泰莱微波 Talent Microwave

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Passive Frequency Multiplier

WR-5.1/X2/160-175GHz/20dBm Output Power Model: TMPM-160175-0220-05

TMPM-160175-0220-05 is a WR-5.1, X2 passive multiplier that generates second order harmonics with good harmonic and fundamental suppression. This multiplier requires an input frequency range of 80 to 87.5 GHz at +31 dBm RF power to yield typical 20 dBm output power at 160 to 175 GHz. The multiplier is equipped with a WR-12 waveguide and UG-387/U-M flange as its input port and a WR-5.1 waveguide and UG-387/U-M flange as its output port.

Features:

- Output Frequency: 160-175GHz
- Output Power : 20dBm Typ
- Compactness,High Power&Efficiency

Applications:

- Frequency Extenders
- THz Systems
- Source Modules

电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
输出频率 Output Frequency	160		175	GHz
输入频率 Input Frequency	80		87.5	GHz
输出功率 Output Power		20		dBm
输入功率 Input Power	26	31	32	dBm
倍频次数 Multiply Factor		2		
偏置电压 Bias voltage		-14		V
偏置电流 Bias current		28		mA

Note: A 500 Ω resistor needs to be connected in parallel at the feed-through capacitor of each power supply port.

机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输出接口 Output Connector	WR-5.1/UG-387/U	
输入接口 Input Connector	WR-12/UG-387/U	
尺寸 Size	40*40*19.1	mm

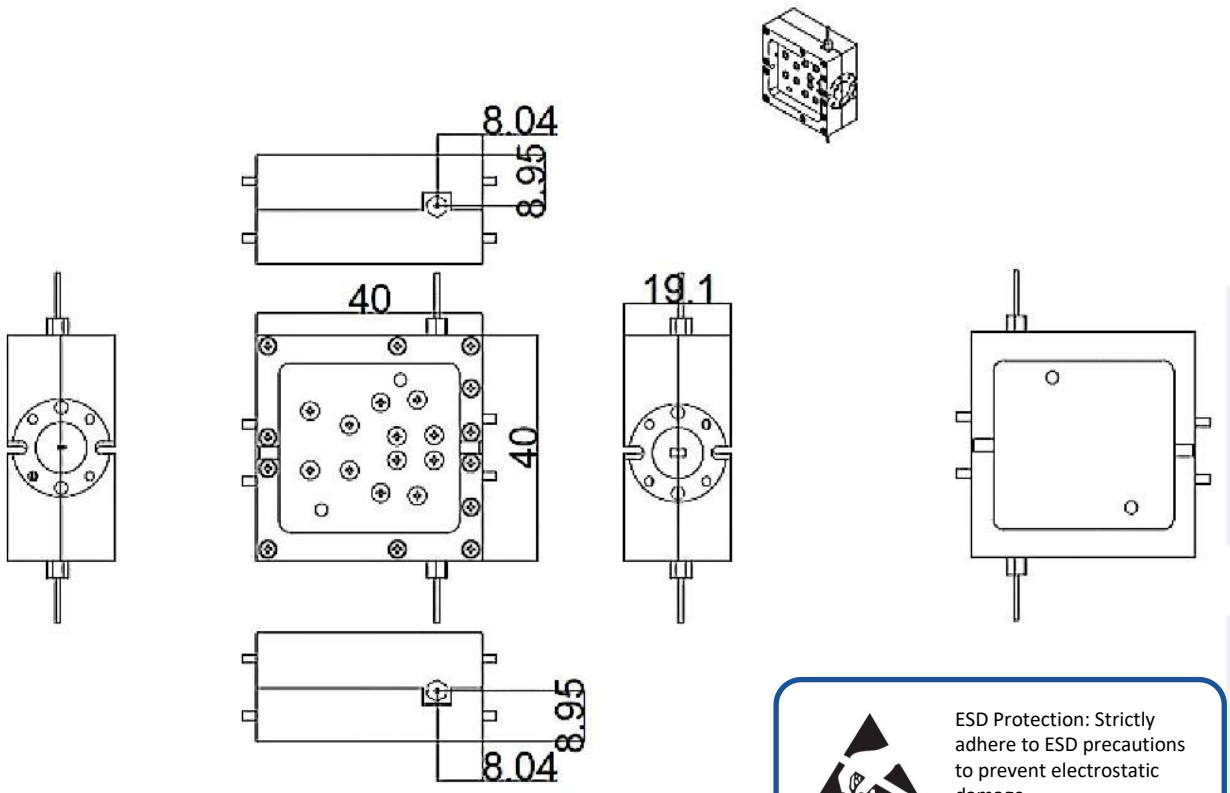
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绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
输入功率 RF Input Power	+32dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

外形图 Outline Drawing:

Unit:mm; Tolerance:±0.1mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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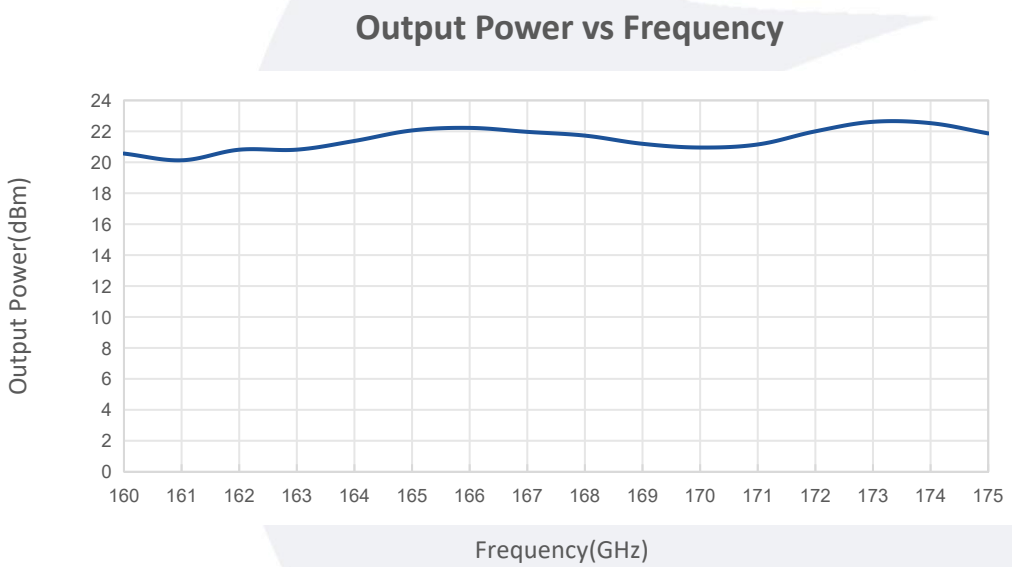
温度环境 Environmental Conditions:

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 Description	版本号 Revision
TMPM-160175-0220-05	Passive Frequency Multiplier X2,160-175GHz, 20dBm Output Power,WR-5.1	Rev.1.0

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.