

Low Noise Amplifier

2-8GHz/0.9dB NF/50dB Gain/13dBm P1dB

TLLA2G8G-50-9

TURLA2G8G-50⁹ is a low noise amplifier with a typical small signal gain of 50 dB and a nominal noise figure of 0.9 dB across the frequency range of 2 to 8 GHz. The DC power requirement for the amplifier is +5 V DC/80 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 2-8GHz
- Gain: 50dB Typ
- Noise Figure: 0.9dB 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 | 2 | | 8 | GHz |
| 小信号增益 Small Signal Gain | | 50 | | dB |
| 增益平坦度 Gain Flatness | | ±2.5 | | dB |
| 噪声系数 Noise Figure | | 0.9 | 1 | dB |
| 线性输出功率 Output P1dB | | 13 | | dBm |
| 饱和输出功率 Output Psat | | 14 | | 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 | +8 | V DC |
| 直流电流 DC Supply Current | | 80 | | mA |
| 阻抗 Impedance | | 50 | | Ohms |

机械特性 Mechanical Specifications:

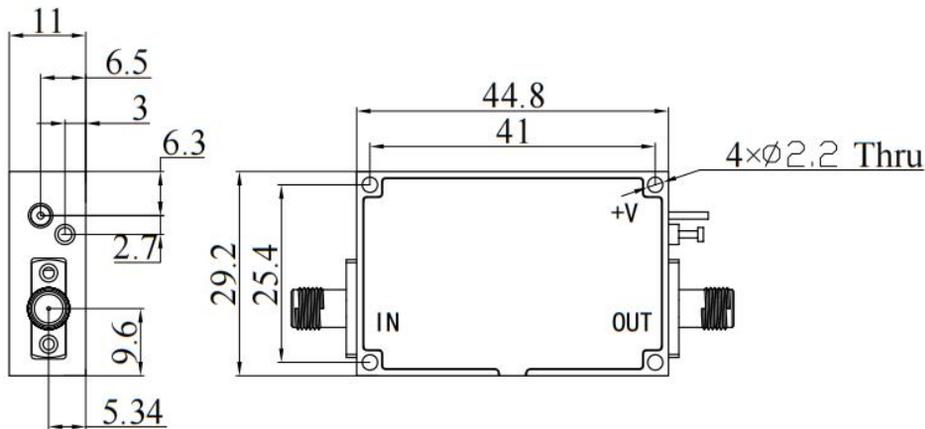
| 参数 Parameter | 指标 Value | 单位 Units |
|---------------------------------|-----------------------|----------|
| 输入/输出接口 Input /Output Connector | SMA Female/SMA Female | |

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:

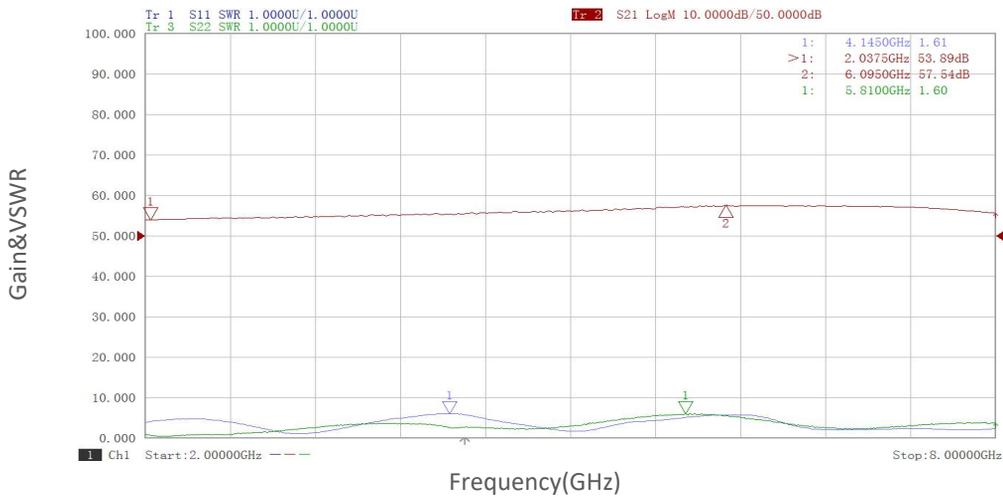
| 参数 Parameter | Min | Typ | Max | 单位 Units |
|------------------------------------|---|--------|------|----------|
| 操作温度 Operating Temperature | -45 | | +85 | °C |
| 存储温度 Non-operating Temperature | -55 | | +125 | °C |
| 相对湿度 Relative humidity | | 95 | | % |
| 海拔 Altitude | | 10,000 | | feet |
| 震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

订货信息 Ordering Information:

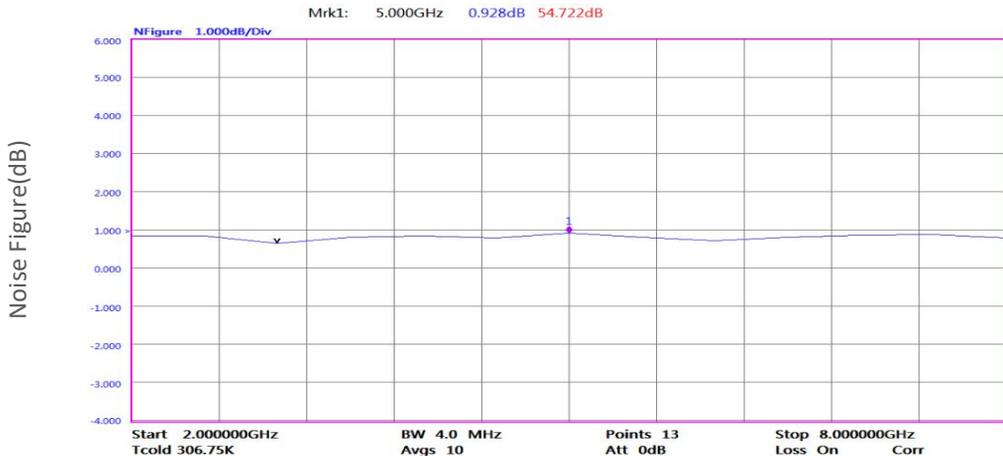
| 标准型号 Base Number | 描述 Description | 版本号 Revision |
|------------------|--|--------------|
| TURLA2G8G-509 | Low Noise Amplifier, 2-8GHz, Noise Figure:0.9dB, Gain:50 dB,P1dB:13dBm,+5V DC,Without Heatsink | Rev.1.1 |
| TURLA2G8G-509 HS | Low Noise Amplifier, 2-8GHz, Noise Figure:0.9dB, Gain:50 dB,P1dB:13dBm,+5V DC,With Heatsink | Rev.1.1 |

典型曲线 Typical Performance Data:

Gain&VSWR vs Frequency

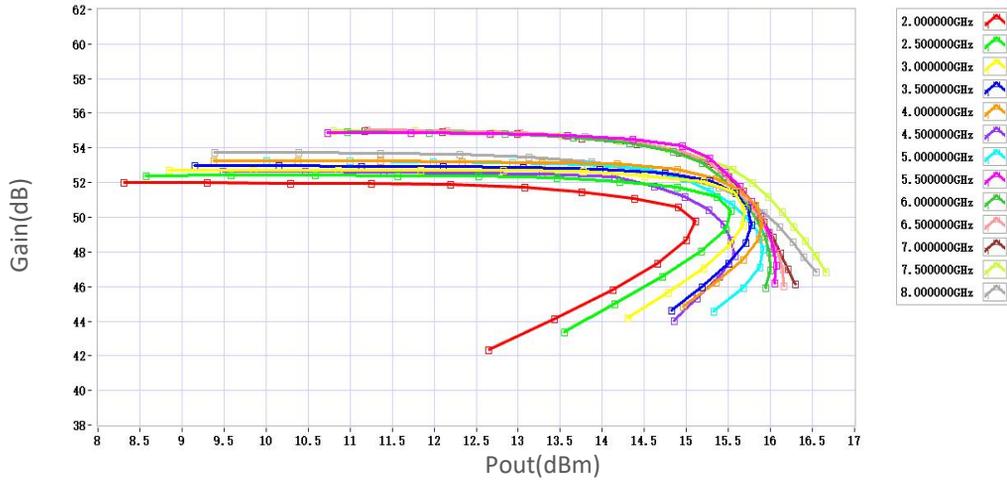


Noise Figure vs Frequency

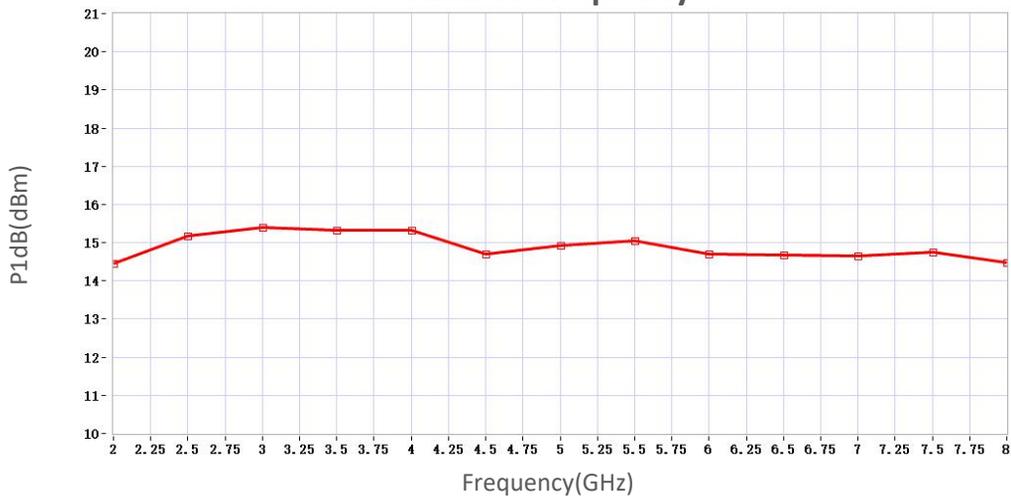


典型曲线 Typical Performance Data:

Gain vs Output Power



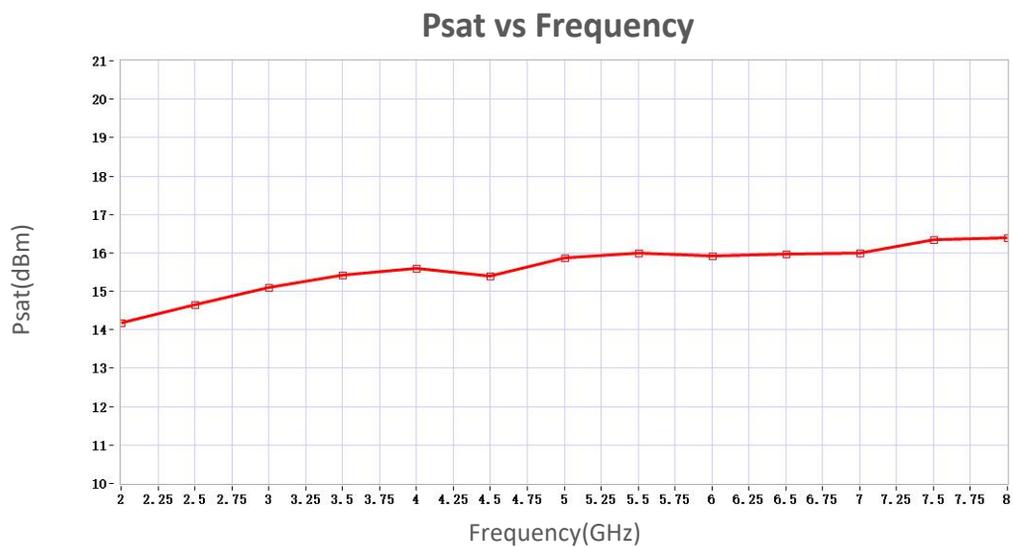
P1dB vs Frequency



P3dB vs Frequency

P3dB(dBm)

典型曲线 Typical Performance Data:



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.