

Low Noise Amplifier

18-42GHz/4.0dB NF/28dB Gain/15dBm P1dB

Model: TLLA18G42G-22-40

TLLA18G42G-22-40 is a low noise amplifier with a typical small signal gain of 28 dB and a nominal noise figure of 4.0 dB across the frequency range of 18 to 42 GHz. The DC power requirement for the amplifier is +5 V DC/240 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 18-42GHz
- Gain: 28dB Typ
- Noise Figure: 4.0dB 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 | 18 | | 42 | GHz |
| 小信号增益 Small Signal Gain | 22 | 28 | | dB |
| 增益平坦度 Gain Flatness | | ±2.0 | ±2.5 | dB |
| 噪声系数 Noise Figure | | 4 | 5.5 | dB |
| 线性输出功率 Output P1dB | 13 | 15 | | dBm |
| 输出三阶交调 Output IP3 | | 25 | | dBm |
| 输入驻波 Input VSWR | | 2 | 2.5 | :1 |
| 输出驻波 Output VSWR | | 2 | 2.5 | :1 |
| 直流电压 DC Voltage | | +5 | | V DC |
| 直流电流 DC Supply Current | | 240 | | mA |
| 阻抗 Impedance | | 50 | | Ohms |

机械特性 Mechanical Specifications:

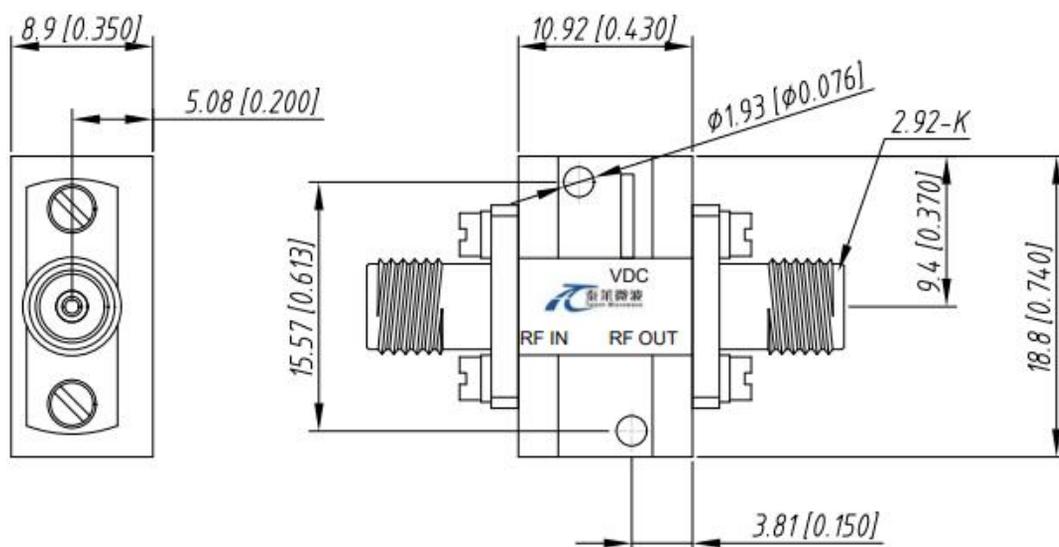
| 参数 Parameter | 指标 Value | 单位 Units |
|---------------------------------|-----------------------------|----------|
| 输入/输出接口 Input /Output Connector | 2.92mm Female/2.92mm Female | |
| 直流偏置 DC Bias | Solder Pin | |
| 尺寸 Size | 10.92*18.8*8.9 | mm |

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 |
|---------------------|--|--------------|
| TLLA18G42G-22-40 | Low Noise Amplifier, 18-42GHz, Noise Figure:4.0dB, Gain:28 dB,P1dB:15dBm,+5V DC,Without Heatsink | Rev.1.1 |
| TLLA18G42G-22-40-HS | Low Noise Amplifier, 18-42GHz, Noise Figure:4.0dB, Gain:28 dB,P1dB:15dBm,+5V DC,With Heatsink | Rev.1.1 |