

Low Noise Amplifier

4-8GHz/0.7dB NF/26dB Gain/10dBm P1dB

Model: TLLA4G8G-26-07

TLLA4G8G-26-07 is a low noise amplifier with a typical small signal gain of 26 dB and a nominal noise figure of 0.7 dB across the frequency range of 4 to 8 GHz. The DC power requirement for the amplifier is +8 V DC/35 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 4-8GHz
- Gain: 26dB Typ
- Noise Figure: 0.7dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	4		8	GHz
Small Signal Gain	25	26		dB
Gain Flatness		±1.0	±1.5	dB
Noise Figure		0.7		dB
Output P1dB	10			dBm
Output IP3		25		dBm
Input VSWR		1.5	2	:1
Output VSWR		1.5	2.2	:1
DC Voltage		+8		V DC
DC Supply Current		35		mA
Impedance	50			Ohms

Mechanical Specifications:

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

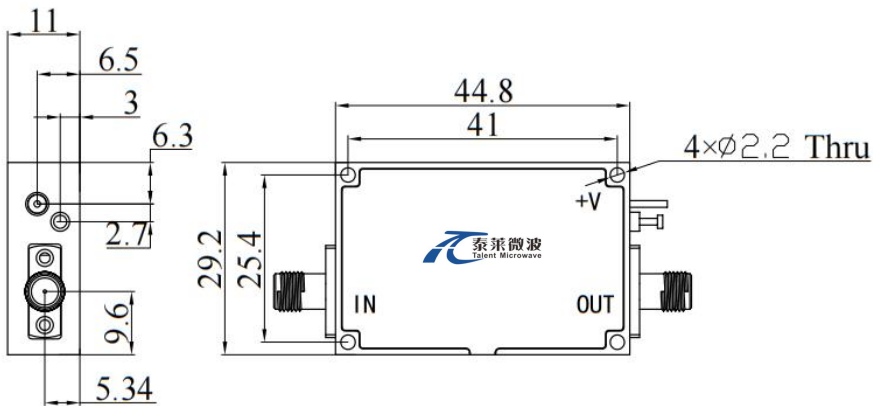
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+2 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:

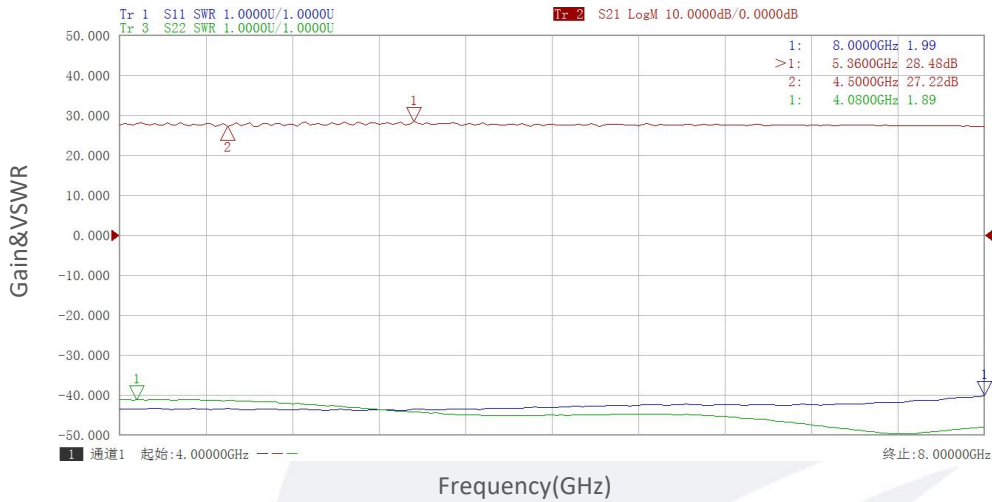
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude		50,000		feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

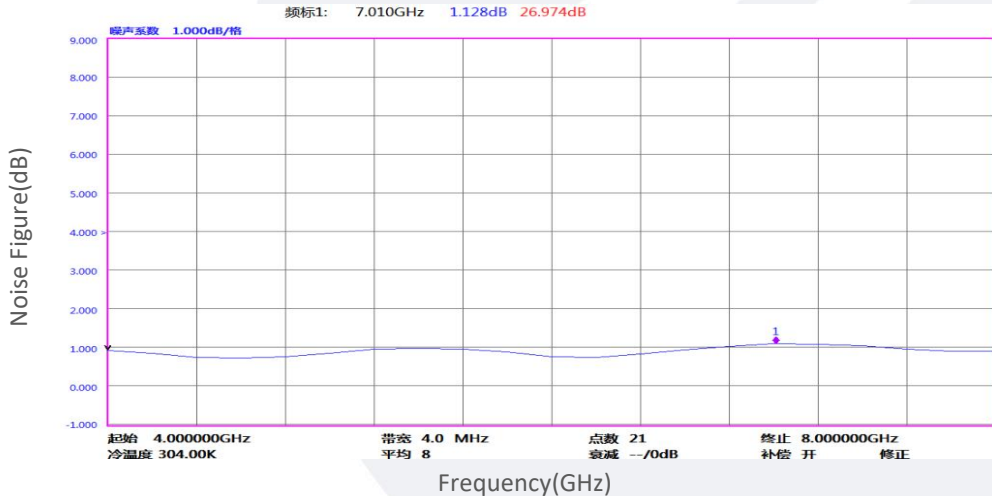
Base Number	Description	Revision
TLLA4G8G-26-07	Low Noise Amplifier, 4-8GHz, Noise Figure:0.7dB, Gain:26dB,P1dB:10dBm,+8V DC,Without Heatsink	Rev.1.1
TLLA4G8G-26-07-HS	Low Noise Amplifier, 4-8GHz, Noise Figure:0.7dB, Gain:26dB,P1dB:10dBm,+8V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



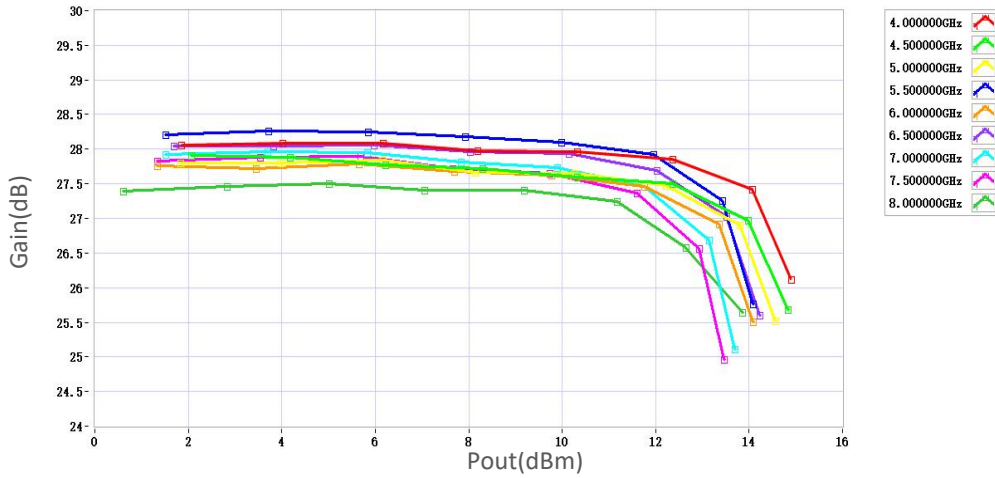
Noise Figure vs Frequency



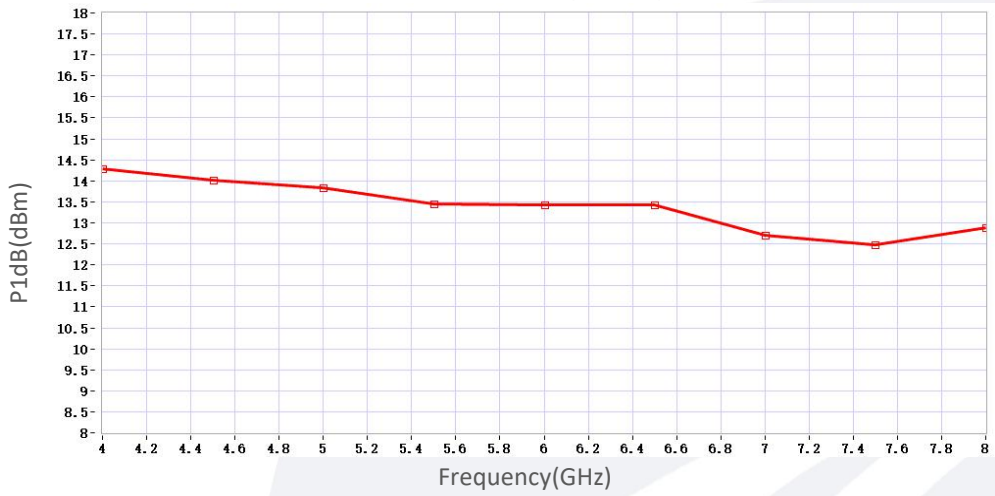
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Gain vs Output Power



P1dB vs Frequency



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