

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

电气特性 Electrical Characteristics:

参数 Parameter	代码 Symbol	Min	Typ	Max	单位 Units
频率范围 Frequency range	BW	50-75			GHz
功率增益 Power Gain	GP	47			dB
线性增益平坦度 Linear Gain flatness	ΔGL		±5		dB
增益调节范围 Gain adjust Range	ΔGR		20		dB
增益调节步进 Gain adjust Step	ΔGS		0.5		dB
饱和输出功率 Output Psat	Psat	47			dBm
杂散 Spurious@Pout=47dBm	Spur			-60	dBc
谐波 Harmonics@Pout=47dBm	HAM			-30	dBc
输入驻波 Input VSWR	VSWRin		3		:1
匹配负载驻波 Load VSWR	/			3	:1
交流电压 AC Voltage	Vac		220		V AC
功耗 Power Consumption	Pdiss			1500	W
阻抗 Impedance	I/O-IMP	50			Ohms

机械特性 Mechanical Specifications:

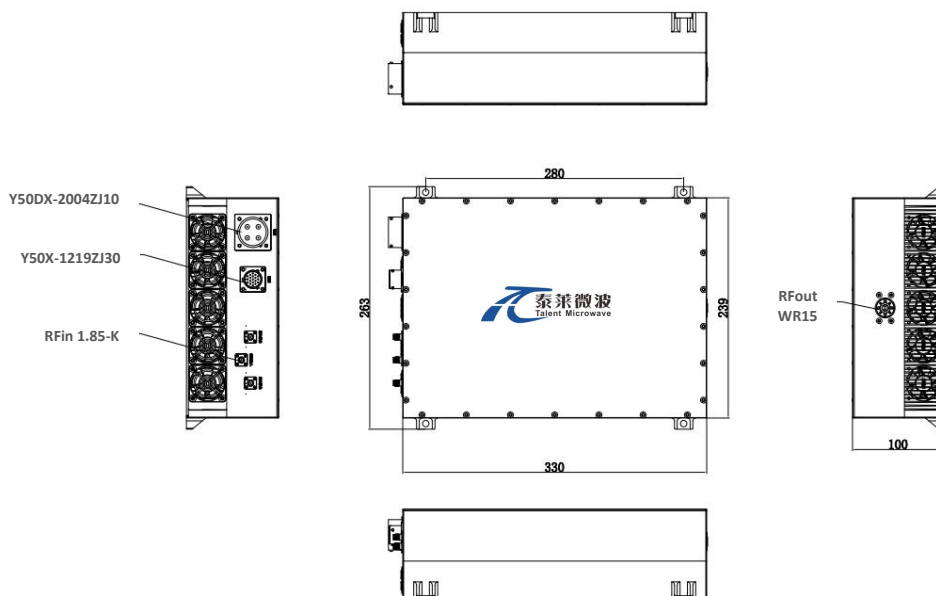
参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	1.85mm Female/WR-15	
正向/反向耦合 Forward/Reverse Coupling	1.85mm Female/ 1.85mm Female	
交流供电接口 AC Supply Connector	Y50DX-2004	
控制接口 Control Connector	Y50X-1219	
尺寸 Size	280*239*100	mm
重量 Weight	≤20	Kg

绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



主要功能 Key Features:

参数 Parameter	特点 Advantages
内置保护功能 Protection functions	1,Over TEM 2,Over voltage 3,Over current 4,Over VSWR
监测功能 Monitoring Function	1,Working voltage 2,Working current 3,Case/environment TEM 4,Output/reflected power
冷却系统 Cooling system	Built in Cooling system,forced air cooling

温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature*	-20		+40	℃
存储温度 Non-operating Temperature*	-30		+50	℃
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

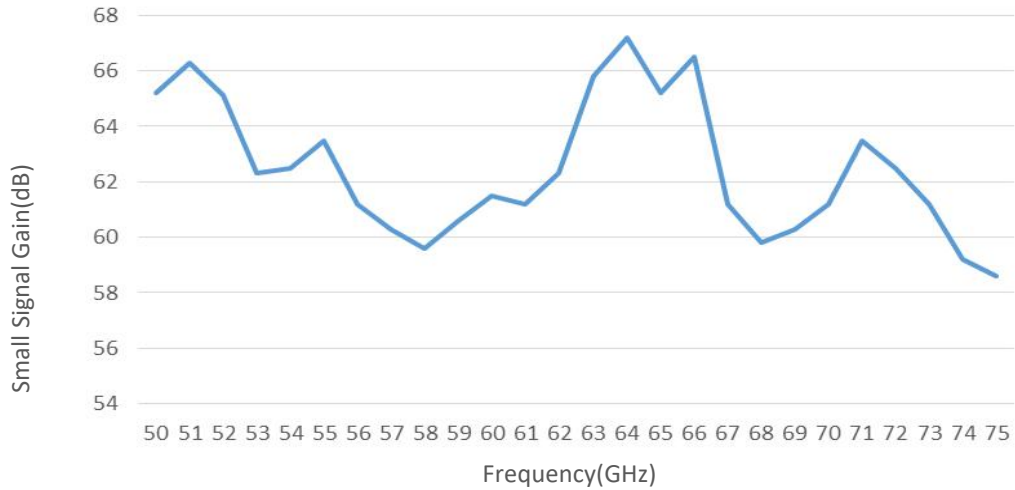
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

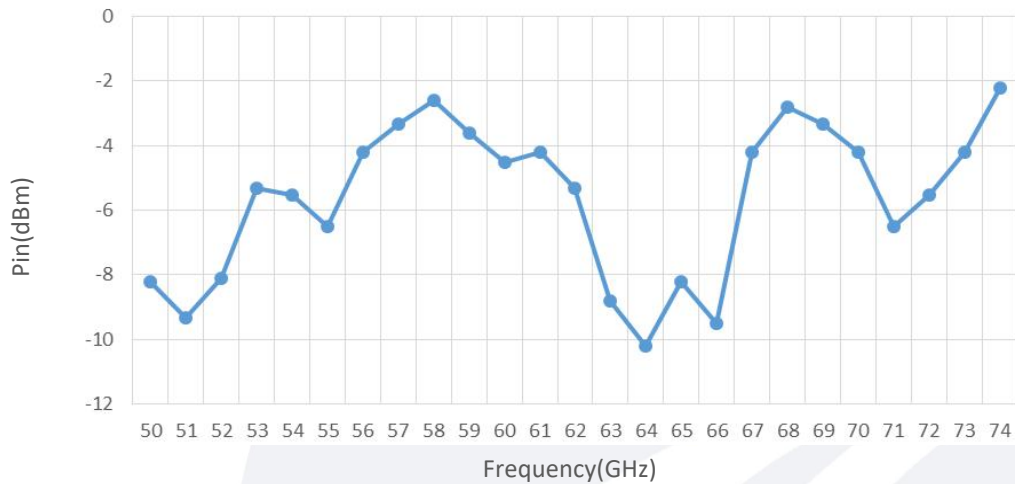
标准型号 Base Number	描述 Description	版本号 Revision
TLPA50G75G-47-47-BC	Solid State High Power Amplifier Systems 50-75GHz,Gain:47dB,Psat:47 dBm,220V AC,Built in Fan Cooling	Rev.1.1

典型曲线 Typical Performance Data:

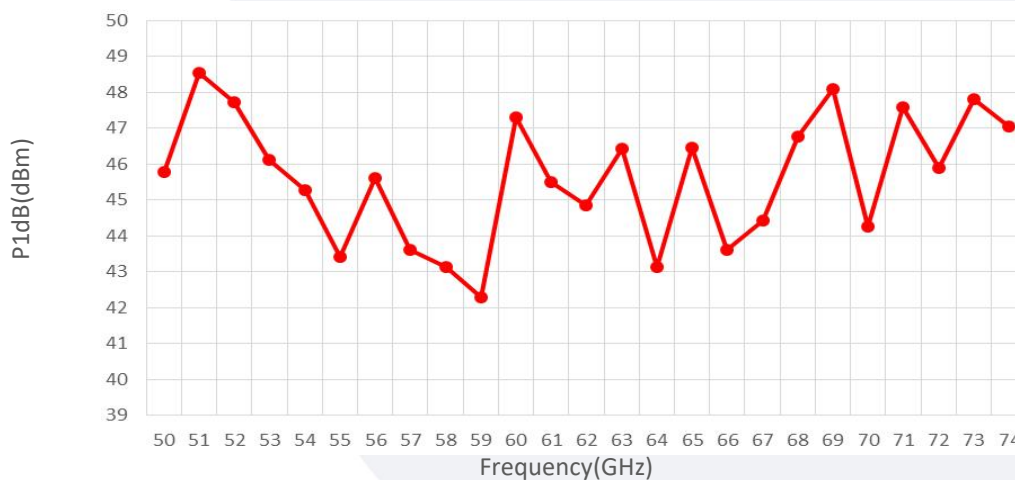
Small Signal Gain vs Frequency



Pin@Equal_Pout vs Frequency

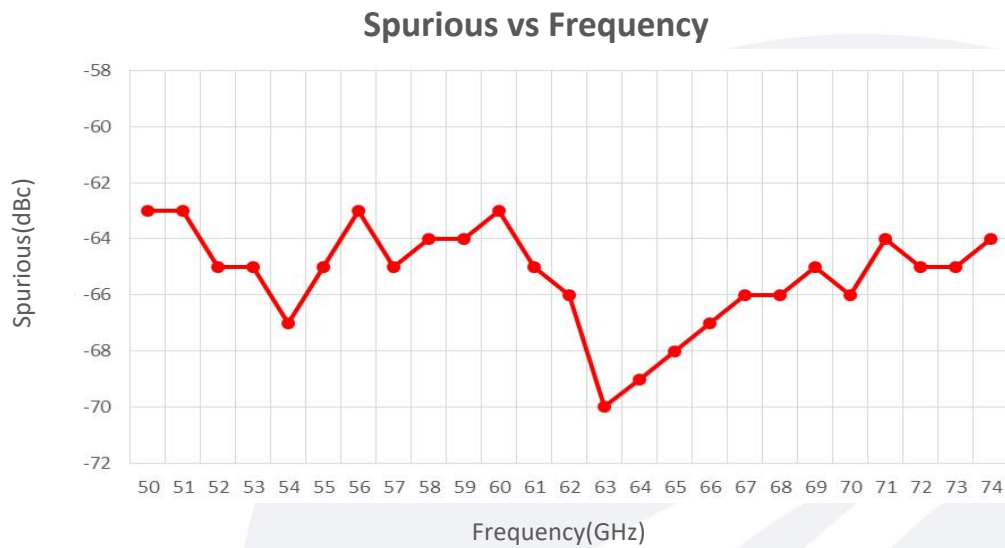
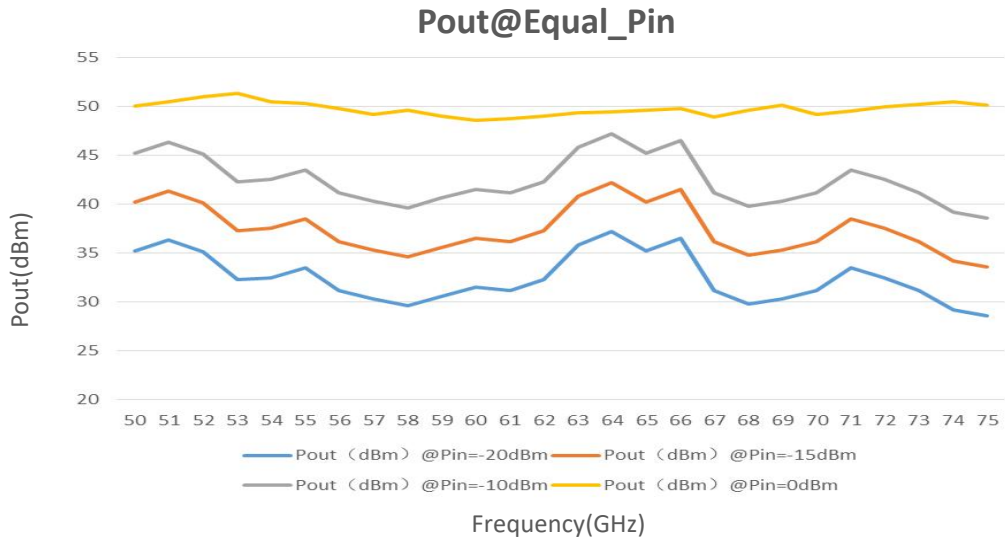


P1dB vs Frequency



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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