泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
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Low Noise Amplifier

50KHz-50GHz /8dB NF/23dB Gain/15 dBm P1dB

Model: TLLA50K50G-23-50

TLLA50K50G-23-50 is a low noise amplifier with a typical small signal gain of 23 dB and a nominal noise figure of 8 dB across the frequency range of 50 KHz to 50 GHz. The DC power requirement for the amplifier is +12 V DC/280 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

Features:

- Output Frequency:50KHz-50GHz
- Gain: 23dB Typ
- Noise Figure: 8dB 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		
Gain		23		dB
Gain Flatness		±4.5		dB
Noise Figure		8		dB
Output P1dB		15		dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage	8	12	15	V DC
DC Supply Current		280		mA
Impedance		50		Ohms

Mechanical Specifications:

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

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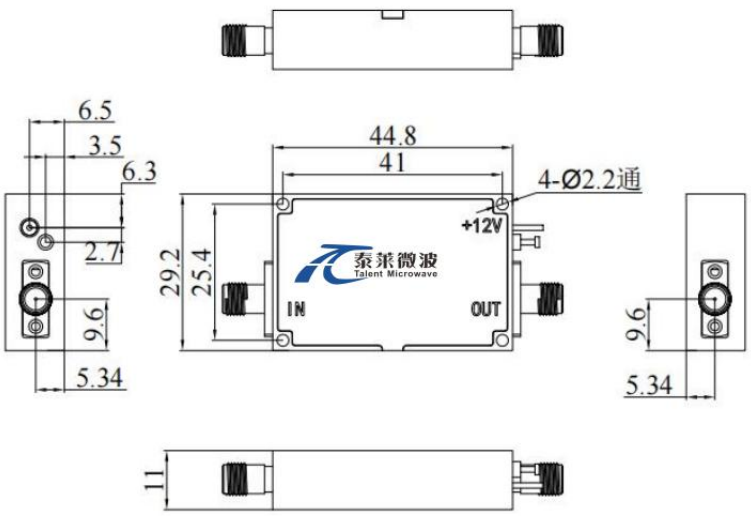
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+15 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



***Heat Sink Required During Operation

OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

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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			

Ordering Information:

Base Number	Desciption	Revision
TLLA50K50G-23-50	Low Noise Amplifier, 50KHz-50GHz, Noise Figure:8dB, Gain:23 dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA50K50G-23-50-HS	Low Noise Amplifier, 50KHz-50GHz, Noise Figure:8dB, Gain:23 dB,P1dB:15dBm,+12V DC,With Heatsink	

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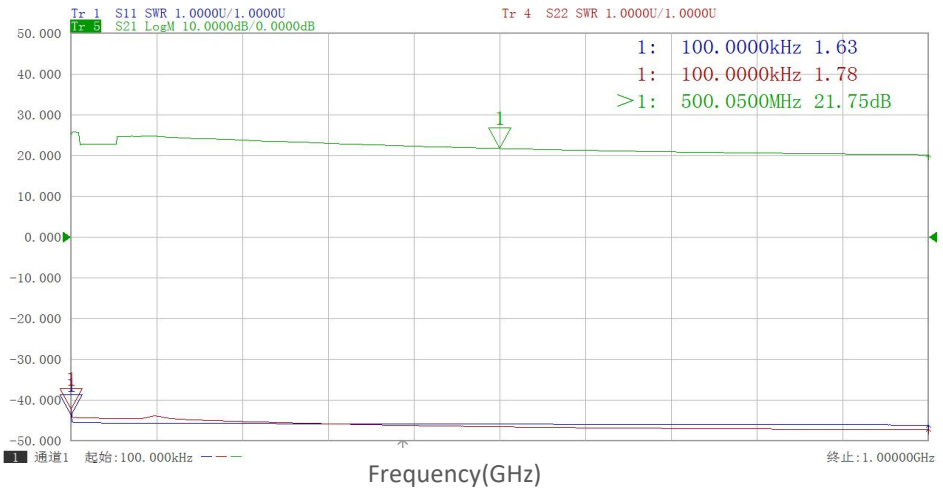
Typical Performance Data:

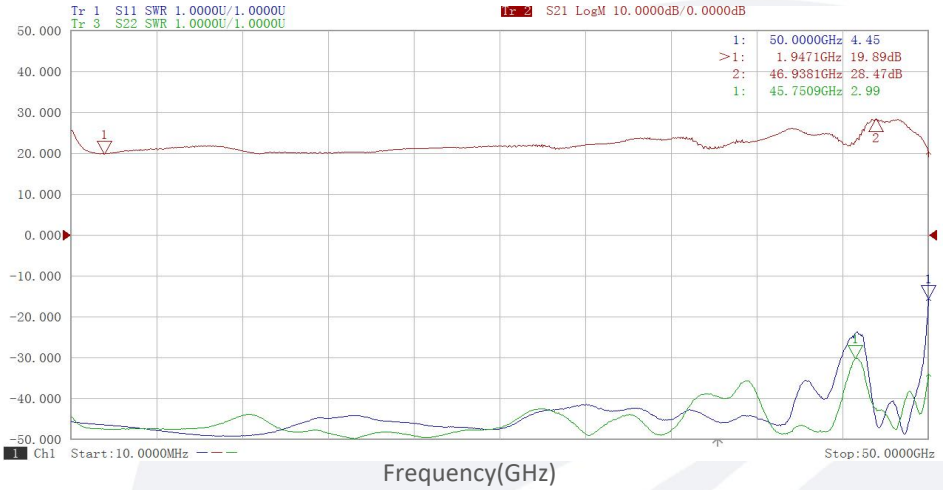
Gain&VSWR vs Frequency



Gain&VSWR

Frequency(GHz)

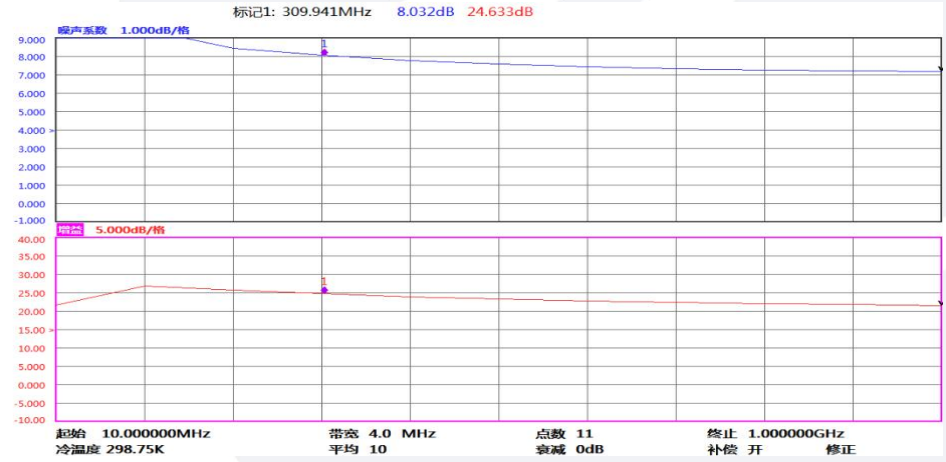
Gain&VSWR vs Frequency



Gain&VSWR

Frequency(GHz)

Noise Figure vs Frequency



Noise Figure(dB)

Frequency(GHz)

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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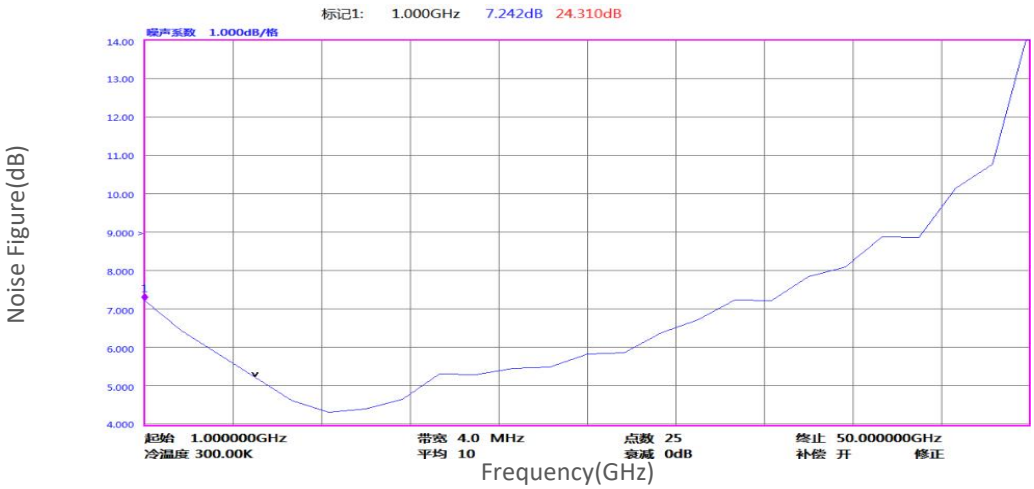
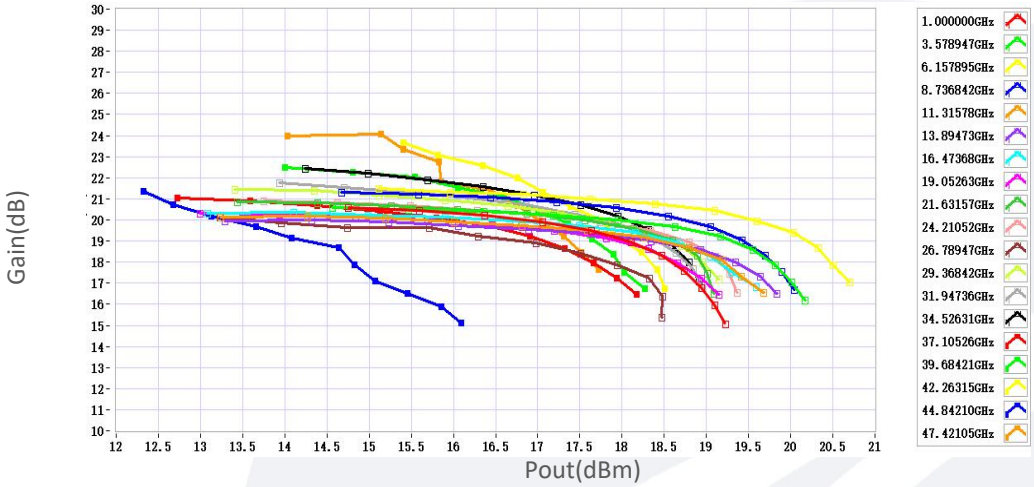
Typical Performance Data:

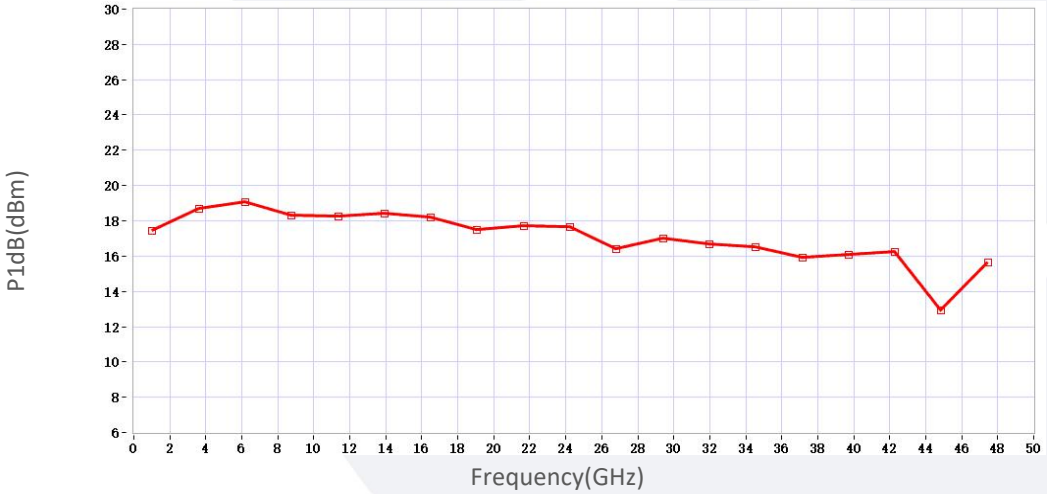
Noise Figure vs Frequency



Gain vs Output Power



P1dB vs Frequency



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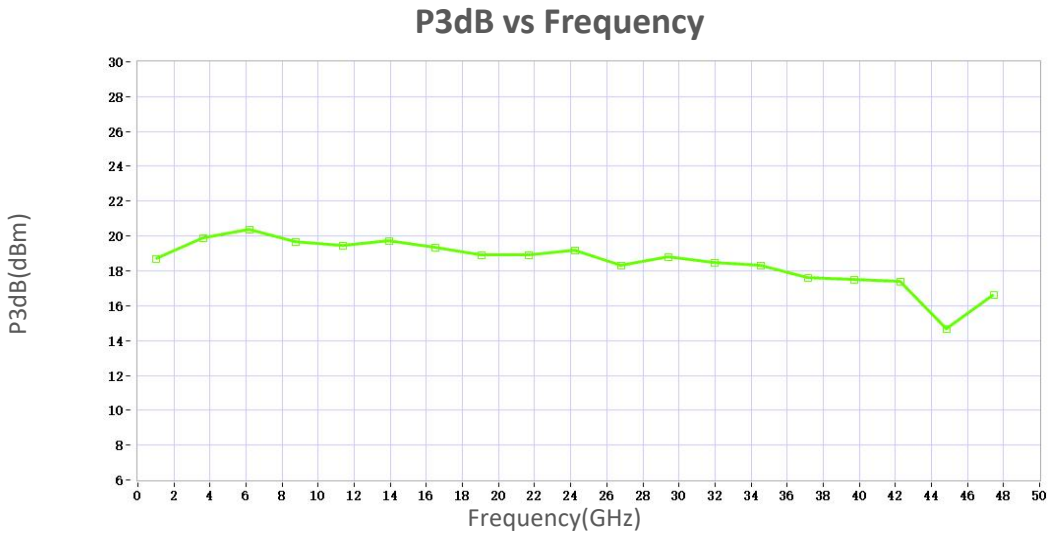

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