泰莱微波
Talent Microwave

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Low Noise Amplifier

0.1-3GHz/1.0dB NF/28dB Gain/17dBm P1dB Model: TLLA0.1G3G-28-10

TLLA0.1G3G-28-10 is a low noise amplifier with a minimum small signal gain of 28 dB and a maximum noise figure of 1.0dB across the frequency range of 0.1 to 3 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: 0.1-3 GHz
- Gain: 28dB Min
- Noise Figure: 1.0dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.1		3	GHz
Small Signal Gain	28	29		dB
Noise Figure		0.8	1.0	dB
Output P1dB	14	17		dBm
Output Psat		18		dBm
Input VSWR		1.8		:1
Output VSWR		1.4		:1
DC Voltage	+8	+12	+15	V DC
DC Supply Current		70		mA
Impedance		50		Ohms

*Performance may degrade below 300 MHz. Please refer to below typical test plots

Mechanical Specifications:

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

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Absolute Maximum Ratings:

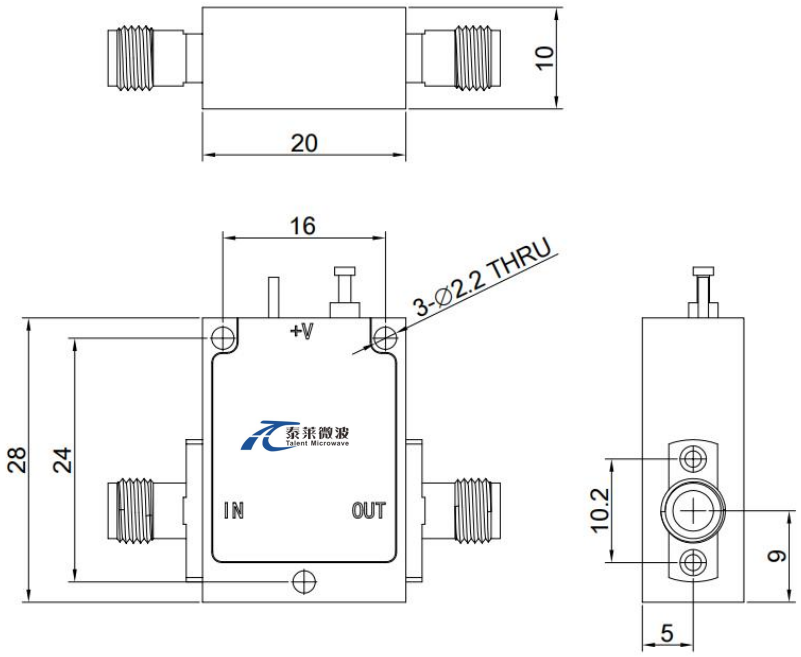
Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+15 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Simple 220V System
Available SAC option

Outline Drawing:

Unit:mm; Tolerance:±0.1mm





ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

***Heat Sink Required During Operation

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-40		+60	℃
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:

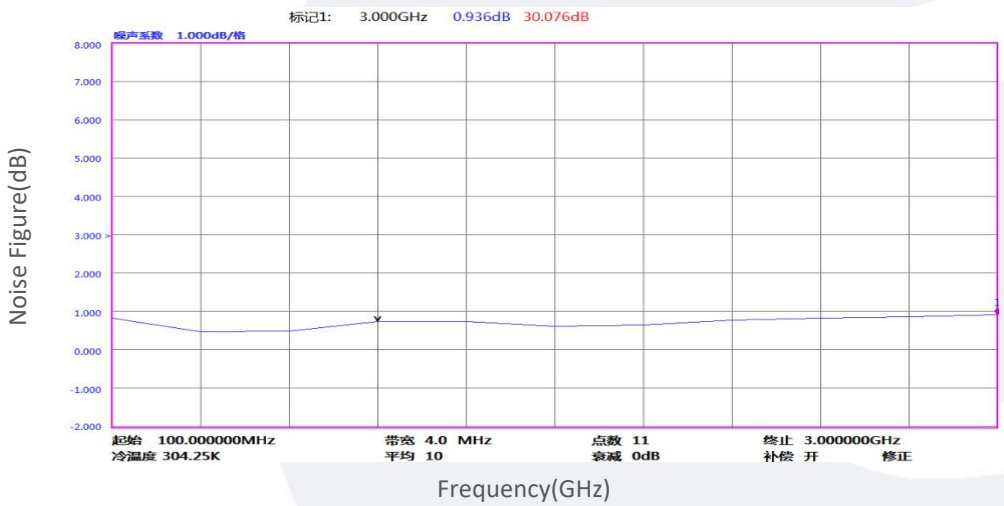
Base Number	Description	Revision
TLLA0.1G3G-28-10	Low Noise Amplifier, 0.1-3GHz, Noise Figure:1.0dB, Gain:28 dB,P1dB:17dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.1G3G-28-10-HS	Low Noise Amplifier, 0.1-3GHz, Noise Figure:1.0dB, Gain:28 dB,P1dB:17dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



Noise Figure vs Frequency

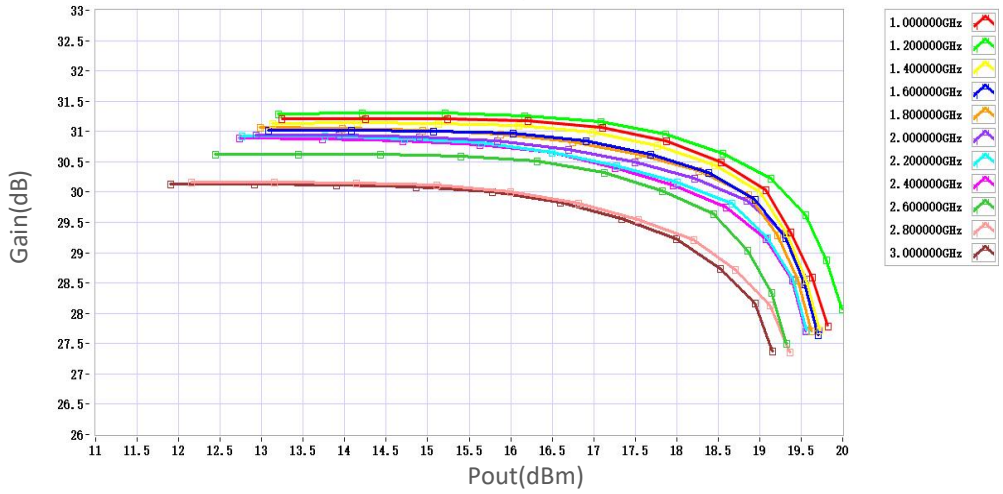


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

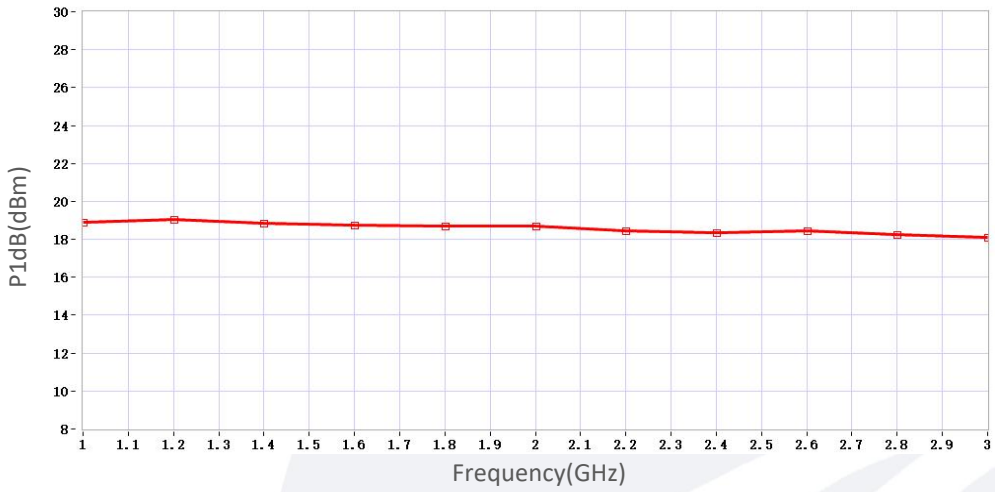
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Typical Performance Data:

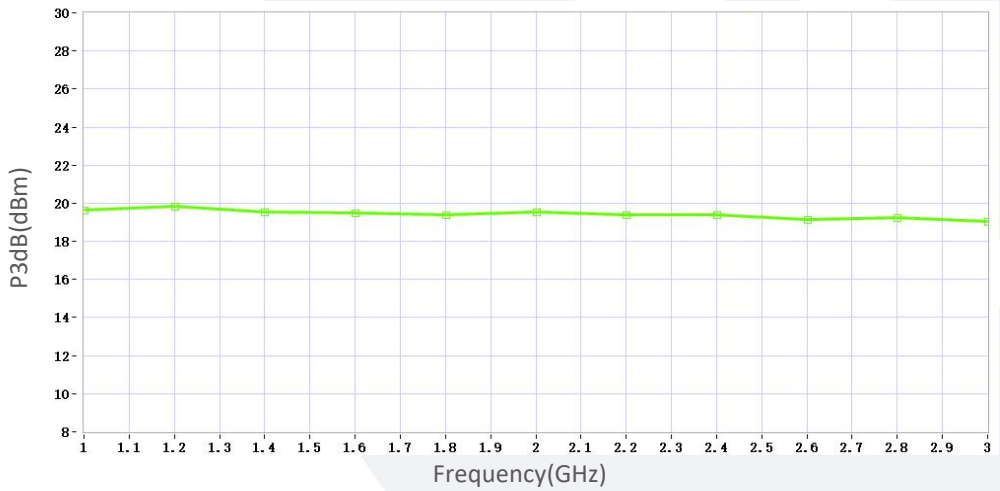
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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