

## Low Noise Amplifier

0.03-6GHz/3.0dB NF/25dB Gain/15dBm P1dB

Model: TLLA0.03G6G-25-30

TLLA0.03G6G-25-30 is a low noise amplifier with a minimum small signal gain of 25 dB and a maximum noise figure of 3.0 dB across the frequency range of 0.03 to 6 GHz. The DC power requirement for the amplifier is +12 V DC/80 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 0.03-6 GHz
- Gain: 25dB Min
- Noise Figure: 3.0dB Max
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	0.03		6	GHz
Small Signal Gain	25	30		dB
Gain Flatness		±2.5		dB
Noise Figure			3	dB
Output P1dB	15			dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		+12		V DC
DC Supply Current		80		mA
Impedance		50		Ohms

The noise figure and VSWR will deteriorate at the 2450MHz frequency point.

### Mechanical Specifications:

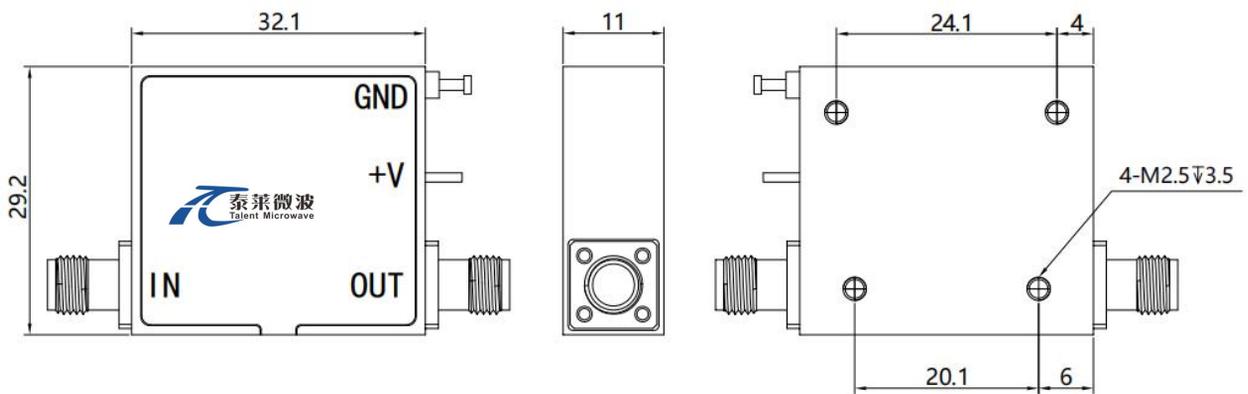
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	32.1*29.2*11	mm
Weight	≤45	g

### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+10 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:

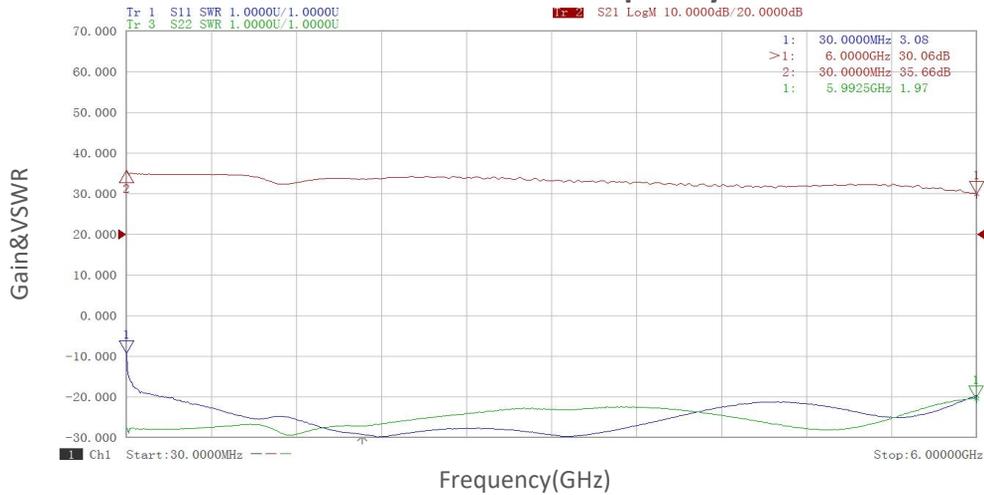
Parameter	Min	Typ	Max	Units
Operating Temperature	-45		+85	°C
Non-operating Temperature	-55		+125	°C
Relative humidity		95		%
Altitude		10,000		feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

### Ordering Information:

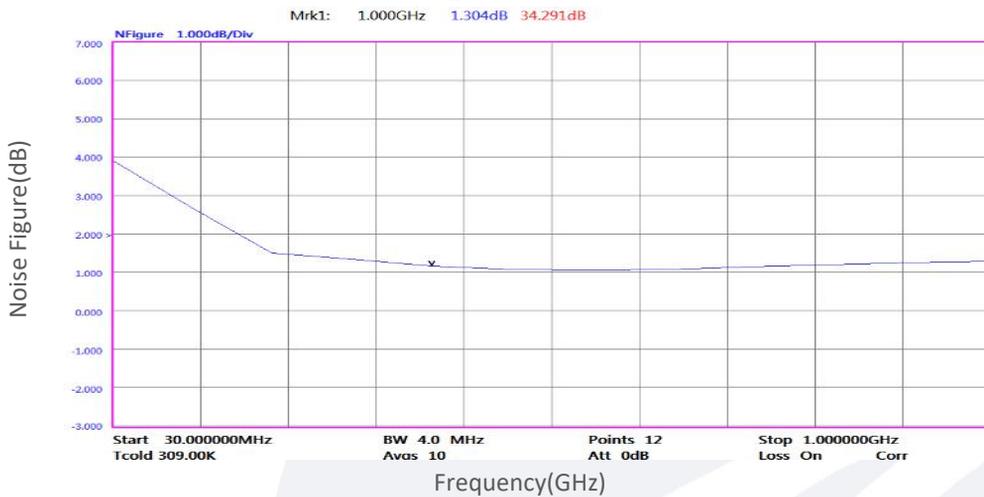
Base Number	Description	Revision
TLLA0.03G6G-25-30	Low Noise Amplifier, 0.03-6GHz, Noise Figure:3.0dB, Gain:25dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.03G6G-25-30-HS	Low Noise Amplifier, 0.03-6GHz, Noise Figure:3.0dB, Gain:25dB,P1dB:15dBm,+12V DC,With Heatsink	Rev.1.1

## Typical Performance Data:

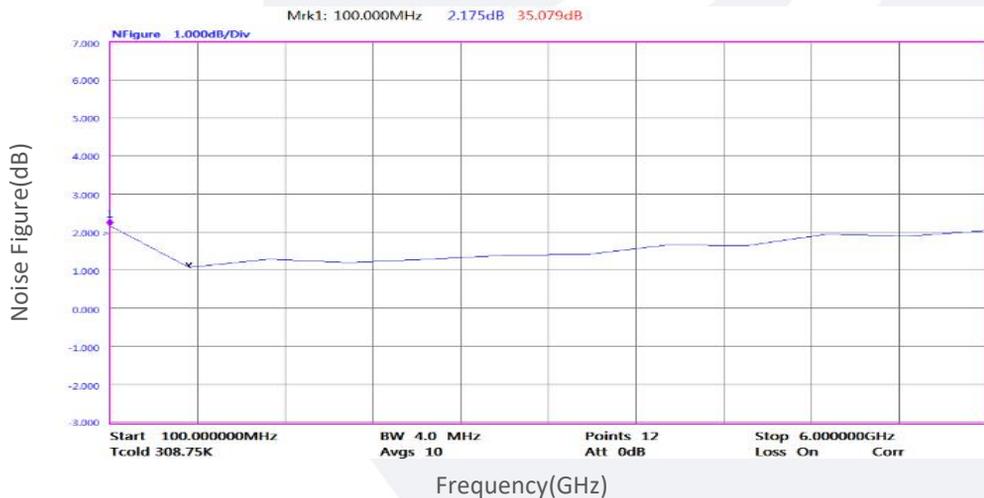
### Gain&VSWR vs Frequency



### Noise Figure vs Frequency



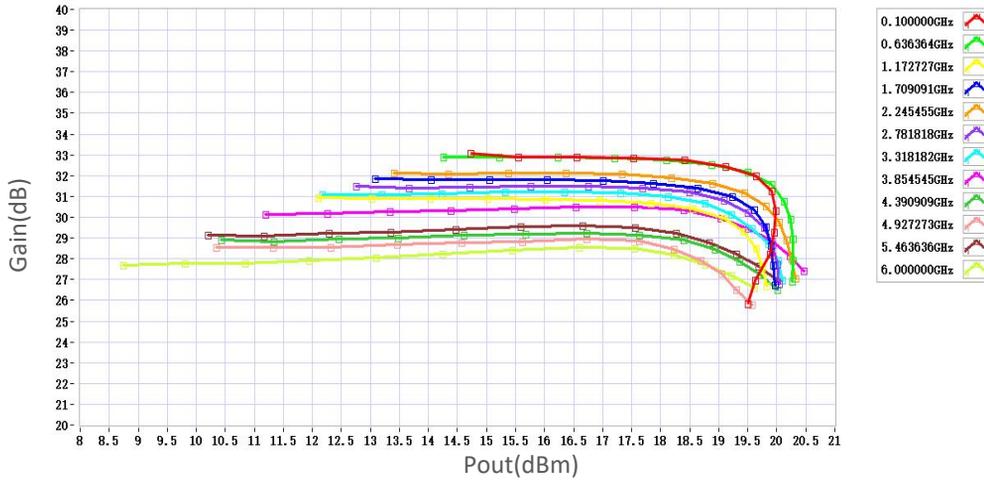
### Noise Figure vs Frequency



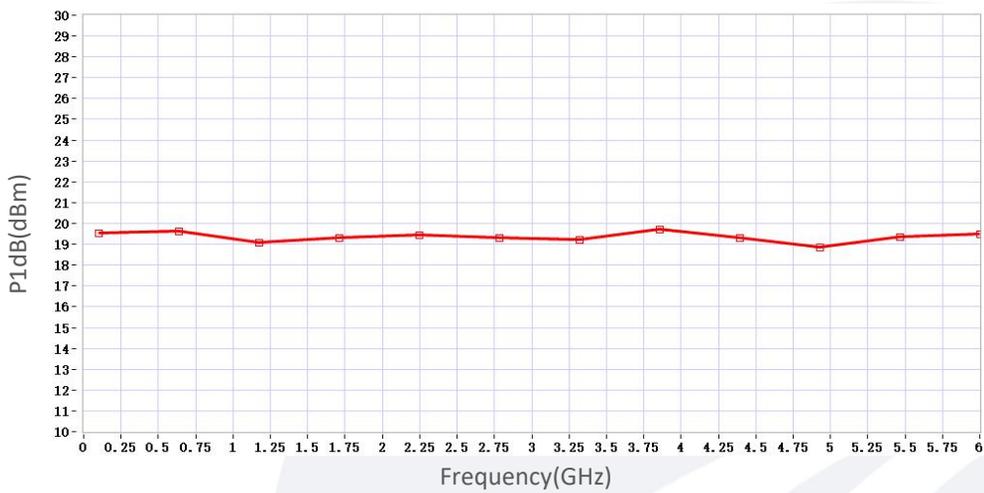
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

### Gain vs Output Power



### P1dB vs Frequency



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