

Power Amplifier

8-12.4GHz /30dB Gain/25 dBm Psat

Model: TLPA8G12.4G-30-23

TLPA8G12.4G-30-23 is a power amplifier with a typical small signal gain of 30 dB and Psat of 25 dBm across the frequency range of 8 to 12.4 GHz. The DC power requirement for the amplifier is +12 VDC/0.2 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Ultra Wide Band: 8-12.4 GHz
- Gain: 30dB Typ
- Output Power Psat: 25dBm 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		8-12.4		GHz
小信号增益 Small Signal Gain		30		dB
增益平坦度 Gain Flatness		±1		dB
线性输出功率 Output P1dB	23			dBm
饱和输出功率 Output Psat	25			dBm
杂散 Spurious			-50	dBc
谐波抑制 Harmonic			-10	dBc
输入驻波 Input VSWR		2.0		:1
输出驻波 Output VSWR		2.0		
直流电压 DC Voltage		12		V DC
直流电流 DC Supply Current		0.2		A
阻抗 Impedance		50		Ohms

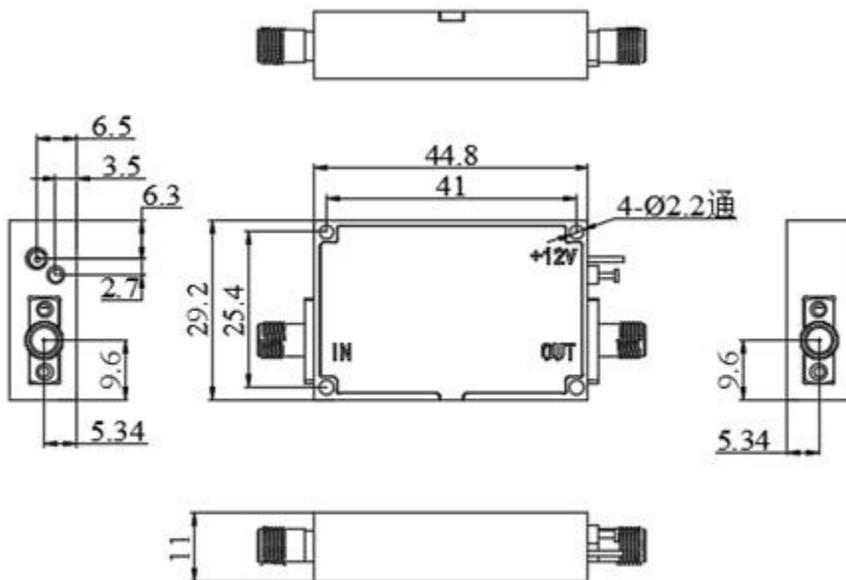
机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	44.8*29.2*11	mm
重量 Weight	40	g

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15 V
输入功率 RF Input Power	+12 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing: Unit:mm



温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+60	°C
存储温度 Non-operating Temperature*	-50		+70	°C
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
TLPA8G12.4G-30-23	Power amplifier 8-12.4 GHz,Gain:30dB,Psat:25dBm, +12V DC,Without Heatsink	Rev.1.1
TLPA8G12.4G-30-23-HS	Power amplifier 8-12.4GHz,Gain:30dB,Psat:25dBm, +12V DC,With Heatsink	Rev.1.1

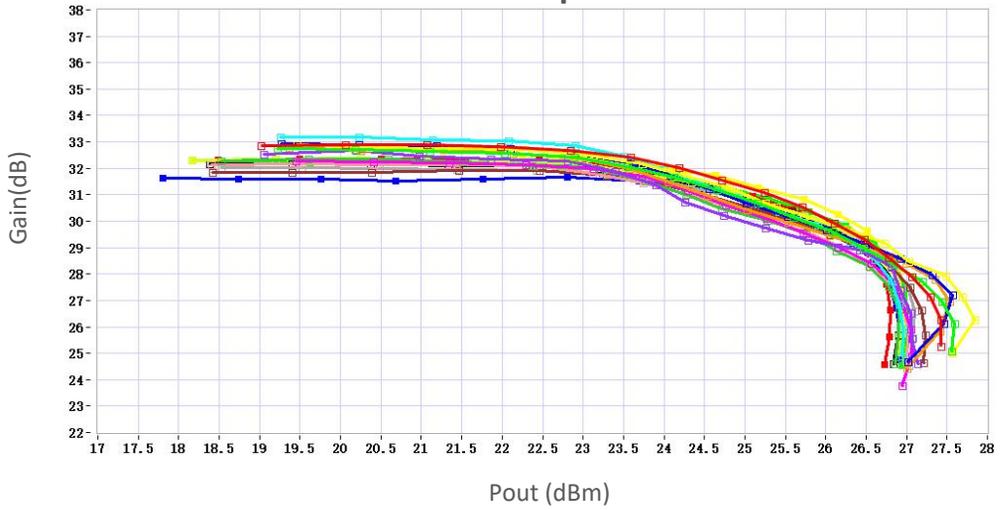
典型曲线 Typical Performance Data:

VSWR&Gain vs Frequency

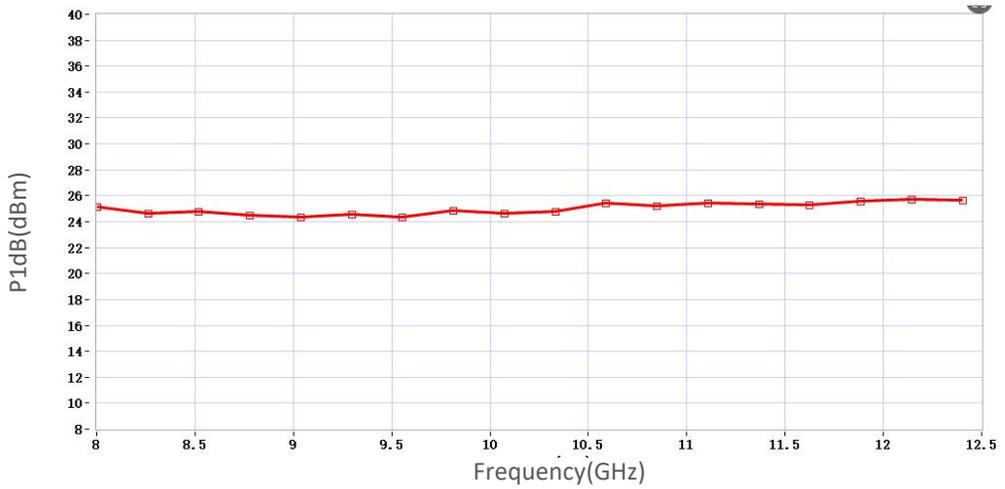
VSWR&Gain

典型曲线 Typical Performance Data:

Gain vs Output Power



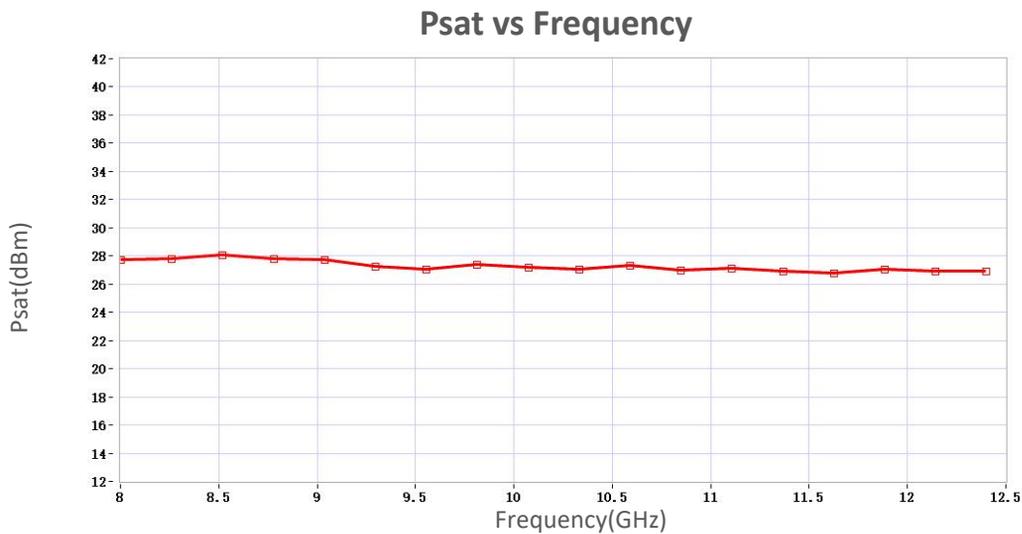
P1dB vs Frequency



P3dB vs Frequency

P3dB (dBm)

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.