

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

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Output Frequency	40		60	GHz
Output Power	16			dBm
Input Frequency	10		15	GHz
Input Power	3	5	7	dBm
Multiply Factor		4		
Harmonic Suppression			-30	dBc
DC Voltage		12		V
DC Supply Current		180		mA

Mechanical Specifications:

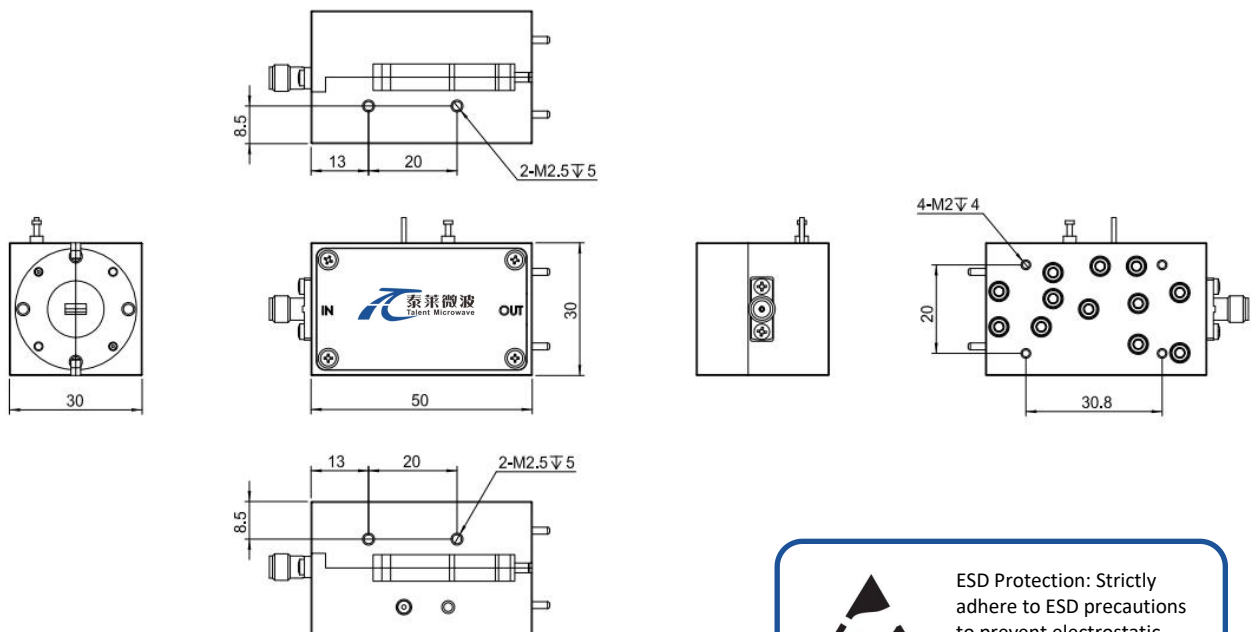
Parameter	Value	Units
Output Connector	WR-19/UG-383/U	
Input Connector	SMA Female	
DC Bias	Solder Pin	
Size	50*30*30	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+12 V
RF Input Power	+10 dBm
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.

Environmental Conditions:

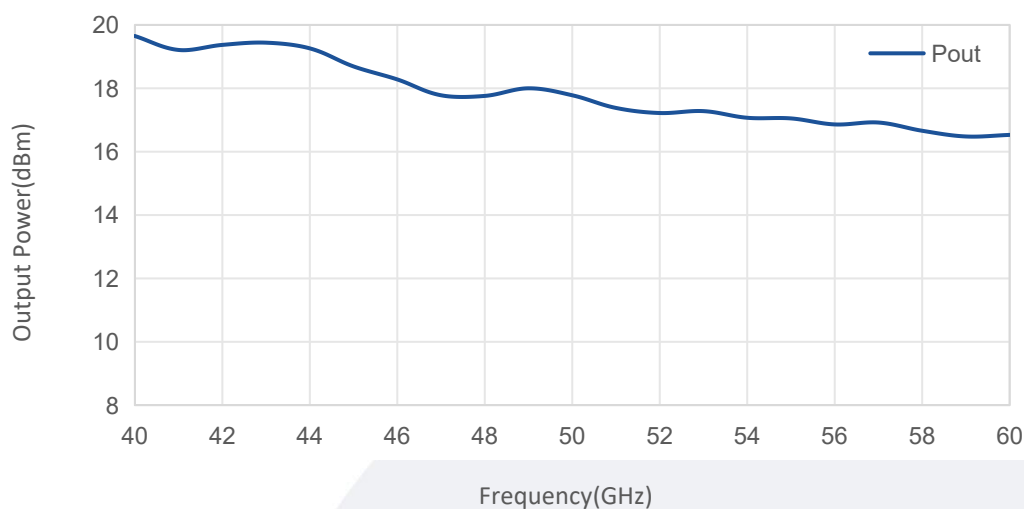
Parameter	Min	Typ	Max	Units
Operating Temperature	-10		+65	°C
Non-operating Temperature	-45		+85	°C
Relative humidity		95		%
Altitude	50,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

Ordering Information:

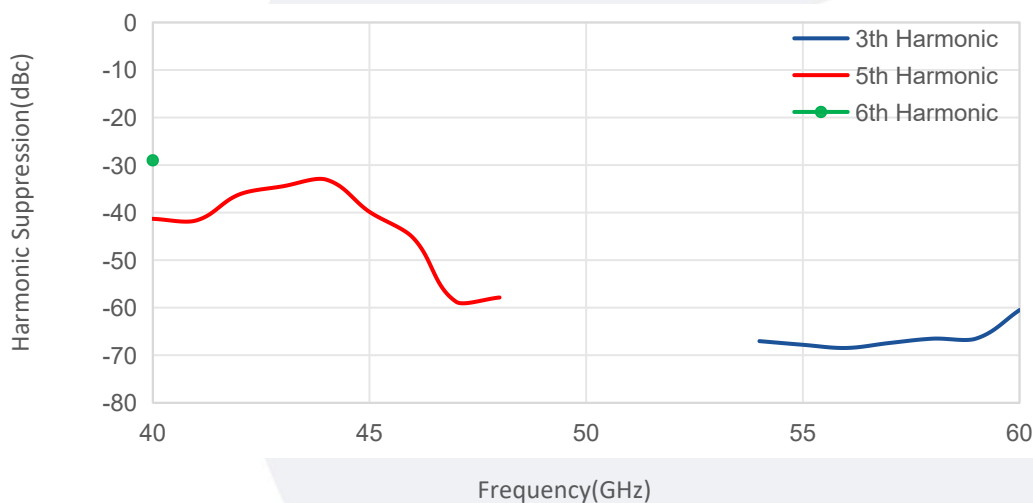
Base Number	Description	Revision
TMAM-040060-0415-19	Active Multiplier,X4,40-60GHz, Output Power:16dBm,WR-19/UG-383/U,SMA Female	Rev.1.1

Typical Performance Data:

Output Power vs Frequency



Harmonic Suppression 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.