

Solid State High Power Amplifier Systems

1.1-1.4GHz/53dB Gain/53dBm Psat/220V AC

Model: TLPA1.1G1.4G-53-53-BC

TLPA1.1G1.4G-53-53-BC is a solid state high power amplifier systems provides high output power and high gain across the 1.1 to 1.4 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: 1.1-1.4GHz
- Gain: 53dB Min
- Psat Output Power: 53dBm Min
- Protection: Over TEM, over voltage, over current, infinite VSWR protection
- 50 Ohm Matched Input / Output

Electrical Characteristics:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	1.1-1.4			GHz
Power Gain	GP	53	54		dB
Gain flatness	ΔGL		± 1	± 2	dB
Output P1dB	P1dB		50		dBm
Output Psat	Psat	53			dBm
Spurious	Spur			-60	dBc
Harmonics	HAM			-10	dBc
Input VSWR	VSWR _{in}		1.5	2	:1
AC Voltage	Vac	110	220		V AC
AC Supply Current	Iac		5		A
Impedance	I/O-IMP	50			Ohms

Mechanical Specifications:

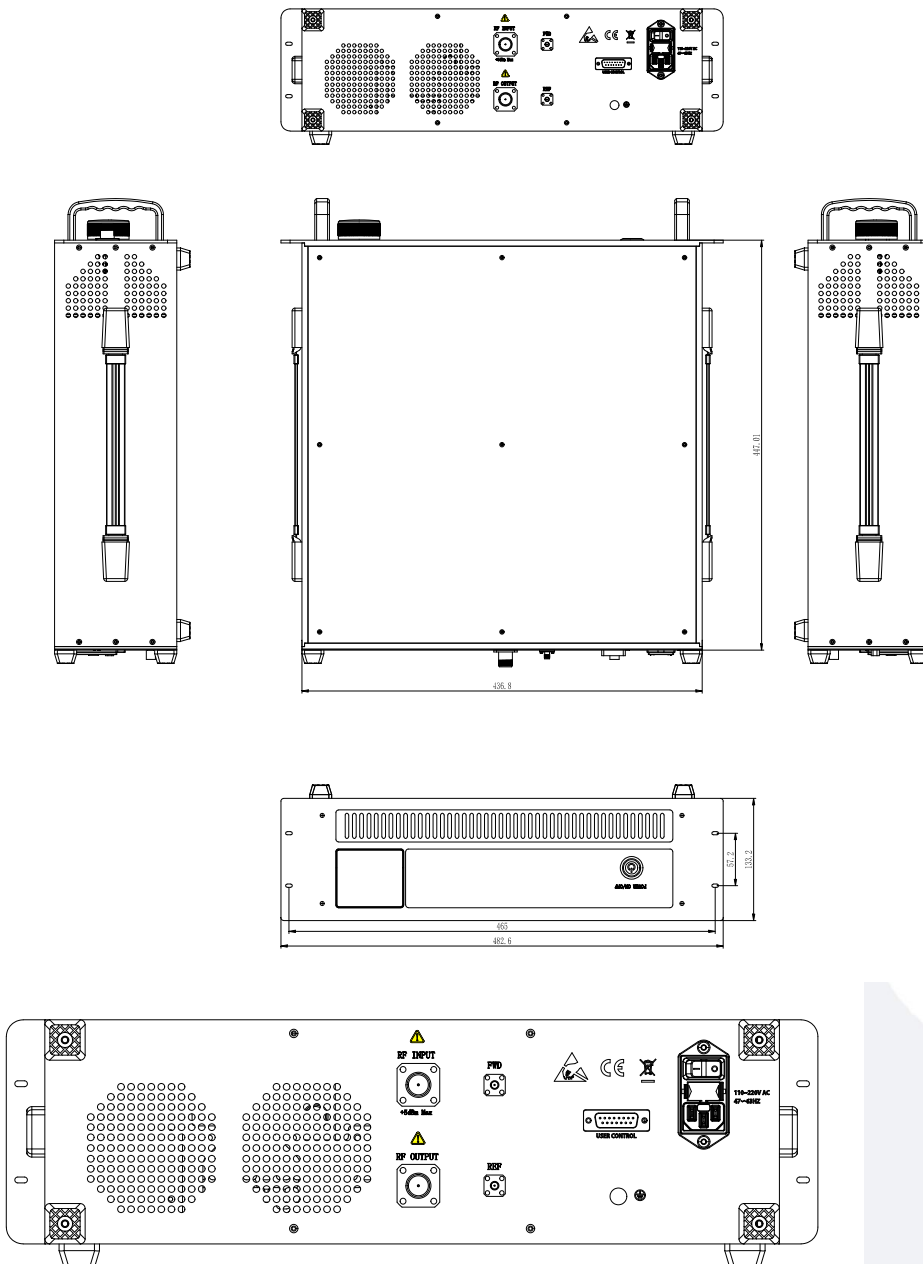
Parameter	Value	Units
Input /Output Connector	N Female/N Female	
Forward/Reverse Coupling	SMA Female/ SMA Female	
Size	3U*500	mm
Weight	≤17	Kg

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
Protection functions	1,Over TEM 2,Over voltage 3,Over current 4,Infinite VSWR
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			

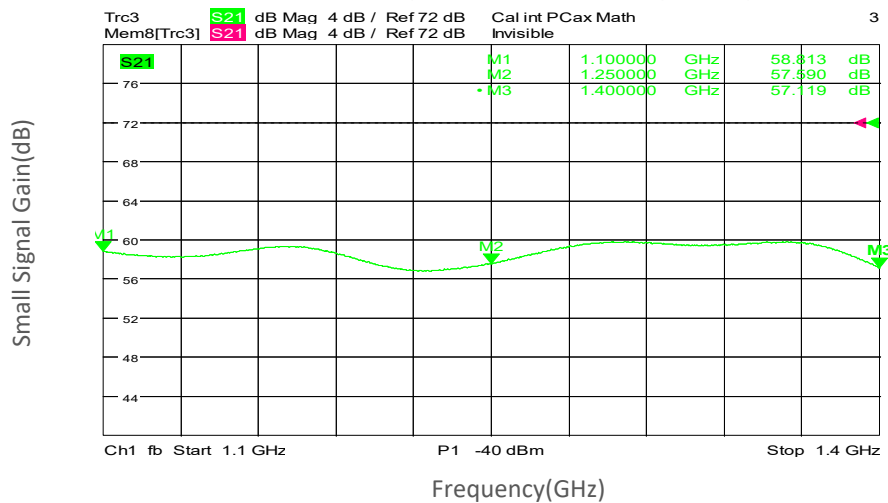
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

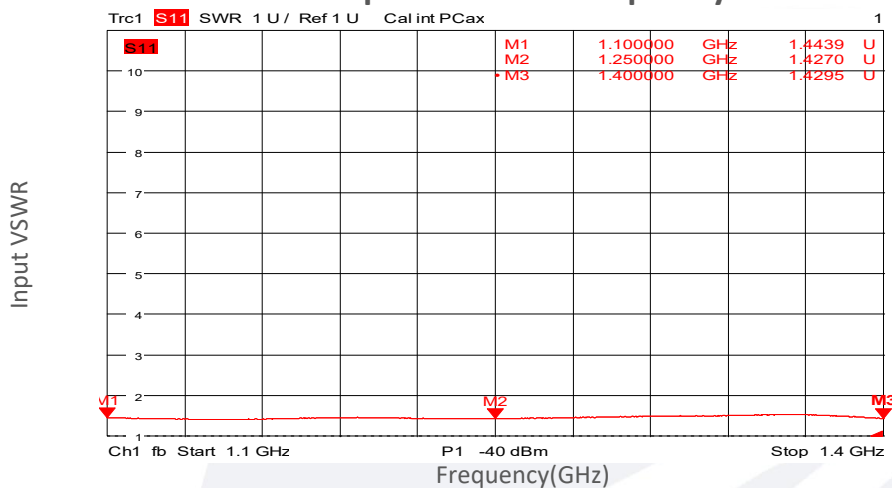
Base Number	Description	Revision
TLPA1.1G1.4G-53-53-BC	Solid State High Power Amplifier Systems 1.1-1.4GHz,Gain:53dB,Psat:53dBm,220V AC,Built in Fan Cooling	Rev.1.1

Typical Performance Data:

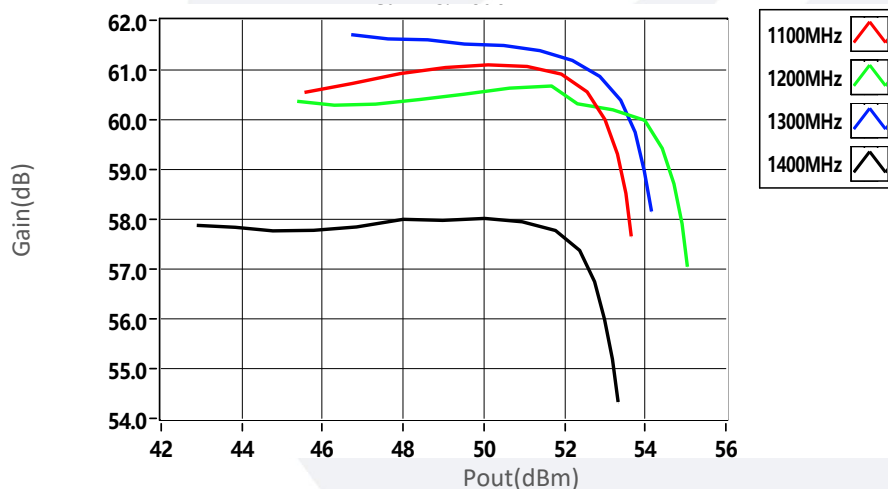
Small Signal Gain vs Frequency



Input VSWR vs Frequency



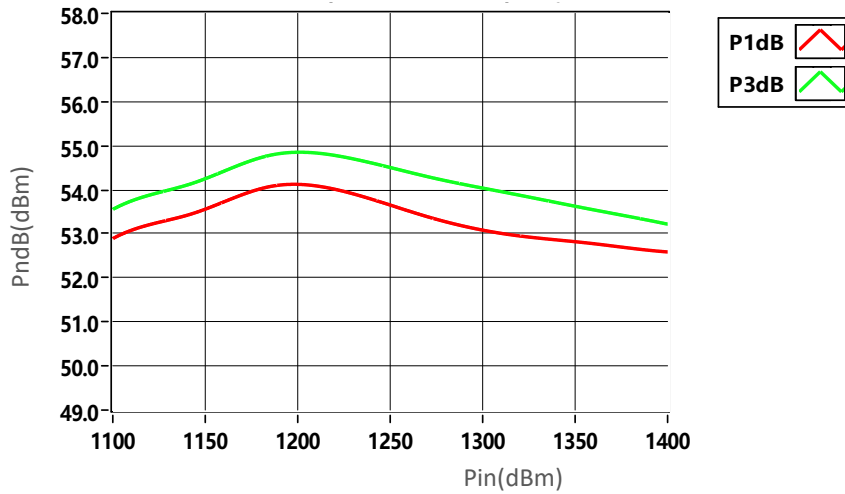
Gain vs Output Power



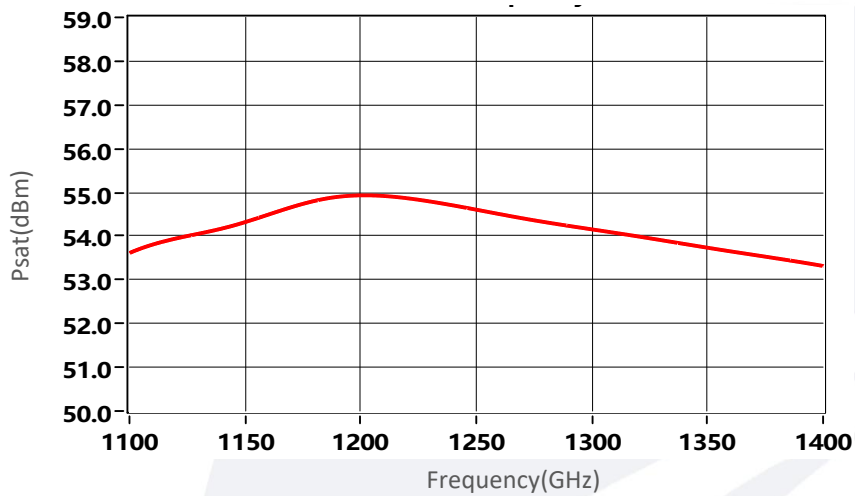
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

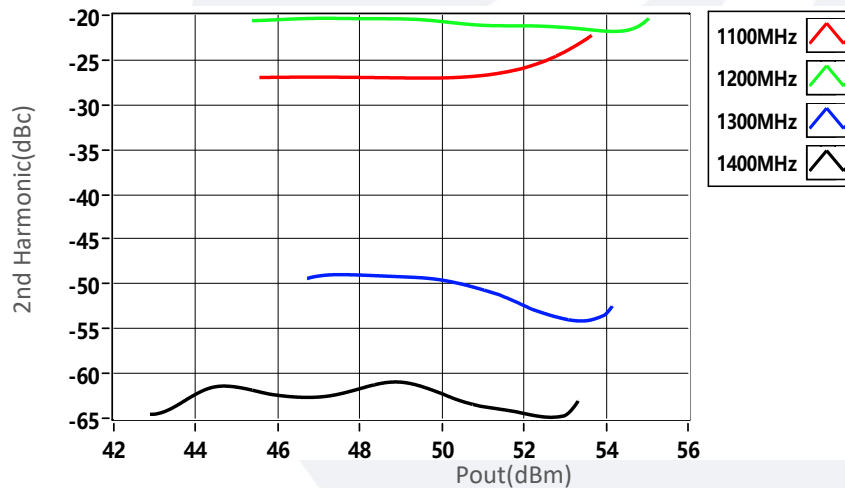
PndB vs Frequency



Psat vs Frequency



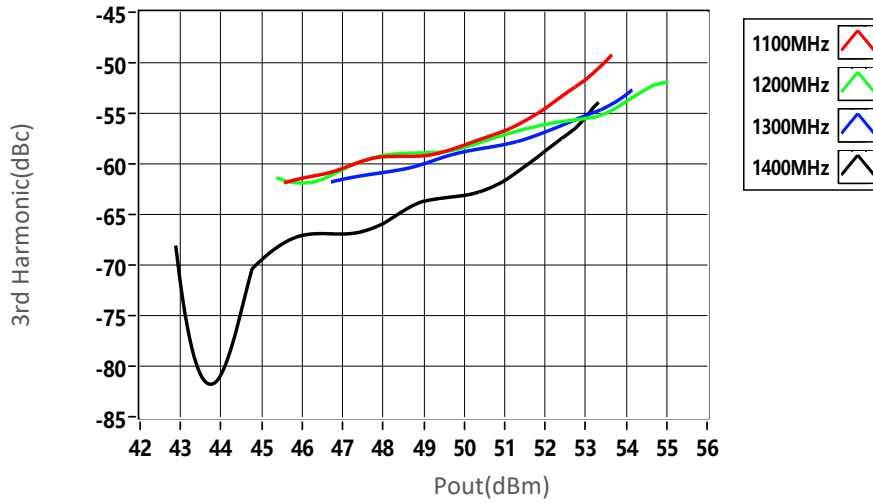
2nd Harmonic vs Output Power



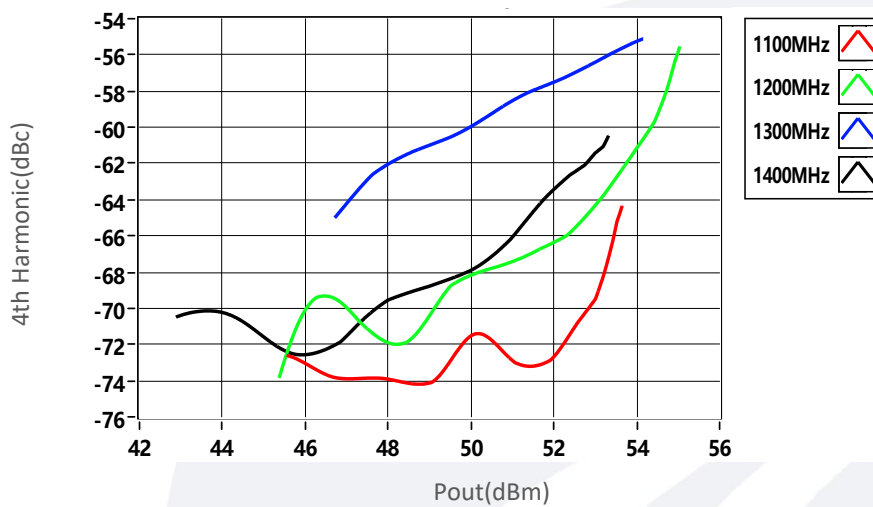
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

3rd Harmonic vs Output Power



4th Harmonic vs Output Power



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