Suzhou Talent Microwave,Inc
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# Power Amplifier

## 50KHz-6GHz/33dB Gain/33dBm Psat

## Model: TLPA50K6G-33-33

TLPA50K6G-33-33 is a power amplifier with a minimum small signal gain of 33 dB and a nominal Psat of 33 dBm across the frequency range of 50KHz to 6GHz. The DC power requirement for the amplifier is +28 VDC/600 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 50KHz-6GHz
- Gain: 33dB Min
- Output Power Psat: 33dBm Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Frequency range | 50KHz | | 6GHz | |
| Small Signal Gain | 33 | 34 | | dB |
| Gain Flatness | | | ±4 | dB |
| Output P1dB | | 30 | | dBm |
| Output Psat | 32 | 33 | | dBm |
| Harmonic | | | -10 | dBc |
| Input VSWR | | 1.5 | 2.0 | :1 |
| DC Voltage | | +28 | | V DC |
| DC Supply Current | | 600 | | mA |
| Impedance | | 50 | | Ohms |

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## Mechanical Specifications:

| Parameter | Value | Units |
|---|---|---|
| Input /Output Connector | SMA Female/SMA Female | |
| DC Bias | Solder Pin | |
| Size | 120*80*22 | mm |
| Weight | 200 | g |

## Absolute Maximum Ratings:

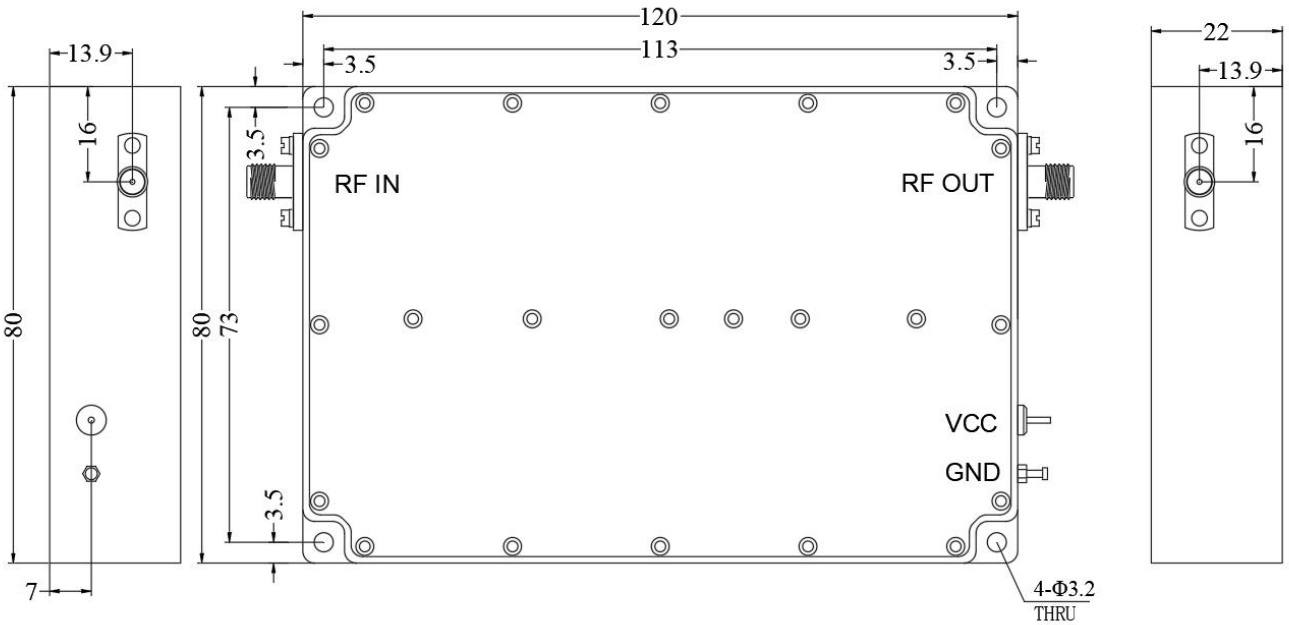
| Parameter | Value |
|---|---|
| Supply Bias Voltage | +30 V |
| RF Input Power | 0 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |



Simple 220V System
Available SAC option

## Outline Drawing:

Unit:mm; Tolerance:±0.1mm



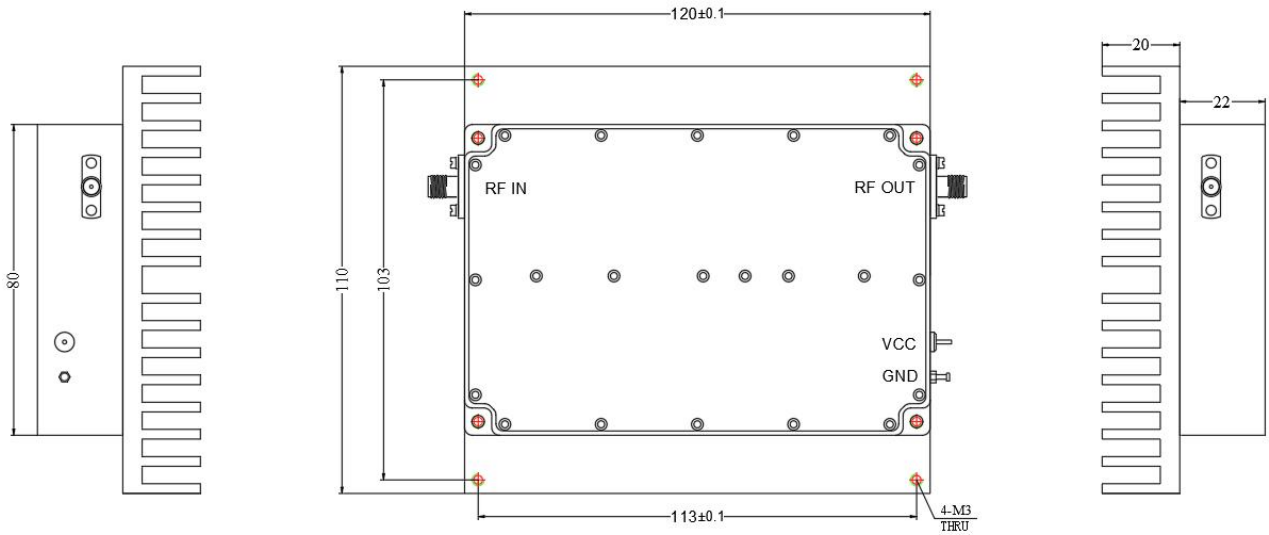

***Heat Sink Required During Operation

ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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## Outline Drawing:

Unit:mm; Tolerance:±0.1mm




## Environmental Conditions:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Operating Temperature* | -40 | | +60 | ℃ |
| Non-operating Temperature* | -50 | | +70 | ℃ |
| Relative humidity | | 95 | | % |
| Altitude | 10,000 | | | feet |
| Shock / Vibration(MIL-STD-810F) | 20g,11ms,saw-tooth | | | |
| 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:

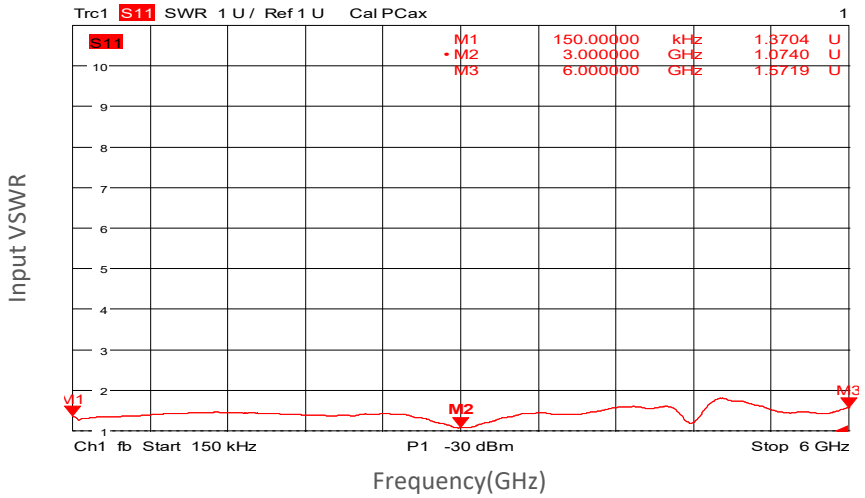
| Base Number | Description | Revision |
|---|---|---|
| TLPA50K6G-33-33 | Power amplifier 50KHz-6GHz, Gain:33dB,Psat:33dBm,+28V DC,Without Heatsink | Rev.1.2 |
| TLPA50K6G-33-33-HS | Power amplifier 50KHz-6GHz, Gain:33dB,Psat:33dBm,+28V DC,With Heatsink | Rev.1.2 |

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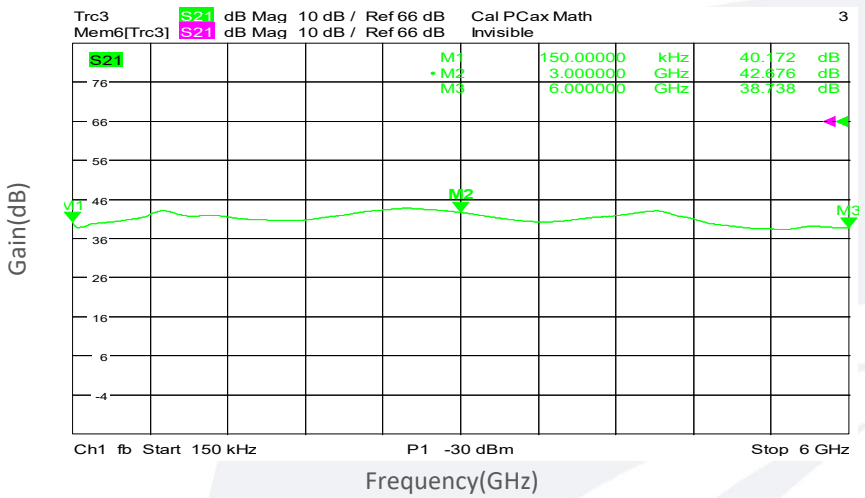
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## Typical Performance Data:

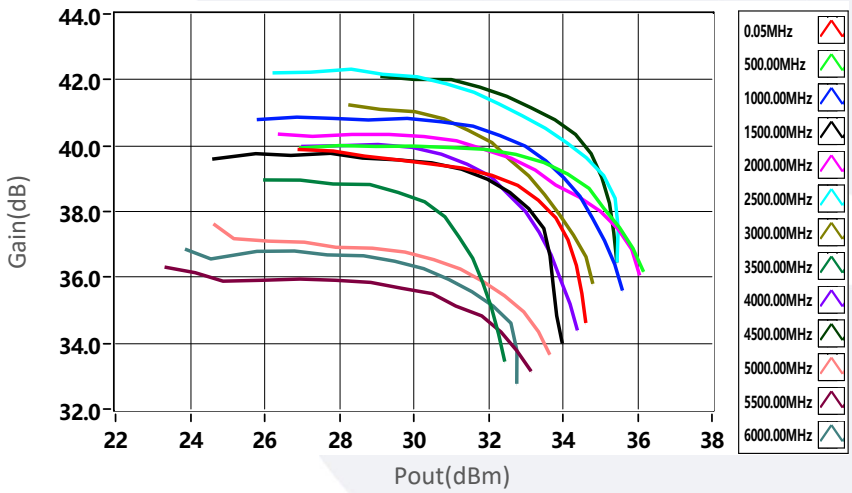
### Input VSWR vs Frequency




### Small Signal Gain vs Frequency



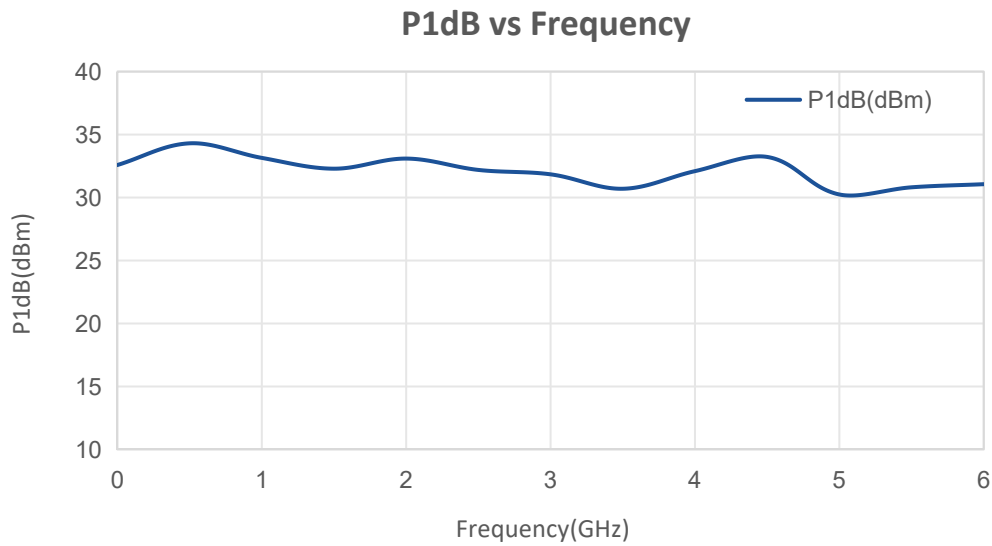

### Gain vs Output Power

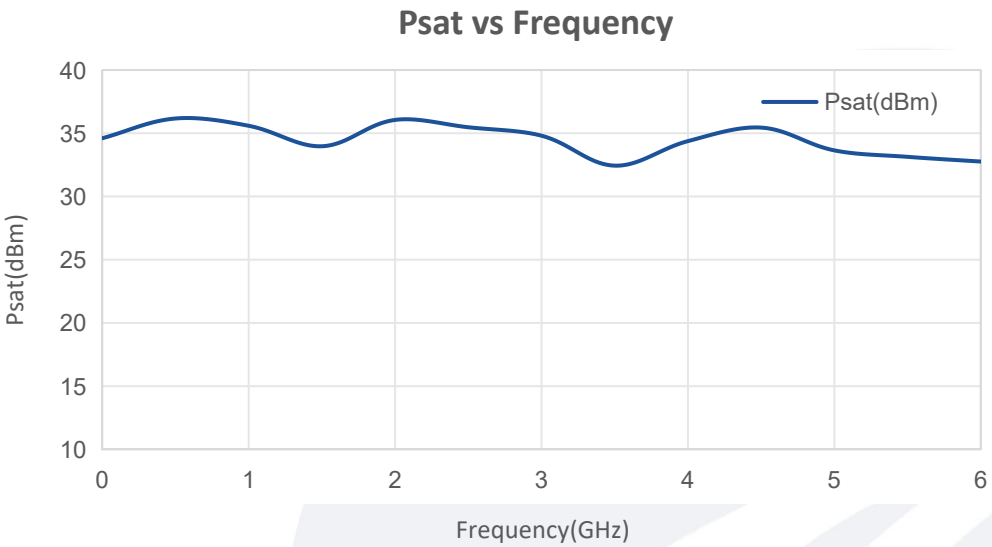


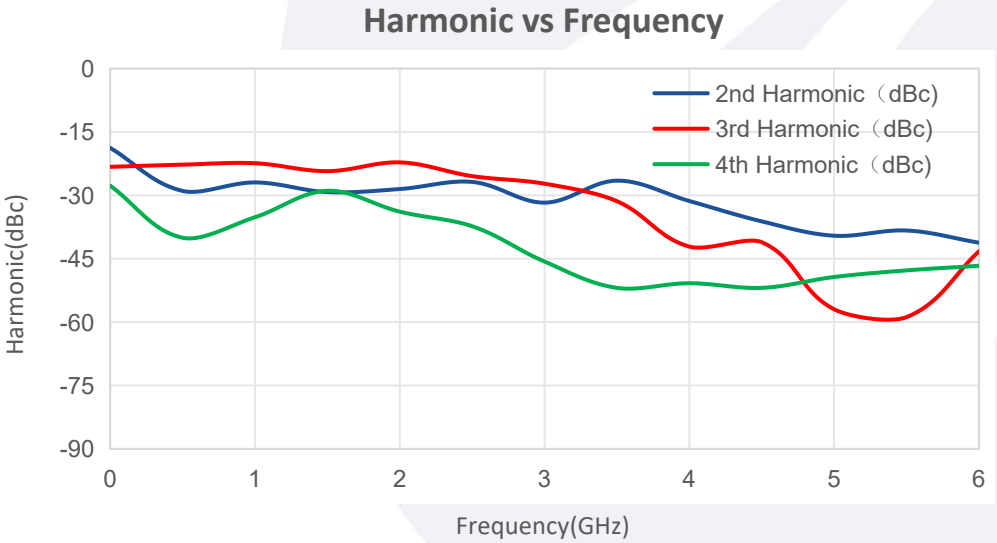

Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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