泰莱微波
Talent Microwave

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

Power Amplifier

0.1-20GHz /30dB Gain/30 dBm Psat

Model: TLPA0.1G20G-30-30

TLPA0.1G20G-30-30 is a power amplifier with a power gain of 30 dB and a nominal Psat of 30 dBm across the frequency range of 0.1 to 20 GHz. The DC power requirement for the amplifier is +24 VDC/0.55 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.1-20GHz
- Power Gain: 30dB Min
- Output Power Psat: 30dBm 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	0.1		20	GHz
功率增益 Power Gain	30			dB
小信号增益 Small Signal Gain@2-8GHz		35		dB
增益平坦度 Gain Flatness		±2		dB
线性输出功率 Output P1dB		28		dBm
饱和输出功率 Output Psat		30		dBm
噪声系数 Noise Figure		4		dB
杂散 Spurious		-60		dBc
谐波抑制 Harmonic		-10		dBc
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		2		:1
直流电压 DC Voltage		24		V DC
直流电流 DC Supply Current		550	800	mA
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	
尺寸 Size	38*58.5*12.5	mm
重量 Weight	200	g

绝对最大值 Absolute Maximum Ratings:

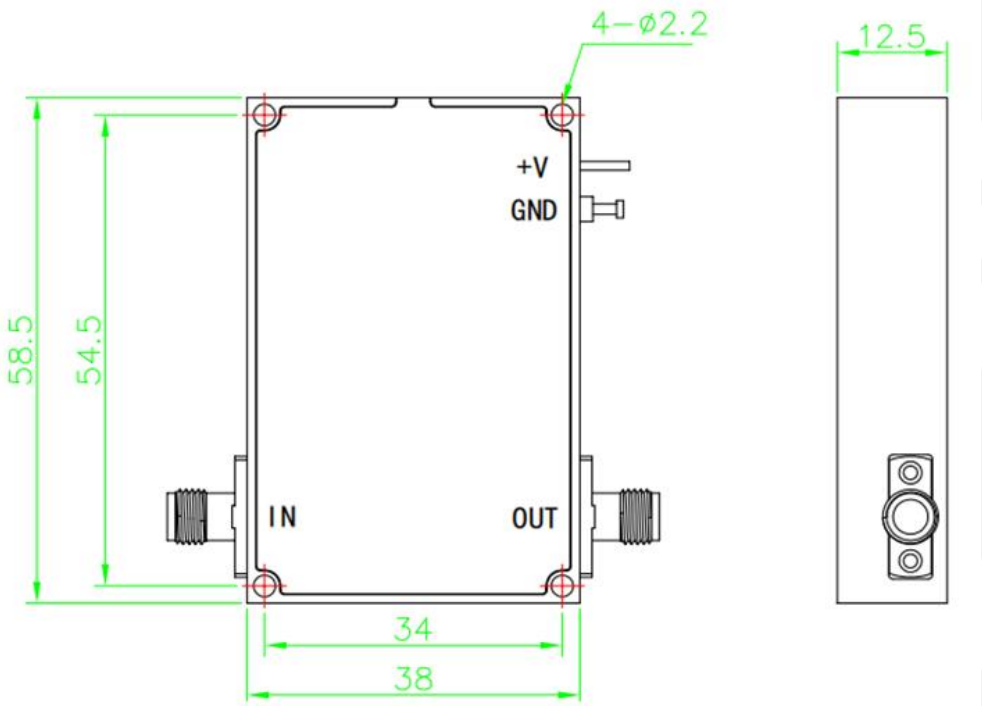
参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	TBD
输入功率 RF Input Power	0 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



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.

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温度环境 Environmental Conditions:

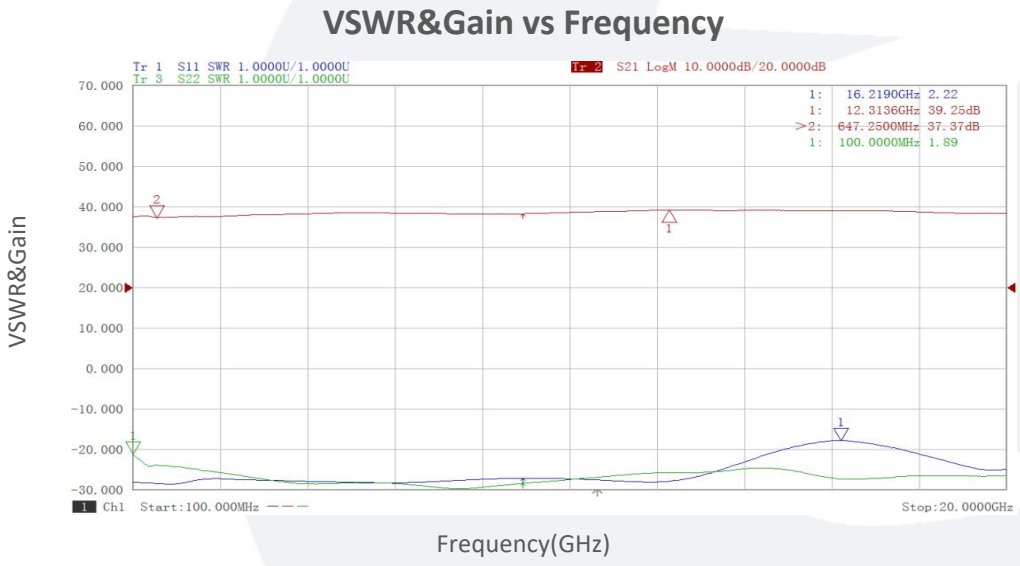
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+60	℃
存储温度 Non-operating Temperature*	-50		+70	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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
TLPA0.1G20G-30-30	Power amplifier 0.1-20GHz,Power Gain:30dB,Psat:30dBm, +24V DC,Without Heatsink	Rev.1.2
TLPA0.1G20G-30-30-HS	Power amplifier 0.1-20GHz,Power Gain:30dB,Psat:30dBm, +24V DC,With Heatsink	Rev.1.2

典型曲线 Typical Performance Data:

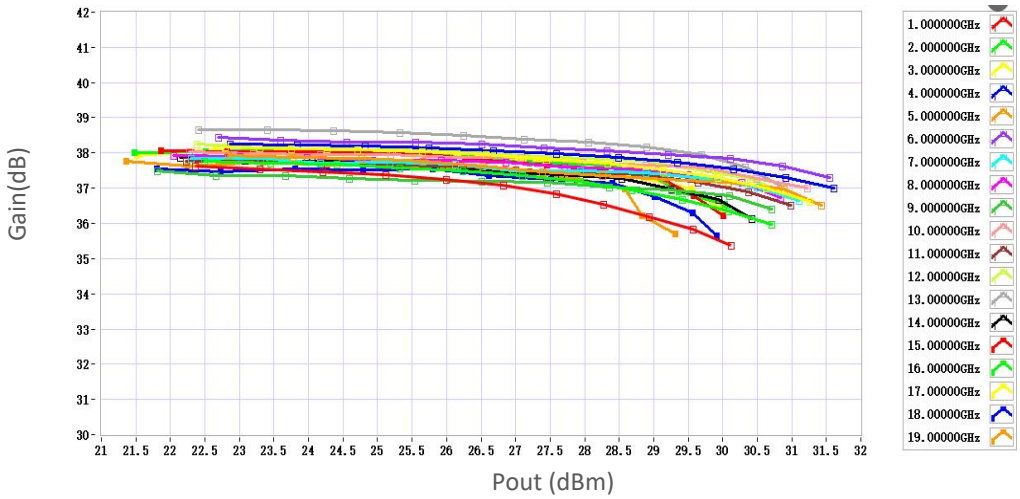


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

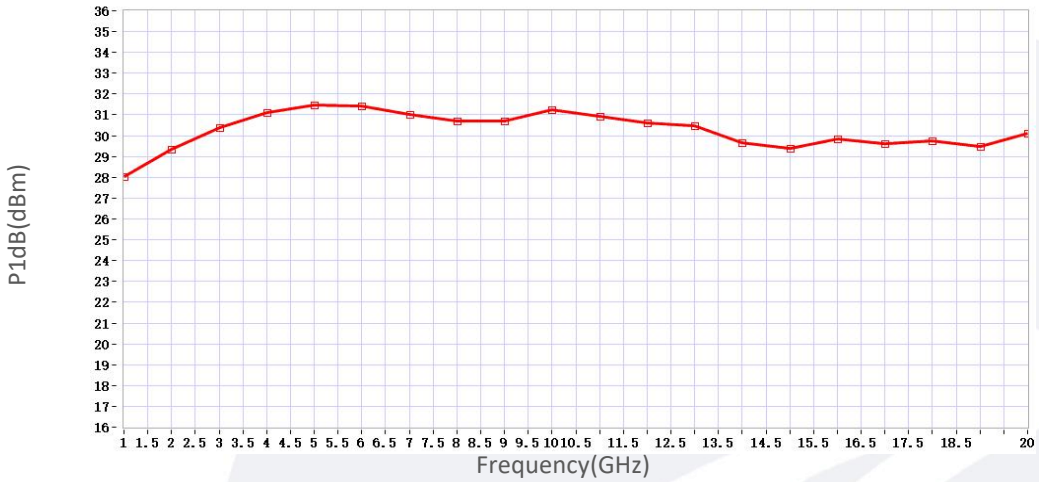
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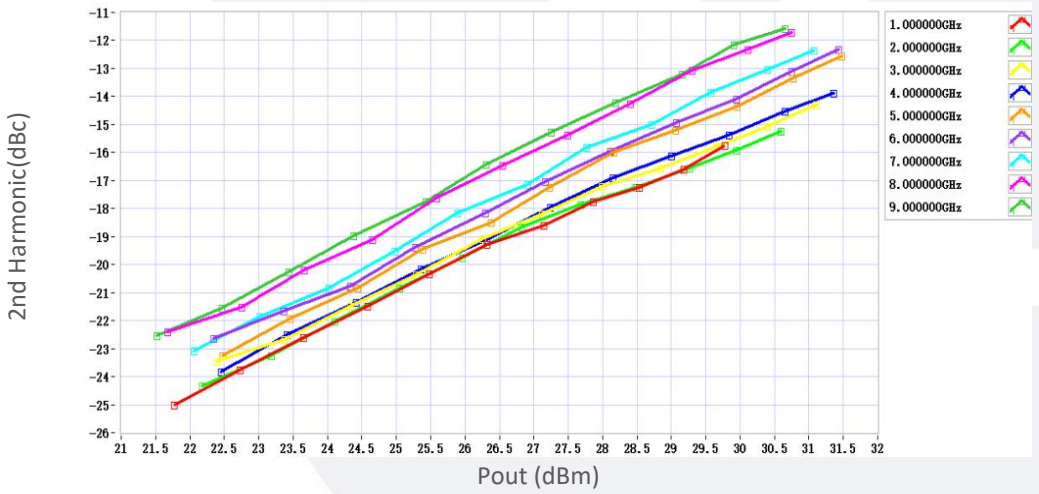
Gain vs Output Power



P1dB vs Frequency



2nd Harmonic vs Output Power

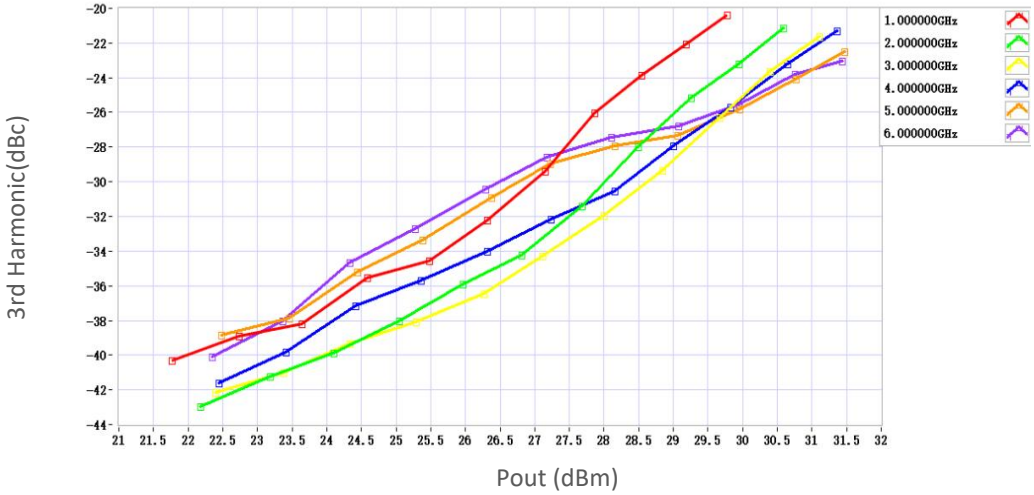


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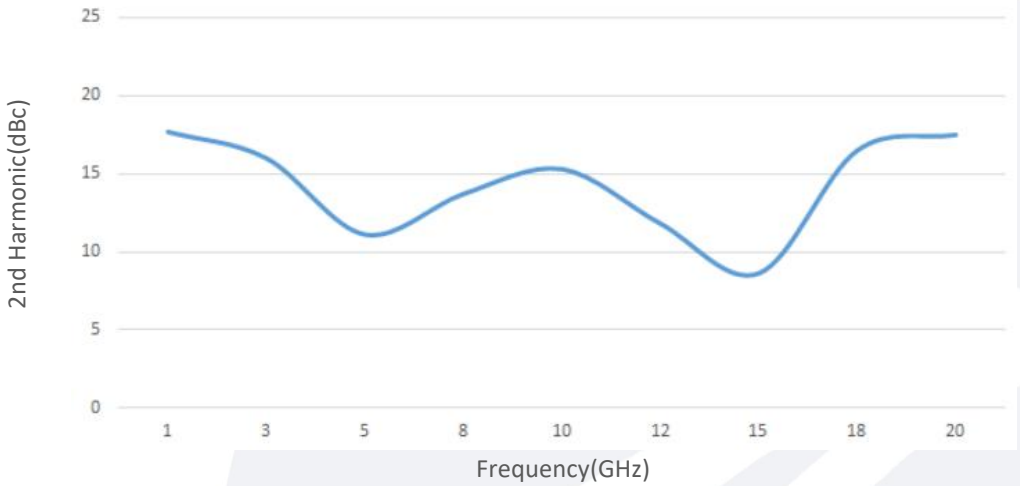
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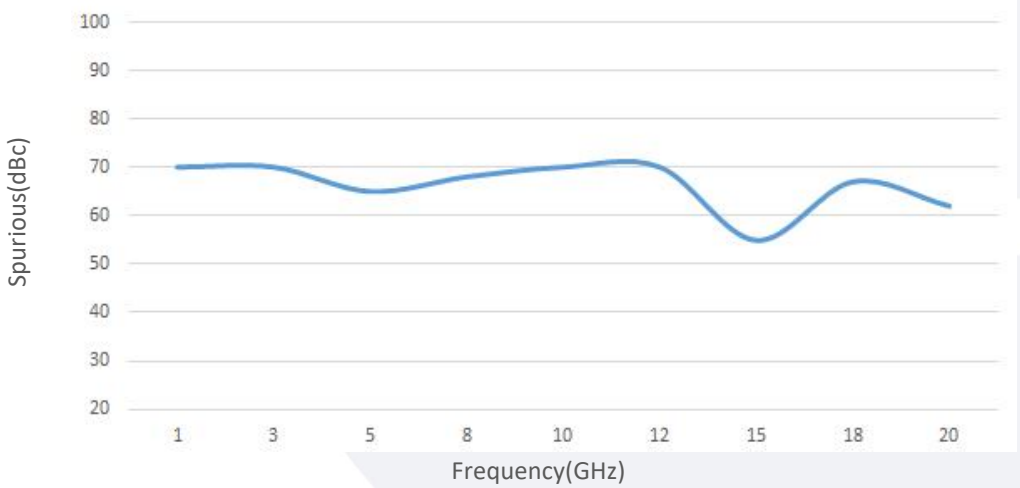
3rd Harmonic vs Output Power



2nd Harmonic vs Frequency@Pout=30dBm



Spurious vs Frequency@Pout=30dBm



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