

Power Amplifier

1.8-4GHz/45dB Gain/42dBm Psat

Model: TLPA1.8G4G-45-42

TLPA1.8G4G-45-42 is a power amplifier with a minimum small signal gain of 45 dB and a nominal Psat of 42 dBm across the frequency range of 1.8 to 4 GHz. The DC power requirement for the amplifier is +28 VDC/0.5 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1.8-4GHz
- Gain: 45dB Min
- Output Power Psat: 42dBm 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	1.8		4	GHz
小信号增益 Small Signal Gain	45	47		dB
增益平坦度 Gain Flatness		±2	±3	dB
线性输出功率 Output P1dB	37	38		dBm
饱和输出功率 Output Psat	41	42		dBm
谐波 Harmonic			-10	dBc
输入驻波 Input VSWR		1.5	2	:1
直流电压 DC Voltage	26	28	30	V DC
直流电流 DC Supply Current		0.5	2.5	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/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	140*80*15	mm
重量 Weight	250	g

绝对最大值 Absolute Maximum Ratings:

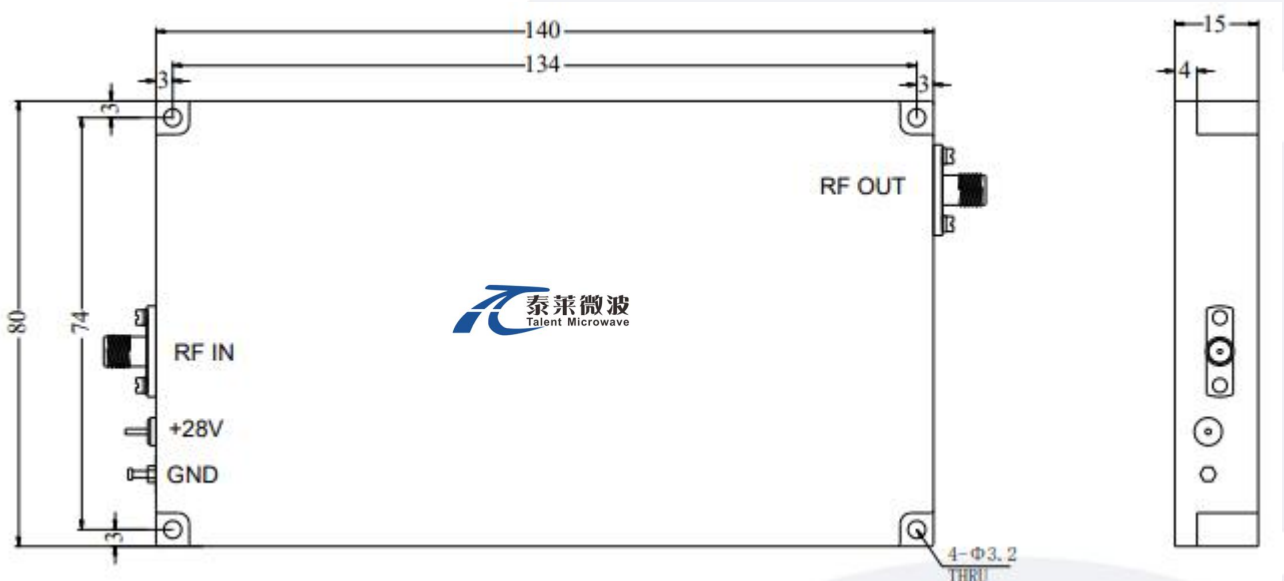
参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+30 V
输入功率 RF Input Power	+3 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



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.

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-40		+50	℃
存储温度 Non-operating Temperature*	-50		+60	℃
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
TLPA1.8G4G-45-42	Power amplifier 1.8-4GHz, Gain:45dB,Psat:42dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA1.8G4G-45-42-HS	Power amplifier 1.8-4GHz, Gain:45dB,Psat:42dBm,+28V DC,With Heatsink	Rev.1.1