

Low Noise Amplifier

0.1-1.5GHz/1.0dB NF/28dB Gain/17dBm P1dB

Model: TLLA0.1G1.5G-30-10

TLLA0.1G1.5G-30-10 is a low noise amplifier with a minimum small signal gain of 28 dB and a maximum noise figure of 1.0 dB across the frequency range of 0.1 to 1.5 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: 0.1-1.5GHz
- 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		1.5	GHz
Small Signal Gain	28			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

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	20*28*10(Without hratsink) 120*150*70(With heatsink)	mm

Absolute Maximum Ratings:

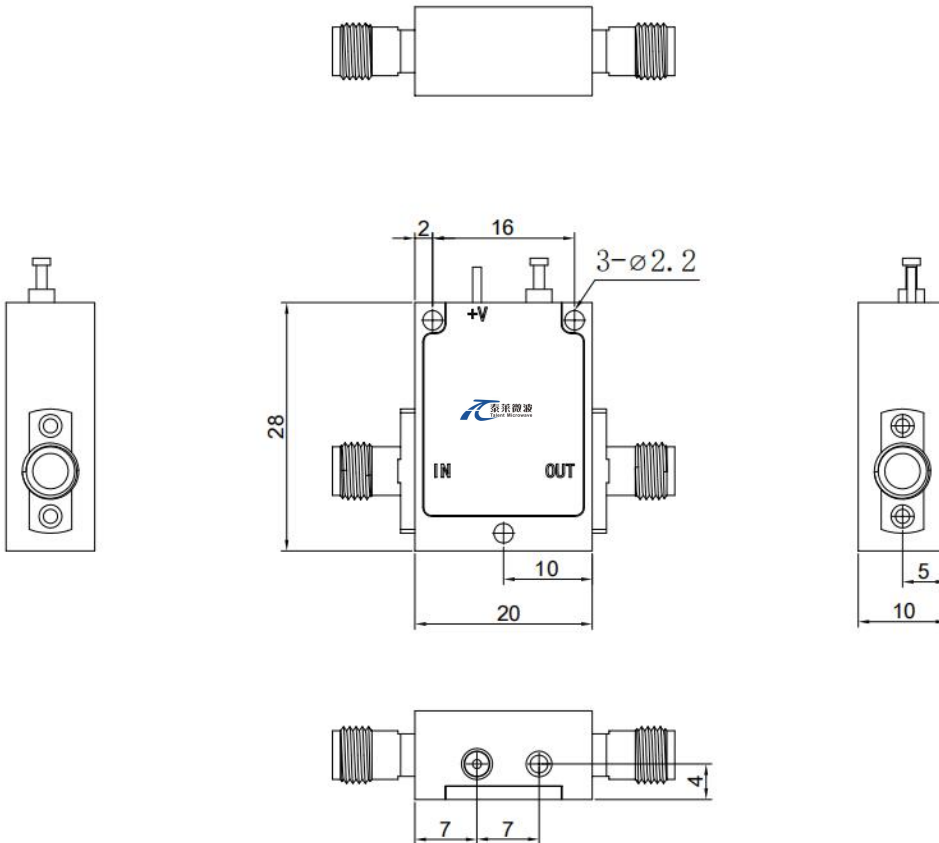
Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	15 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Simple 220V System
Available SAC option

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



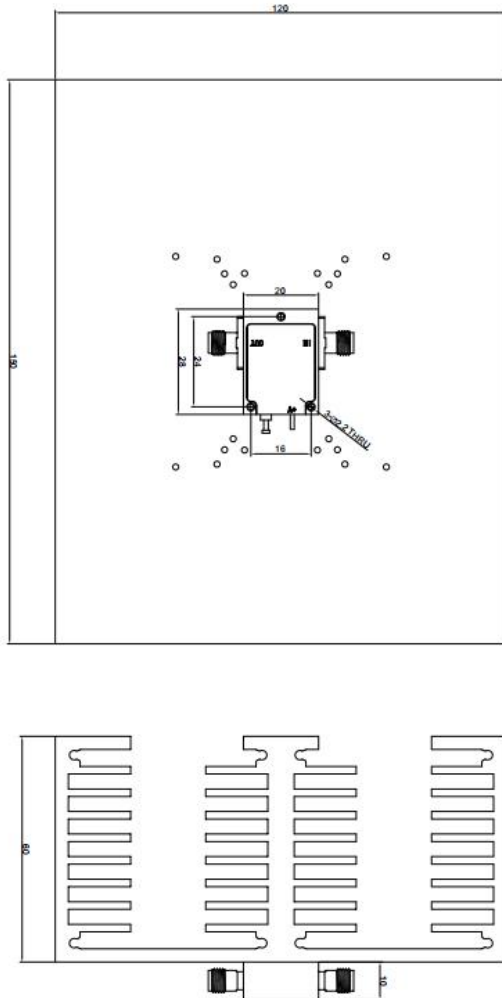
*****Heat Sink Required During Operation**



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

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



Environmental Conditions:

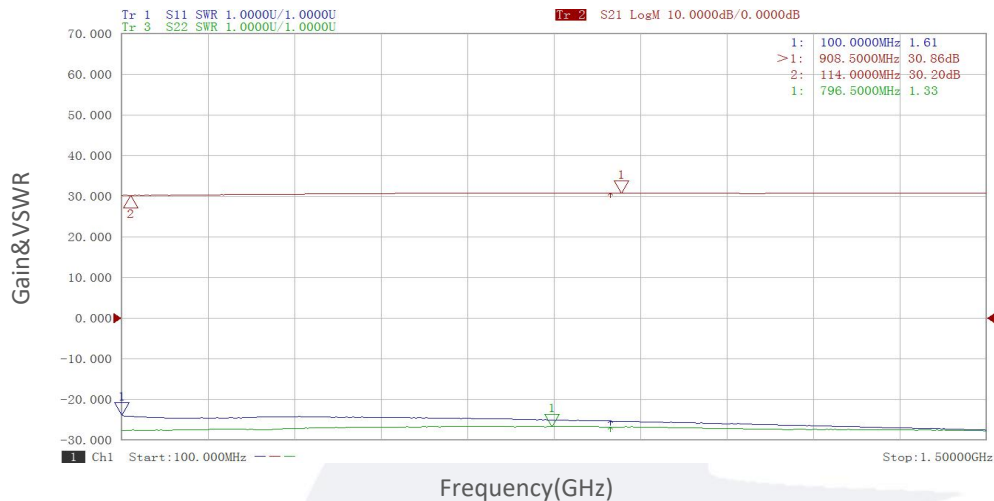
Parameter	Min	Typ	Max	Units
Operating Temperature	-40		+60	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

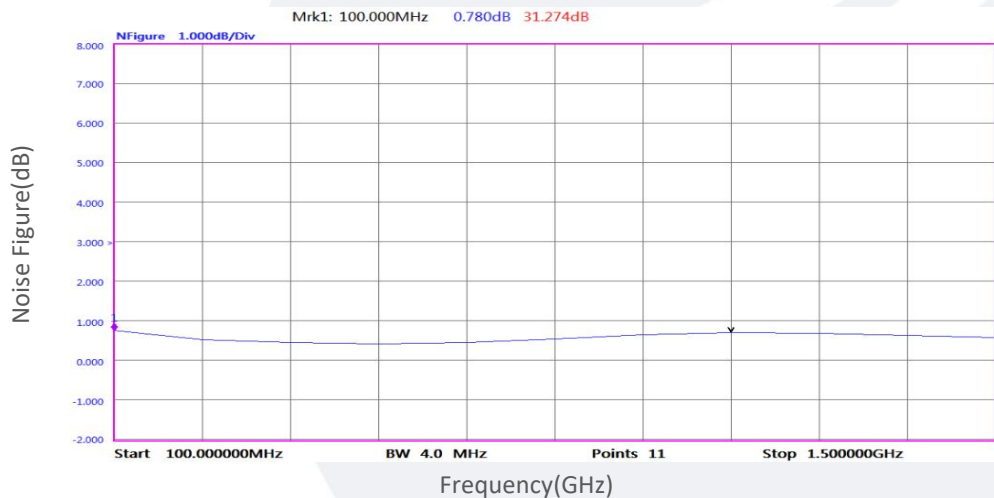
Base Number	Description	Revision
TLLA0.1G1.5G-30-10	Low Noise Amplifier, 0.1-1.5GHz, Noise Figure:1.0dB, Gain:28 dB,P1dB:17dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.1G1.5G-30-10-HS	Low Noise Amplifier, 0.1-1.5GHz, Noise Figure:1.0dB, Gain:28 dB,P1dB:17dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



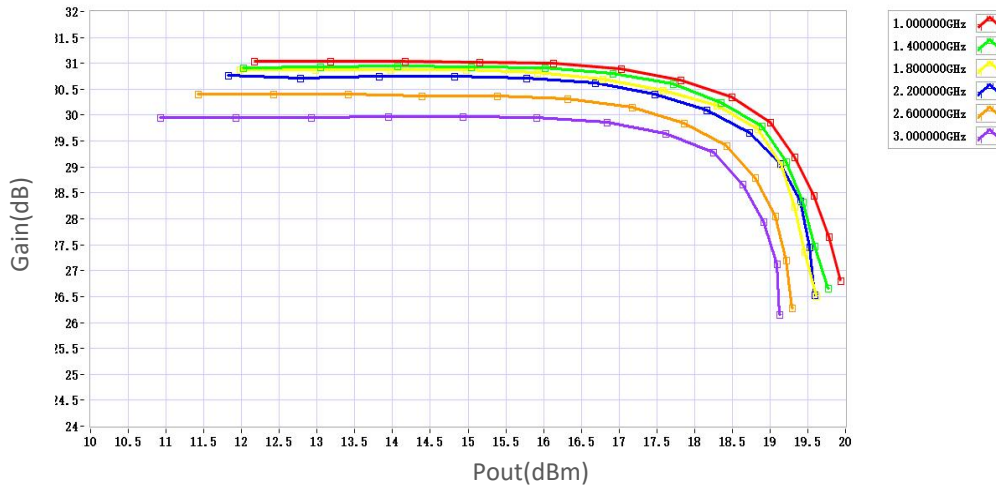
Noise Figure vs Frequency



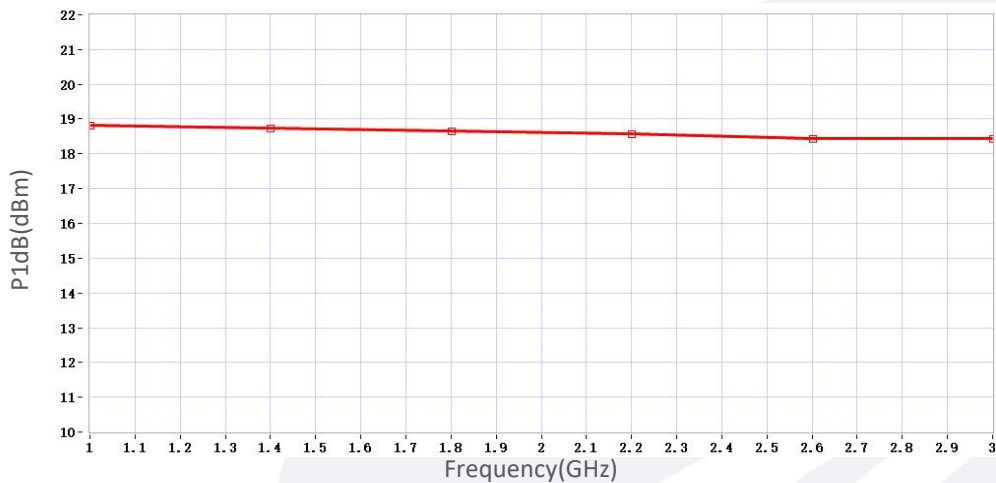
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

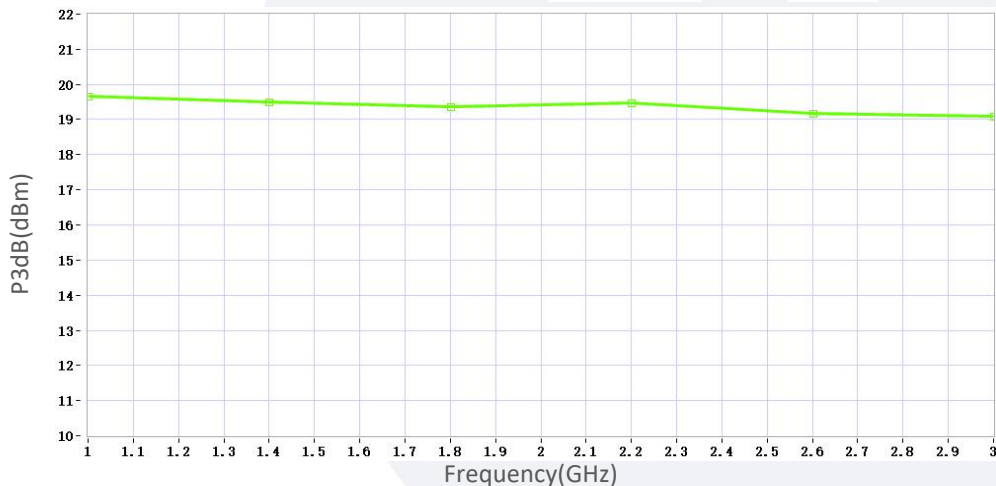
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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