

Low Noise Amplifier

10-67GHz/5.0dB NF/30dB Gain/13dBm P1dB

Model: TLLA10G67G-30-50

TLLA10G67G-30-50 is a low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 5.0 dB across the frequency range of 10 to 67 GHz. The DC power requirement for the amplifier is +12 V DC/300 mA. The input and output port configuration offers coax adapter structure with 1.85mm female.

Features:

- Frequency range: 10-67GHz
- Gain: 30dB Typ
- Noise Figure: 5.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|-------------------|-----|-----|-----|-------|
| Frequency range | 10 | | 67 | GHz |
| Small Signal Gain | 28 | 30 | | dB |
| Gain Flatness | | ±3 | | dB |
| Noise Figure | | 5 | 8 | dB |
| Output P1dB | | 13 | | dBm |
| Output IP3 | | 25 | | dBm |
| Input VSWR | | 2 | | :1 |
| Output VSWR | | 2 | | :1 |
| DC Voltage | | +12 | +13 | V DC |
| DC Supply Current | | 300 | | mA |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

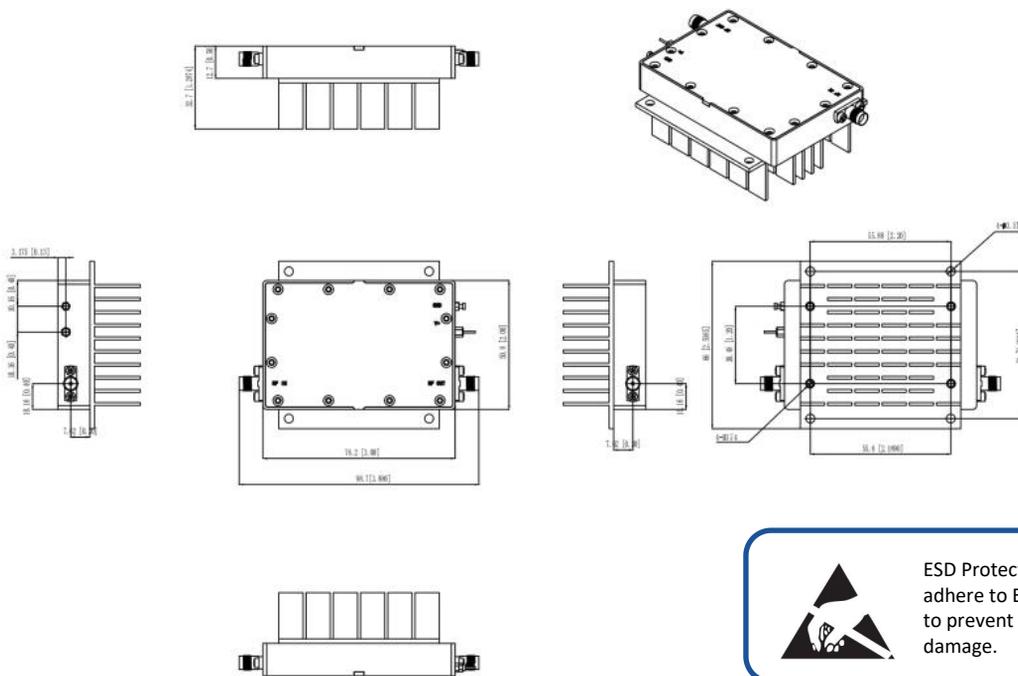
| Parameter | Value | Units |
|-------------------------|----------------------------|-------|
| Input /Output Connector | 1.85mm Female/1.85mmFemale | |
| DC Bias | Solder Pin | |
| Size | 76.2*50.8*37.2 | mm |

Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +13 V |
| RF Input Power | +10 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |

Outline Drawing:

Unit:mm



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

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

Environmental Conditions:

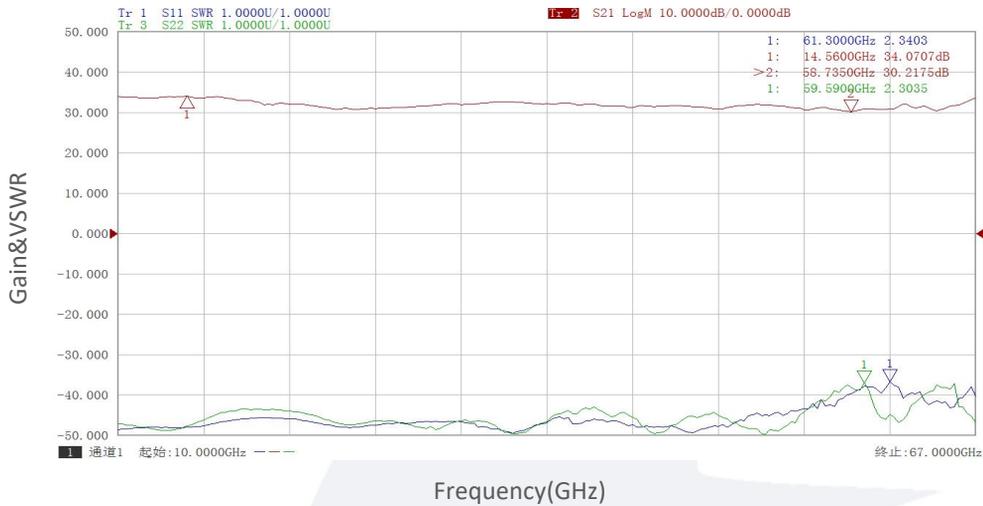
| Parameter | Min | Typ | Max | Units |
|---------------------------------|---|-----|------|-------|
| Operating Temperature | -40 | | +85 | °C |
| Non-operating Temperature | -55 | | +125 | °C |
| Relative humidity | | 95 | | % |
| Altitude | 50,000 | | | feet |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis | | | |
| Shock(non operating) | 20G for 11msc half sin wave,3 axis both directions | | | |

Ordering Information:

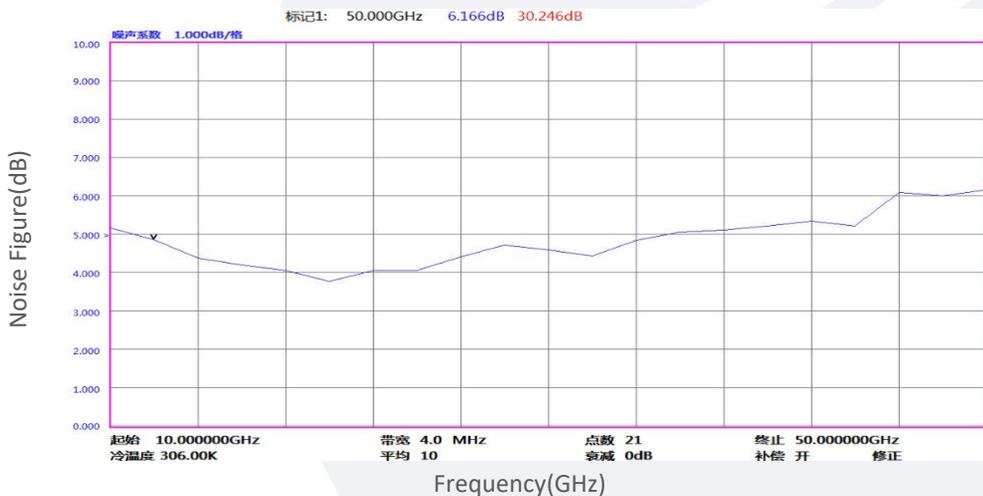
| Base Number | Description | Revision |
|---------------------|--|----------|
| TLLA10G67G-30-50 | Low Noise Amplifier, 10-67GHz, Noise Figure:5.0dB, Gain:30dB,P1dB:13dBm,+12V DC,Without Heatsink | Rev.1.1 |
| TLLA10G67G-30-50-HS | Low Noise Amplifier, 10-67GHz, Noise Figure:5.0dB, Gain:30dB,P1dB:13dBm,+12V DC,With Heatsink | Rev.1.1 |

Typical Performance Data:

Gain&VSWR vs Frequency



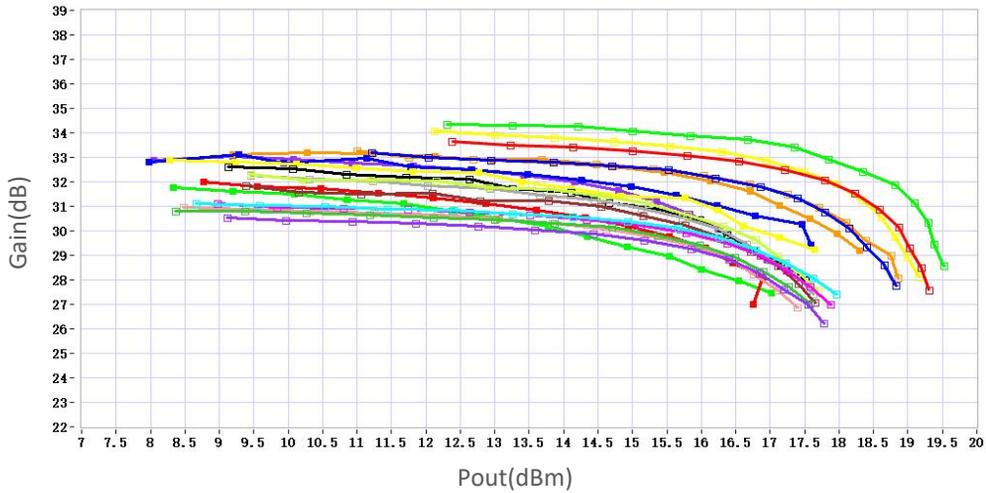
Noise Figure vs Frequency



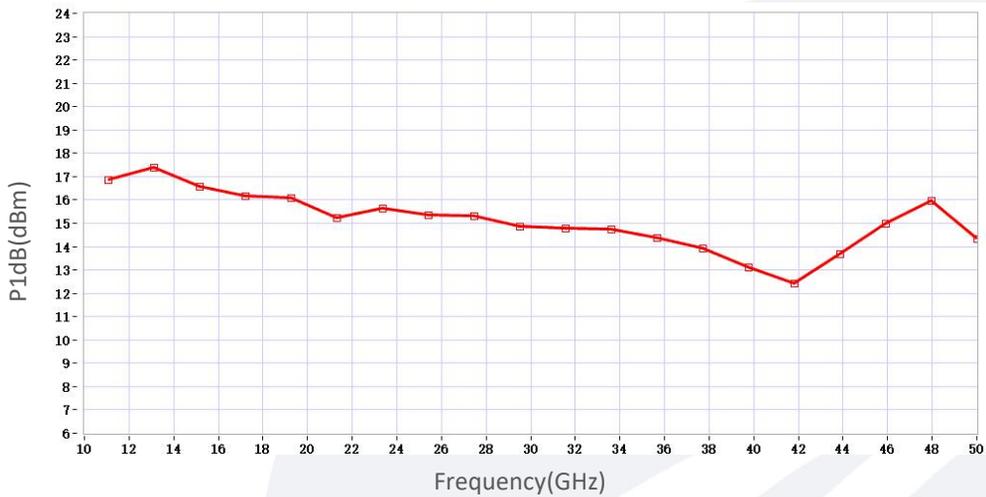
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Gain vs Output Power



P1dB vs Frequency



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