

## Low Phase Noise Amplifier

0.1-22GHz /12dB Gain/+18dBm P1dB

Model: TLPNA0.1G22G-12-18

TLPNA0.1G22G-12-18 is a low phase noise driver amplifier across the frequency range of 0.1 to 22 GHz, with a typical small signal gain of 12dB , provide a +18 dBm P1dB. The DC power requirement for the amplifier is +12 V DC/50 mA. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range:0.1-22GHz
- Gain: 12dB Typ.
- Output P1dB: +18dB 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	0.1		22	GHz
小信号增益 Small Signal Gain		12		dB
相位噪声 Phase Noise @10KHz offset		-160		dBc/Hz
噪声系数 Noise Figure		5		dB
线性输出功率 Output P1dB		18		dBm
输出三阶交调 Output IP3		24		dBm
输入驻波 Input VSWR		2.0		:1
输出驻波 Output VSWR		2.0		:1
直流电压 DC Voltage	+8	+12	+15	V DC
直流电流 DC Supply Current		50		mA
阻抗 Impedance		50		Ohms

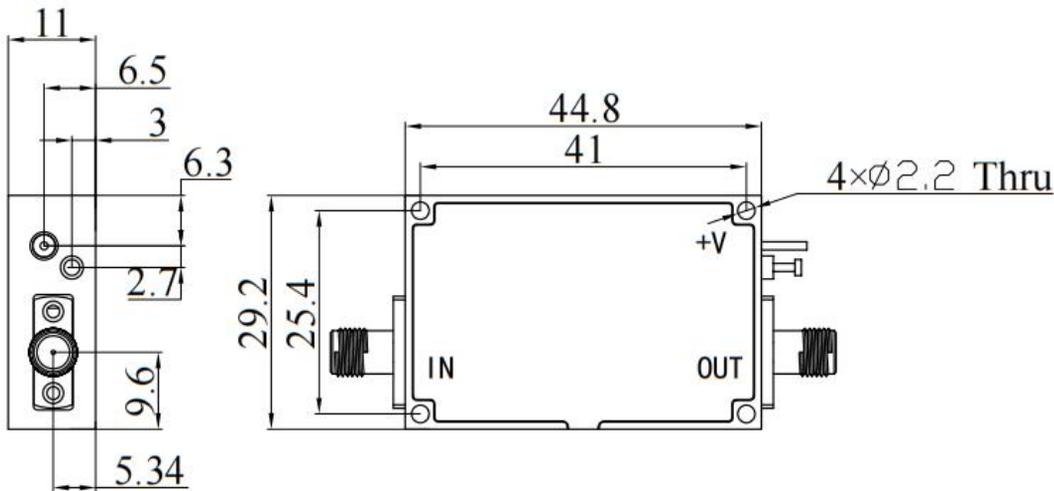
## 机械特性 Mechanical Specifications:

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	

## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15 V
输入功率 RF Input Power	+10 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:

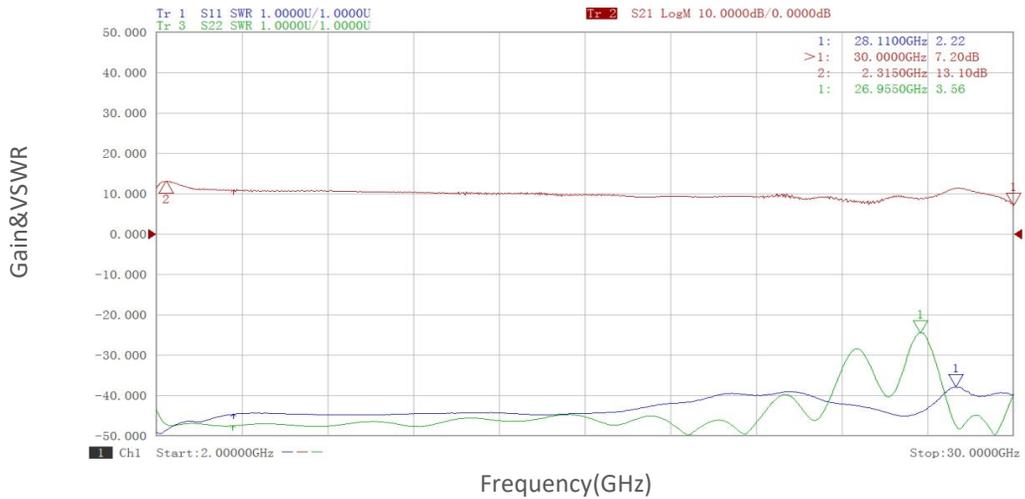
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude		10,000		feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			

### 订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPNA0.1G22G-12-18	Low Phase Noise Amplifier, 0.1-22GHz, Gain:12 dB, Phase Noise:-160dBc/Hz, P1dB:+18dBm,+12V DC, Without Heatsink	Rev.1.1
TLPNA0.1G22G-12-18-HS	Low Phase Noise Amplifier, 0.1-22GHz, Gain:12 dB, Phase Noise:-160dBc/Hz, P1dB:+18dBm,+12V DC, With Heatsink	Rev.1.1

### 典型曲线 Typical Performance Data:

#### Gain&VSWR 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.