

## Low Noise Amplifier

6-18GHz/4.0dB NF/41dB Gain/28dBm P1dB

Model: TLLA6G18G-41-40

TLLA6G18G-41-40 is a low noise amplifier with a typical small signal gain of 41 dB and a nominal noise figure of 4.0 dB across the frequency range of 6 to 18 GHz. The DC power requirement for the amplifier is +18 V DC/800 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 6-18GHz
- Gain: 41dB Typ
- Noise Figure: 4.0dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	6		18	GHz
Small Signal Gain		41		dB
Gain Flatness		±1.5	±2	dB
Noise Figure		3	4	dB
Output P1dB	26	28		dBm
Output Psat		29		dBm
Input VSWR		1.6		:1
Output VSWR		1.8		:1
DC Voltage		+18	+20	V DC
DC Supply Current		800		mA
Impedance	50			Ohms

### Mechanical Specifications:

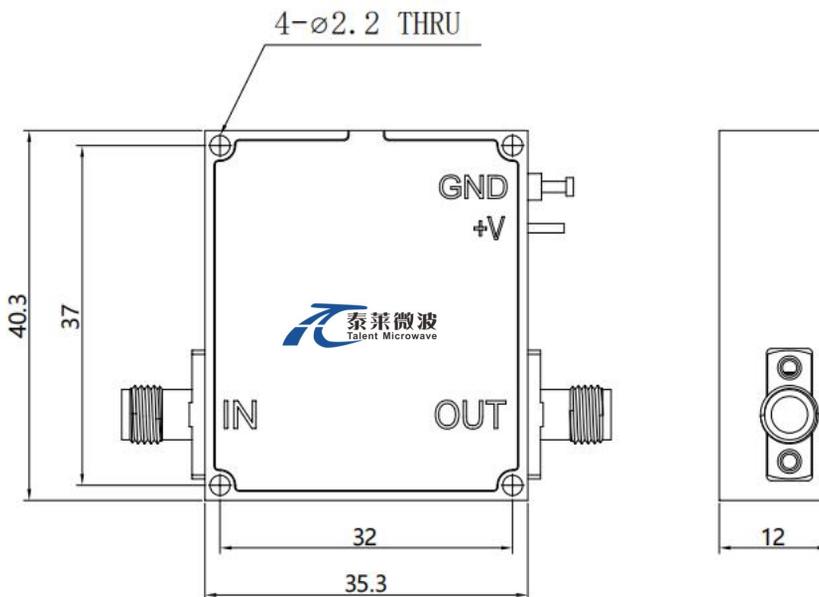
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	35.3*40.3*12	mm

### Absolute Maximum Ratings:

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

### Outline Drawing:

Unit:mm



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



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

### Environmental Conditions:

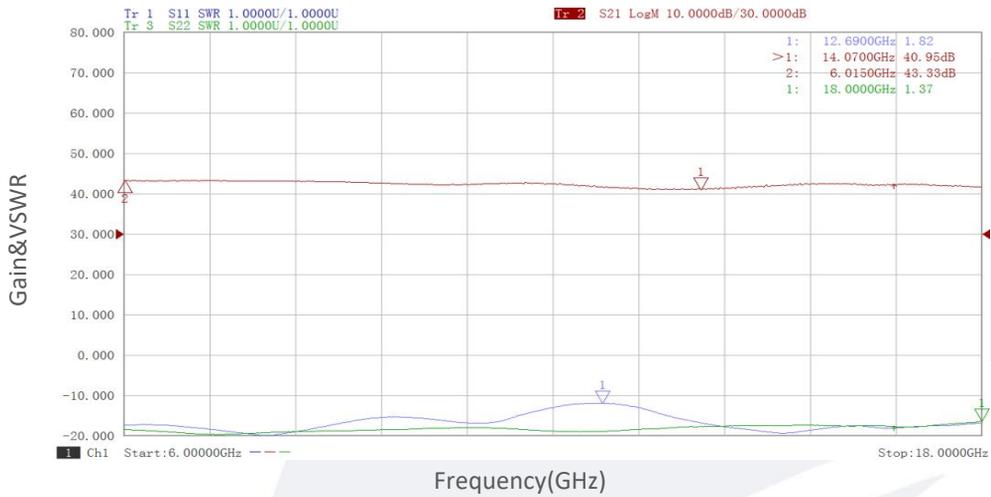
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

### Ordering Information:

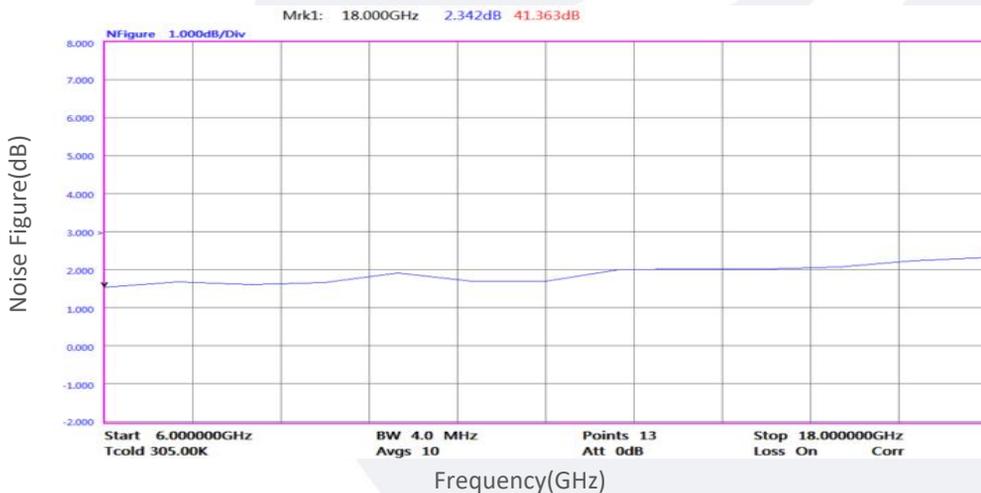
Base Number	Description	Revision
TLLA6G18G-41-40	Low Noise Amplifier, 6-18GHz, Noise Figure:4.0dB, Gain:41 dB,P1dB:28dBm,+18V DC,Without Heatsink	Rev.1.1
TLLA6G18G-41-40-HS	Low Noise Amplifier, 6-18GHz, Noise Figure:4.0dB, Gain:41 dB,P1dB:28dBm,+18V DC,With Heatsink	Rev.1.1

### Typical Performance Data:

#### Gain&VSWR vs Frequency



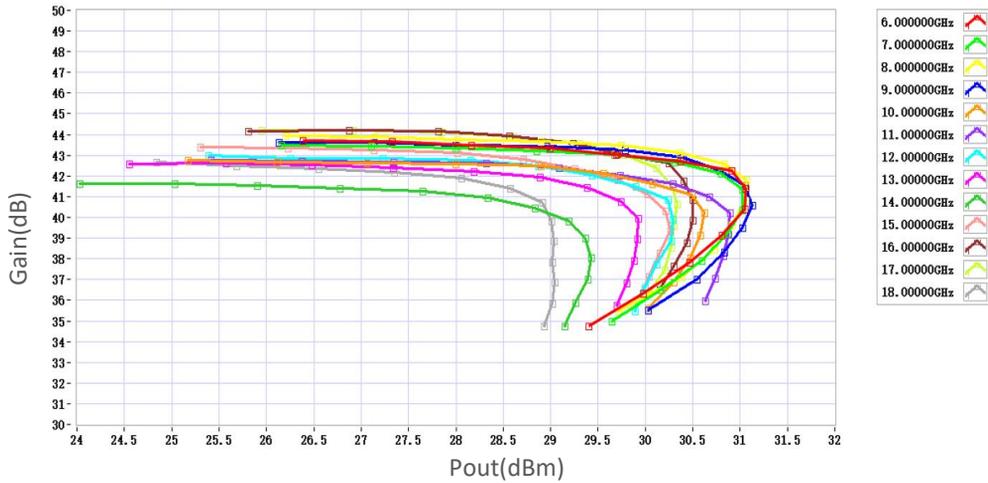
#### Noise Figure vs Frequency



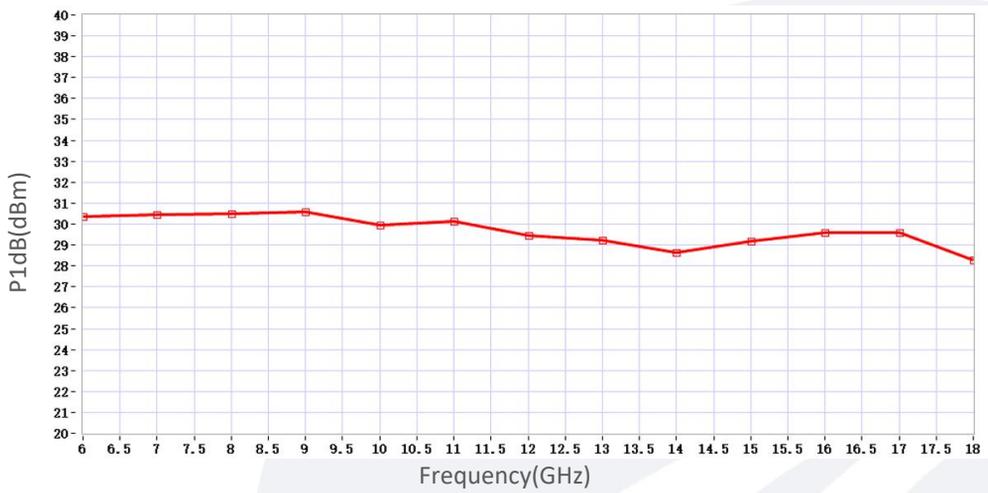
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

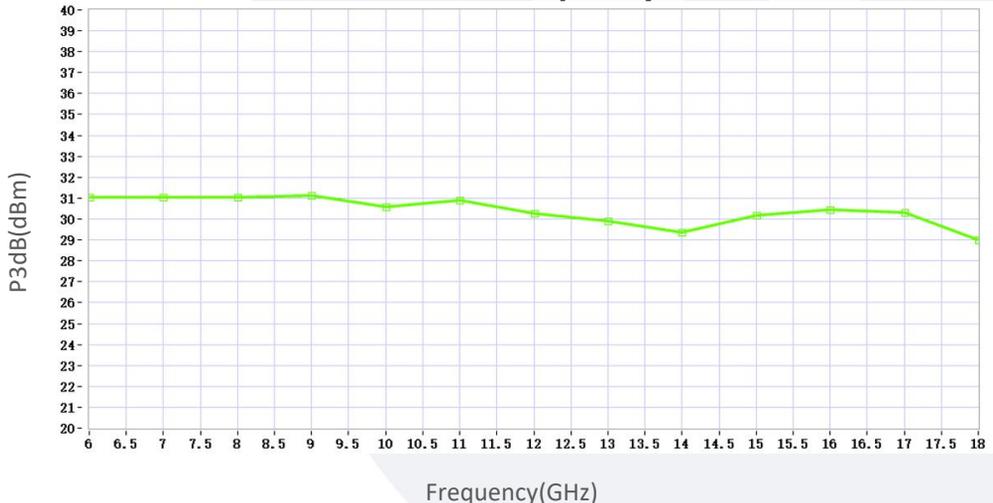
### Gain vs Output Power



### P1dB vs Frequency



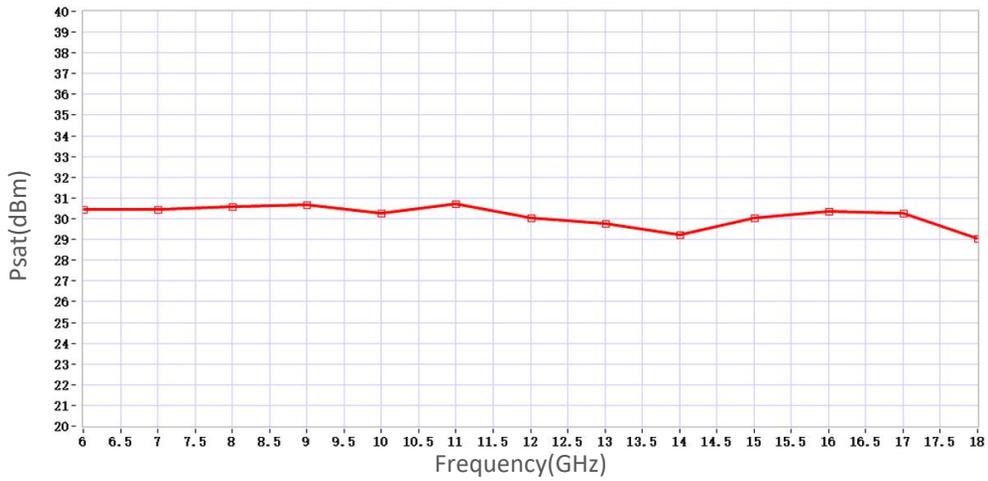
### P3dB vs Frequency



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**Typical Performance Data:**

**Psat vs Frequency**



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