

## Low Noise Amplifier

1.5-4.5GHz/5.5dB NF/15dB Gain/20dBm P1dB

Model: TLLA1.5G4.5G-15-55

TLLA1.5G4.5G-15-55 is a low noise amplifier with a typical small signal gain of 15 dB and a nominal noise figure of 5.5 dB across the frequency range of 1.5 to 4.5 GHz. The DC power requirement for the amplifier is +5.5 V DC/125 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 1.5-2.5GHz
- Gain: 15dB Typ
- Noise Figure: 5.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	1.5		4.5	GHz
Small Signal Gain	14	15		dB
Phase Noise	-162@10kHz			dBc/Hz
Noise Figure		5.5		dB
Output P1dB		20		dBm
Output Psat		21		dBm
Input VSWR		1.8		:1
Output VSWR		1.8		:1
DC Voltage	+5	+5.5	+8	V DC
DC Supply Current		125		mA
Impedance	50			Ohms

### 机械Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	20*28*10	mm

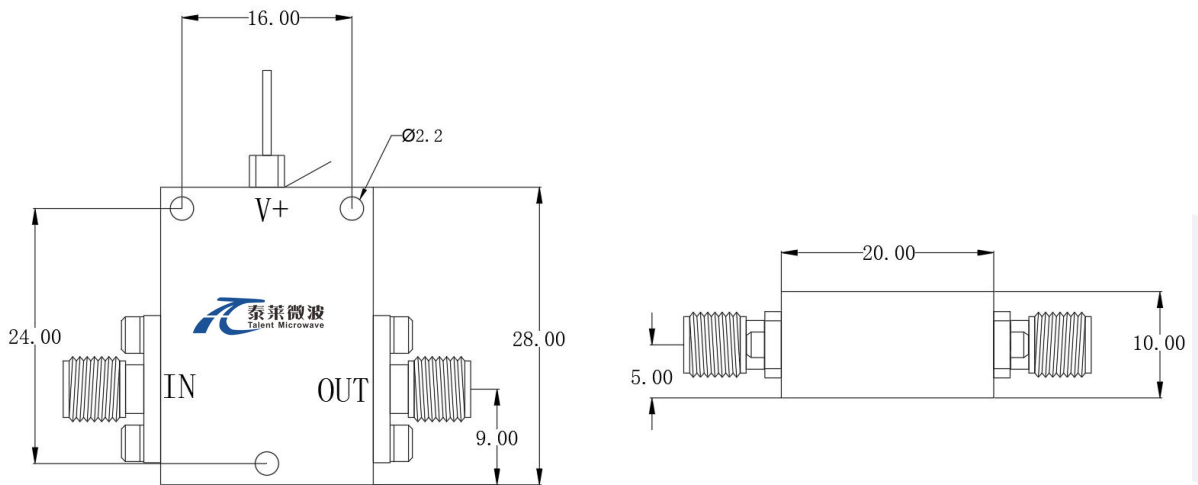
### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+8 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	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
TLLA1.5G4.5G-15-55	Low Noise Amplifier, 1.5-4.5GHz, Noise Figure:5.5dB, Gain:15 dB,P1dB:20dBm,+5.5V DC,Without Heatsink	Rev.1.1
TLLA1.5G4.5G-15-55-HS	Low Noise Amplifier, 1.5-4.5GHz, Noise Figure:5.5dB, Gain:15 dB,P1dB:20dBm,+5.5V DC,With Heatsink	Rev.1.1