

## Power Amplifier

2-8GHz /50dB Gain/47 dBm Psat

Model: TLPA2G8G-47-47

TLPA2G8G-47-47 is a power amplifier with power gain of 50 dB and a nominal Psat of 47 dBm across the frequency range of 2 to 8 GHz. The DC power requirement for the amplifier is +28 VDC/600W. 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: 2-8 GHz
- Gain: 50 dB Min
- Output Power Psat: 47 dBm 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	2-8			GHz
功率增益 Power Gain	50			dB
增益平坦度 Gain Flatness		±3	±5	dB
线性输出功率 Output P1dB		40		dBm
饱和输出功率 Output Psat	47			dBm
杂散 Spurious@Pout=47dBm			-60	dBc
谐波抑制 Harmonic@Pout=47dBm		-10	-15	dBc
输入驻波 Input VSWR			2	:1
直流电压 DC Voltage		28		V DC
功耗 Power Consumption			600	W
阻抗 Impedance	50			Ohms

## 机械特性 Mechanical Specifications:

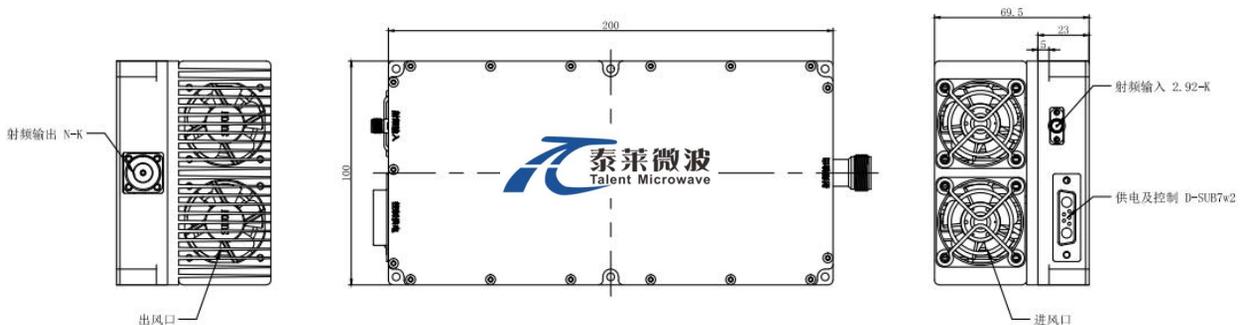
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/N Female	
直流偏置 DC Bias	SUB-7W2	A1:+28V A2:GND Pin1~5:NC
尺寸 Size	200*100*23(Without Heatsink) 200*100*69.5(With Heatsink)	mm
重量 Weight	≤4	Kg

## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+28 V
输入功率 RF Input Power	+10 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

## 外形图 Outline Drawing:

Unit:mm



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*	-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			

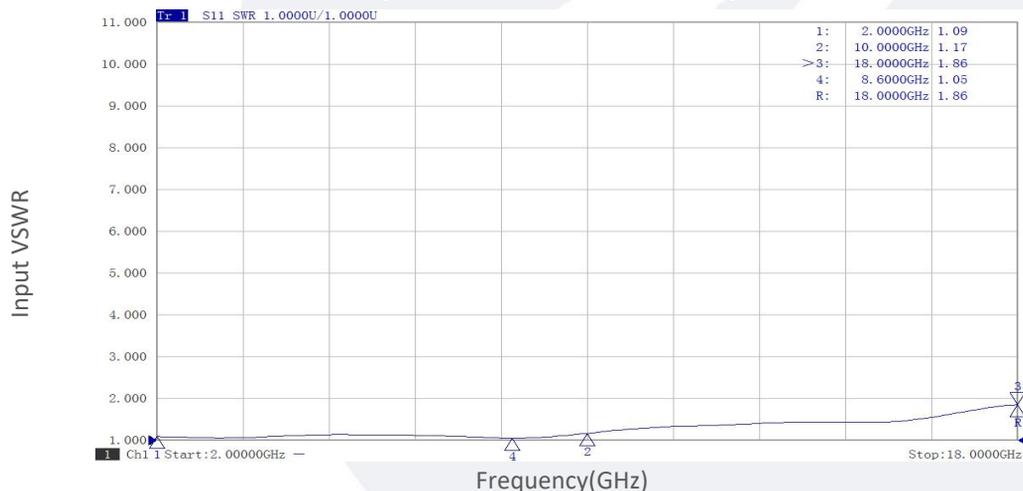
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA2G8G-47-47	Power amplifier 2-8GHz, Gain:50dB,Psat:47dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA2G8G-47-47-HS	Power amplifier 2-8GHz, Gain:50dB,Psat:47dBm,+28V DC,With Heatsink	Rev.1.1

## 典型曲线 Typical Performance Data:

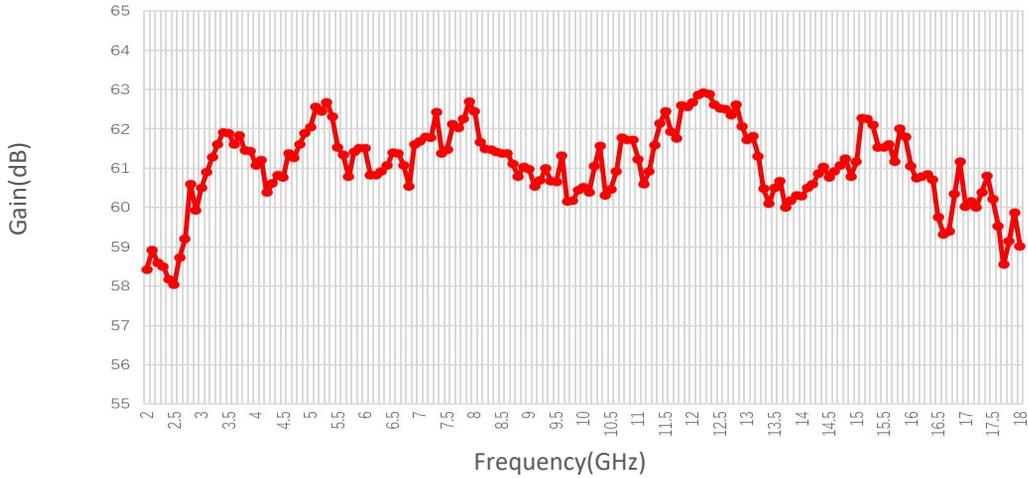
### Input VSWR vs Frequency



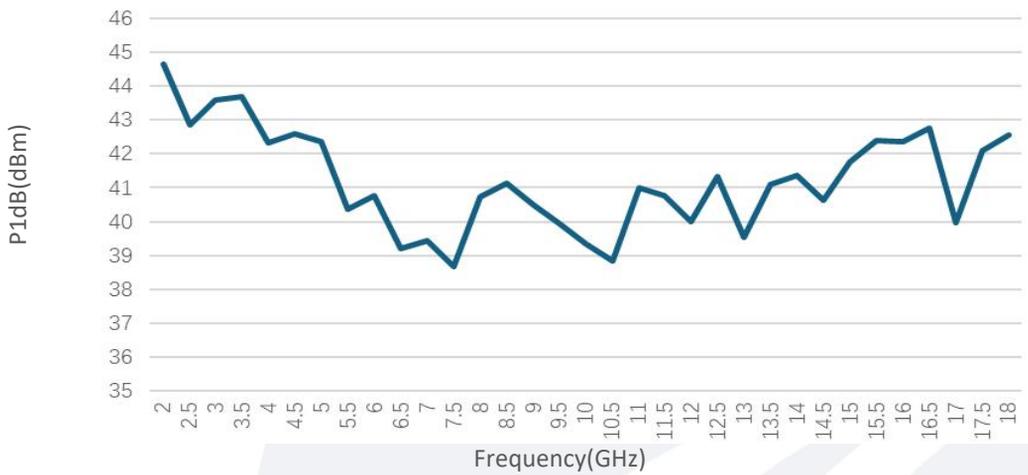
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**典型曲线 Typical Performance Data:**

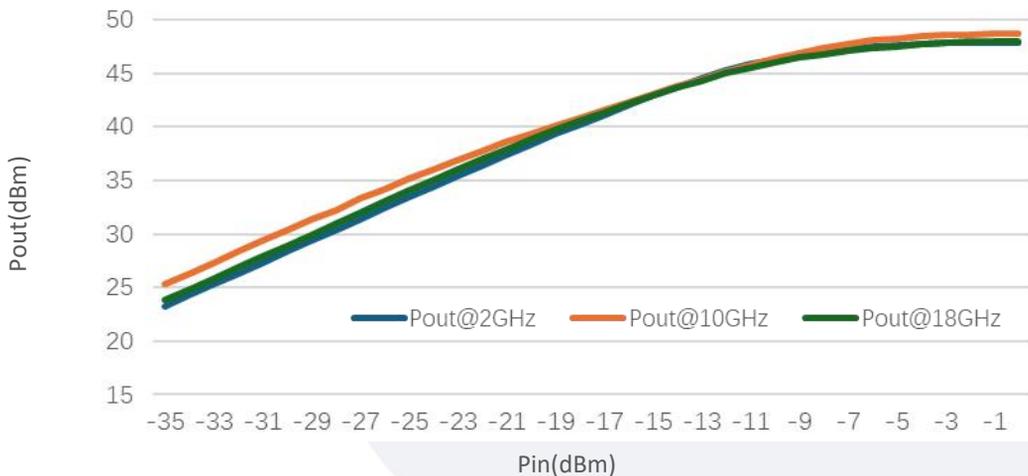
**Small Signal Gain vs Frequency**



**P1dB vs Frequency**



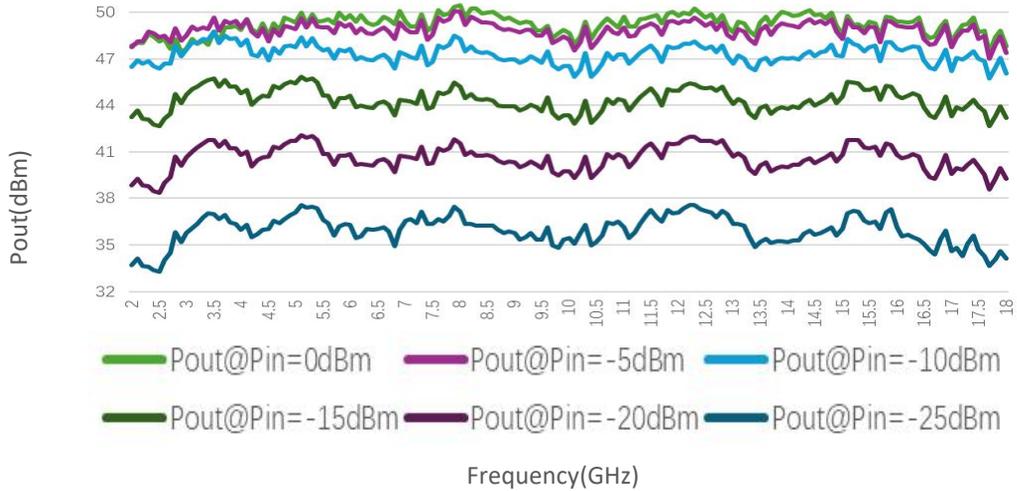
**Pout@Pin**



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**典型曲线 Typical Performance Data:**

**Pout@Equal\_Pin**



**Spurious vs Frequency**



**Harmonic vs Frequency**



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