

Low Noise Amplifier

4-8GHz/2.0dB NF/25dB Gain/12dBm P1dB

Model: TLLA4G8G-25-20

TLLA4G8G-25-20 is a low noise amplifier with a minimum small signal gain of 25 dB and a nominal noise figure of 2.0 dB across the frequency range of 4 to 8 GHz. The DC power requirement for the amplifier is +12 V DC/30 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 4-8GHz
- Gain: 25dB Min
- Noise Figure: 2.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|-------------------|-----|------|-----|-------|
| Frequency range | 4 | | 8 | GHz |
| Small Signal Gain | 25 | | | dB |
| Gain Flatness | | ±2.0 | | dB |
| Noise Figure | | 2.0 | | dB |
| Output P1dB | 12 | | | dBm |
| Input VSWR | | 2.0 | | :1 |
| Output VSWR | | 2.0 | | :1 |
| DC Voltage | +8 | +12 | +15 | V DC |
| DC Supply Current | | 30 | | mA |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

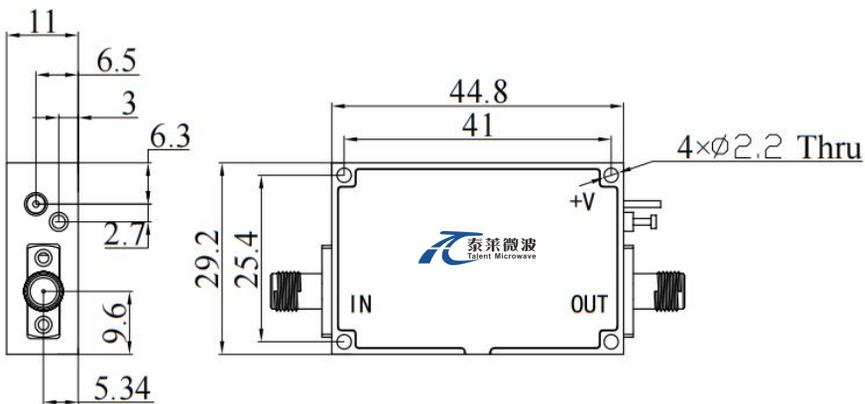
| Parameter | Value | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female | |
| DC Bias | Solder Pin | |
| Size | 44.8*29.2*11 | mm |
| Weight | 55 | g |

Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +15V |
| 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 | -45 | | +85 | °C |
| Non-operating Temperature | -55 | | +125 | °C |
| Relative humidity | | 95 | | % |
| Altitude | 10,000 | | | 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 |
|-------------------|--|----------|
| TLLA4G8G-25-20 | Low Noise Amplifier, 4-8GHz, Noise Figure:2.0dB, Gain:25dB,P1dB:12dBm,+12V DC,Without Heatsink | Rev.1.1 |
| TLLA4G8G-25-20-HS | Low Noise Amplifier, 4-8GHz, Noise Figure:2.0dB, Gain:25dB,P1dB:12dBm,+12V DC,With Heatsink | Rev.1.1 |