

Low Noise Amplifier

WR-15/50-75GHz /3.0dB NF/38dB Gain

Model: TMLA-050075-3840-15

TMLA-050075-3840-15 is a V-Band low noise amplifier with a typical small signal gain of 38 dB and a nominal noise figure of 3.0 dB across the frequency range of 50 to 75 GHz. The DC power requirement for the amplifier is +12 VDC /175 mA. The input and output port configuration offers an inline structure with WR-15 waveguides and UG-385/U-M anti-cocking flanges.

Features:

- Ultra Wide Band:50-75GHz
- Gain: 38dB Typ
- Noise Figure: 3.0dB 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	50		75	GHz
增益 Gain		38		dB
噪声系数 Noise Figure		3		dB
输出功率1dB压缩点 Output P1dB		12.5		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		175		mA

机械特性 Mechanical Specifications:

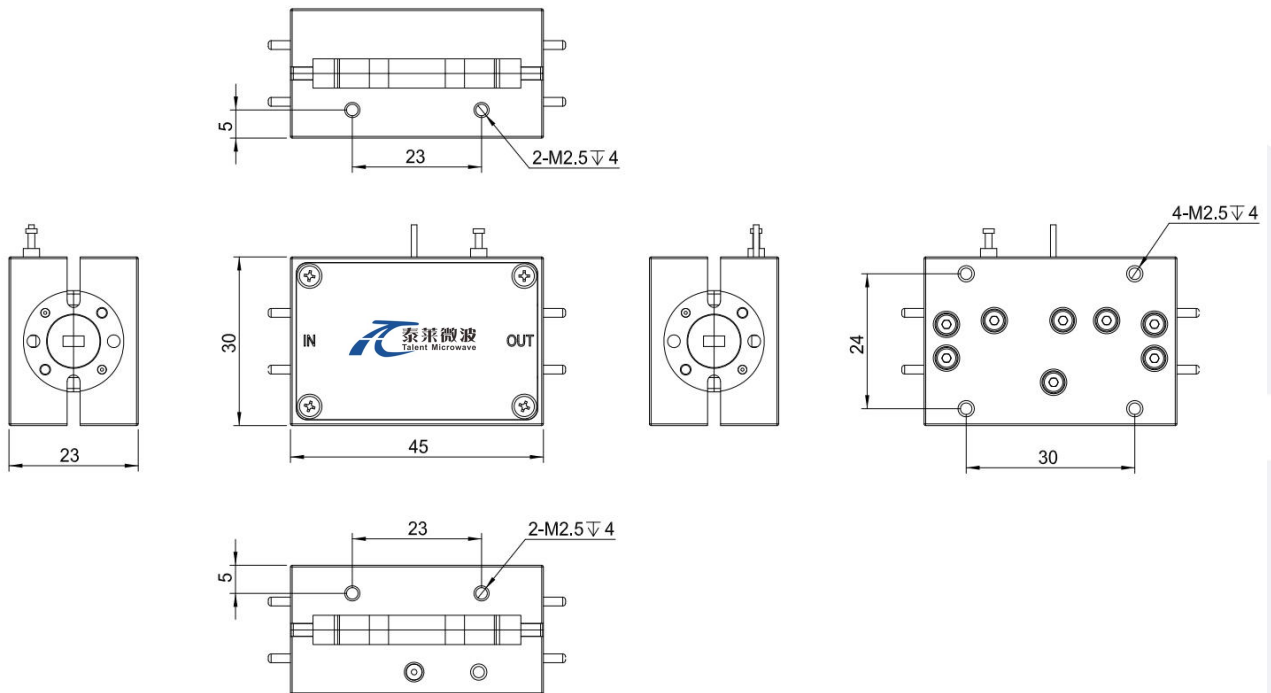
参数 Parameter	指标 Value	单位 Units
输入接口 Input Connector	WR-15/ UG-385/U	
输出接口 Output Connector	WR-15/ UG-385/U	
供电引脚 Power Supply Pin	Solder Pin	
尺寸 Size	45*30*30	mm

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	+10 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm



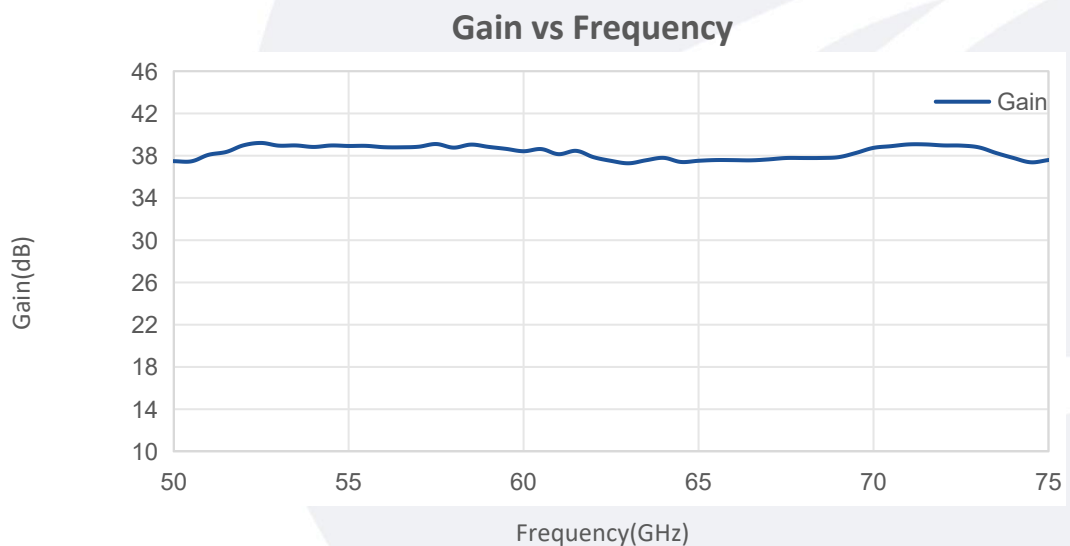
温度环境 Environmental Conditions:

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-050075-3840-15	Low Noise Amplifier,50-75GHz, Noise Figure:3.0dB, Gain:38dB,+12V DC,WR-15	Rev.1.1

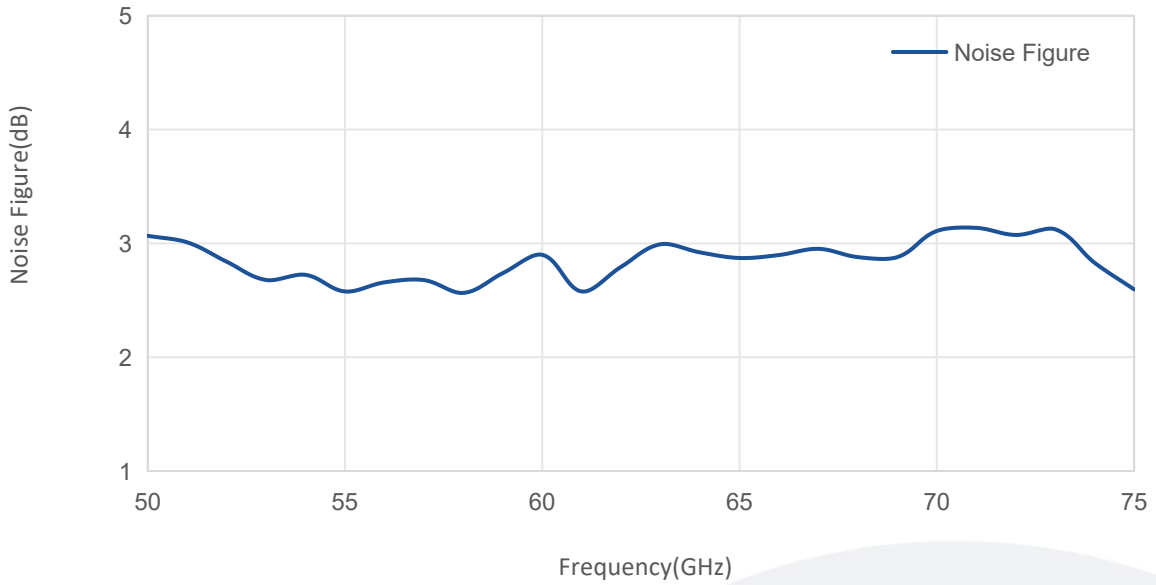
典型曲线 Typical Performance Data:



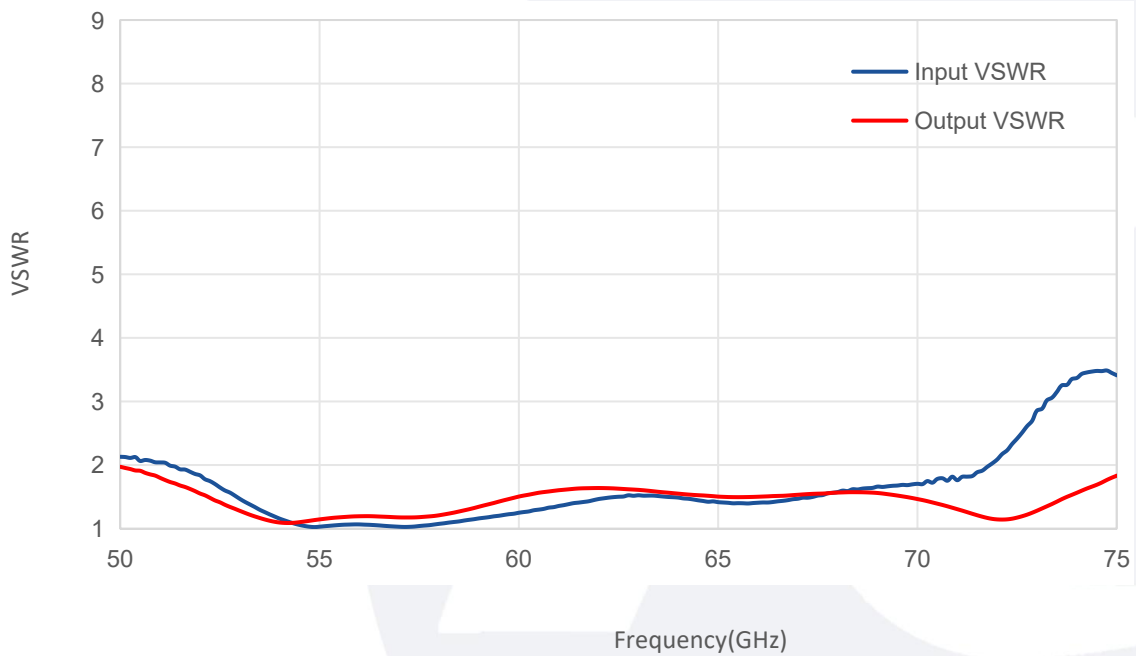
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Noise Figure vs Frequency



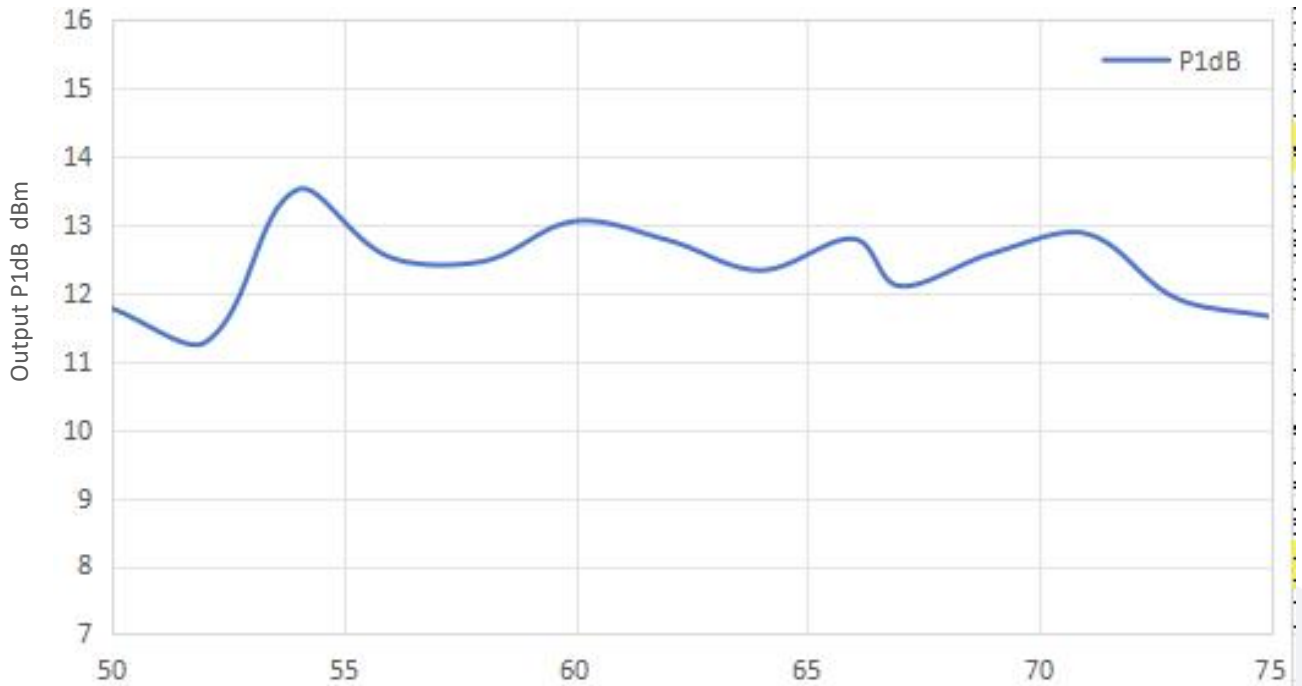
VSWR vs Frequency



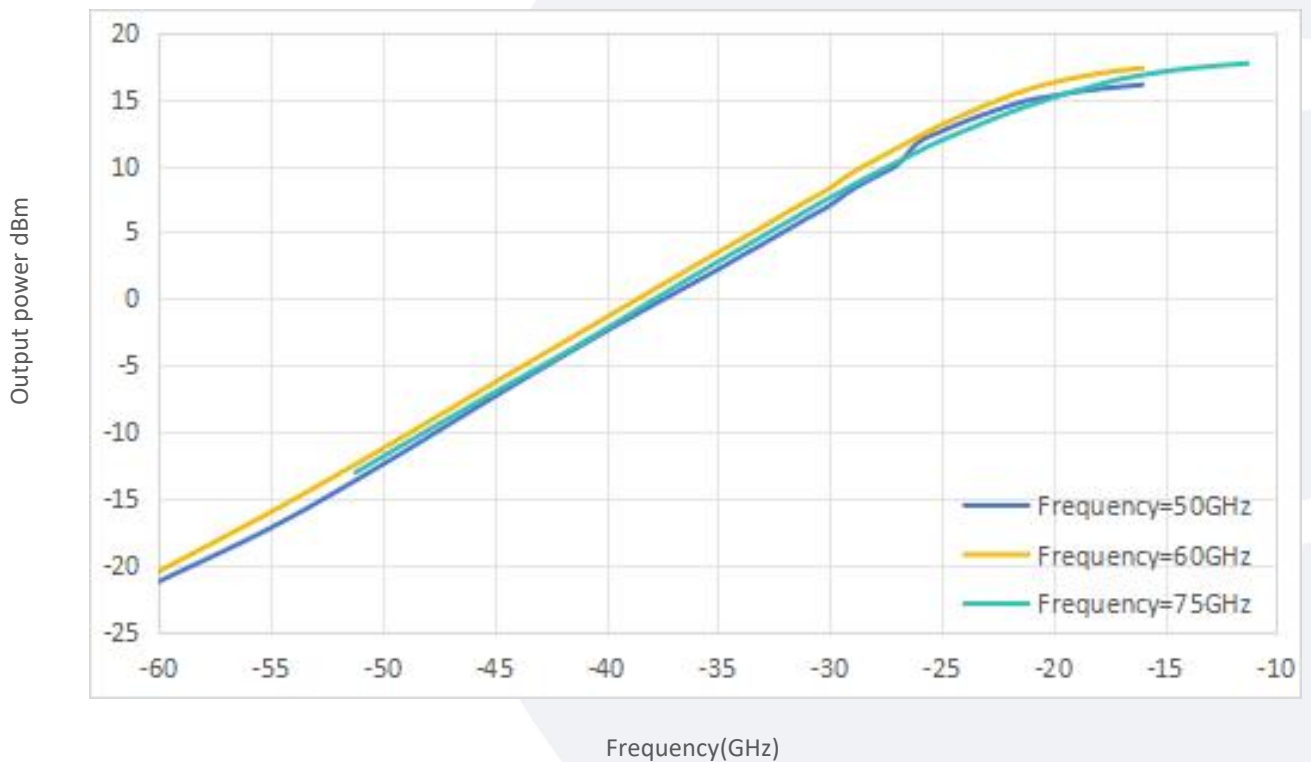
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Output P1dB vs Frequency



Output Power vs Input Power



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.