Suzhou Talent Microwave,Inc
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# Solid State High Power Amplifier Systems

## 1-6GHz/45dB Gain/45dBm Psat/220V AC  Model: TLPA1G6G-45-45-BC

TLPA1G6G-45-45-BC is a solid state high power amplifier systems provides high output power and high gain across the 1 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: 1-6GHz
- Gain: 45dB Min
- Psat Output Power: 45dBm Min
- 50 Ohm Matched Input / Output

## Electrical Characteristics:

| Parameter | Symbol | Min | Typ | Max | Units |
|---|---|---|---|---|---|
| Frequency range | BW | | 1-6 | | GHz |
| Power Gain | GP | 45 | 47 | | dB |
| Gain flatness | ΔGL | | ±4 | ±5 | dB |
| Output P1dB | P1dB | | 42 | | dBm |
| Output Psat | Psat | 45 | 46 | | dBm |
| Spurious@Pout=45dBm | Spur | | | -60 | dBc |
| Harmonics@Pout=45dBm | HAM | | | -10 | dBc |
| Input VSWR | VSWRin | | 1.5 | 2.0 | :1 |
| AC Voltage | Vac | 110 | 220 | | V AC |
| AC Supply Current | Iac | | 2 | | A |
| Impedance | I/O-IMP | | 50 | | Ohms |

## Mechanical Specifications:

| Parameter | Value | Units |
|---|---|---|
| Input /Output Connector | N Female/N Female | |
| Size | 3U*500 depth | mm |
| Weight | ≤27 | Kg |

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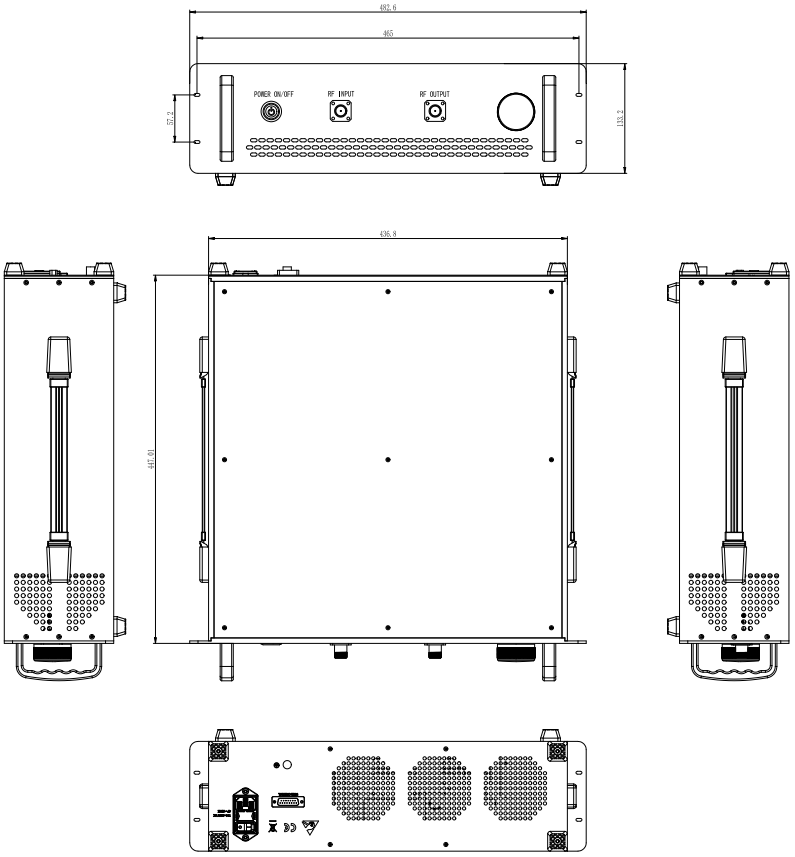
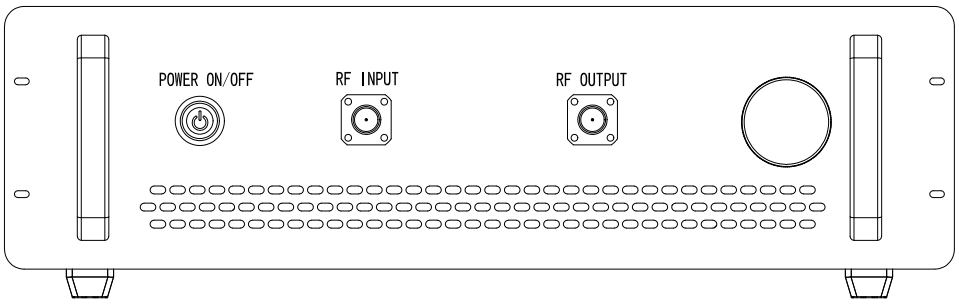
## Absolute Maximum Ratings:

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

## Outline Drawing:

Unit:mm



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## Environmental Conditions:

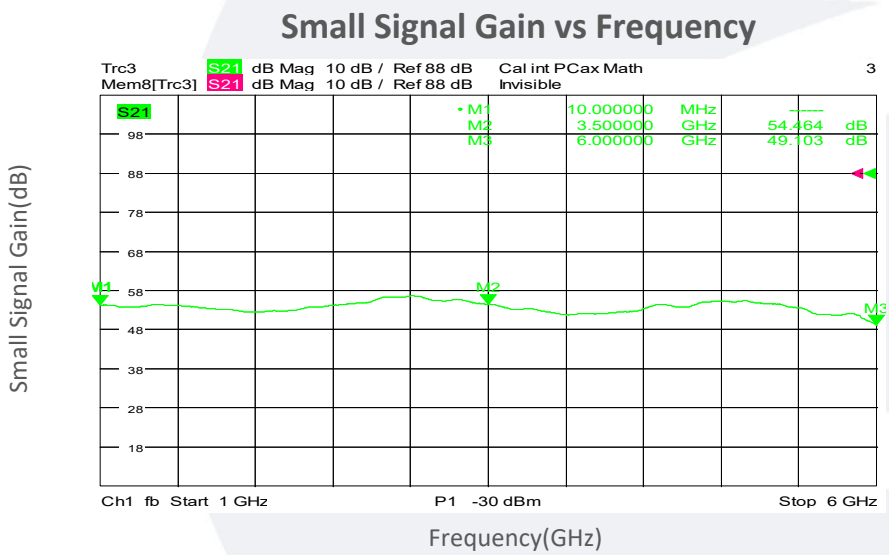
| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Operating Temperature* | -20 | | +50 | ℃ |
| Non-operating Temperature* | -30 | | +60 | ℃ |
| Relative humidity | | 95 | | % |
| Altitude | 10,000 | | | feet |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour 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 |
|---|---|---|
| TLPA1G6G-45-45-BC | Solid State High Power Amplifier Systems 1-6GHz,Gain:45dB,Psat:45dBm,220V AC,Built in Fan Cooling | Rev.1.1 |

## Typical Performance Data:




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.

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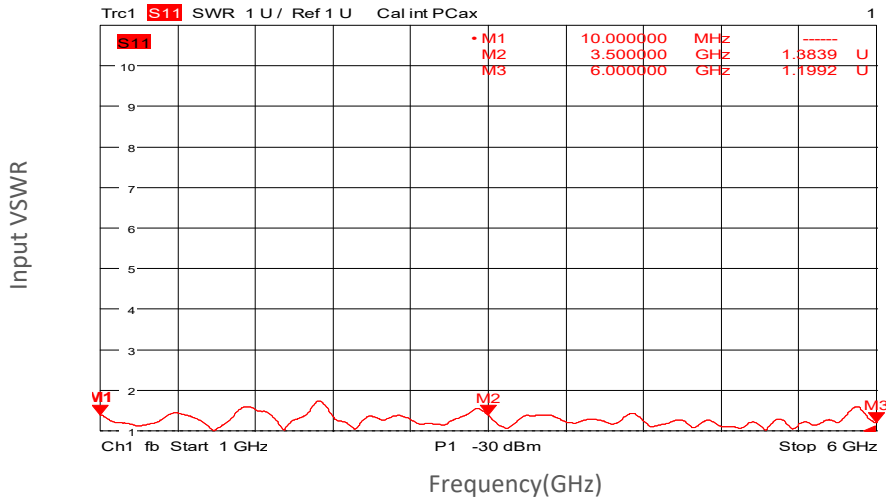
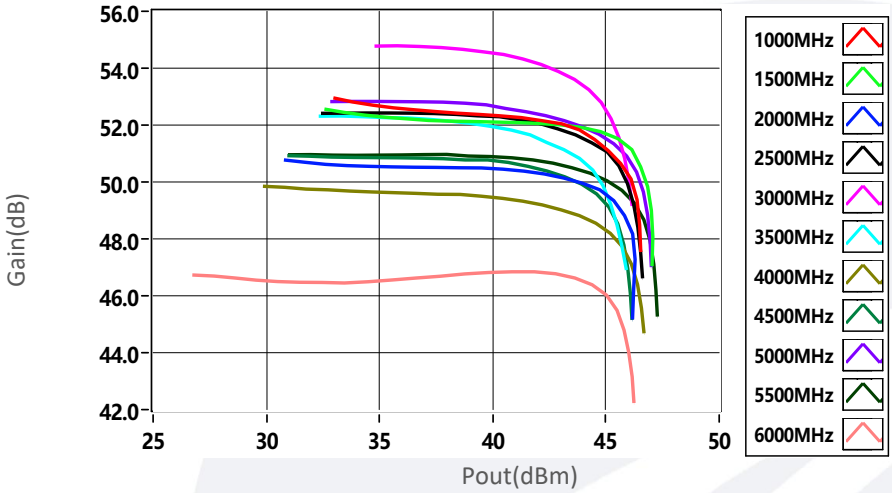
## Typical Performance Data:

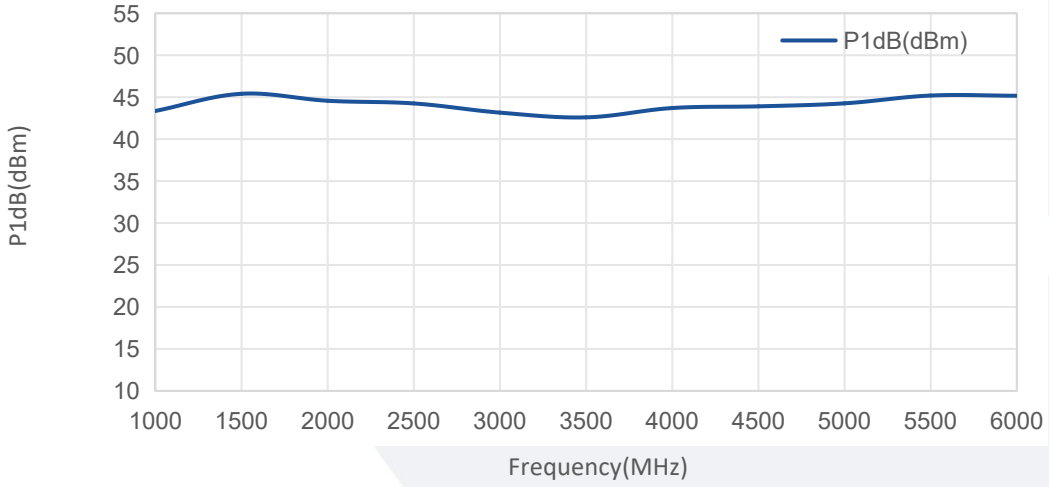
### Input VSWR vs Frequency




### Gain vs Output Power




### P1dB vs Frequency

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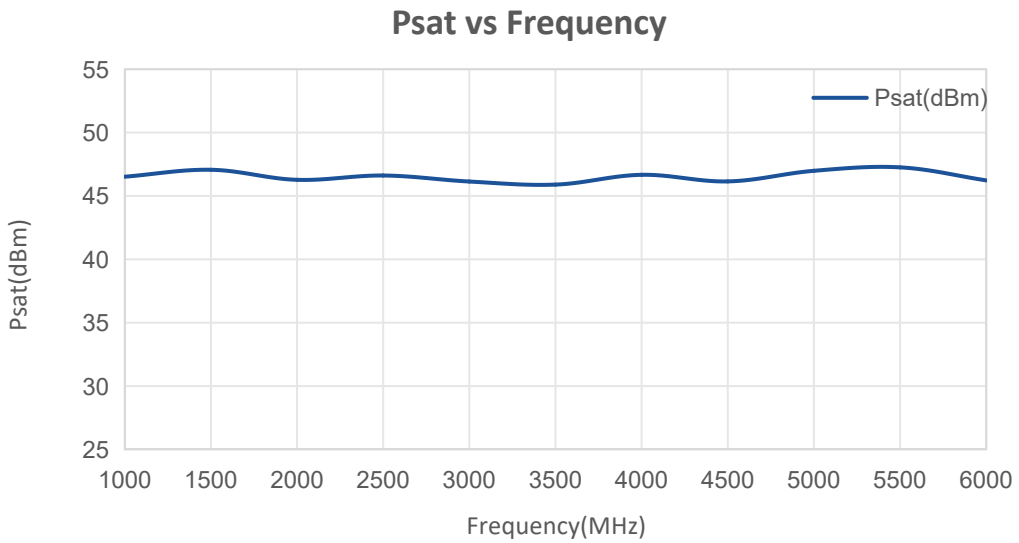


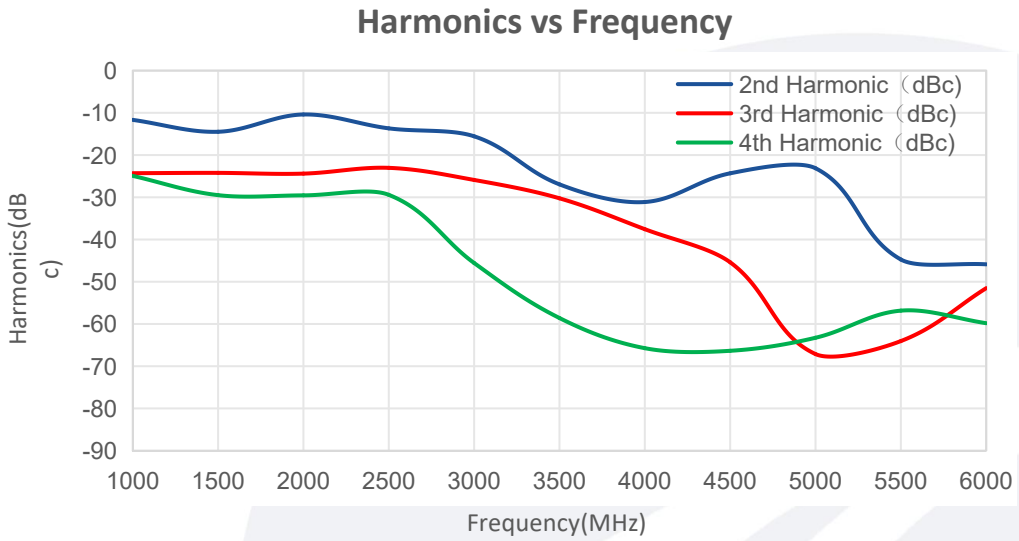


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