泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

# Low Noise Amplifier

## WR-15/50-75GHz /3.0dB NF/38dB Gain  Model: TMLA-050075-3840-15

TMLA-050075-3840-15 is a V-Band low noise amplifier with a typical small signal gain of 38 dB and a nominal noise figure of 3.0 dB across the frequency range of 50 to 75 GHz. The DC power requirement for the amplifier is +12 VDC /175 mA. The input and output port configuration offers an inline structure with WR-15 waveguides and UG-385/U-M anti-cocking flanges.

### Features:

- Ultra Wide Band:50-75GHz
- Gain: 38dB Typ
- Noise Figure: 3.0dB Typ
- Unconditional stability

### Applications:

- Passive Imaging
- 5G Systems

### Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Frequency range | 50 | | 75 | GHz |
| Gain | | 38 | | dB |
| Noise Figure | | 3 | | dB |
| Output P1dB | | 12.5 | | dBm |
| Input VSWR | | 2 | | :1 |
| Output VSWR | | 2 | | :1 |
| DC Voltage | | 12 | | V DC |
| DC power supply | | 175 | | mA |

### Mechanical Specifications:

| Parameter | Value | Units |
|---|---|---|
| Input Connector | WR-15/ UG-385/U | |
| Output Connector | WR-15/ UG-385/U | |
| Power Supply Pin | Solder Pin | |
| Size | 45*30*30 | mm |

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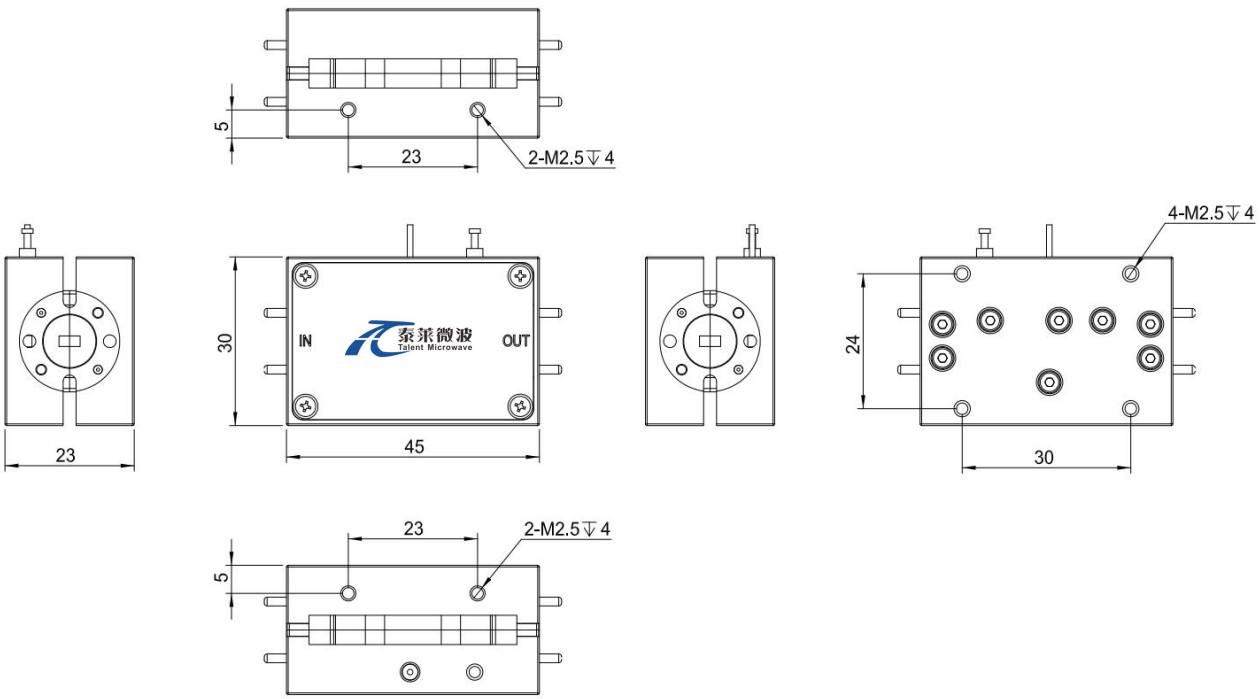
## Absolute Maximum Ratings:

| Parameter | Value |
|---|---|
| Supply Bias Voltage | +15 V |
| RF Input Power | +10 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |

## Outline Drawing:

Unit:mm



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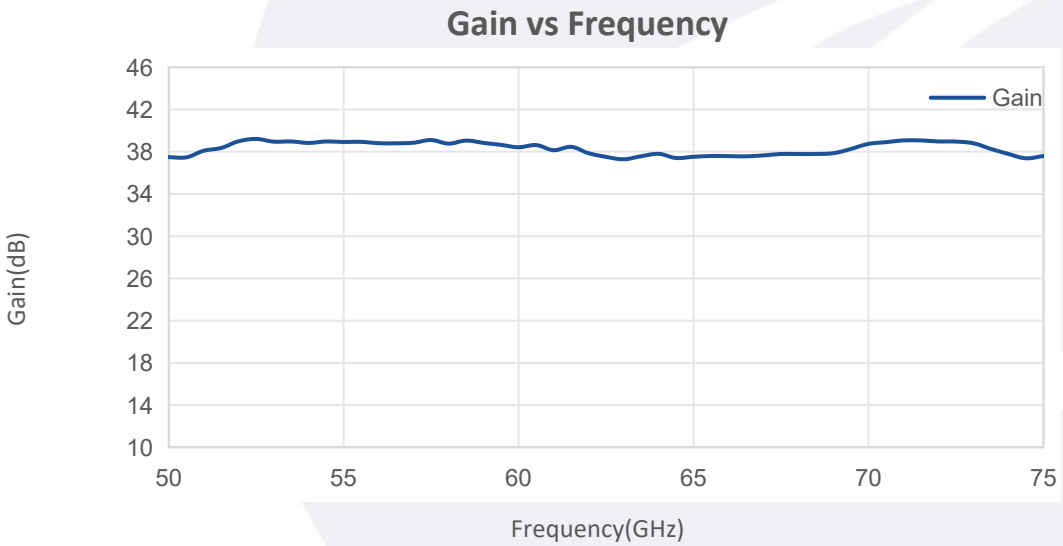
## Environmental Conditions:

| Parameter | Min | Typ | Max | Units |
|---|---|---|---|---|
| Operating Temperature | -10 | | +65 | ℃ |
| Non-operating Temperature | -45 | | +85 | ℃ |
| 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 | | | |

## Ordering Information:

| Base Number | Desciption | Revision |
|---|---|---|
| TMLA-050075-3840-15 | Low Noise Amplifier,50-75GHz, Noise Figure:3.0dB, Gain:38dB,+12V DC,WR-15 | 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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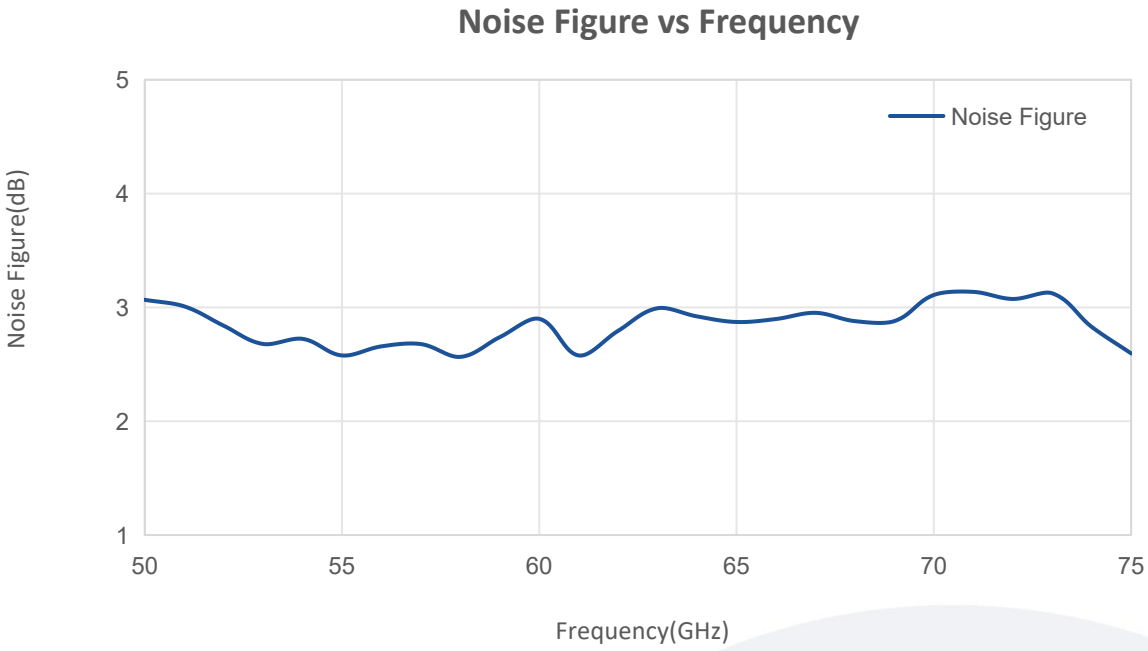
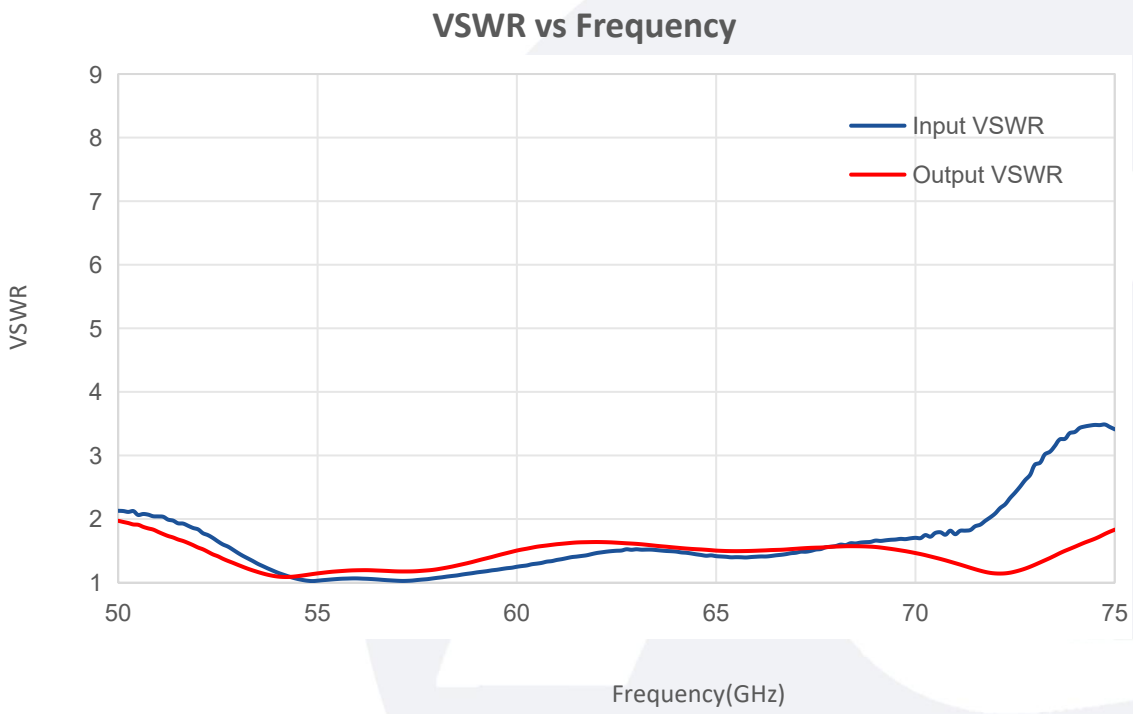
## 典型曲线 Typical Performance Data:

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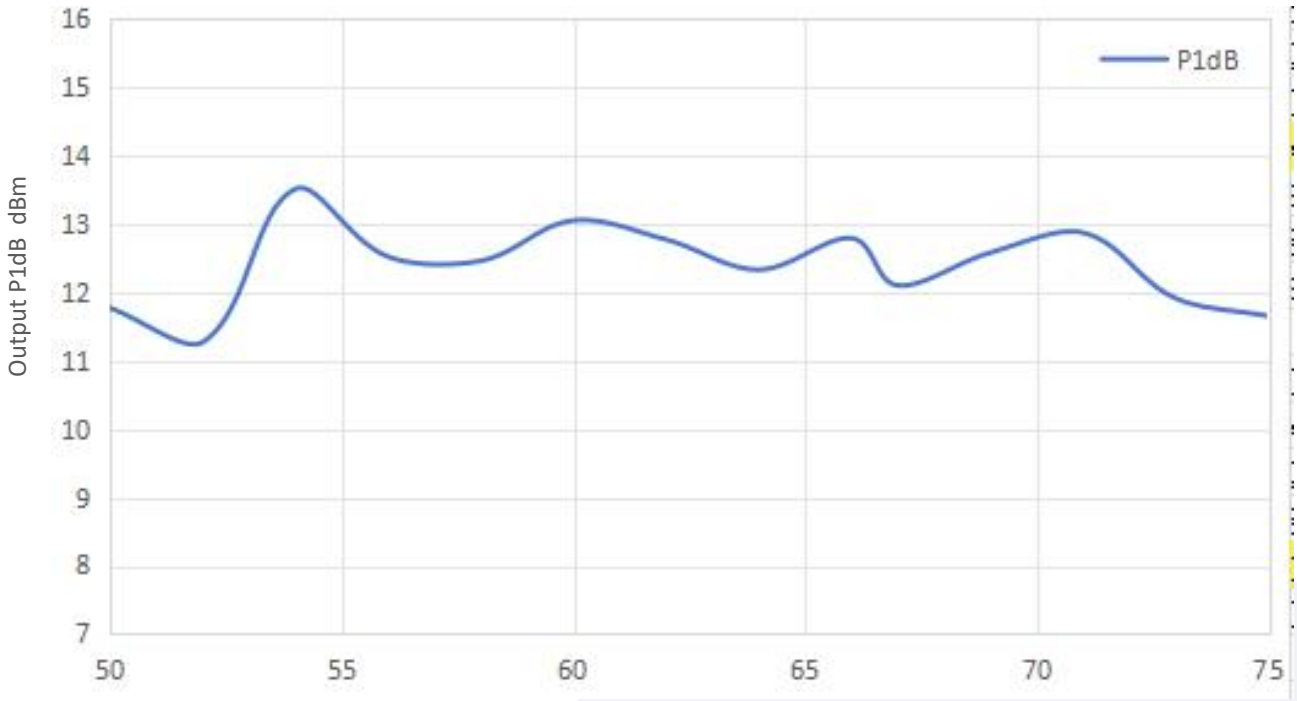
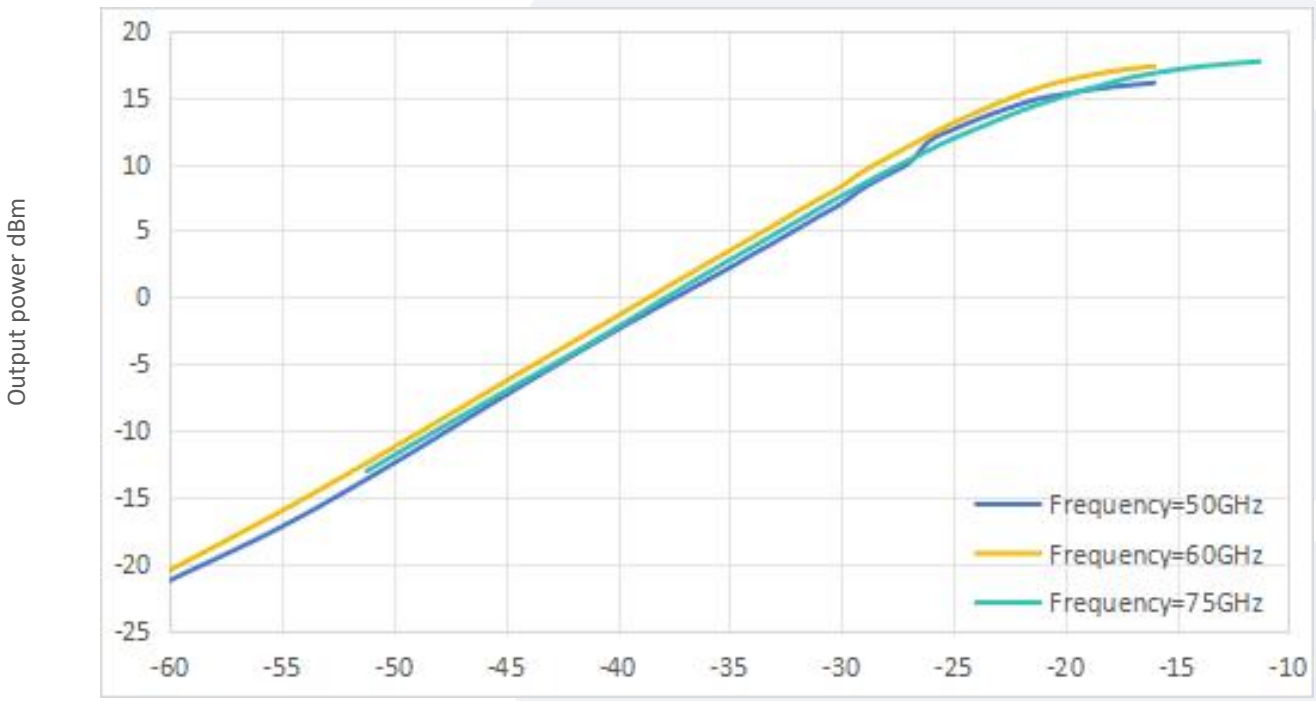
## 典型曲线 Typical Performance Data:

### Output P1dB vs Frequency




### Output Power vs Input Power

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