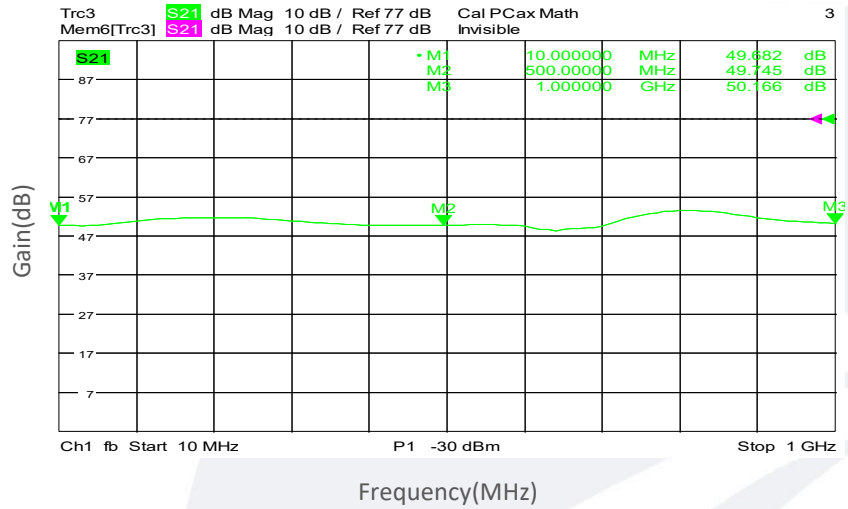
Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

典型曲线 Typical Performance Data:

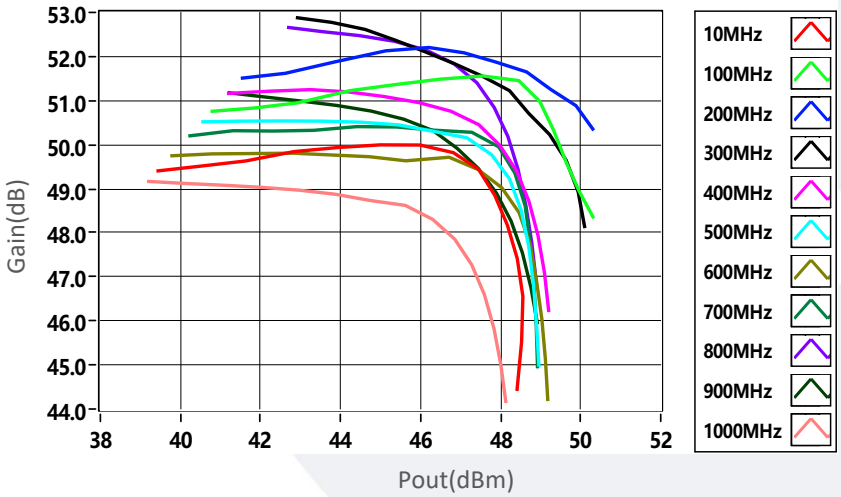
Input VSWR vs Frequency



Small Signal Gain vs Frequency



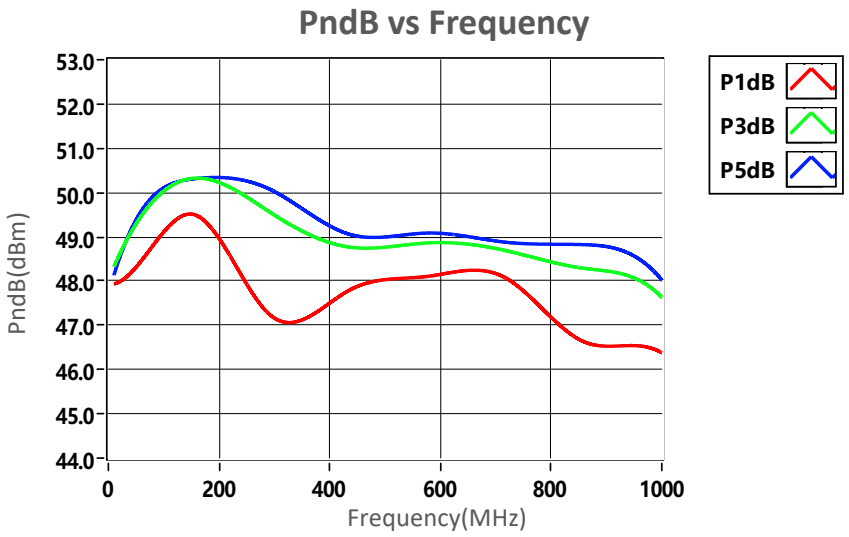
Gain vs Output Power

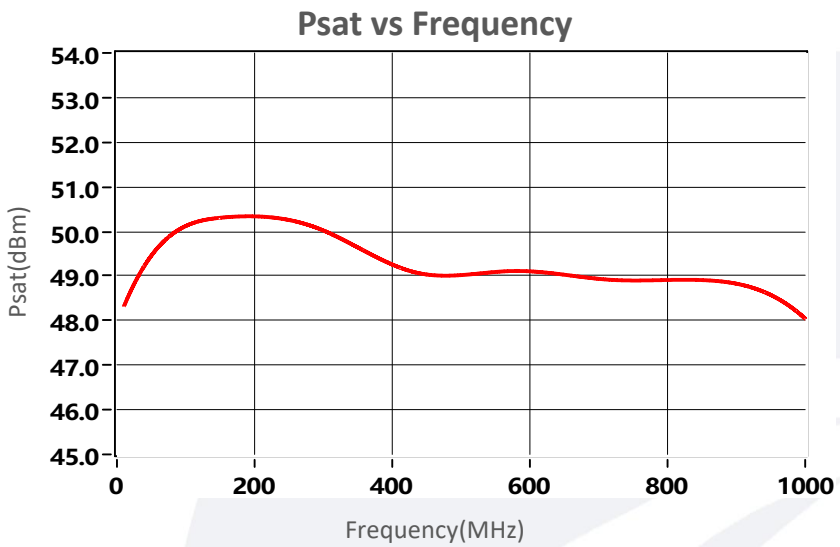


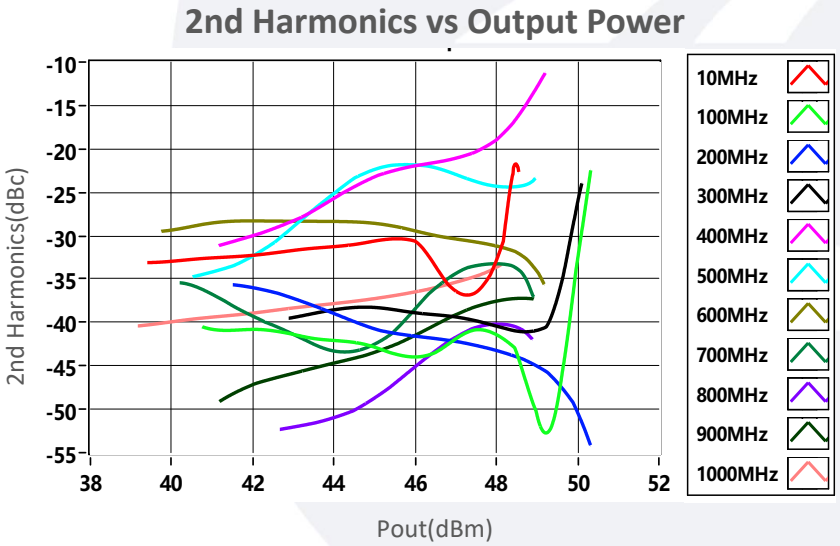
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

典型曲线 Typical Performance Data:



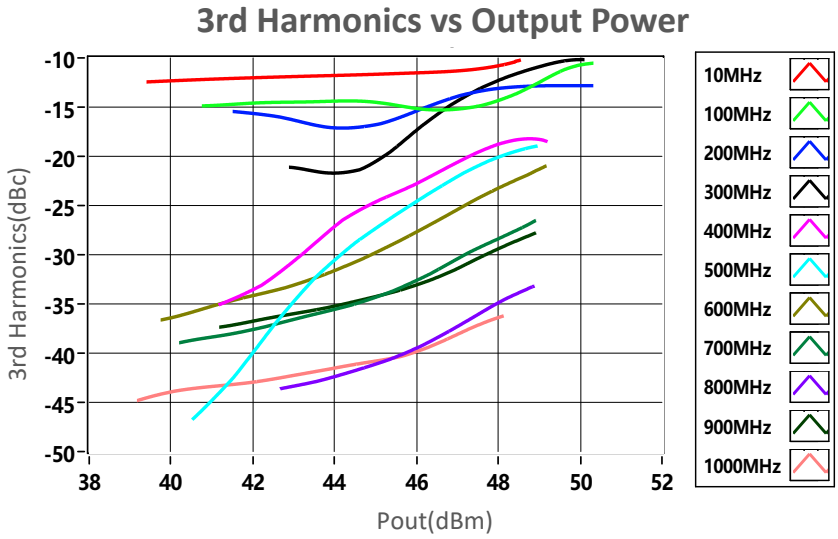




Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

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.