

Solid State High Power Amplifier Systems

50-75GHz/47dB Gain/47dBm Psat/220V AC

Model: TLPA50G75G-47-47-BC

TLPA50G75G-47-47-BC is a solid state high power amplifier systems provides high output power and high gain across the 50 to 75 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: 50-75GHz
- Gain: 47dB Min
- Psat Output Power: 47dBm 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	50-75			GHz
Power Gain	GP	47			dB
Linear Gain flatness	Δ GL		± 5		dB
Gain adjust Range	Δ GR		20		dB
Gain adjust Step	Δ GS		0.5		dB
Output Psat	Psat	47			dBm
Spurious@Pout=47dBm	Spur			-60	dBc
Harmonics@Pout=47dBm	HAM			-30	dBc
Input VSWR	VSWRin		3		:1
Load VSWR	/			3	:1
AC Voltage	Vac		220		V AC
Power Consumption	Pdiss			1500	W
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

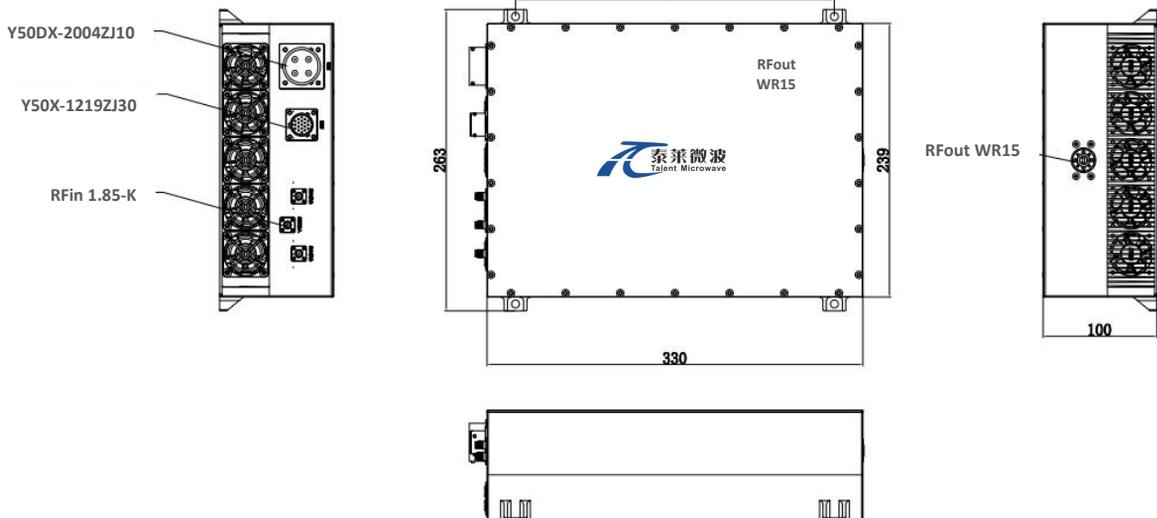
Parameter	Value	Units
Input /Output Connector	1.85mm Female/WR-15	
Forward/Reverse Coupling	1.85mm Female/ 1.85mm Female	
AC Supply Connector	Y50DX-2004	
Control Connector	Y50X-1219	
Size	280*239*100	mm
Weight	≤20	Kg

Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm



Key Features:

Parameter	Advantages
Protection functions	1,Over TEM 2,Over voltage 3,Over current 4,Over VSWR
Monitoring Function	1,Working voltage 2,Working current 3,Case/environment TEM 4,Output/reflected power
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			

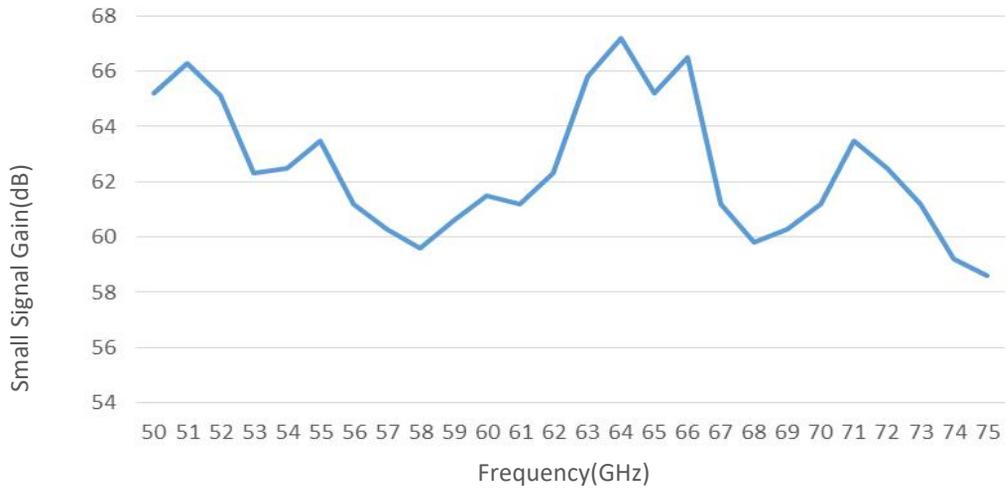
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

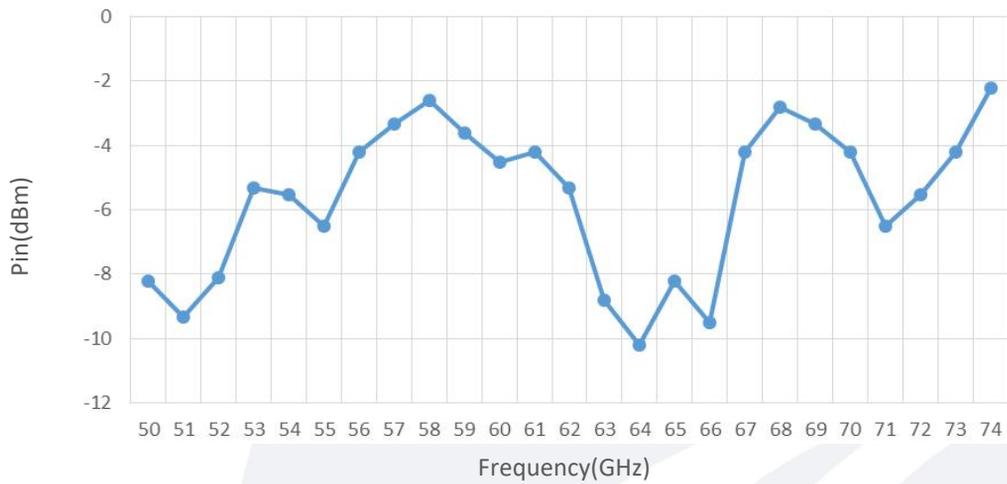
Base Number	Description	Revision
TLPA50G75G-47-47-BC	Solid State High Power Amplifier Systems 50-75GHz, Gain:47dB, Psat:47 dBm, 220V AC, Built in Fan Cooling	Rev.1.1

Typical Performance Data:

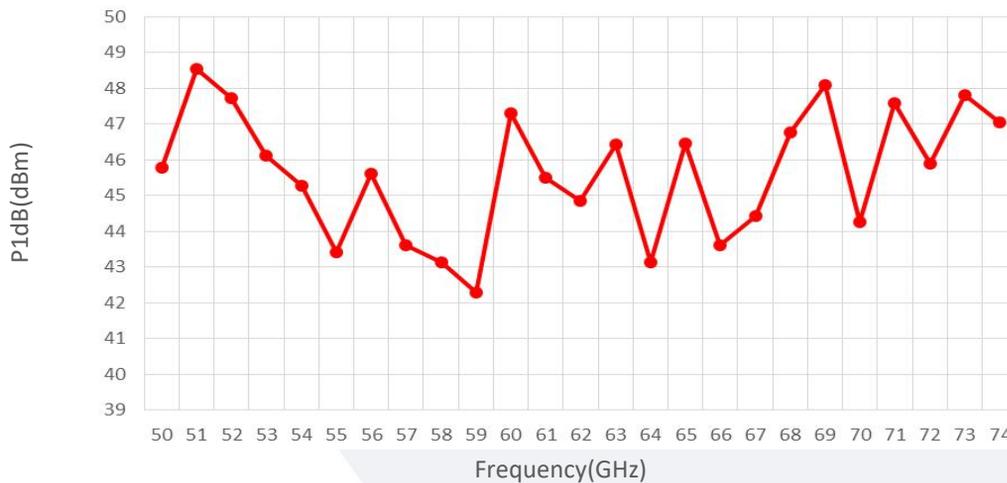
Small Signal Gain vs Frequency



Pin@Equal_Pout vs Frequency

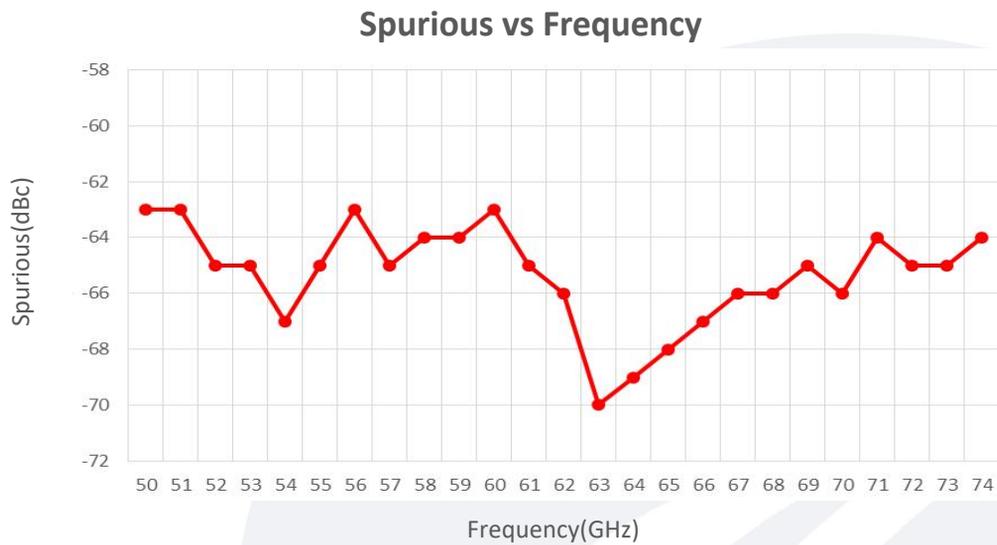
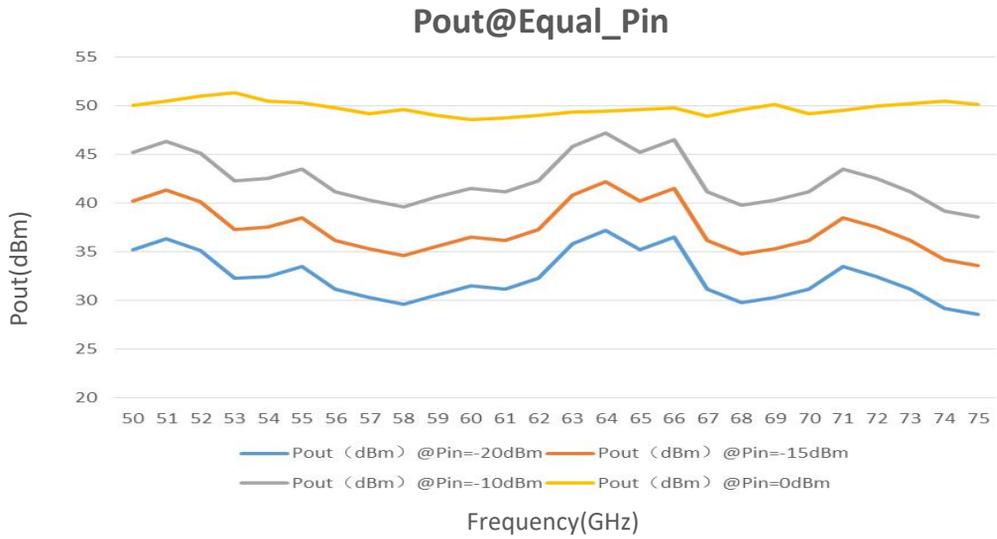


P1dB vs Frequency



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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