

## Low Noise Amplifier

6-18GHz/2.0dB NF/12dB Gain/18dBm P1dB

Model: TLLA6G18G-12-20

TLLA6G18G-12-20 is a low noise amplifier with a typical small signal gain of 12 dB and a nominal noise figure of 2.0 dB across the frequency range of 6 to 18 GHz. The DC power requirement for the amplifier is +5 V DC/60 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 6-18GHz
- Gain: 12dB Typ
- 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	6		18	GHz
Small Signal Gain	9	12		dB
Gain Flatness		±2.0		dB
Noise Figure		2	2.8	dB
Output P1dB	16	18		dBm
Input VSWR		2	2.5	:1
Output VSWR		2	2.5	:1
DC Voltage		+5	+12	V DC
DC Supply Current		60		mA
Impedance		50		Ohms

### Mechanical Specifications:

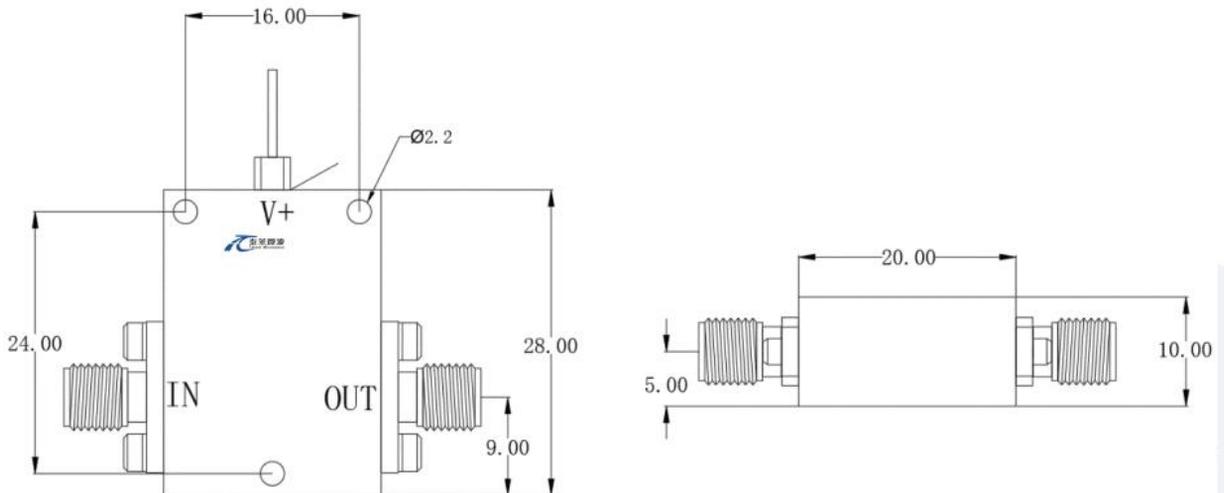
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	28*20*10	mm

### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	+15 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	-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:

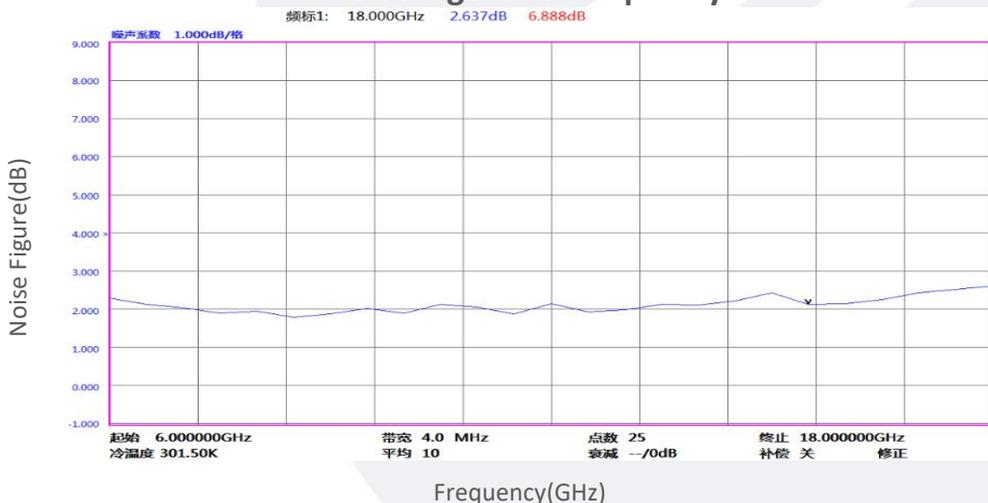
Base Number	Description	Revision
TLLA6G18G-12-20	Low Noise Amplifier, 6-18GHz, Noise Figure:2.0dB, Gain:12dB,P1dB:18dBm,+5V DC,Without Heatsink	Rev.1.1
TLLA6G18G-12-20-HS	Low Noise Amplifier, 6-18GHz, Noise Figure:2.0dB, Gain:12dB,P1dB:18dBm,+5V DC,With Heatsink	Rev.1.1

### Typical Performance Data:

#### Gain&VSWR vs Frequency

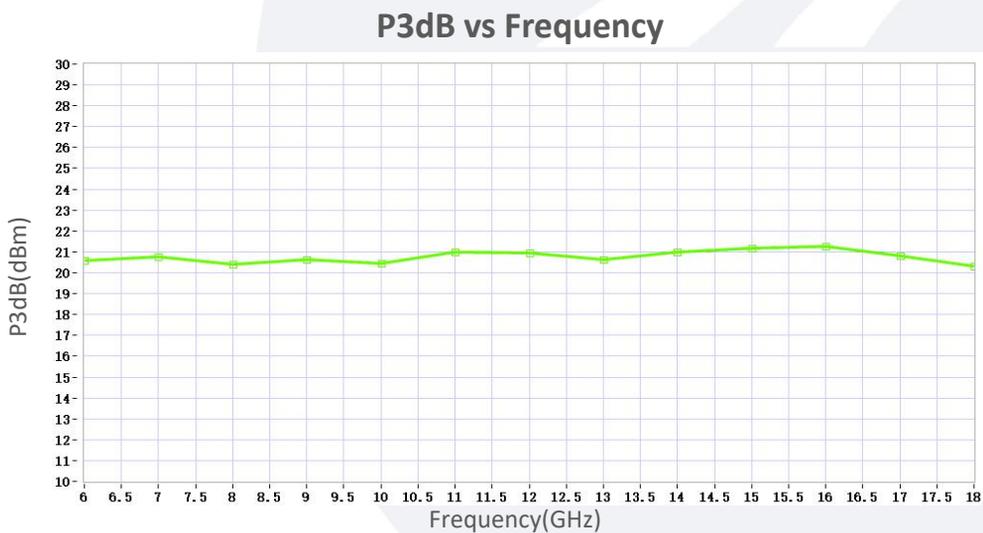
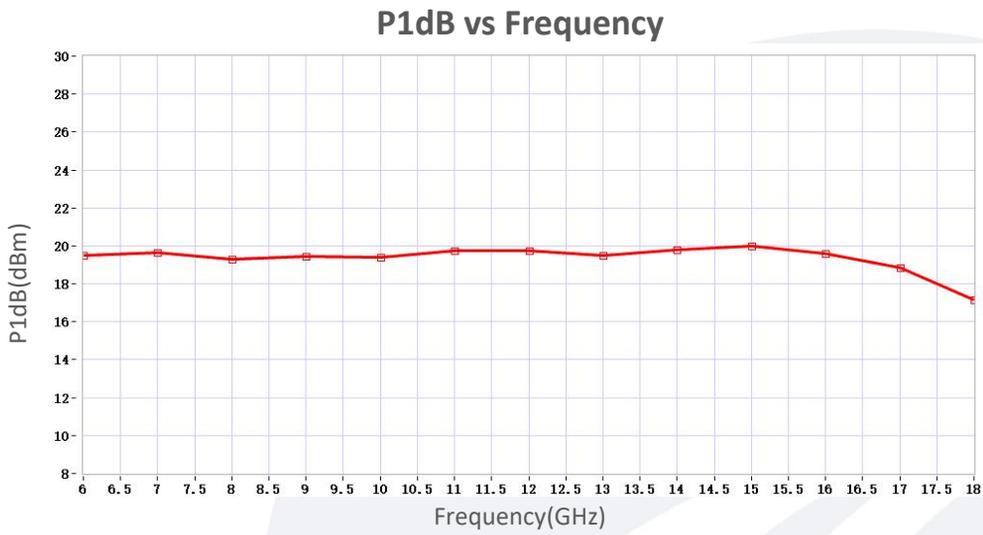
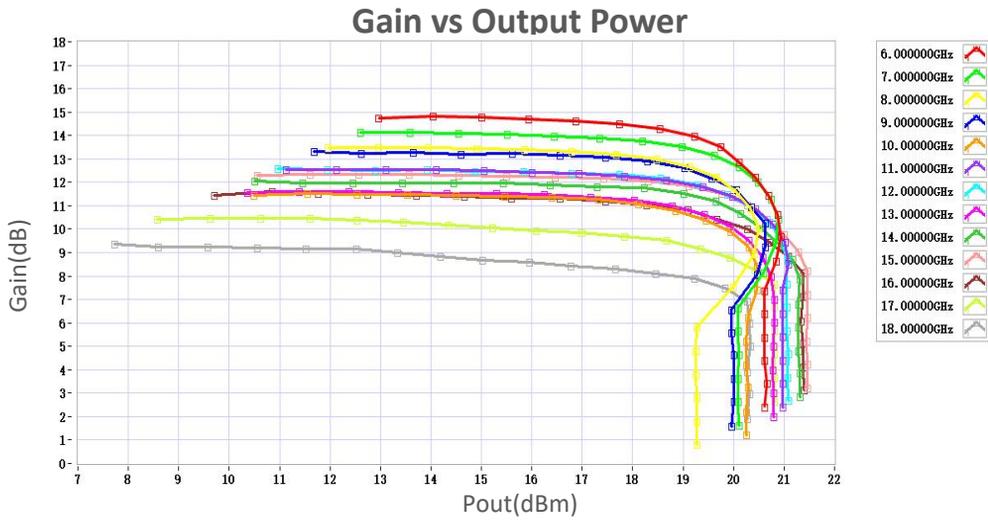


#### Noise Figure vs Frequency



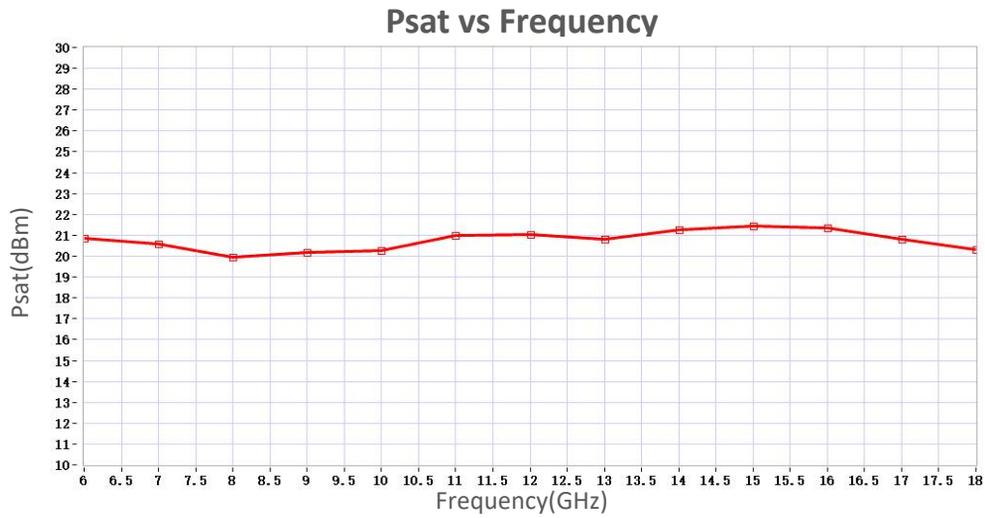
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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