泰莱微波
Talent Microwave

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Low Noise Amplifier

1-18GHz/2.0dB NF/13dB Gain/14dBm P1dB Model: TLLA1G18G-13-20

TLLA1G18G-13-20 is a low noise amplifier with a minimum small signal gain of 13 dB and a nominal noise figure of 2.0 dB across the frequency range of 1 to 18 GHz. The DC power requirement for the amplifier is +12V DC/50 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1-18GHz
- Gain: 13dB Min
- Noise Figure: 2.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	1		18	GHz
Small Signal Gain	13	14		dB
Gain Flatness		±1		dB
Noise Figure		2.0	2.5	dB
Output P1dB	13	14		dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage	+8	+12	+15	V DC
DC Supply Current		50		mA
Impedance		50		Ohms

Mechanical Specifications:

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

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

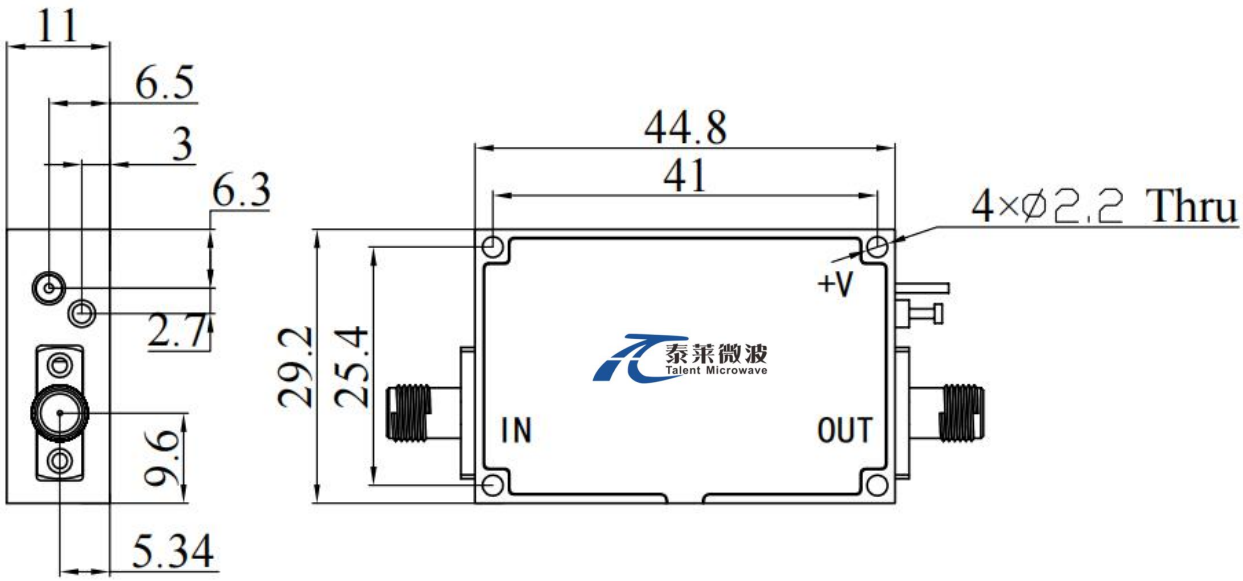
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+20 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Simple 220V System
Available SAC option

Outline Drawing:

Unit:mm



***Heat Sink Required During Operation

OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	℃
Non-operating Temperature	-55		+125	℃
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			

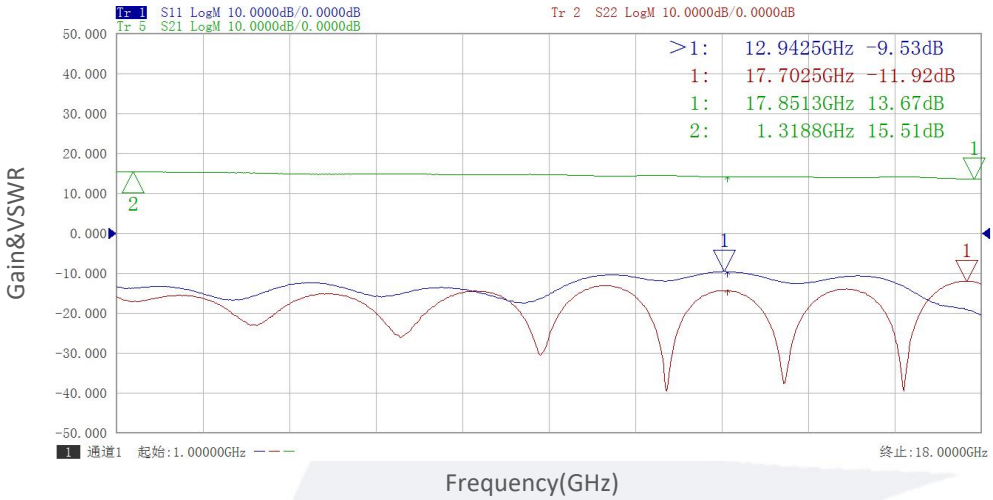
Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Ordering Information:

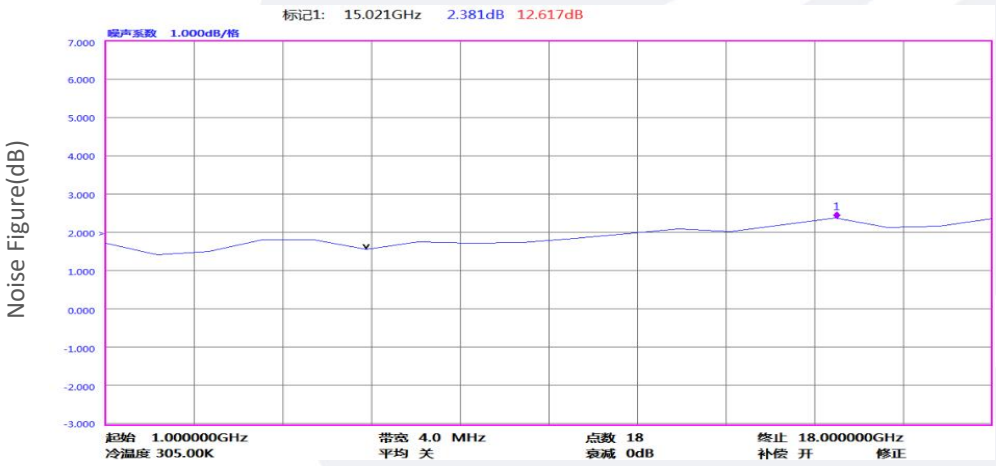
Base Number	Description	Revision
TLLA1G18G-13-20	Low Noise Amplifier,1-18GHz, Noise Figure:2.0dB, Gain:13dB,P1dB:14dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA1G18G-13-20-HS	Low Noise Amplifier, 1-18GHz, Noise Figure:2.0dB, Gain:13 dB,P1dB:14dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



Noise Figure vs Frequency

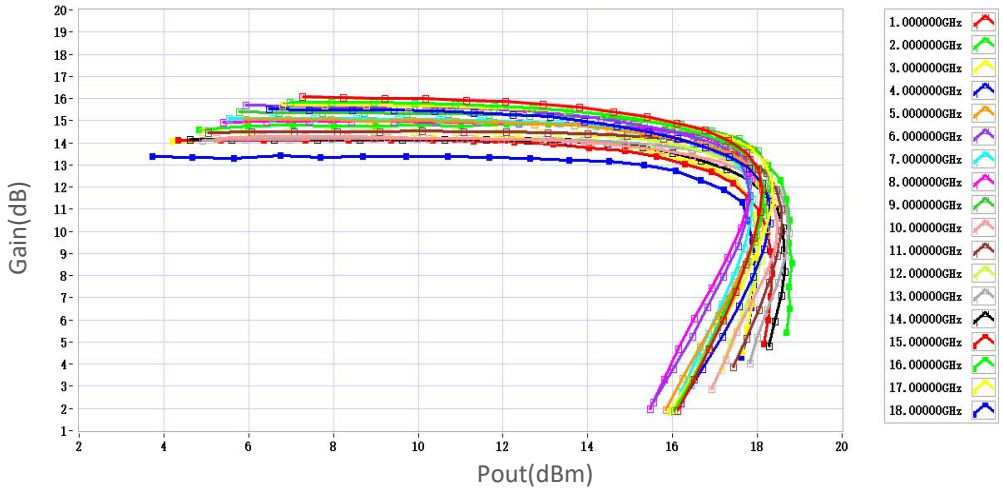


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

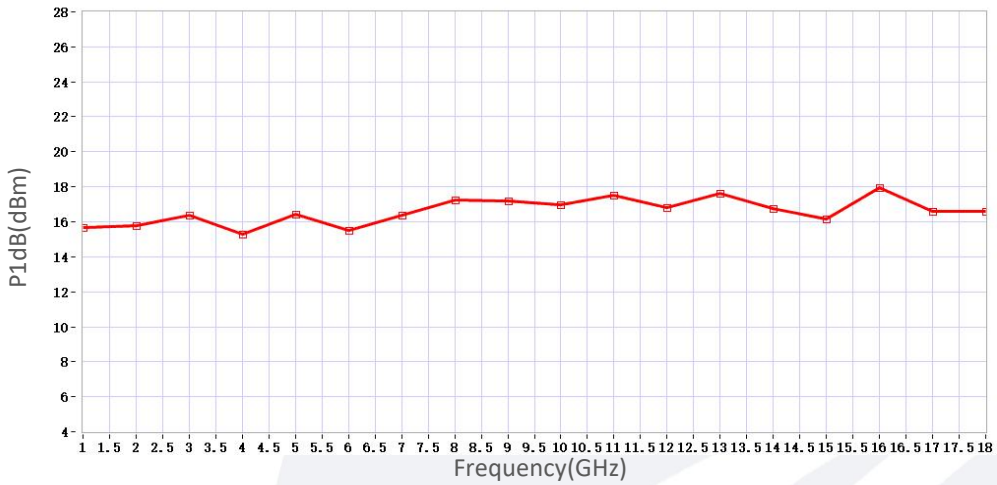
Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Typical Performance Data:

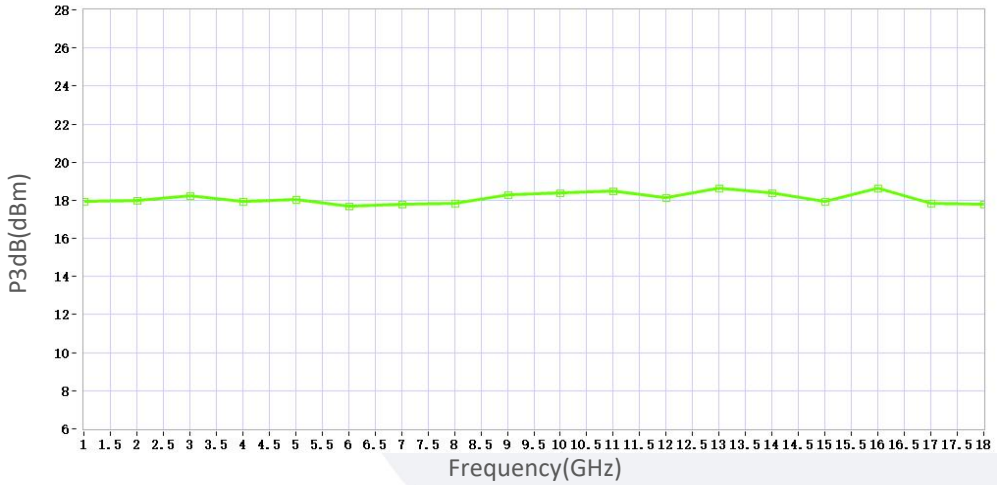
Gain vs Output Power



P1dB vs Frequency



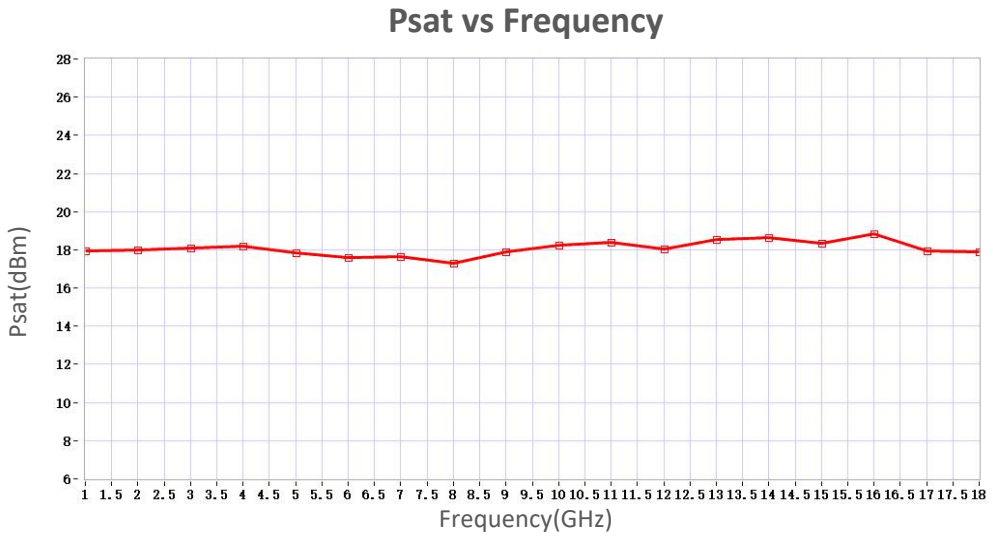
P3dB vs Frequency



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.

Suzhou Talent Microwave,Inc
sales@talentmw.com
www.talentmw.com

Typical Performance Data:



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.