

Solid State High Power Amplifier Systems

5.85-7.075GHz/75dB Gain/58dBm Psat

Model: TLPA5.85G7.075G-75-58-BC

TLPA5.85G7.075G-75-58-BC is a solid state high power amplifier systems provides high output power and high gain across the 5.85 to 7.075 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: 5.85-7.075GHz
- Gain: 75dB Typ
- Psat Output Power: 58dBm Typ
- 50 Ohm Matched Input / Output

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	5.85-7.075			GHz
Small Signal Gain @Pout=57dBm	SSGP	70	75		dB
Gain flatness	ΔGL			± 3	dB
Output Psat	Psat	57	58		dBm
Pout adjust range	Padj	20			dB
Gain stability@24h	Gstb			± 0.25	dB
Gain fluctuation@-40~+55°C	Gvrt		± 2		dB
Gain slope	Gslp			± 0.02	dB/MHz
Spurious@Pout=57dBm	Spur			-60	dBc
2nd Harmonics	HAM			-20	dBc
Input VSWR	VSWRin		1.3	1.5	:1
Output VSWR	VSWRout		1.3	1.5	
AC Voltage	Vac		220		V AC
Power Consumption	Pdiss			2200	W
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

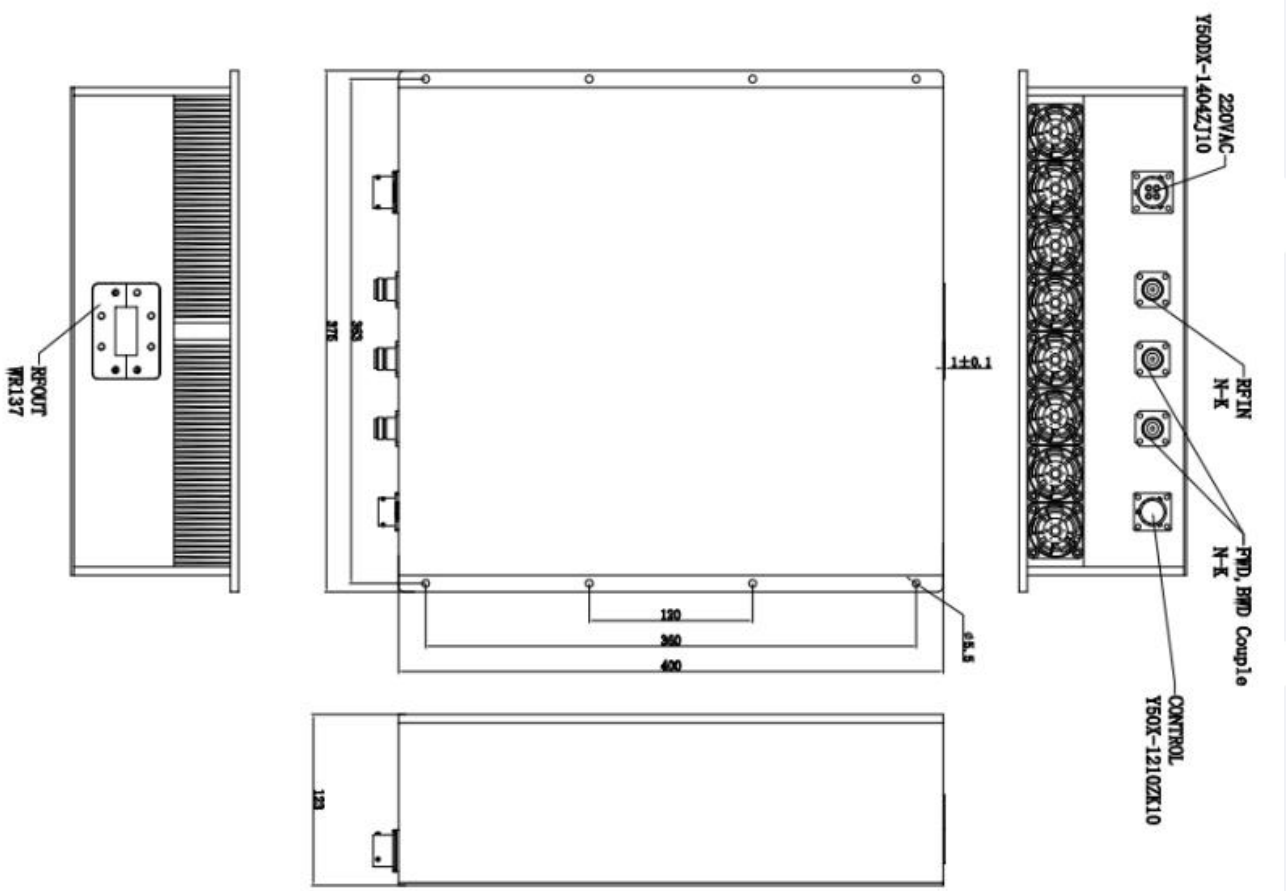
Parameter	Value	Units
Input /Output Connector	N Female/WR137	
Forward/Reverse Coupling	N Female/N Female	
Size	375*400*123	mm
Weight	≤38	Kg

Absolute Maximum Ratings:

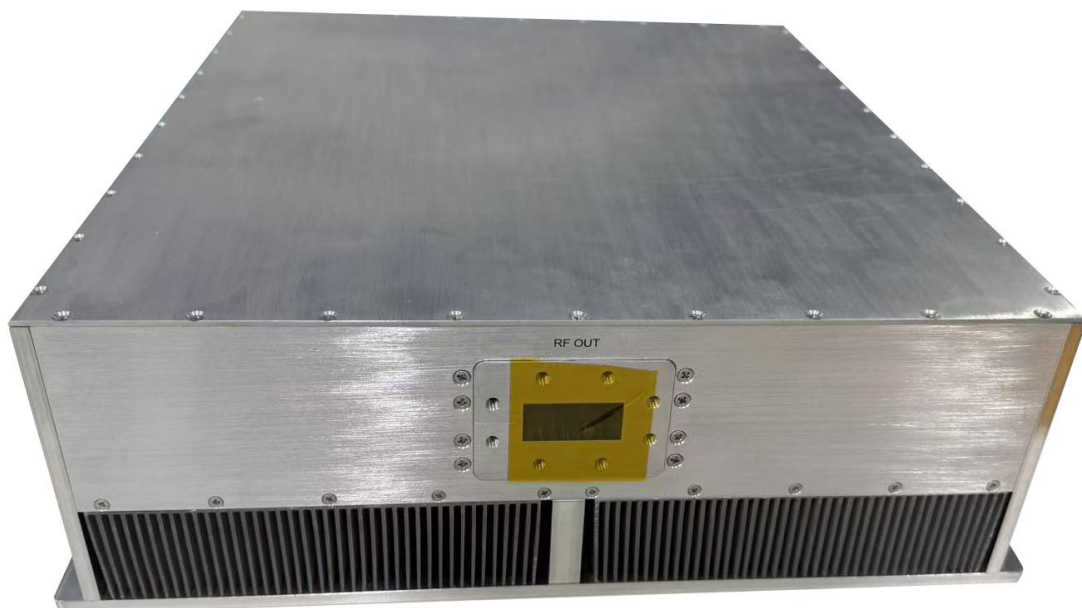
Parameter	Value
RF Input Power	-5 dBm
ESD sensitivity (HBM)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Physical picture:



Key Features:

Parameter	Advantages
Control functions	1, Power setting On/Off 2, ALC automatic level control
Monitor functions	1, Temperature 2, Voltage 3, Current 4, Output/Reverse Power
Remote control	RS422/RS485
Cooling system	Built in Cooling system, forced air cooling

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	°C
Non-operating Temperature*	-20		+40	°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			

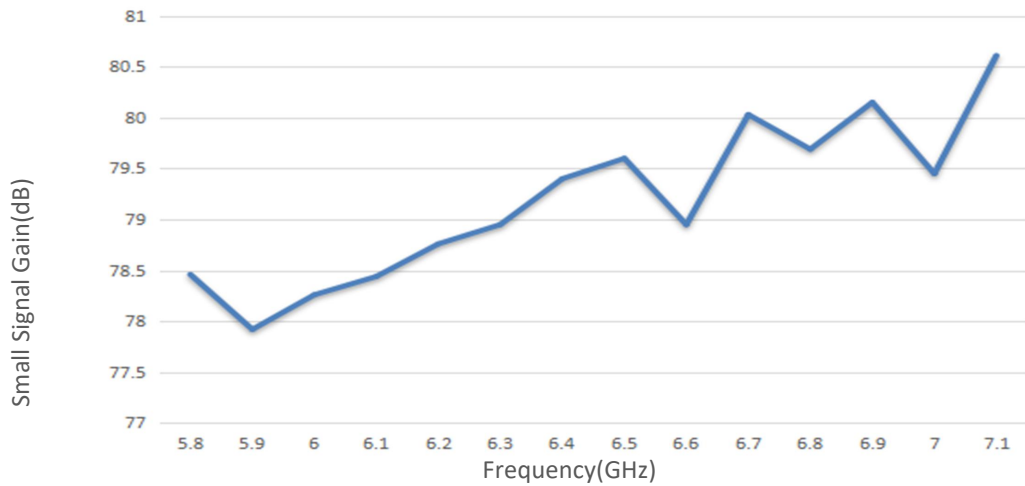
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

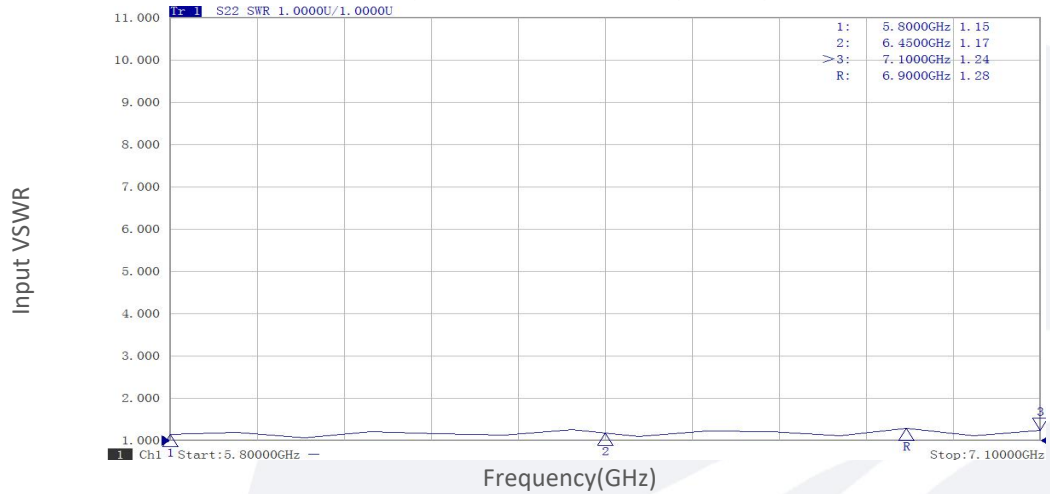
Base Number	Description	Revision
TLPA5.85G7.075G-75-58-BC	Solid State High Power Amplifier Systems 5.85-7.075GHz, Gain: 75dB, Psat: 58 dBm, 220V AC, Built in Fan Cooling	Rev.1.1

Typical Performance Data:

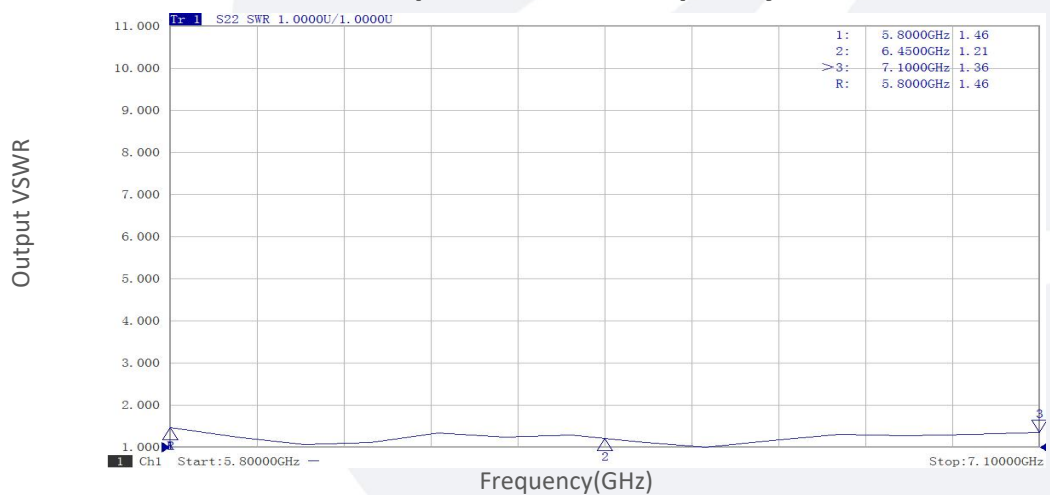
Small Signal Gain vs Frequency



Input VSWR vs Frequency



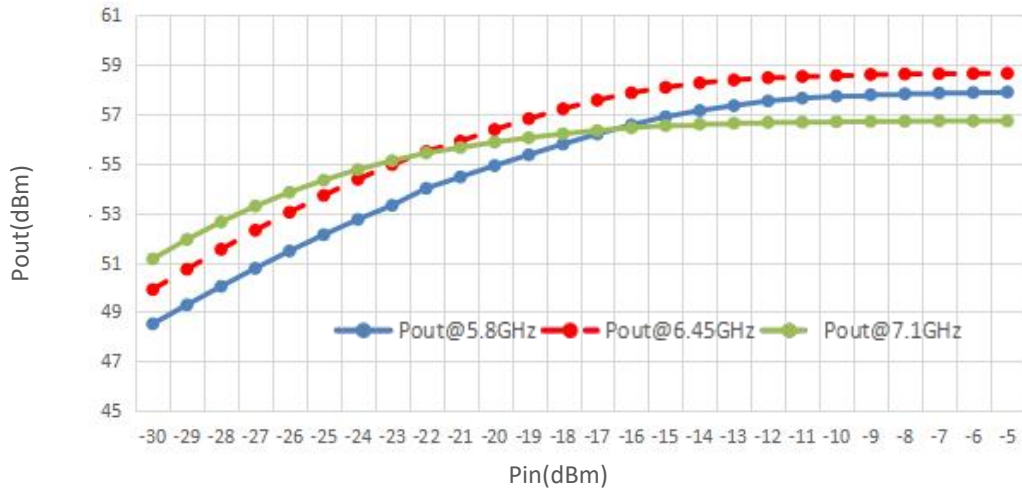
Output VSWR vs Frequency



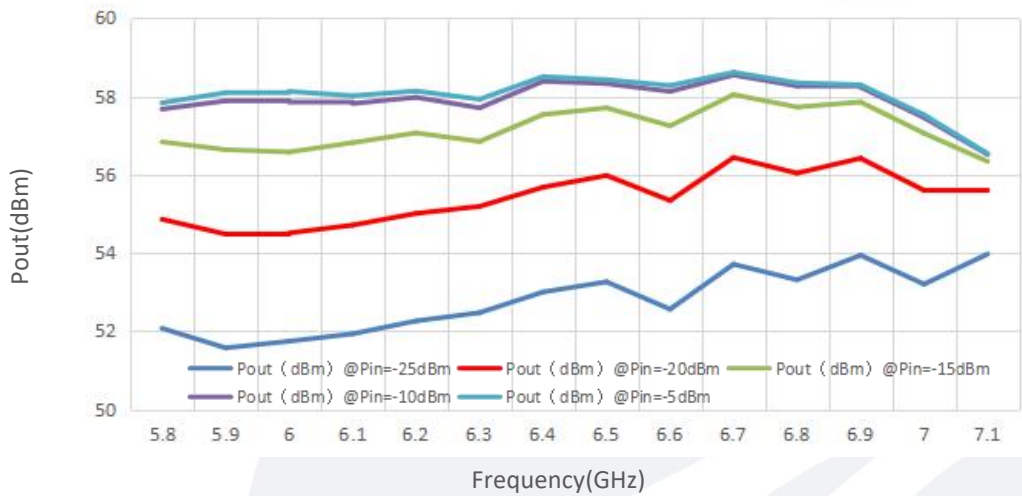
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

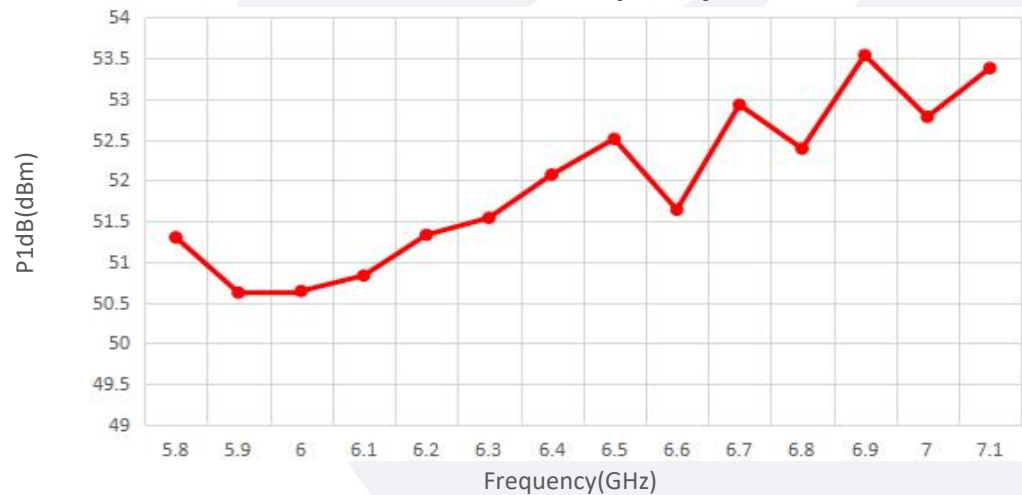
Pout@Pin



Pout@Equal_Pin



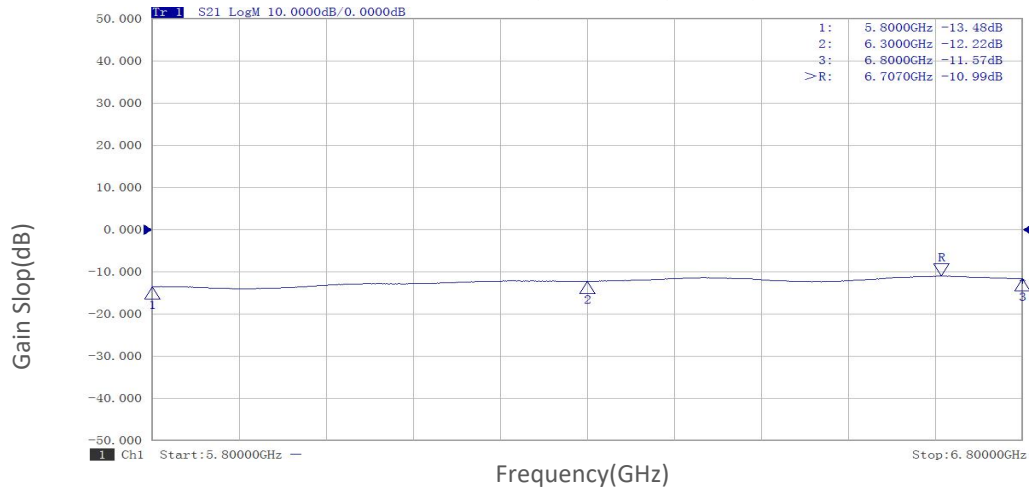
P1dB vs Frequency



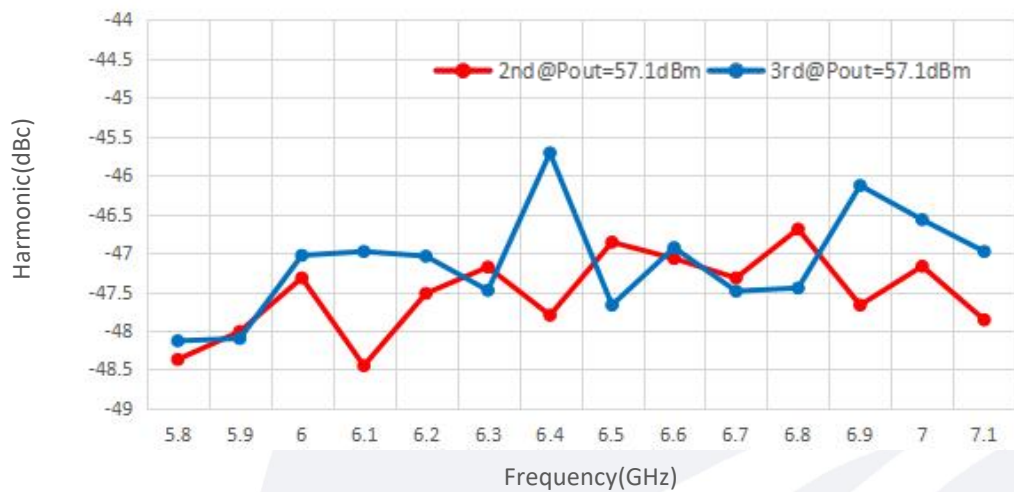
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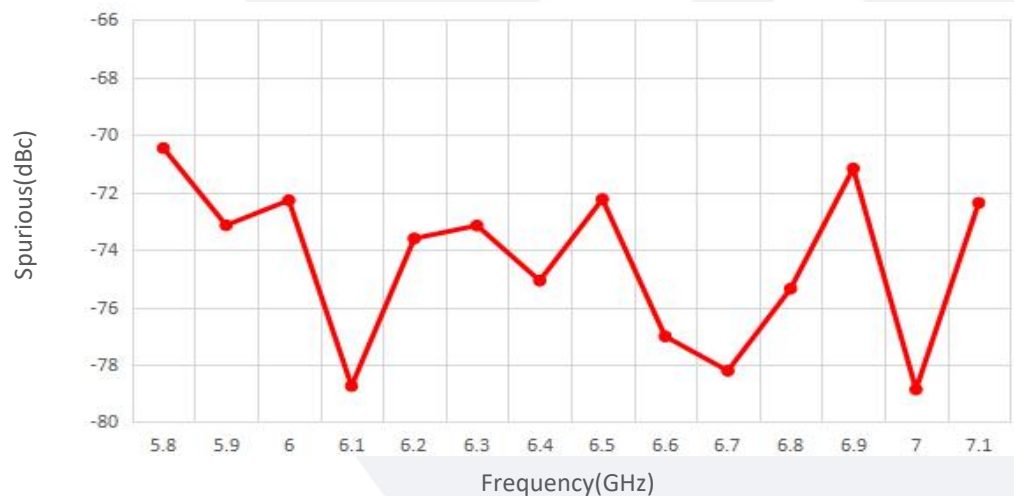
Gain Slop vs Frequency



Harmonic vs Frequency



Spurious vs Frequency



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