

## Low Noise Amplifier

0.01-0.1GHz/1.5dB NF/32dB Gain/20dBm P1dB

Model: TLLA0.01G0.1G-32-15

TLLA0.01G0.1G-32-15 is a low noise amplifier with a typical small signal gain of 32 dB and a nominal noise figure of 1.5dB across the frequency range of 0.01 to 0.1 GHz. The DC power requirement for the amplifier is +6V DC/162 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 0.01-0.1GHz
- Gain: 32dB Typ
- Noise Figure: 1.5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Communication systems

## 电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	0.01		0.1	GHz
小信号增益 Small Signal Gain	30	32		dB
增益平坦度 Gain Flatness		±1		dB
噪声系数 Noise Figure		1.5		dB
线性输出功率 Output P1dB		20		dBm
输入驻波 Input VSWR		1.8		:1
输出驻波 Output VSWR		1.8		:1
直流电压 DC Voltage	+5	+6	+8	V DC
直流电流 DC Supply Current		162		mA
阻抗 Impedance		50		Ohms

## 机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	SMA Female/SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	44.8*29.2*11	mm

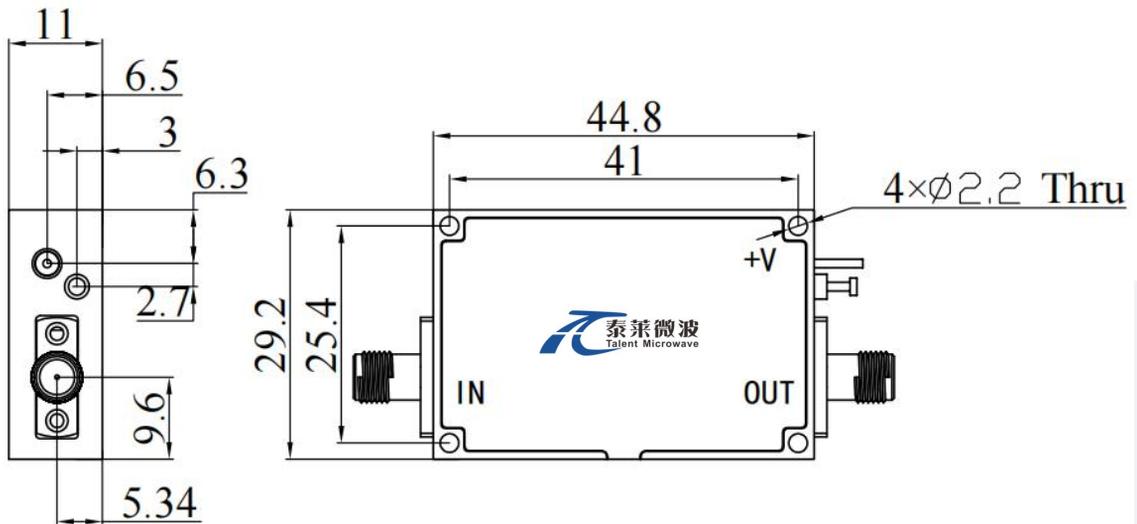
### 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+8 V
输入功率 RF Input Power	+5 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



### 外形图 Outline Drawing:

Unit:mm



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



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

### 温度环境 Environmental Conditions:

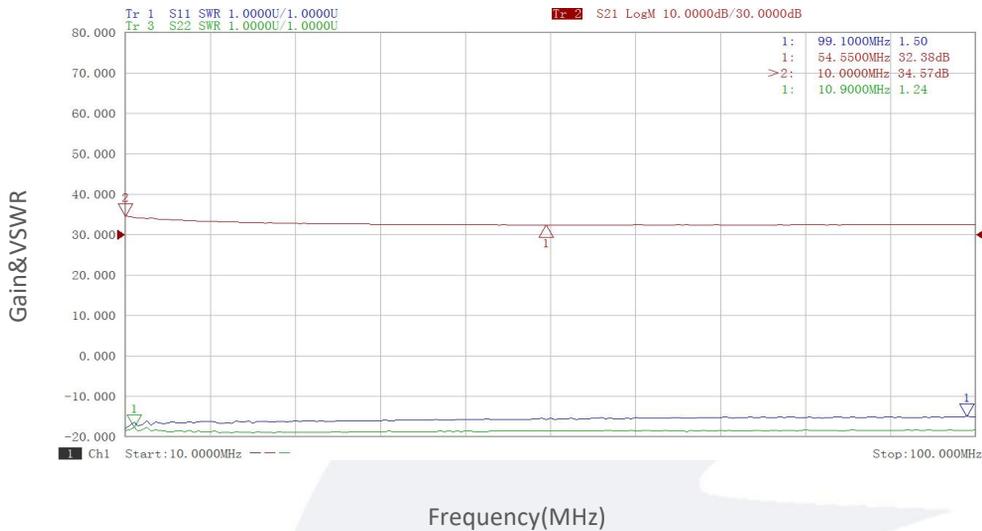
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc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

### 订货信息 Ordering Information:

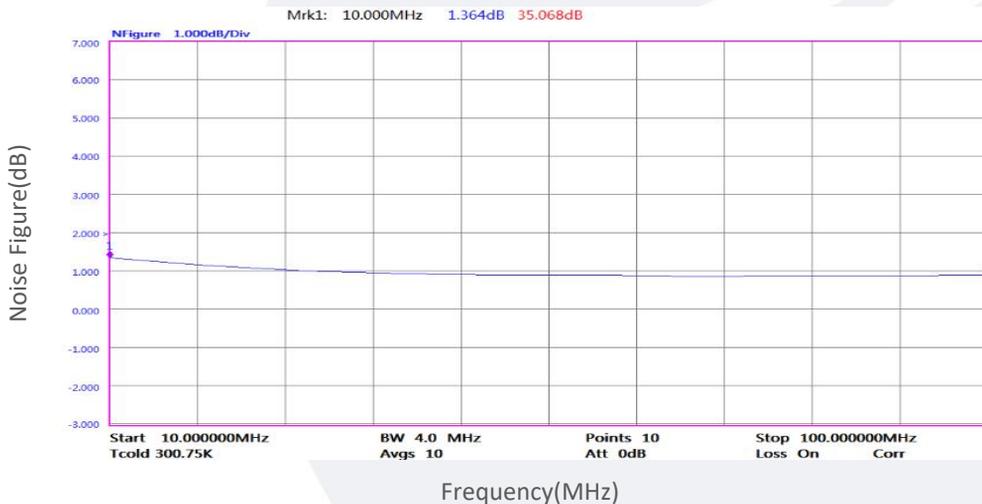
标准型号 Base Number	描述 Description	版本号 Revision
TLLA0.01G0.1G-32-15	Low Noise Amplifier,0.01-0.1GHz, Noise Figure:1.5dB, Gain:32dB,P1dB:20dBm,+6V DC,Without Heatsink	Rev.1.1
TLLA0.01G0.1G-32-15-HS	Low Noise Amplifier, 0.01-0.1GHz, Noise Figure:1.5dB, Gain:32 dB,P1dB:20dBm,+6V DC,With Heatsink	Rev.1.1

### 典型曲线 Typical Performance Data:

#### Gain&VSWR vs Frequency



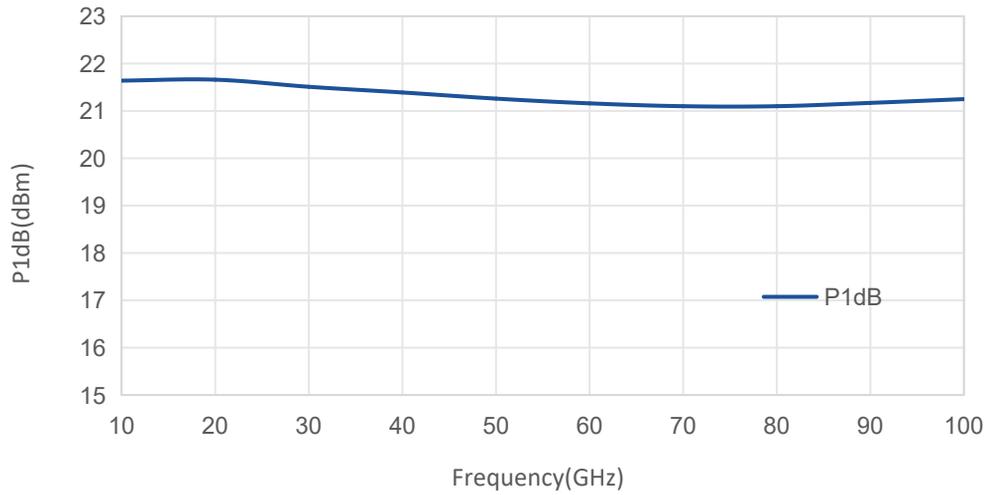
#### Noise Figure vs Frequency



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.

## 典型曲线 Typical Performance Data:

### P1dB 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.