

Solid State High Power Amplifier Systems

40-60GHz /47dB Gain/50 dBm Psat/220V AC

Model: TLPA40G60G-47-47-BC

TLPA40G60G-47-47-BC is a solid state high power amplifier systems provides high output power and high gain across the 40 to 60 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: 40-60GHz
- Gain: 47dB Min
- Psat Output Power: 50dBm 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	40-60			GHz
Power Gain	GP	47			dB
Gain flatness	Δ GL		± 5		dB
Output Psat	Psat	50			dBm
ALC Accuracy	ALC			± 0.5	dB
Spurious	Spur			-50	dBc
Input VSWR	VSWR _{in}		2.5		:1
AC Voltage	V _{ac}		220		V AC
Power Consumption	P _{diss}			1500	W
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	WR-19/WR-19	
Communication Connector	DB9/RJ45	
Size	19 Inch 5U	
Weight	≤ 45	Kg

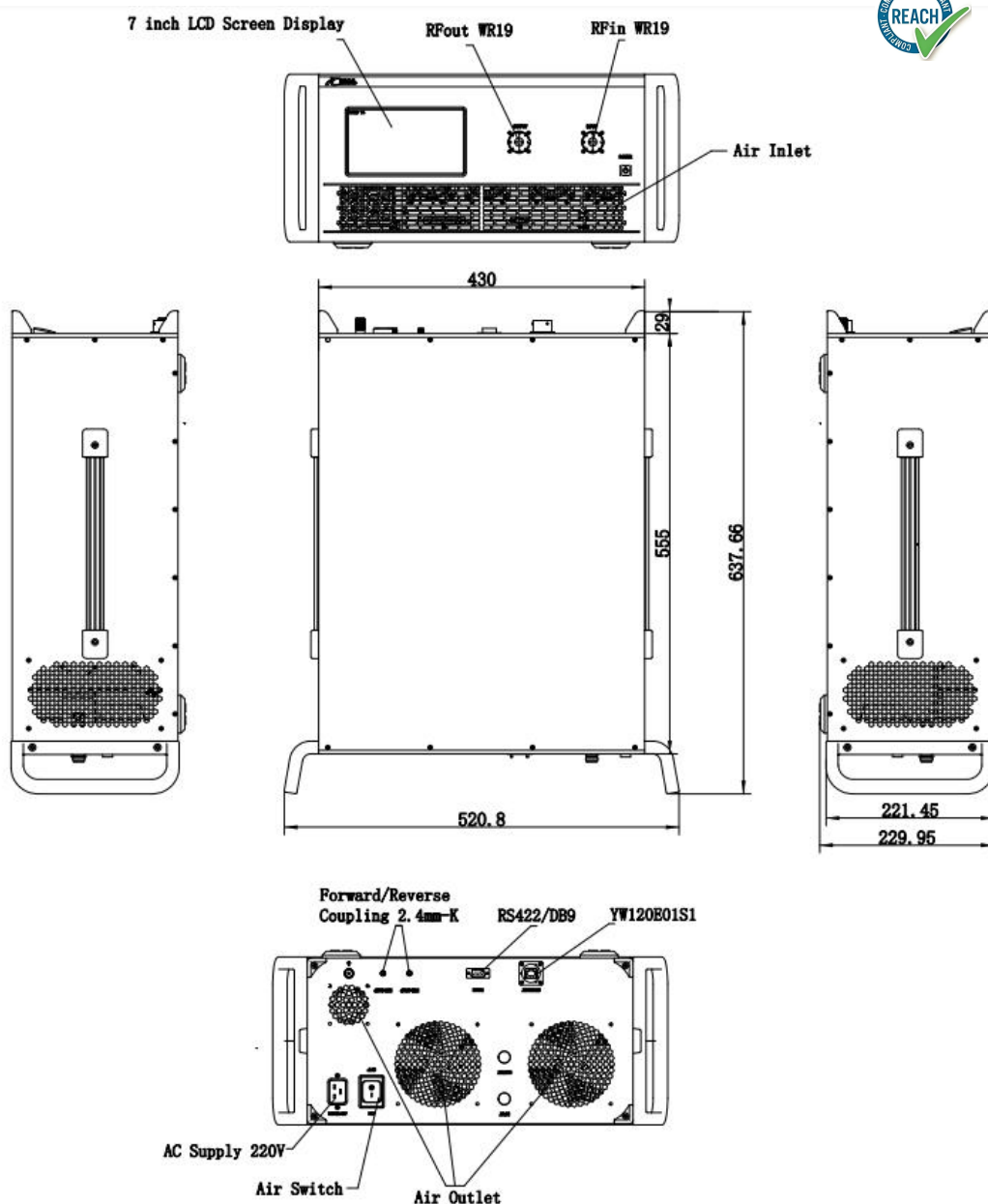
Absolute Maximum Ratings:

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, Psat adjust
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			

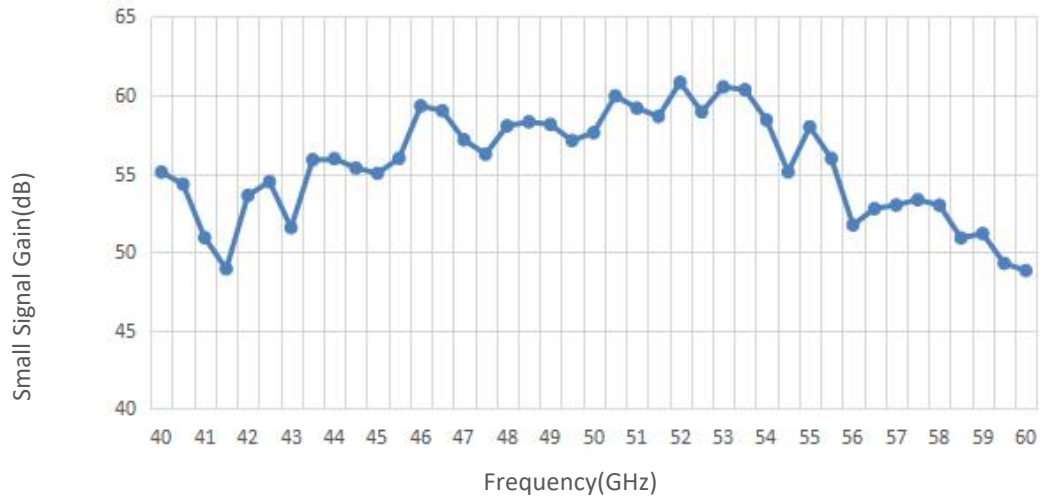
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

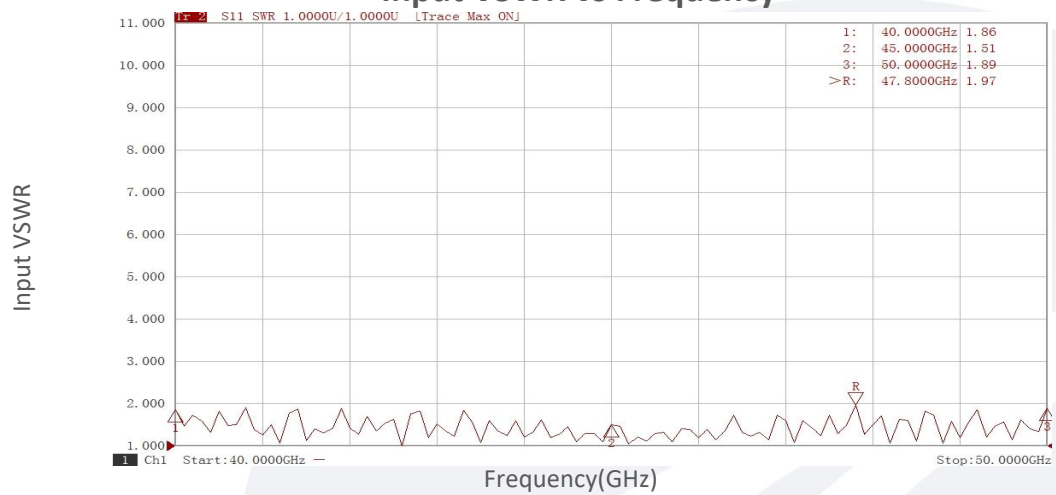
Base Number	Description	Revision
TLPA40G60G-47-47-BC	Solid State High Power Amplifier Systems 40-60GHz, Gain: 47dB, Psat: 47 dBm, 220V AC, Built in Fan Cooling	Rev.1.1

Typical Performance Data:

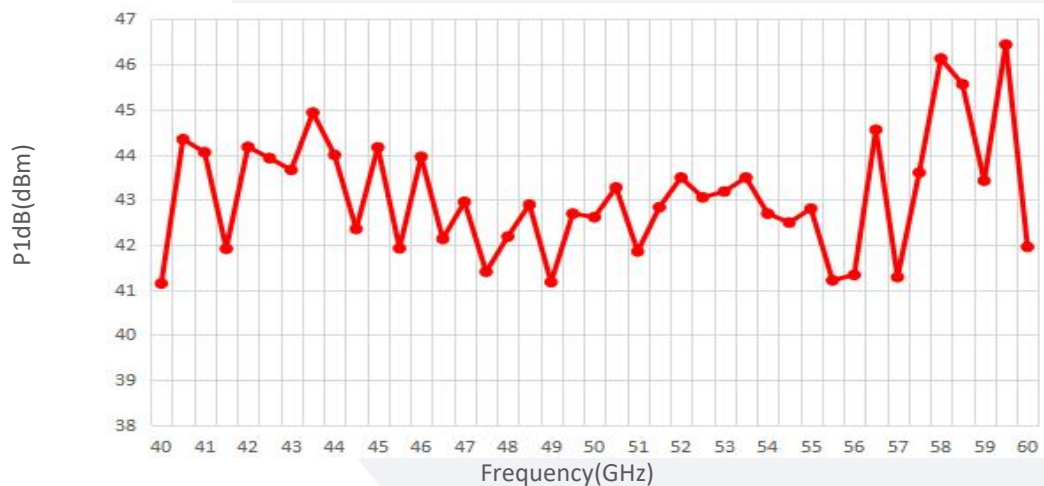
Small Signal Gain vs Frequency



Input VSWR vs Frequency



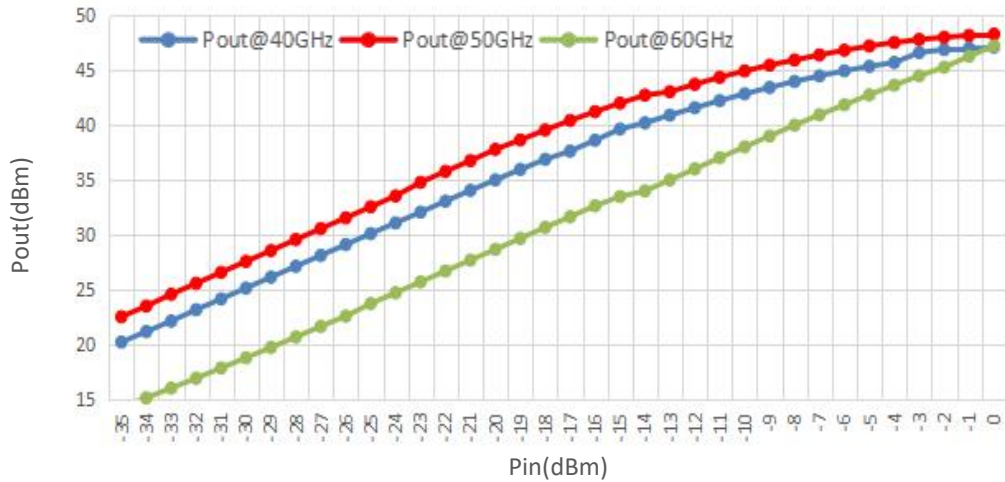
P1dB vs Frequency



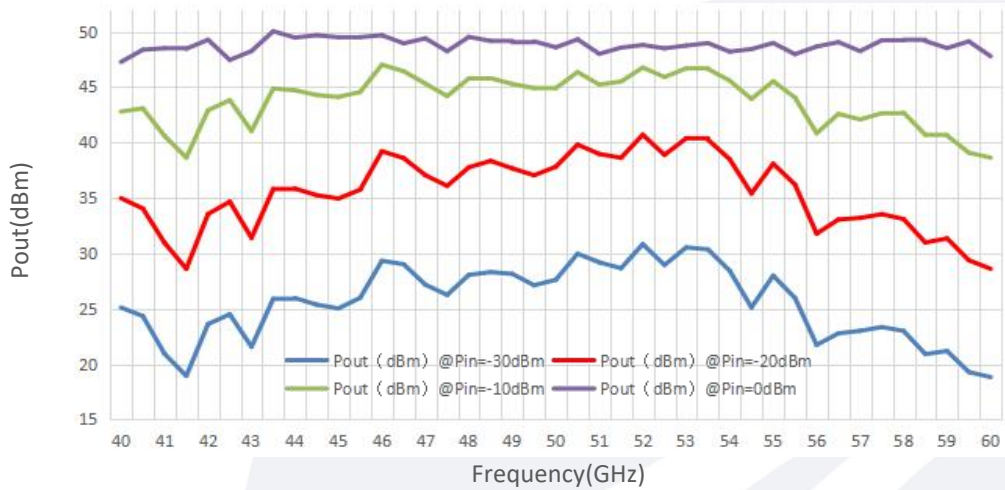
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

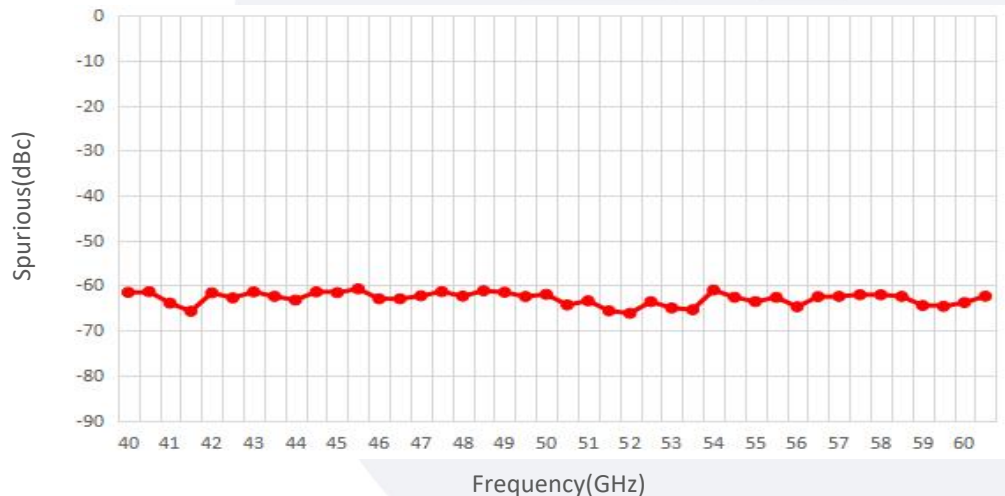
Pout@Pin



Pout@Equal_Pin



Spurious 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.