

## Low Noise Amplifier

17-40GHz/4.5dB NF/37dB Gain/28dBm P1dB

Model: TLLA17G40G-37-45

TLLA17G40G-37-45 is a low noise amplifier with a typical small signal gain of 37 dB and a nominal noise figure of 4.5 dB across the frequency range of 17 to 40 GHz. The DC power requirement for the amplifier is +6 V DC/0.8 A. The input and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Frequency range: 17-40 GHz
- Gain: 37dB Typ
- Noise Figure: 4.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

## 电气特性 Electrical Characteristics:

| 参数 Parameter            | Min  | Typ  | Max | 单位 Units |
|-------------------------|------|------|-----|----------|
| 频率范围 Frequency range    | 17   |      | 40  | GHz      |
| 小信号增益 Small Signal Gain | 35   | 37   |     | dB       |
| 增益平坦度 Gain Flatness     |      | ±3.5 |     | dB       |
| 噪声系数 Noise Figure       |      | 4.5  | 6   | dB       |
| 线性输出功率 Output P1dB      | 26.5 | 28   |     | dBm      |
| 饱和输出功率 Output Psat      |      | 29   |     | dBm      |
| 输入驻波 Input VSWR         |      | 2    |     | :1       |
| 输出驻波 Output VSWR        |      | 2    |     | :1       |
| 直流电压 DC Voltage         |      | +6   | +8  | V DC     |
| 直流电流 DC Supply Current  |      | 0.8  |     | A        |
| 阻抗 Impedance            |      | 50   |     | Ohms     |

## 机械特性 Mechanical Specifications:

| 参数 Parameter                    | 指标 Value   | 单位 Units |
|---------------------------------|--|----------|
| 输入/输出接口 Input /Output Connector | 2.92mm Female/2.92mm Female                            |          |
| 直流偏置 DC Bias                    | Solder Pin   |          |
| 尺寸 Size                         | 44*52*13(Without Heatsink)<br>50*63*120(With Heatsink) | mm       |

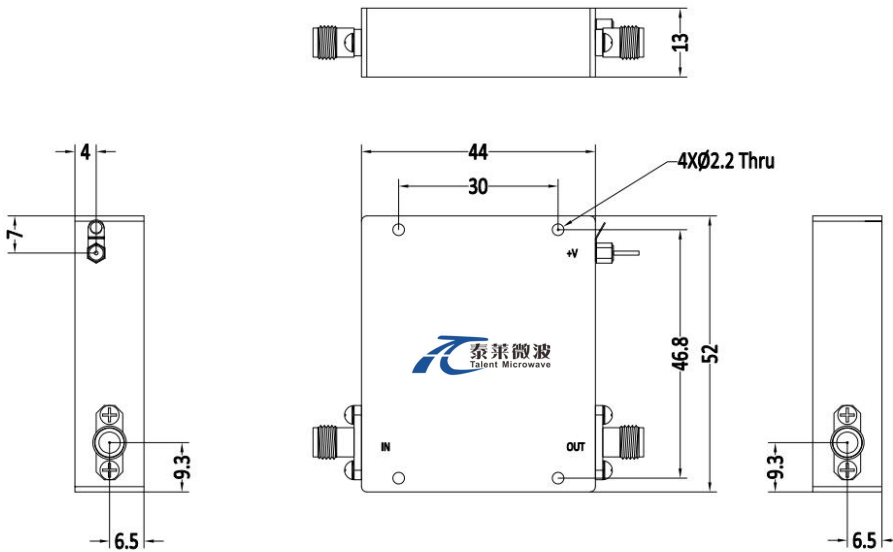
### 绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage   | +8 V                 |
| 输入功率 RF Input Power          | +5 dBm               |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |



### 外形图 Outline Drawing:

Unit:mm



### \*\*\*Heat Sink Required During Operation



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

### 温度环境 Environmental Conditions:

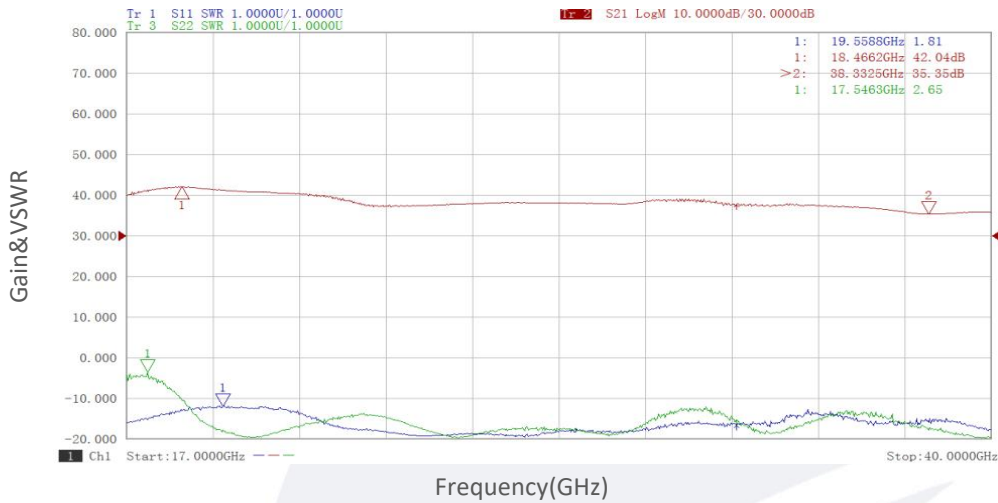
| 参数 Parameter                       | Min   | Typ | Max  | 单位 Units |
|------------------------------------|---|-----|------|----------|
| 操作温度 Operating Temperature         | -45   |     | +85  | °C       |
| 存储温度 Non-operating Temperature     | -55   |     | +125 | °C       |
| 相对湿度 Relative humidity             |   | 95  |      | %        |
| 海拔 Altitude                        | 10,000  |     |      | feet     |
| 震动 Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |     |      |          |
| 冲击 Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions  |     |      |          |

### 订货信息 Ordering Information:

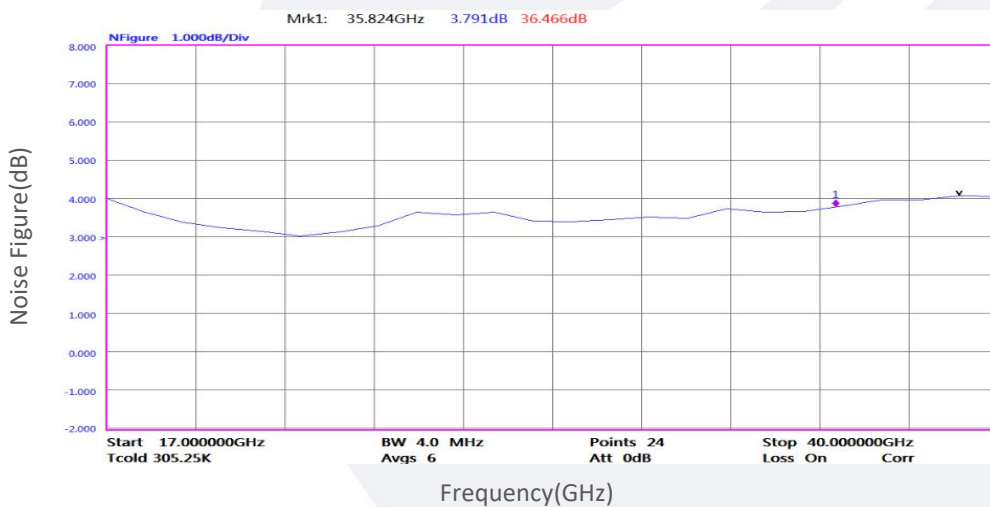
| 标准型号 Base Number    | 描述 Description   | 版本号 Revision |
|---------------------|--|--------------|
| TLLA17G40G-37-45    | Low Noise Amplifier, 17-40GHz, Noise Figure:4.5dB, Gain:37 dB,P1dB:28dBm,+6V DC,Without Heatsink | Rev.1.1      |
| TLLA17G40G-37-45-HS | Low Noise Amplifier, 17-40GHz, Noise Figure:4.5dB, Gain:37 dB,P1dB:28dBm,+6V DC,With Heatsink    | Rev.1.1      |

### 典型曲线 Typical Performance Data:

#### Gain&VSWR vs Frequency



#### Noise Figure 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.