

## Power Amplifier

1-2.7GHz/52dB Gain/52dBm Psat

Model: TLPA1G2.7G-52-52-P

TLPA1G2.7G-52-52-P is a power amplifier with a typical gain of 52 dB and a minimum Psat of 52 dBm across the frequency range of 1 to 2.7 GHz. The DC power requirement for the amplifier is +48 VDC/10 A. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

### Features:

- Frequency range:: 1-2.7 GHz
- Gain: 52dB Typ
- Output Power Psat: 52dBm 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	1		2.7	GHz
工作模式 Working Mode	PULSE ONLY&CW/PULSE compatible			
输入信号体制 Input Signal Mode	CW/PULSE			
增益 Gain	50	52		dB
增益平坦度 Gain Flatness		±3	±4	dB
饱和输出功率 Output Psat(CW)	48	49	50	dBm
饱和输出功率 Output Psat	52	53		dBm
杂散 Spurious@Pout=52dBm			-60	dBc
谐波抑制 Harmonic@Pout=52dBm		-15	-10	dBc
输入驻波 Input VSWR		1.5	2	:1
直流电压 DC Voltage	+46	+48	+50	V DC
直流电流 DC Supply Current		2	10	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/N Female	
直流供电接口 DC Supply Connector	DB9	
尺寸 Size	200*130*25	mm
重量 Weight	500	g

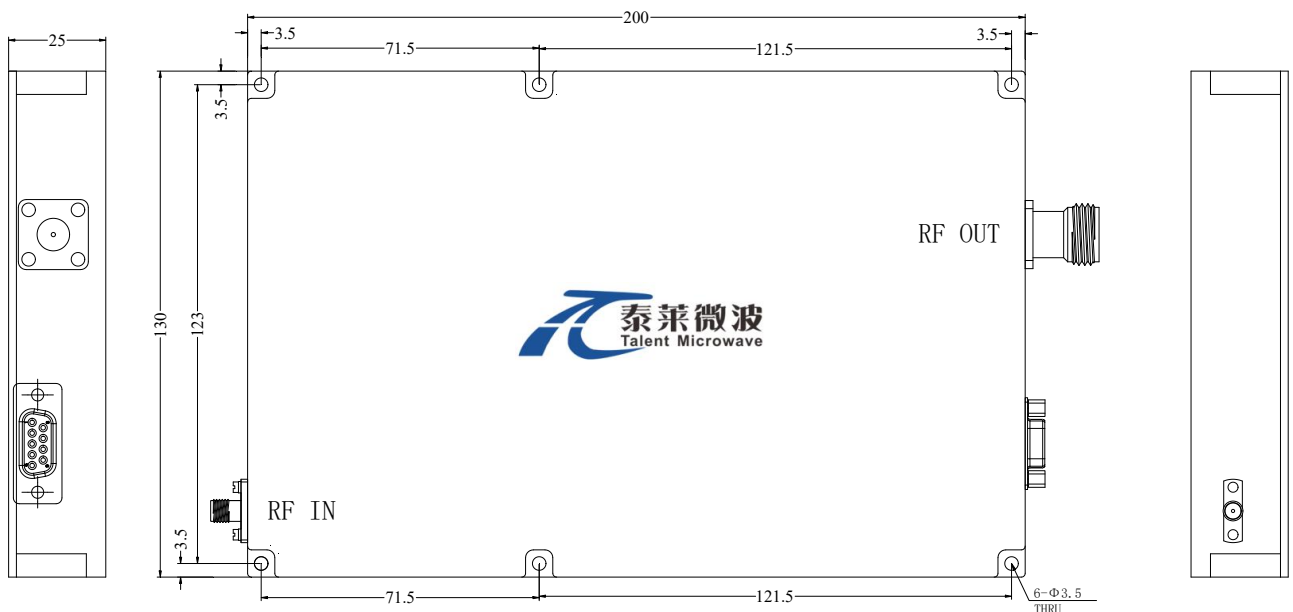
## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+50 V
输入功率 RF Input Power	+5 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.

## 直流供电接口 DC Supply Connector (DSUB-9 Female):

引脚 Pin	名称 Name	功能 Function
1	+48V	Power supply positive,+26.0-30.0VDC
2	+48V	Power supply positive,+26.0-30.0VDC
3	+48V	Power supply positive,+26.0-30.0VDC
4	GND	Ground
5	GND	Ground
6	Reset	When the power amplifier triggers VSWR protection, the power amplifier will shut down and enter a state lock. Giving this pin a low pulse of 10us will restart the power amplifier. Only VSWR protection can be reset.
7	Over VSWR	When the external VSWR of the power amplifier output is greater than 5, the power amplifier is turned off, and this pin will output a high level. When the external VSWR is less than 5, this pin outputs a low level.
8	Over TEM	When the temperature of the case exceeds 85 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 70 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
9	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground

## 温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+50	°C
存储温度 Non-operating Temperature*	-30		+60	°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 11msec 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
TLPA1G2.7G-52-52-P	Power amplifier 1-2.7GHz, Gain:52dB,Psat:52dBm,+48V DC,Without Heatsink	Rev.1.1
TLPA1G2.7G-52-52-P-HS	Power amplifier 1-2.7GHz, Gain:52dB,Psat:52dBm,+48V DC,With Heatsink	Rev.1.1