

## Power Amplifier

1-6GHz/47dB Gain/47dBm Psat

Model: TLPA1G6G-47-47-V2

TLPA1G6G-47-47-V2 is a power amplifier with a typical small signal gain of 47 dB and a nominal Psat of 47 dBm across the frequency range of 1 to 6 GHz. The DC power requirement for the amplifier is +28 VDC/6 A. The input and output port configuration offers coax adapter structure with SMA female .

### Features:

- Frequency range: 1-6GHz
- Gain: 47dB Typ
- Output Power Psat: 47dBm 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		6	GHz
小信号增益 Small Signal Gain	45	47		dB
增益平坦度 Gain Flatness		±4	±5	dB
线性输出功率 Output P1dB	44.5	45.5		dBm
饱和输出功率 Output Psat		47		dBm
谐波 Harmonic		-15	-13	dBc
输入驻波 Input VSWR		1.5	2	:1
直流电压 DC Voltage		+28		V DC
直流电流 DC Supply Current		6	7	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	
直流供电接口 DC Supply Connector	DSUB-9 Male	
尺寸 Size	220*180*25(Without heatsink) 300*200*70(With heatsink)	mm

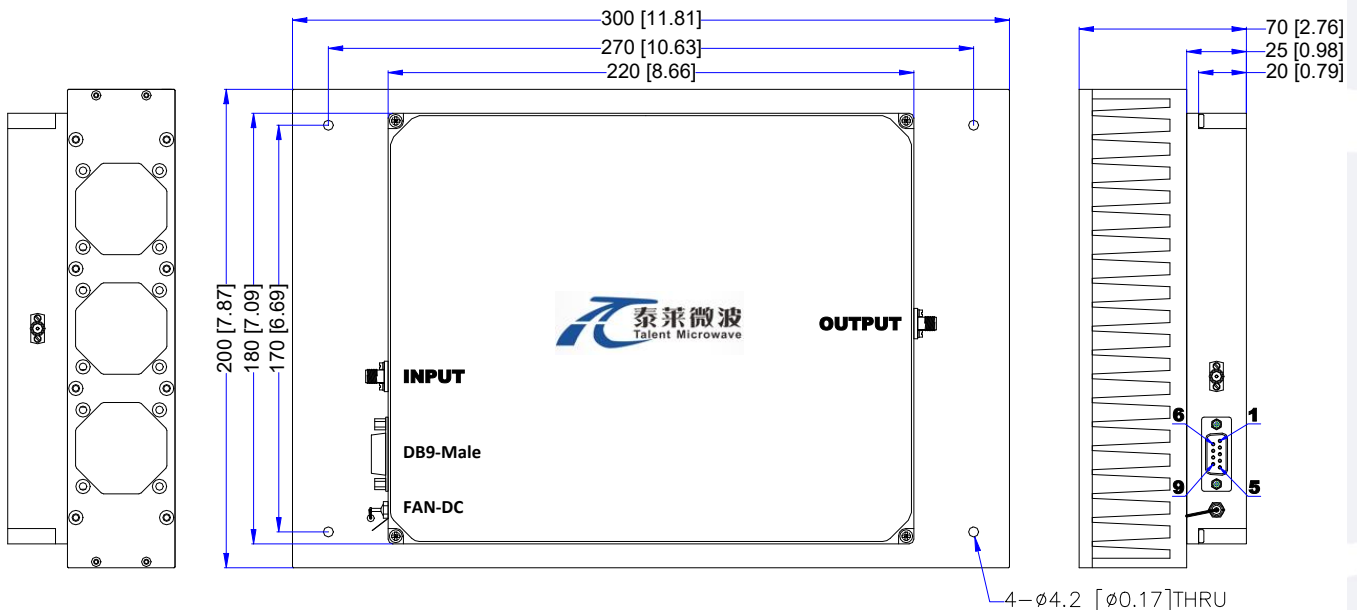
## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	TBD
输入功率 RF Input Power	+8 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 Male):

引脚 Pin	名称 Name	功能 Function
1	+28V	+28.0-30.0VDC
2	+28V	+28.0-30.0VDC
3	+28V	+28.0-30.0VDC
4	GND	Ground
5	GND	Ground
6	GND	Ground
7	NC	NC
8	NC	NC
9	NC	NC

## 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			

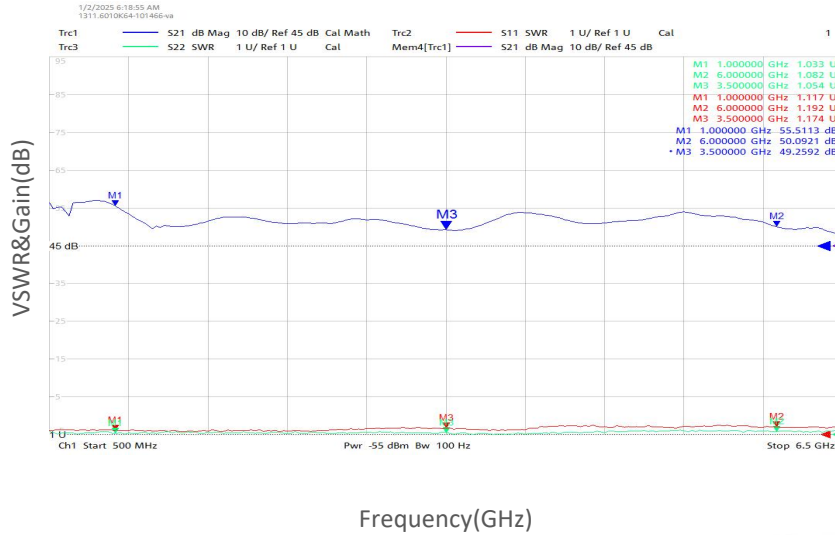
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA1G6G-47-47-V2	Power amplifier 1-6GHz, Gain:47dB,Psat:47dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA1G6G-47-47-V2-HS	Power amplifier 1-6GHz, Gain:47dB,Psat:47dBm,+28V DC,With Heatsink	Rev.1.1

## 典型曲线 Typical Performance Data:

### VSWR&Gain vs Frequency



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.