

## Model: TLLA50K20G-18-30

**Low Noise Amplifier , 50KHz-20GHz,  
NF:2.5dB, Gain:18dB,P1dB:15dBm**

### Feature:

- Ultra Wide Band: 50KHz-20GHz
- Gain: 18dB Typ
- Noise Figure: 2.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Electrical Specifications:

Parameter	Min	Typ	Max	Units
Frequency range	50KHz-20GHz			GHz
Gain		18		dB
Gain Flatness		±2.0		dB
Noise Figure		2.5	4.0	dB
Output P1dB		15		dBm
Input VSWR		2.0		:1
Output VSWR		2.0	2.2	:1
DC Voltage		+8		V DC
DC Supply Current		70		mA
Impedance	50			Ohms

### Mechanical Specifications:

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

### Absolute Maximum Ratings:

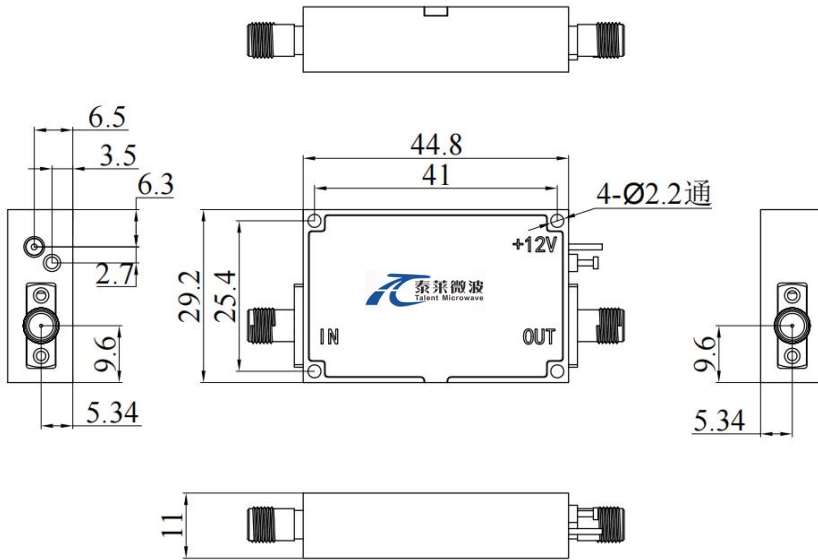
Parameter	Value
Supply Bias Voltage	+8V
RF Input Power	TBD
ESD sensitivity (HBm)	Class 0, passed 150V



Available 220V System  
Benchtop Amplifier

**Outline Drawing:**

Unit: mm



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



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

**Environmental Conditions:**

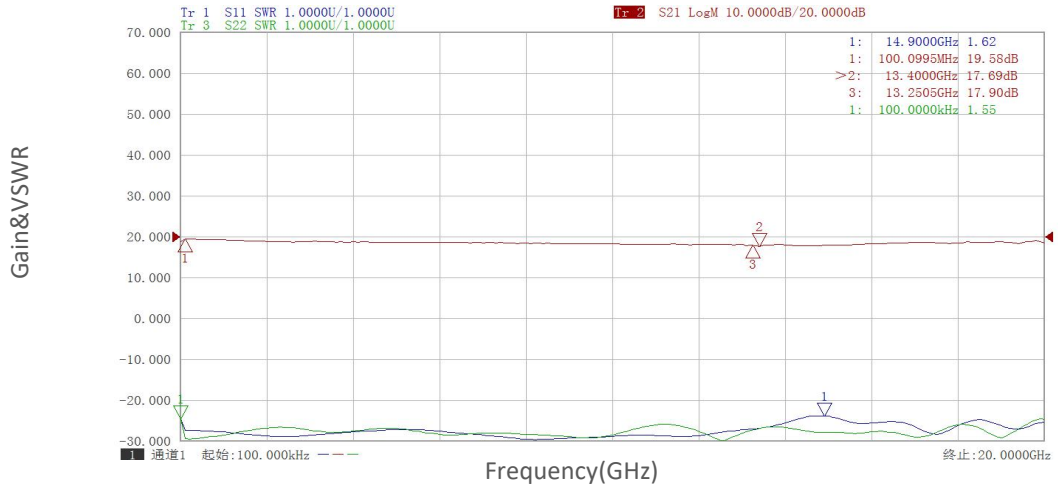
Parameter	Min	Typ	Max	Units
Operating Temperature	-40		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

**Ordering Information:**

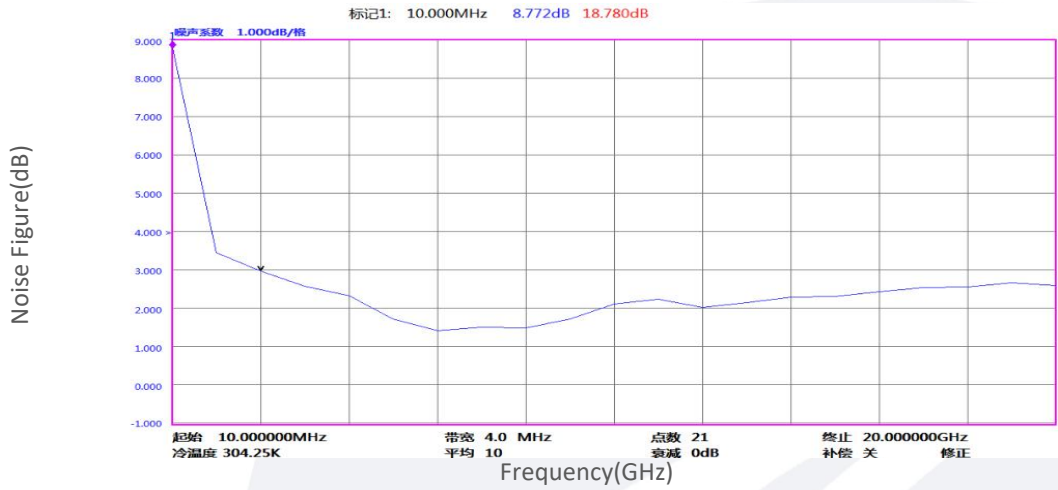
Part Number	Description	Revision
TLLA50K20G-18-30	Low Noise Amplifier, 50KHz-20GHz, Noise Figure:2.5dB, Gain:18 dB,P1dB:15dBm,+8V DC,Without Heatsink	Rev.1.1
TLLA50K20G-18-30-HS	Low Noise Amplifier, 50KHz-20GHz, Noise Figure:2.5dB, Gain:18 dB,P1dB:15dBm,+8V DC,With Heatsink	Rev.1.1

Typical Performance Data:

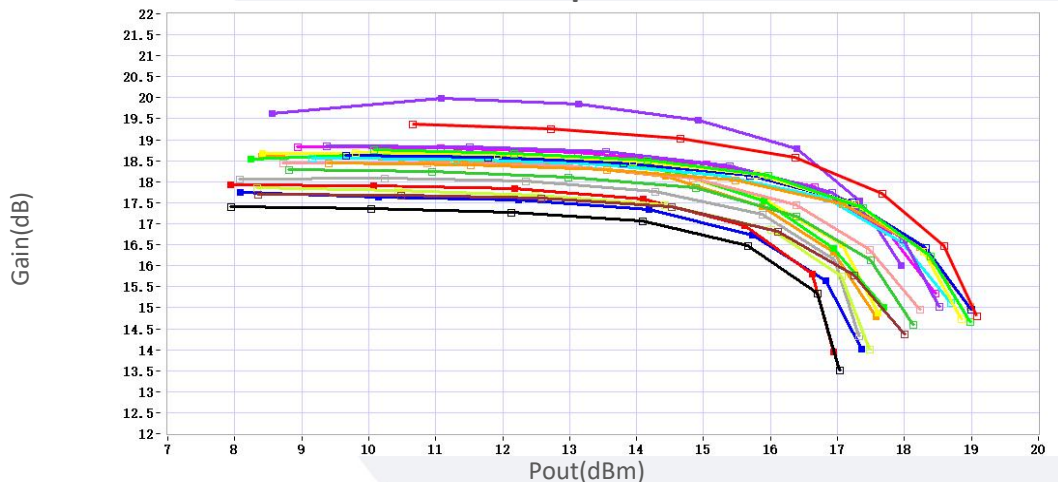
Gain&VSWR vs Frequency



Noise Figure vs Frequency



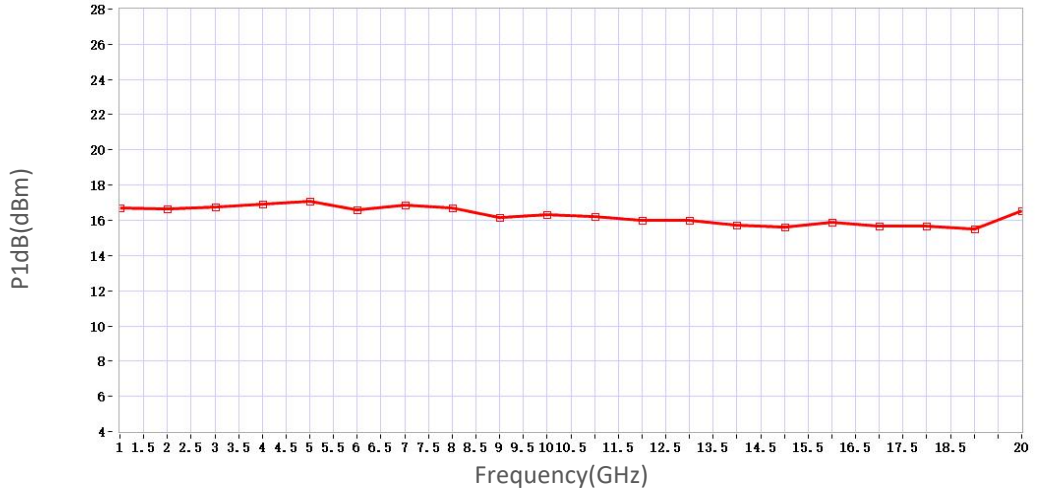
Gain vs Output Power



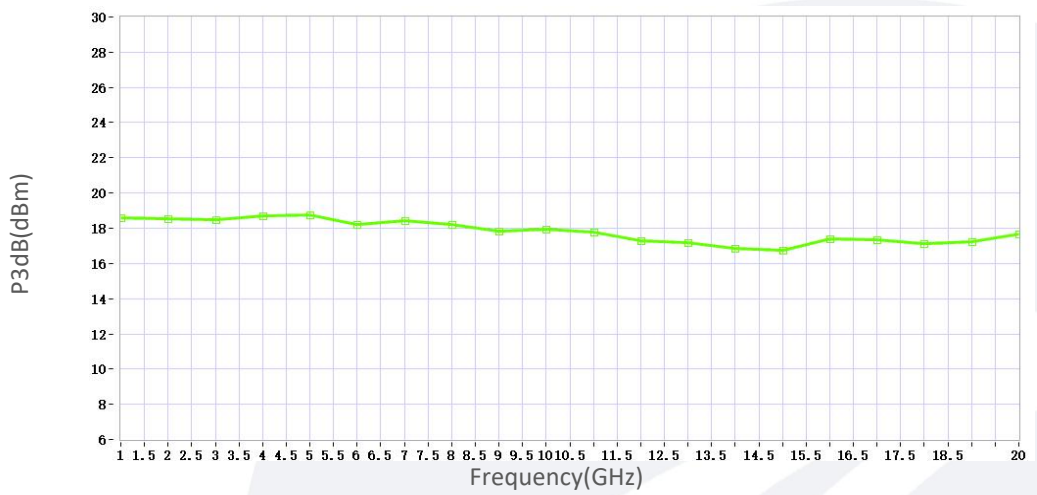
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

P1dB vs Frequency



P3dB 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.