

## Power Amplifier

2.5-6GHz/66dB Gain/54dBm Psat

Model: TLPA2.5G6G-66-54

TLPA2.5G6G-66-54 is a power amplifier with a minimum gain of 66 dB and a minimum Psat of 54 dBm across the frequency range of 2.5 to 6 GHz. The DC power requirement for the amplifier is +28 VDC/50 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: 2.5-6GHz
- Gain: 66dB Min
- Output Power Psat: 54dBm 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	2.5		6	GHz
增益 Gain	66	68		dB
增益平坦度 Gain Flatness		±1.5	±3	dB
饱和输出功率 Output Psat	54	55		dBm
谐波抑制 Harmonic@Pout=54dBm		-15	-10	dBc
开关时间 Switching Time			50	us
输入驻波 Input VSWR		1.5	2.0	:1
直流电压 DC Voltage		+28	+30	V DC
直流电流 DC Supply Current		50	60	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 Power Supply Connector	D-SUB-5W5	
尺寸 Size	330*210*30	mm
重量 Weight	2500	g

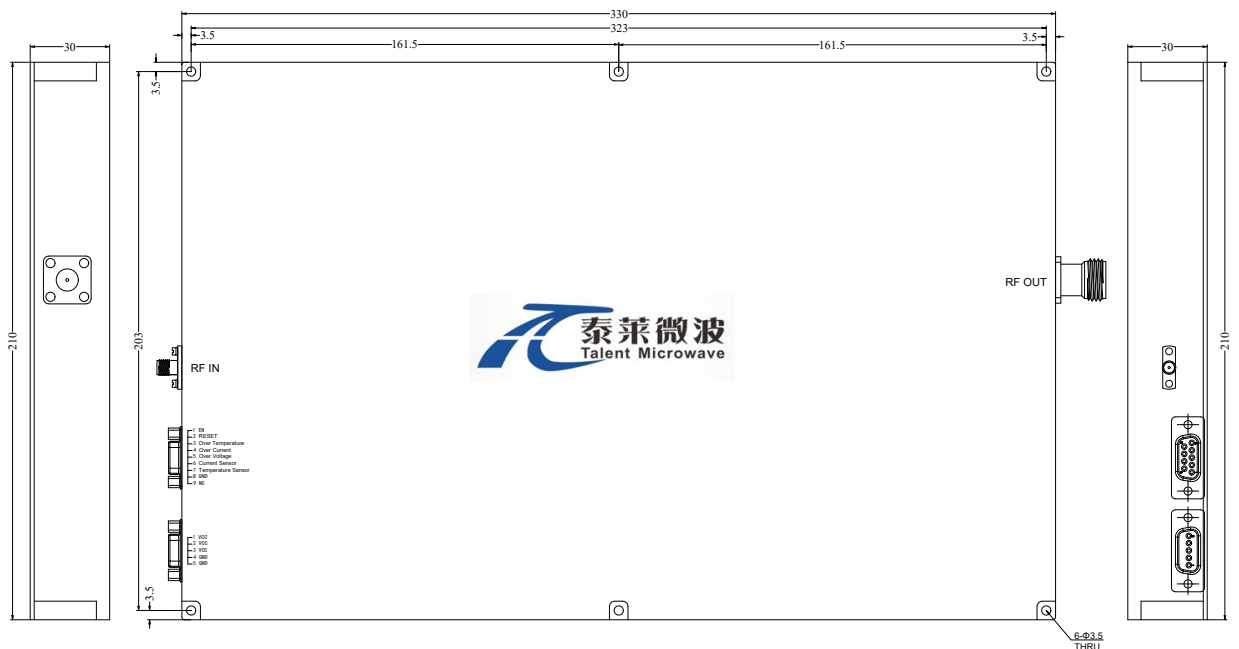
## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+30 V
输入功率 RF Input Power	-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-5W5 Female):

引脚 Pin	名称 Name	功能 Function
1	VCC	Power supply positive ,+26.0-30.0VDC
2	VCC	Power supply positive ,+26.0-30.0VDC
3	VCC	Power supply positive ,+26.0-30.0VDC
4	GND	Power supply negative
5	GND	Power supply negative

### 监视控制连接器 Monitor and Control Interface(DSUB-9 Female):

引脚 Pin	名称 Name	功能 Function
1	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High)
2	RESET	Resets PA when logic LOW is applied and released (Internally Pulled-High)
3	Over Temperature	When the temperature of the case exceeds 60 °C, the power amplifier will turn off and this pin will be pulled high. If the temperature of case drops to 55 °C, the power amplifier will return to normal operation, and this pin will be pulled low.
4	Over Current	Current FAULT:(TTL High= Fault, TTL Low =Normal)
5	Over Voltage	Voltage FAULT:(TTL High= Fault, TTL Low =Normal)
6	Current Sensor	0.1V/A
7	Temperature Sensor	$VO = 10 \text{ mV}/^{\circ}\text{C} \times T^{\circ}\text{C} + 600 \text{ mV}$
8	GND	Ground
9	NC	Not connection

## 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 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
TLPA2.5G6G-66-54	Power amplifier 2.5-6GHz, Gain:66dB,Psat:54dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA2.5G6G-66-54-HS	Power amplifier 2.5-6GHz, Gain:66dB,Psat:54dBm,+28V DC,With Heatsink	Rev.1.1