

Low Noise Amplifier

0.8-21GHz/3.5dB NF/26dB Gain/23dBm P1dB

Model: TLLA0.8G21G-26-30

TLLA0.8G21G-26-30 is a low noise amplifier with a typical small signal gain of 26 dB and a nominal noise figure of 3.5 dB across the frequency range of 0.8 to 21 GHz. The DC power requirement for the amplifier is +12 V DC/250 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 0.8-21GHz
- Gain: 26dB Typ
- Noise Figure: 3.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.8		21	GHz
Small Signal Gain	23	26		dB
Gain Flatness		±2.0	±3.0	dB
Noise Figure		3.5	5.5	dB
Output P1dB		23		dBm
Input VSWR		1.8	2.2	:1
Output VSWR		1.8	2.2	:1
DC Voltage		12	15	V DC
DC Supply Current		250		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	44.8*29.2*11	mm

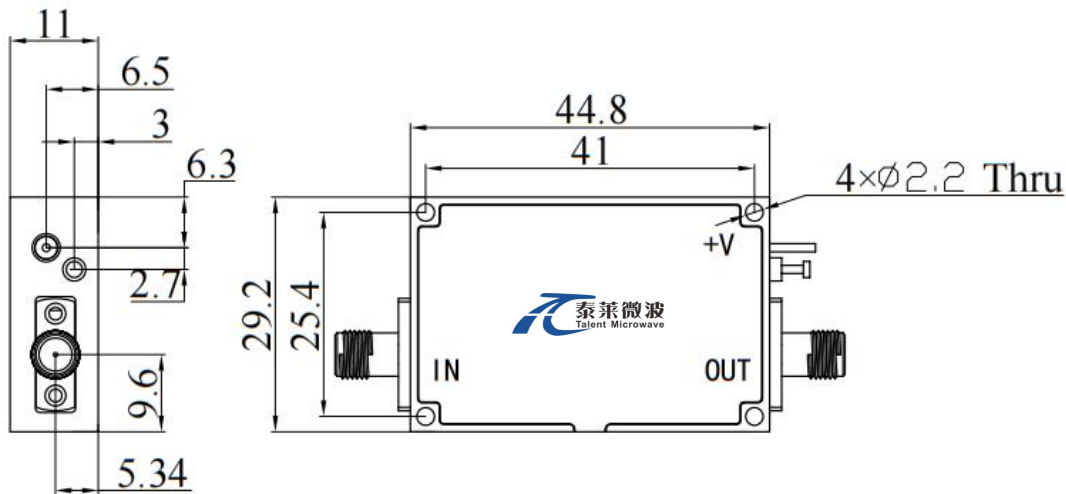
Absolute Maximum Ratings:

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

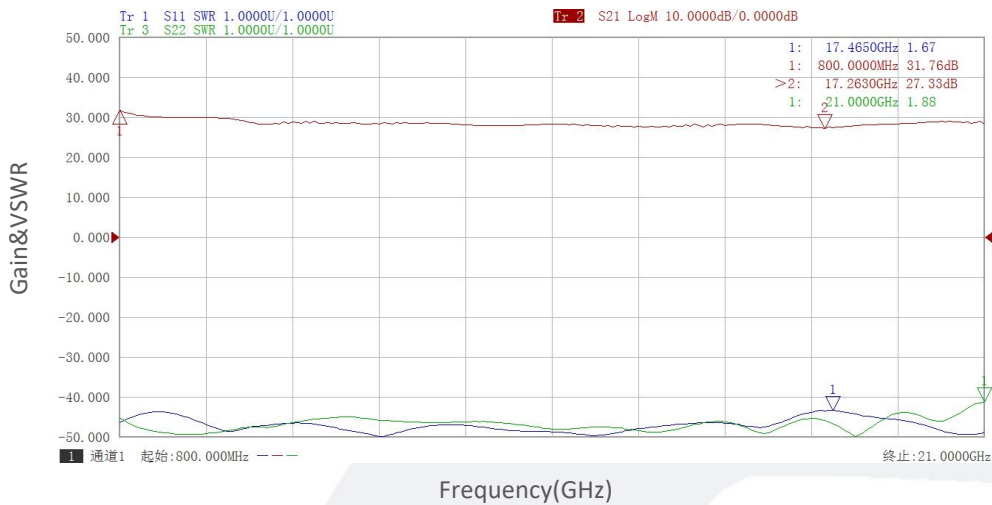
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

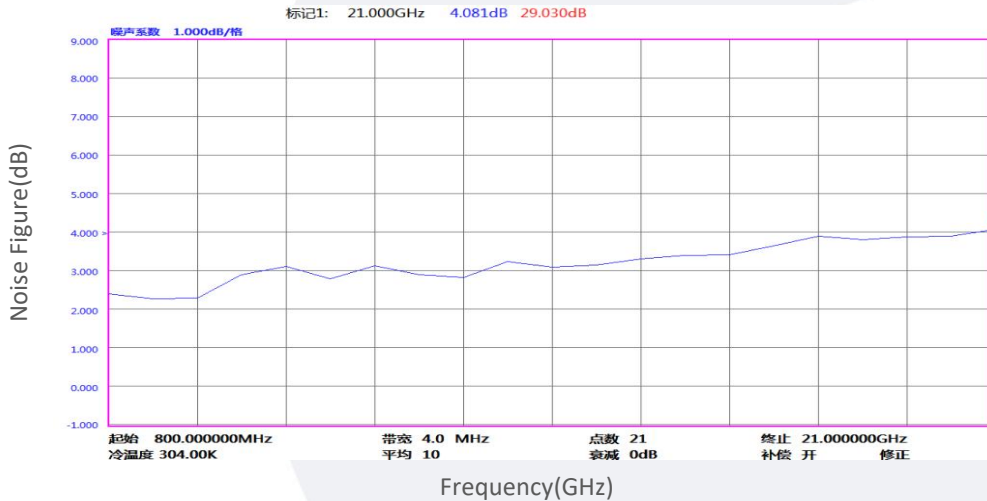
Base Number	Description	Revision
TLLA0.8G21G-26-30	Low Noise Amplifier, 0.8-21GHz, Noise Figure:3.5dB, Gain: 26dB,P1dB:23dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.8G21G-26-30-HS	Low Noise Amplifier, 0.8-21GHz, Noise Figure:3.5dB, Gain: 26dB,P1dB:23dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



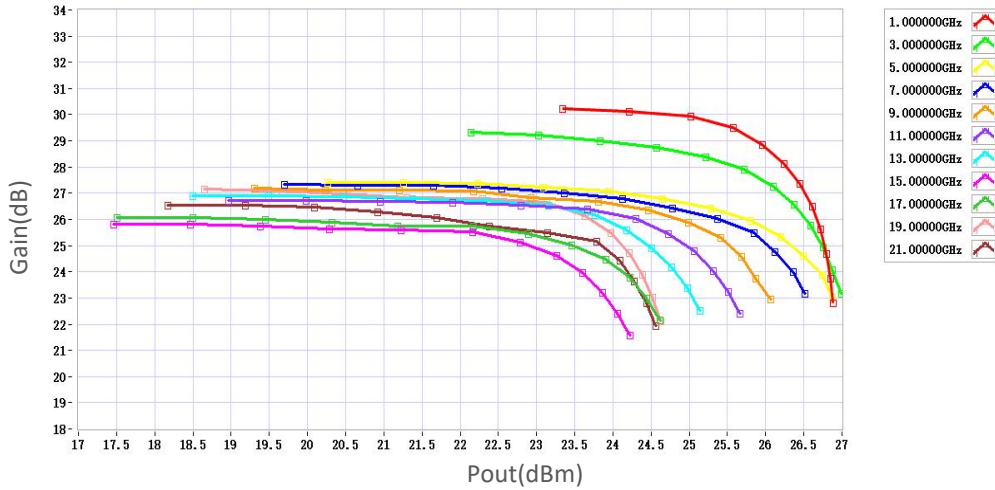
Noise Figure vs Frequency



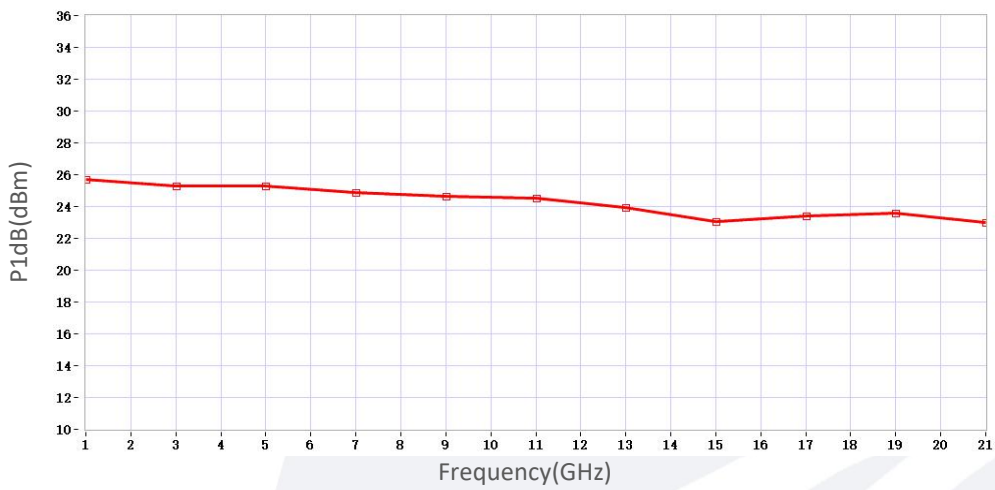
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

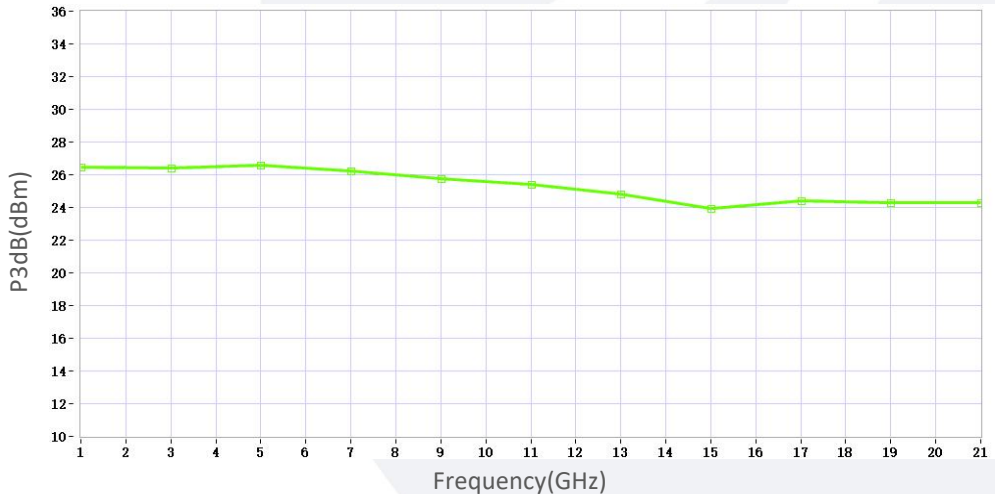
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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