

Low Noise Amplifier

WR-12/60-90GHz /4.5dB NF/38dB Gain

Model: TMLA-060090-4045-12

TMLA-060090-4045-12 is a E-Band low noise amplifier with a typical small signal gain of 38 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 +12 VDC /90 mA. The input and output port configuration offers an inline structure with WR-12 waveguides and UG-387/U-M anti-cocking flanges.

Features:

- Frequency range:60-90GHz
- Gain: 38dB Typ
- 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
小信号增益 Small Signal Gain		38		dB
噪声系数 Noise Figure		4.5		dB
输出功率1dB压缩点 Output P1dB		10		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		90		mA

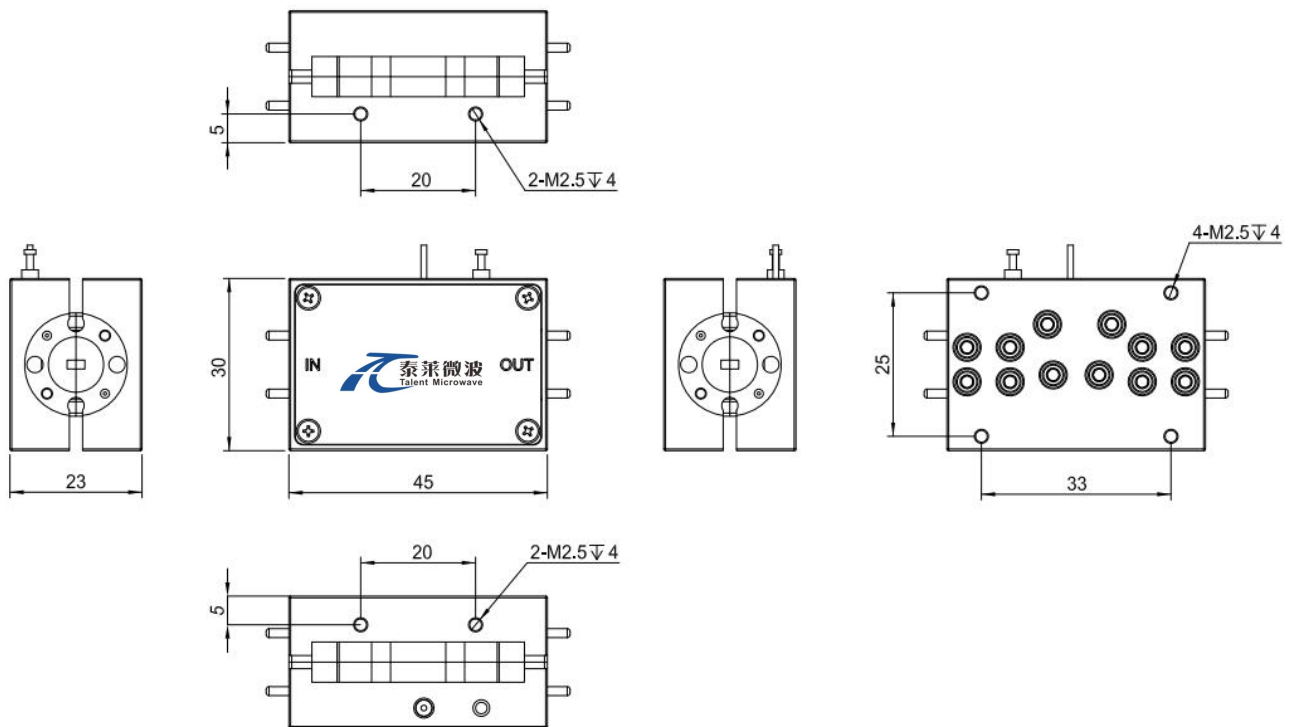
机械特性 Mechanical Specifications:

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	45*30*23	mm

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

外形图 Outline Drawing: Unit:mm



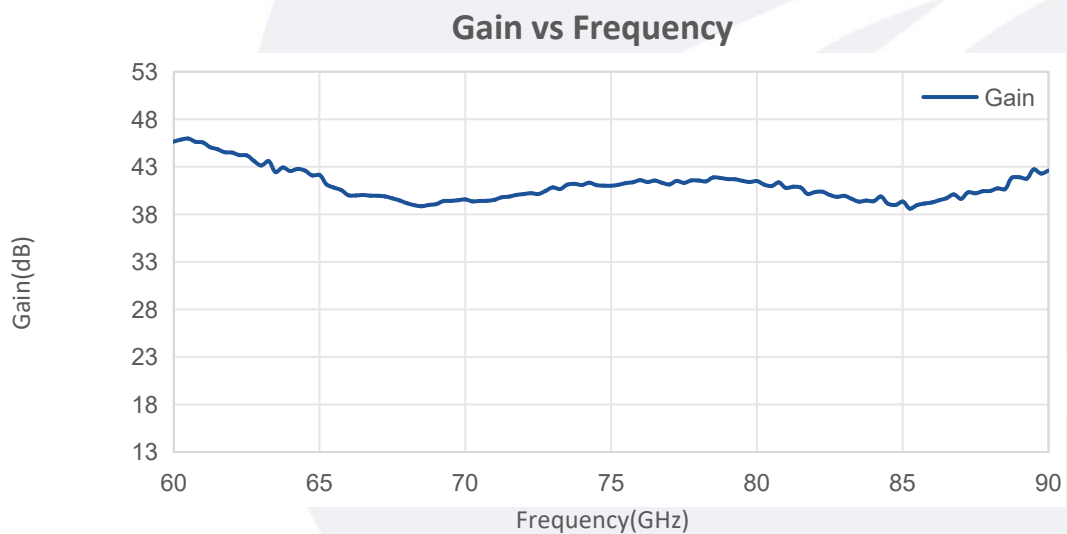
温度环境 Environmental Conditions:

参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	°C
存储温度 Non-operating Temperature	-45		+85	°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			
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 Description	版本号 Revision
TMLA-060090-4045-12	Low Noise Amplifier,60-90GHz, Noise Figure:4.5dB, Gain:38dB,+12V DC,WR-12	Rev.1.1

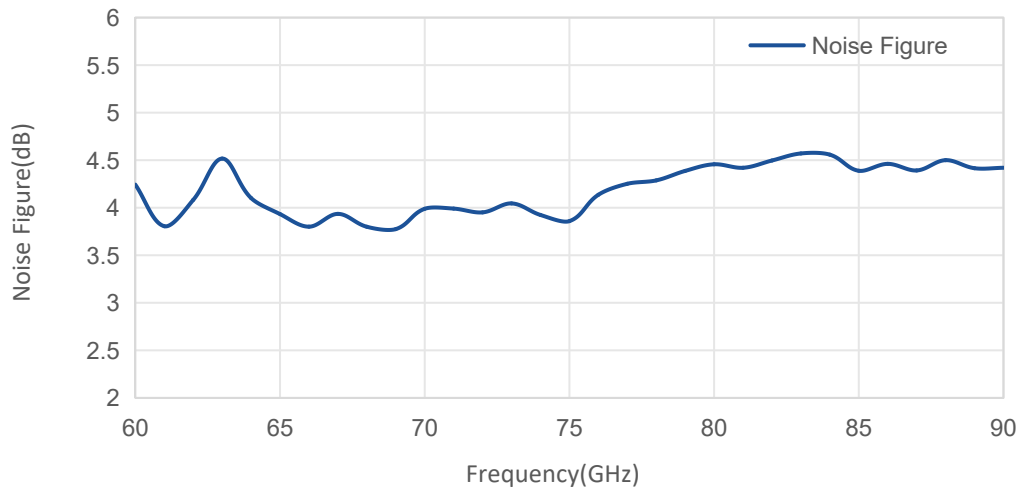
典型曲线 Typical Performance Data:



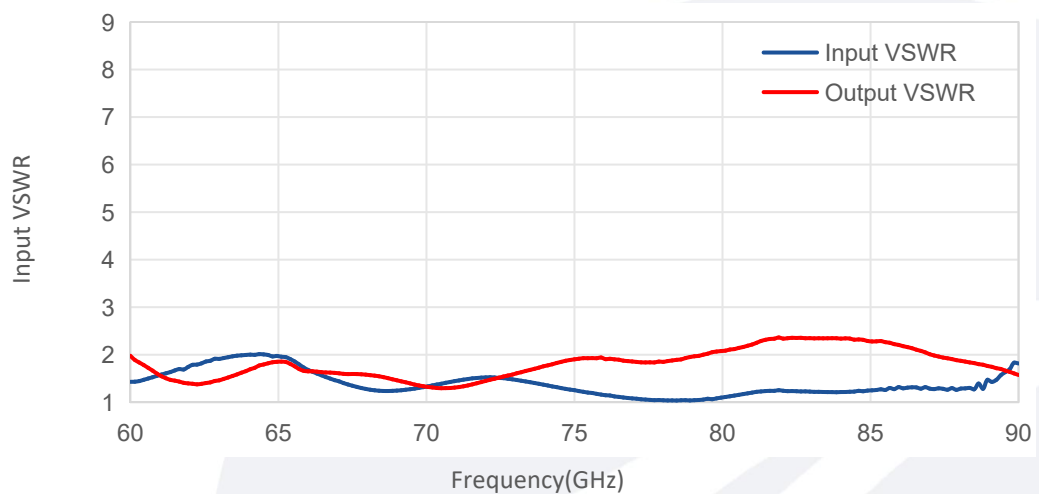
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Noise Figure vs Frequency



Input VSWR vs Frequency



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