泰莱微波
Talent Microwave

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

Power Amplifier

0.05-12GHz/30dB Gain/31dBm Psat

Model: TLPA0.05G12G-30-30

TLPA0.05G12G-33-30 is a power amplifier with a minimun small signal gain of 30 dB and a nominal Psat of 31 dBm across the frequency range of 0.05 to 12 GHz. The DC power requirement for the amplifier is +24 VDC/790 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.05-12GHz
- Gain: 30dB Min
- Output Power Psat: 31dBm 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	0.05		12	GHz
小信号增益 Small Signal Gain	30	33		dB
增益平坦度 Gain Flatness		±3		dB
线性输出功率 Output P1dB	30			dBm
饱和输出功率 Output Psat		31		dBm
二次谐波 Second Harmonic		-20		dBc
杂散 Spurious		-60		dBc
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		2		:1
噪声系数 Noise Figure		8		dB
直流电压 DC Voltage		+24		V DC
直流电流 DC Supply Current		790	1000	mA
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	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	35*52*12	mm
重量 Weight	50	g

绝对最大值 Absolute Maximum Ratings:

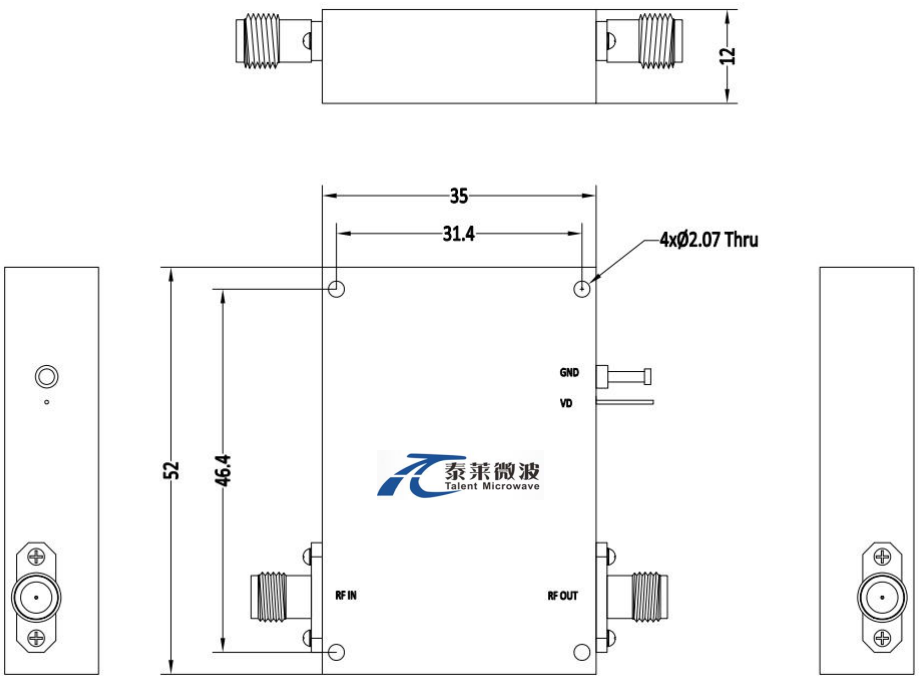
参数 Parameter	指标 Value
输入功率 RF Input Power	5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



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

温度环境 Environmental Conditions:

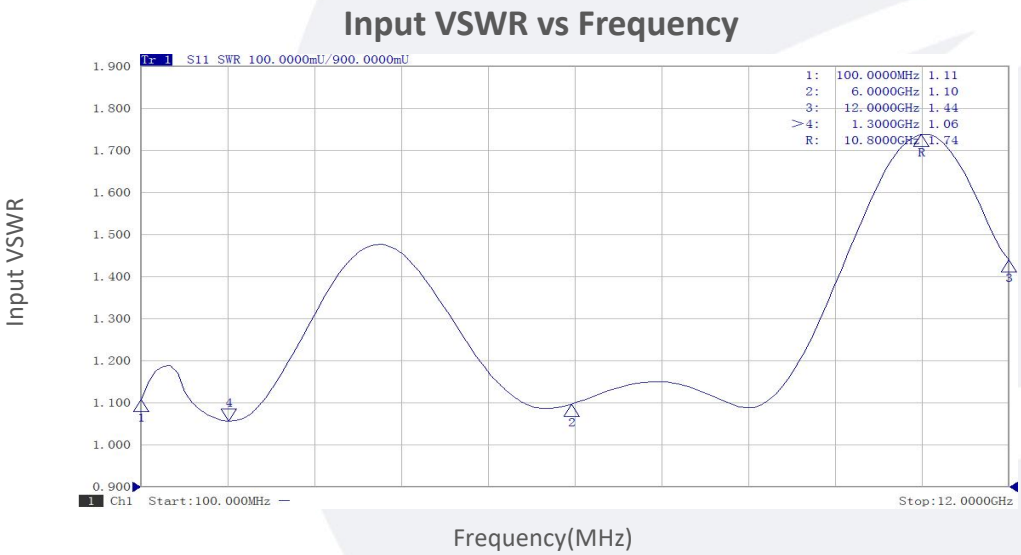
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+60	℃
存储温度 Non-operating Temperature*	-50		+70	℃
相对湿度 Relative humidity	100%RH at 35℃， 95%RH at 40℃			%
海拔 Altitude	50,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	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
TLPA0.05G12G-30-30	Power amplifier 0.05-12GHz, Gain:30dB,Psat:31dBm,+24VDC,Without Heatsink.	Rev.1.1
TLPA0.05G12G-30-30-HS	Power amplifier 0.05-12GHz, Gain:30dB,Psat:31dBm,+24VDC,With Heatsink.	Rev.1.1

典型曲线 Typical Performance Data:

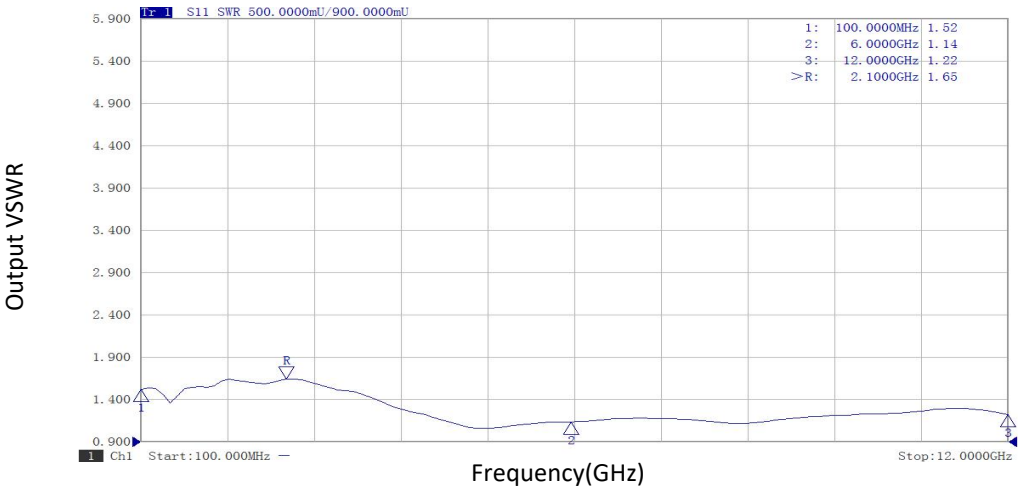


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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

典型曲线 Typical Performance Data:

Output VSWR vs Frequency



Output VSWR

Frequency(GHz)

Small Signal Gain vs Frequency



Gain(dB)

Frequency(GHz)

P1dB vs Frequency



P1dB(dBm)

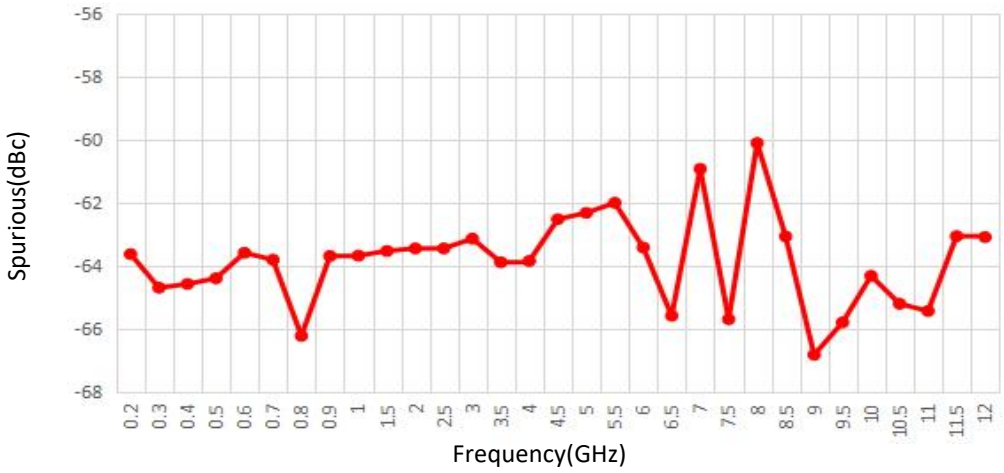
Frequency(GHz)

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.

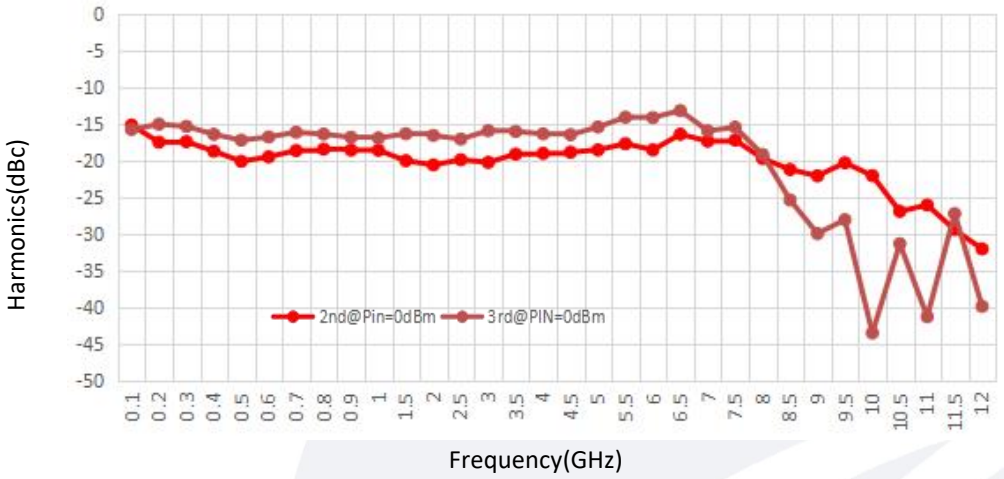
Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

典型曲线 Typical Performance Data:

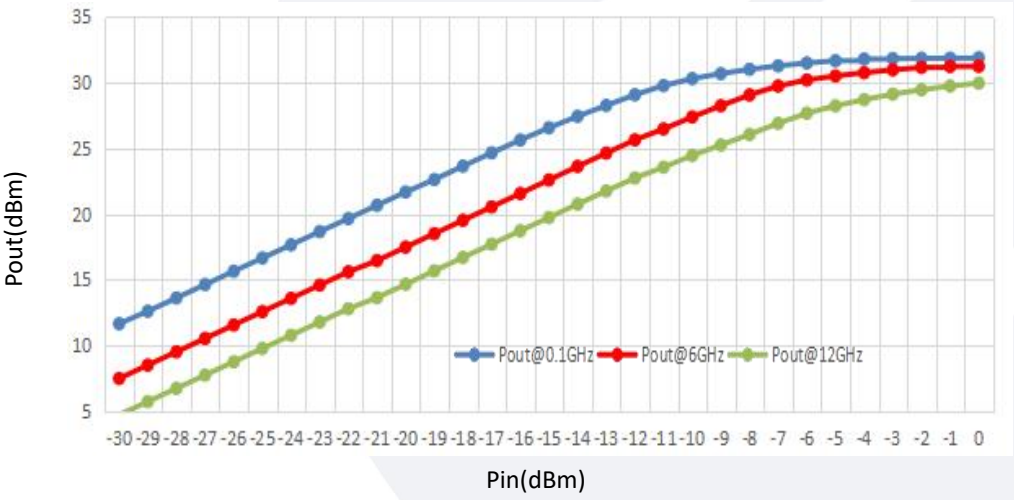
Spurious VS Frequency



Harmonics VS Frequency



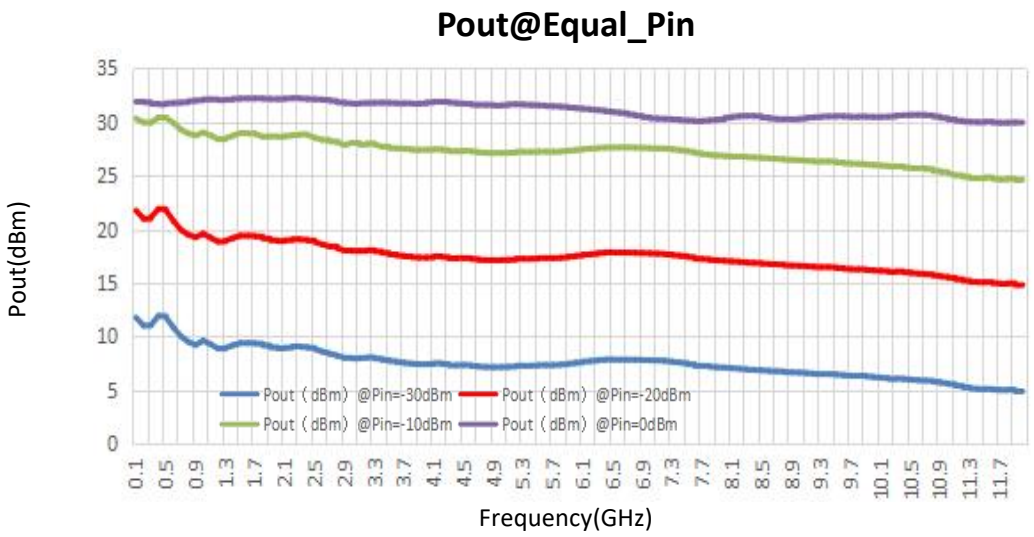
Pout@Pin



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.