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

Low Noise Amplifier

50KHz-43GHz/5dB NF/30dB Gain/16dBm P1dB Model: TLLA50K43G-30-50

TLLA50K43G-30-50 is a low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 5 dB across the frequency range of 50 KHz to 43 GHz. The DC power requirement for the amplifier is +12 V DC/350 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 50KHz-43GHz
- Gain: 30dB Typ
- Noise Figure: 5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range		50KHz-43GHz		
Small Signal Gain	23	30		dB
Noise Figure		5		dB
Output P1dB		16		dBm
Input VSWR		2.0		:1
Output VSWR		2.0		:1
DC Voltage		+12		V DC
DC Supply Current		350		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	44.8*29.2*11	mm

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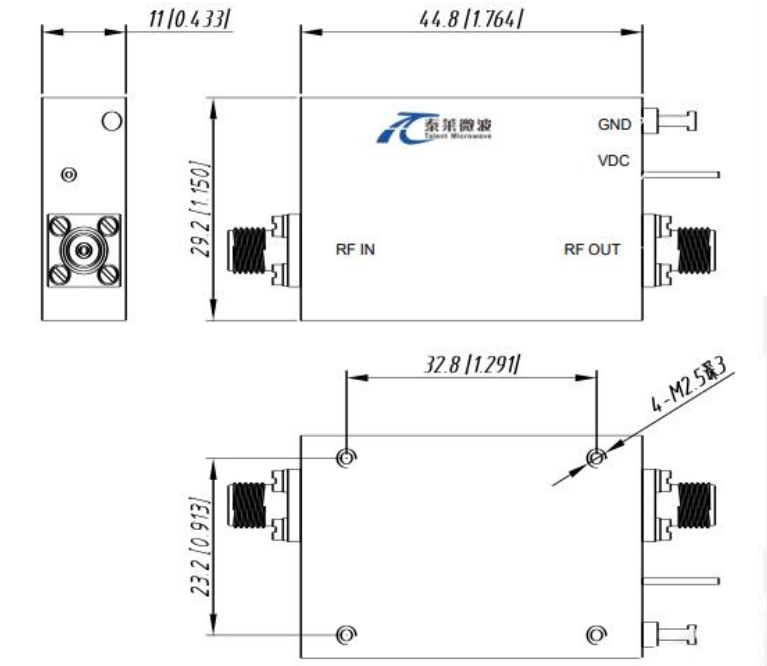
Absolute Maximum Ratings:

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	-40		+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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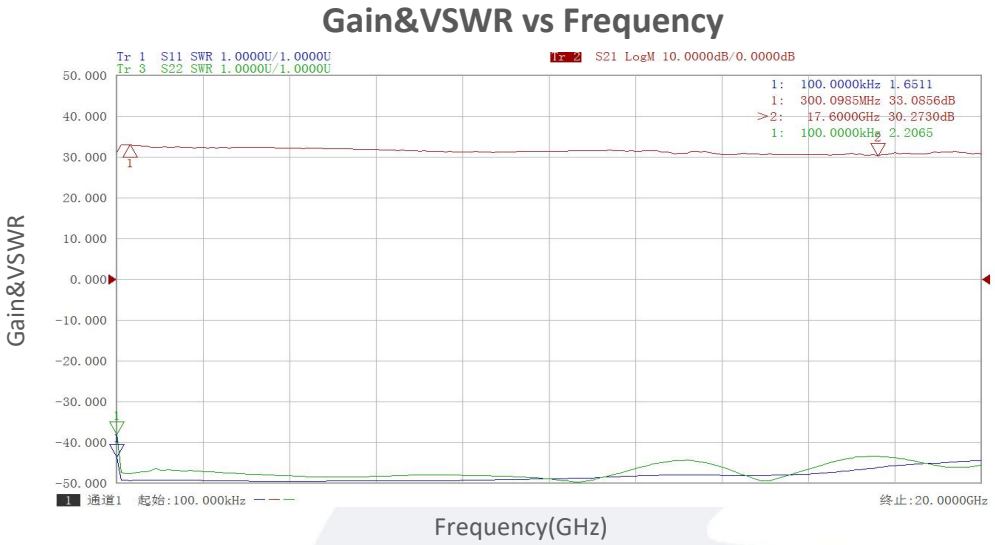
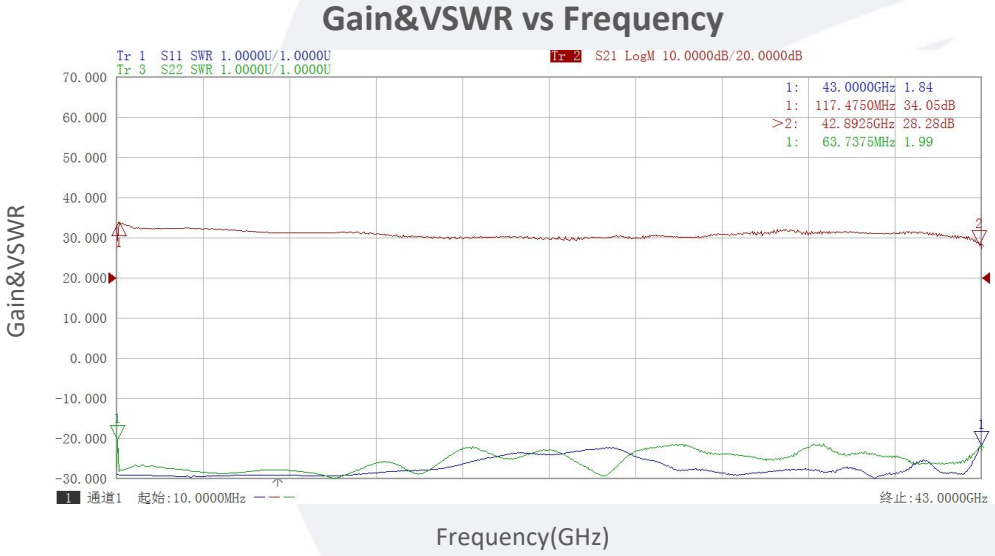
Ordering Information:

Base Number	Description	Revision
TLLA50K43G-30-50	Low Noise Amplifier, 50KHz-43GHz, Noise Figure: 5.0dB, Gain:30 dB,P1dB:16dBm, +12V DC, Without Heatsink	Rev.1.1
TLLA50K43G-30-50-HS	Low Noise Amplifier, 50KHz-43GHz, Noise Figure: 5.0dB, Gain:30 dB,P1dB:16dBm, +12V DC, With Heatsink	Rev.1.1

Typical Performance Data:





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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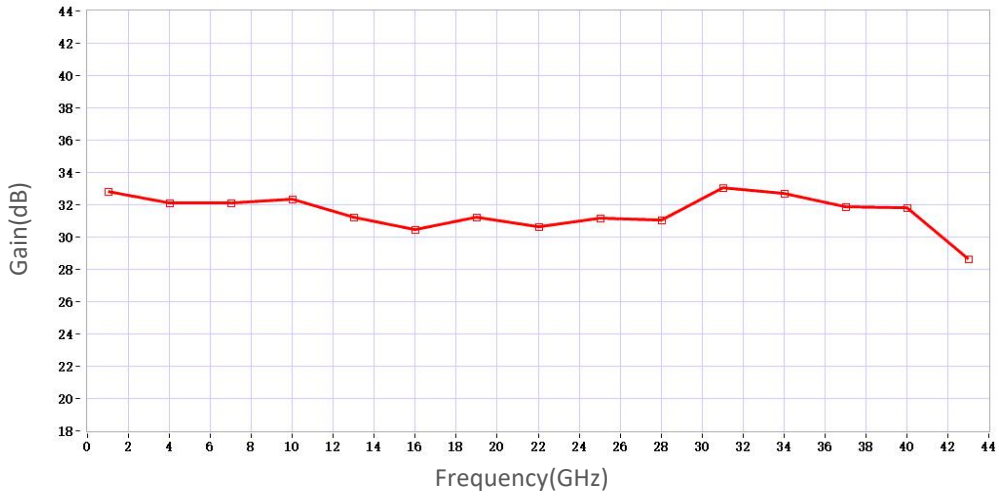
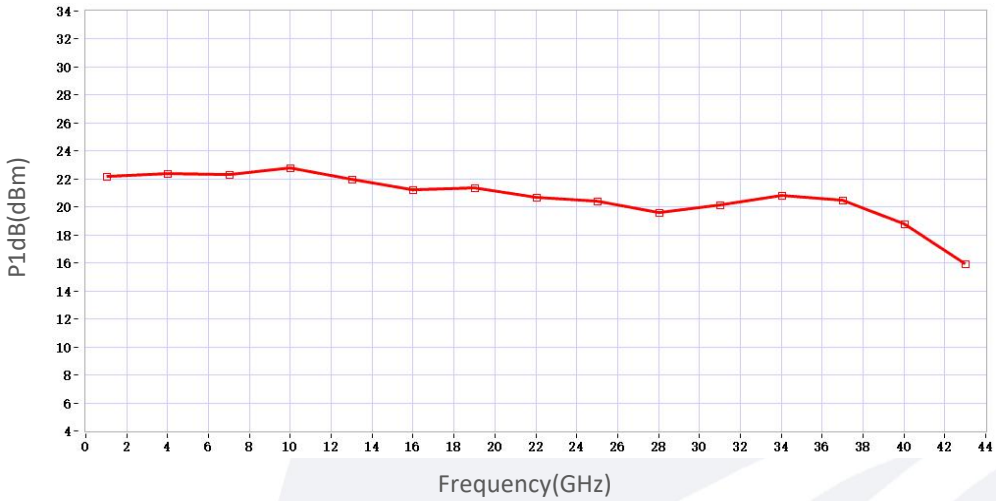
Typical Performance Data:

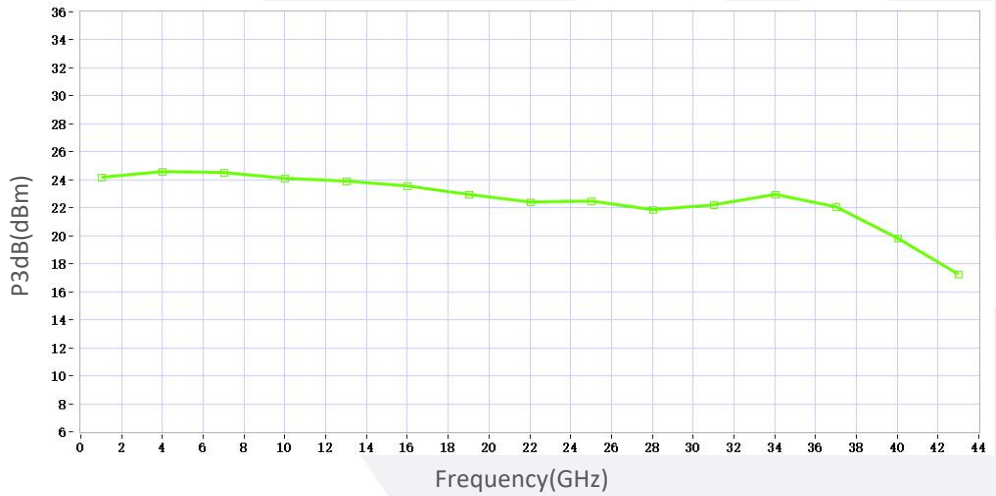
Gain vs Frequency



P1dB vs Frequency



P3dB vs Frequency



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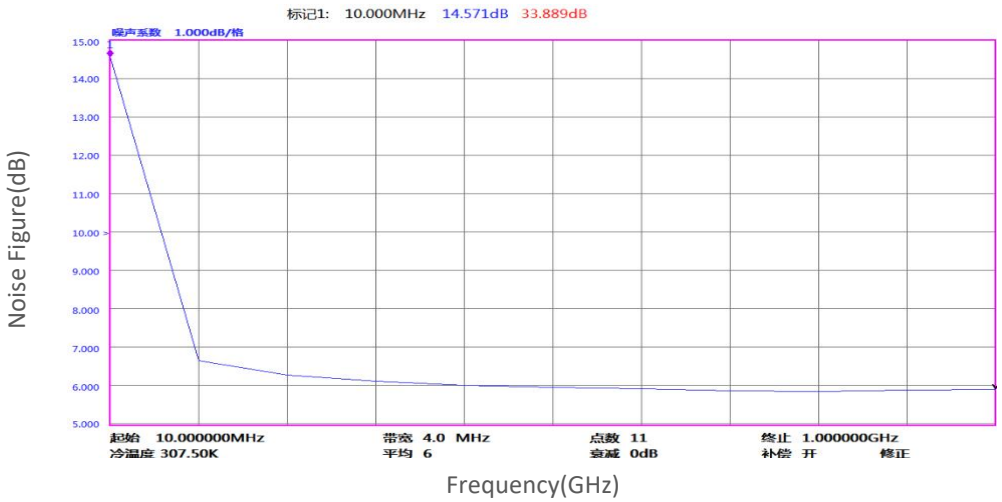
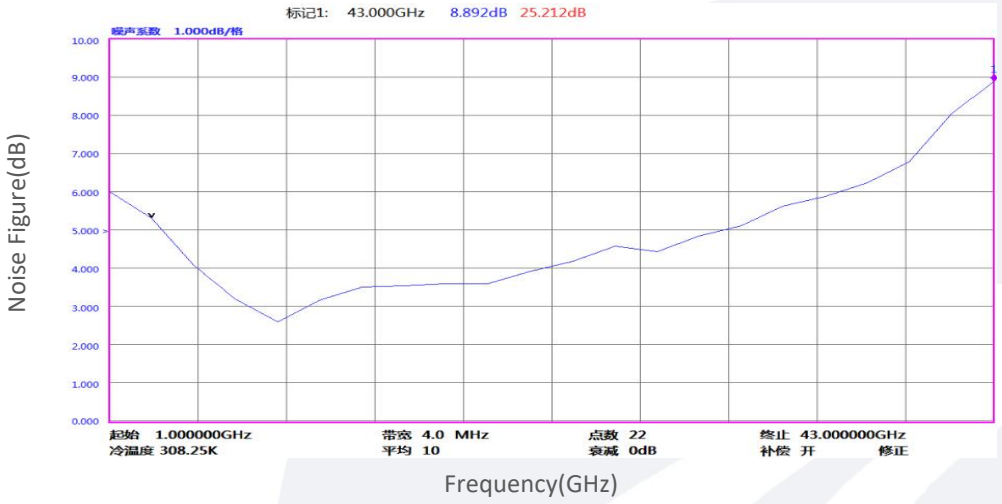
Typical Performance Data:

Noise Figure vs Frequency



Noise Figure vs Frequency



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