泰莱微波 Talent Microwave

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Low Noise Amplifier

0.3-20GHz/3.0dB NF/14dB Gain/11dBm P1dB Model: TLLA0.3G20G-14-30

TLLA0.3G20G-14-30 is a low noise amplifier with a typical small signal gain of 14 dB and a nominal noise figure of 3.0 dB across the frequency range of 0.3 to 20 GHz. The DC power requirement for the amplifier is +12 V DC/70 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 0.3-20GHz
- Gain: 14dB Typ
- Noise Figure: 3.0dB 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	0.3		20	GHz
小信号增益 Small Signal Gain	11	14		dB
增益平坦度 Gain Flatness		±3	±5	dB
噪声系数 Noise Figure		3.0	3.8	dB
线性输出功率 Output P1dB		11		dBm
输出三阶交调 Output IP3		20		dBm
输入驻波 Input VSWR		1.6	2.0	:1
输出驻波 Output VSWR		1.5	2.0	:1
直流电压 DC Voltage		+12		V DC
直流电流 DC Supply Current		70		mA
阻抗 Impedance		50		Ohms

*Performance may degrade below 300 MHz. Please refer to below typical test plots

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	17*17*8	mm

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绝对最大值 Absolute Maximum Ratings:

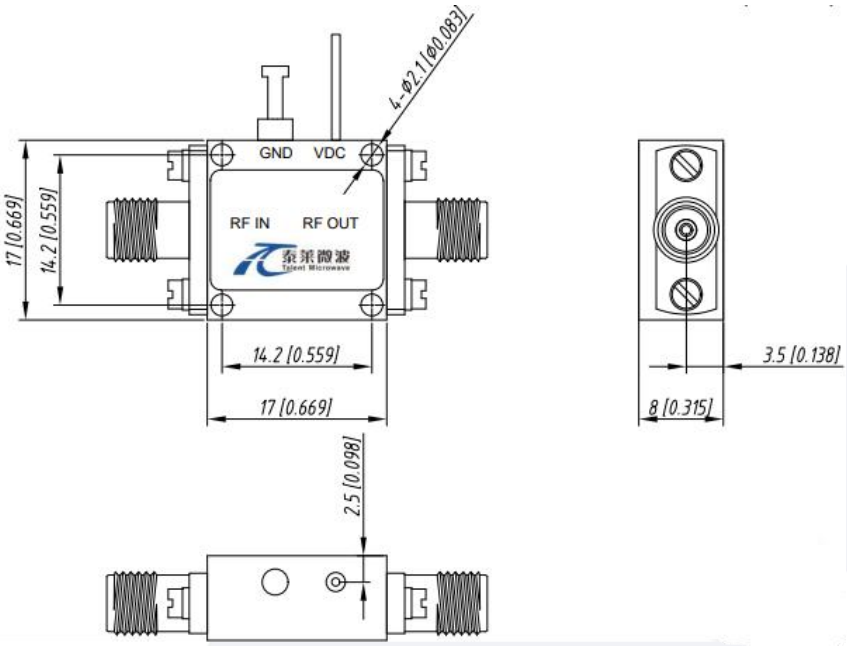
参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	TBD
输入功率 RF Input Power	+10 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V



Simple 220V System
Available SAC option

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



***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	℃
存储温度 Non-operating Temperature	-55		+125	℃
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 11msc half sin wave,3 axis both directions			

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订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLLA0.3G20G-14-30	Low Noise Amplifier, 0.3-20GHz, Noise Figure:3.0dB, Gain: 14dB,P1dB:11dBm,+12V DC,Without Heatsink	Rev.1.1
TLLA0.3G20G-14-30-HS	Low Noise Amplifier, 0.3-20GHz, Noise Figure:3.0dB, Gain: 14dB,P1dB:11dBm,+12V DC,With Heatsink	Rev.1.1