Suzhou Talent Microwave,Inc
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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

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Output Frequency	160		175	GHz
Input Frequency	80		87.5	GHz
Output Power		20		dBm
Input Power	26	31	32	dBm
Multiply Factor		2		
Bias voltage		-14		V
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.

Mechanical Specifications:

Parameter	Value	Units
Output Connector	WR-5.1/UG-387/U	
Input Connector	WR-12/UG-387/U	
Size	40*40*19.1	mm

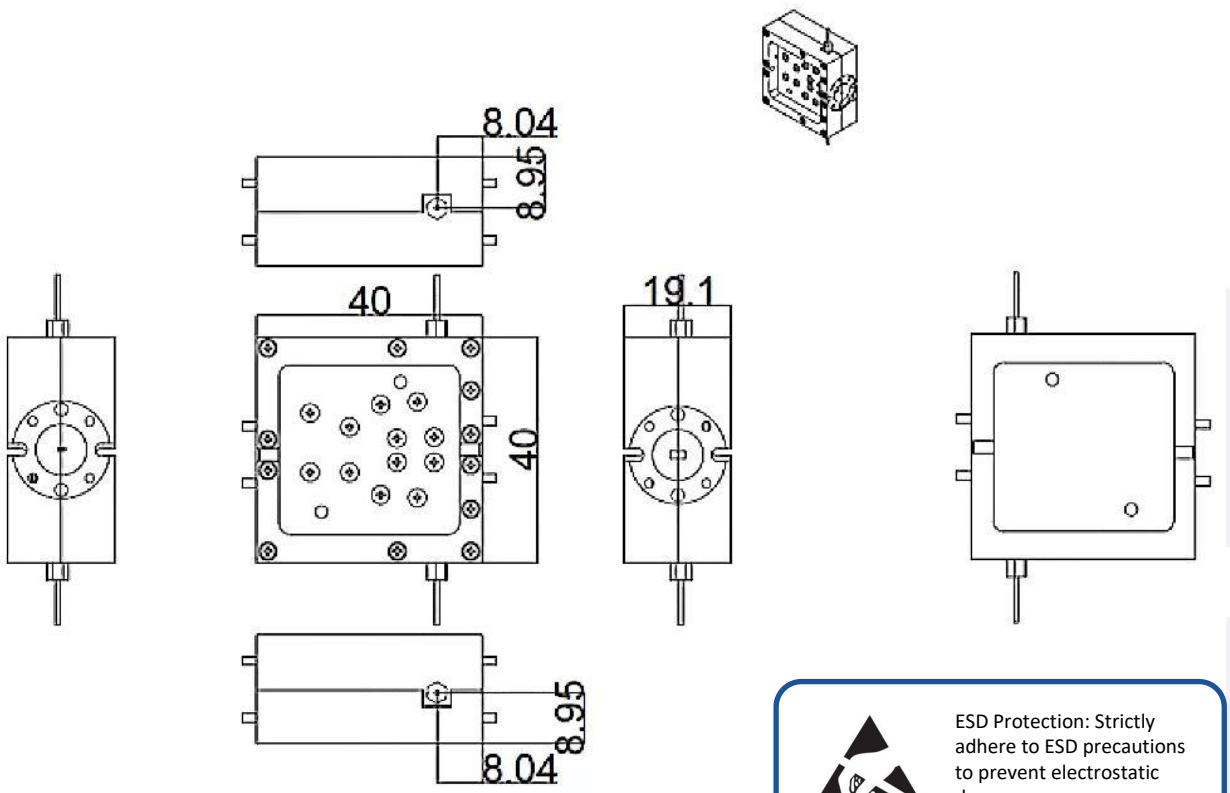
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Absolute Maximum Ratings:

Parameter	Value
RF Input Power	+32dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



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

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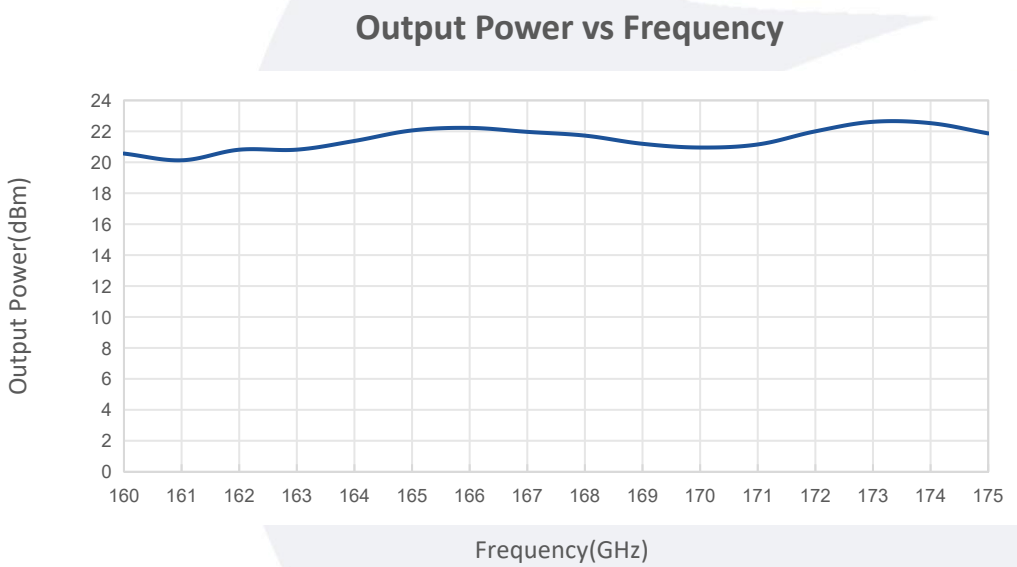
Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	℃
Non-operating Temperature	-45		+85	℃
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

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

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.