

Low Noise Amplifier

WR-12/60-90GHz /4.5dB NF/35dB Gain

Model: TMLA-060090-3545-12-N

TMLA-060090-3545-12-N is a E-Band low noise amplifier with small signal gain of 35 dB and a nominal noise figure of 4.5 dB across the frequency range of 60 to 90 GHz. The DC power requirement for the amplifier is +5 VDC/300 mA. The input and output port configuration offers an inline structure with WR-12 waveguides and UG-387/U-M anti-cocking flanges.

Features:

- Ultra Wide Band:60-90 GHz
- Gain: 35dB Min
- Noise Figure: 4.5dB 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	60		90	GHz
增益 Gain	35			dB
噪声系数 Noise Figure		4.5		dB
输出功率1dB压缩点 Output P1dB		17		dBm
输入驻波 Input VSWR		2		:1
输出驻波 Output VSWR		2		:1
直流电压 DC Voltage		5		V DC
直流供电 DC power supply		300		mA

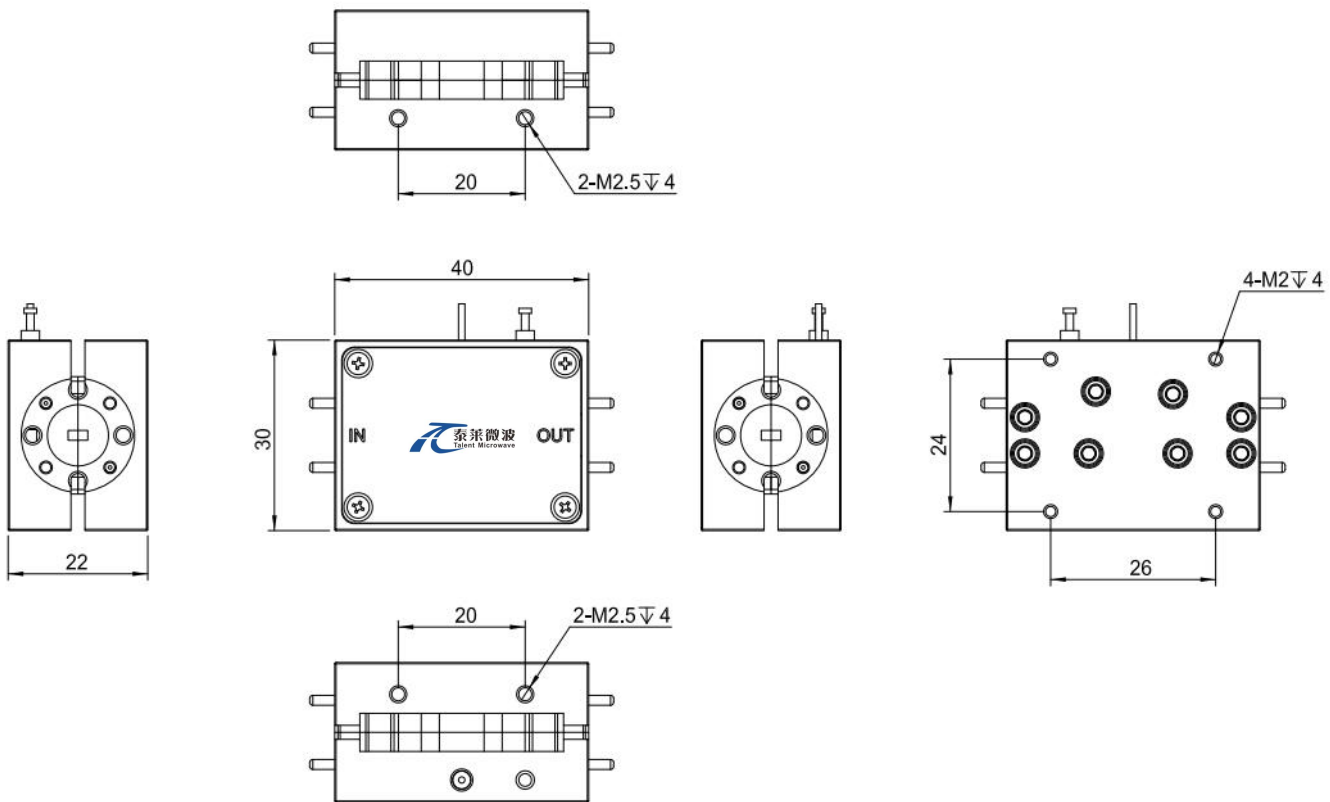
机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入接口 Input Connector	WR-12/ UG-387/U	
输出接口 Output Connector	WR-12/ UG-387/U	
供电引脚 Power Supply Pin	Solder Pin	
尺寸 Size	40*30*22	mm

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	+15 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing: Unit:mm



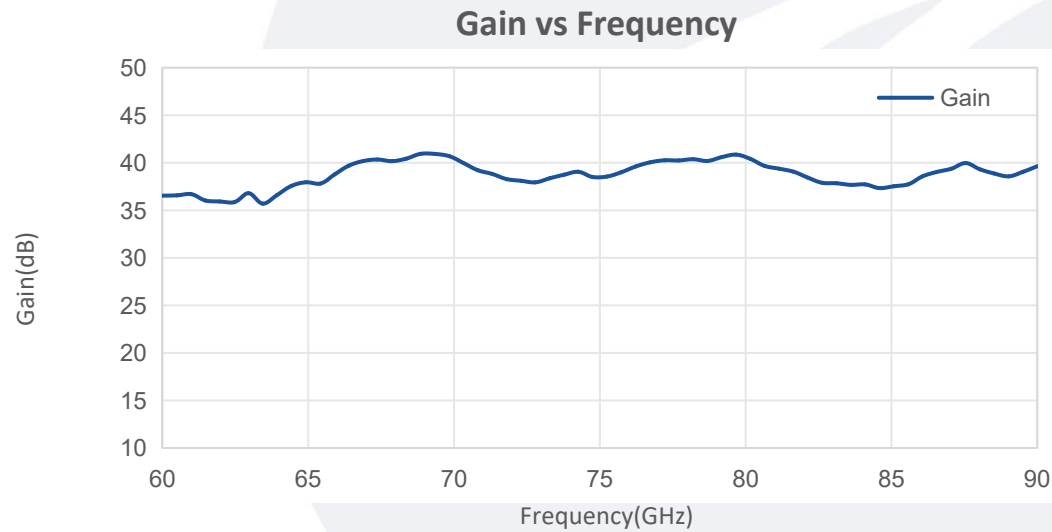
温度环境 Environmental Conditions:

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-060090-3545-12-N	Low Noise Amplifier,60-90GHz, Noise Figure:4.5dB, Gain:35dB,+5V DC,WR-12	Rev.1.1

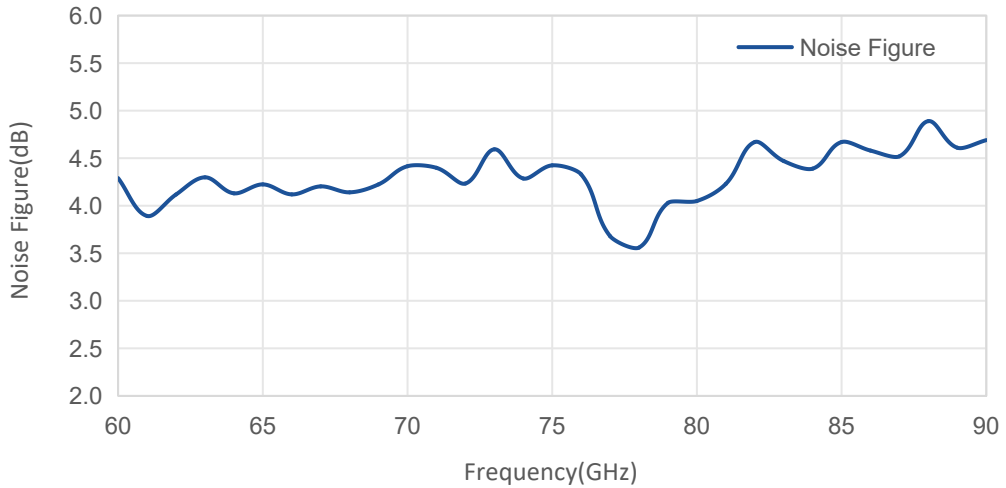
典型曲线 Typical Performance Data:



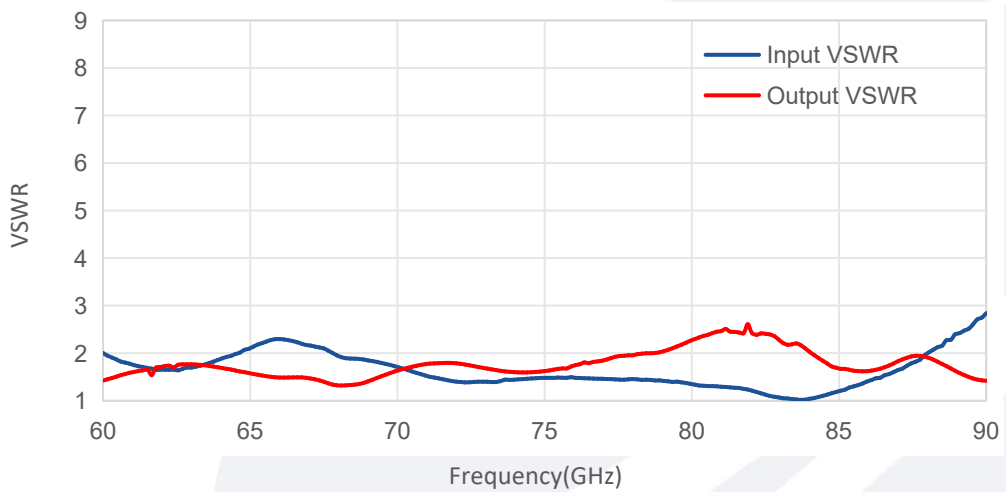
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Noise Figure vs Frequency



VSWR vs Frequency



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