

## Low Noise Amplifier

0.5-6GHz/2.5dB NF/35dB Gain/20dBm P1dB

Model: TLLA0.5G6G-33-25

TLLA0.5G6G-33-2.5 is a low noise amplifier with a typical small signal gain of 35 dB and a maximum noise figure of 2.5 dB across the frequency range of 0.5 to 6GHz. The DC power requirement for the amplifier is +12V DC/200 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 0.5-60GHz
- Gain: 35dB Typ
- Noise Figure: 2.5dB Max
- 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                          | 0.5 |      | 6    | GHz      |
| 小信号增益 Small Signal Gain                       | 30  | 35   |      | dB       |
| 增益平坦度 Gain Flatness                           |     | ±1.0 | ±2.0 | dB       |
| 温度变化下的增益变化<br>Gain Variation Over Temperature |     | ±1.0 |      | dB       |
| 噪声系数 Noise Figure                             |     | 2.2  | 2.5  | dB       |
| 线性输出功率 Output P1dB                            | 17  | 20   |      | dBm      |
| 饱和输出功率 Output Psat                            |     | 20   |      | dBm      |
| 输出三阶交调 Output IP3                             |     | 29   |      | dBm      |
| 输入驻波 Input VSWR                               |     | 1.6  | 2.0  | :1       |
| 输出驻波 Output VSWR                              |     | 1.5  | 2.2  | :1       |
| 直流电压 DC Voltage                               |     | +12  |      | V DC     |
| 直流电流 DC Supply Current                        |     | 200  |      | mA       |
| 阻抗 Impedance                                  |     | 50   |      | Ohms     |

### Mechanical Specifications:

| Parameter               | Value                     | Units |
|-------------------------|---------------------------|-------|
| Input /Output Connector | SMA Female/SMA Female     |       |
| DC Bias                 | Solder Pin                |       |
| Material                | Aluminium/Gold Painting   |       |
| Package Sealing         | General Sealing(Standard) |       |
| Size                    | 30*35*10                  | mm    |
| Weight                  | 30                        | g     |

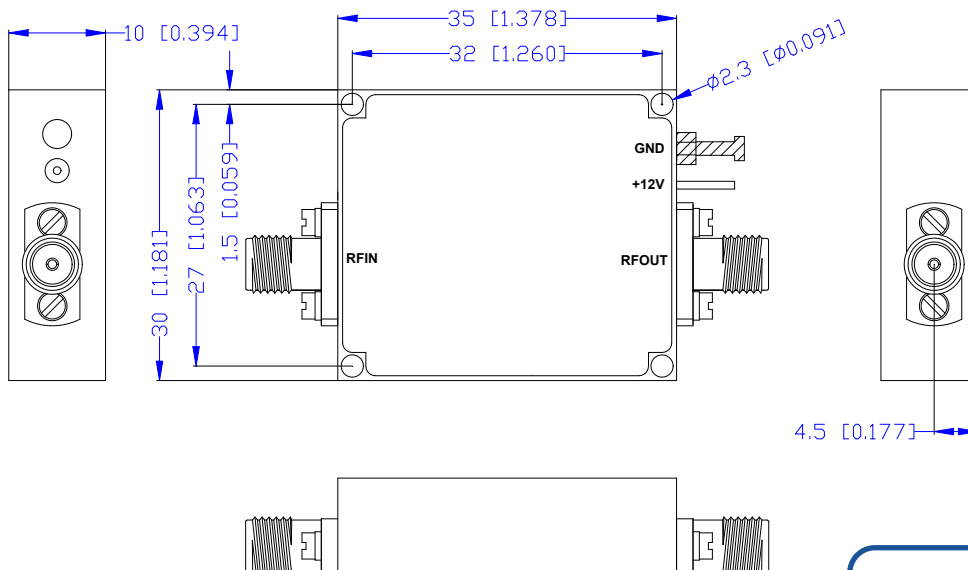
### Absolute Maximum Ratings:

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



### Outline Drawing:

Unit:mm



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



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

### Environmental Conditions:

| Parameter                       | Min   | Typ | Max  | Units |
|---------------------------------|---|-----|------|-------|
| Operating Temperature           | -45   |     | +85  | °C    |
| Non-operating Temperature       | -55   |     | +125 | °C    |
| Relative humidity               |   | 95  |      | %     |
| Altitude                        | 50,000  |     |      | 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         | Description   | Revision |
|---------------------|---|----------|
| TLLA0.5G6G-33-25    | Low Noise Amplifier, 0.5-6GHz, Noise Figure:2.5dB, Gain: 35dB,P1dB:20dBm,+12V DC,Without Heatsink | Rev.1.1  |
| TLLA0.5G6G-33-25-HS | Low Noise Amplifier, 0.5-6GHz, Noise Figure:2.5dB, Gain: 35dB,P1dB:20dBm,+12V DC,With Heatsink    | Rev.1.1  |