泰莱微波
Talent Microwave

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Low Noise Amplifier

9-10GHz/2.0dB NF/21dB Gain/18.5dBm P1dB Model: TLLA9G10G-21-20

TLLA9G10G-21-20 is a low noise amplifier with a typical small signal gain of 21 dB and a nominal noise figure of 2.0 dB across the frequency range of 9 to 10 GHz. The DC power requirement for the amplifier is +12 V DC/110 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 9-10GHz
- Gain: 21dB Typ
- Noise Figure: 2.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	9		10	GHz
Small Signal Gain		21		dB
Gain Flatness		±0.4	±0.5	dB
Noise Figure		2	2.4	dB
Output P1dB	18	18.5		dBm
Output Psat	19	19.5		dBm
Input VSWR		2	2.2	:1
Output VSWR		1.5	2.2	:1
DC Voltage	+8	+12	+15	V DC
DC Supply Current		110		mA
Impedance	50			Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	28*20*10	mm

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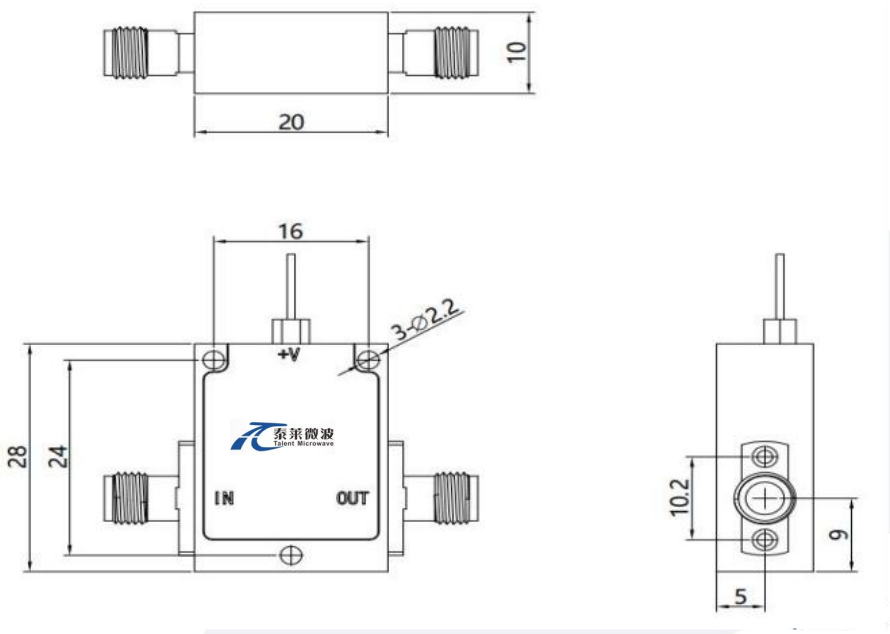
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+22 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	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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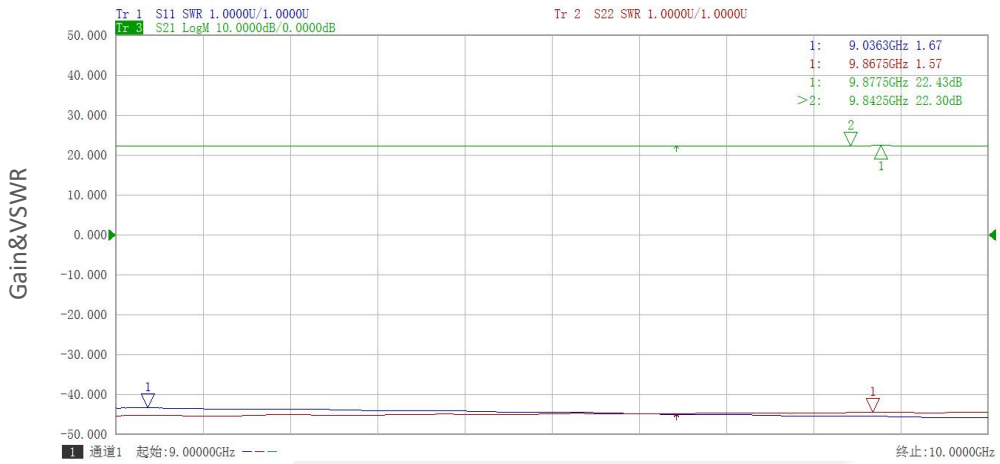
Ordering Information:

Base Number	Description	Revision
TLLA9G10G-21-20	Low Noise Amplifier, 9-10GHz, Noise Figure:2.0dB, Gain:21dB,P1dB:18.5dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA9G10G-21-20-HS	Low Noise Amplifier, 9-10GHz, Noise Figure:2.0dB, Gain:21dB,P1dB:18.5dBm,+12V DC,With Heatsink	Rev.1.1

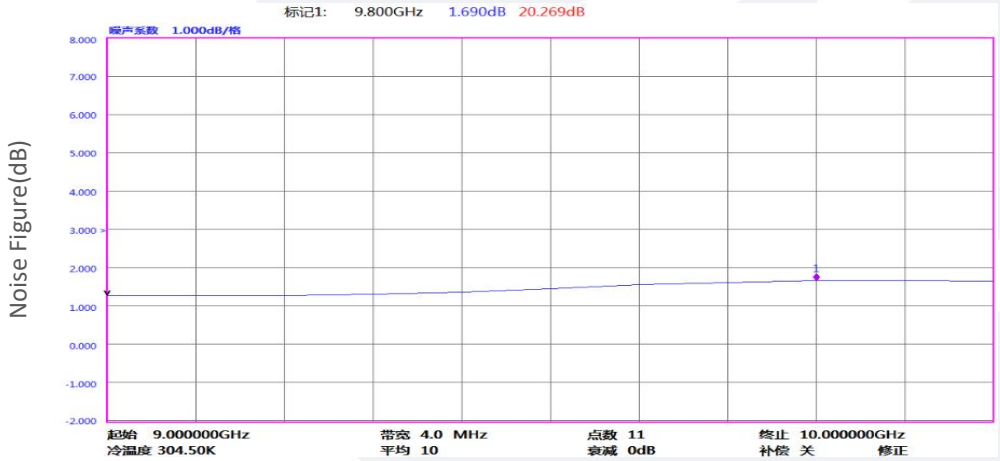
Typical Performance Data:

Gain&VSWR vs Frequency



Frequency(GHz)

Noise Figure vs Frequency



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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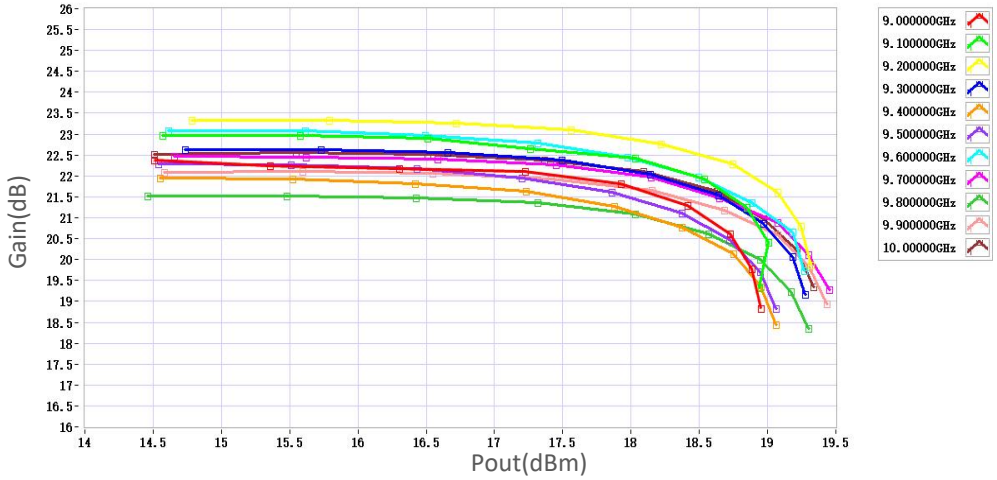
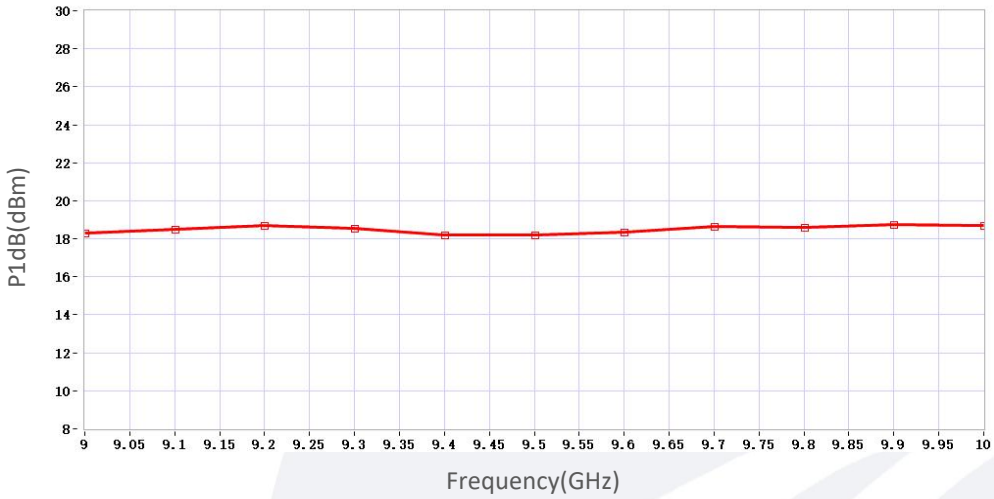
Typical Performance Data:

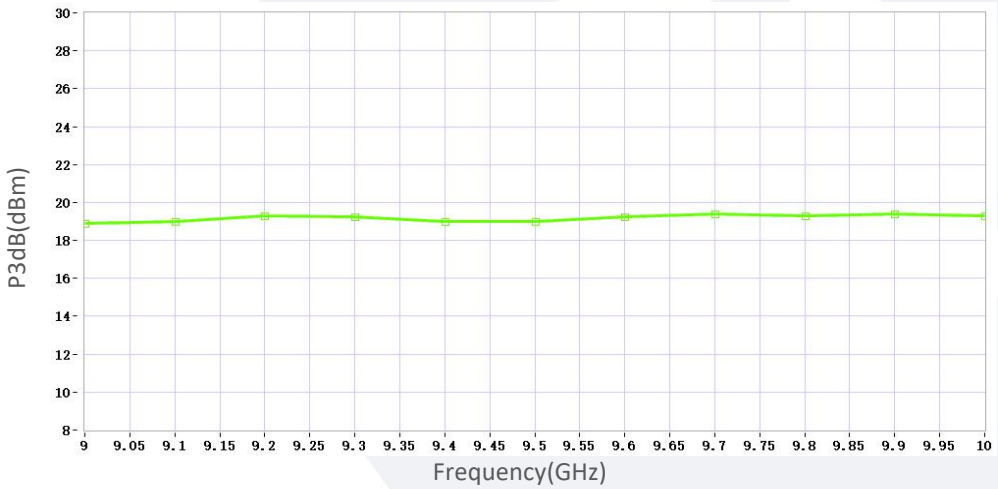
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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