

## E-band,Active Frequency Multiplier

**WR-12/X6/ 71-86GHz /13dBm Output Power**

**Model: TMAM-071086-0613-12**

TMAM-071086-0613-12 is an active X6 frequency multiplier. The multiplier has an input frequency of 11.83 to 14.33 GHz with a typical input power of +5 dBm and an output frequency of 71 to 86 GHz with a typical output power of +13 dBm. The DC power requirement for the multiplier is +5 V DC. 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:71-86GHz
- Output Power :13dBm Typ
- Low power consumption

### Applications:

- Frequency Extenders
- THz Systems

### Electrical Characteristics:

| Parameter            | Min   | Typ | Max   | Units |
|----------------------|-------|-----|-------|-------|
| Output Frequency     | 71    |     | 86    | GHz   |
| Output Power         |       | 13  |       | dBm   |
| Input Frequency      | 11.83 |     | 14.33 | GHz   |
| Input Power          | 3     | 5   | 10    | dBm   |
| Multiply Factor      |       | 6   |       |       |
| Harmonic Suppression |       |     | -20   | dBc   |
| DC Voltage           |       | 5   |       | V     |
| DC Supply Current    |       | 150 |       | mA    |

### Mechanical Specifications:

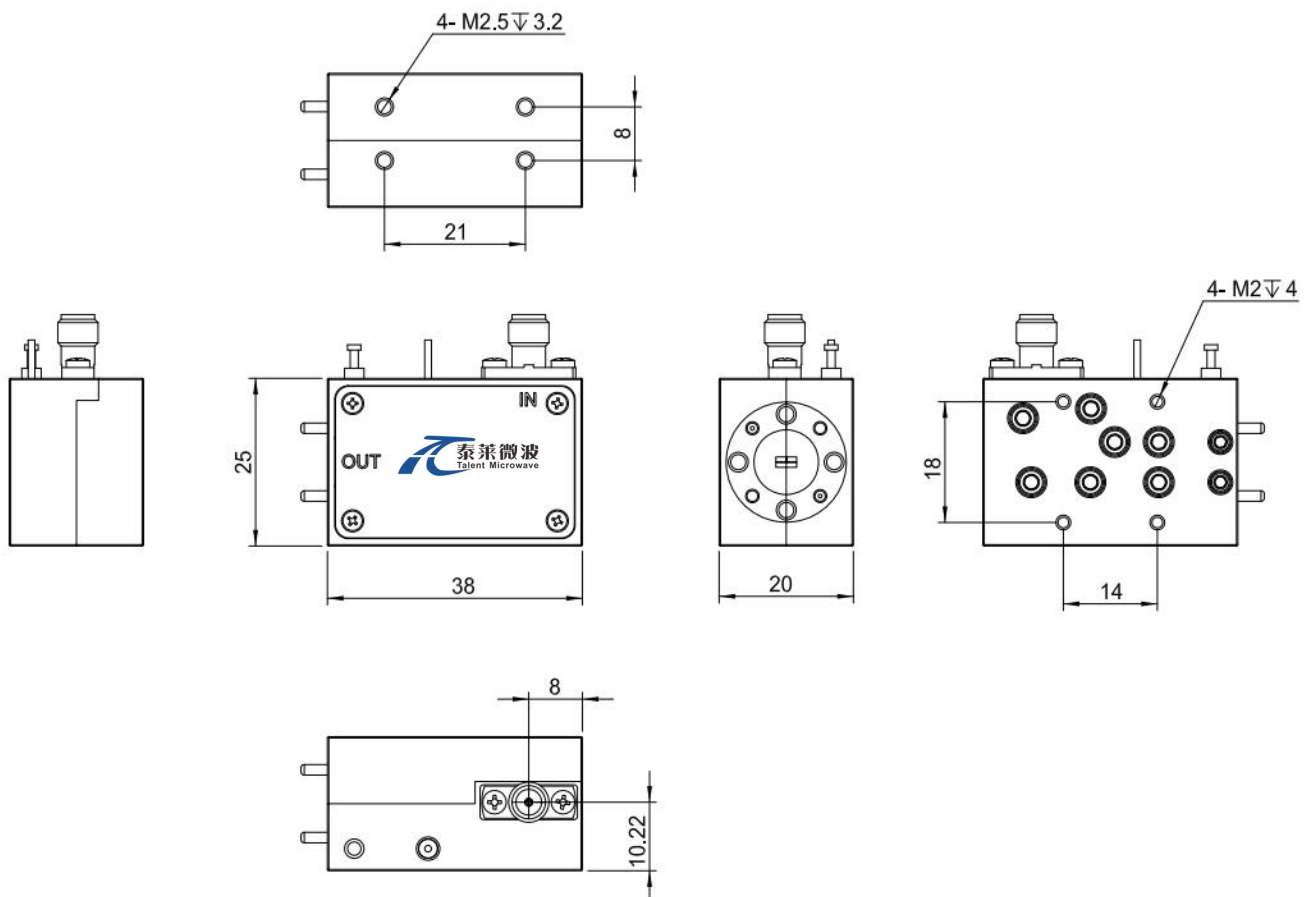
| Parameter        | Value          | Units |
|------------------|----------------|-------|
| Output Connector | WR-12/UG-387/U |       |
| Input Connector  | SMA Female     |       |
| DC Bias          | Solder Pin     |       |
| Size             | 38*25*20       | mm    |

## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +8 V                 |
| RF Input Power        | +12 dBm              |
| ESD sensitivity (HBm) | Class 0, passed 150V |

## Outline Drawing:

Unit:mm



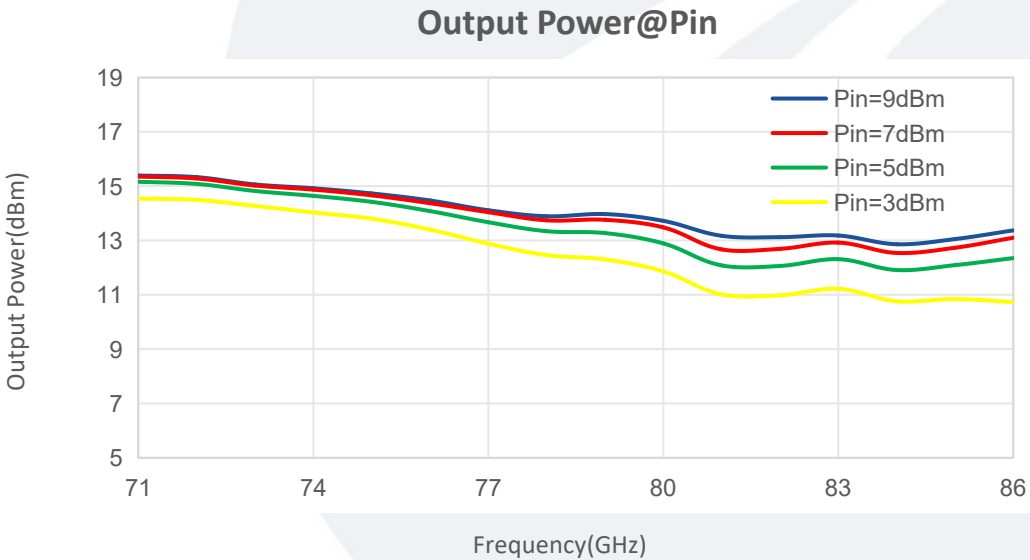
### Environmental Conditions:

| 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-071086-0613-12 | Active Multiplier,X6,71-86GHz, Output Power:13dBm,WR-12/UG-387/U,SMA Female | Rev.1.1  |

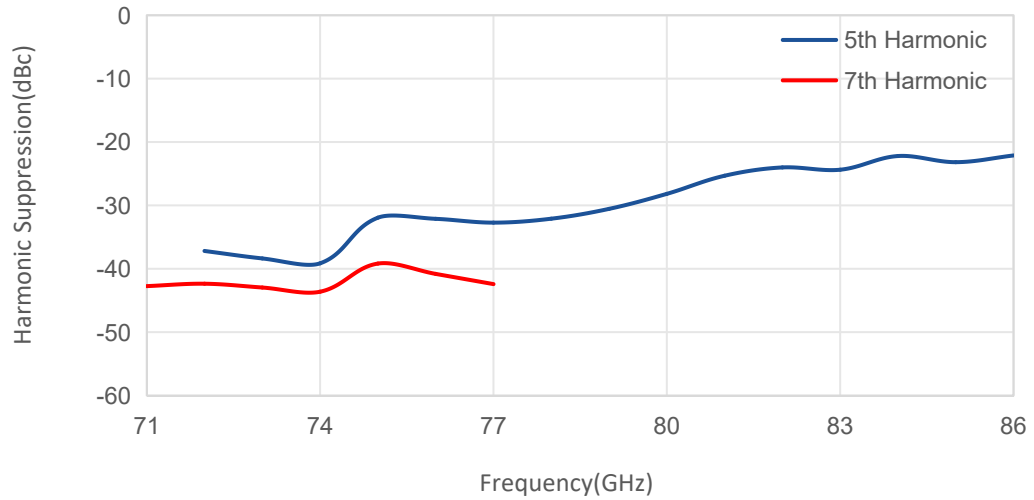
### Typical Performance Data:



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



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