泰莱微波 Talent Microwave

Suzhou Talent Microwave,Inc
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Power Amplifier

0.1-6GHz /30dB Gain/30 dBm Psat

Model: TLPA100M6G-30-30

TLPA100M6G-30-30 is a power amplifier with a typical small signal gain of 30 dB and a Psat of 30 dBm across the frequency range of 0.1 to 6 GHz. The DC power requirement for the amplifier is +15 VDC/0.7 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.1-6GHz
- Gain: 30dB Typ
- Output Power Psat: 30dBm Min
- 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	0.1		6	GHz
小信号增益 Small Signal Gain	27	30		dB
增益平坦度 Gain Flatness		±3	±4	dB
线性输出功率 Output P1dB	30	31		dBm
饱和输出功率 Output Psat	30			dBm
谐波 Harmonics		-25	-20	dBc
输入驻波 Input VSWR		1.5	2	:1
直流电压 DC Voltage		15	16	V DC
直流电流 DC Supply Current		0.7	1	A
阻抗 Impedance	50			Ohms

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

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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	100*50*15	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	+16 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; Tolerance:±0.1mm



***Heat Sink Required During Operation

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

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温度环境 Environmental Conditions:

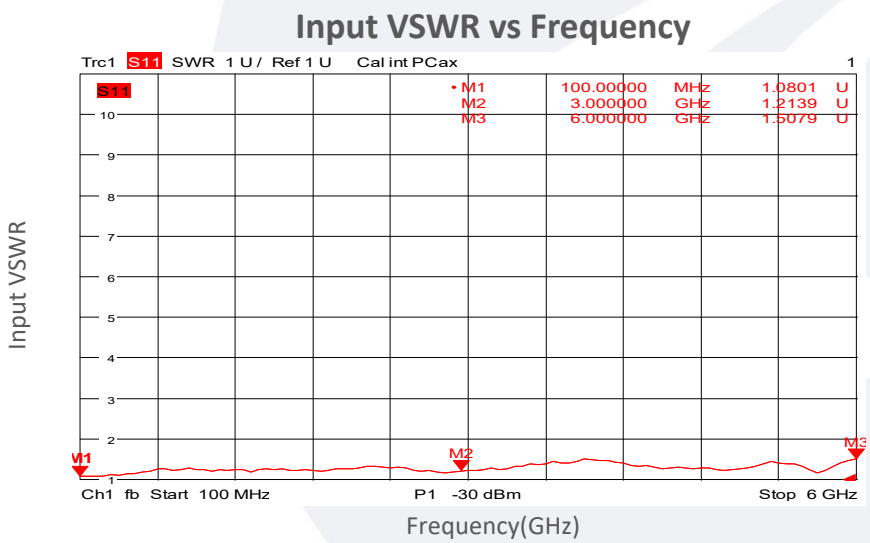
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+60	℃
存储温度 Non-operating Temperature*	-50		+70	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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
TLPA100M6G-30-30	Power amplifier 0.1-6GHz, Gain:30dB,Psat:30dBm,+15V DC,Without Heatsink	Rev.1.1
TLPA100M6G-30-30-HS	Power amplifier 0.1-6GHz, Gain:30dB,Psat:30dBm,+15V DC,With Heatsink	Rev.1.1

典型曲线 Typical Performance Data:

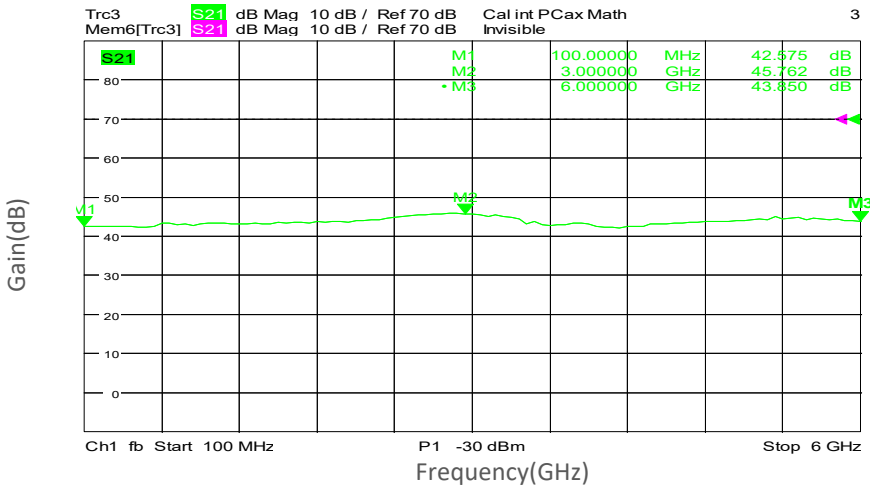


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

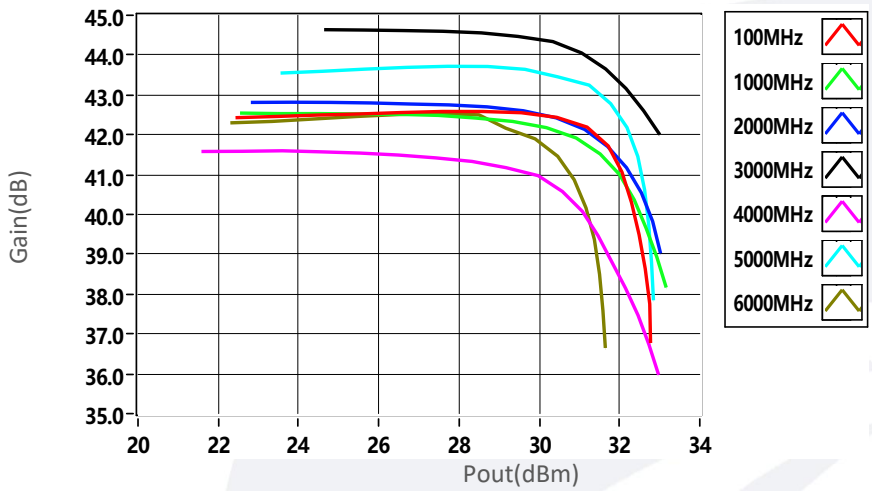
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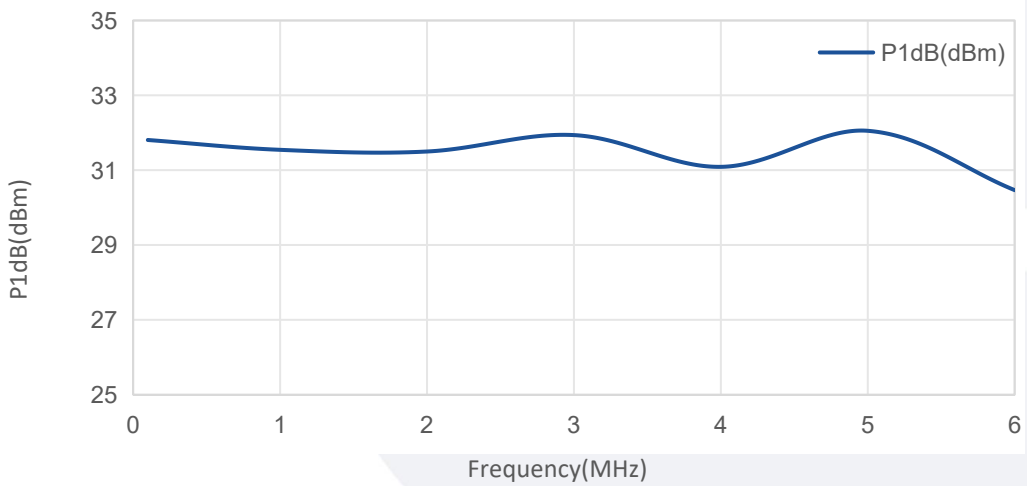
Small Signal Gain vs Frequency



Gain vs Output Power



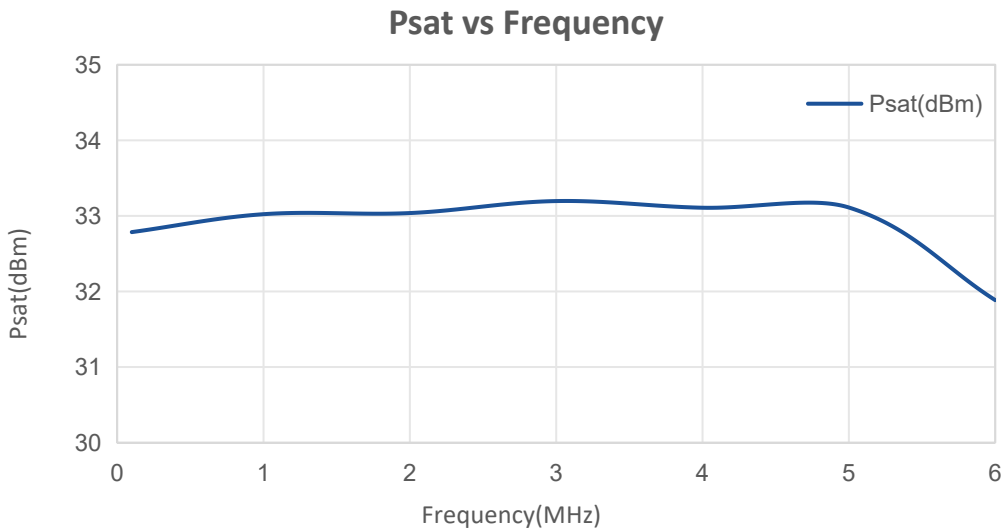
P1dB vs Frequency

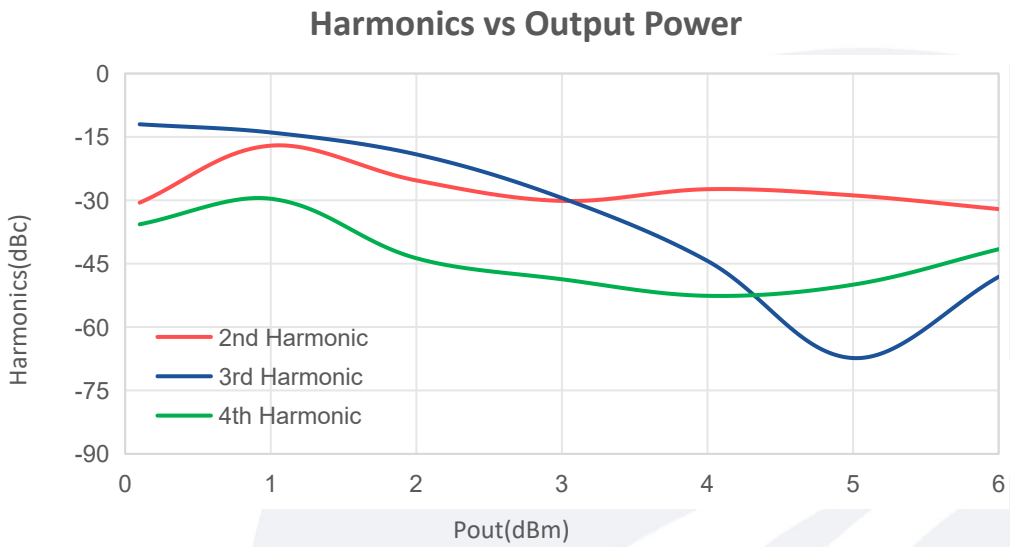


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