

Low Noise Amplifier

1-4GHz/1.3dB NF/40dB Gain/16dBm P1dB

Model: TLLA1G4G-40-13

TLLA1G4G-40-13 is a low noise amplifier with a minimum small signal gain of 40 dB and a maximum noise figure of 1.3 dB across the frequency range of 1 to 4 GHz. The DC power requirement for the amplifier is +12 V DC/100 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1-4GHz
- Gain: 40dB Min
- Noise Figure: 1.3dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	1		4	GHz
Small Signal Gain	40	43		dB
Noise Figure		1	1.3	dB
Output P1dB	12	16		dBm
Output Psat		17		dBm
Input VSWR		1.6		:1
Output VSWR		1.8		:1
DC Voltage	+8	+12	+16	V DC
DC Supply Current		100		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	30*28*10	mm

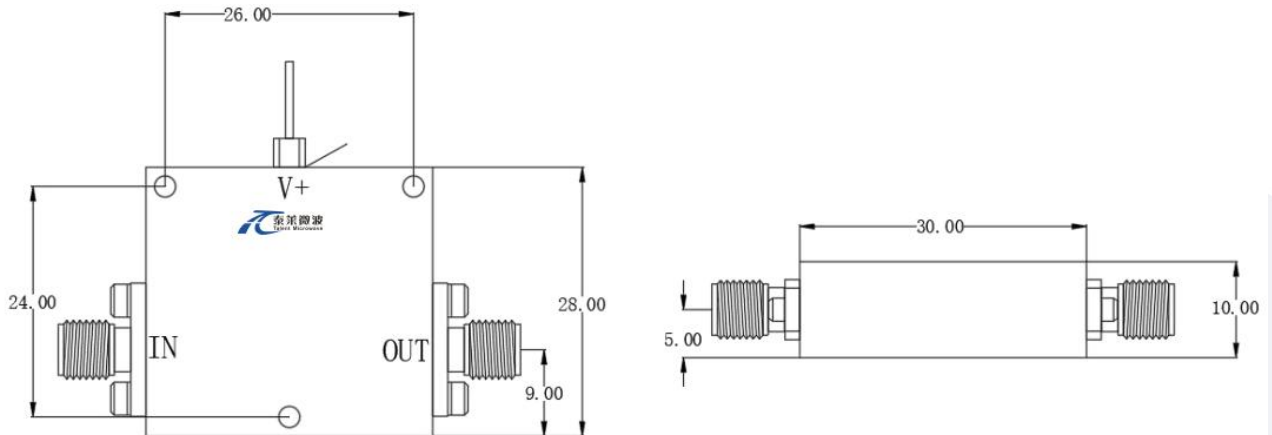
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	16 V
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
TLLA1G4G-40-13	Low Noise Amplifier, 1-4GHz, Noise Figure:1.3dB, Gain: 40dB,P1dB:16dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA1G4G-40-13-HS	Low Noise Amplifier, 1-4GHz, Noise Figure:1.3dB, Gain: 40dB,P1dB:16dBm,+12V DC,With Heatsink	Rev.1.1