

Solid State High Power Amplifier Systems

18-40GHz/40dB Gain/40dBm Psat/220V AC

Model: TLPA18G40G-40-40-BC

TLPA18G40G-40-40-BC is a solid state high power amplifier systems provides high output power and high gain across the 18 to 40GHz 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: 18-40GHz
- Gain: 40dB Min
- Psat Output Power: 40dBm Min
- Protection: Over TEM, over voltage, over current, over VSWR protection
- 50 Ohm Matched Input / Output



Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	18-40			GHz
Power Gain	GP	40			dB
Gain flatness	ΔGL		± 5		dB
Output Psat	Psat	40	41		dBm
ALC Accuracy	ALC			± 0.5	dB
Spurious	Spur			-50	dBc
Harmonics	HAM			-15	dBc
Input VSWR	VSWR _{in}			2.0	:1
AC Voltage	Vac		220		V AC
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
Communication Connector	DB9	
Size	19 Inch 2U	
Weight	≤ 25	Kg

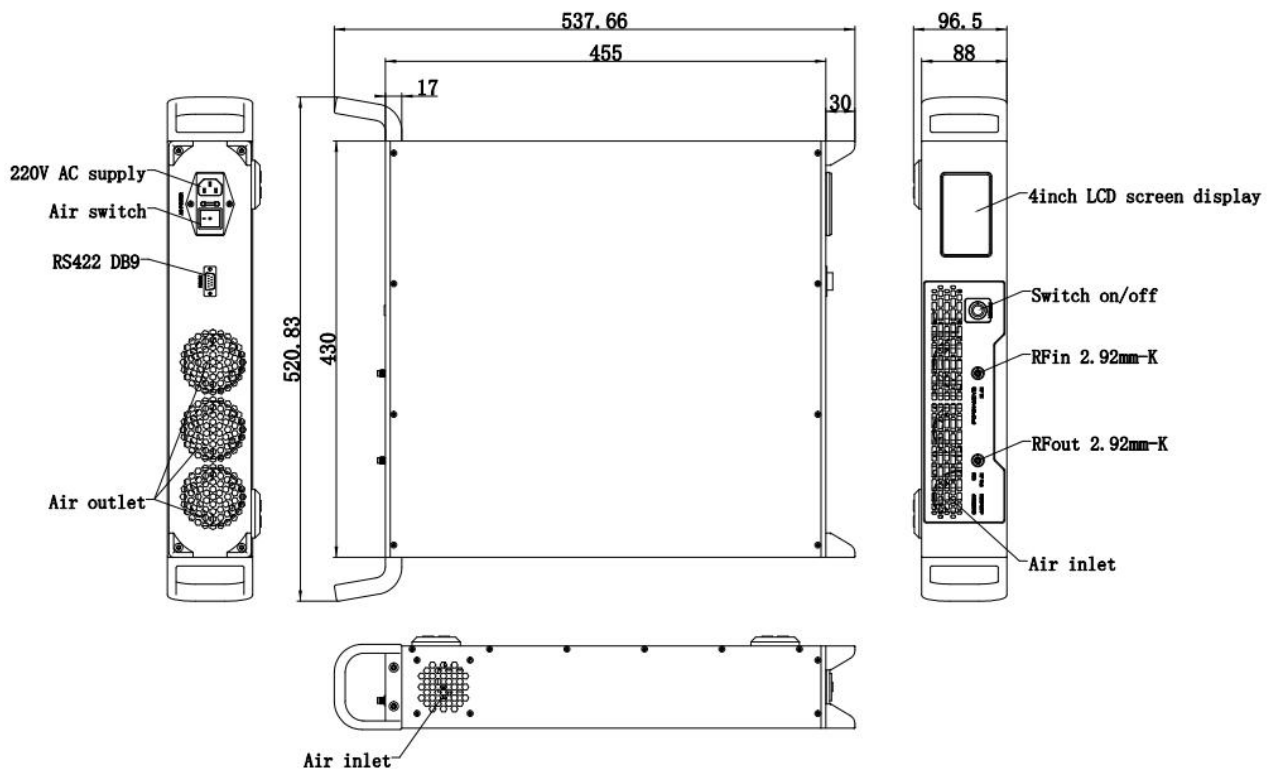
Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

Regulatory Compliance:



Key Features:

Parameter	Advantages
Control functions	1, Power setting on/off 2, RF on/off 3, Gain adjustment
Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR
Remote control	RS422
Cooling system	Built in Cooling system, forced air cooling

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	°C
Non-operating Temperature*	-30		+60	°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			

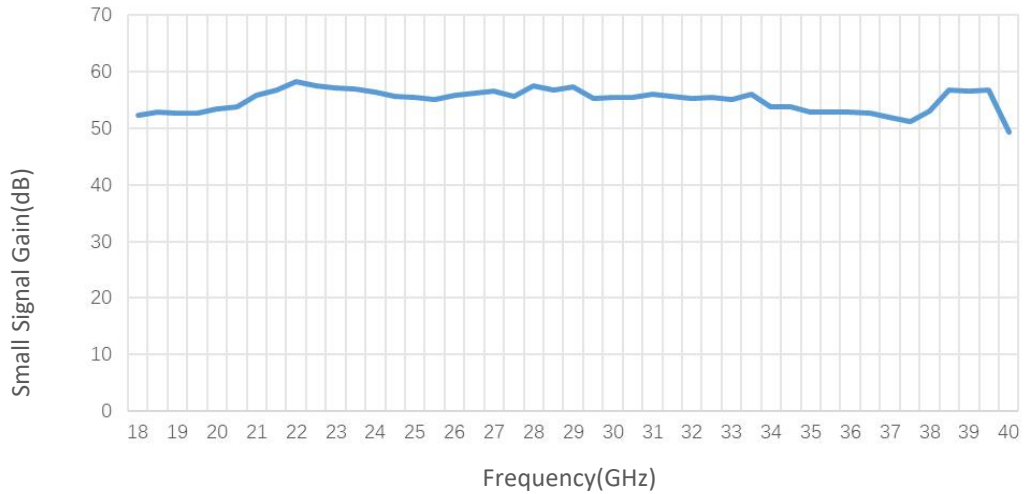
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

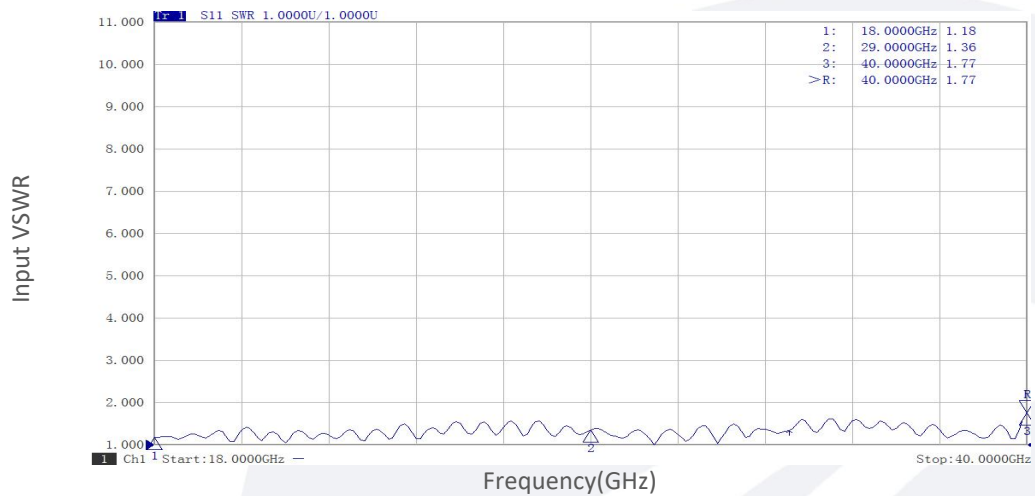
Base Number	Description	Revision
TLPA18G40G-40-40-BC	Solid State High Power Amplifier Systems 18-40GHz, Gain:40dB, Psat:40dBm, 220V AC, Built in Fan Cooling	Rev.1.1

Typical Performance Data:

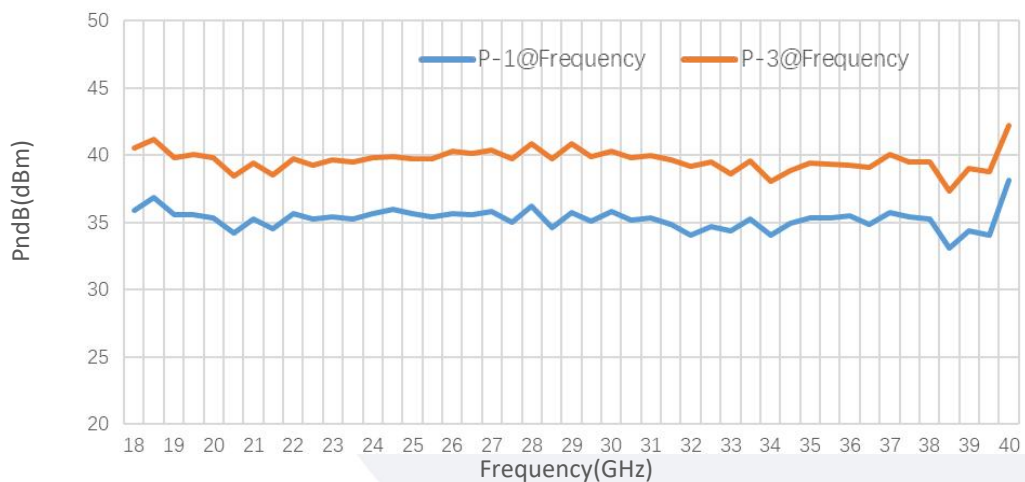
Small Signal Gain vs Frequency



Input VSWR vs Frequency

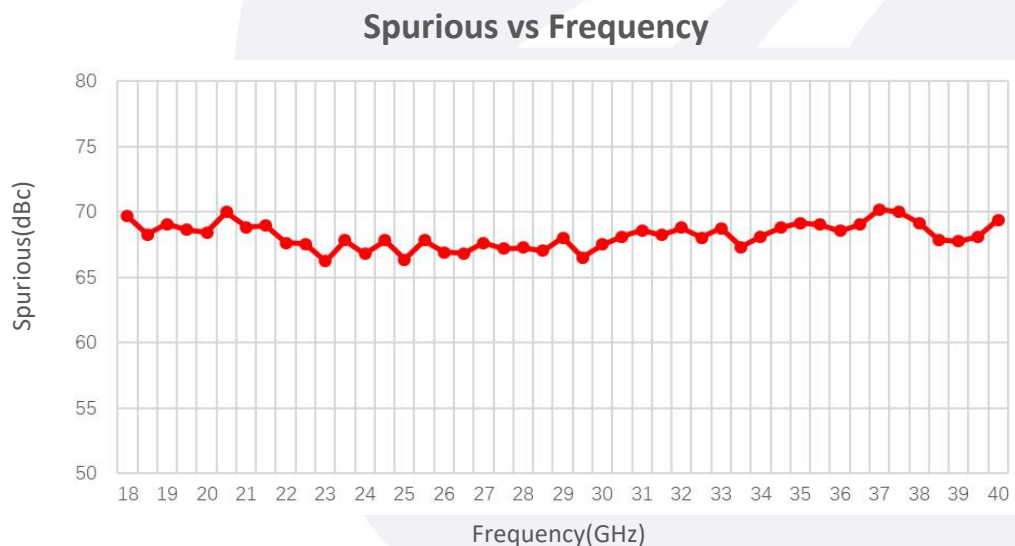
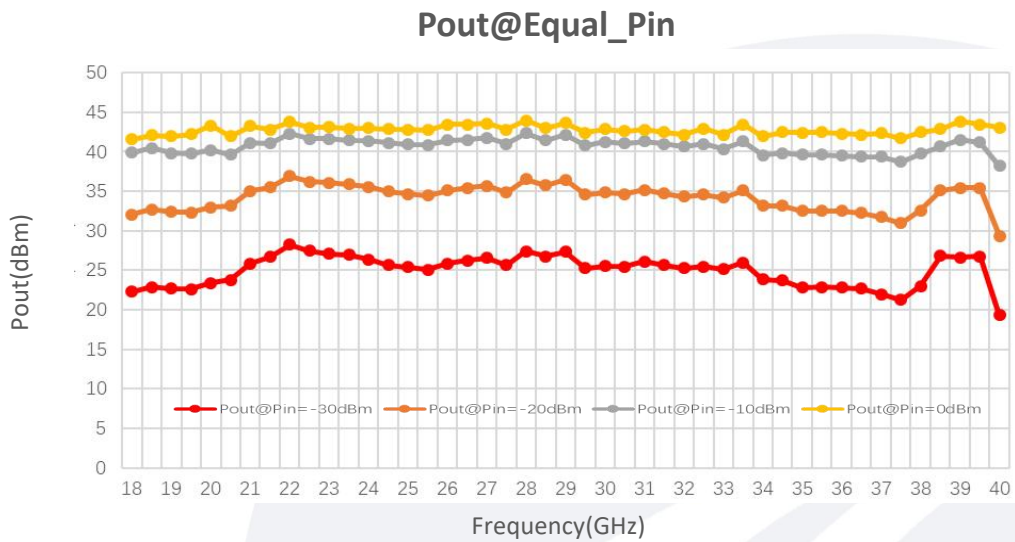
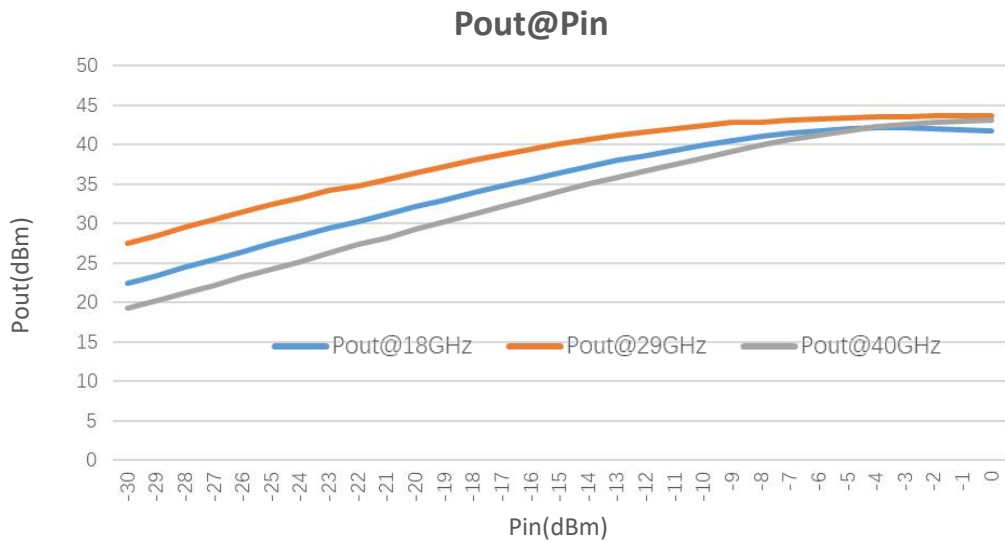


PndB vs Frequency



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.

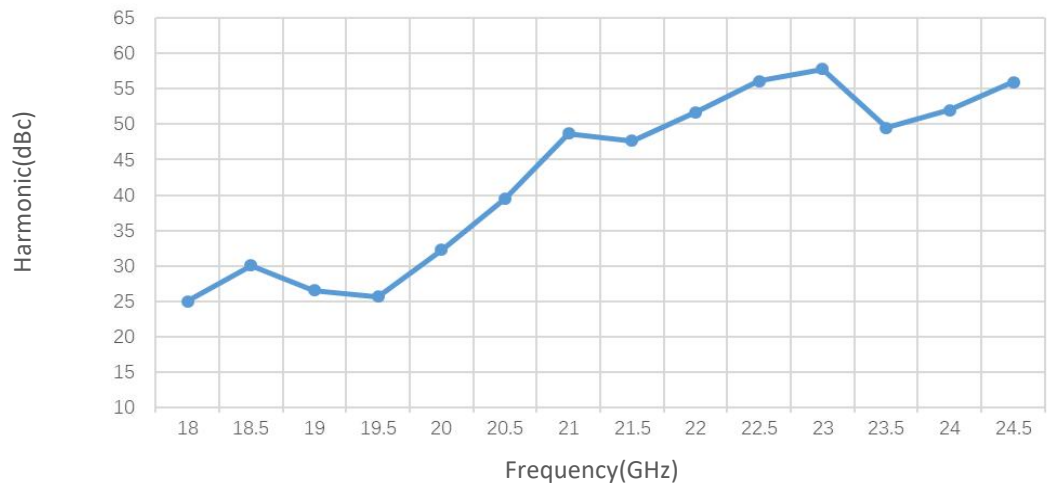
Typical Performance Data:



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Typical Performance Data:

Harmonic vs Frequency



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