

## U-Band, Active Frequency Multiplier

WR-19/X4/ 40-60GHz /16dBm Output Power

Model: TMAM-040060-0415-19

TMAM-040060-0415-19 is an active X4 frequency multiplier. The multiplier has an input frequency of 10 to 15 GHz with a typical input power of +5 dBm and an output frequency of 40 to 60 GHz with a typical output power of +16 dBm. The DC power requirement for the multiplier is +12 V DC/180 mA. The input port configuration is a female SMA connector and the output is a WR-19 waveguide with a UG-383/U-M anti-cocking flange.

### Features:

- Output Frequency:40-60GHz
- Output Power :16dBm Min
- Low power consumption

### Applications:

- Frequency Extenders
- THz Systems

### 电气特性 Electrical Characteristics:

参数 Parameter	Min	Typ	Max	单位 Units
输出频率 Output Frequency	40		60	GHz
输出功率 Output Power	16			dBm
输入频率 Input Frequency	10		15	GHz
输入功率 Input Power	3	5	7	dBm
倍频次数 Multiply Factor		4		
谐波抑制 Harmonic Suppression			-30	dBc
供电电压 DC Voltage		12		V
供电电流 DC Supply Current		180		mA

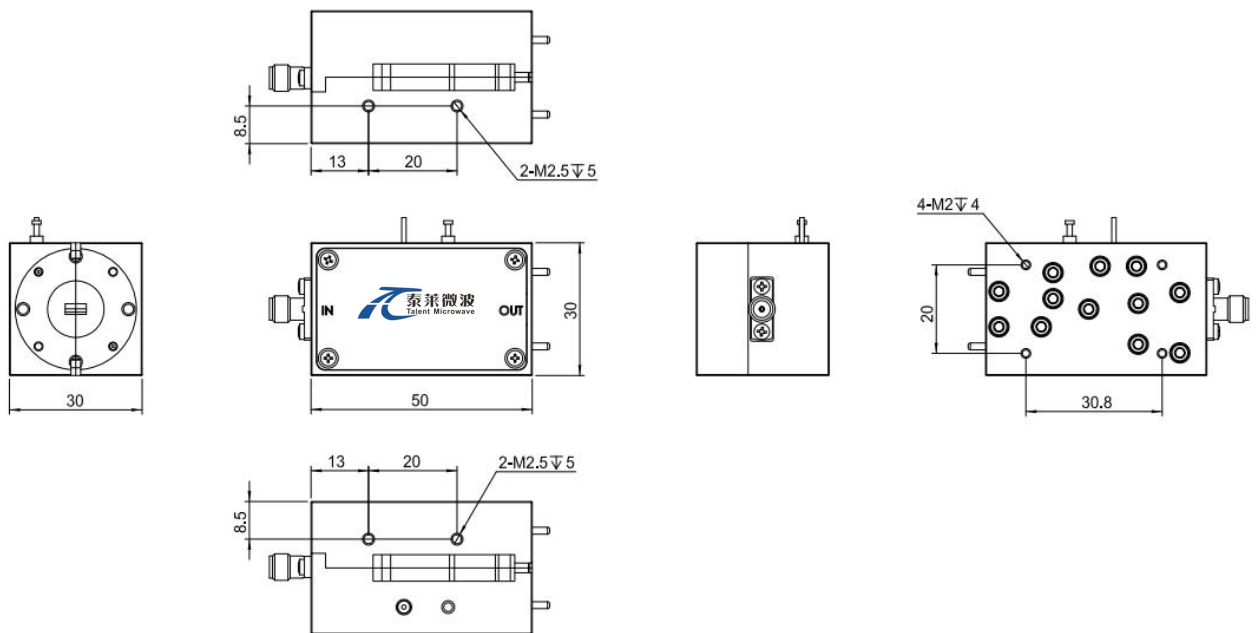
### 机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输出接口 Output Connector	WR-19/UG-383/U	
输入接口 Input Connector	SMA Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	50*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	+12 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



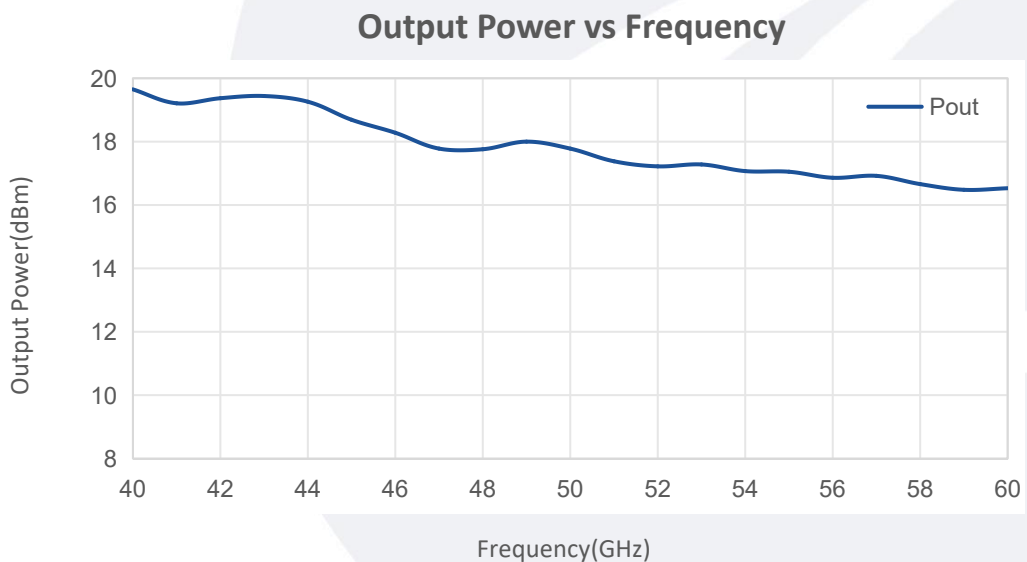
## 温度环境 Environmental Conditions:

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	50,000			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
TMAM-040060-0415-19	Active Multiplier,X4,40-60GHz, Output Power:16dBm,WR-19/UG-383/U,SMA Female	Rev.1.1

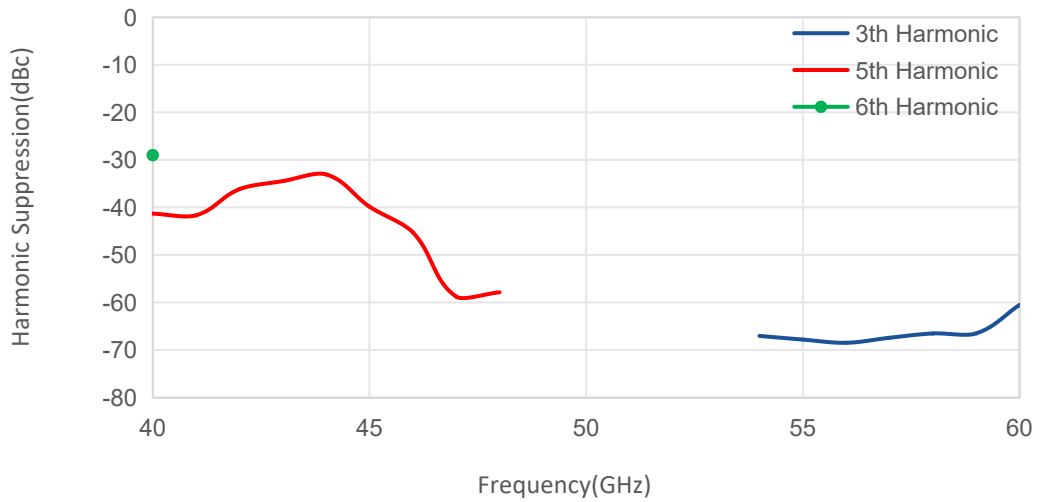
## 典型曲线 Typical Performance Data:



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:

### Harmonic Suppression vs Frequency



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