

## E-Band, Active Frequency Multiplier

WR-12/X6/ 60-90GHz /16dBm Output Power

Model: TMAM-060090-0616-12

TMAM-060090-0616-12 is an active X6 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 60 to 90 GHz with a typical output power of +16 dBm. The DC power requirement for the multiplier is +12 V DC/290 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 :16dBm Typ
- Low power consumption

### Applications:

- Frequency Extenders
- THz Systems

### Electrical Characteristics:

| Parameter         | Min | Typ | Max | Units |
|-------------------|-----|-----|-----|-------|
| Output Frequency  | 60  |     | 90  | GHz   |
| Output Power      |     | 16  |     | dBm   |
| Input Frequency   | 10  |     | 15  | GHz   |
| Input Power       | 3   | 5   | 7   | dBm   |
| Multiply Factor   |     | 6   |     |       |
| Harmonic          |     | -30 |     | dBc   |
| DC Voltage        |     | 12  |     | V     |
| DC Supply Current |     | 290 |     | mA    |

### Mechanical Specifications:

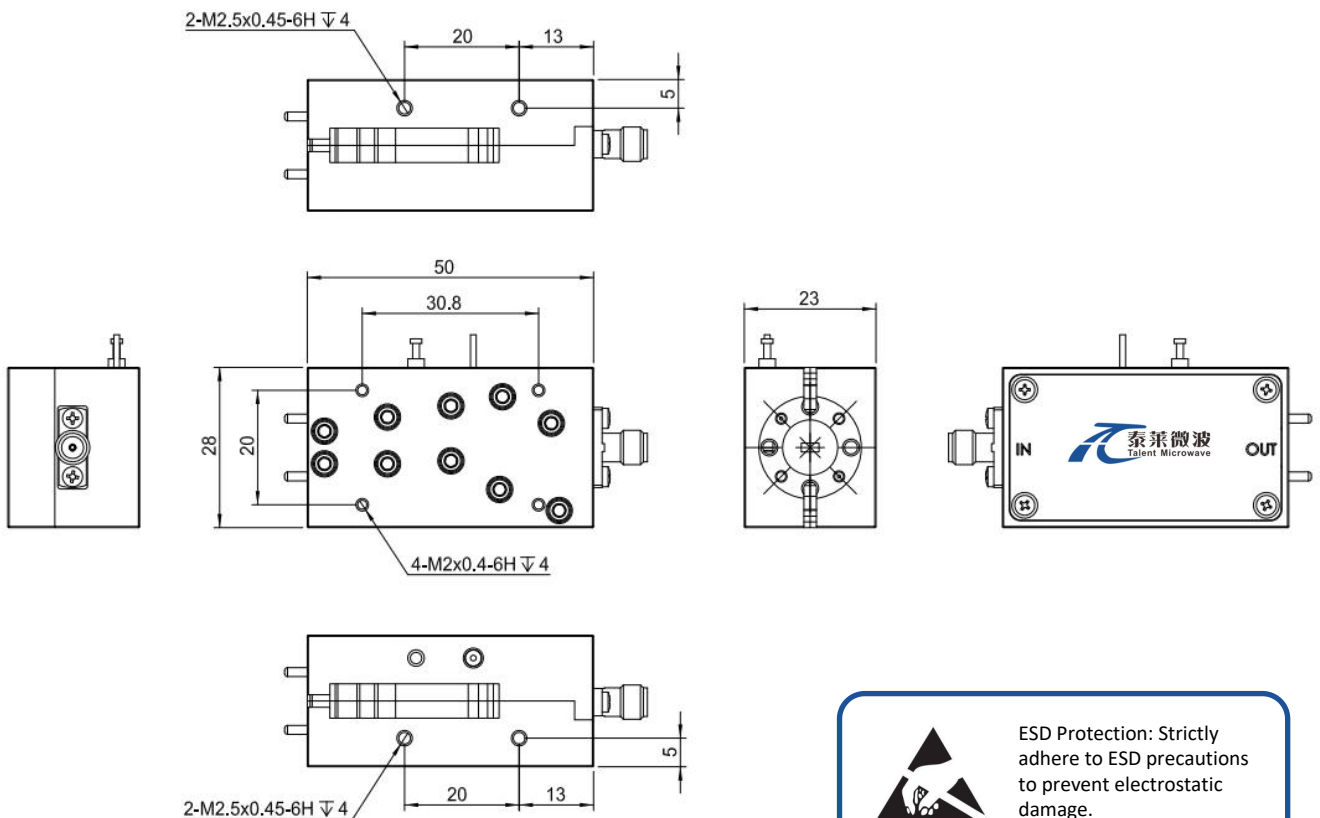
| Parameter        | Value          | Units |
|------------------|----------------|-------|
| Output Connector | WR-12/UG-387/U |       |
| Input Connector  | SMA Female     |       |
| DC Bias          | Solder Pin     |       |
| Size             | 50*28*23       | mm    |

## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +15 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.

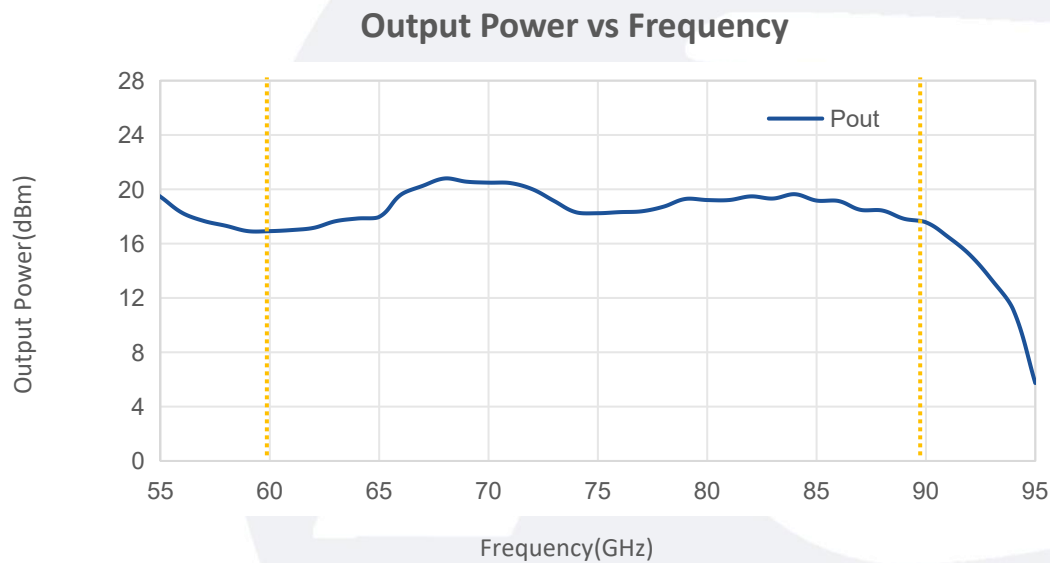
### Environmental Conditions:

| 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:

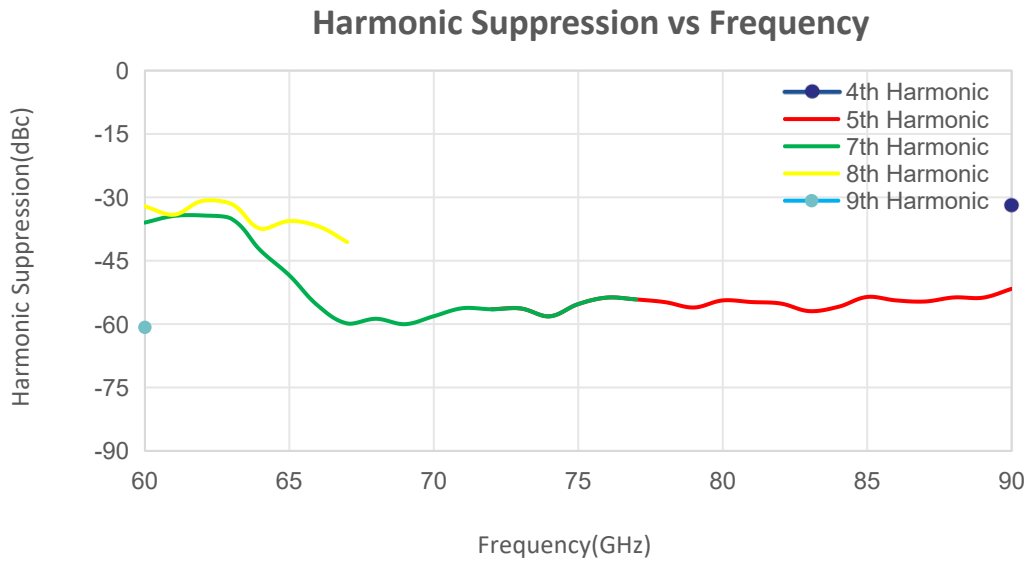
| Base Number         | Description                                                                 | Revision |
|---------------------|-----------------------------------------------------------------------------|----------|
| TMAM-060090-0616-12 | Active Multiplier,X6,60-90GHz, Output Power:16dBm,WR-12/UG-387/U,SMA Female | 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.

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