

Low Noise Amplifier

0.01-40GHz /4.5dB NF/48dB Gain/14dBm P1dB

Model: TLLA0.01G40G-48-45

TLLA0.01G40G-48-45 is a low noise amplifier with a typical small signal gain of 48 dB and a nominal noise figure of 4.5 dB across the frequency range of 0.01 to 40 GHz. The DC power requirement for the amplifier is +24 V DC/100 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Ultra Wide Band:0.01-40GHz
- Gain: 48dB 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 | 0.01 | | 40 | GHz |
| 增益 Gain | 45 | 48 | | dB |
| 噪声系数 Noise Figure | | 4.5 | 6.5 | dB |
| 线性输出功率 Output P1dB | | 14 | | dBm |
| 饱和输出功率 Output Psat | | 15 | | dBm |
| 杂散 Spurious | | | -60 | dBc |
| 谐波 Harmonic | | | -20 | dBc |
| 输入驻波 Input VSWR | | 1.8 | | :1 |
| 输出驻波 Output VSWR | | 1.8 | | :1 |
| 直流电压 DC Voltage | | 24 | | V DC |
| 直流电流 DC Supply Current | | 100 | | mA |
| 阻抗 Impedance | | 50 | | Ohms |

机械特性 Mechanical Specifications:

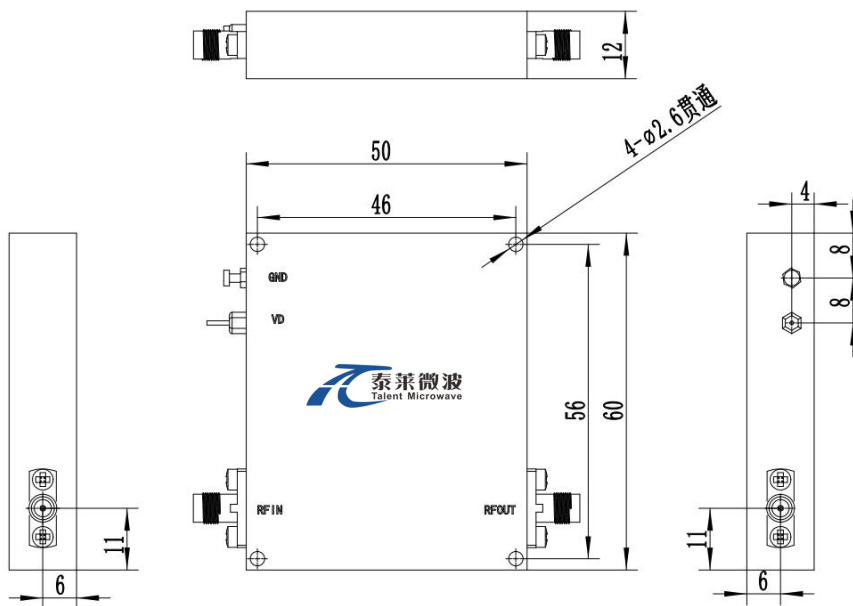
| 参数 Parameter | 指标 Value | 单位 Units |
|---------------------------------|-----------------------------|----------|
| 输入/输出接口 Input /Output Connector | 2.92mm Female/2.92mm Female | |
| 直流偏置 DC Bias | Solder Pin | |
| 尺寸 Size | 50*60*12 | mm |
| 重量 Weight | / | g |

绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage | TBD |
| 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**



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

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 |
|-----------------------|---|--------------|
| TLLA0.01G40G-48-45 | Low Noise Amplifier, 0.01-40GHz, Noise Figure:4.5dB, Gain:48 dB,P1dB:14dBm,+24V DC,Without Heatsink | Rev.1.1 |
| TLLA0.01G40G-48-45-HS | Low Noise Amplifier, 0.01-40GHz, Noise Figure:4.5dB, Gain:48 dB,P1dB:14dBm,+24V DC,With Heatsink | Rev.1.1 |