

## Low Noise Amplifier

0.5-12GHz/2.0dB NF/40dB Gain/18dBm P1dB

Model: TLLA0.5G12G-40-20

TLLA0.5G12G-40-20 is a low noise amplifier with a typical small signal gain of 40 dB and a nominal noise figure of 2.0 dB across the frequency range of 0.5 to 12 GHz. The DC power requirement for the amplifier is +12 V DC/200 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 0.5-12GHz
- Gain: 40dB Typ
- Noise Figure: 2.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.5		12	GHz
Small Signal Gain		40		dB
Gain Flatness		±2		dB
Noise Figure		2		dB
Output P1dB		18		dBm
Input VSWR		1.6		:1
Output VSWR		1.6		:1
DC Voltage	+8	+12	+15	V DC
DC Supply Current		200		mA
Impedance		50		Ohms

### Mechanical Specifications:

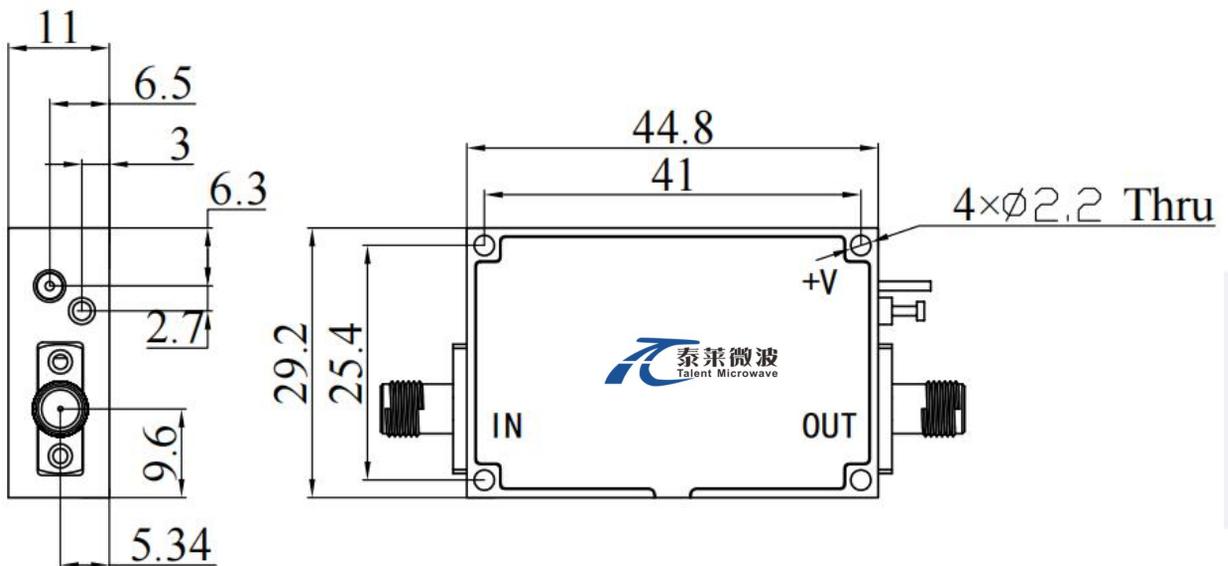
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	44.8*29.2*11	mm
Weight	55	g

### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+10 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
TLLA0.5G12G-40-20	Low Noise Amplifier,0.5-12GHz, Noise Figure:2.0dB, Gain: 40dB,P1dB:18dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.5G12G-40-20-HS	Low Noise Amplifier, 0.5-12GHz, Noise Figure:2.0dB, Gain: 40dB,P1dB:18dBm,+12V DC,With Heatsink	Rev.1.1