

Solid State High Power Amplifier Systems

0.5-6GHz/50dB Gain/50dBm Psat/220V AC

Model: TLPA0.5G6G-50-50-BC

TLPA0.5G6G-50-50-BC is a solid state high power amplifier systems provides high output power and high gain across the 0.5 to 6 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: 0.5-6GHz
- Gain: 50dB Min
- Psat Output Power:50dBm 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 | 0.5-6 | | | GHz |
| Power Gain | GP | 50 | | | dB |
| Gain flatness | Δ GL | | ± 3.5 | | dB |
| Gain adjust Range | Δ GR | 20 | | | dB |
| Gain adjust Step | Δ GS | | 0.5 | | dB |
| Output Psat | Psat | 50 | | | dBm |
| Spurious@Pout=50dBm | Spur | | | -60 | dBc |
| Harmonics@Pout=50dBm | HAM | | -10 | | dBc |
| Input VSWR | VSWRin | | | 2.0 | :1 |
| AC Voltage | Vac | 110 | 220 | | V AC |
| Impedance | I/O-IMP | 50 | | | Ohms |

Mechanical Specifications:

| Parameter | Value | Units |
|-------------------------|-------------------|-------|
| Input /Output Connector | N Female/N Female | |
| AC Supply Interface | Air swtch | |
| Size | 19 Inch 3U | mm |
| Weight | ≤ 30 | Kg |

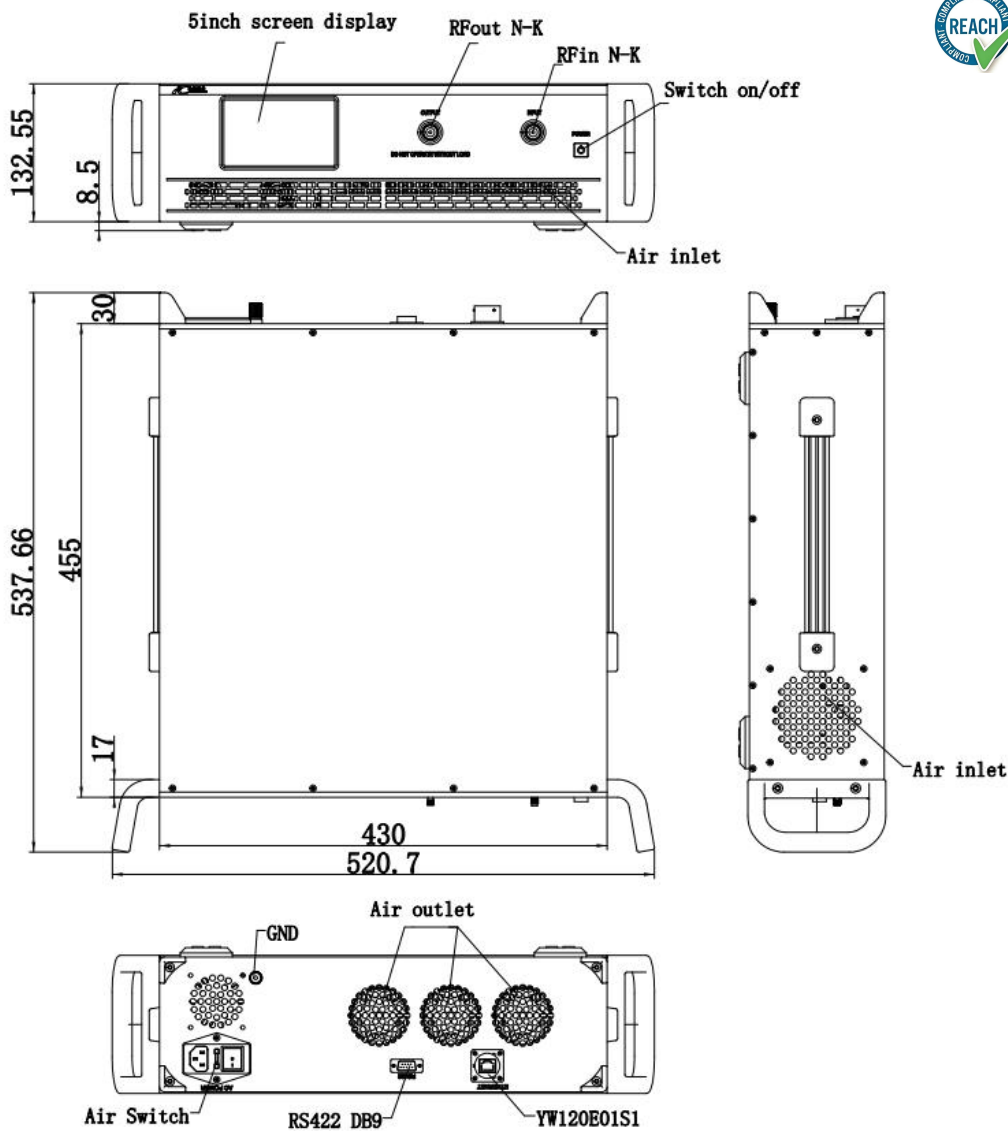
Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | 260 VAC |
| RF Input Power | +5 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |

Outline Drawing:

Unit:mm

Regulatory Compliance:



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 |
| Monitoring functions | 1, Forward power 2, Temp fault |
| 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 | | | |

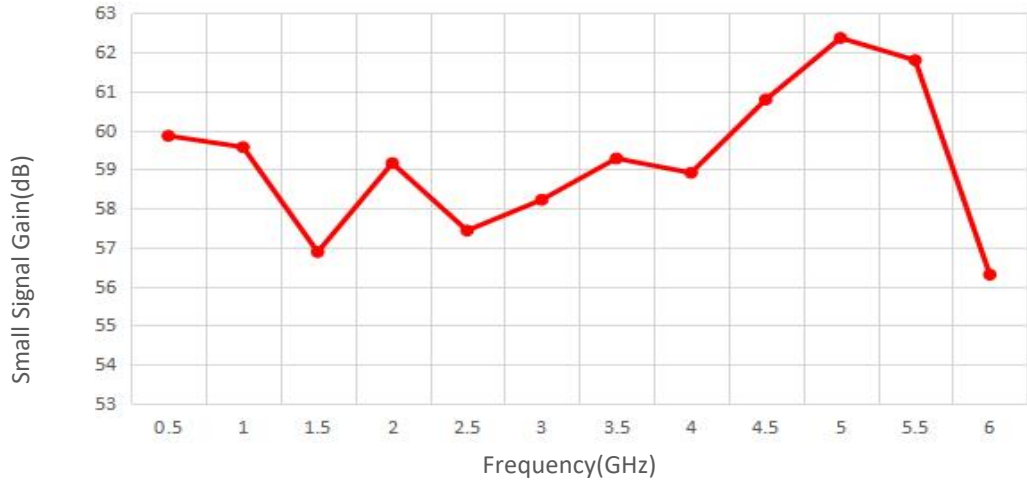
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

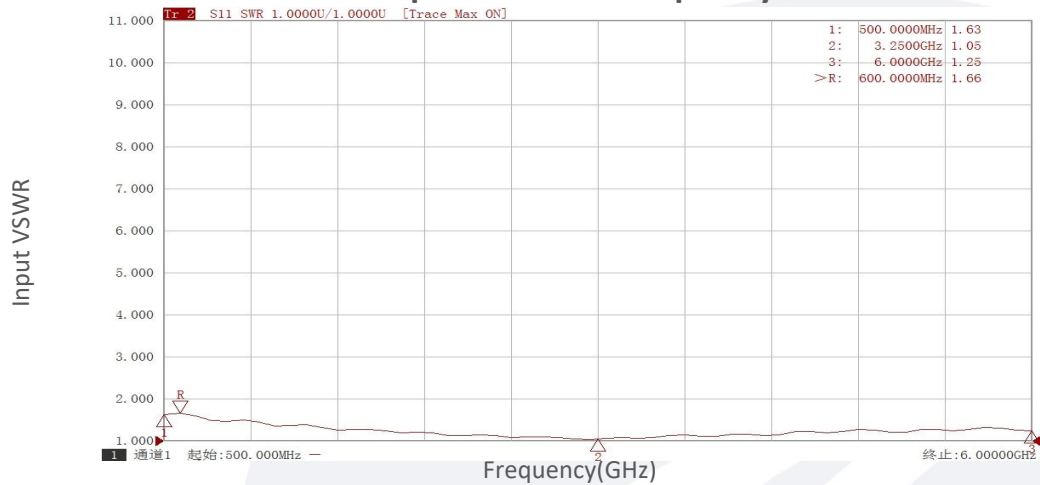
| Base Number | Description | Revision |
|---------------------|--|----------|
| TLPA0.5G6G-50-50-BC | Solid State High Power Amplifier Systems 0.5-6GHz, Gain:50dB, Psat:50 dBm, 220V AC, Built in Fan Cooling | Rev.1.1 |

Typical Performance Data:

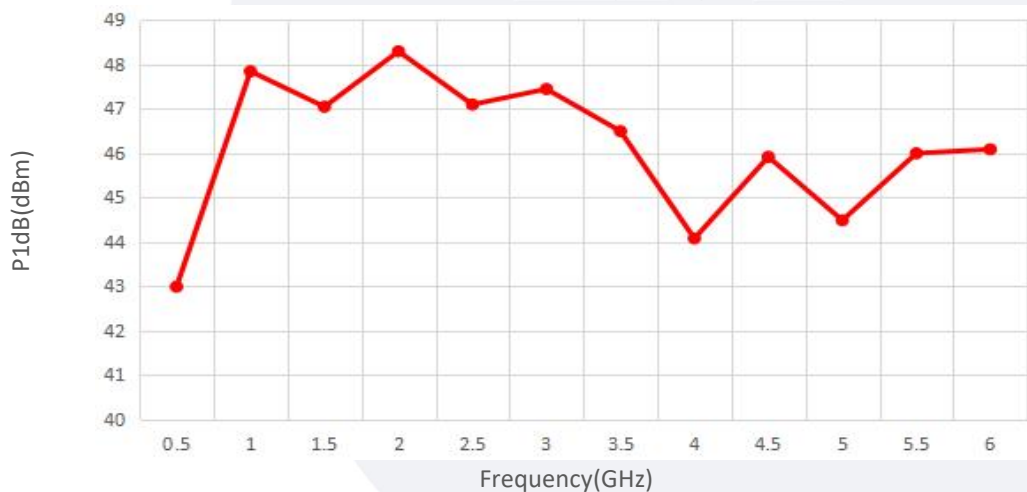
Small Signal Gain vs Frequency



Input VSWR vs Frequency



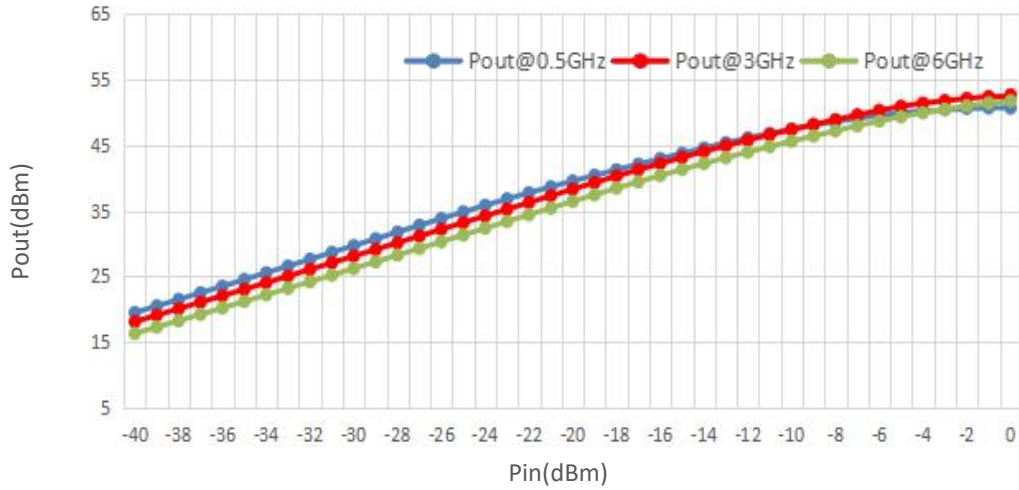
P1dB vs Frequency



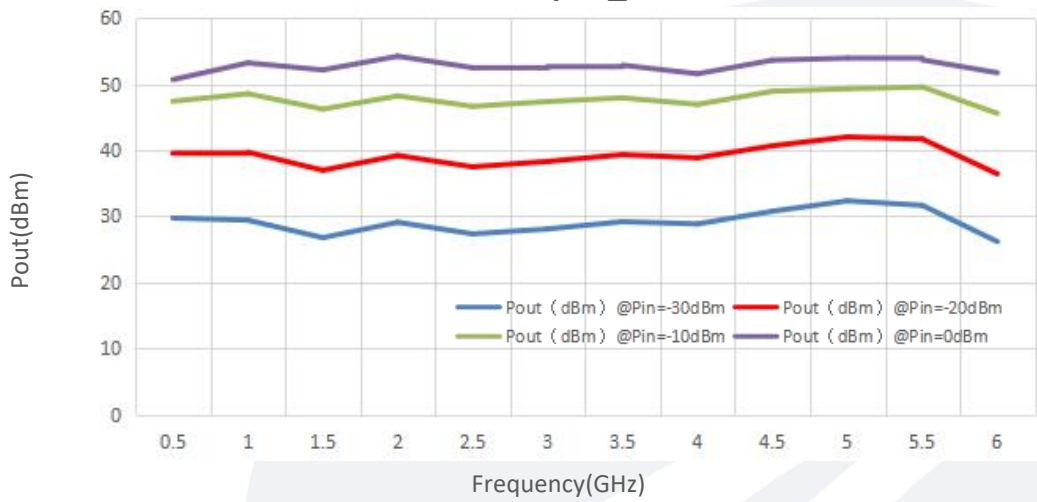
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

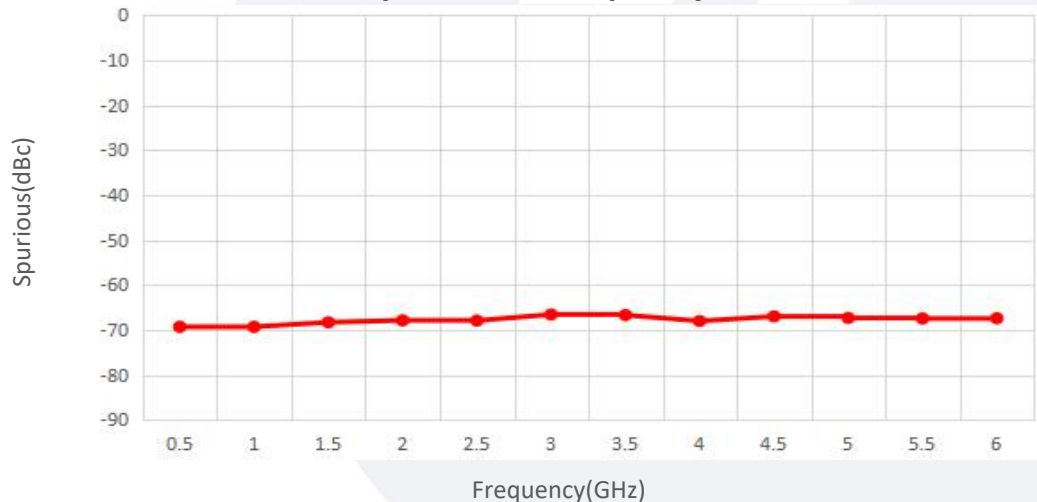
Pout@Pin



Pout@Equal_Pin

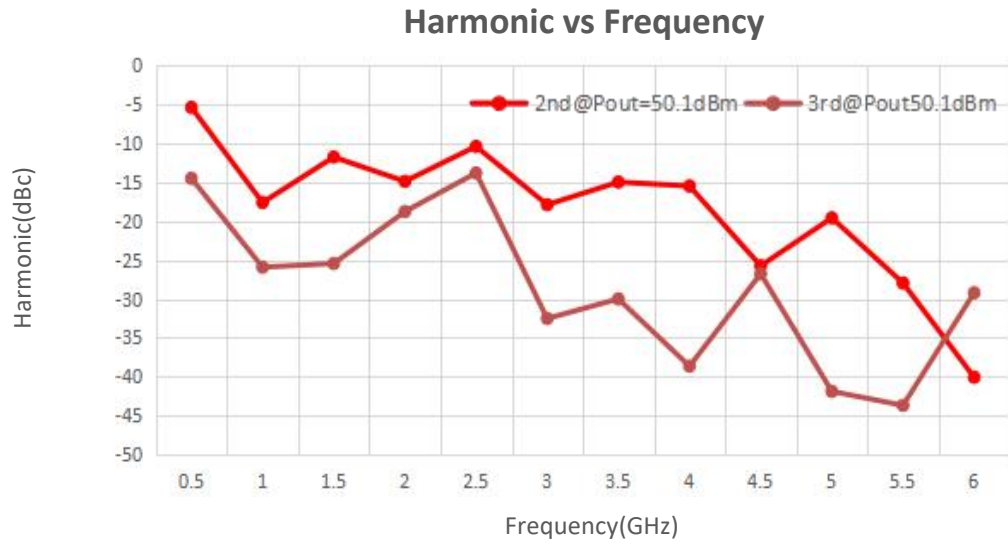


Spurious vs Frequency



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