

Solid State High Power Amplifier Systems

2.5-7.5GHz /60dB Gain/60 dBm Psat/380V AC

Model: TLPA2.5G7.5G-60-60-BC

TLPA2.5G7.5G-60-60-BC is a solid state high power amplifier systems provides high output power and high gain across the 2.5 to 7.5 GHz frequency range. The amplifier features a built-in 380V 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:

- Wide Band: 2.5-7.5 GHz
- Gain: 60dB Min
- Psat Output Power:60dBm Min
- Protection:Over TEM,over voltage, over current ,output mismatch 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	2.5-7.5			GHz
工作模式 Working Mode	MOD	CW/PULSE compatible			
功率增益 Power Gain	GP	60			dB
增益平坦度 Gain flatness	ΔGL		± 4		dB
饱和输出功率 Output Psat	Psat	60			dBm
杂散 Spurious@Pout=60dBm	Spur			-60	dBc
谐波 Harmonics@Pout=60dBm	HAM		-15		dBc
交流电压 AC Voltage	Vac		380		V AC
功耗 Power Consumption@Pout=60dBm	Pdiss		7000		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	N Female/WRD250	
正向/反向耦合 Forward/Reverse Coupling	SMA Female/SMA Female	
液晶显示屏 Front Panel LCD Screen Display	7 inch LCD Screen Display	
通信接口 Communication Interface	DB9/RJ-45	
尺寸 Size	20U*600 width*800 depth	mm
重量 Weight	≤300	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
控制功能 Control functions	1, Power setting On/Off 2, Gain control
内置保护功能 Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Output mismatch
监控和控制 Remote control	RS422/LAN
监测功能 Monitor functions	1, Output power 2, Reflected power 3, TEM 4, Operating voltage 5, Operating current
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	°C
存储温度 Non-operating Temperature*	-30		+50	°C
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			

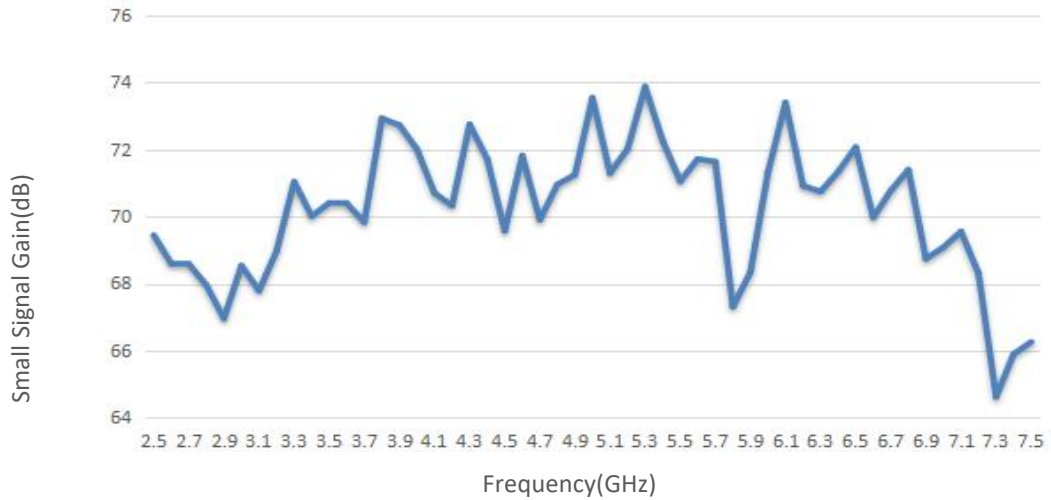
*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

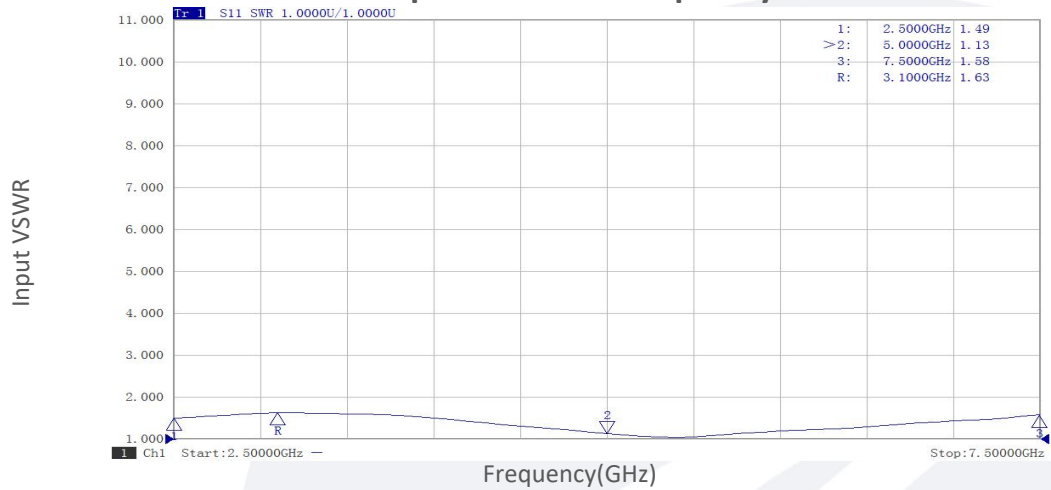
标准型号 Base Number	描述 Description	版本号 Revision
TLPA2.5G7.5G-60-60-BC	Solid State High Power Amplifier Systems 2.5-7.5GHz, Gain: 60dB, Psat: 60 dBm, 380V AC, Built in Fan Cooling	Rev.1.1

典型曲线 Typical Performance Data:

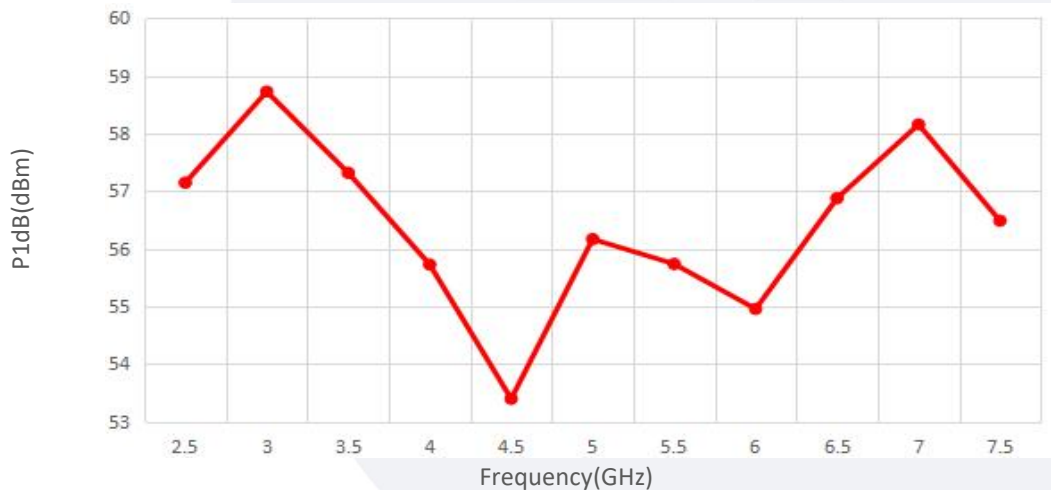
Small Signal Gain vs Frequency



Input VSWR vs Frequency



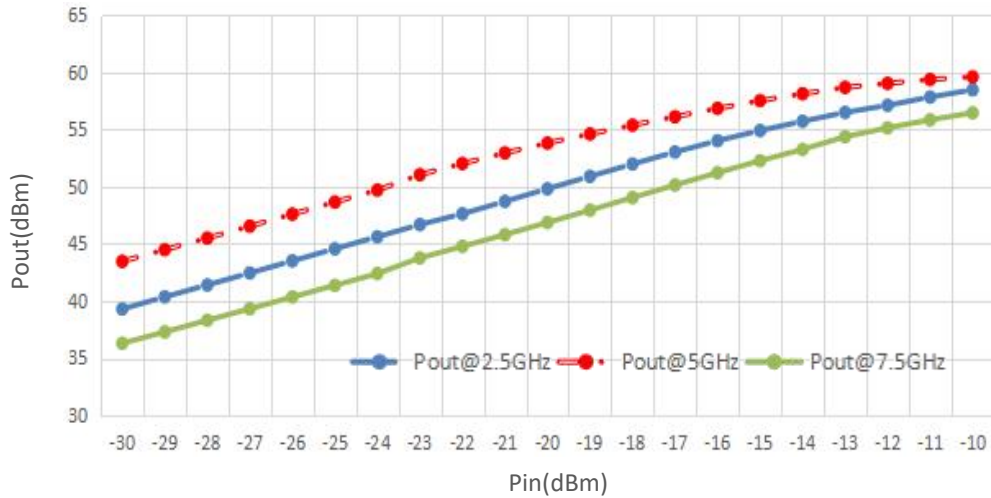
P1dB vs Frequency



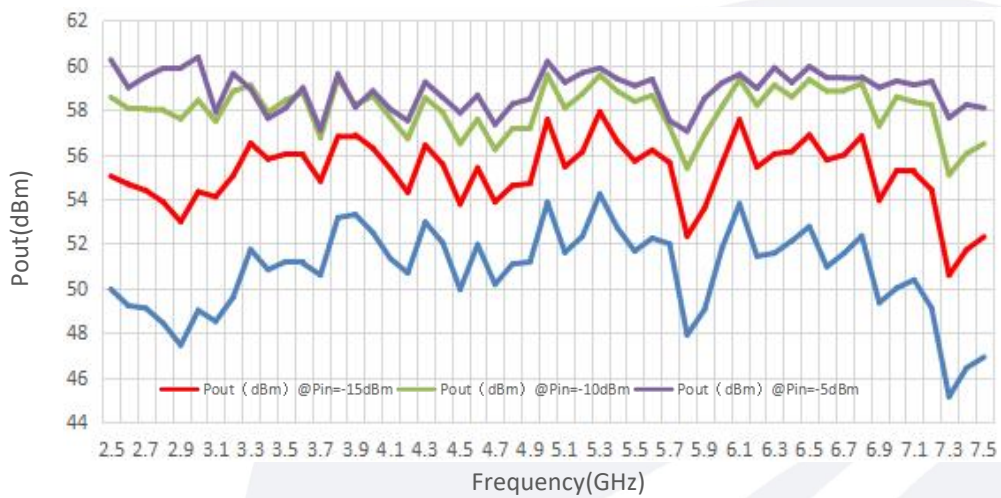
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Pout@Pin



Pout@Equal_Pin



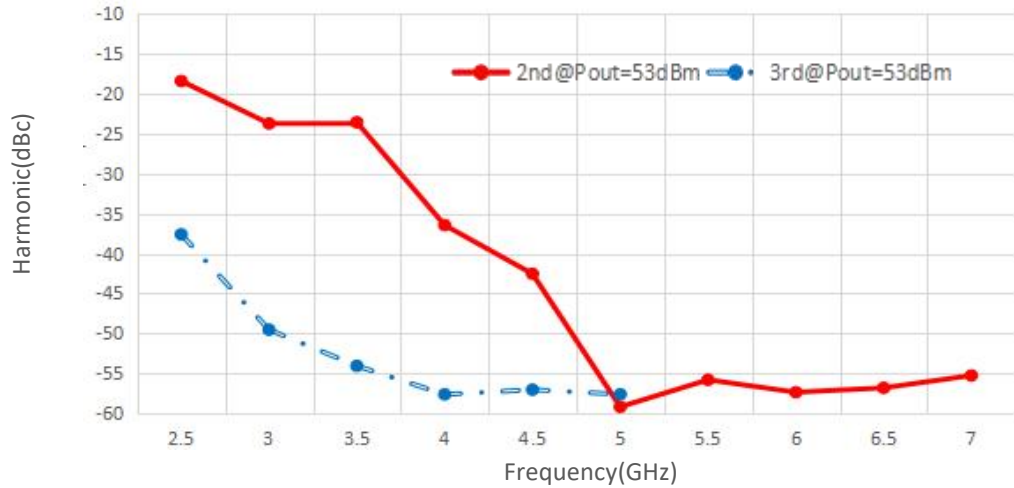
Spurious vs Frequency



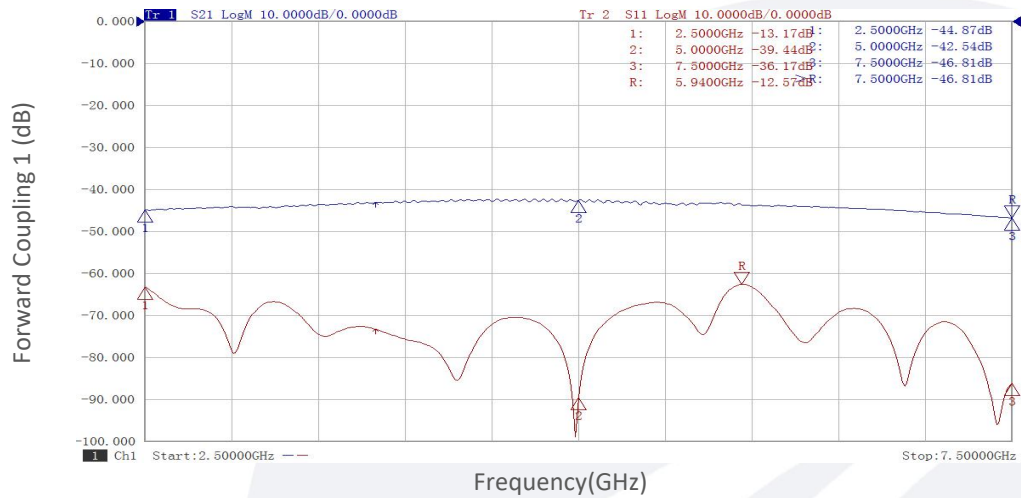
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

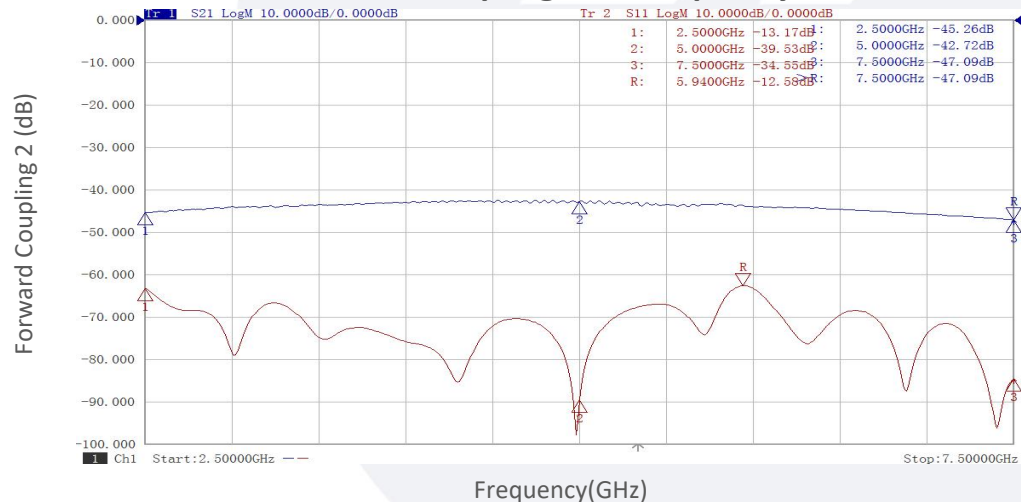
Harmonic vs Frequency



Forward Coupling 1 vs Frequency

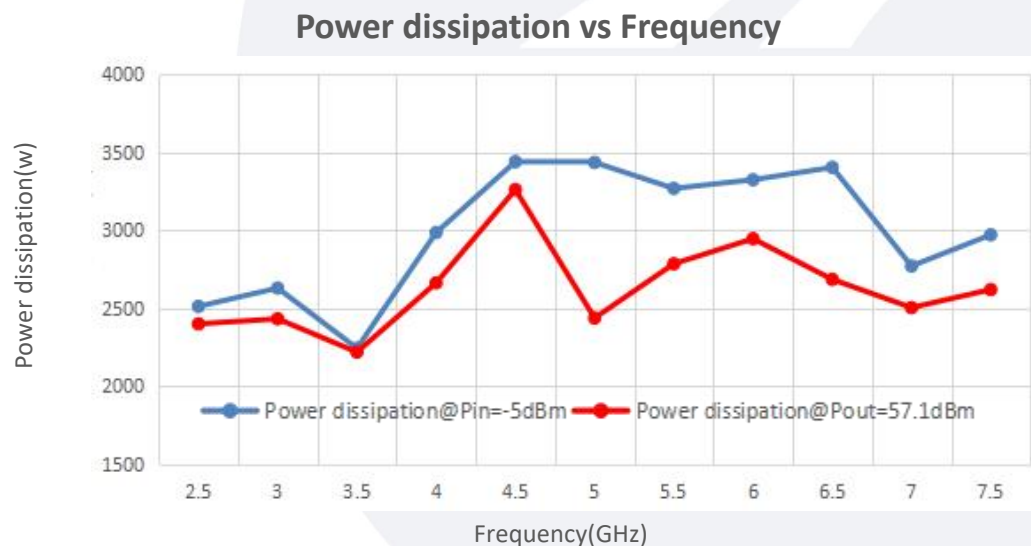
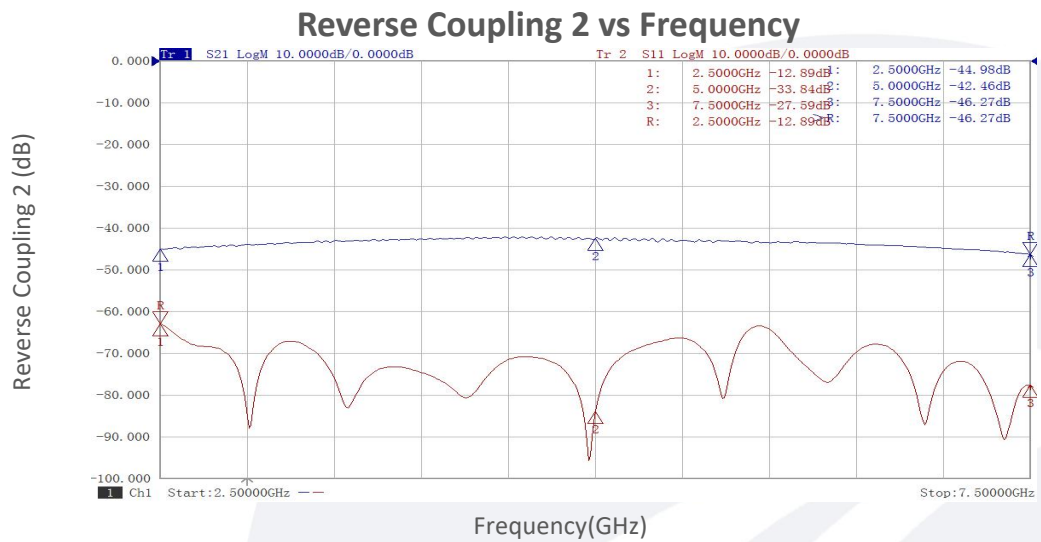
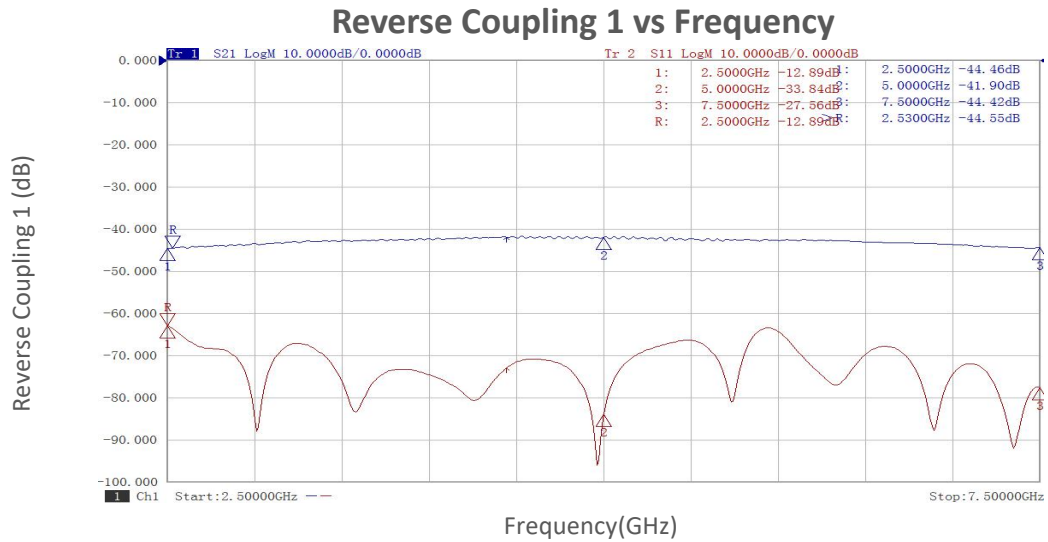


Forward Coupling 2 vs Frequency



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典型曲线 Typical Performance Data:



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