

Solid State High Power Amplifier Systems

0.5-2GHz/55dB Gain/55dBm Psat/220V AC

Model: TLPA0.5G2G-55-55-BC

TLPA0.5G2G-55-55-BC is a solid state high power amplifier systems provides high output power and high gain across the 0.5 to 2 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: 0.5-2GHz
- Gain: 55dB Min
- Psat Output Power: 55dBm 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	0.5-2			GHz
Power Gain	GP	55			dB
Gain flatness	Δ GL		± 3		dB
Output Psat	Psat	55			dBm
Spurious@Pout=55dBm	Spur			-60	dBc
Harmonics@Pout=55dBm	HAM			-10	dBc
Input VSWR	VSWRin			2.0	:1
AC Voltage	Vac		220		V AC
Power Consumption	Pdiss			1500	W
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

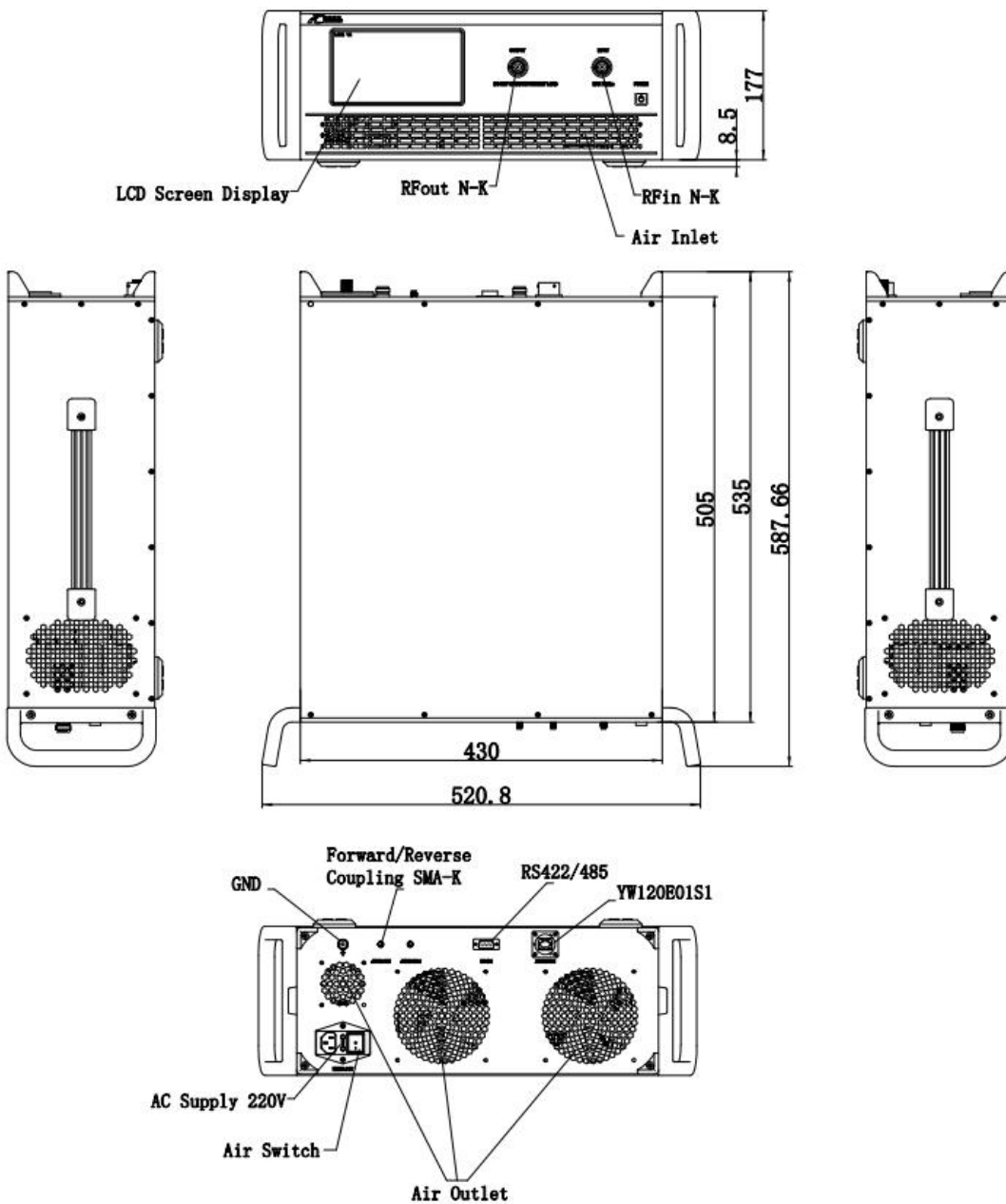
Parameter	Value	Units
Input /Output Connector	N Female/N Female	
Forward/Reverse Coupling	SMA Female/ SMA Female	
Communication Connector	DB9/RJ45	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Size	19 Inch 4U*550	mm
Weight	≤ 35	Kg

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
Control functions	1, Power setting On/Off 2, ALC automatic level control
Protection functions	1, Over TEM 2, Over voltage 3, Over current 4, Over VSWR
Remote control	RS422/Ethernet
Cooling system	Built in Cooling system, forced air cooling

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	°C
Non-operating Temperature*	-30		+60	°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			

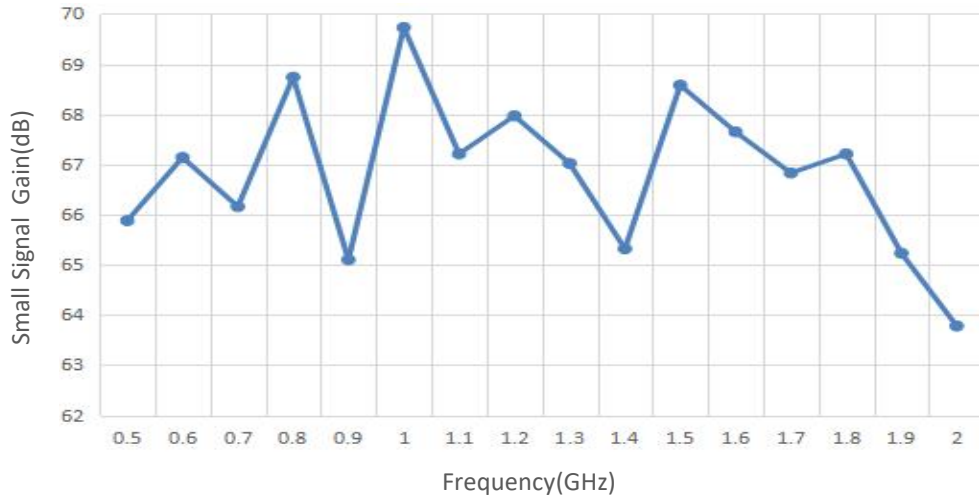
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

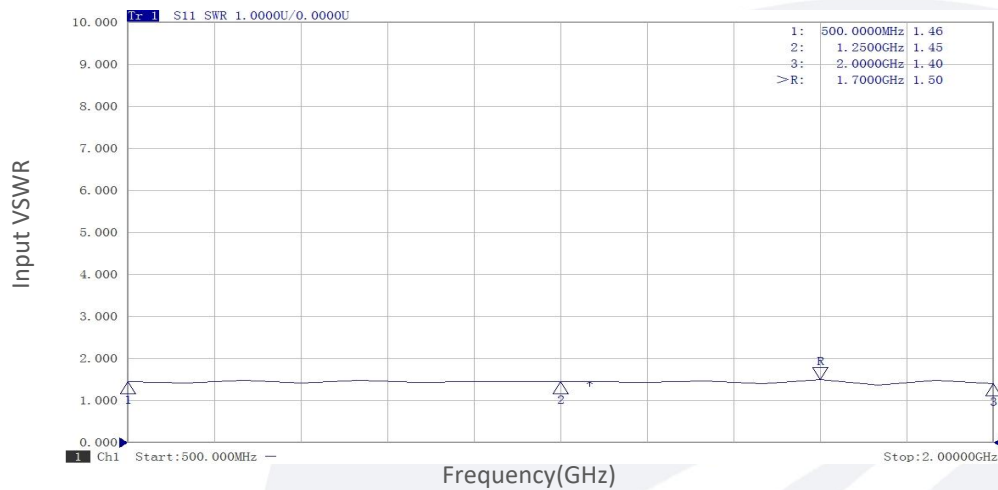
Base Number	Description	Revision
TLPA0.5G2G-55-55-BC	Solid State High Power Amplifier Systems 0.5-2GHz, Gain:55dB, Psat:55dBm, 220V AC, Built in Fan Cooling	Rev.1.1

Typical Performance Data:

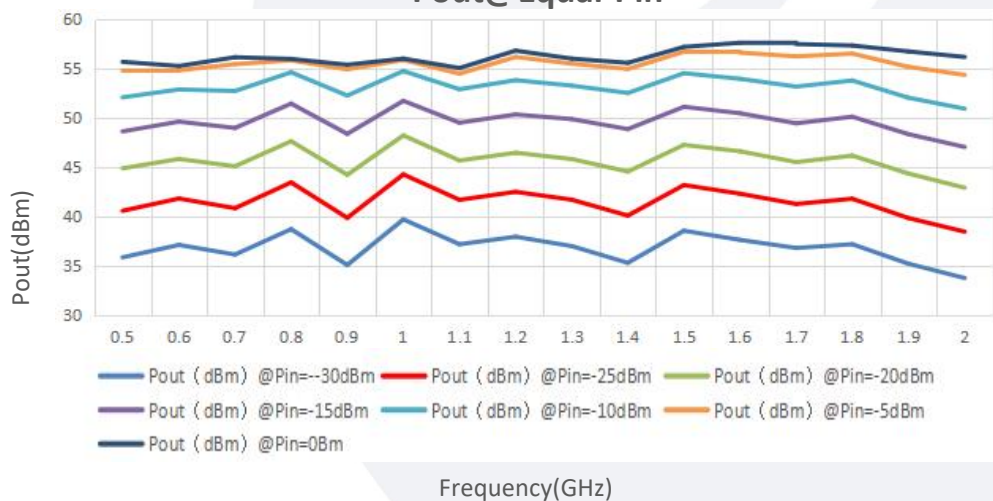
Small Signal Gain vs Frequency



Input VSWR vs Frequency



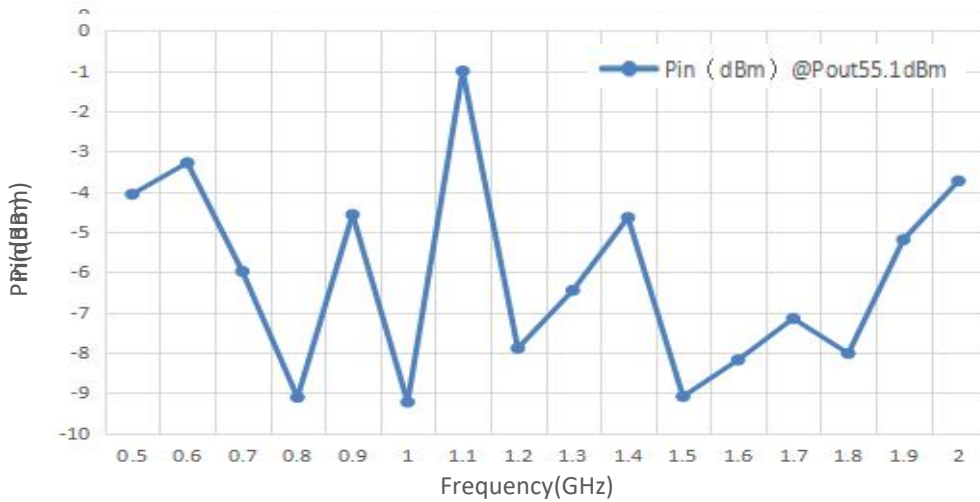
Pout@Equal-Pin



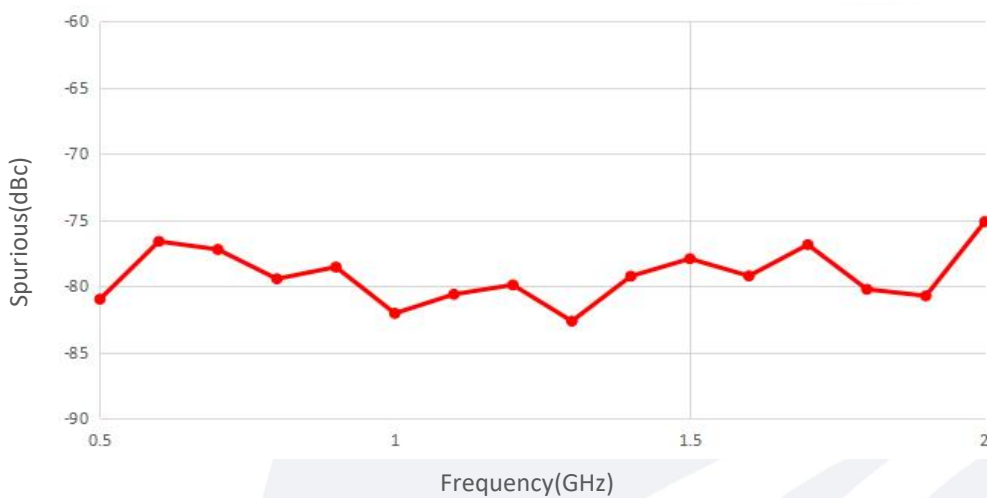
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

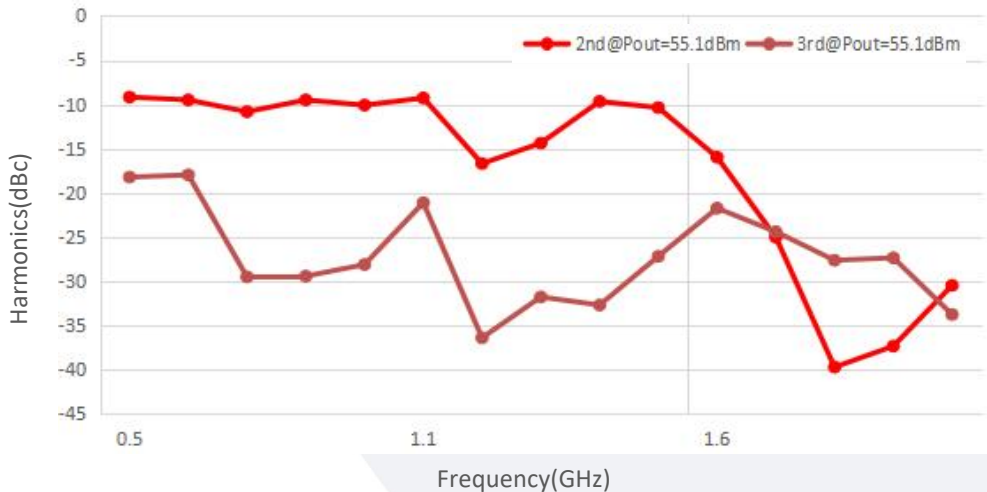
Pin@Equal-Pout



Spurious vs Frequency



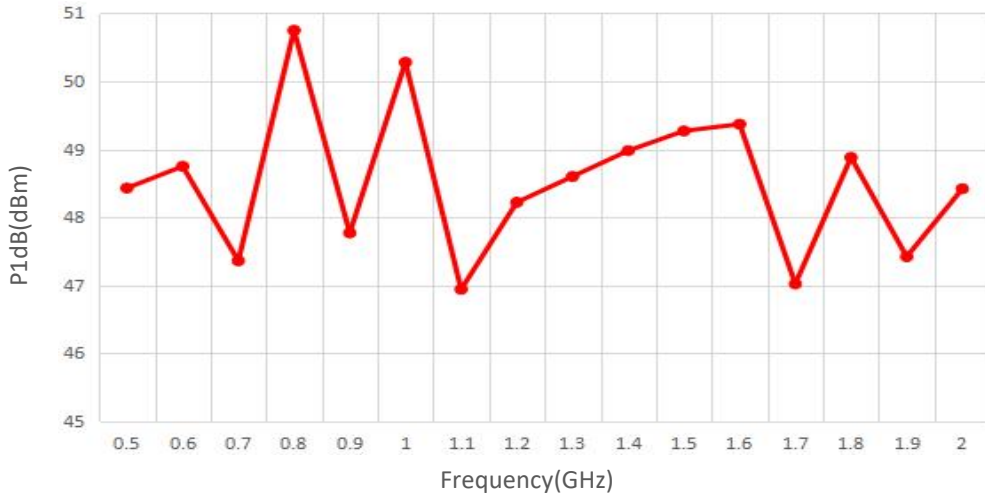
Harmonics vs Frequency



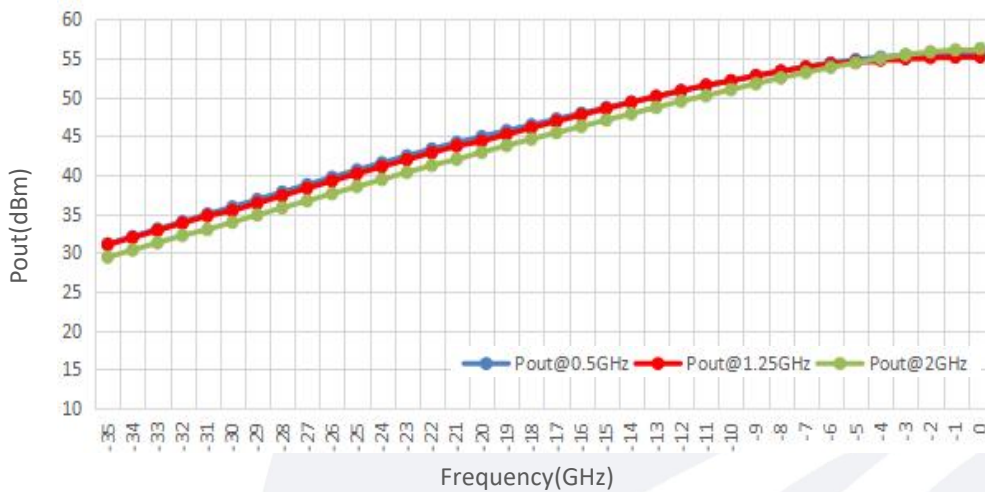
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

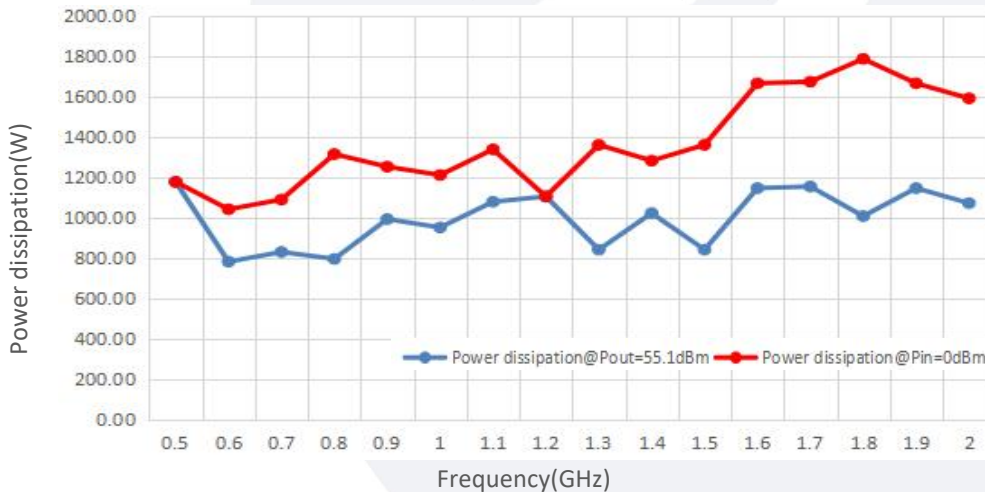
P1dB vs Frequency



Pout@Pin



Power dissipation 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.