泰莱微波
Talent Microwave

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Low Noise Amplifier

50KHz-20GHz/2.5dB NF/18dB Gain/15dBm P1dB Model: TLLA50K20G-18-30

TLLA50K20G-18-30 is a low noise amplifier with a typical small signal gain of 18 dB and a nominal noise figure of 2.5 dB across the frequency range of 50 KHz to 20 GHz. The DC power requirement for the amplifier is +12 V DC/70 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 50KHz-20GHz
- Gain: 18dB Typ
- Noise Figure: 2.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range		50KHz-20GHz		
Small Signal Gain		18		dB
Gain Flatness		±2.0		dB
Noise Figure		2.5	4.0	dB
Output P1dB		15		dBm
Input VSWR		2.0		:1
Output VSWR		2.0	2.2	:1
DC Voltage	+10	+12	+15	V DC
DC Supply Current		70		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female	
DC Bias	Solder Pin	
Size	44.8*29.2*11	mm
Weight	55	g

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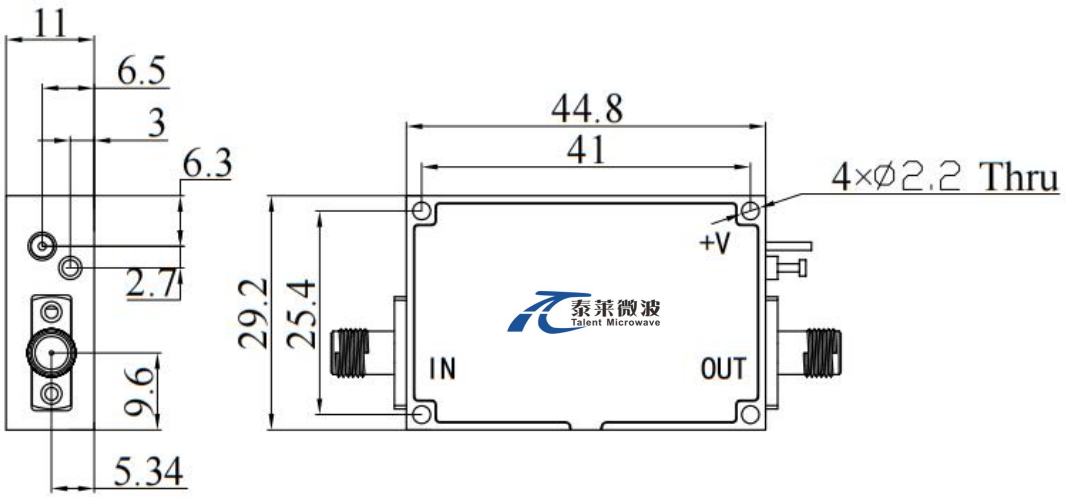
Absolute Maximum Ratings:

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

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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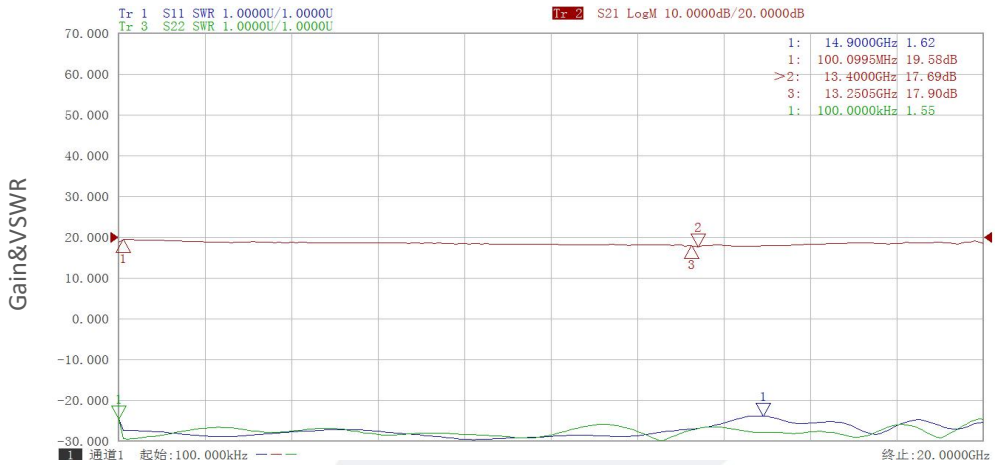
Ordering Information:

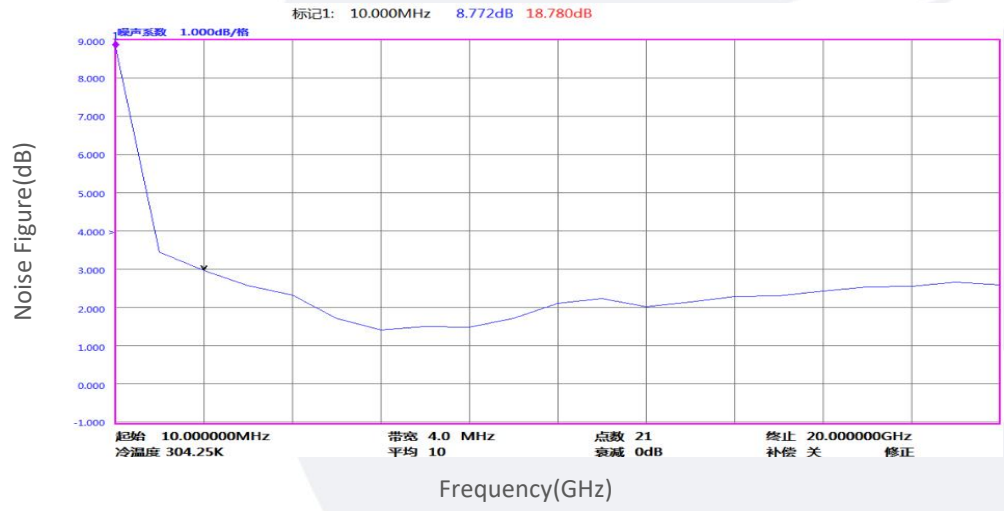
Base Number	Description	Revision
TLLA50K20G-18-30	Low Noise Amplifier, 50KHz-20GHz, Noise Figure:2.5dB, Gain:18 dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA50K20G-18-30-HS	Low Noise Amplifier, 50KHz-20GHz, Noise Figure:2.5dB, Gain:18 dB,P1dB:15dBm,+12V DC,With Heatsink	Rev.1.1

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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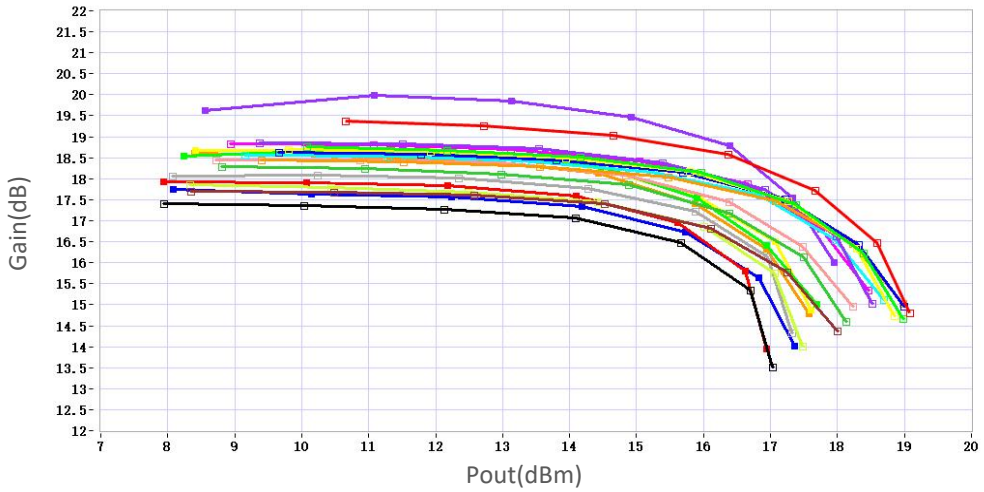
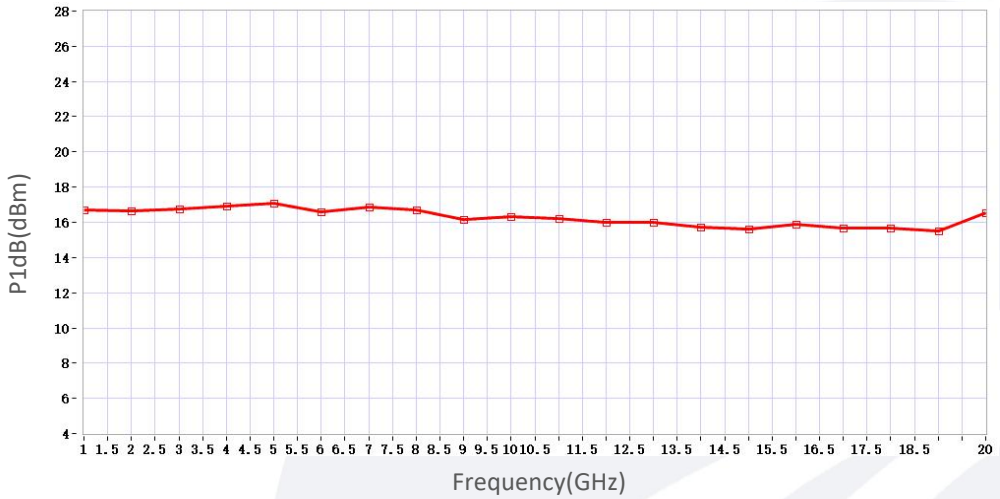
Typical Performance Data:

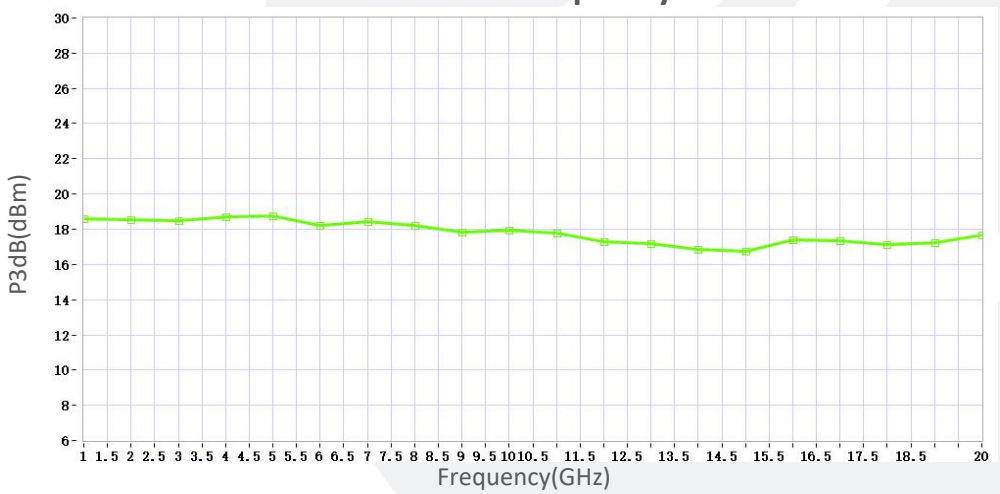
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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