Suzhou Talent Microwave,Inc
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Low Noise Amplifier

18-40GHz/3.0dB NF/40dB Gain/15dBm P1dB Model: TLLA18G40G-40-35

TLLA18G40G-40-35 is a low noise amplifier with a minimum small signal gain of 40 dB and a nominal noise figure of 3.0 dB across the frequency range of 18 to 40 GHz. The DC power requirement for the amplifier is +12 V DC/100 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 18-40GHz
- Gain: 40dB Min
- Noise Figure: 3.0dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Communication systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	18		40	GHz
Small Signal Gain	40	43		dB
Gain Flatness		±2.0		dB
Noise Figure		3	3.5	dB
Output P1dB	12	15		dBm
Spurious		-60		dBc
Input VSWR		1.6	2	:1
Output VSWR		1.6	2.2	:1
DC Voltage		+12		V DC
DC Supply Current		100		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mmFemale	
DC Bias	Solder Pin	
Size	44.8*29.2*11	mm
Weight	50	g

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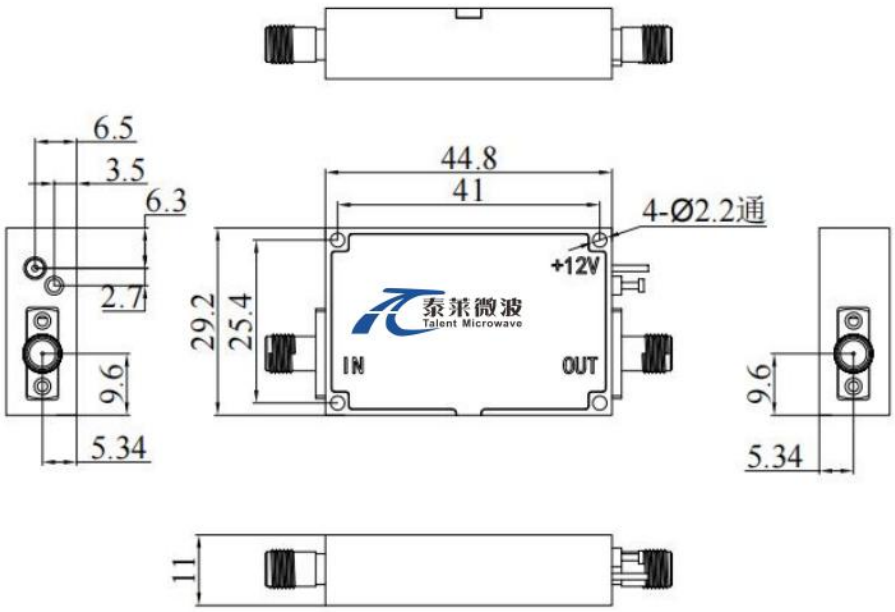
Absolute Maximum Ratings:

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

Simple 220V System
Available SAC option

Outline Drawing:

Unit:mm



***Heat Sink Required During Operation

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

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-40		+85	℃
Non-operating Temperature	-55		+125	℃
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			

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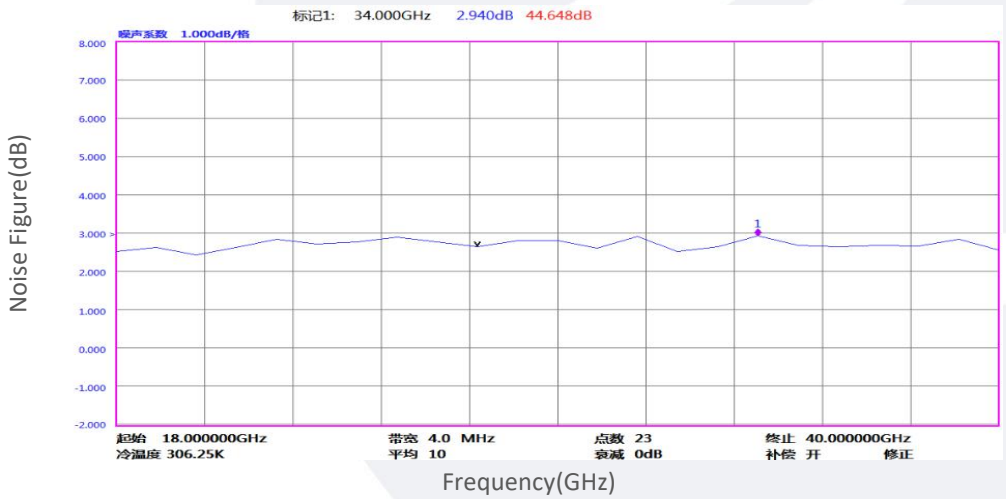
Ordering Information:

Base Number	Description	Revision
TLLA18G40G-40-35	Low Noise Amplifier, 18-40GHz, Noise Figure:3.0dB, Gain:40dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA18G40G-40-35-HS	Low Noise Amplifier, 18-40GHz, Noise Figure:3.0dB, Gain:40dB,P1dB:15dBm,+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.

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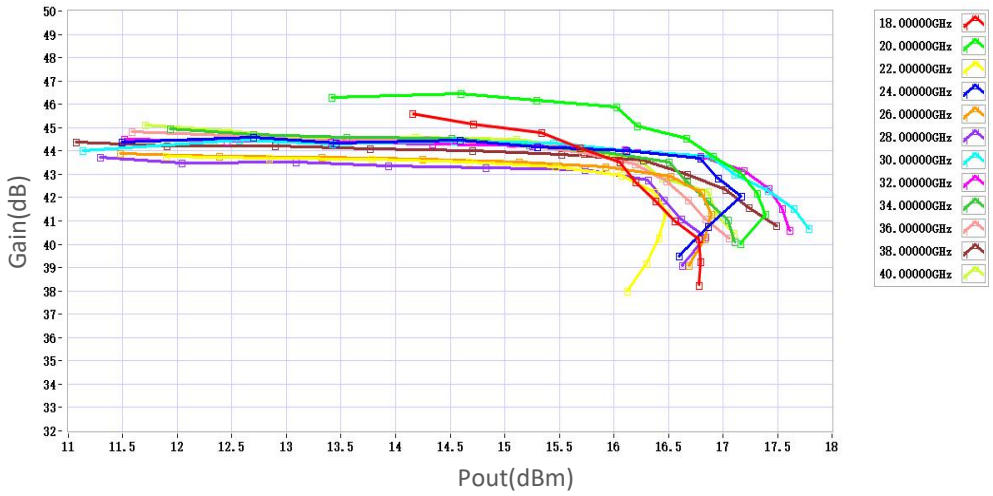
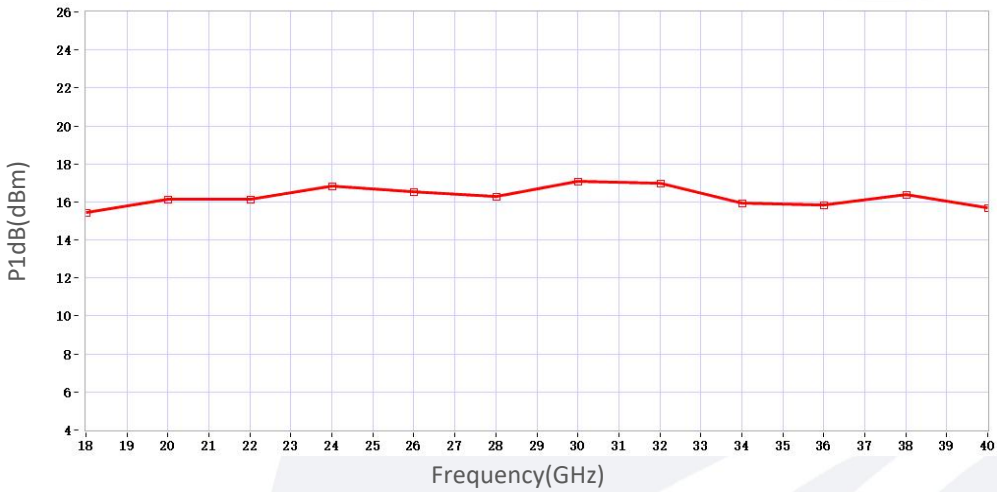
Typical Performance Data:

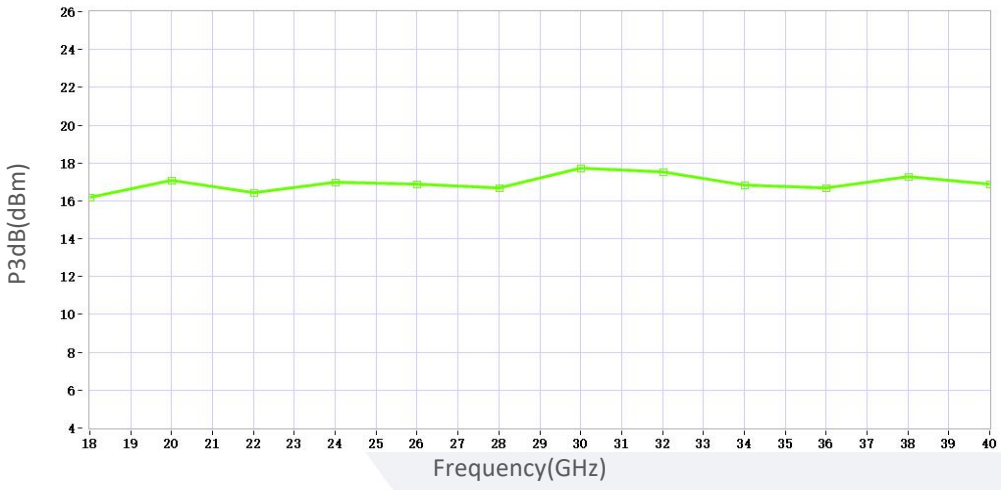
Gain vs Output Power



P1dB vs Frequency



P3dB vs Frequency



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