

**Model: TLLA50K20G-30-30**
**Low Noise Amplifier**
**50KHz-20GHz, NF:3.0dB, Gain:30dB, P1dB:15dBm**
**Feature:**

- Ultra Wide Band: 50KHz-20GHz
- Gain: 30dB Typ
- Noise Figure: 3.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

**Electrical Specifications:**

Parameter	Min	Typ	Max	Units
Frequency range	50KHz-20GHZ			GHz
Gain		30		dB
Gain Flatness		±1.5		dB
Noise Figure		3		dB
P1dB	15	16		dBm
Input VSWR		1.8	2	:1
Output VSWR		1.8	2	:1
DC Voltage		+12		V DC
DC Supply Current		180		mA
Impedance	50			Ohms

**Mechanical Specifications:**

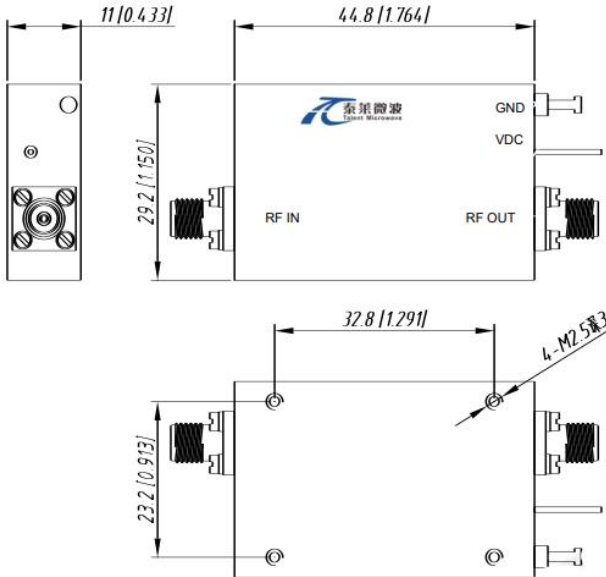
Parameter	Value	Units
Input /Output Connector	SMA Female	
DC Bias	Solder Pin	
Size	44.8*29.2*11	mm
Weight	55	g


**Absolute Maximum Ratings:**

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

**Outline Drawing:**

Unit: mm(inches)



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



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

**Environmental Conditions:**

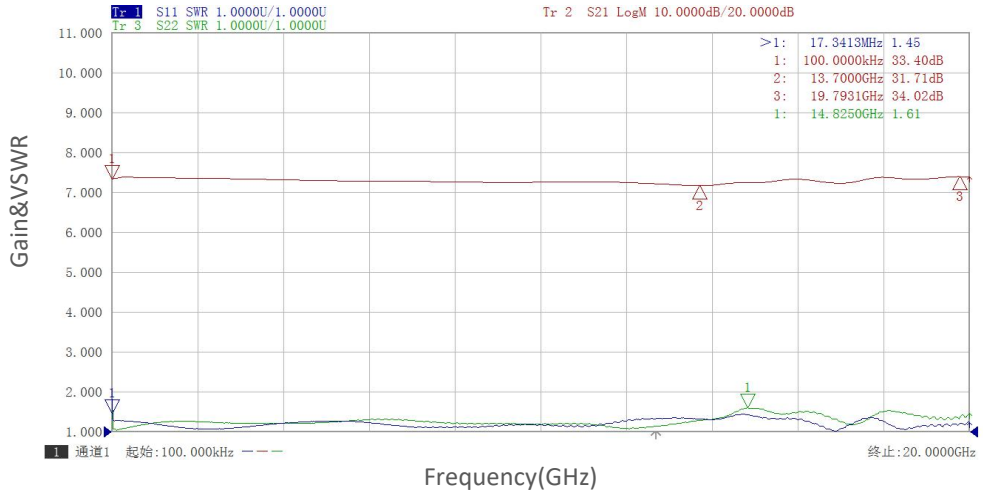
Parameter	Min	Typ	Max	Units
Operating Temperature	-40		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

**Ordering Information:**

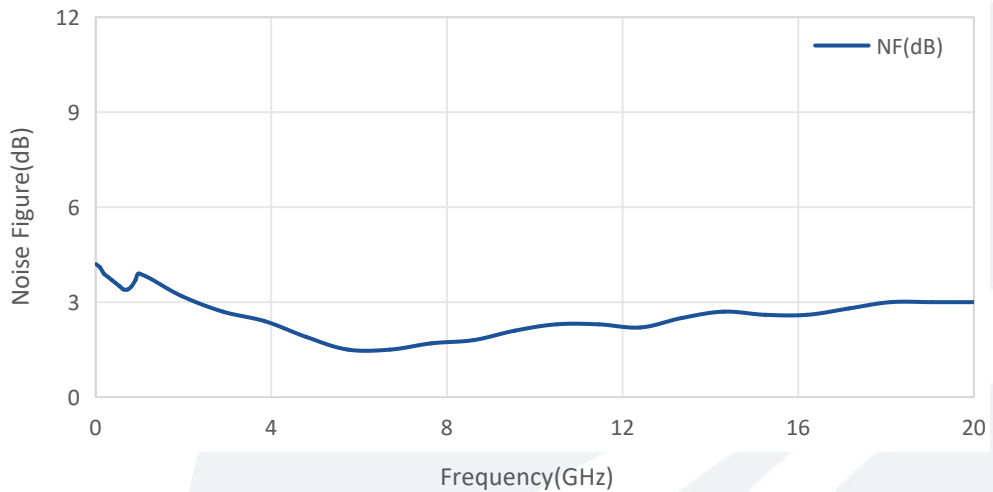
Part Number	Description	Revision
TLLA50K20G-30-30	Low Noise Amplifier, 50K-20GHz, Noise Figure:3.0dB, Gain:30 dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA50K20G-30-30-HS	Low Noise Amplifier, 50K-20GHz, Noise Figure:3.0dB, Gain:30 dB,P1dB:15dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

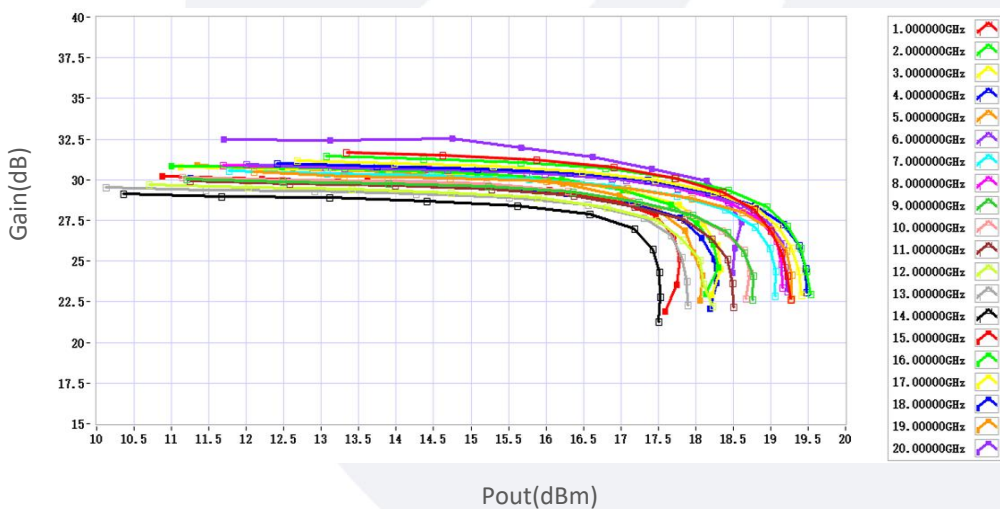
Gain&VSWR vs Frequency



Noise Figure vs Frequency

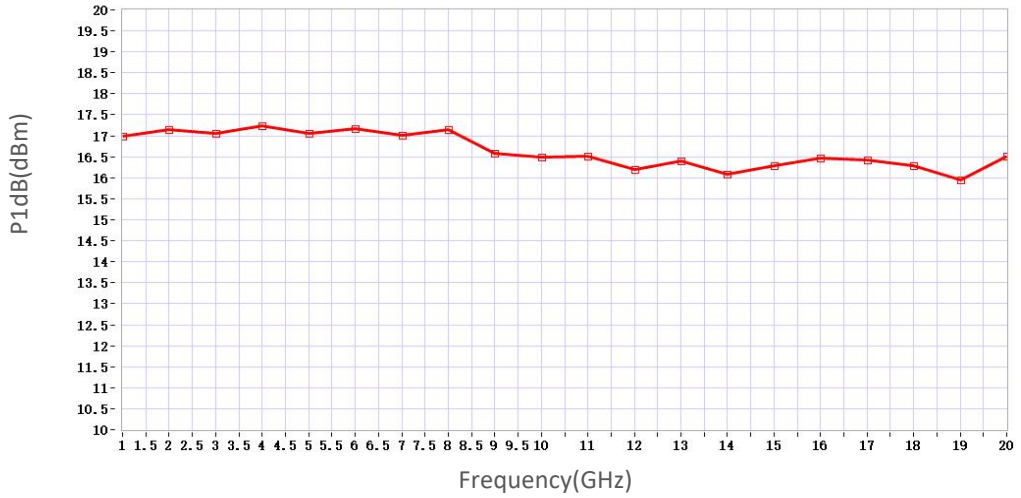


Gain vs Output Power

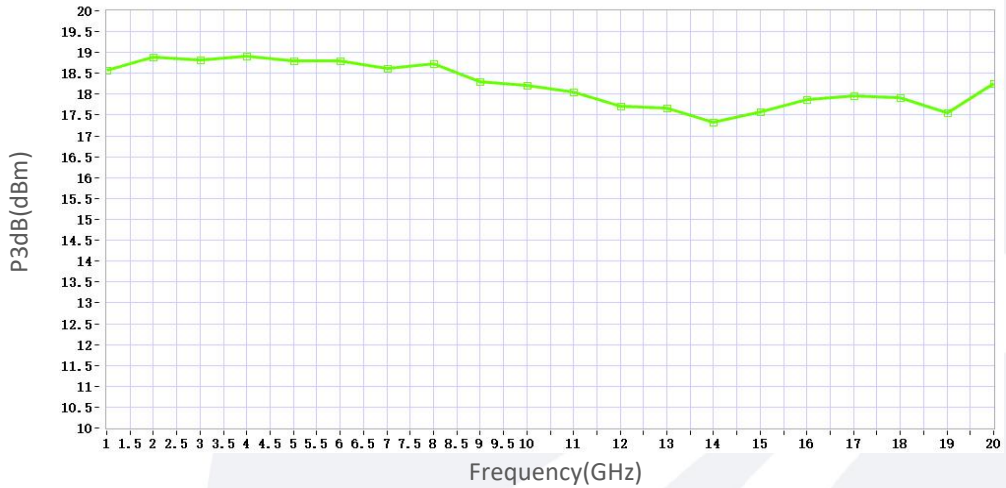


Typical Performance Data:

P1dB vs Frequency



P3dB vs Frequency



Psat vs Frequency

