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Low Noise Amplifier

WR-19/40-60GHz /5dB NF/30dB Gain Model: TMLA-040060-3050-19

TMLA-040060-3050-19 is a U-Band low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 5.0 dB across the frequency range of 40 to 60 GHz. The DC power requirement for the amplifier is +12 VDC /270 mA. The input and output port configuration offers an inline structure with WR-19 waveguides and UG-383/U-M anti-cocking flanges.

Features:

- Ultra Wide Band:40-60GHz
- Gain: 30dB Typ
- Noise Figure: 5.0dB Typ
- Unconditional stability

Applications:

- Passive Imaging
- 5G Systems

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
频率范围 Frequency range	40		60	GHz
小信号增益 Small Signal Gain		30		dB
噪声系数 Noise Figure		5		dB
输出功率1dB压缩点 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		12		V DC
直流供电 DC power supply		270		mA

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入接口 Input Connector	WR-19/ UG-383/U	
输出接口 Output Connector	WR-19/ UG-383/U	
供电引脚 Power Supply Pin	Solder Pin	

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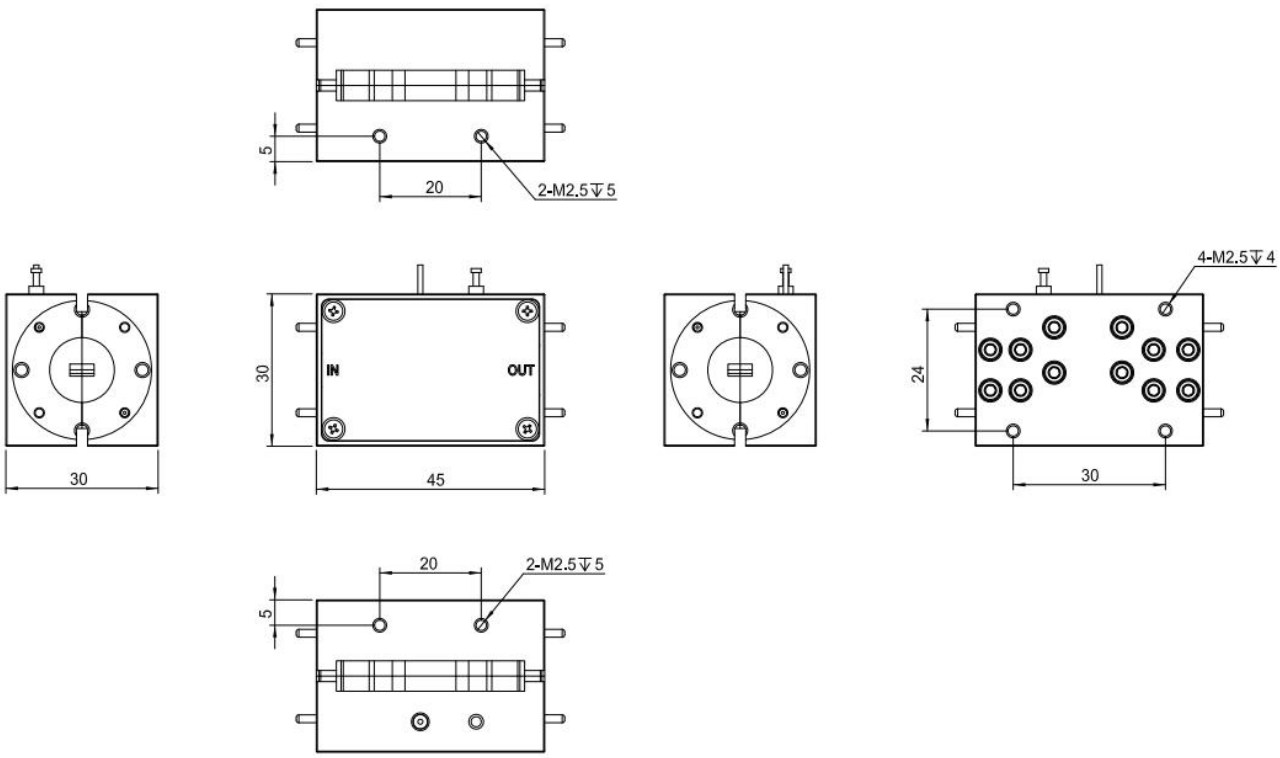
绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15 V
输入功率 RF Input Power	TBD
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing: Unit:mm



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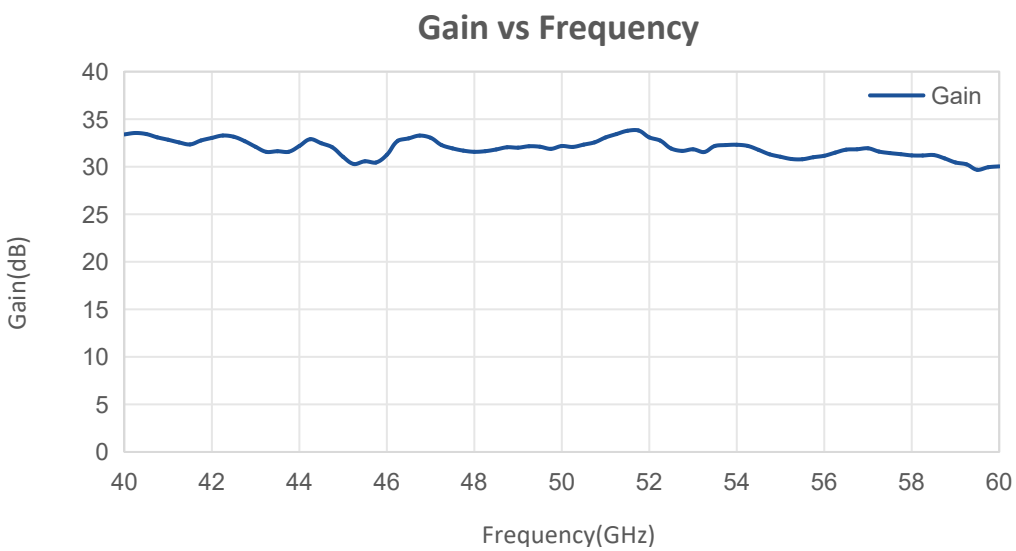
温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	℃
存储温度 Non-operating Temperature	-45		+85	℃
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			
冲击 Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

订货信息 Ordering Information:

标准型号 Base Number	描述 Desciption	版本号 Revision
TMLA-040060-3050-19	Low Noise Amplifier,40-60GHz, Noise Figure:5.0dB, Gain:30dB,+12V DC,WR-19	Rev.1.1

典型曲线 Typical Performance Data:



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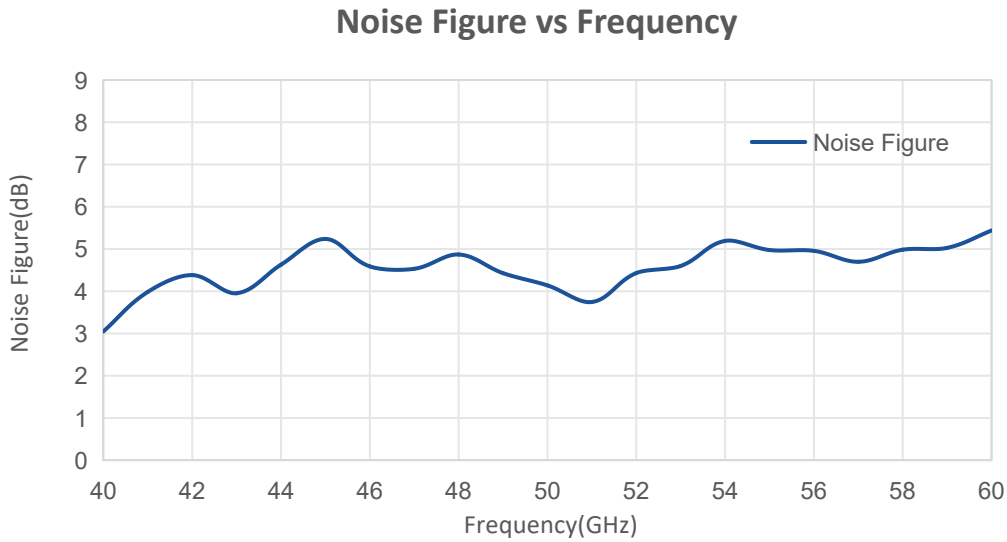
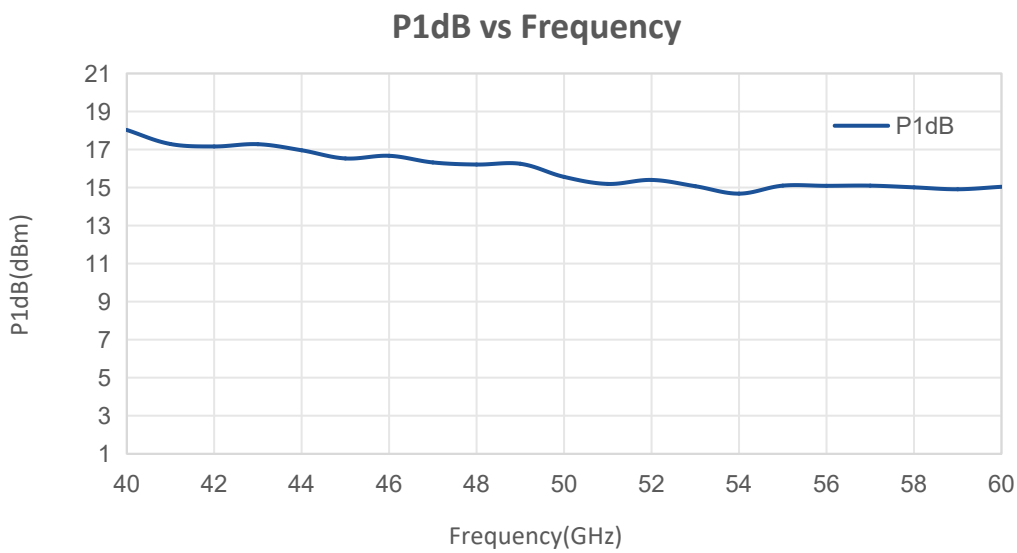
典型曲线 Typical Performance Data:





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.

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