

Low Noise Amplifier

WR-05/140-220GHz /6.0 NF/18dB Gain

Model: TMLA-140220-1860-05

TMLA-140220-1860-05 is a G-Band low noise amplifier with small signal gain of 18 dB and a nominal noise figure of 6.0 dB across the frequency range of 140 to 220 GHz. The DC power requirement for the amplifier is +12 VDC/50 mA. The input and output port configuration offers an inline structure with WR-05 waveguides and UG-387/U-M anti-cocking flanges.

Features:

- Frequency range:140-220GHz
- Gain: 18dB Min
- Noise Figure: 6.0dB 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	140		220	GHz
增益 Gain	18			dB
噪声系数 Noise Figure		6		dB
饱和输出功率 Output Psat		0		dBm
输入驻波 Input VSWR		3.5		:1
输出驻波 Output VSWR		3.5		:1
直流电压 DC Voltage		12		V DC
直流供电 DC power supply		50		mA

机械特性 Mechanical Specifications:

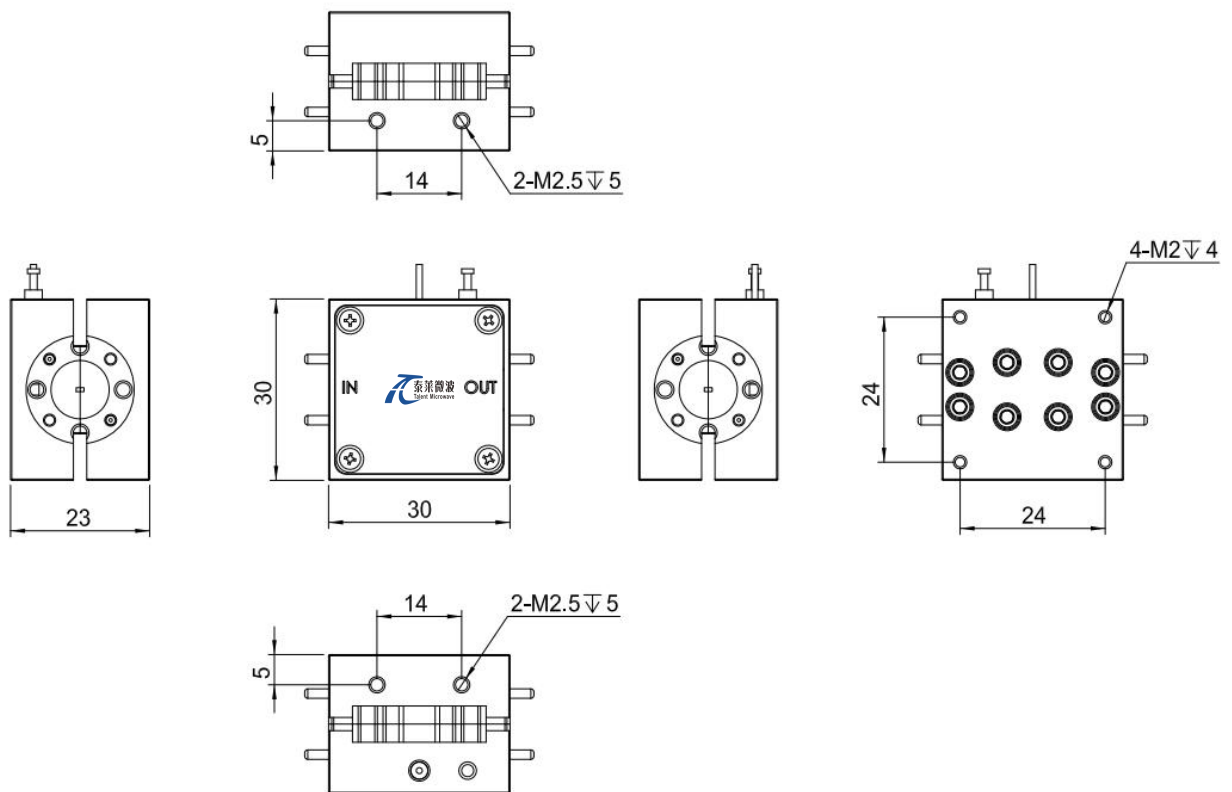
参数 Parameter	指标 Value	单位 Units
输入接口 Input Connector	WR-05/ UG-387/U	
输出接口 Output Connector	WR-05/ UG-387/U	
供电引脚 Power Supply Pin	Solder Pin	
尺寸 Size	30*30*23	mm

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	-5 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:

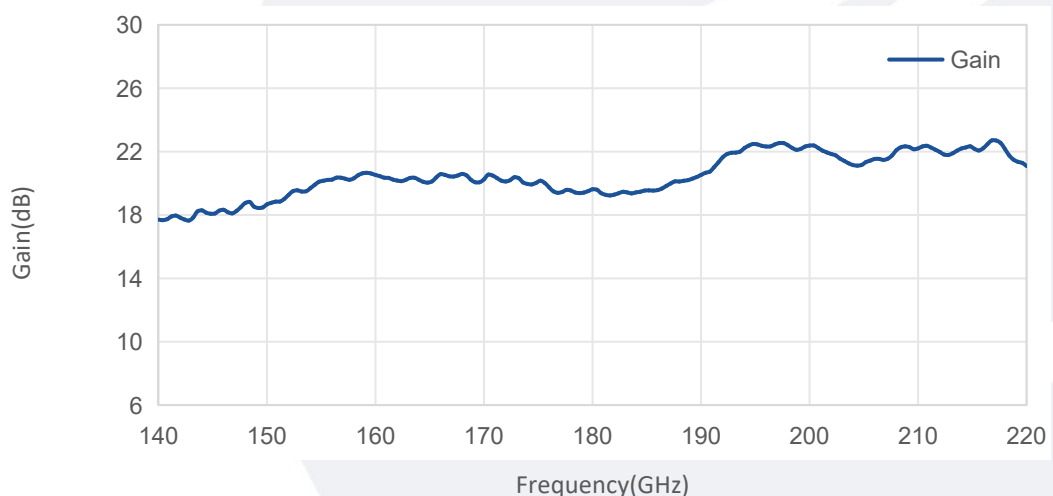
参数 Parameter	Min	Typ	Max	单位 Units
操作温度 Operating Temperature	-10		+65	°C
存储温度 Non-operating Temperature	-45		+85	°C
相对湿度 Relative humidity		95		%
海拔 Altitude	10,000			feet
震动 Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
冲击 Shock(non operating)	20G for 11msc half 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-140220-1860-05	Low Noise Amplifier,140-220GHz, Noise Figure:6.0dB, Gain:18dB,+12V DC,WR-05	Rev.1.1

典型曲线 Typical Performance Data:

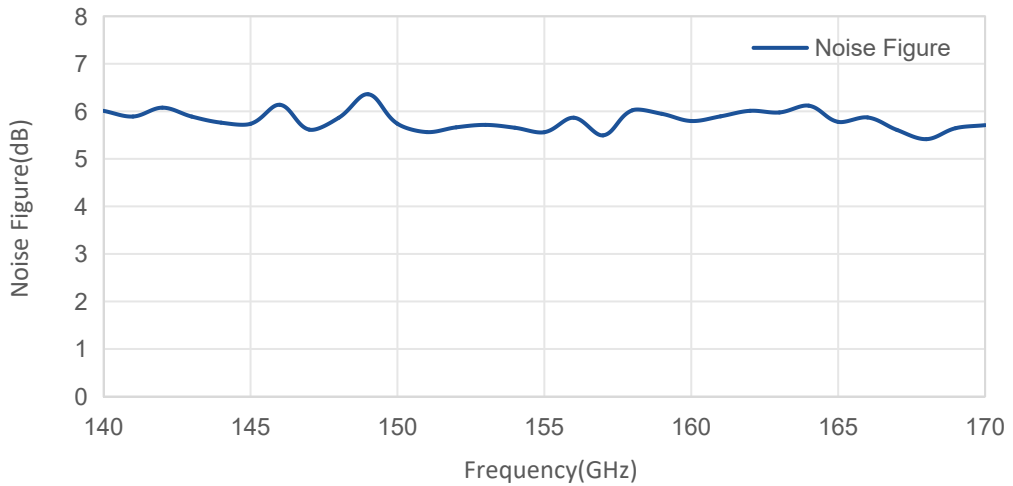
Gain vs Frequency



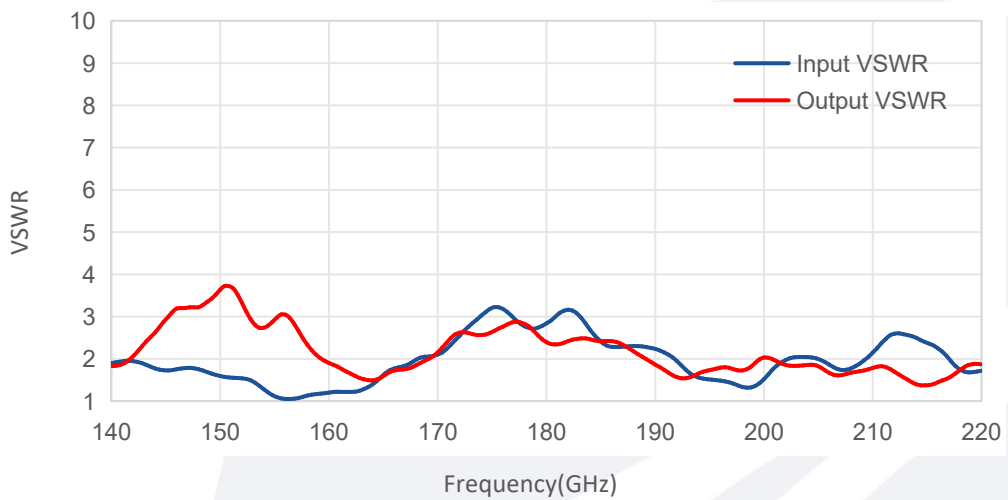
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

Noise Figure vs Frequency



VSWR vs Frequency



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