

Low Noise Amplifier

2-18GHz /2.5dB NF/35dB Gain/20dBm P1dB

Model: TLLA2G18G-35-40

TLLA2G18G-35-40 is a low noise amplifier with a minimum small signal gain of 35 dB and a maximum noise figure of 2.5 dB across the frequency range of 2 to 18 GHz. The DC power requirement for the amplifier is +12 V DC/180 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 2-18 GHz
- Gain: 35dB Min
- Noise Figure: 2.5dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	2		18	GHz
Small Signal Gain	35	40		dB
Gain Flatness		±2.0		dB
Noise Figure		1.5	2.5	dB
Output P1dB	18	20		dBm
Input VSWR			2	:1
Output VSWR			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/SMA Female	
DC Bias	Solder Pin	
Size	44*36*11	mm
Weight	42	g

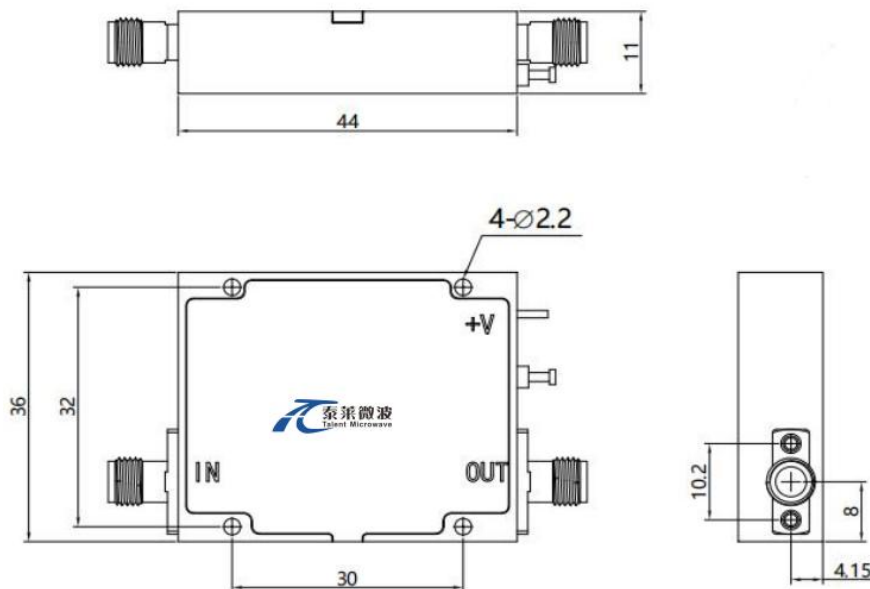
Absolute Maximum Ratings:

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



Outline Drawing:

Unit:mm



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



OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE
DEVICES

Environmental Conditions:

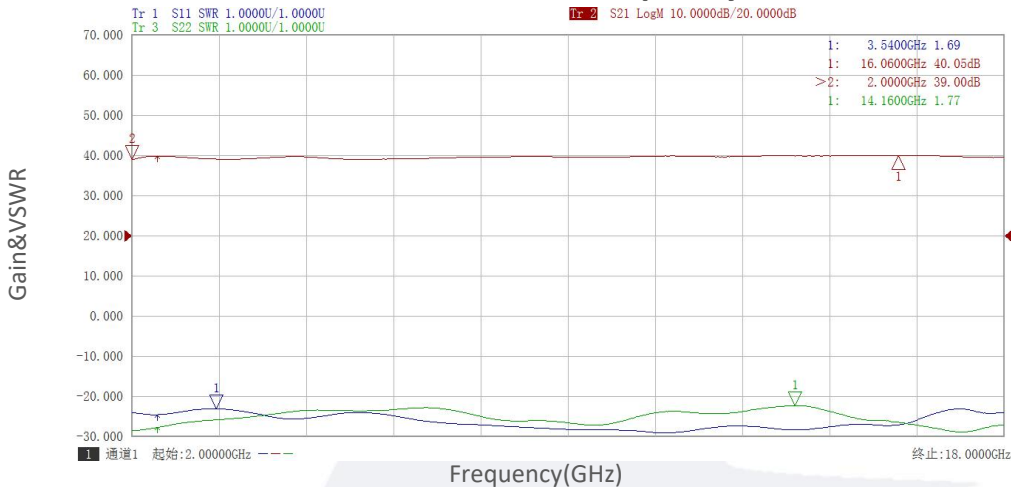
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

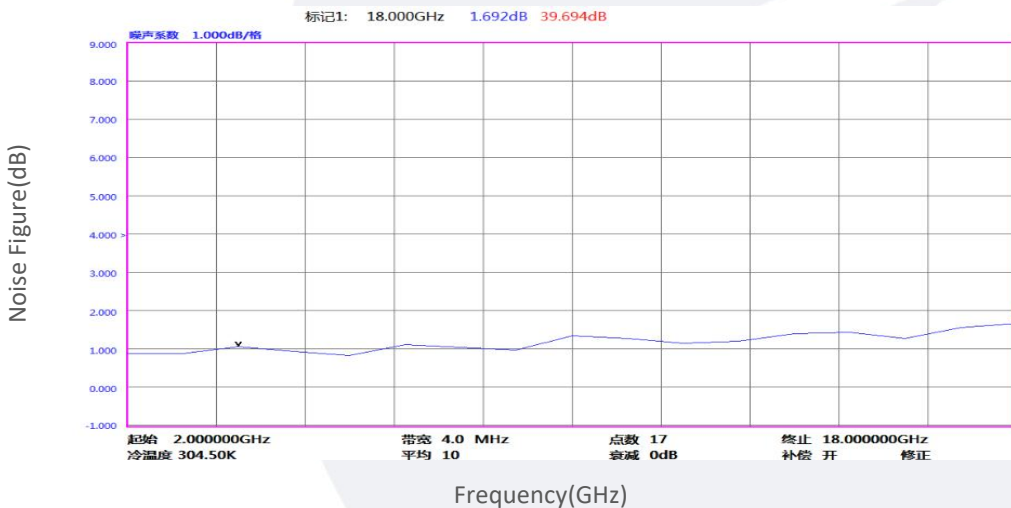
Base Number	Description	Revision
TLLA2G18G-35-40	Low Noise Amplifier, 2-18GHz, Noise Figure:2.5dB, Gain:35 dB,P1dB:20dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA2G18G-35-40-HS	Low Noise Amplifier, 2-18GHz, Noise Figure:2.5dB, Gain:35 dB,P1dB:20dBm,+12V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



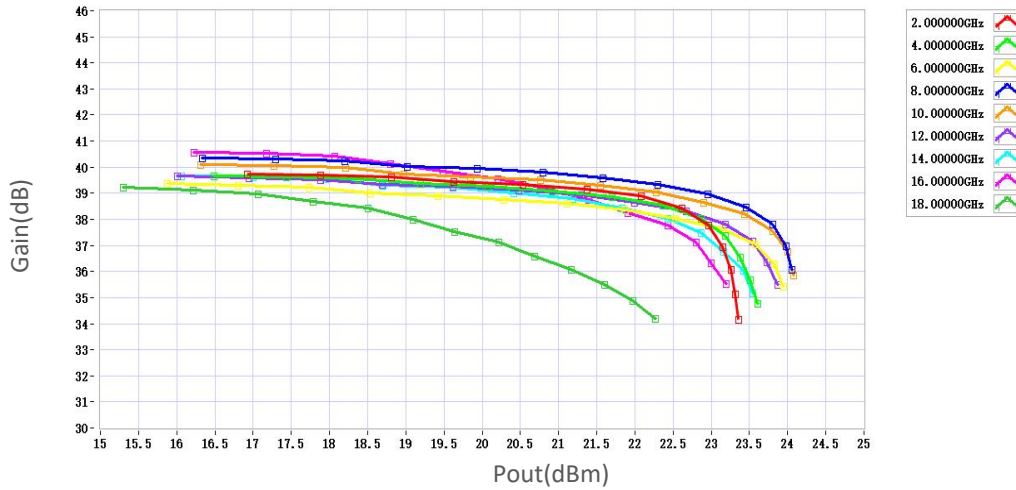
Noise Figure vs Frequency



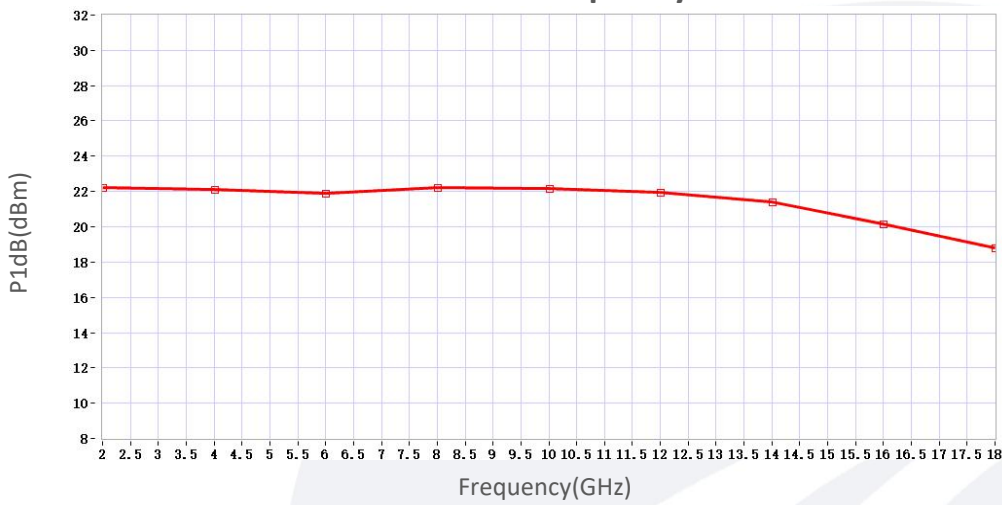
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

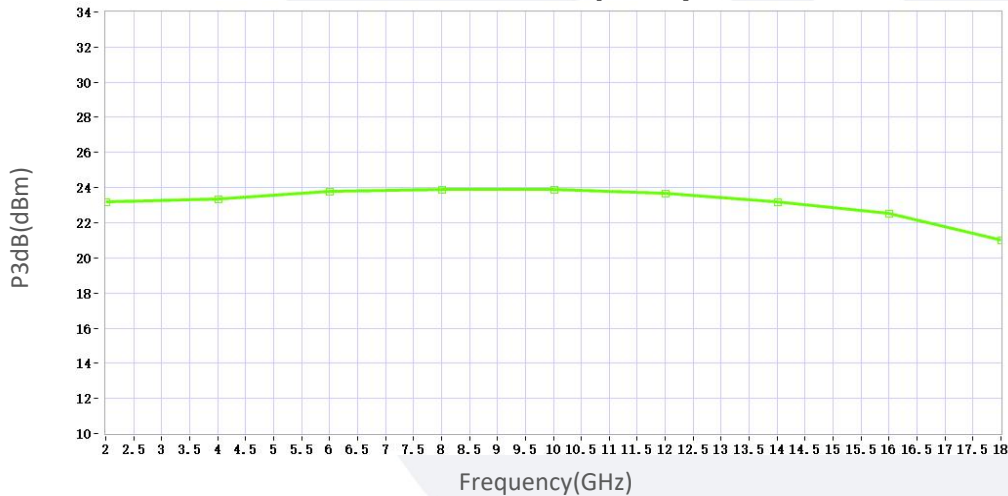
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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