

Low Noise Amplifier

6-34GHz/3.5dB NF/32dB Gain/14dBm P1dB

Model: TLLA6G34G-32-35

TLLA6G34G-32-35 is a low noise amplifier with a typical small signal gain of 32 dB and a nominal noise figure of 3.5 dB across the frequency range of 6 to 34 GHz. The DC power requirement for the amplifier is +12 V DC/280 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 6-34GHz
- Gain: 32dB Typ
- Noise Figure: 3.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|-------------------|-----|------|-----|-------|
| Frequency range | 6 | | 34 | GHz |
| Small Signal Gain | 30 | 32 | | dB |
| Gain Flatness | | ±2.5 | | dB |
| Noise Figure | | 3.5 | | dB |
| Output P1dB | 13 | 14 | | dBm |
| Output Psat | | 15 | | dBm |
| Input VSWR | | 1.6 | | :1 |
| Output VSWR | | 1.6 | | :1 |
| DC Voltage | +8 | +12 | +13 | V DC |
| DC Supply Current | | 280 | | mA |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

| Parameter | Value | Units |
|-------------------------|----------------------------|-------|
| Input /Output Connector | 2.92mm Female/2.92mmFemale | |
| DC Bias | Solder Pin | |
| Size | 44*36*12 | mm |

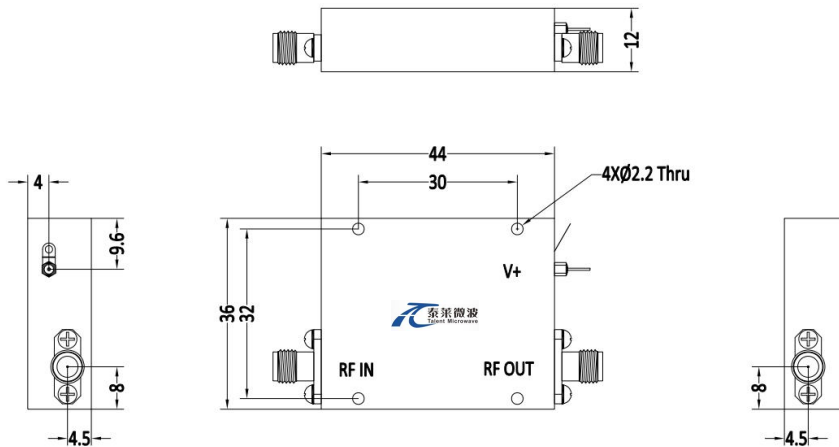
Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +13V |
| RF Input Power | +5 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:

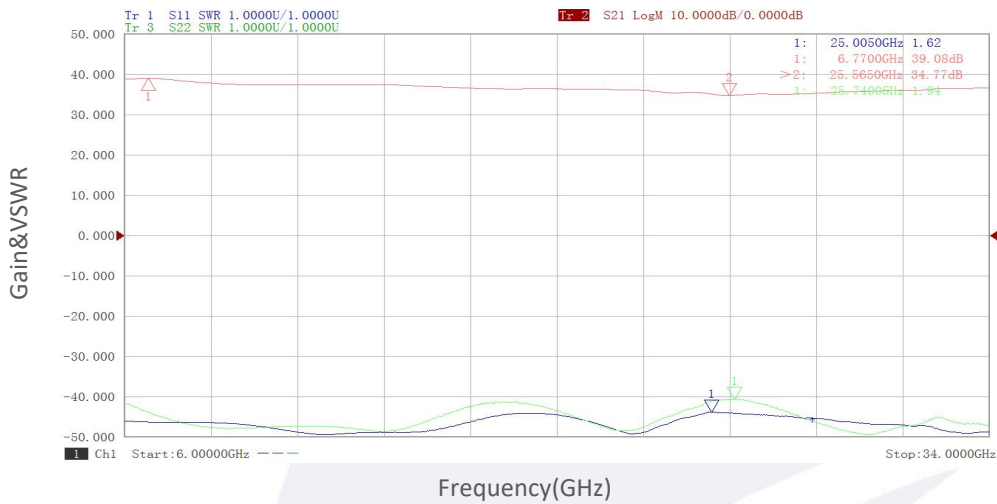
| Parameter | Min | Typ | Max | Units |
|---------------------------------|---|--------|------|-------|
| Operating Temperature | -45 | | +85 | °C |
| Non-operating Temperature | -55 | | +125 | °C |
| Relative humidity | | 95 | | % |
| Altitude | | 50,000 | | feet |
| Shock / Vibration(MIL-STD-810F) | 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:

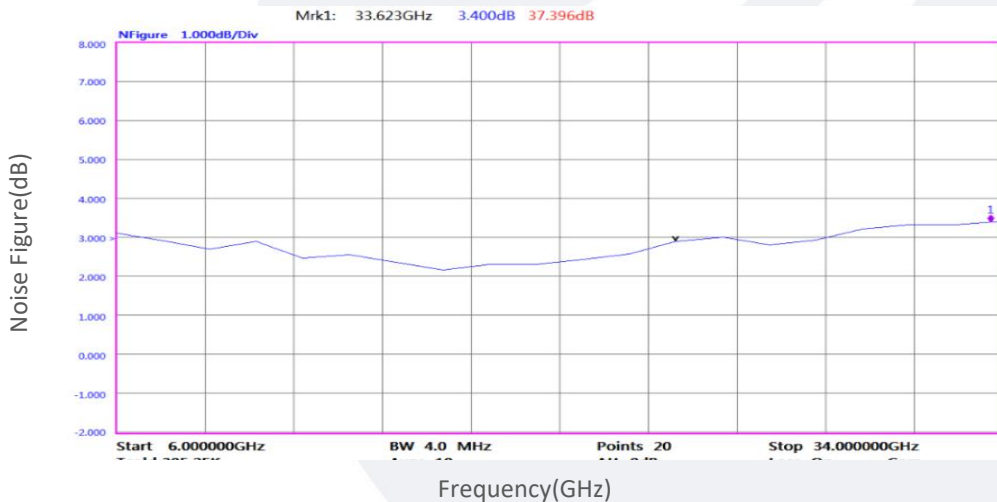
| Base Number | Description | Revision |
|--------------------|---|----------|
| TLLA6G34G-32-35 | Low Noise Amplifier, 6-34GHz, Noise Figure:3.5dB, Gain:32dB,P1dB:14dBm,+12V DC,Without Heatsink | Rev.1.1 |
| TLLA6G34G-32-35-HS | Low Noise Amplifier, 6-34GHz, Noise Figure:3.5dB, Gain:32dB,P1dB:14dBm,+12V DC,With Heatsink | Rev.1.1 |

Typical Performance Data:

Gain&VSWR vs Frequency



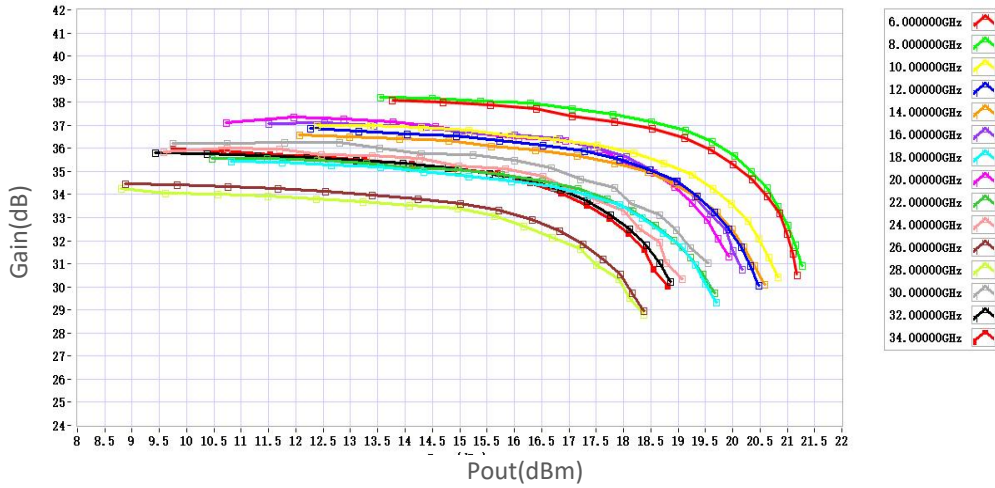
Noise Figure vs Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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