

Low Noise Amplifier

0.01-40GHz/4.5dB NF/27dB Gain/21dBm P1dB

Model: TLLA0.01G40G-27-45

TLLA0.01G40G-27-45 is a low noise amplifier with a typical small signal gain of 27 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 +12 V DC/260 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 0.01-40GHz
- Gain: 27dB 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 |
| 小信号增益 Small Signal Gain | 25 | 27 | | dB |
| 增益平坦度 Gain Flatness | | ±2.5 | | dB |
| 噪声系数 Noise Figure | | 4.5 | 6 | dB |
| 线性输出功率 Output P1dB | 18 | 21 | | dBm |
| 饱和输出功率 Output Psat | | 22 | | dBm |
| 输入驻波 Input VSWR | | 1.8 | 2.5 | :1 |
| 输出驻波 Output VSWR | | 1.8 | 2.5 | :1 |
| 直流电压 DC Voltage | +10 | +12 | +14 | V DC |
| 直流电流 DC Supply Current | | 260 | | mA |
| 阻抗 Impedance | | 50 | | Ohms |

机械特性 Mechanical Specifications:

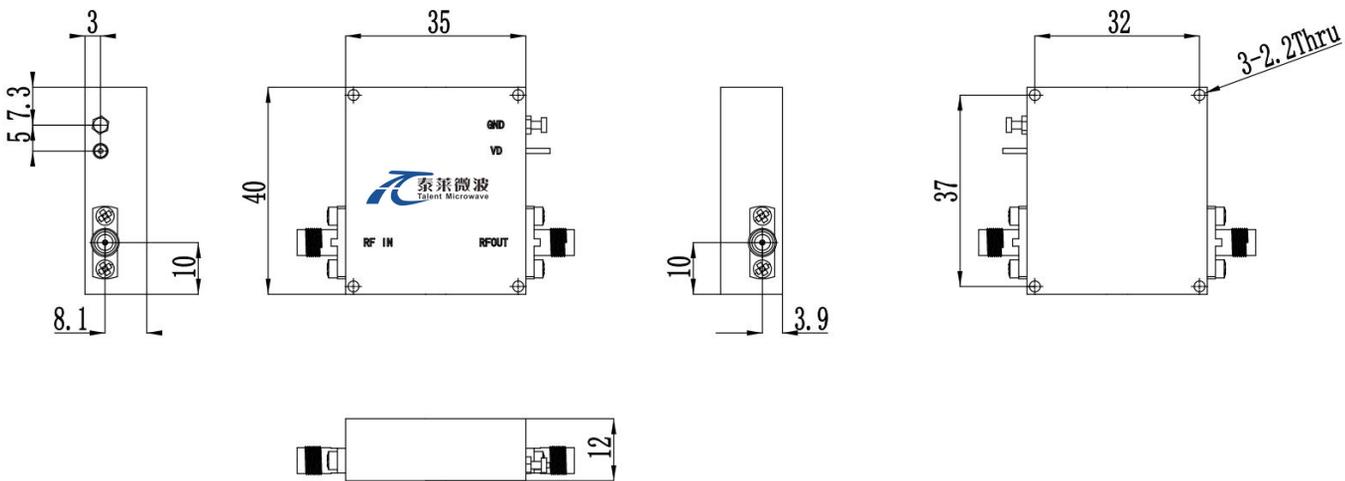
| 参数 Parameter | 指标 Value | 单位 Units |
|---------------------------------|-----------------------------|----------|
| 输入/输出接口 Input /Output Connector | 2.92mm Female/2.92mm Female | |
| 直流偏置 DC Bias | Solder Pin | |
| 尺寸 Size | 35*40*12 | mm |

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



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 | 50,000 | | | 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-27-45 | Low Noise Amplifier,0.01-40GHz, Noise Figure:4.5dB, Gain: 27dB,P1dB:21dBm,+12V DC,Without Heatsink | Rev.1.1 |
| TLLA0.01G40G-27-45-HS | Low Noise Amplifier,0.01-40GHz, Noise Figure:4.5dB, Gain: 27dB,P1dB:21dBm,+12V DC,With Heatsink | Rev.1.1 |