

## Low Noise Amplifier

50KHz-50GHz/8dB NF/23dB Gain/15dBm P1dB

TLLA50K50G-23-50

TURLA50K50G-2350 is a low noise amplifier with a typical small signal gain of 23 dB and a nominal noise figure of 8 dB across the frequency range of 50 KHz to 50 GHz. The DC power requirement for the amplifier is +12 V DC/280 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

### Features:

- Output Frequency: 50KHz-50GHz
- Gain: 23dB Typ
- Noise Figure: 8dB 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	50KHz-50GHz			
小信号增益 Small Signal Gain		23		dB
增益平坦度 Gain Flatness		±4.5		dB
噪声系数 Noise Figure		8		dB
线性输出功率 Output P1dB		15		dBm
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		2		:1
直流电压 DC Voltage	+8	+12	+15	V DC
直流电流 DC Supply Current		280		mA
阻抗 Impedance	50			Ohms

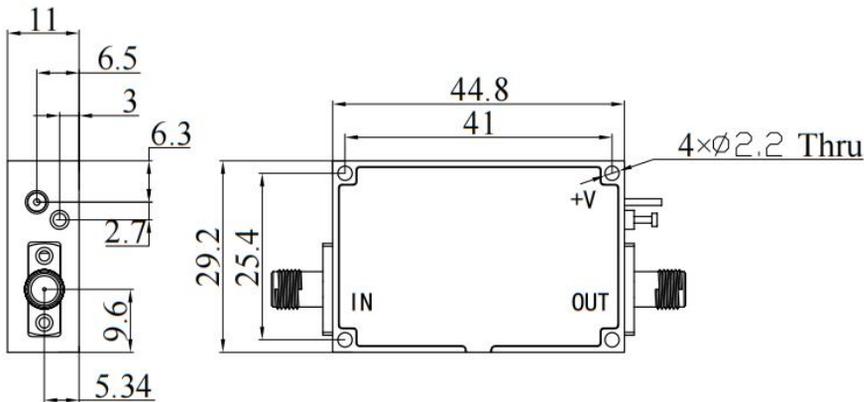
## 机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	2.4mm Female/2.4mm 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	+15 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:

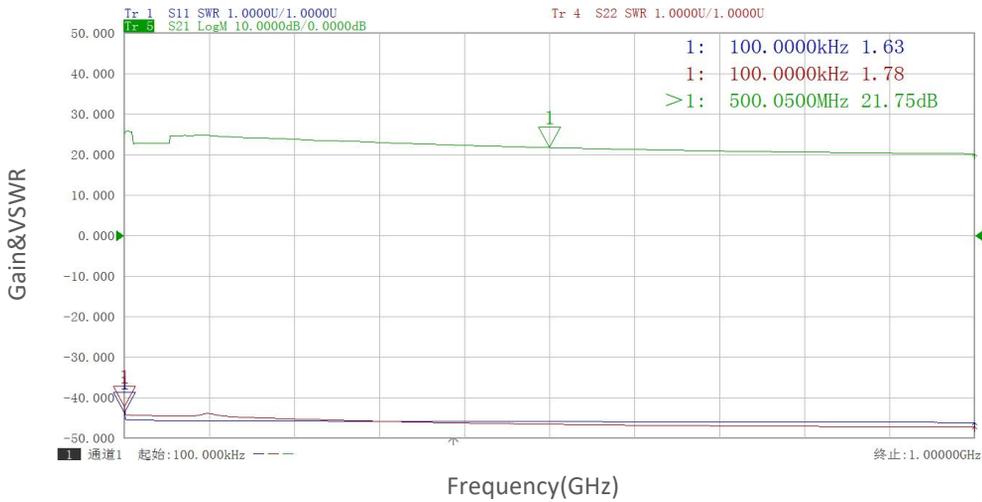
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-45		+85	°C
存储温度 Non-operating Temperature	-55		+125	°C
相对湿度 Relative humidity		95		%
海拔 Altitude		10,000		feet

### 订货信息 Ordering Information:

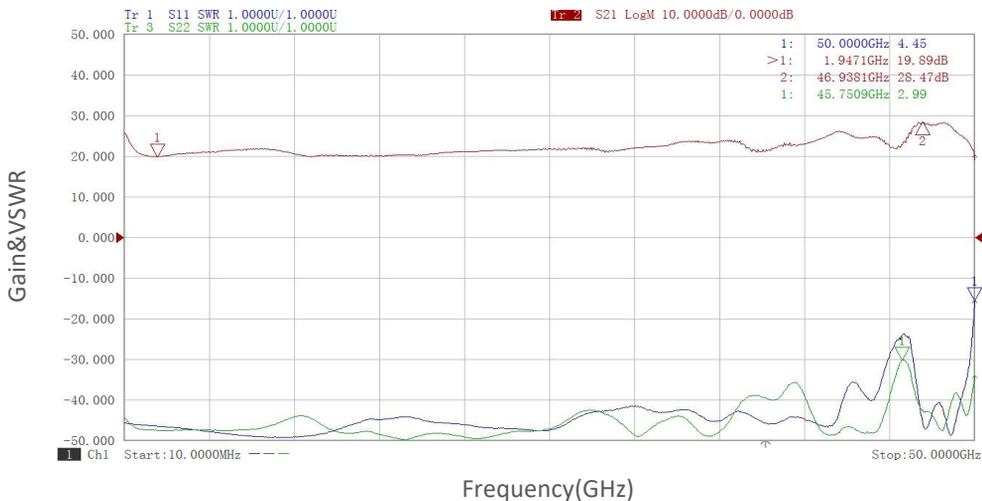
标准型号 Base Number	描述 Description	版本号 Revision
TURLA50K50G-2350	Low Noise Amplifier, 50KHz-50GHz, Noise Figure:8dB, Gain: 23dB,P1dB:15dBm,+12V DC,Without Heatsink	Rev.1.1
TURLA50K50G-2350 HS	Low Noise Amplifier, 50KHz-50GHz, Noise Figure:8dB, Gain: 23dB,P1dB:15dBm,+12V DC,With Heatsink	

### 典型曲线 Typical Performance Data:

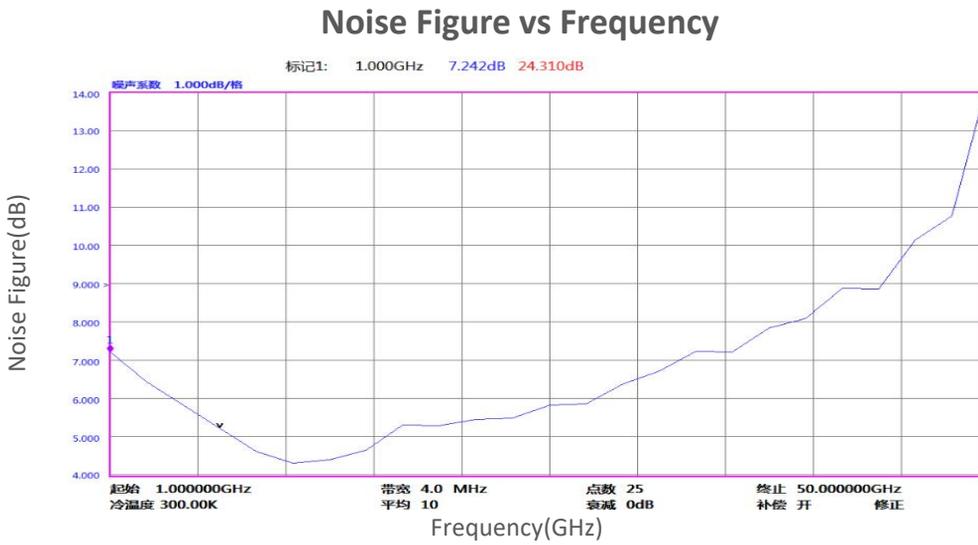
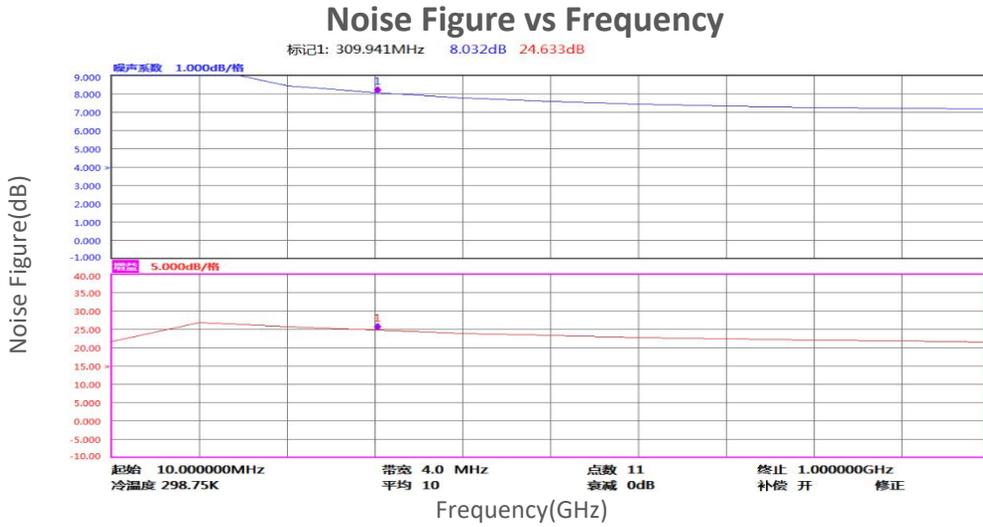
#### Gain&VSWR vs Frequency



#### Gain&VSWR vs Frequency



## 典型曲线 Typical Performance Data:

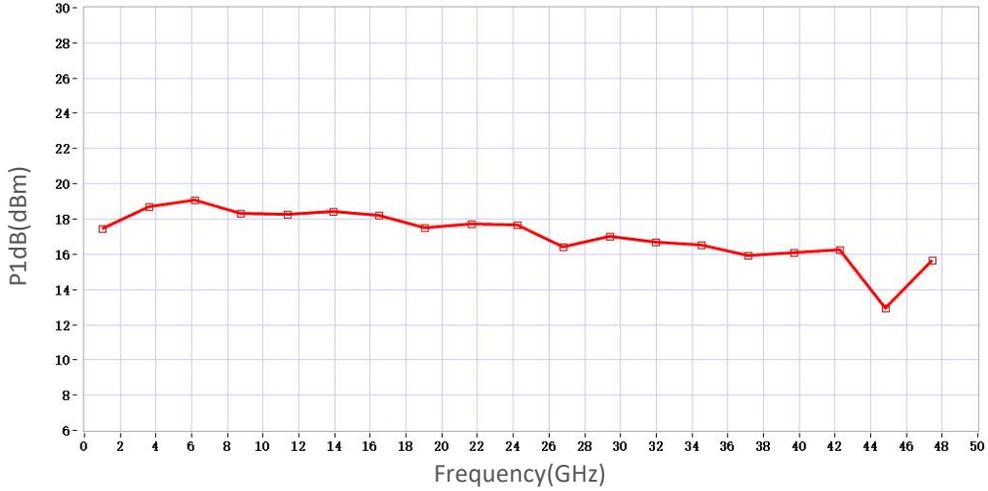


## Gain vs Output Power

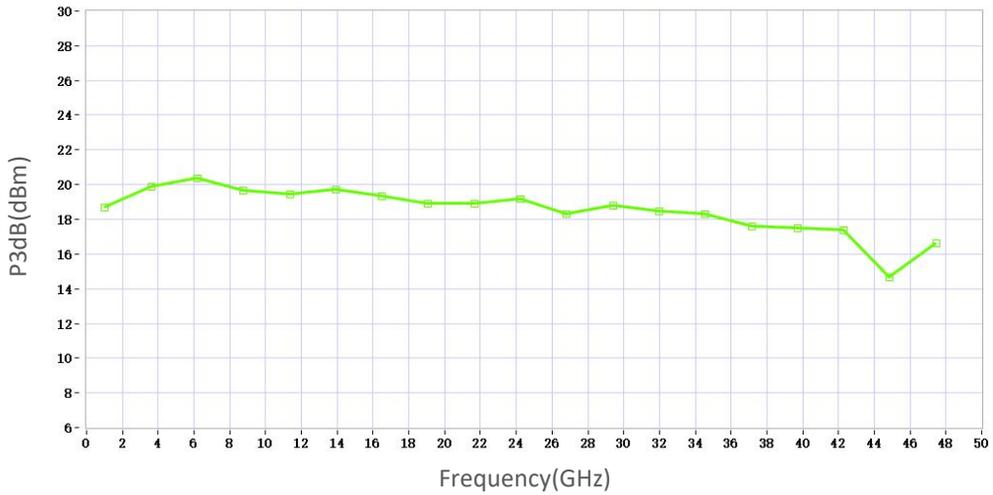
Gain(dB)

## 典型曲线 Typical Performance Data:

### P1dB vs Frequency



### P3dB 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.