

Low Noise Amplifier

6-18GHz/1.8dB NF/22dB Gain/13dBm P1dB

Model: TLLA6G18G-21-15-LC

TLLA6G18G-21-15-LC is a low noise amplifier with small signal gain of 22 dB and noise figure of 1.8 dB across the frequency range of 6 to 18 GHz. The DC power requirement for the amplifier is +5 V DC/70 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 6-18GHz
- Gain: 22dB Typ
- Noise Figure: 1.8dB 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		22		dB
Gain Flatness		±0.7		dB
Noise Figure		1.8		dB
Output P1 dB		13		dBm
Input VSWR			2.0	:1
Output VSWR			2.0	:1
DC Voltage		5		V DC
DC Supply Current		70		mA
Impedance	50			Ohms

Mechanical Specifications:

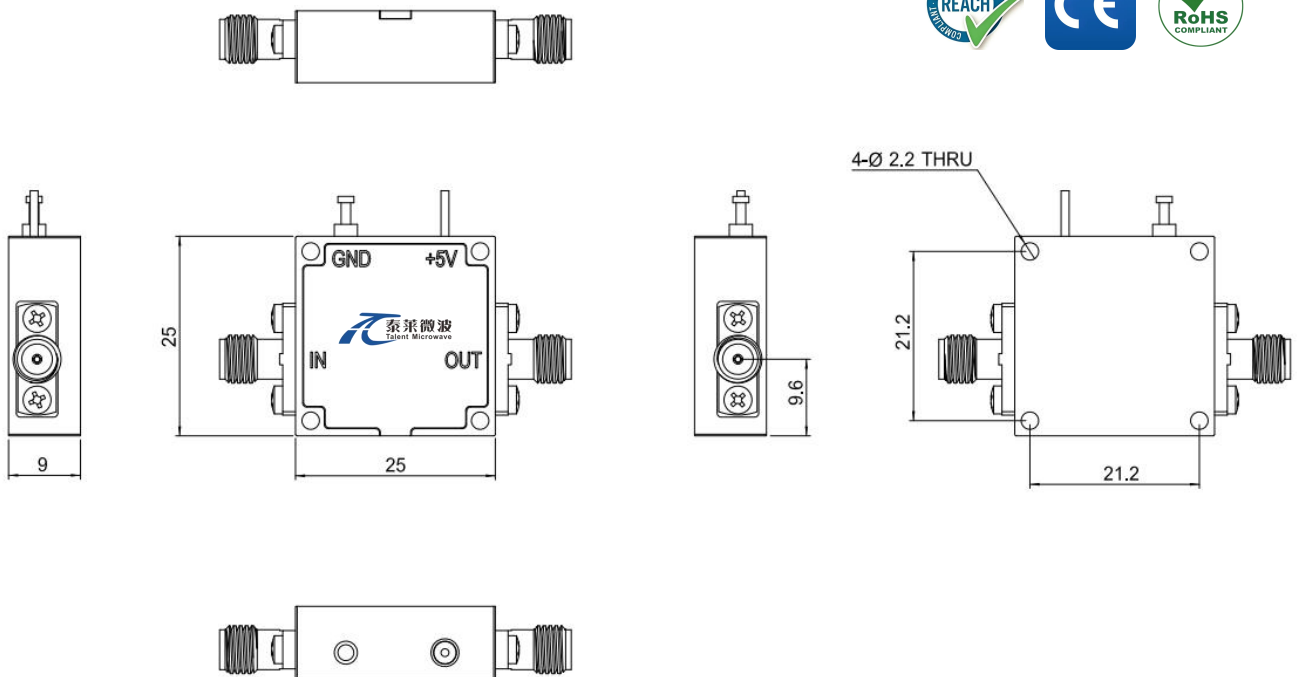
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	25*25*9	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+7 V
RF Input Power	+18 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



Regulatory Compliance:



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			



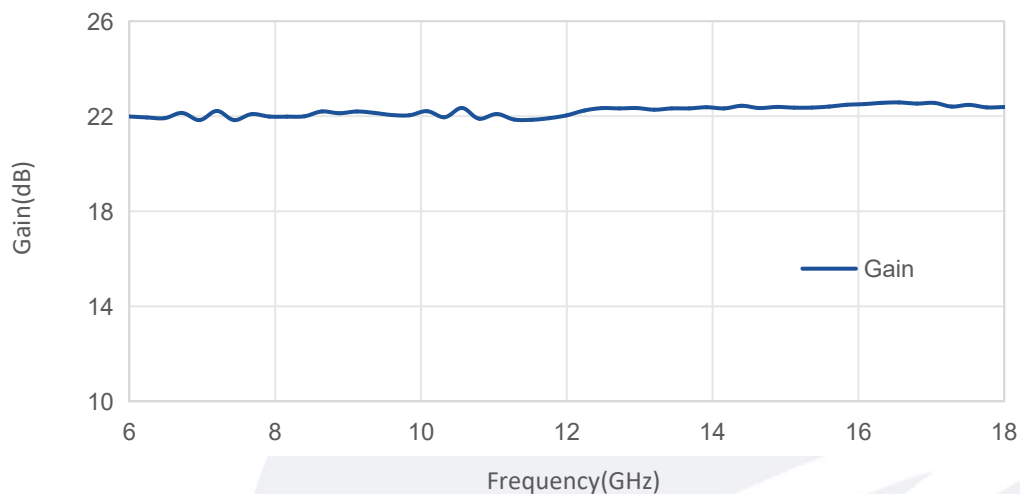
ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Ordering Information:

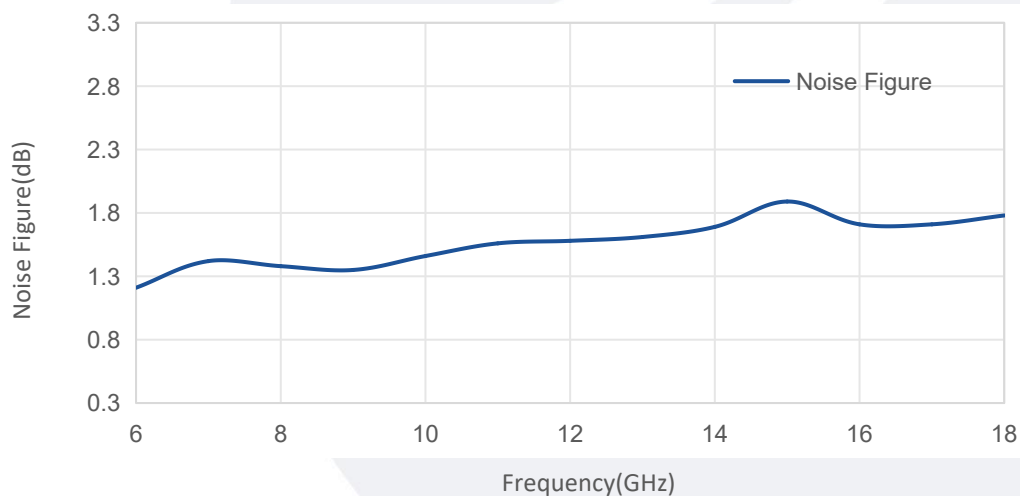
Base Number	Description	Revision
TLLA6G18G-21-15-LC	Low Noise Amplifier, 6-18GHz, Noise Figure:1.8dB, Gain:22 dB,P1dB:13dBm,+5V DC,Without Heatsink	Rev.1.0

Typical Performance Data:

Gain vs Frequency



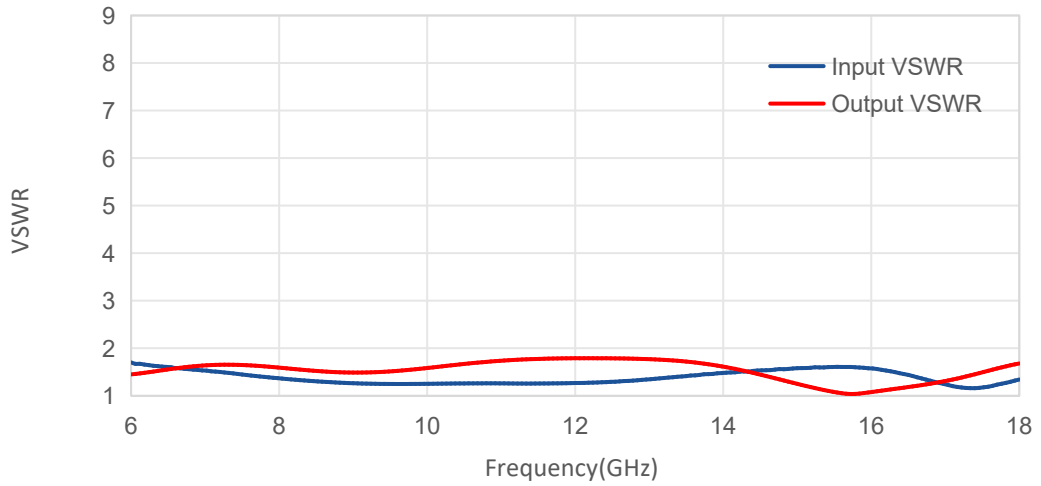
Noise Figure vs Frequency



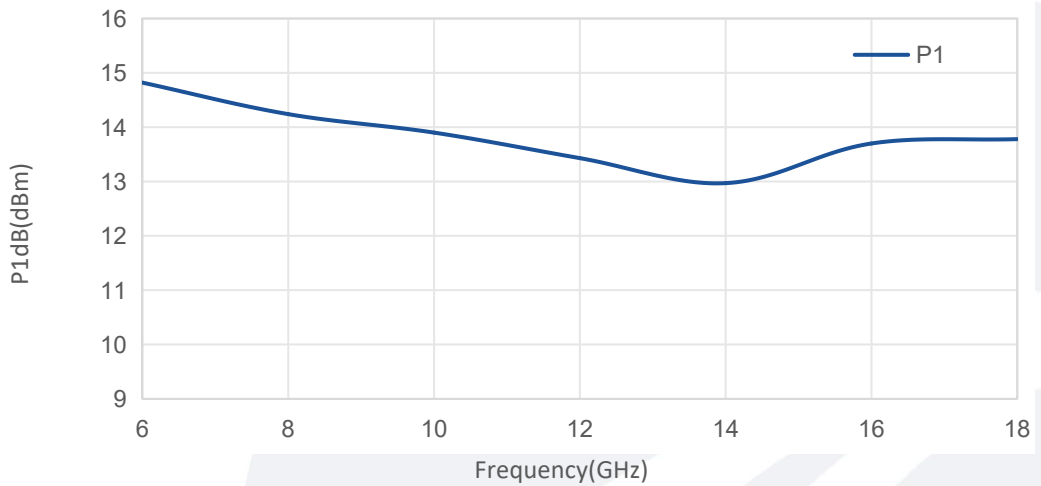
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

VSWR vs Frequency



P1dB vs Frequency



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