泰莱微波 Talent Microwave

Suzhou Talent Microwave,Inc
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Power Amplifier

1-18GHz /40dB Gain/30 dBm Psat Model: TLPA1G18G-40-30

TLPA1G18G-40-30 is a power amplifier with a typical small signal gain of 40 dB and a nominal Psat of 30 dBm across the frequency range of 1 to 18 GHz. The DC power requirement for the amplifier is +18 VDC/800 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band: 1-18GHz
- Gain: 40dB Typ
- 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		1-18		GHz
小信号增益 Small Signal Gain	38	40		dB
增益平坦度 Gain Flatness		±2.5		dB
线性输出功率 Output P1dB	27			dBm
饱和输出功率 Output Psat		30		dBm
噪声系数 Noise Figure		4		dB
输入驻波 Input VSWR			2.2	:1
输出驻波 Output VSWR			2.2	:1
直流电压 DC Voltage		18	20	V DC
直流电流 DC Supply Current		800		mA
阻抗 Impedance		50		Ohms

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机械特性 Mechanical Specifications:

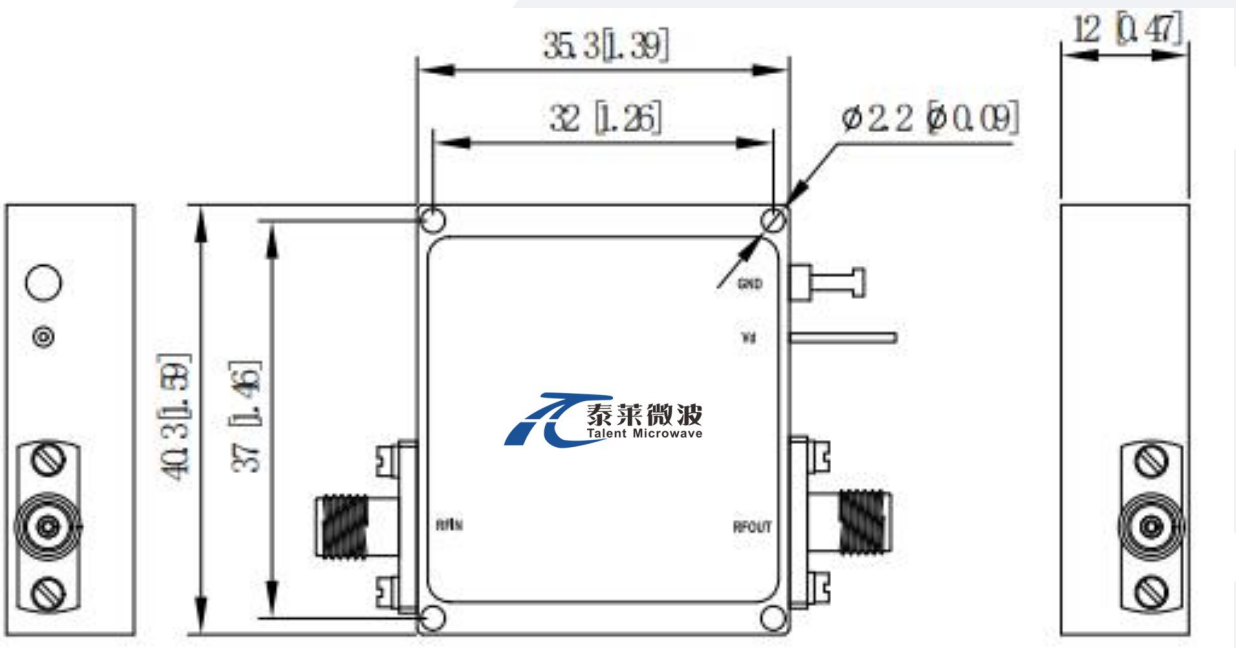
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	35.3*40.3*12	mm
重量 Weight	50	g

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+20 V
输入功率 RF Input Power	0 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



***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:

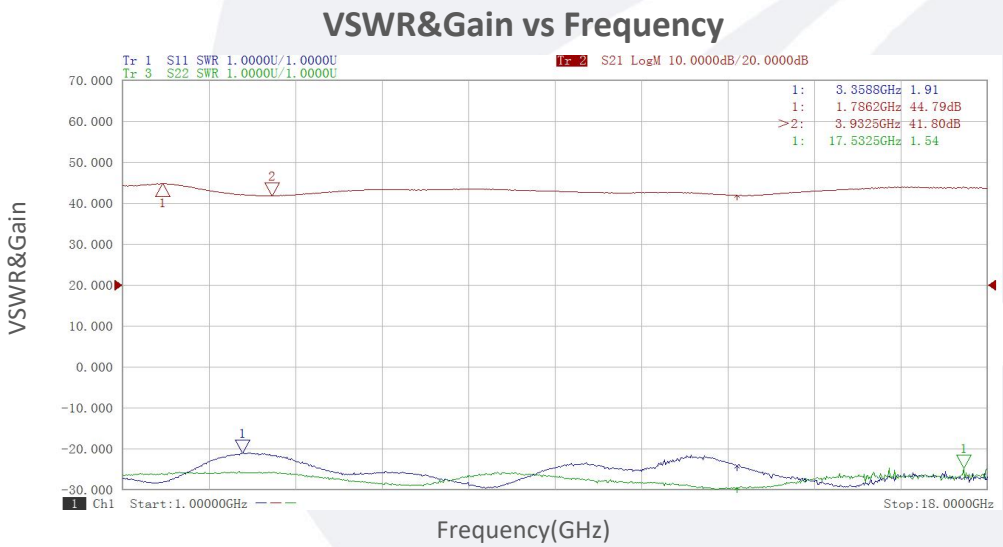
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+60	℃
存储温度 Non-operating Temperature*	-50		+70	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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 Desciption	版本号 Revision
TLPA1G18G-40-30	Power amplifier 1-18GHz,Gain:40dB,Psat:30dBm,+18V DC,Without Heatsink.	Rev.1.1
TLPA1G18G-40-30-HS	Power amplifier 1-18GHz,Gain:40dB,Psat:30dBm,+18V 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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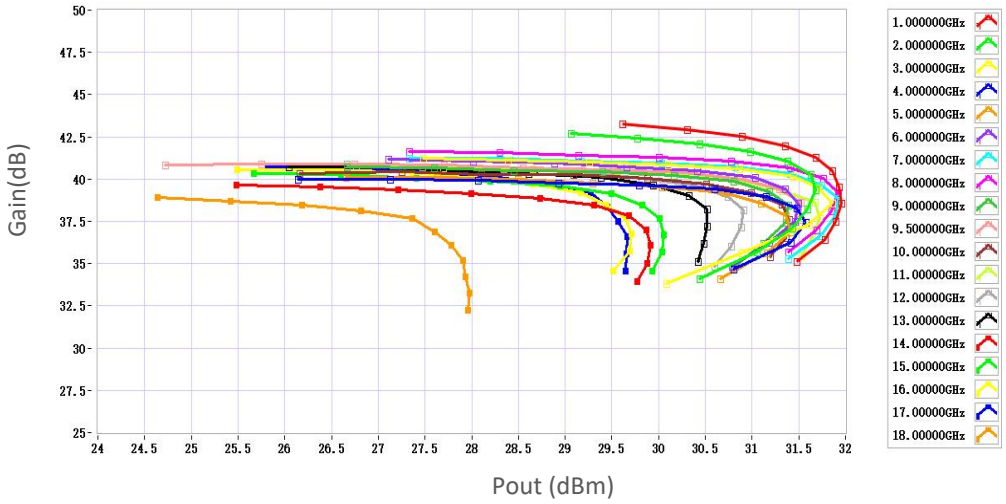
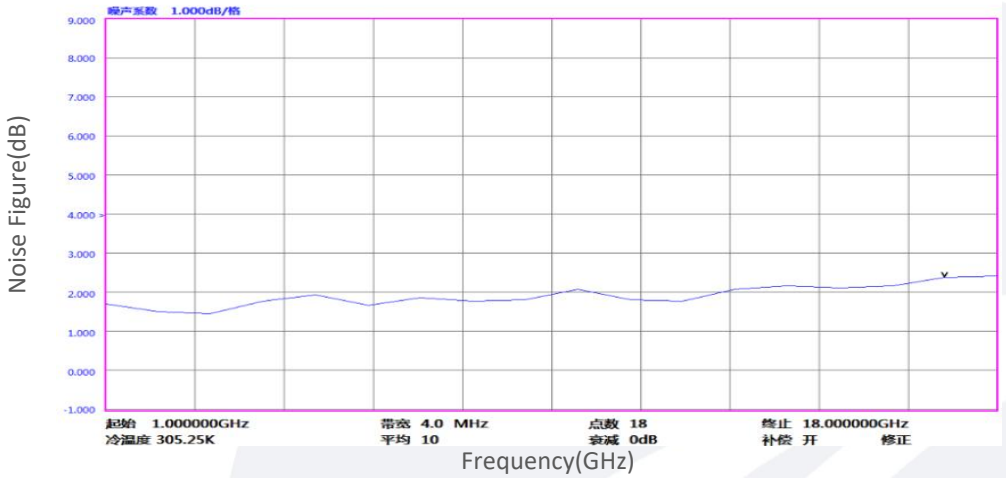
典型曲线 Typical Performance Data:

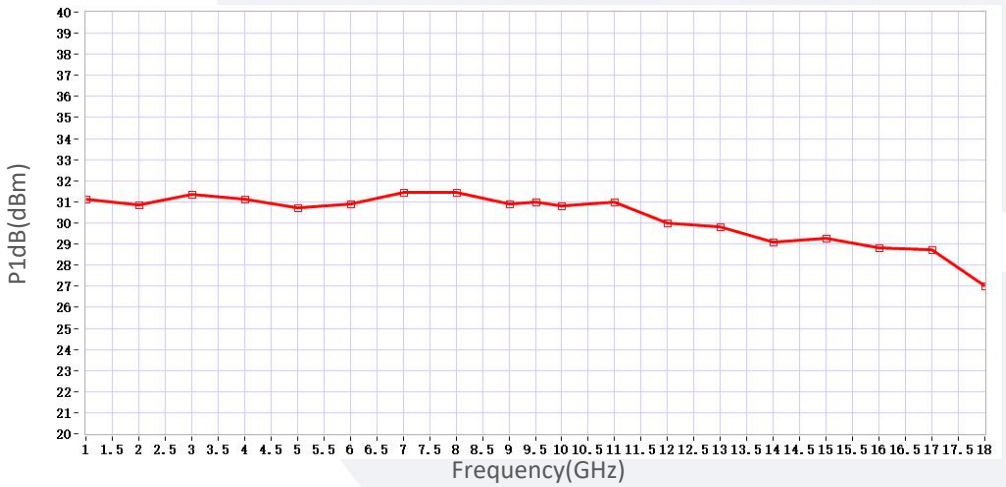
Gain vs Output Power



Noise Figure vs Frequency



P1dB vs Frequency



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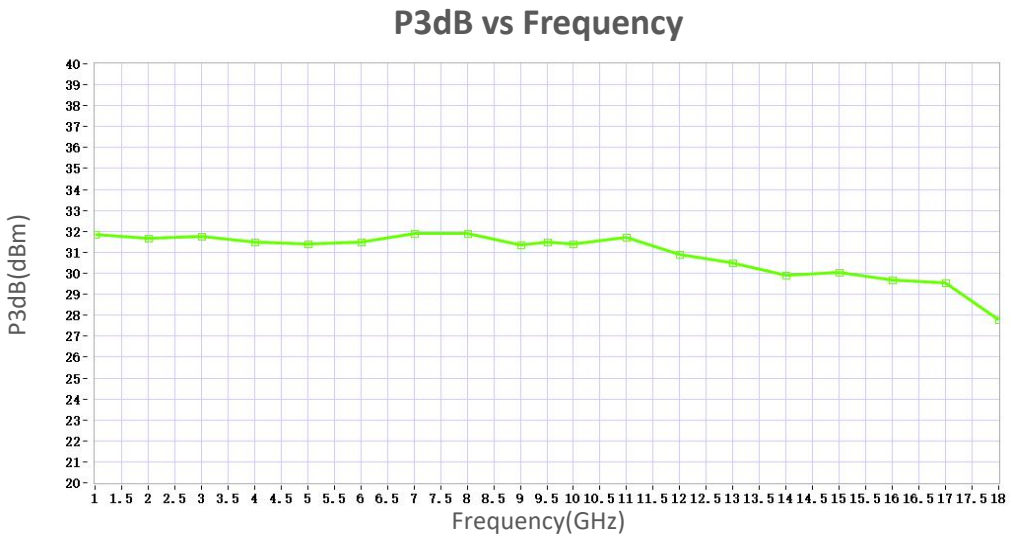

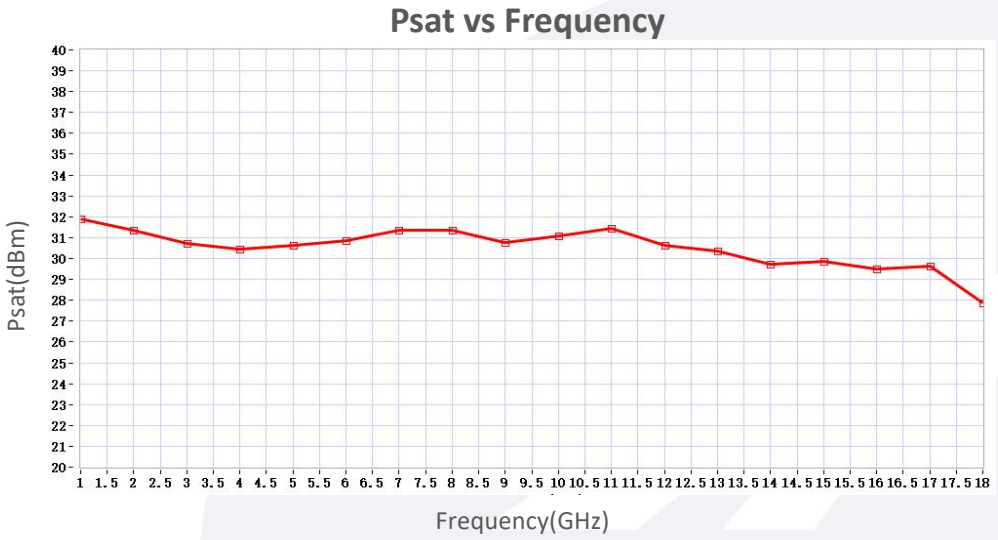

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