

Low Noise Amplifier

2-30GHz/5dB NF/20dB Gain/20dBm P1dB

Model: TLLA2G30G-20-50

TLLA2G30G-20-50 is a low noise amplifier with a typical small signal gain of 20 dB and a nominal noise figure of 5 dB across the frequency range of 2 to 30 GHz. The DC power requirement for the amplifier is +12 V DC/200 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 2-30GHz
- Gain: 20dB Typ
- Noise Figure: 5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	2		30	GHz
Small Signal Gain		20		dB
Gain Flatness		±3.0		dB
Noise Figure		5		dB
Output P1dB		20		dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		12		V DC
DC Supply Current		200		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

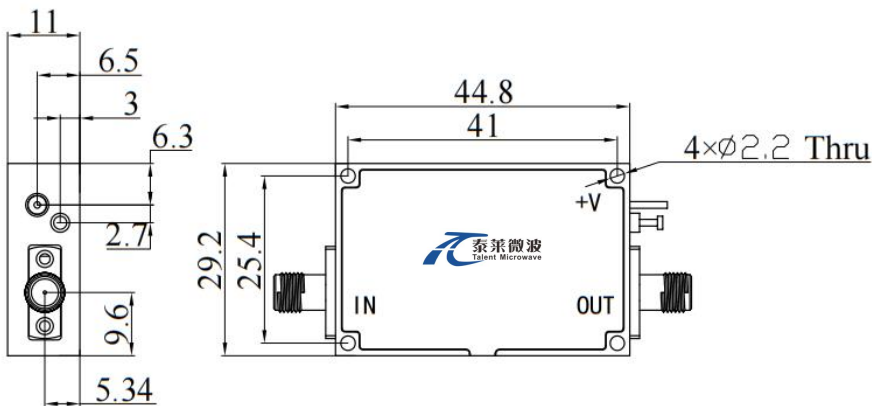
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	±5 %
RF Input Power	+10 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:

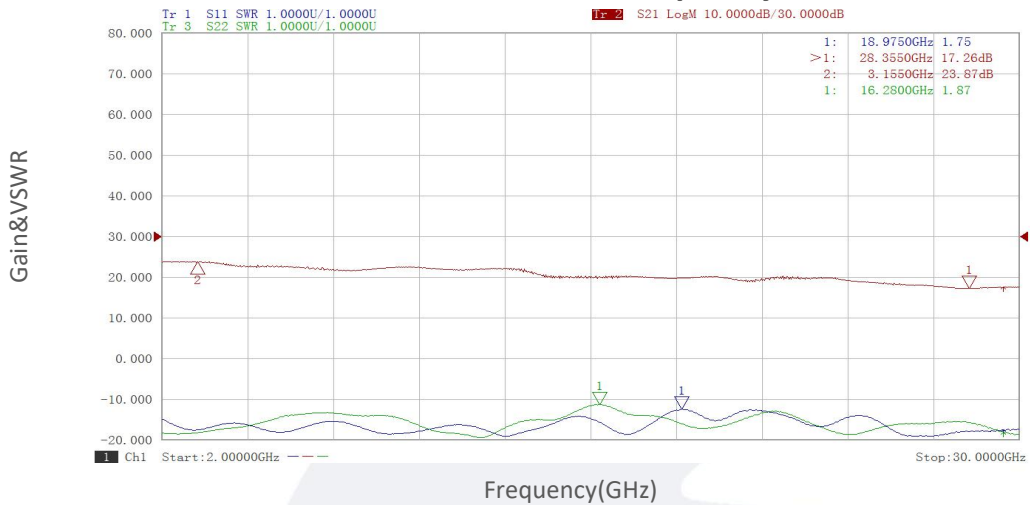
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude		10,000		feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

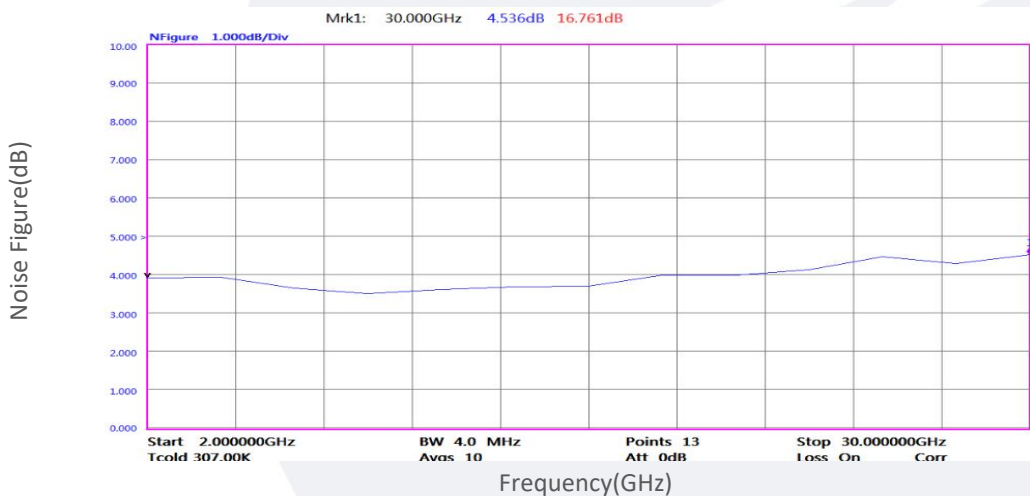
Base Number	Description	Revision
TLLA2G30G-20-50	Low Noise Amplifier, 2-30GHz, Noise Figure: 5dB, Gain: 20dB, P1dB: 20dBm, +12V DC, Without Heatsink	Rev.1.0
TLLA2G30G-20-50-HS	Low Noise Amplifier, 2-30GHz, Noise Figure: 5dB, Gain: 20 dB, P1dB: 20dBm, +12V DC, With Heatsink	Rev.1.0

Typical Performance Data:

Gain&VSWR vs Frequency



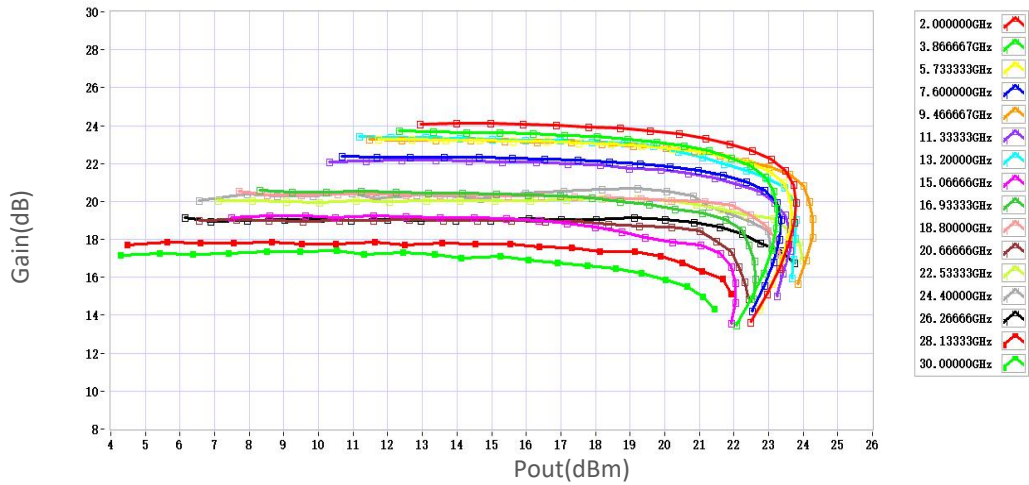
Noise Figure vs Frequency



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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