

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

Electrical Characteristics:

Parameter	代码 Symbol	Min	Typ	Max	Units
Frequency range	BW	3.0-3.5			GHz
Working Mode	MOD	PULSE ONLY			
Power Gain	GP	68			dB
Gain flatness	Δ GL		\pm 3		dB
Output Psat	Psat	68			dBm
Spurious@Pout=65dBm	Spur			-60	dBc
Harmonics@Pout=65dBm	HAM			-20	dBc
Input Signal Mode	IPS_MOD	CW/PULSE			
Modulation Signal Level	TTL	0		5	V
Modulation Frequency	MF	1		100	KHz
Pulse Width	T	0.3		500	us
Duty Cycle	τ	0.1		20	%
Rise/Fall Time	Tr		50	100	ns
Pulse Drop@T=100us	Pdrop		0.5	1	dB
Input VSWR	VSWR		1.5	2	:1
AC Voltage	Vac		220		V AC
Power consumption@20%	Pdiss			5000	W

Mechanical Specifications:

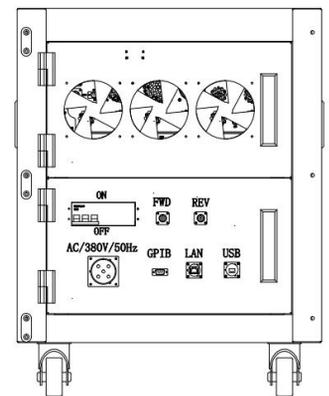
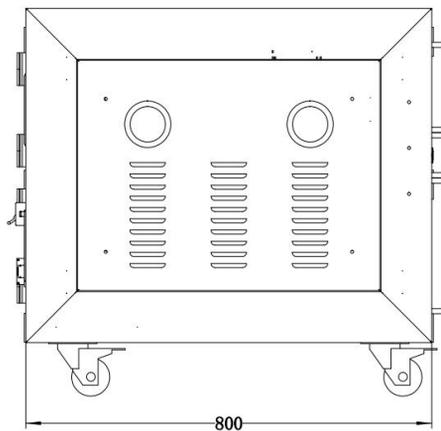
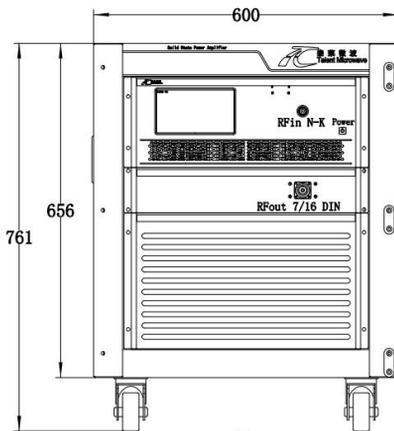
Parameter	Value	Units
Input /Output Connector	SMA Female/7/16 Din Female	
Forward/Reverse Coupling	SMA Female/SMA Female	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Pulse Input Connector	BNC Female	
Communication Connector	DB9/RJ-45	

Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Key Features:

Parameter	Advantages
Control functions	1, Power setting On/Off 2, ALC automatic level control
Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR
Remote control	RS422/Ethernet
Cooling system	Built in Cooling system, forced air cooling

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+40	°C
Non-operating Temperature*	-30		+50	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave, 3 axis both directions			

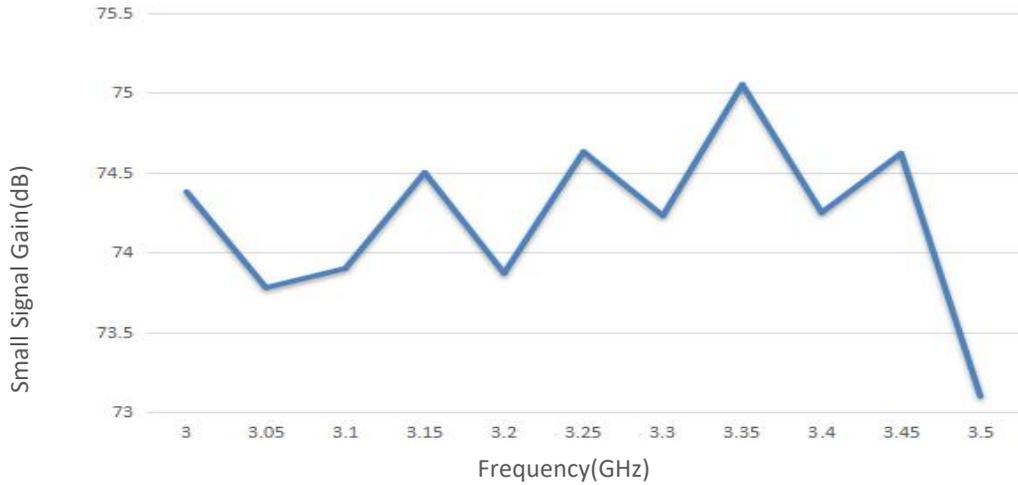
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

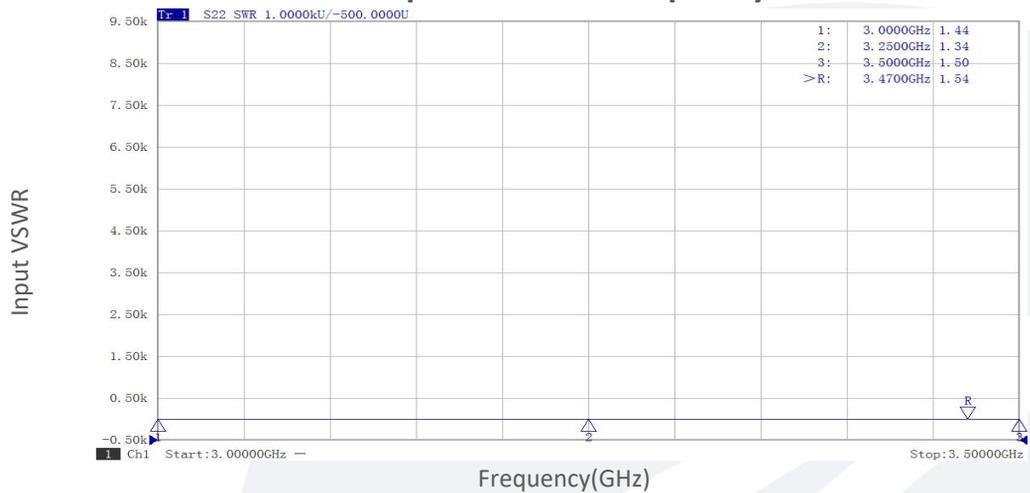
Base Number	Description	Revision
TLPA3.0G3.5G-68-68-P-BC	Solid State High Power Amplifier Systems 3.0-3.5GHz, Gain:68dB, Psat:68 dBm, 220V AC, Built in Fan Cooling	Rev.1.1

Typical Performance Data:

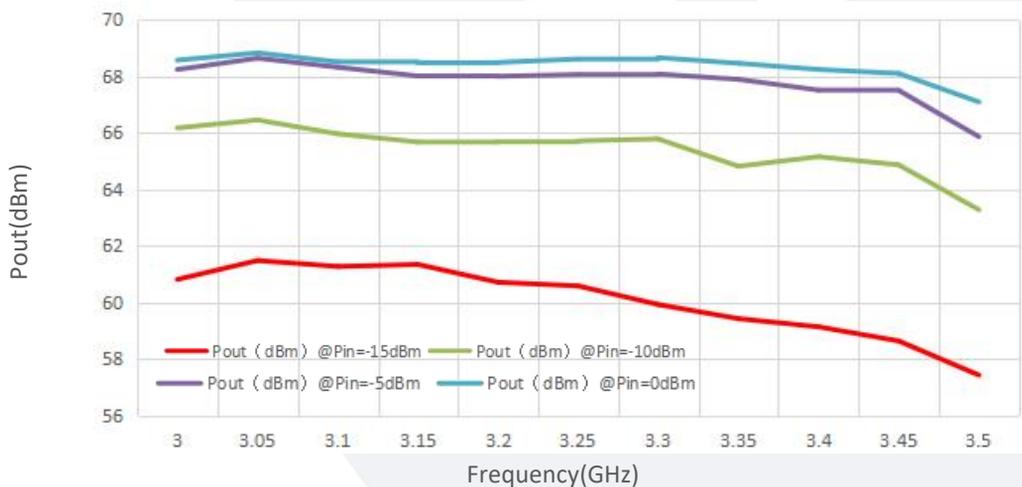
Small Signal Gain vs Frequency



Input VSWR vs Frequency



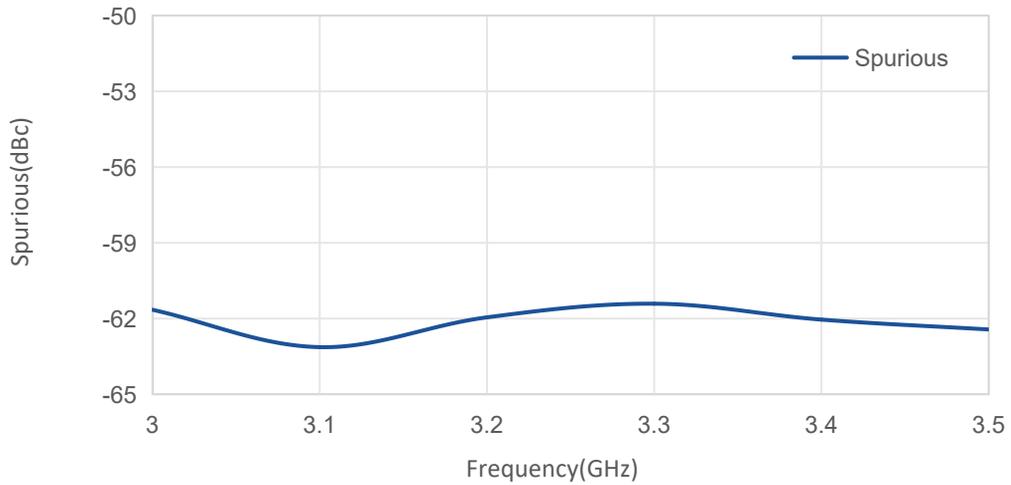
Pout@Equal_Pin



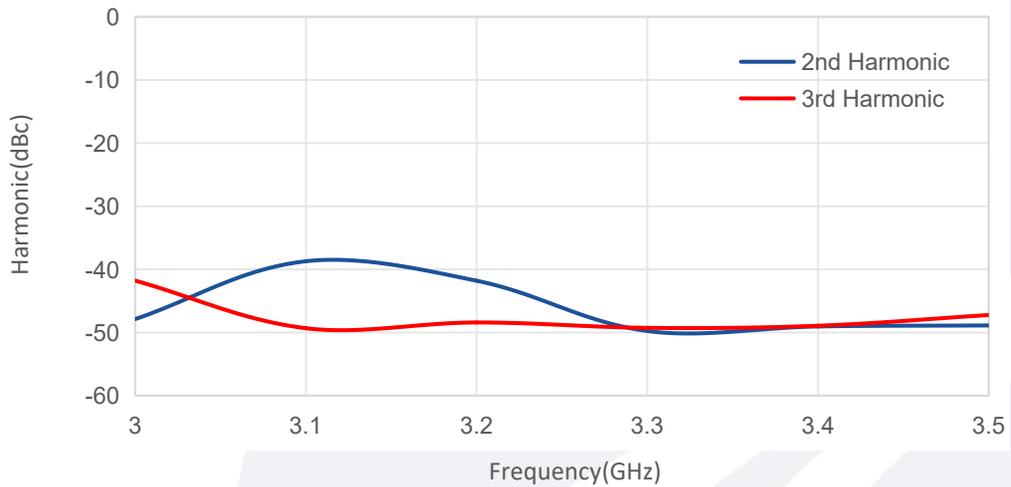
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Spurious vs Frequency



Harmonic vs Frequency



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