

## Low Noise Amplifier

**23.8-24.2GHz/4.5dB NF/18dB Gain/13dBm P1dB      Model: TLLA23.8G24.2G-18-45**

TLLA23.8G24.2G-18-45 is a low noise amplifier with a minimum small signal gain of 18 dB and a maximum noise figure of 4.5 dB across the frequency range of 23.8 to 24.2 GHz. The DC power requirement for the amplifier is +12 V DC/120 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Frequency range: 23.8-24.2GHz
- Gain: 18dB Min
- Noise Figure: 4.5dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	23.8		24.2	GHz
Small Signal Gain	18			dB
Gain Flatness		±0.6		dB
Noise Figure			4.5	dB
Output P1dB	13			dBm
Input VSWR			1.8	:1
Output VSWR			1.8	:1
DC Voltage		+12		V DC
DC Supply Current		120		mA
Impedance		50		Ohms

### Mechanical Specifications:

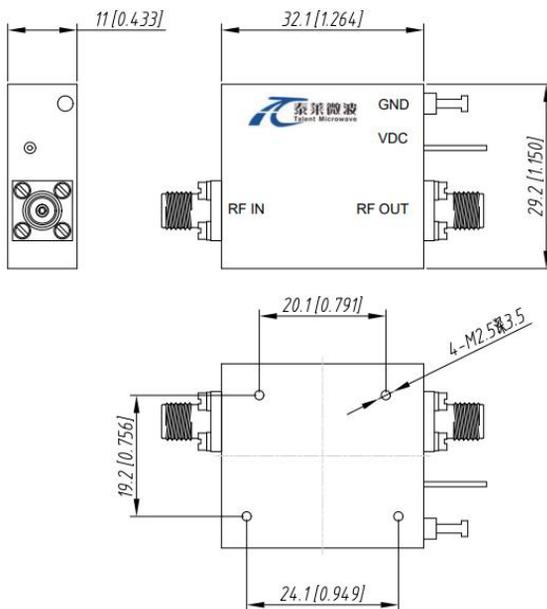
Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	32.1*29.2*11	mm

### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	TBD
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
TLLA23.8G24.2G-18-45	Low Noise Amplifier, 23.8-24.2GHz, Noise Figure:4.5dB, Gain:18 dB,P1dB:13dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA23.8G24.2G-18-45-HS	Low Noise Amplifier, 23.8-24.2GHz, Noise Figure:4.5dB, Gain:18 dB,P1dB:13dBm,+12V DC,With Heatsink	Rev.1.1