Suzhou Talent Microwave,Inc
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# Low Noise Amplifier

## 50KHz-67GHz/5dB NF/25dB Gain/15dBm P1dB  Model: TLLA50K67G-25-50

TLLA50K67G-25-50 is a low noise amplifier with a typical small signal gain of 25 dB and a nominal noise figure of 5 dB across the frequency range of 50 KHz to 67 GHz. The DC power requirement for the amplifier is +12 V DC/300 mA. The input and output port configuration offers coax adapter structure with 1.85mm female.

## Features:

- Frequency range: 50KHz-67GHz
- Gain: 25dB Typ
- Noise Figure: 5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

## Applications:

- Communication systems

## Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Frequency range | | 50KHz-67GHz | | |
| Small Signal Gain | | 25 | | dB |
| Gain Flatness | | ±2 | | dB |
| Noise Figure | | 5 | | dB |
| Output P1dB | | 15 | | dBm |
| Output IP3 | | 20 | | dBm |
| Input VSWR | | 2 | | :1 |
| Output VSWR | | 2 | | :1 |
| DC Voltage | | +12 | | V DC |
| DC Supply Current | | 300 | | mA |
| Impedance | | 50 | | Ohms |

## Mechanical Specifications:

| Parameter | Value | Units |
|---|---|---|
| Input /Output Connector | 1.85mm Female/1.85mm Female | |
| DC Bias | Solder Pin | |
| Size | 35*40*12 | mm |

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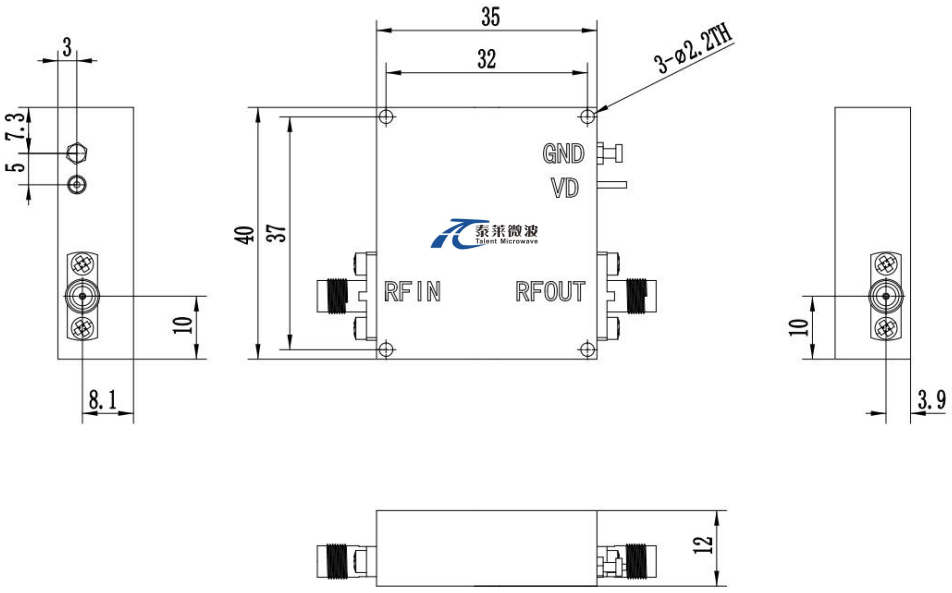
## Absolute Maximum Ratings:

| Parameter | Value |
|---|---|
| Supply Bias Voltage | TBD |
| RF Input Power | +10 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |

Simple 220V System
Available SAC option

## Outline Drawing:

Unit:mm




***Heat Sink Required During Operation

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

## Environmental Conditions:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Operating Temperature | -45 | | +85 | ℃ |
| Non-operating Temperature | -55 | | +125 | ℃ |
| 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 | | | |

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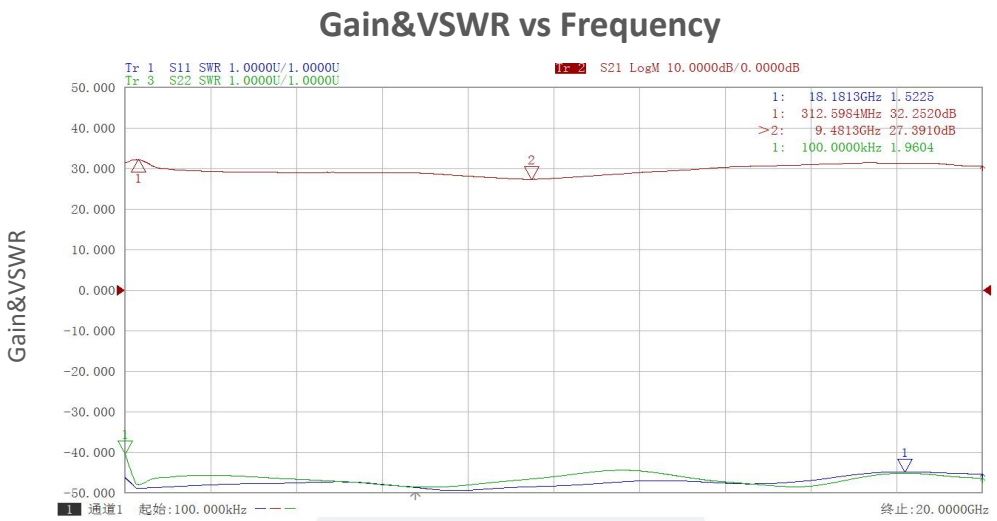
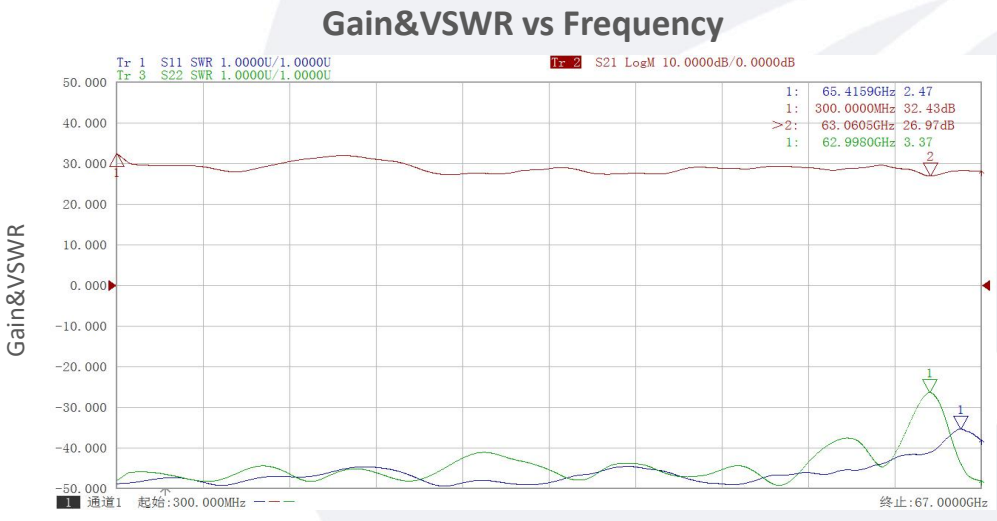
## Ordering Information:

| Base Number | Description | Revision |
|---|---|---|
| TLLA50K67G-25-50 | Low Noise Amplifier, 50KHz-67GHz, Noise Figure:5dB, Gain:25dB,P1dB:15dBm,+12V DC,Without Heatsink | Rev.1.1 |
| TLLA50K67G-25-50-HS | Low Noise Amplifier, 50KHz-67GHz, Noise Figure:5dB, Gain:25dB,P1dB:15dBm,+12V DC,With Heatsink | 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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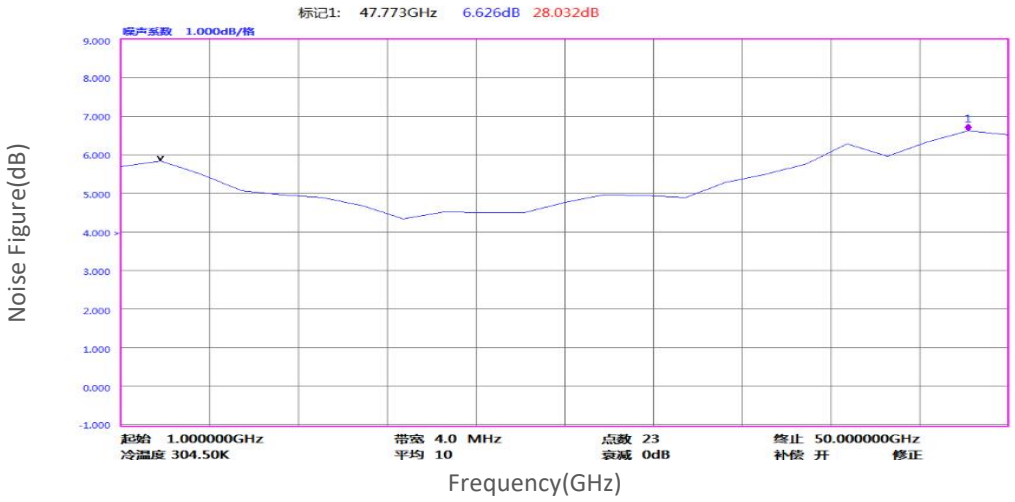
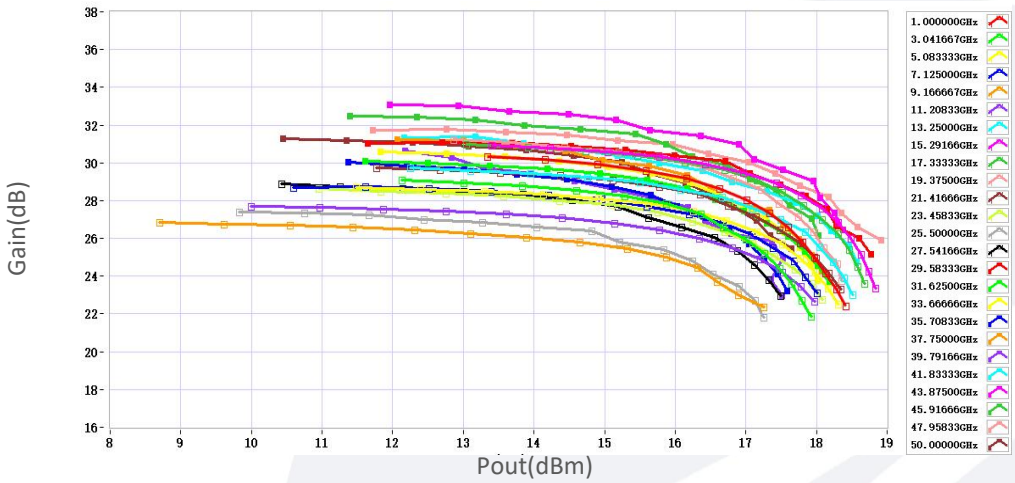
## Typical Performance Data:

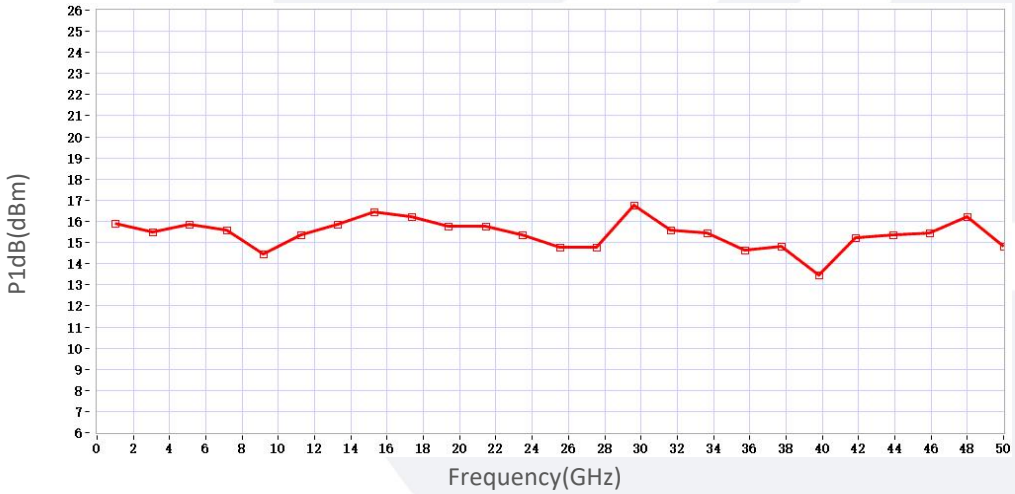
### Noise Figure vs Frequency




### Gain vs Output Power




### P1dB vs Frequency

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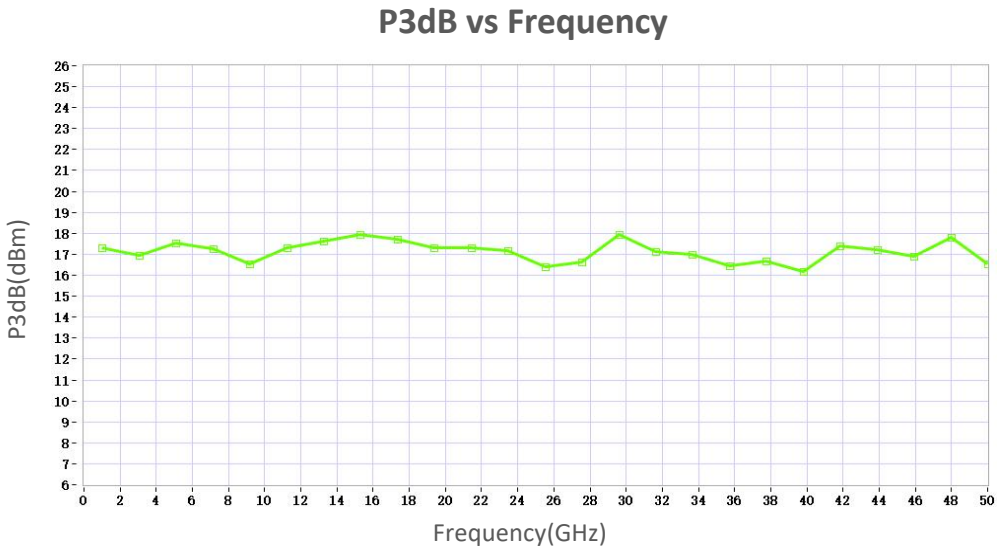


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