

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

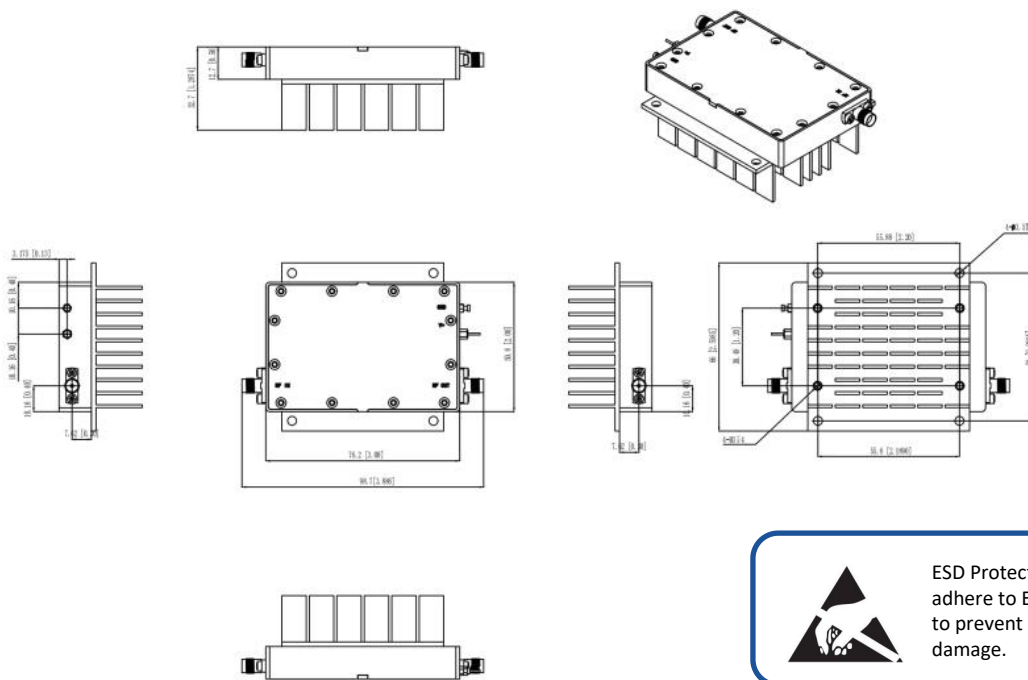

Absolute Maximum Ratings:

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:

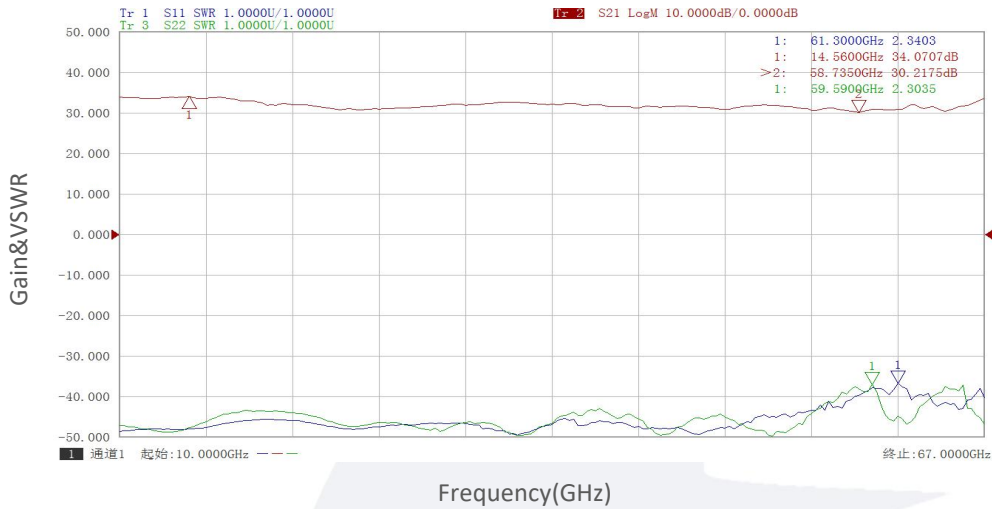
Parameter	Min	Typ	Max	Units
Operating Temperature	-40		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

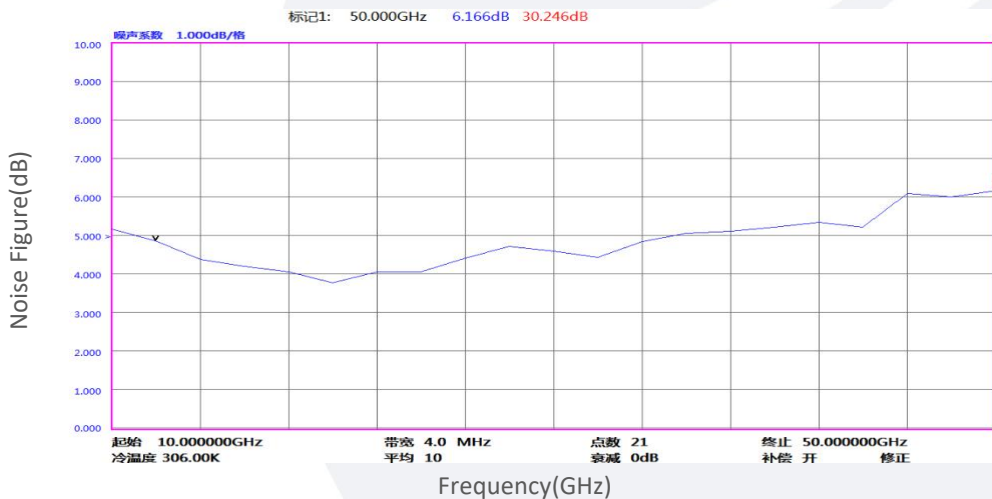
Base Number	Description	Revision
TLLA10G67G-30-50	Low Noise Amplifier, 10-67GHz, Noise Figure:5.0dB, Gain:30dB,P1dB:13dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA10G67G-30-50-HS	Low Noise Amplifier, 10-67GHz, Noise Figure:5.0dB, Gain:30dB,P1dB:13dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



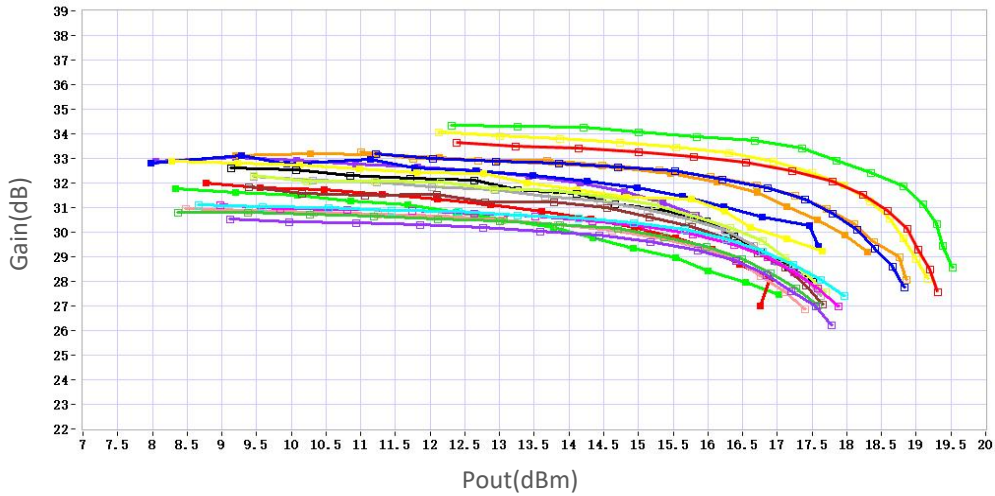
Noise Figure vs Frequency



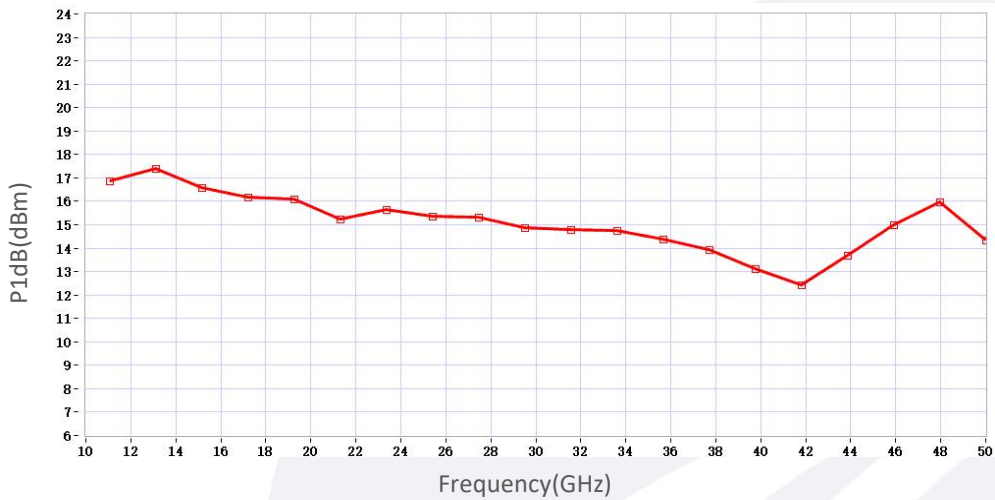
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Gain vs Output Power



P1dB vs Frequency



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