

E-Band, Active Frequency Multiplier

WR-12/X4/60-90GHz/12dBm Output Power

Model: TMAM-060090-0412-12

TMAM-060090-0412-12 is an active X4 frequency multiplier. The multiplier has an input frequency of 15 to 22.5 GHz with a typical input power of +5 dBm and an output frequency of 60 to 90 GHz with a typical output power of 12 dBm. The DC power requirement for the multiplier is +12 V DC/200 mA. The input port configuration is a female SMA connector and the output is a WR-12 waveguide with a UG-387/U-M anti-cocking flange.

Features:

- Output Frequency: 60-90GHz
- Output Power: 12dBm Typ
- Low power consumption

Applications:

- Frequency Extenders
- THz Systems

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Output Frequency	60		90	GHz
Output Power		12		dBm
Input Frequency	15		22.5	GHz
Input Power	3	5	7	dBm
Multiply Factor		4		
Harmonic		-20		dBc
DC Voltage		12		V
DC Supply Current		200		mA

Mechanical Specifications:

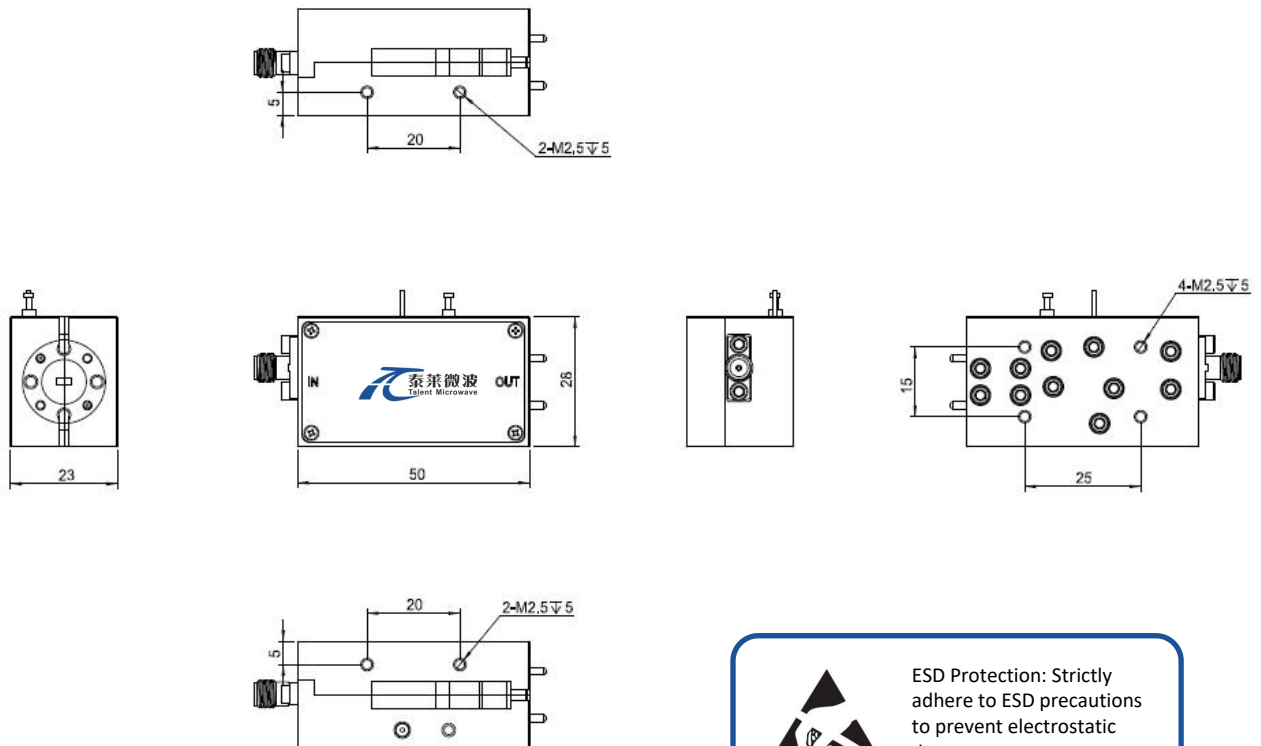
Parameter	Value	Units
Output Connector	WR-12/UG-387/U	
Input Connector	SMA Female	
DC Bias	Solder Pin	
Size	50*28*23	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15V
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.

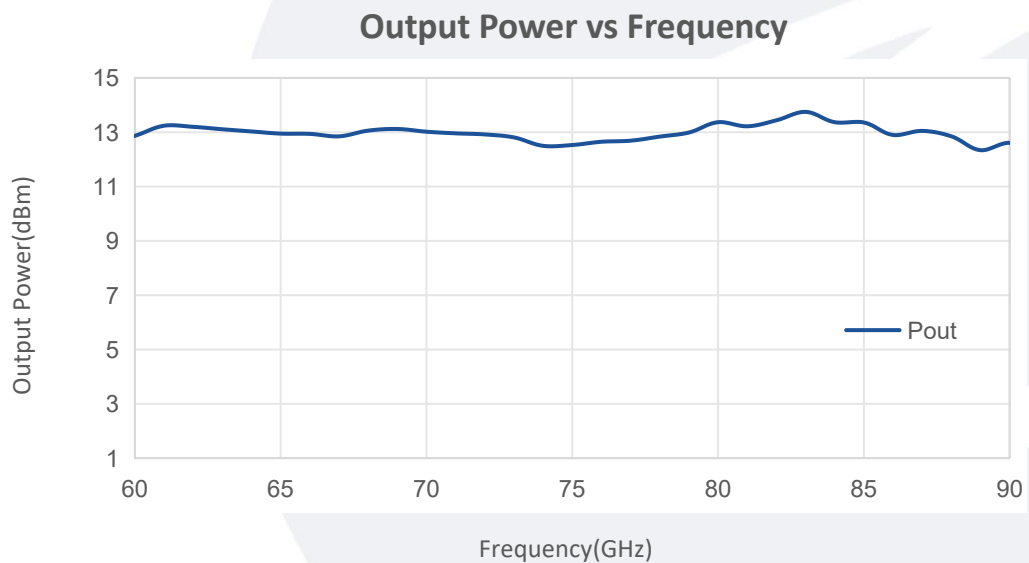
Environmental Conditions:

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-060090-0412-12	Active Multiplier, X4, 60-90GHz, Output Power:12dBm,WR-12/UG-387/U,SMA Female	Rev.1.1

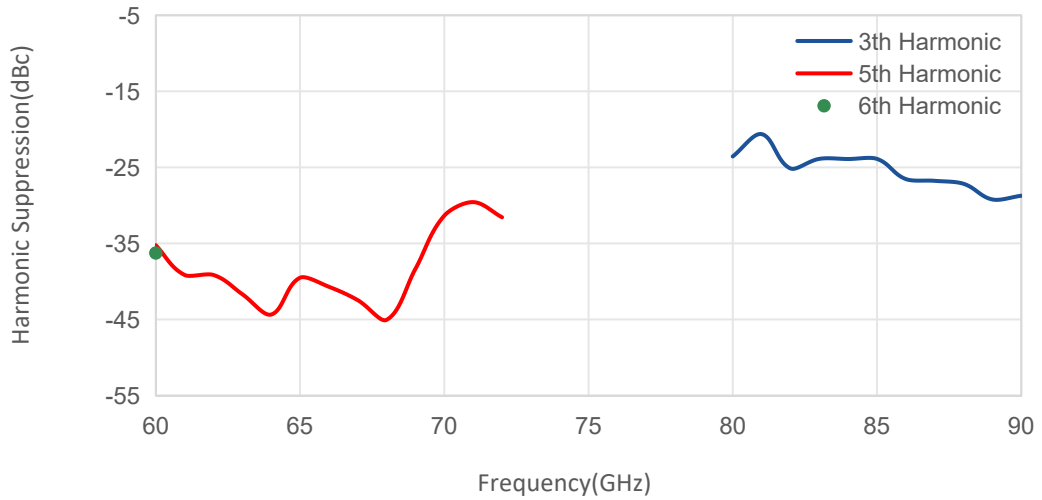
Typical Performance Data:



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.

Typical Performance Data:

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.