

Low Noise Amplifier

6-18GHz /3dB NF/41dB Gain/28 dBm 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 3 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:

- Ultra Wide Band:6-18GHz
- Gain: 41dB Typ
- Noise Figure: 3dB 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
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:

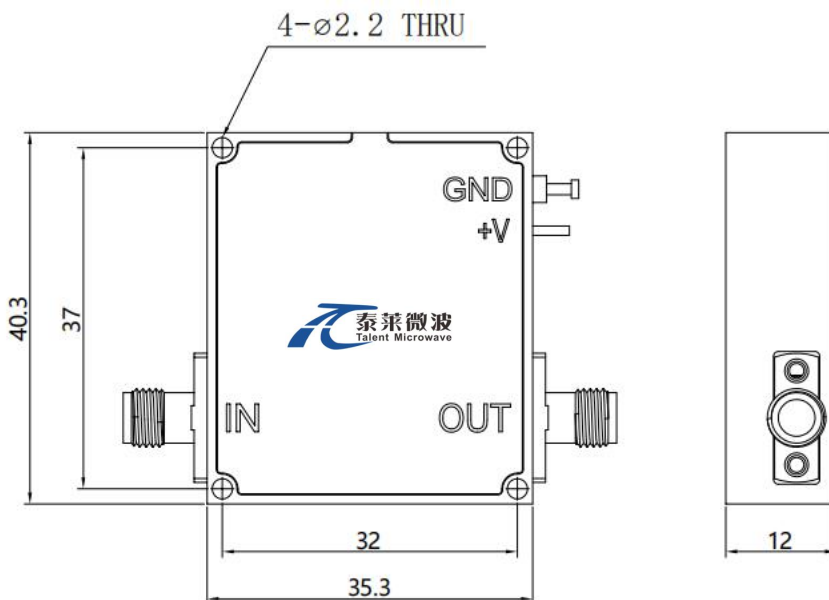
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	35.3*40.3*12	mm

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:

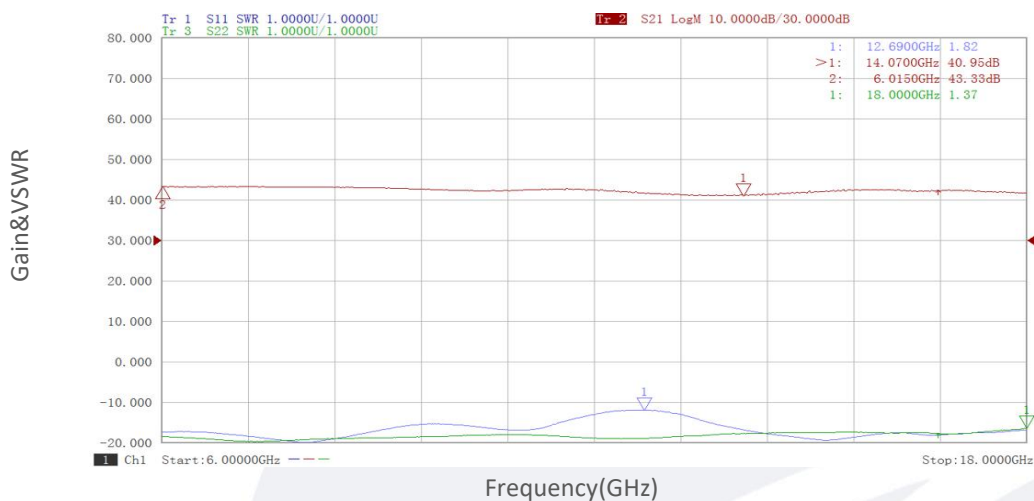
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

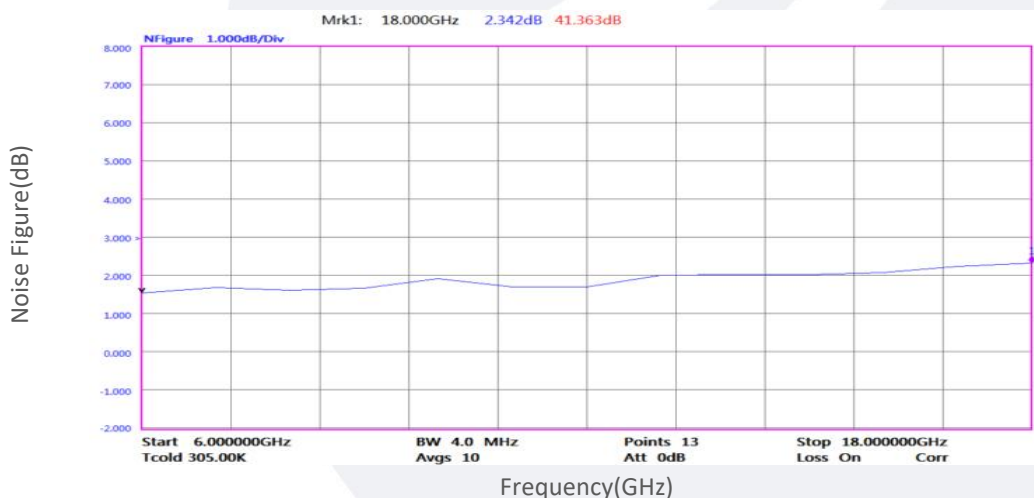
Base Number	Description	Revision
TLLA6G18G-41-40	Low Noise Amplifier, 6-18GHz, Noise Figure:4.0dB, Gain:41 dB,P1dB:28dBm,+18V DC,Without Heatsink	Rev.1.1
TLLA6G18G-41-40-HS	Low Noise Amplifier, 6-18GHz, Noise Figure:4.0dB, Gain:41 dB,P1dB:28dBm,+18V DC,With Heatsink	Rev.1.1

Typical Performance Data:

Gain&VSWR vs Frequency



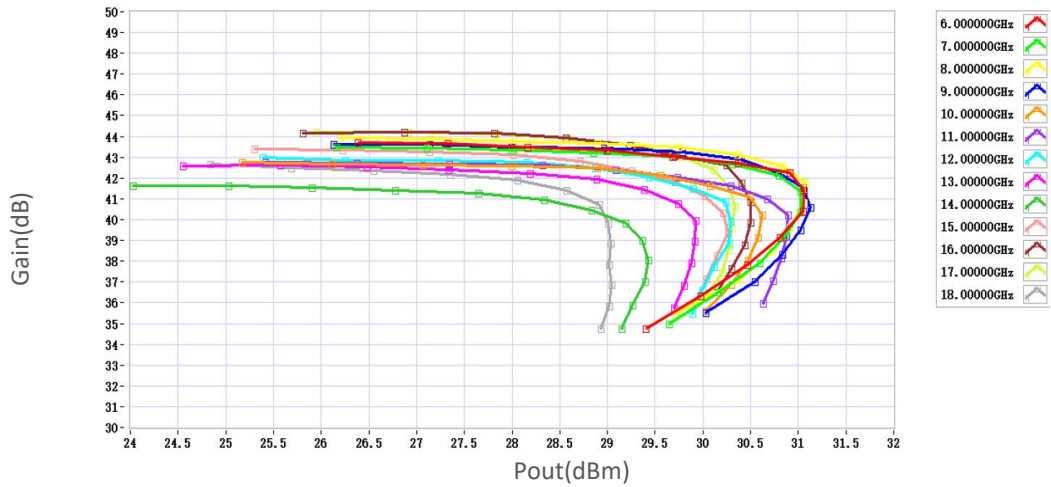
Noise Figure vs Frequency



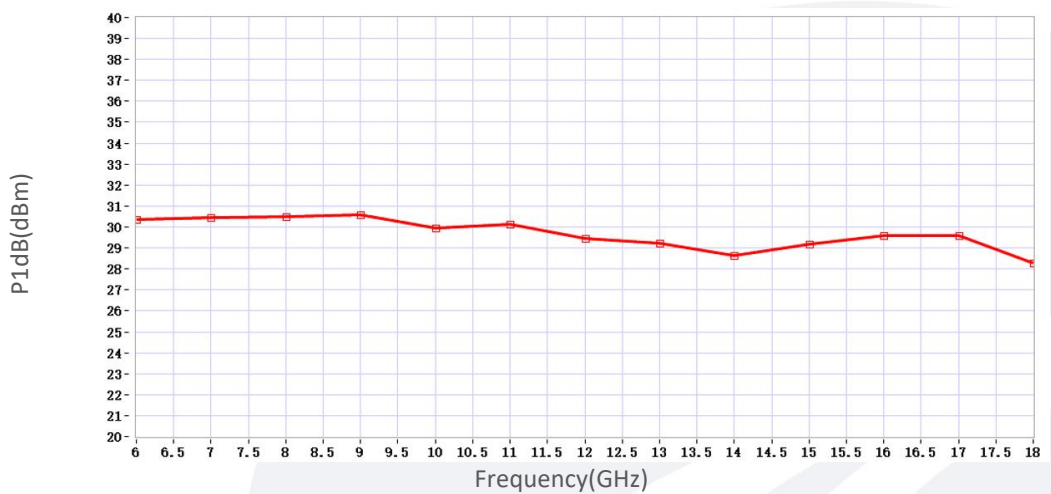
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

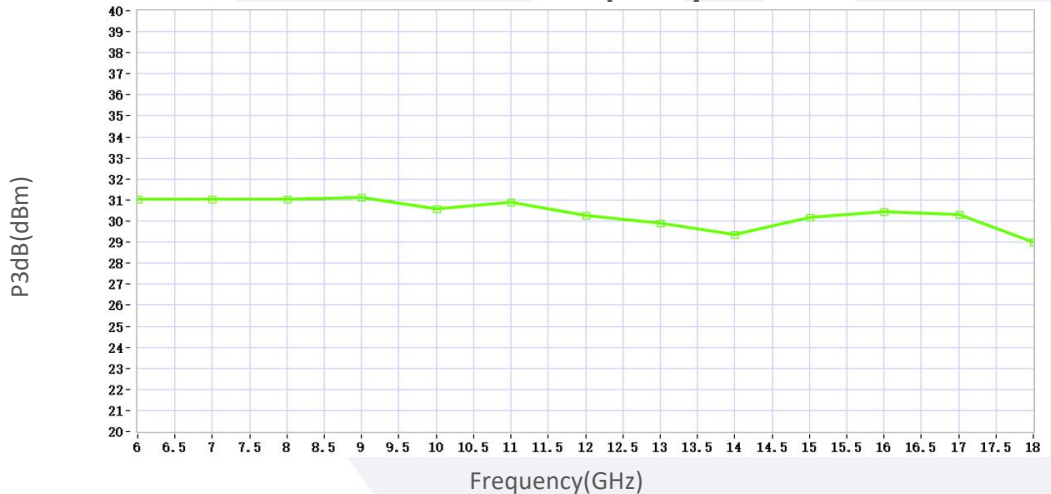
Gain vs Output Power



P1dB vs Frequency



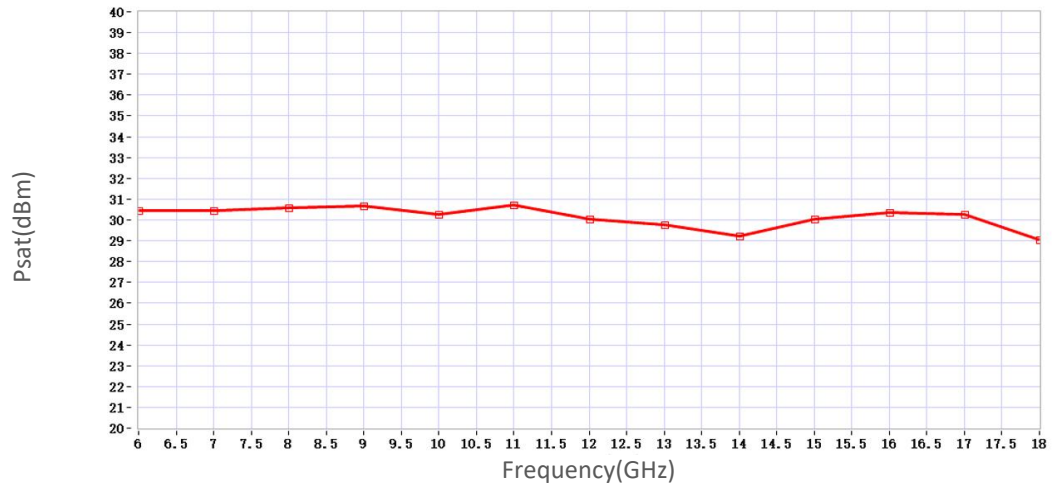
P3dB vs Frequency



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Typical Performance Data:

Psat vs Frequency



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