

**Model: TLLA4G12G-32-00-Cryo**
**C-band Cryogenic Low Noise Amplifier  
 4-12GHz, Noise temperature: 7K, Gain: 32 dB**
**Feature:**

- Ultra Wide Band: 4-12GHz
- Gain: 32 dB Min
- Average Noise temperature: 7K Max@15K
- Technology: InP / GaAs
- 50 Ohm Matched Input / Output

**电气特性 Electrical:**

参数Parameter	Min.	Typ.	Max.	单位Units
频率范围 Frequency range	4-8			GHz
增益 Gain	32			dB
增益平坦度 Gain Flatness		±1.0		dB
平均噪声温度 Average Noise temperature@15K			7	K
输入回波损耗 Input Return Loss			-3	dB
输出回波损耗 Output Return Loss			-10	dB
漏极电压范围 Drain voltage range	0.7		1.4	V
漏极电流范围 Drain current range		20		mA
栅极电压范围 Gate voltage range	-2		+2	V
功耗 Power Consumption			26	mw
阻抗 Impedance	50			Ohms

**机械特性 Mechanical :**

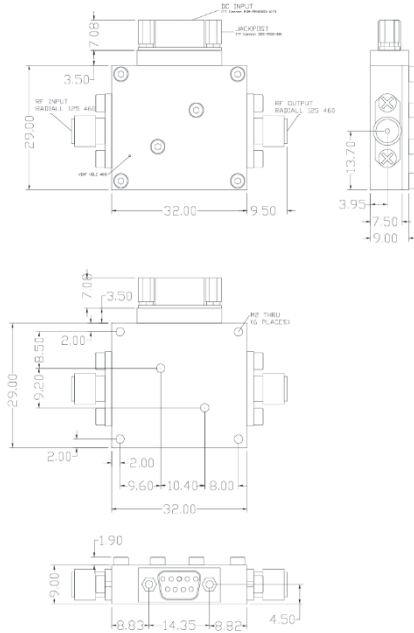
参数Parameter	指标 Value	单位Units
输入输出接口 Input /Output Connector	SMA Female	
直流偏置 Bias	Micro MDM 9-P	
尺寸 Size	32*29*9	mm


**绝对最大值 Absolute Maximum Ratings:**

参数Parameter	指标 Value
漏极电压 Drain voltage	+1.4V
栅极电压 Gate voltage	+2 V
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

**外形尺寸 Outline Drawing:**

Unit: mm



Micro MDM 9-P Define	
引脚 Pin #	功能 Function
1	GND
2	VD1
3	VG1
4-9	NC



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

**温度环境 Environmental Conditions:**

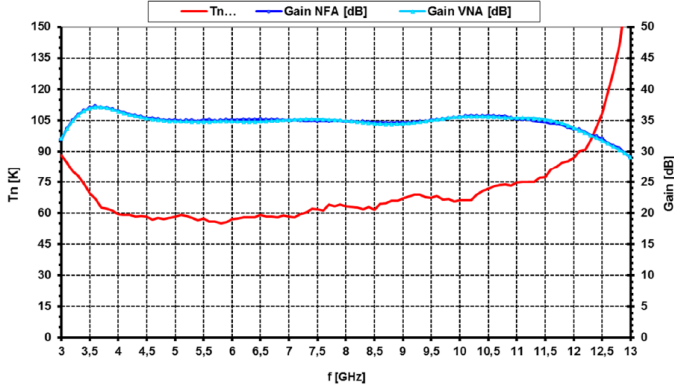
参数 Parameter	Min.	Typ.	Max.	单位 Units
相对湿度 Relative humidity		95		%
海拔 Altitude		50,000		feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msec half sin wave, 3 axis both directions			

**订货信息 Ordering Information:**

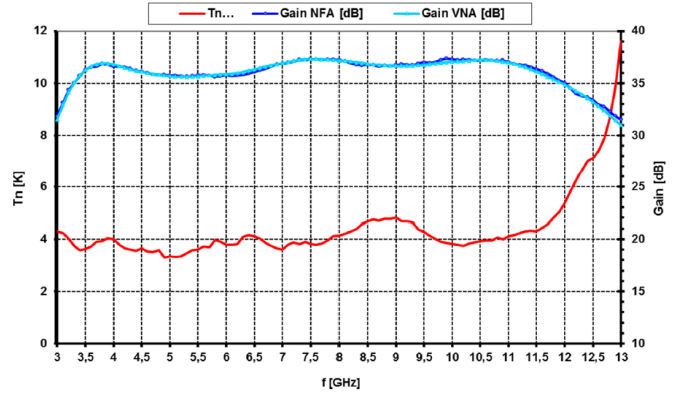
标准型号 Part Number	描述 Description	版本号 Revision
TLLA4G12G-32-00-Cryo	X-band Cryogenic Low Noise Amplifier 4-12GHz, Noise temperature:7K, Gain:32 dB	Rev.1.1

典型曲线 Typical Performance Data:

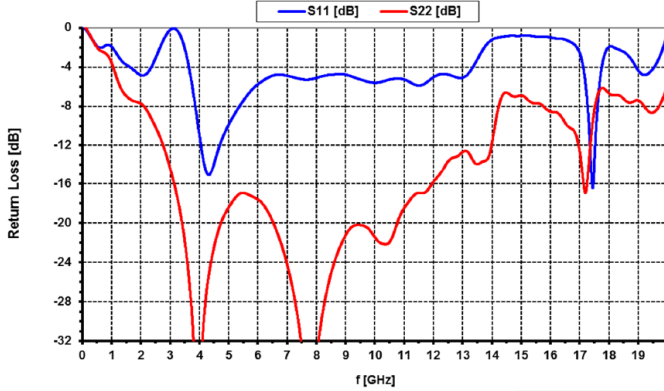
ID(1,2,3) = 1.5 V ID(1,2,3) = 10 mA T=295K



Po < 25mW, T = 11K



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