

Low Noise Amplifier

0.8-1.6GHz/0.5dB NF/32dB Gain/13dBm P1dB

Model: TLLA0.8G1.6G-32-13

TLLA0.8G1.6G-32-13 is a low noise amplifier with a typical small signal gain of 32 dB and a nominal noise figure of 0.5 dB across the frequency range of 0.8 to 1.6 GHz. The DC power requirement for the amplifier is +5 V DC/50 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.8-1.6GHz
- Gain: 32dB Typ
- Noise Figure: 0.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|-------------------|-------|------|-------|-------|
| Frequency range | 0.8 | | 1.6 | GHz |
| Small Signal Gain | 27 | 32 | | dB |
| Gain Flatness | | ±1.0 | ±1.75 | dB |
| Noise Figure | | 0.5 | 0.6 | dB |
| Output P1dB | 12 | 13 | | dBm |
| Input VSWR | | 1.4 | 1.8 | :1 |
| Output VSWR | | 1.4 | 1.8 | :1 |
| DC Voltage | +4.85 | +5 | +6 | V DC |
| DC Supply Current | | 50 | 60 | mA |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

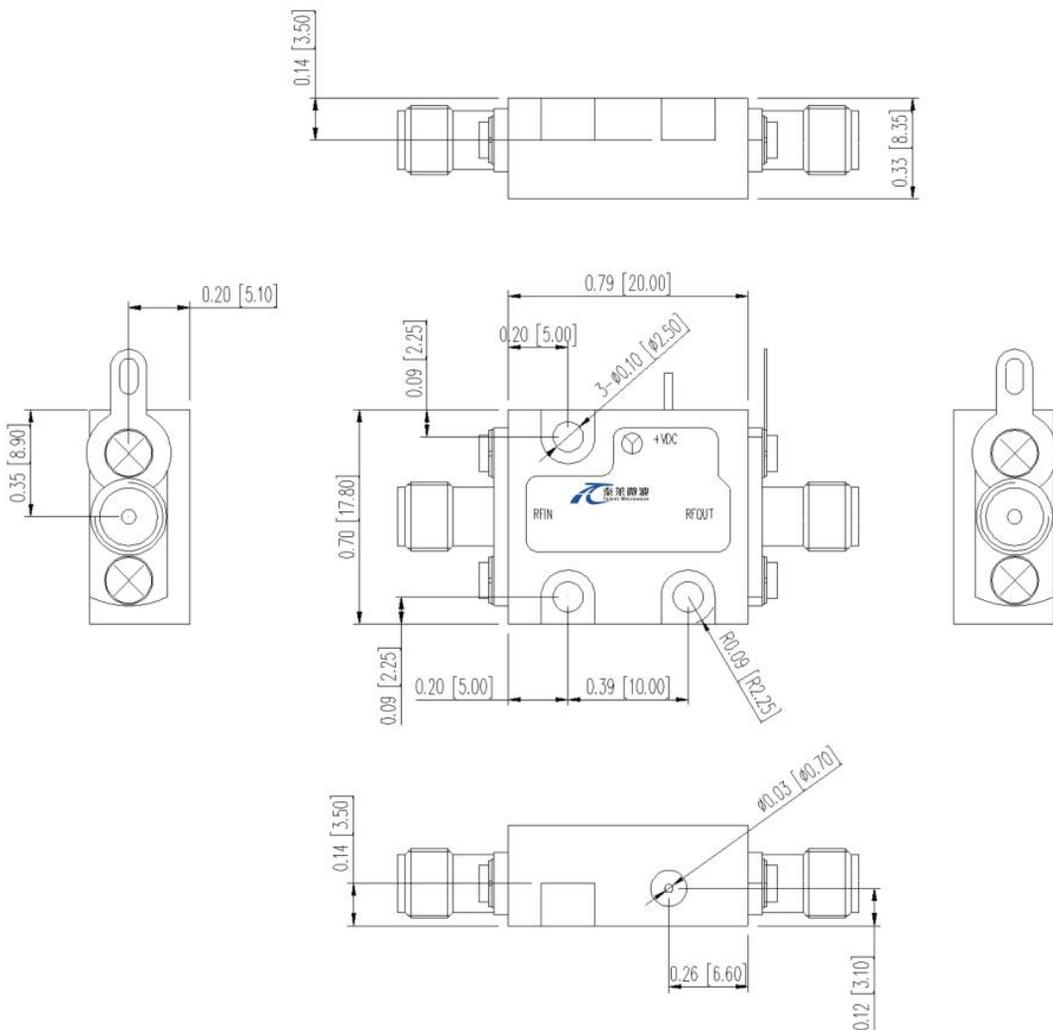
| Parameter | Value | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female | |
| DC Bias | Solder Pin | |
| Size | 17.8*20*8.35 | mm |
| Weight | 11 | g |

Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | TBD |
| RF Input Power | 15 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 | -40 | | +70 | °C |
| Non-operating Temperature | -65 | | +150 | °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 |
|-----------------------|--|----------|
| TLLA0.8G1.6G-32-13 | Low Noise Amplifier, 0.8-1.6GHz, Noise Figure:0.5dB, Gain: 32dB,P1dB:13dBm,+5V DC,Without Heatsink | Rev.1.1 |
| TLLA0.8G1.6G-32-13-HS | Low Noise Amplifier, 0.8-1.6GHz, Noise Figure:0.5dB, Gain: 32dB,P1dB:13dBm,+5V DC,With Heatsink | Rev.1.1 |