

Solid State High Power Amplifier Systems

18-40GHz/47dB Gain/48dBm Psat/220V AC

Model: TLPA18G40G-47-48-BC

TLPA18G40G-47-48-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: 47dB Min
- Psat Output Power: 48dBm Typ
- 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	47			dB
Gain flatness	ΔGL		± 5		dB
Output Psat	Psat	47	48		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
Power Consumption	Pdiss			1800	W
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92mm Female/WRD180	
Communication Connector	RJ45/DB9	
Size	19 Inch 5U	
Weight	≤ 45	Kg

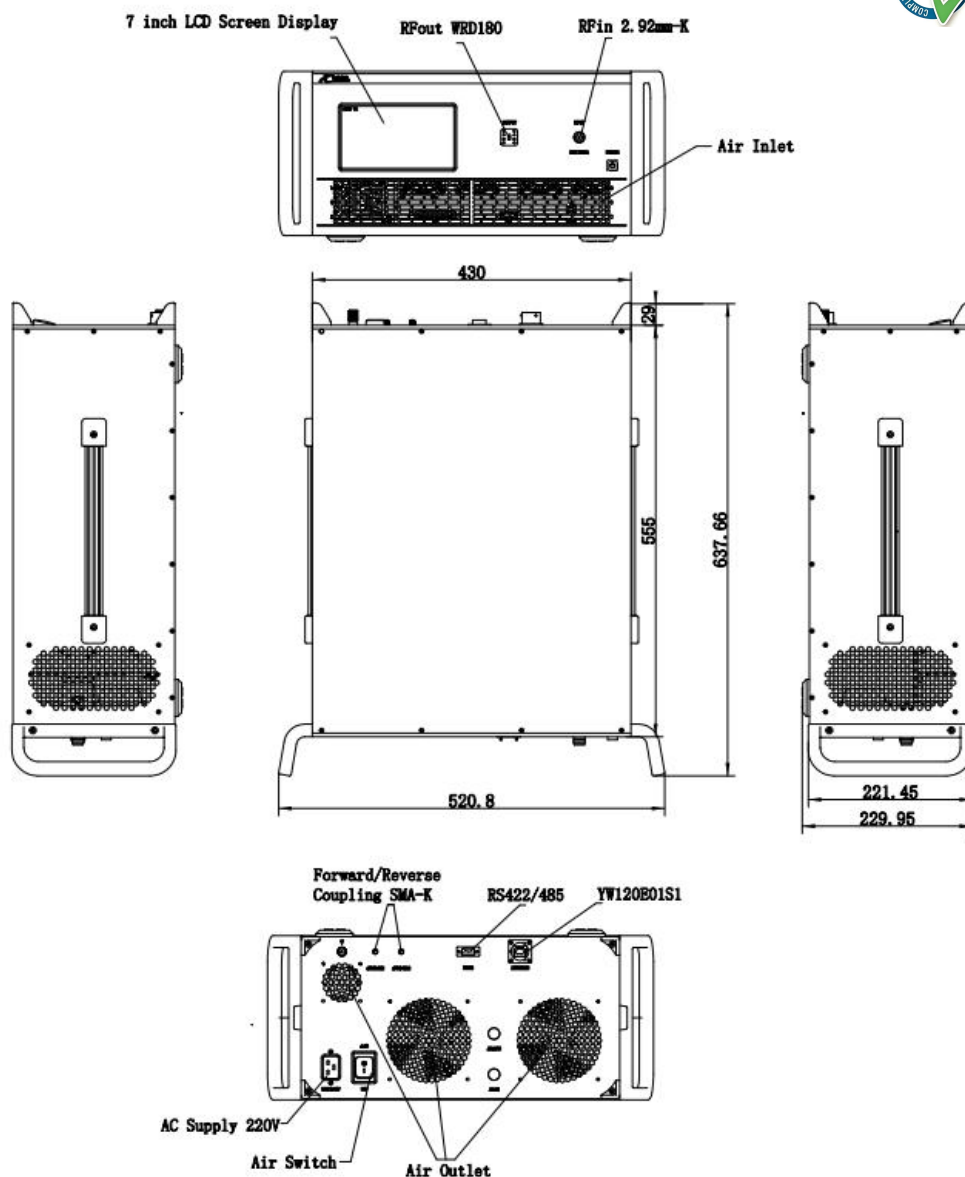
Absolute Maximum Ratings:

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/LAN
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			

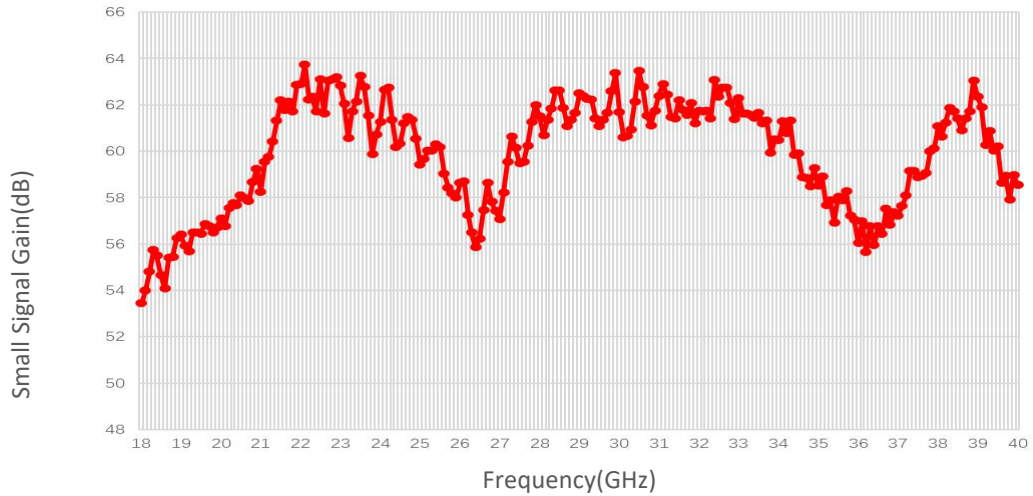
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

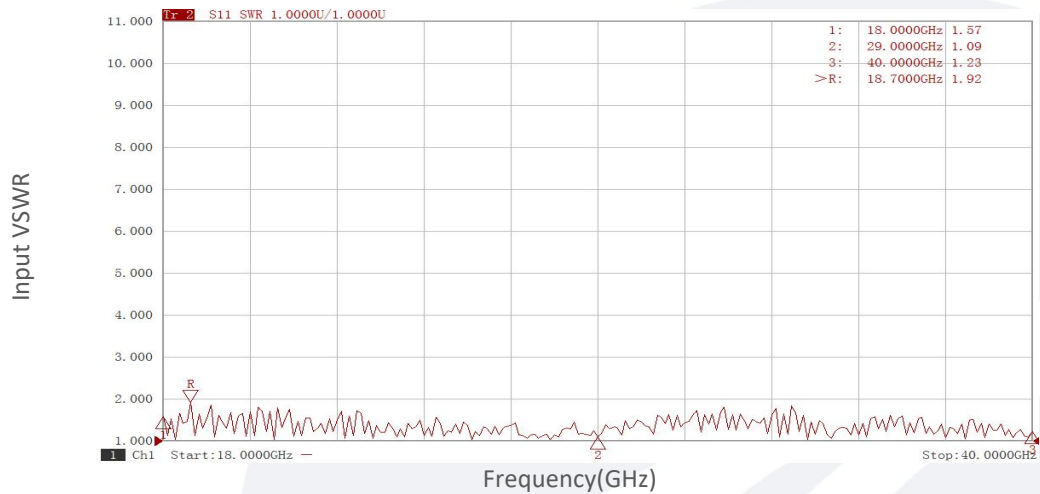
Base Number	Description	Revision
TLPA18G40G-47-48-BC	Solid State High Power Amplifier Systems 18-40GHz, Gain: 47dB, Psat: 48dBm, 220V AC, Built in Fan Cooling	Rev.1.1

Typical Performance Data:

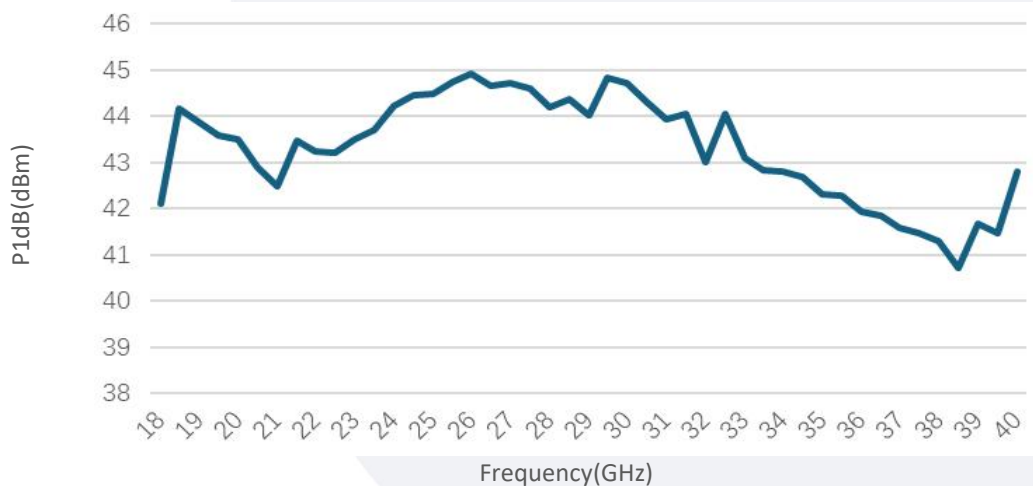
Small Signal Gain vs Frequency



Input VSWR vs Frequency

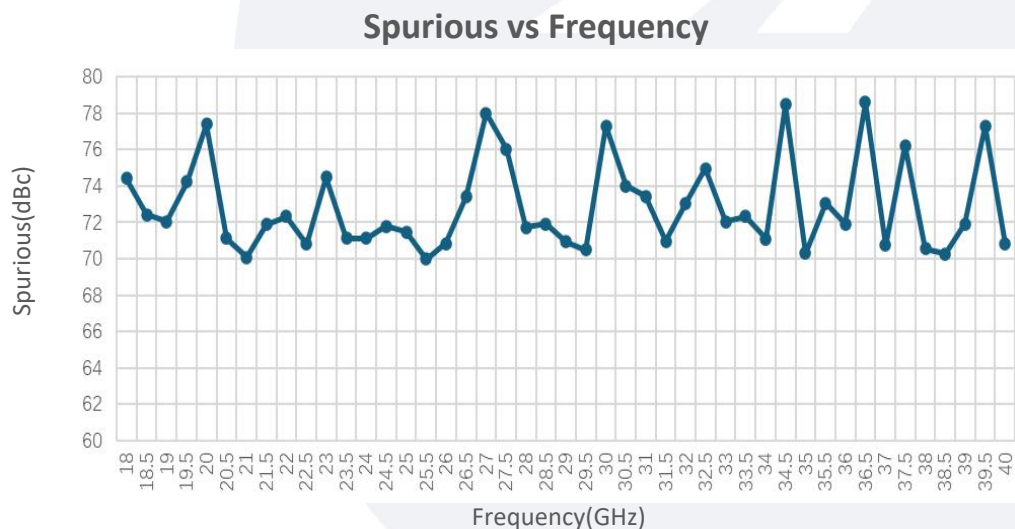
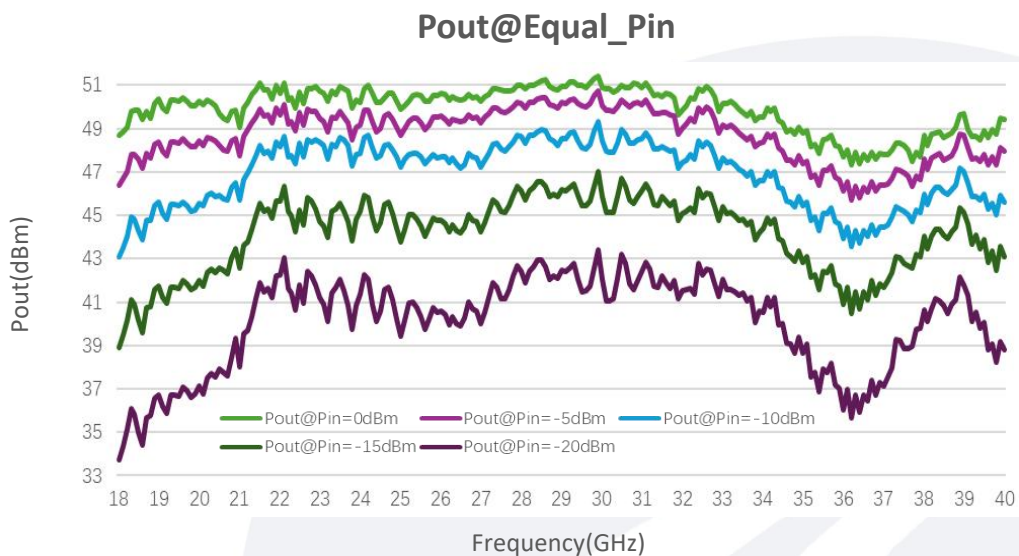
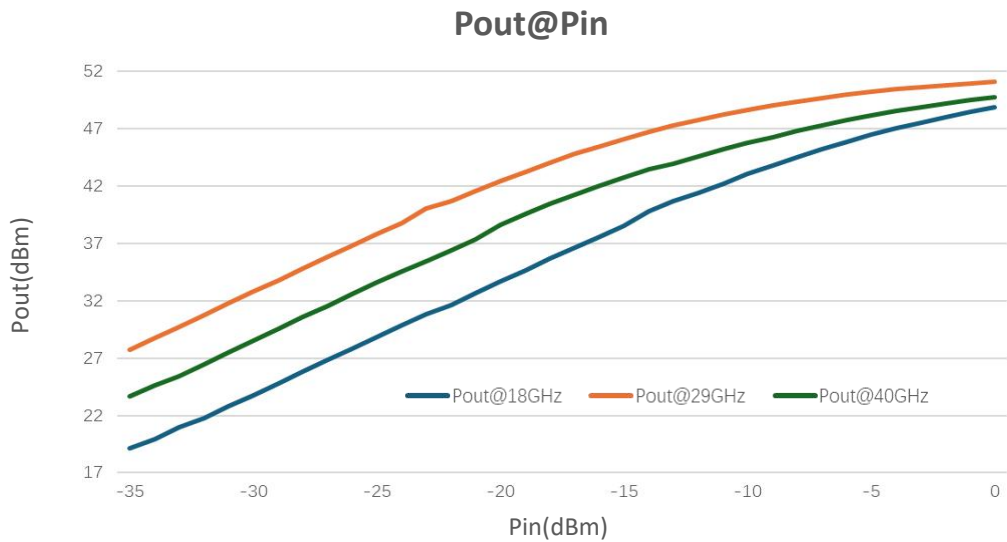


P1dB vs Frequency



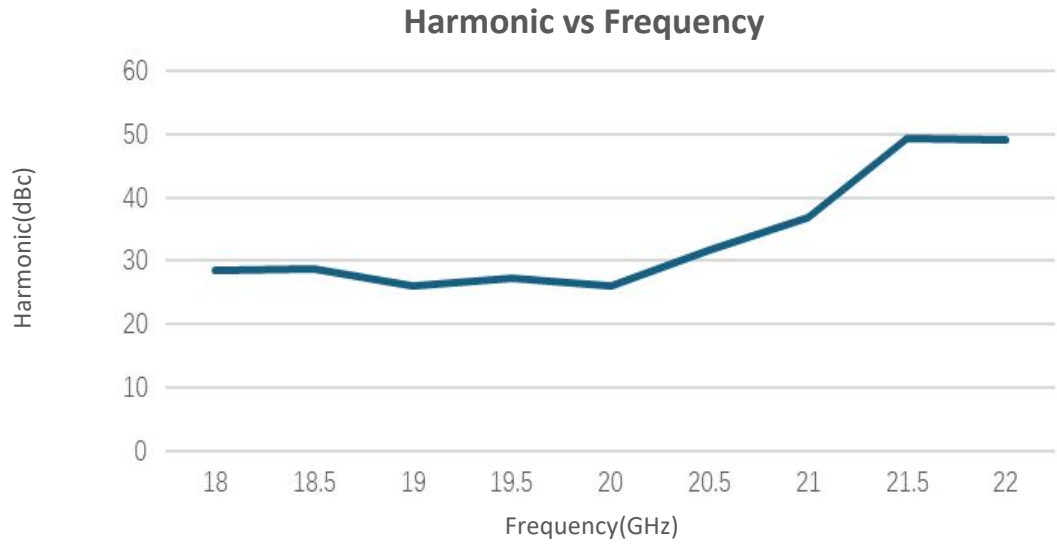
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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