

Power Amplifier

10MHz-1GHz /47dB 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 0.01 to 1 GHz. The DC power requirement for the amplifier is +28 VDC/1 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band: 0.01-1GHz
- 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	0.01-1			GHz
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

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	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

外形图 Outline Drawing:

Unit:mm



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



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

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

引脚 Pin	标识 Identification	类型 Type	功能详细说明 Function specification
1	+28V	输入	供电正极 +26.0-30.0VDC
2	+28V	输入	供电正极 +26.0-30.0VDC
3	+28V	输入	供电正极 +26.0-30.0VDC
4	GND	输入	供电负极
5	GND	输入	供电负极
6	NC		没有连接
7	TEM	输出	功放壳体温度大于70℃时，功放关闭，此引脚将输出高电平。功放壳体温度降低到60℃时，功放恢复正常工作，此引脚将输出低电平。
8	NC		没有连接
9	EN	输入	高电平5V（或悬空）打开功放，低电平关闭功放

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			

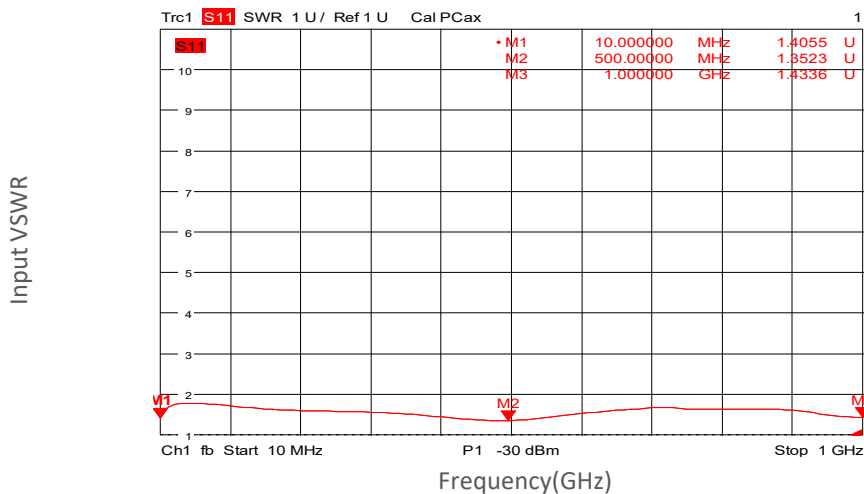
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

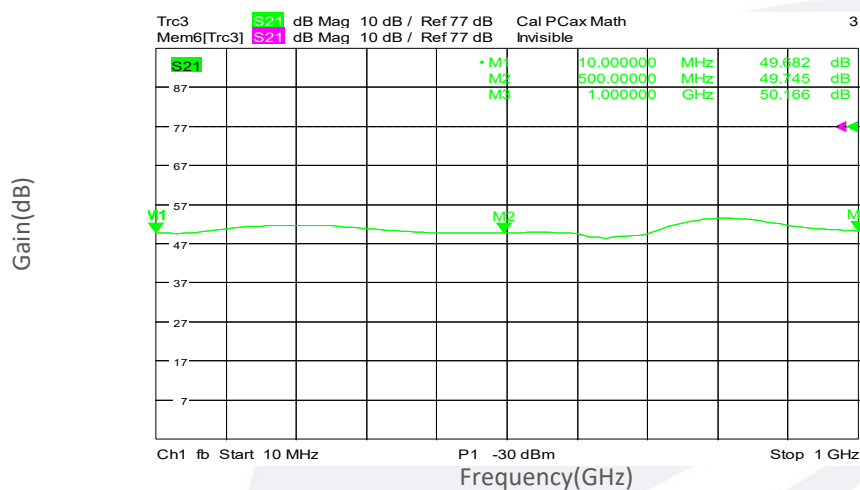
标准型号 Base Number	描述 Description	版本号 Revision
TLPA10M1G-47-47	Power amplifier 0.01-1GHz,Gain:50dB,Psat:47dBm, +28V DC,Without Heatsink	Rev.1.1
TLPA10M1G-47-47-HS	Power amplifier 0.01-1GHz,Gain:50dB,Psat:47dBm, +28V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

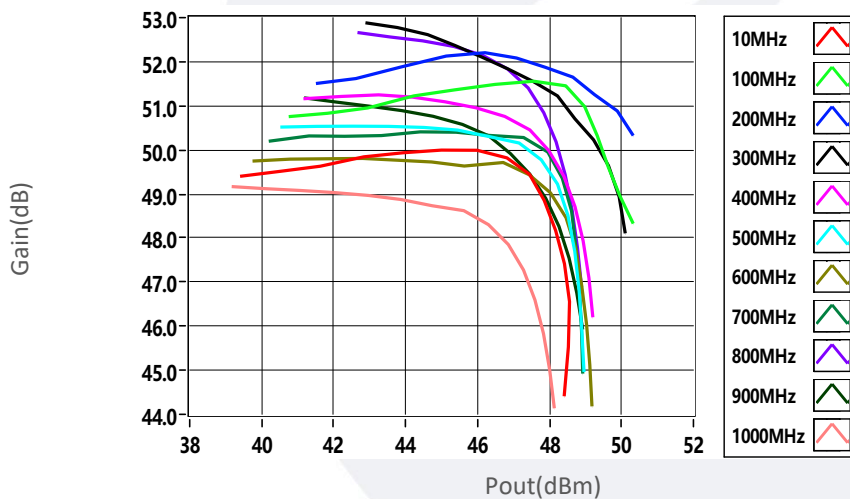
Input VSWR vs Frequency



Small Signal Gain vs Frequency

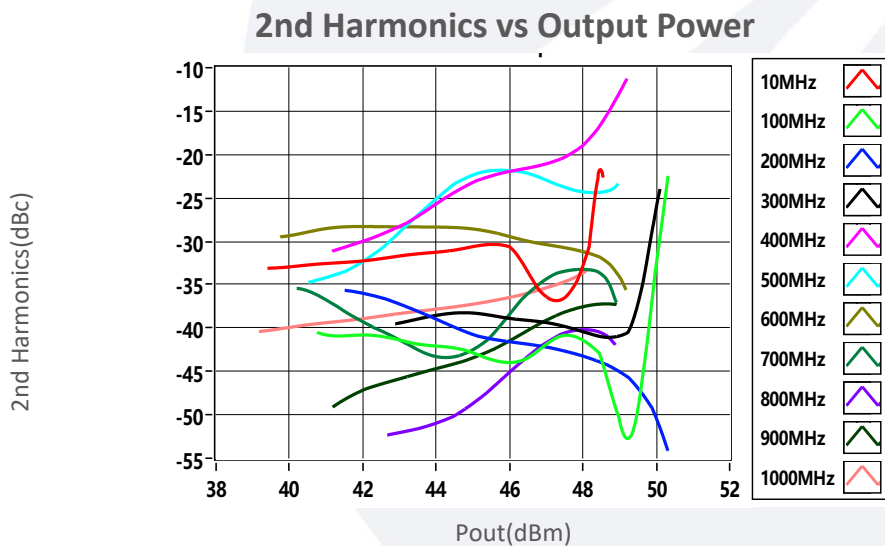
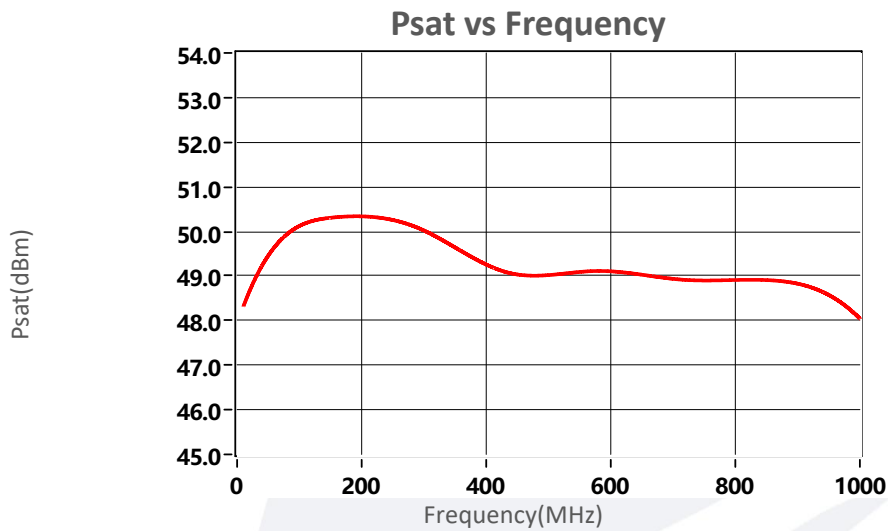
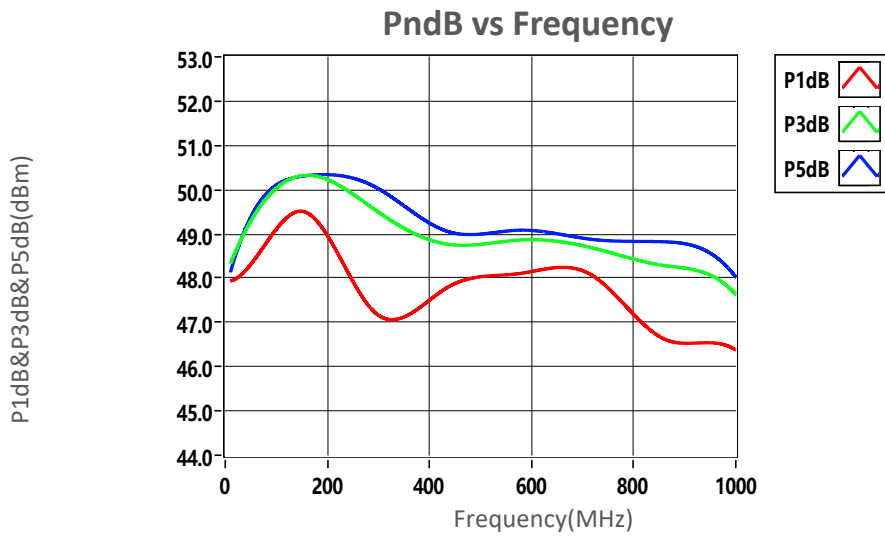


Gain vs Output Power



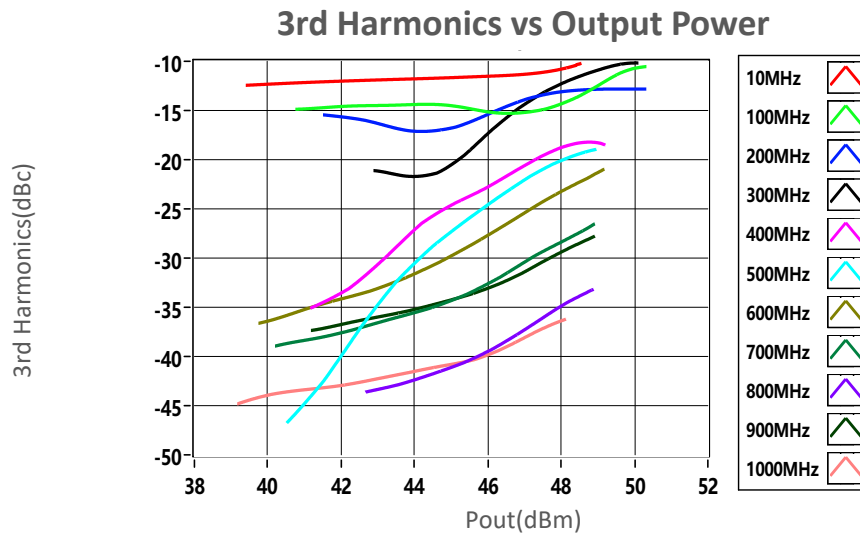
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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