

## Solid State High Power Amplifier Systems

27.5-30GHz/50dB Gain/50dBm Psat/220V AC

Model: TLPA27.5G30G-50-50-BC

TLPA27.5G30G-50-50-BC is a solid state high power amplifier systems provides high output power and high gain across the 27.5 to 30 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: 27.5-30GHz
- Gain: 50dB Min
- Psat Output Power: 50dBm 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	27.5-30			GHz
功率增益 Power Gain	GP	50			dB
增益平坦度 Gain flatness	$\Delta$ GL	$\pm 1.5$ @Bandwidth=200MHz			dB
增益稳定度 Gain Stability	Gstb	$\pm 3$ @Full temperature range			dB
饱和输出功率 Output Psat	Psat	50	51		dBm
三阶互调 Output IM3	IM3		-30	-25	dBc
杂散 Spurious	Spur			-60	dBc
噪声功率谱密度 Noise PSD	ND		-90		dBm/Hz
输入驻波 Input VSWR	VSWRin			2.0	:1
输出驻波 Output VSWR	VSWRout		1.5	1.8	:1
交流电压 AC Voltage	Vac		220		V AC
功耗 Power Consumption	Pdiss			1200	W
阻抗 Impedance	I/O-IMP	50			Ohms

### 机械特性 Mechanical Specifications:

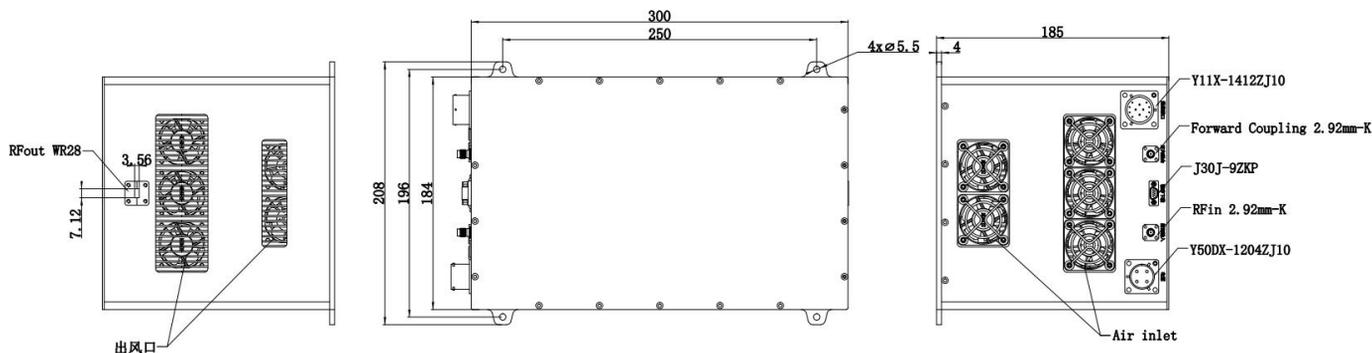
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	2.92mm Female/WR28	
正向/反向耦合 Forward/Reverse Coupling	2.92mm Female/2.92mm Female	
尺寸 Size	300*208*185	mm
重量 Weight	$\leq 25$	Kg

## 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
监测功能 Monitor functions	1, Operating voltage, current, temperature 2, Transmitting power and reflected power
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/LAN
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
TLPA27.5G30G-50-50-BC	Solid State High Power Amplifier Systems 27.5-30GHz, Gain:50dB, Psat:50dBm, 220V AC, Built in Fan Cooling	Rev.1.1