

## Low Noise Amplifier

0.1-50GHz/4.5dB NF/22dB Gain/10dBm P1dB

Model: TLLA0.1G50G-22-45

TLLA0.1G50G-22-45 is a low noise amplifier with a typical small signal gain of 22 dB and a nominal noise figure of 4.5 dB across the frequency range of 0.1 to 50 GHz. The DC power requirement for the amplifier is +8 V DC/160 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

### Features:

- Frequency range: 0.1-50GHz
- Gain: 22dB Typ
- Noise Figure: 4.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.1		50	GHz
Small Signal Gain	20	22		dB
Gain Flatness		±2.5		dB
Noise Figure		4.5	7	dB
Output P1dB	8	10		dBm
Output Psat		12		dBm
Input VSWR		1.8	2.5	:1
Output VSWR		1.8	2.5	:1
DC Voltage	+5	+8	+12	V DC
DC Supply Current		160		mA
Impedance		50		Ohms

### Mechanical Specifications:

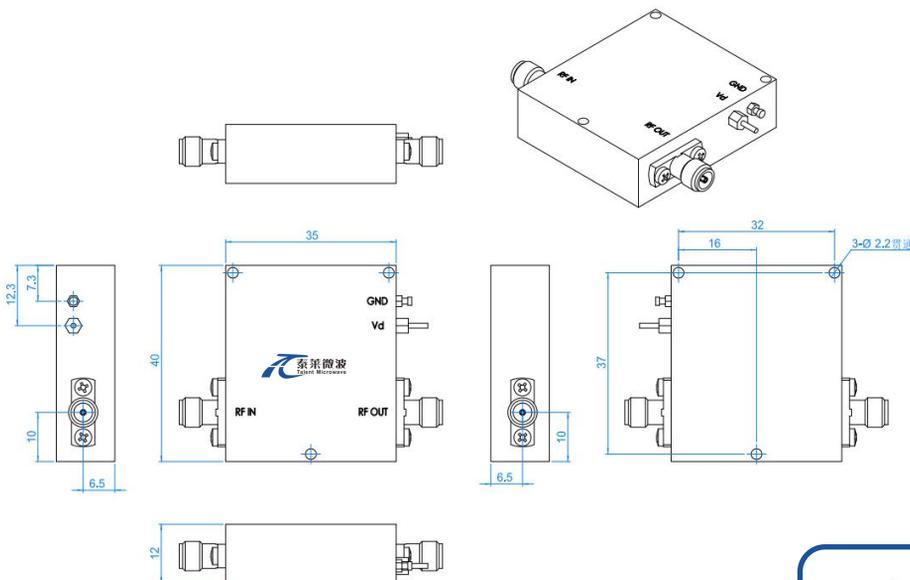
Parameter	Value	Units
Input /Output Connector	2.4mm Female/2.4mm Female	
DC Bias	Solder Pin	
Shell Material	Copper	
Finish	Gold-plated	
Size	35*40*12	mm

### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+12 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
TLLA0.1G50G-22-45	Low Noise Amplifier, 0.1-50GHz, Noise Figure:4.5dB, Gain: 22dB,P1dB:10dBm,+8V DC,Without Heatsink	Rev.1.1
TLLA0.1G50G-22-45-HS	Low Noise Amplifier, 0.1-50GHz, Noise Figure:4.5dB, Gain: 22dB,P1dB:10dBm,+8V DC,With Heatsink	Rev.1.1