

## E-Band, Active Frequency Multiplier

WR-12/X2/71-86GHz /13dBm Output Power

Model: TMAM-071086-0213-12

TMAM-071086-0213-12 is an active X2 frequency multiplier. The multiplier has an input frequency of 30.5 to 43 GHz with a typical input power of +0 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 +5.5 V DC/460 mA. The input port configuration is a female 2.4mm 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   | 30.5 |     | 43  | GHz   |
| Input Power       | -2   | 0   | 2   | dBm   |
| Multiply Factor   |      | 2   |     |       |
| DC Voltage        |      | 5.5 |     | V     |
| DC Supply Current |      | 460 |     | mA    |

### Mechanical Specifications:

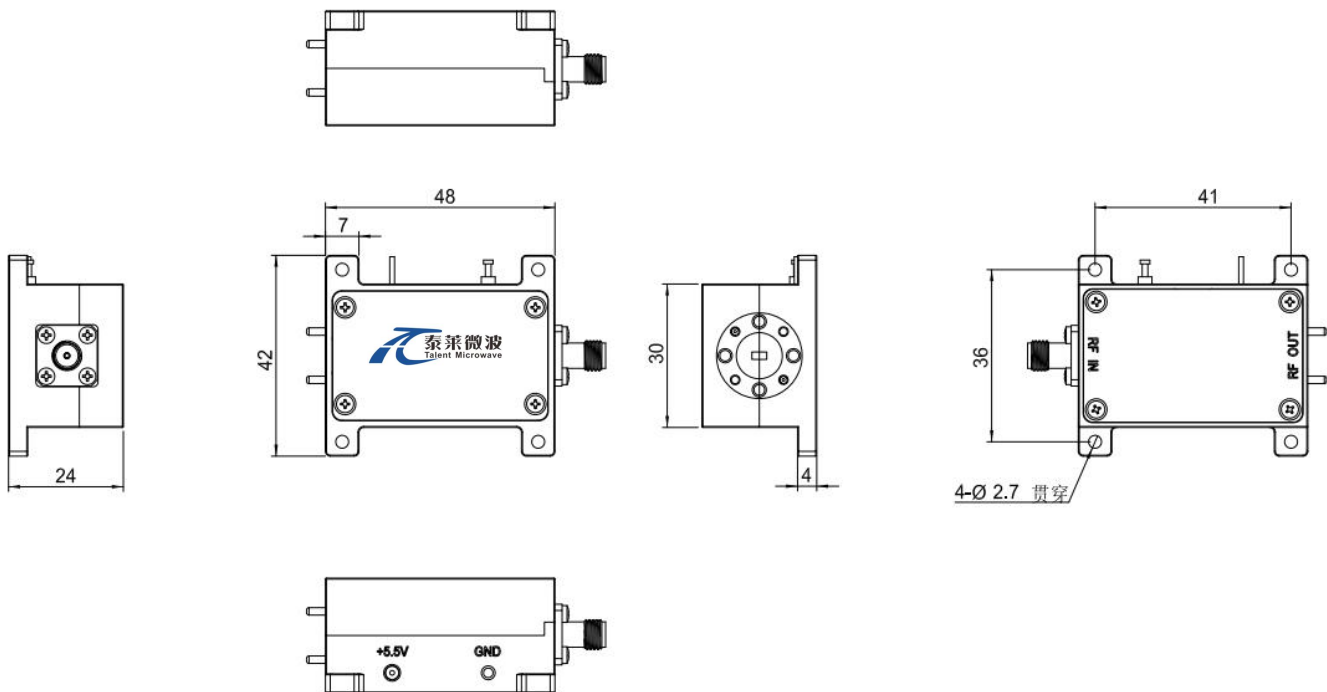
| Parameter        | Value          | Units |
|------------------|----------------|-------|
| Output Connector | WR-12/UG-387/U |       |
| Input Connector  | 2.4mm Female   |       |
| DC Bias          | Solder Pin     |       |
| Size             | 48*42*24       | mm    |

## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +10 V                |
| RF Input Power        | +5 dBm               |
| ESD sensitivity (HBm) | Class 0, passed 150V |

## Outline Drawing:

Unit:mm



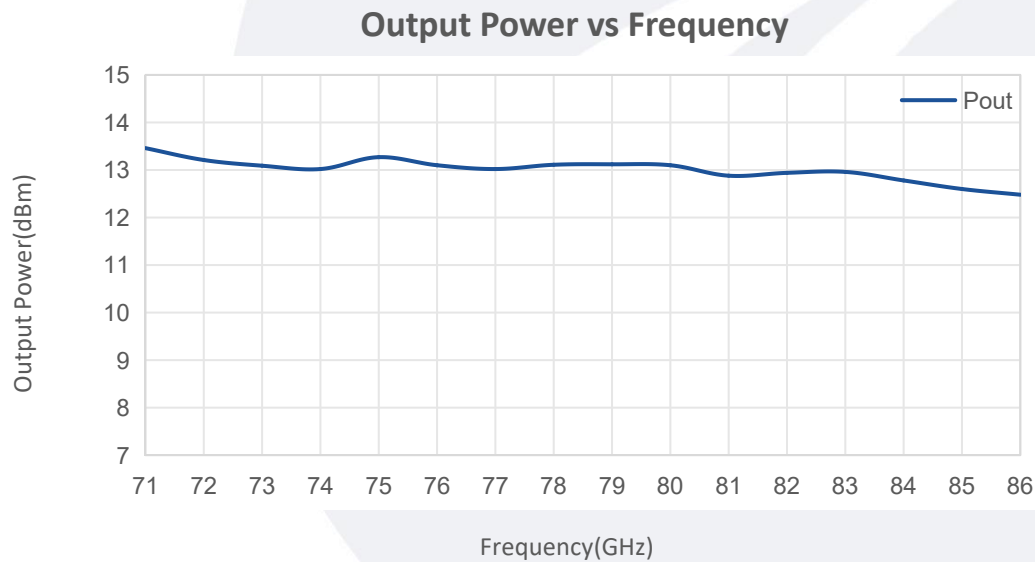
### Environmental Conditions:

| 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         | Desciption                                                                    | Revision |
|---------------------|-------------------------------------------------------------------------------|----------|
| TMAM-071086-0213-12 | Active Multiplier,X2,71-86GHz, Output Power:13dBm,WR-12/UG-387/U,2.4mm 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.