Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Low Noise Amplifier

18-50GHz/5.0dB NF/42dB Gain/13dBm P1dB Model: TLLA18G50G-42-50

TLLA18G50G-42-50 is a low noise amplifier with a typical small signal gain of 42 dB and a nominal noise figure of 5.0 dB across the frequency range of 18 to 50 GHz. The DC power requirement for the amplifier is +5 V DC/280 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

Features:

- Frequency range: 18-50GHz
- Gain: 42dB Typ
- Noise Figure: 5.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	18		50	GHz
Small Signal Gain	40	42		dB
Gain Flatness		±2.5		dB
Noise Figure		5		dB
Output P1dB	13	14		dBm
Output Psat		15		dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		+5	+6	V DC
DC Supply Current		280		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.4mm Female/2.4mmFemale	
DC Bias	Solder Pin	
Size	44.8*29.2*11	mm
Weight	50	g

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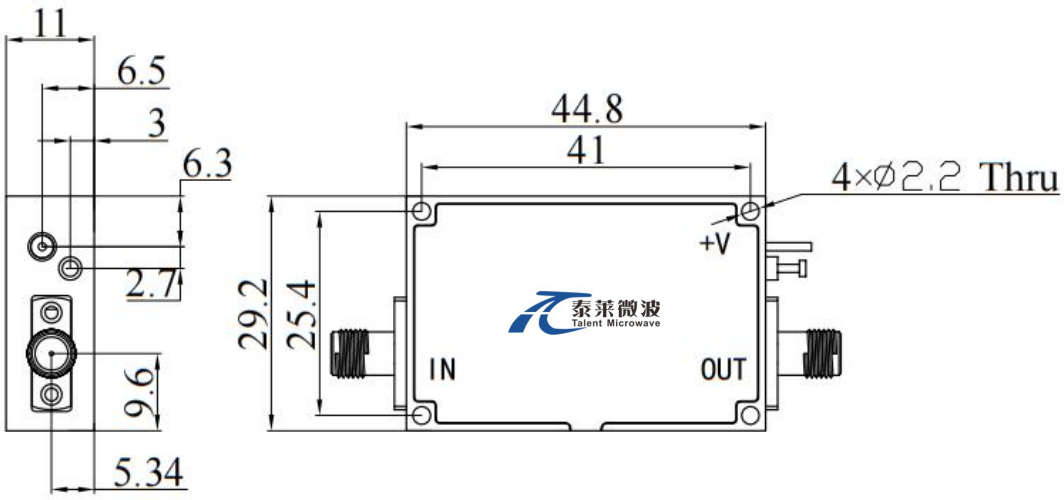
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+6 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	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			

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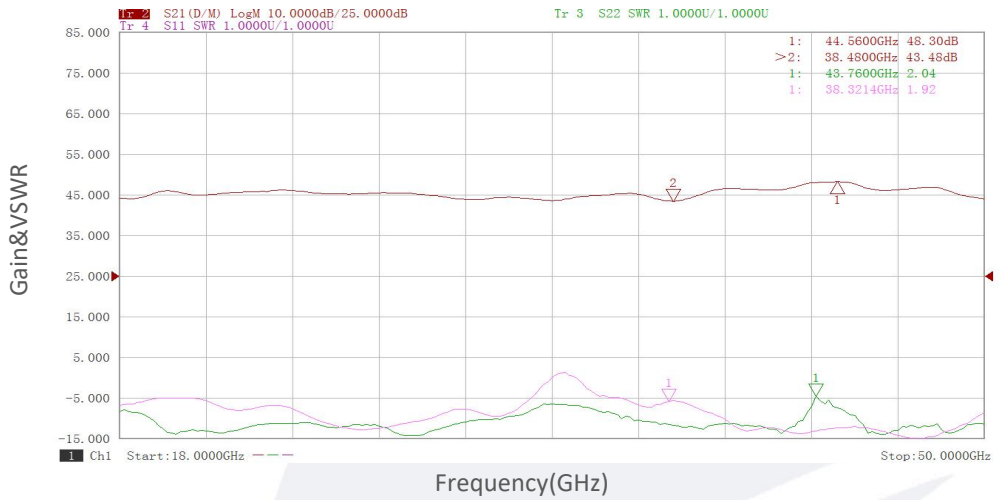
Ordering Information:

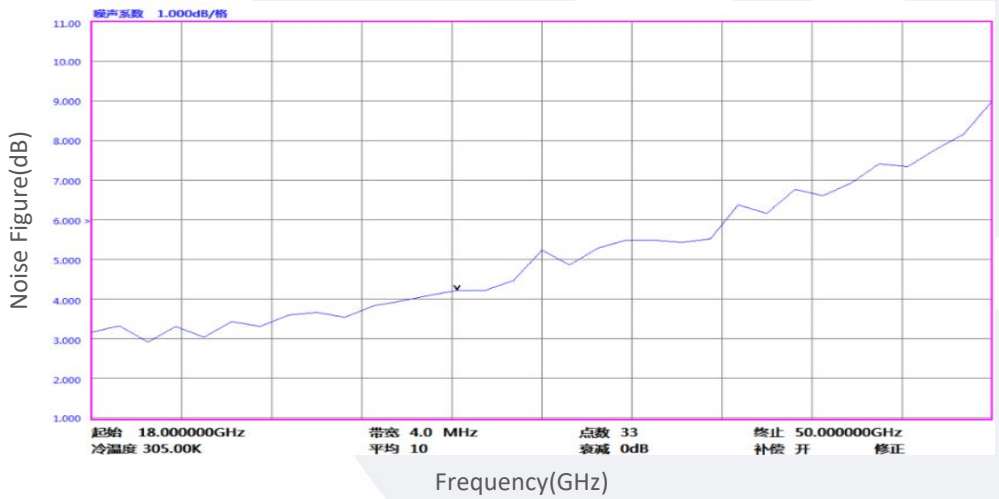
Base Number	Description	Revision
TLLA18G50G-42-50	Low Noise Amplifier, 18-50GHz, Noise Figure:5.0dB, Gain:42dB,P1dB:13dBm,+5V DC,Without Heatsink	Rev.1.1
TLLA18G50G-42-50-HS	Low Noise Amplifier, 18-50GHz, Noise Figure:5.0dB, Gain:42dB,P1dB:13dBm,+5V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



Noise Figure 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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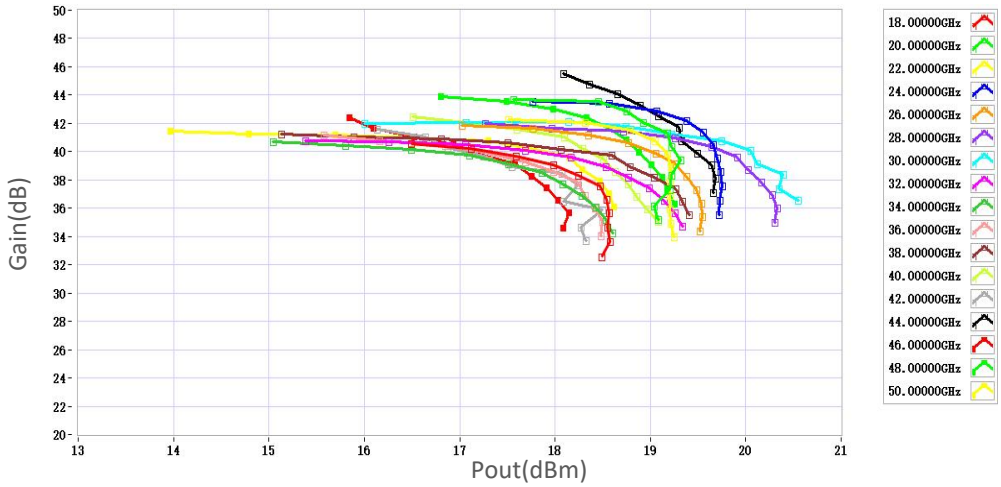
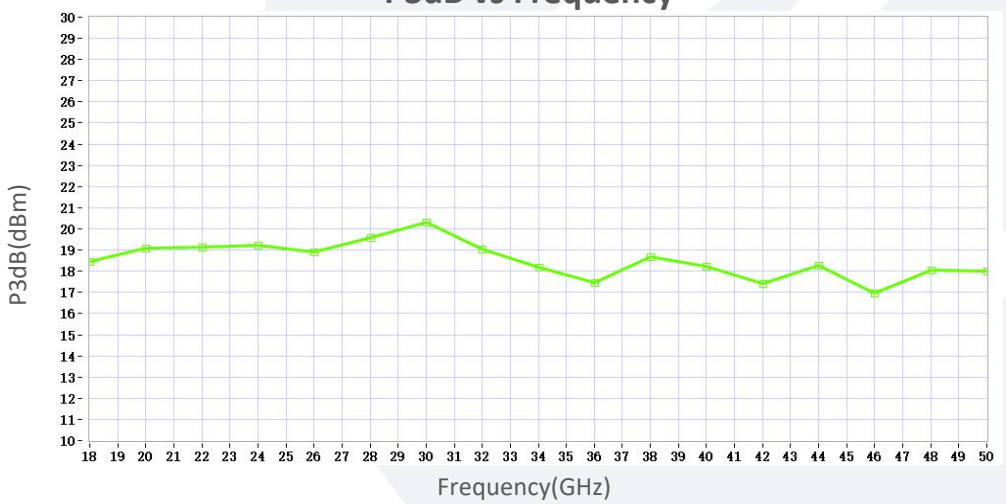
Typical Performance Data:

Gain vs Output Power



P1dB vs Frequency

P3dB vs Frequency



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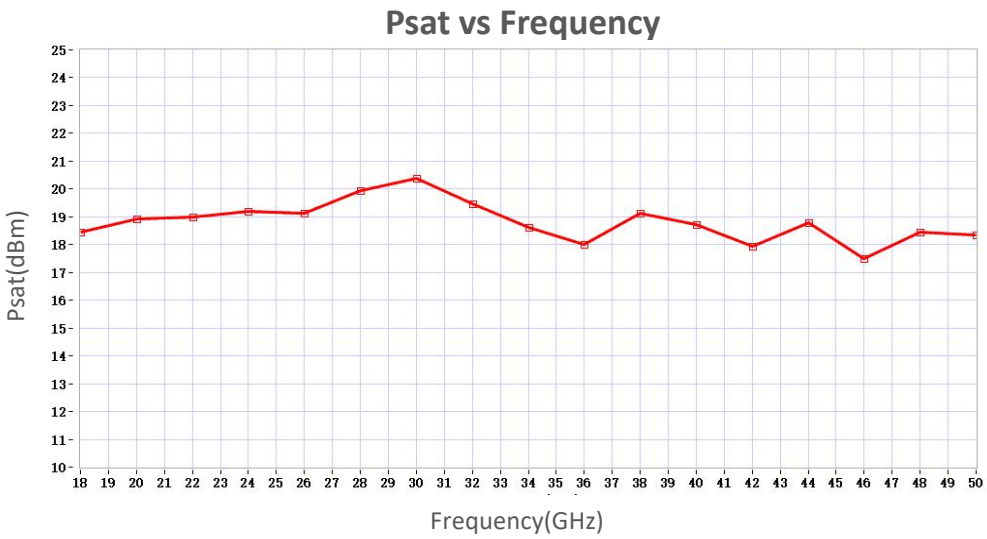

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