Suzhou Talent Microwave,Inc
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Low Noise Amplifier

50KHz-50GHz/6dB NF/32dB Gain/19dBm P1dB Model: TLLA50K50G-33-60

TLLA50K50G-33-60 is a low noise amplifier with a typical small signal gain of 32 dB and a nominal noise figure of 6 dB across the frequency range of 50 KHz to 50 GHz. The DC power requirement for the amplifier is +10 V DC/400 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

Features:

- Frequency range: 50KHz-50GHz
- Gain: 32dB Typ
- Noise Figure: 6dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range		50KHz-50GHz		
Small Signal Gain		32		dB
Gain Flatness		±3.5		dB
Noise Figure		6		dB
Output P1dB		19		dBm
Input VSWR		1.9		:1
Output VSWR		1.9		:1
DC Voltage		+10	+14	V DC
DC Supply Current		400		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.4mm Female/2.4mm Female	
DC Bias	Solder Pin	
Size	35*40*12	mm

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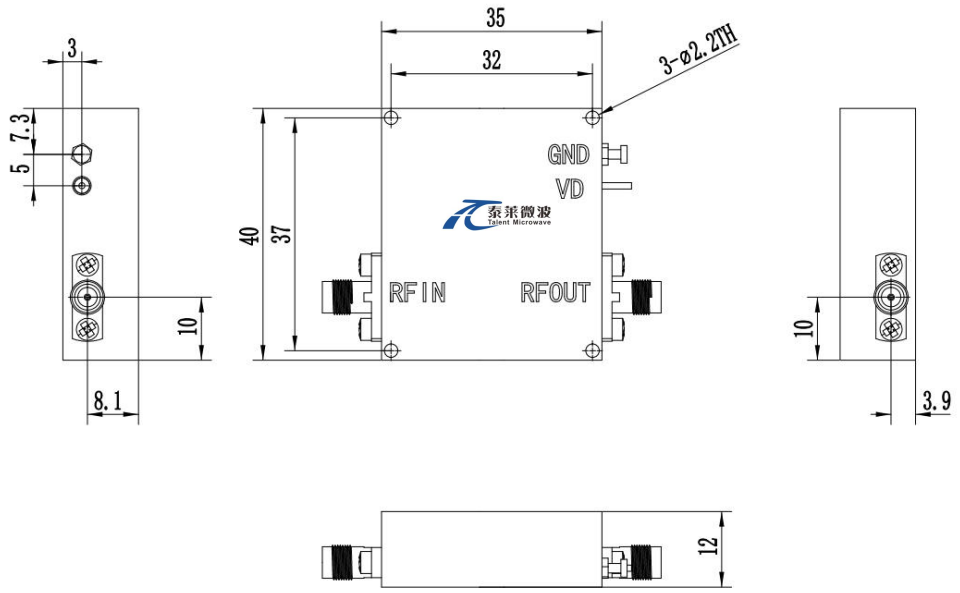
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+14 V
RF Input Power	-5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Simple 220V System
Available SAC option

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	℃
Non-operating Temperature	-55		+125	℃
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			

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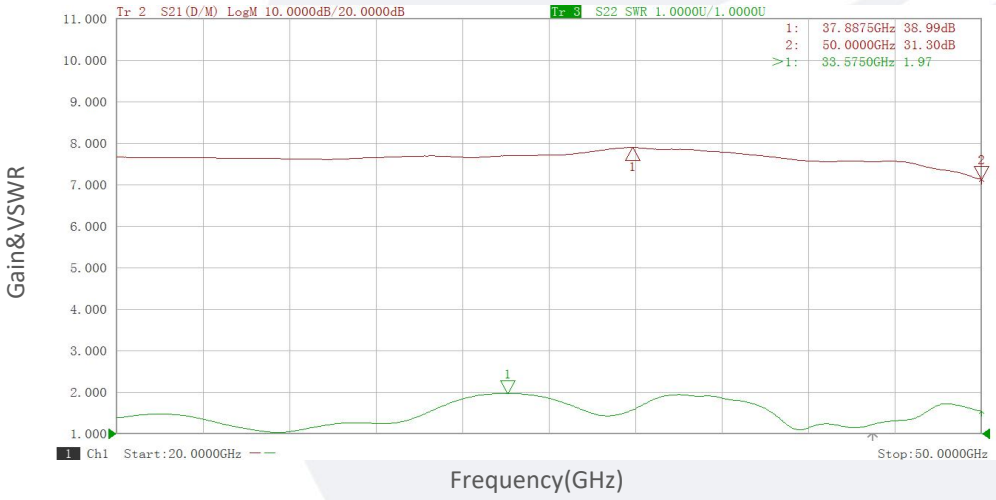
Ordering Information:

Base Number	Description	Revision
TLLA50K50G-33-60	Low Noise Amplifier, 50KHz-50GHz, Noise Figure:6dB, Gain:32 dB,P1dB:19dBm,+10V DC,Without Heatsink	Rev.1.1
TLLA50K50G-33-60-HS	Low Noise Amplifier, 50KHz-50GHz, Noise Figure:6dB, Gain:32 dB,P1dB:19dBm,+10V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency

Gain&VSWR vs Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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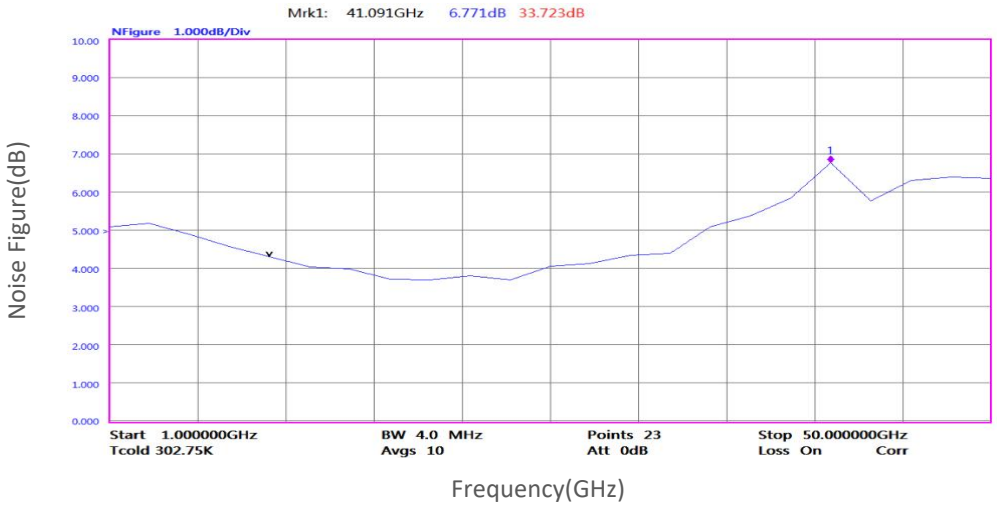
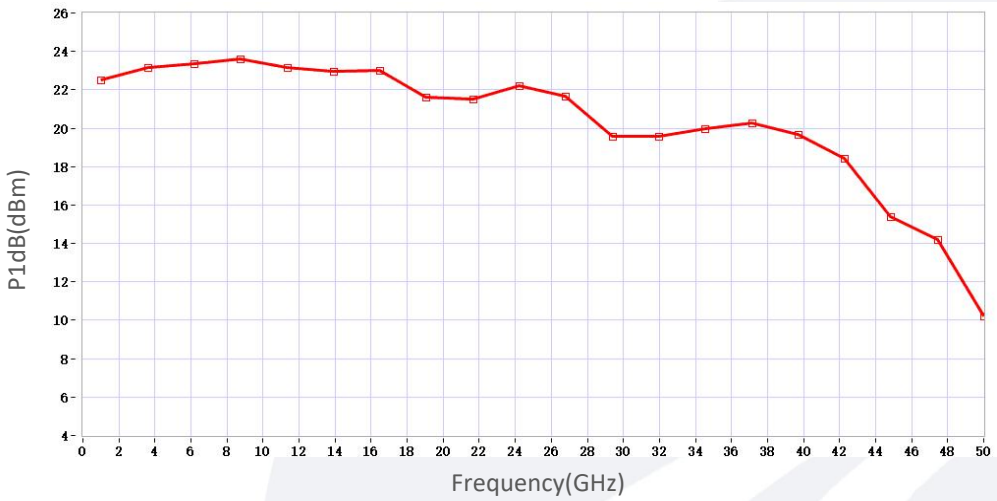
Typical Performance Data:

Noise Figure vs Frequency



P1dB vs Frequency



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