

Solid State High Power Amplifier Systems

3-3.5GHz /68dB Gain/68dBm Psat/220V AC

Model: TLPA3.0G3.5G-68-68-P-BC

TLPA3.0G3.5G-68-68-P-BC is a solid state high power amplifier systems provides high output power and high gain across the 0.5 to 6 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: 3.0-3.5 GHz
- Gain: 68dB Min
- Psat Output Power:68dBm 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	3.0-3.5			GHz
工作模式 Working Mode	MOD	PULSE ONLY			
功率增益 Power Gain	GP	68			dB
增益平坦度 Gain flatness	Δ GL		± 3		dB
饱和输出功率 Output Psat	Psat	68			dBm
杂散 Spurious@Pout=65dBm	Spur			-60	dBc
谐波 Harmonics@Pout=65dBm	HAM			-20	dBc
输入信号体制 Input Signal Mode	IPS_MOD	CW/PULSE			
调制信号电平 Modulation Signal Level	TTL	0		5	V
调制频率 Modulation Frequency	MF	1		100	KHz
脉冲宽度 Pulse Width	T	0.3		500	us
占空比 Duty Cycle	τ	0.1		20	%
上升/下降沿 Rise/Fall Time	Tr		50	100	ns
顶降 Pulse Drop@T=100us	Pdrop		0.5	1	dB
输入驻波 Input VSWR	VSWR		1.5	2	:1
交流电压 AC Voltage	Vac		220		V AC
20%占空比功耗 Power consumption@20%	Pdiss			5000	W

机械特性 Mechanical Specifications:

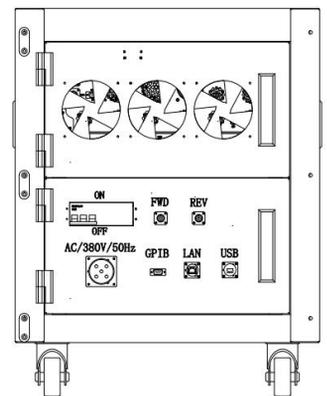
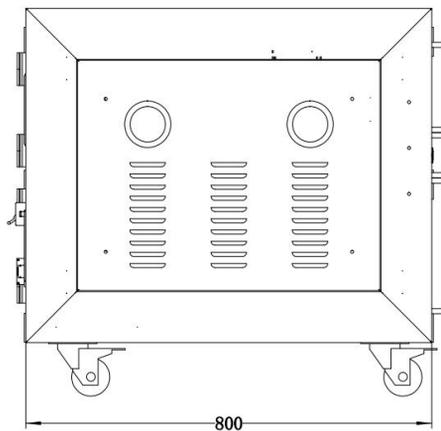
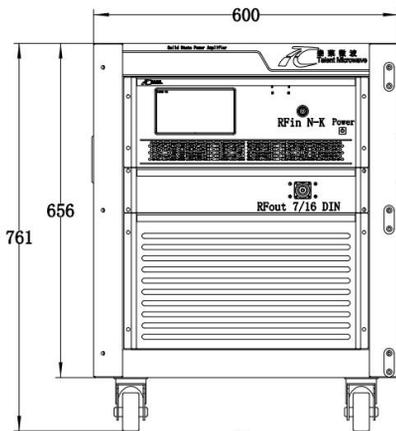
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/7/16 Din Female	
正向/反向耦合 Forward/Reverse Coupling	SMA Female/SMA Female	
液晶显示屏 Front Panel LCD Screen Display	7 inch LCD Screen Display	
相位输入接口 Pulse Input Connector	BNC Female	
通信接口 Communication Connector	DB9/RJ-45	

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
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



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			

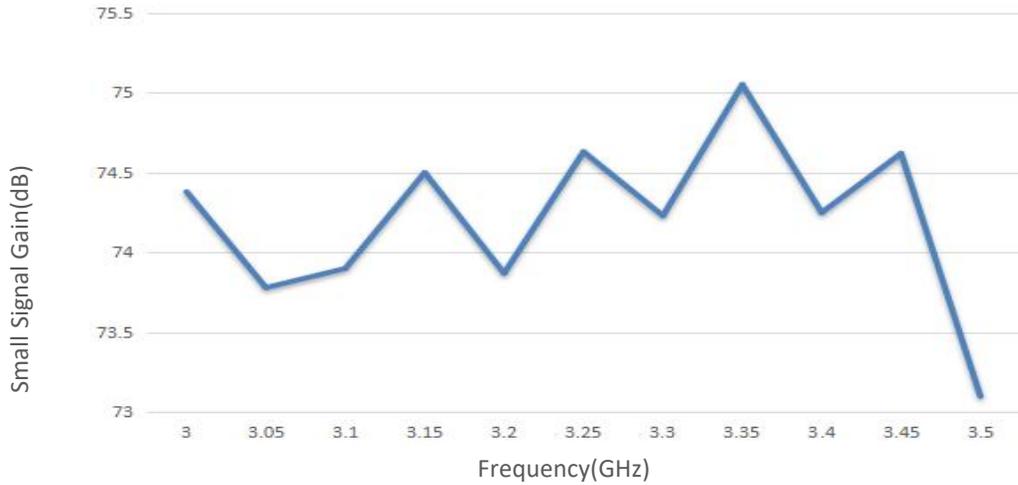
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

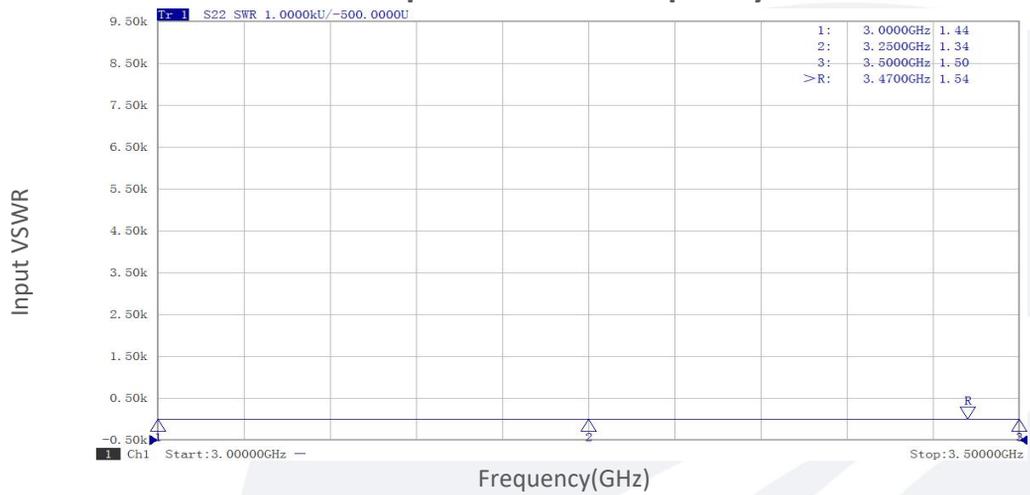
标准型号 Base Number	描述 Description	版本号 Revision
TLPA3.0G3.5G-68-68-P-BC	Solid State High Power Amplifier Systems 3.0-3.5GHz, Gain:68dB, Psat:68 dBm, 220V AC, Built in Fan Cooling	Rev.1.1

典型曲线 Typical Performance Data:

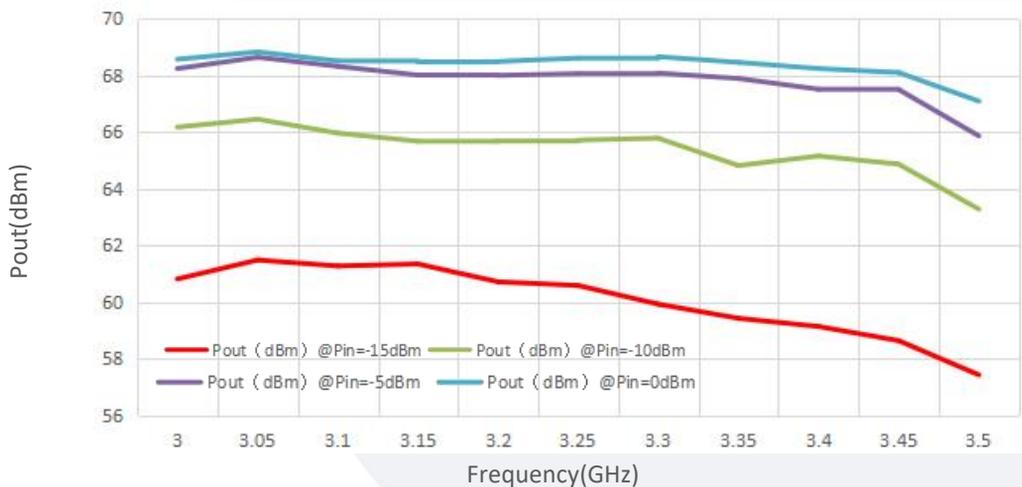
Small Signal Gain vs Frequency



Input VSWR vs Frequency



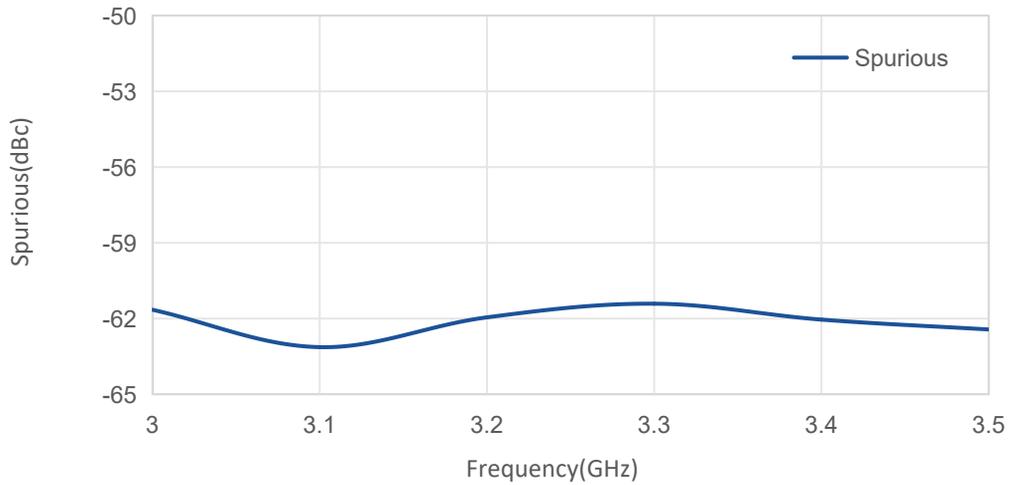
Pout@Equal_Pin



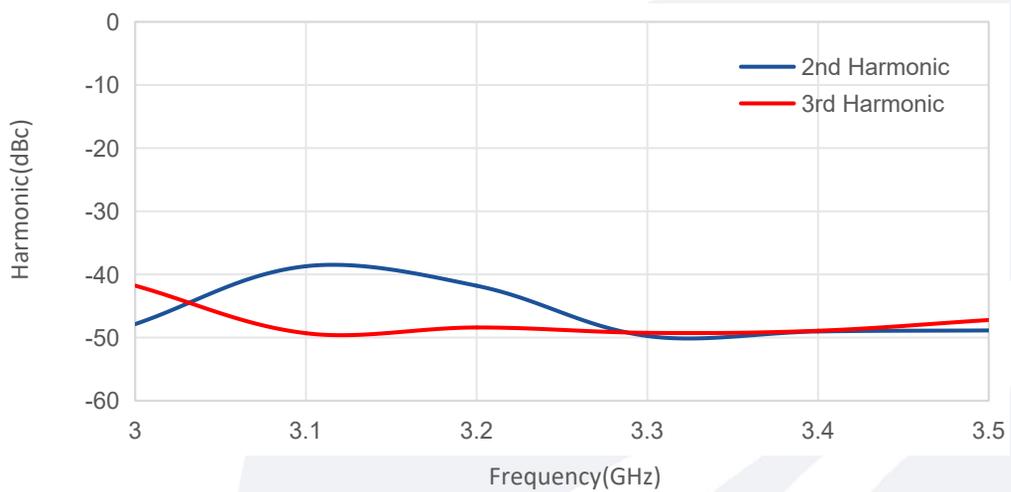
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Spurious vs Frequency



Harmonic vs Frequency



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