

## Solid State High Power Amplifier Systems

2-18 GHz / 50dB Gain/47 dBm Psat/220V AC

Model: TLPA2G18G-50-47-BC

TLPA2G18G-50-47-BC is a solid state high power amplifier systems provides high output power and high gain across the 2 to 18 GHz frequency range. The amplifier features a built-in 220V power supply, making it easy to use in most lab environments. This model features thermal self protection, preventing damage to the amplifier and providing added reliability.

### Features:

- Frequency range: 2-18GHz
- Gain: 50dB Min
- Psat Output Power:47dBm Min
- Protection:Over TEM,over voltage, over current ,over VSWR protection
- 50 Ohm Matched Input / Output



### 电气特性 Electrical Characteristics:

参数 Parameter	代码 Symbol	Min	Typ	Max	单位 Units
频率范围 Frequency range	BW	2-18			GHz
功率增益 Power Gain	GP	50			dB
增益平坦度 Gain flatness	$\Delta$ GL		$\pm 4.5$	$\pm 5$	dB
饱和输出功率 Output Psat	Psat	47			dBm
杂散 Spurious@Pout=47dBm	Spur			-60	dBc
谐波 Harmonics@Pout=47dBm	HAM			-10	dBc
输入驻波 Input VSWR	VSWRin			2.0	:1
交流电压 AC Voltage	Vac		220		V AC
交流电流 AC Supply Current	Iac		5		A
功耗 Power Consumption	Pdiss			1200	W
阻抗 Impedance	I/O-IMP	50			Ohms

### 机械特性 Mechanical Specifications:

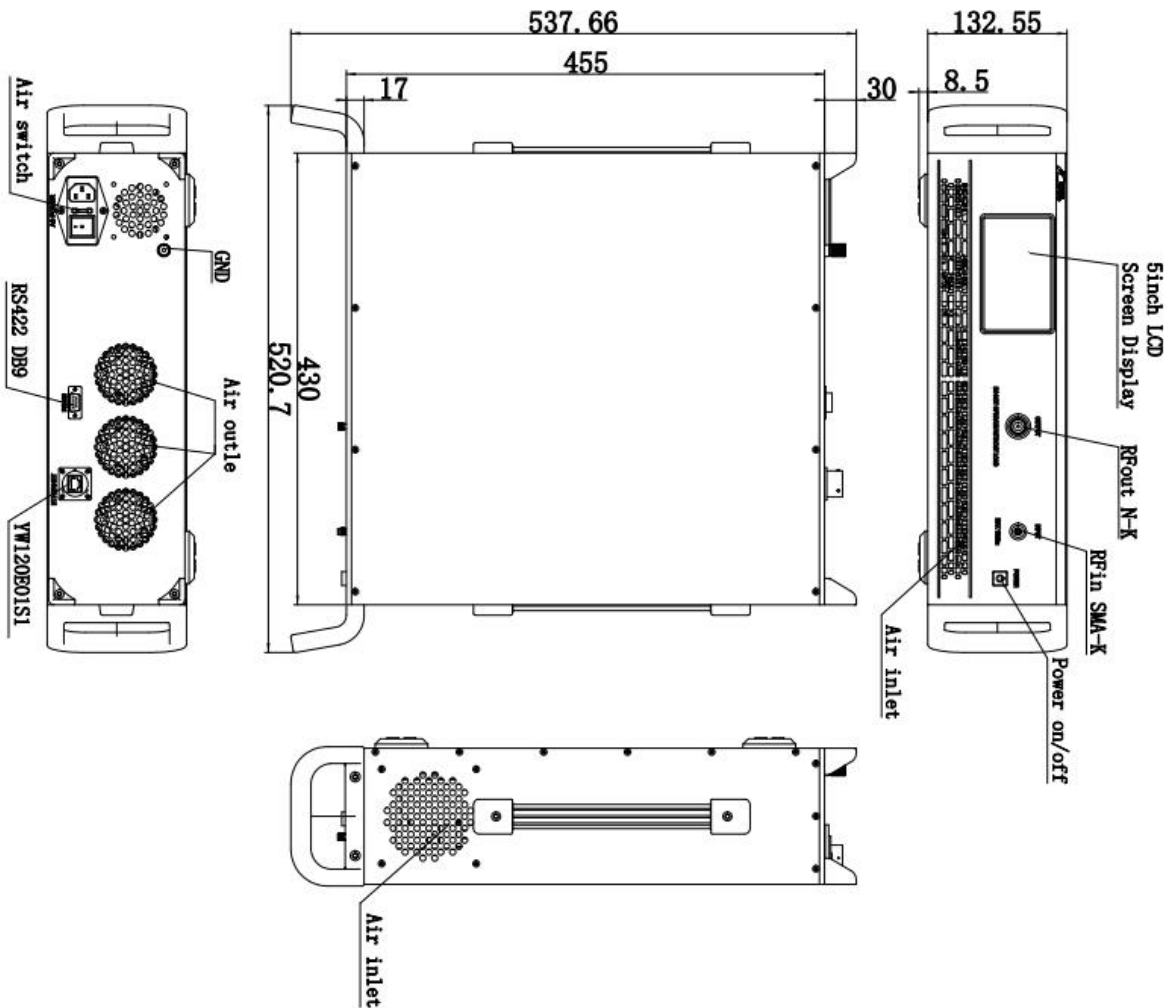
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	N Female/N Female	
正向/反向耦合 Forward/Reverse Coupling	SMA Female/ SMA Female	
通信接口 Communication Connector	DB9/RJ45	
液晶显示屏 Front Panel LCD Screen Display	5 inch LCD Screen Display	
尺寸 Size	19 Inch 3U	mm
重量 Weight	$\leq 30$	Kg

## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
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



## 主要功能 Key Features:

参数 Parameter	特点 Advantages
控制功能 Control functions	1, Power setting On/Off 2, ALC automatic level control
内置保护功能 Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR
监控和控制 Remote control	RS422/Ethernet
冷却系统 Cooling system	Built in Cooling system, forced air cooling

## 温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+40	°C
存储温度 Non-operating Temperature*	-30		+50	°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			

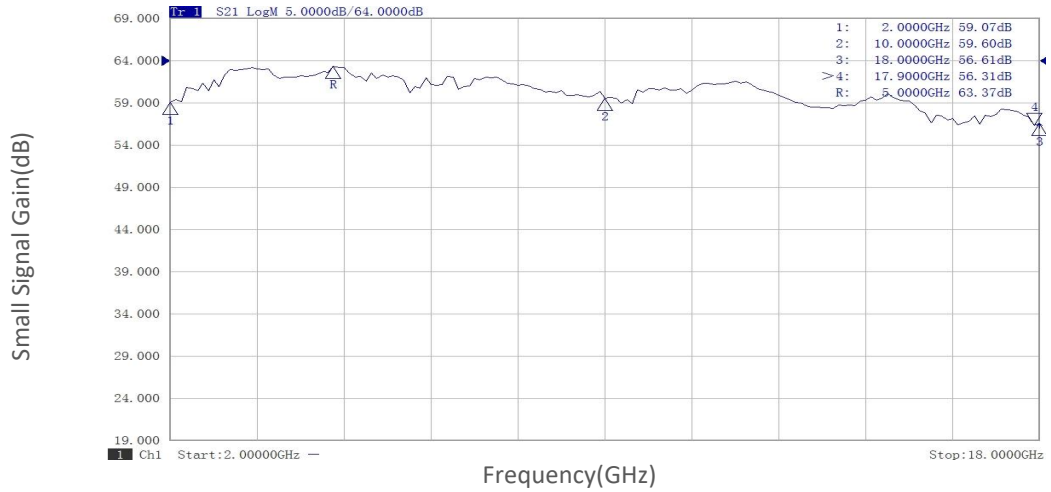
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

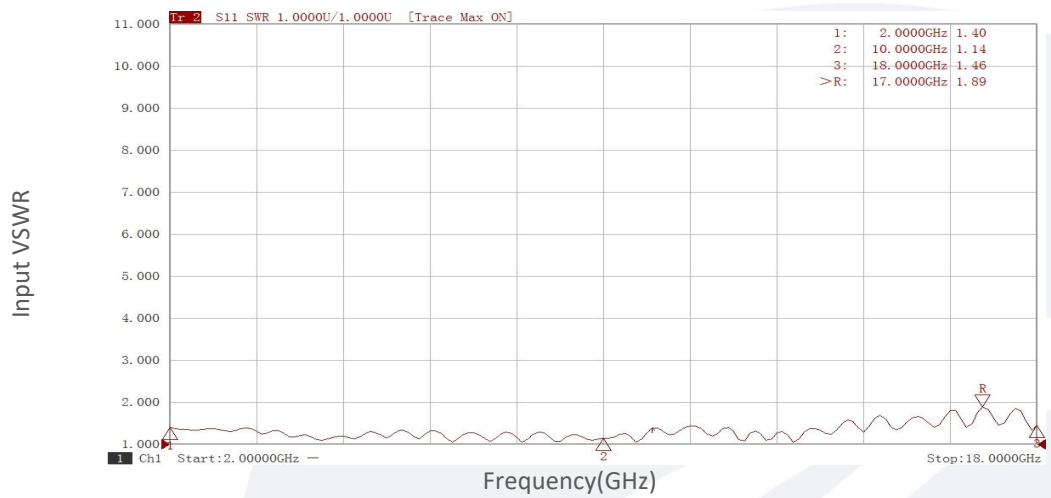
标准型号 Base Number	描述 Description	版本号 Revision
TLPA2G18G-50-47-BC	Solid State High Power Amplifier Systems 2-18GHz, Gain:50dB, Psat:47 dBm, 220V AC, Built in Fan Cooling	Rev.1.0

**典型曲线 Typical Performance Data:**

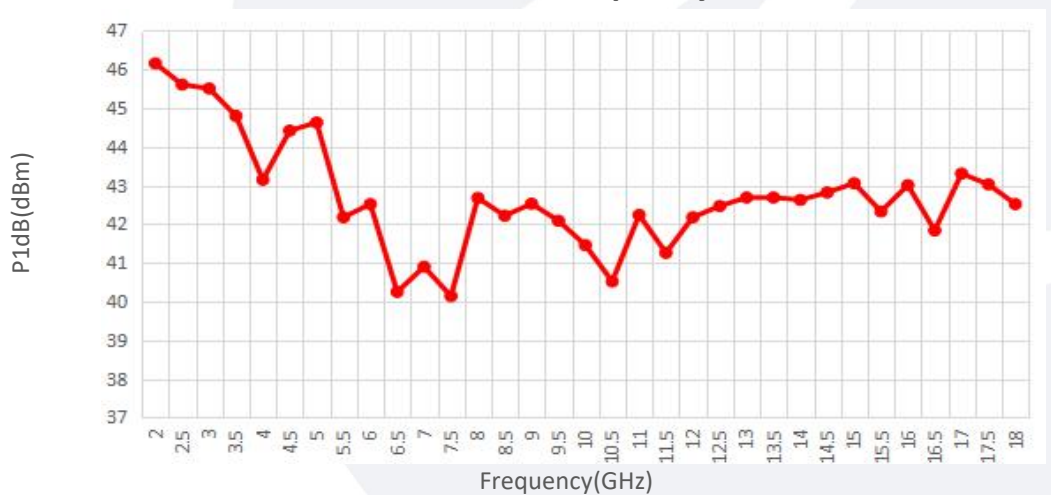
**Small Signal Gain vs Frequency**



**Input VSWR vs Frequency**



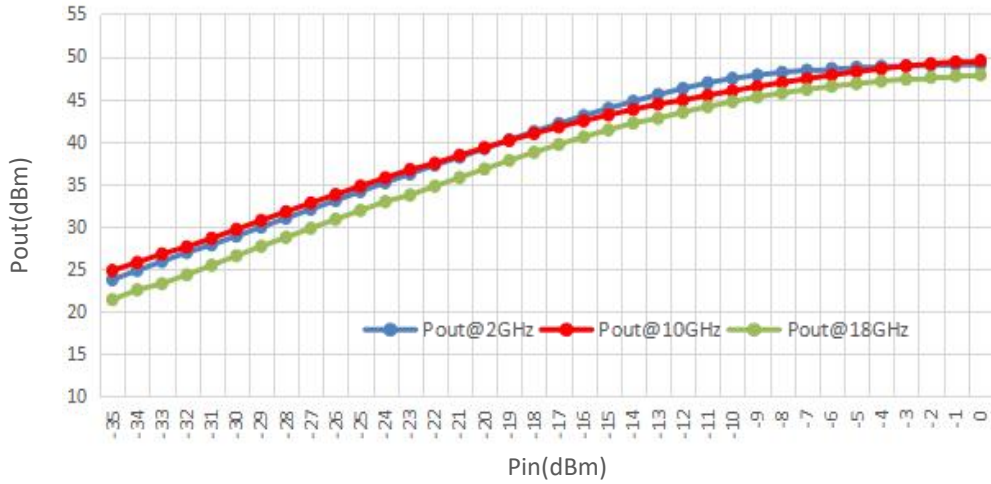
**P1dB vs Frequency**



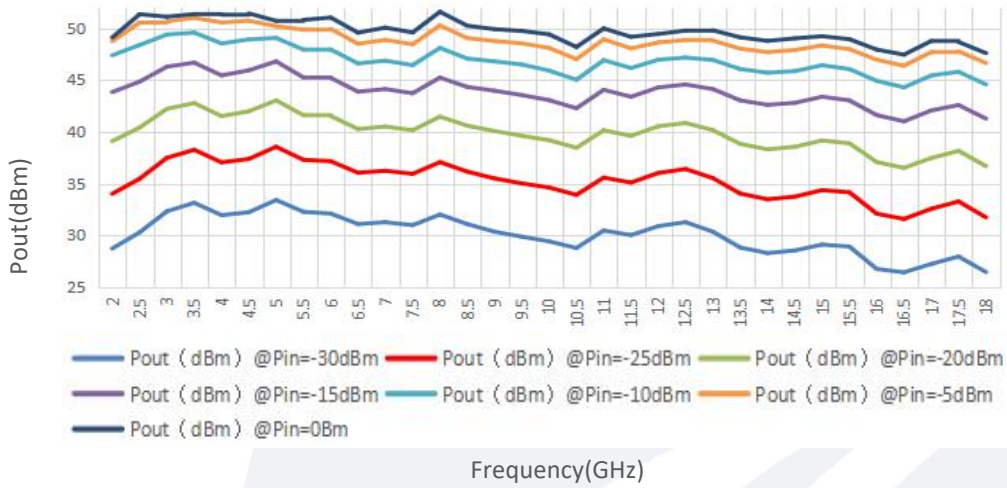
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**典型曲线 Typical Performance Data:**

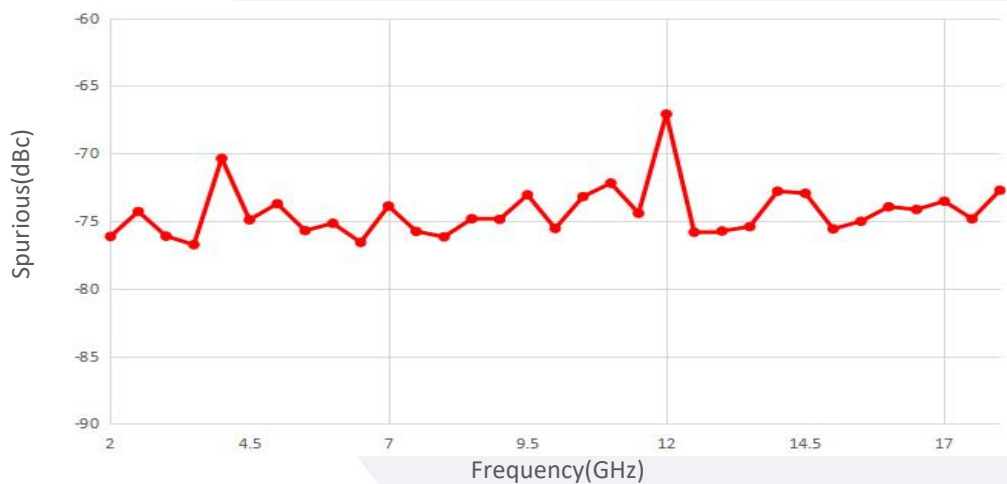
**Pout@Pin**



**Pout@Equal\_Pin**



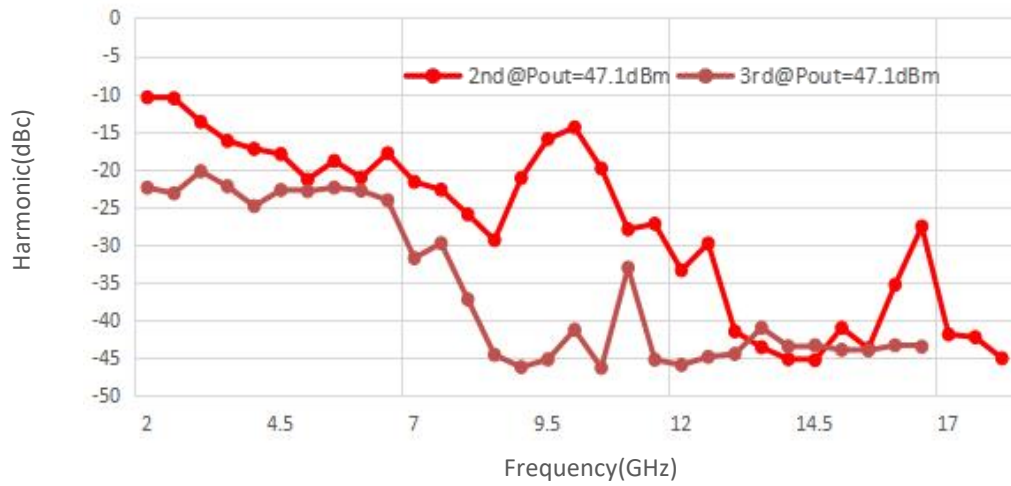
**Spurious vs Frequency**



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**典型曲线 Typical Performance Data:**

**Harmonic vs Frequency**



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