

## W-Band, Active Frequency Multiplier

WR-10/X6/75-110GHz /13dBm Output Power

Model: TMAM-075110-0613-10-E

TMAM-075110-0613-10-E is an active X6 frequency multiplier. The multiplier has an input frequency of 12.5 to 18.34 GHz with a typical input power of +5 dBm and an output frequency of 75 to 110 GHz with a typical output power of +13 dBm. The DC power requirement for the multiplier is +12 V DC. The input port configuration is a female SMA connector and the output is a WR-10 waveguide with a UG-387/U-M anti-cocking flange.

### Features:

- Output Frequency:75-110GHz
- Output Power: 13dBm Typ
- Low power consumption

### Applications:

- Frequency Extenders
- THz Systems

### Electrical Characteristics:

| Parameter            | Min  | Typ | Max   | Units |
|----------------------|------|-----|-------|-------|
| Output Frequency     | 75   |     | 110   | GHz   |
| Output Power         |      | 13  |       | dBm   |
| Input Frequency      | 12.5 |     | 18.34 | GHz   |
| Input Power          | 3    | 5   | 7     | dBm   |
| Multiply Factor      |      | 6   |       |       |
| Harmonic Suppression |      | -15 |       | dBc   |
| DC Voltage           |      | 12  |       | V     |
| DC Supply Current    |      | 150 |       | mA    |

### Mechanical Specifications:

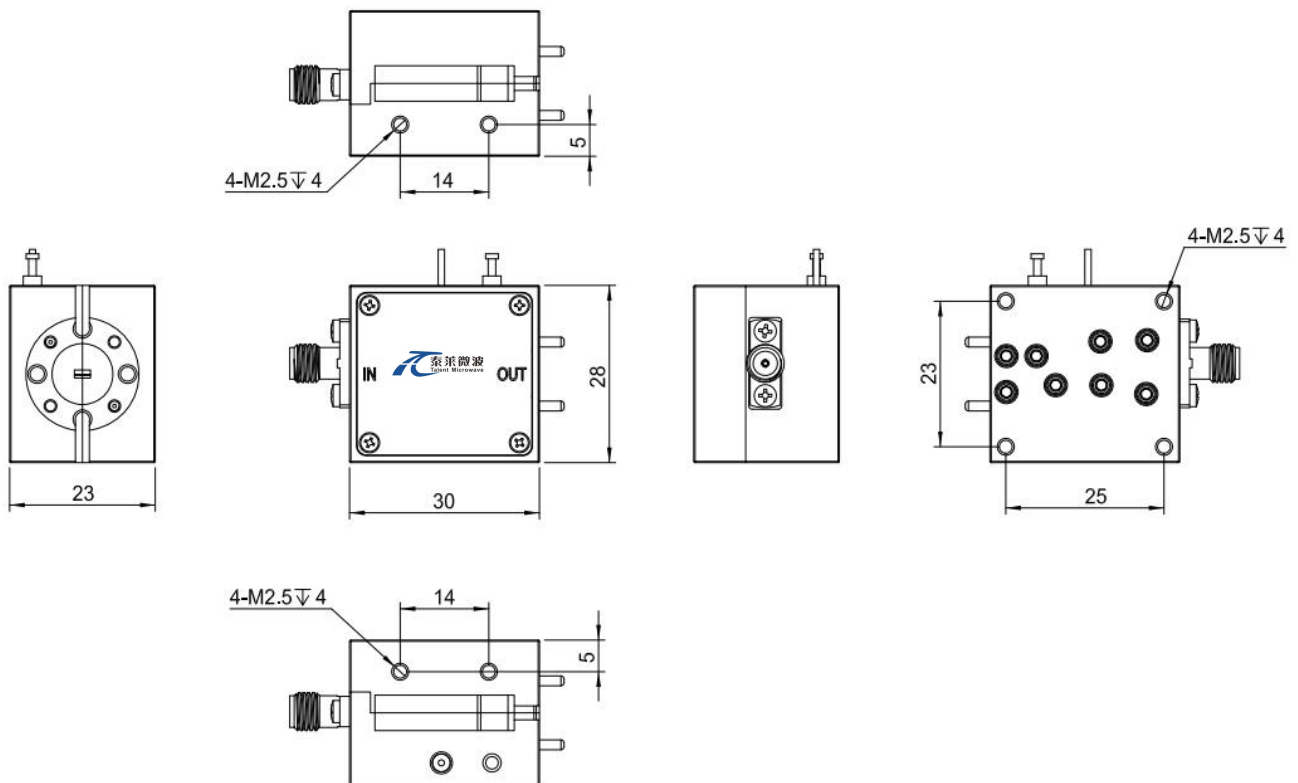
| Parameter        | Value          | Units |
|------------------|----------------|-------|
| Output Connector | WR-10/UG-387/U |       |
| Input Connector  | SMA Female     |       |
| DC Bias          | Solder Pin     |       |
| Size             | 30*28*23       | mm    |

## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +15 V                |
| RF Input Power        | +8 dBm               |
| ESD sensitivity (HBm) | Class 0, passed 150V |

## Outline Drawing:

Unit:mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

### Environmental Conditions:

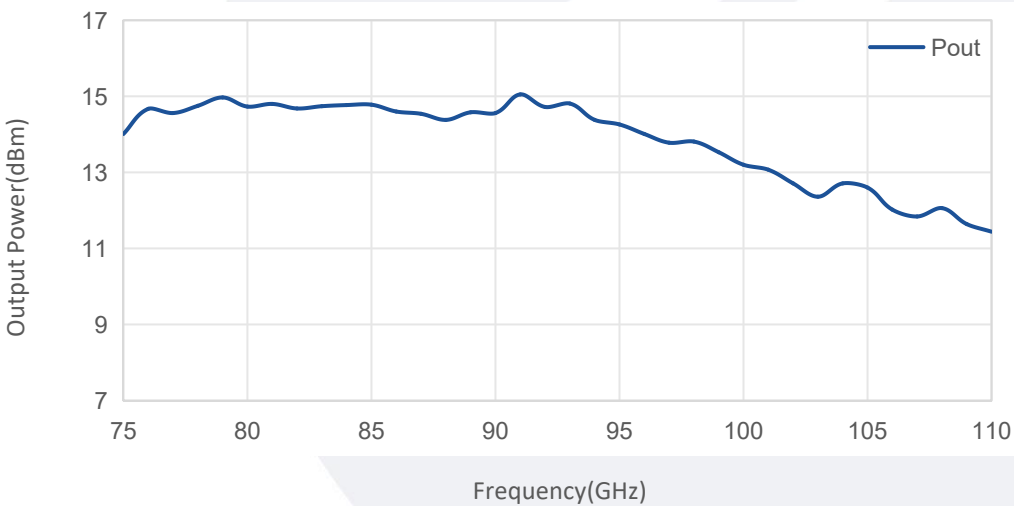
| Parameter                       | Min                                                 | Typ | Max | Units |
|---------------------------------|-----------------------------------------------------|-----|-----|-------|
| Operating Temperature           | -10                                                 |     | +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-075110-0613-10-E | Active Multiplier,X6,75-110GHz, Output Power:13dBm,WR-10/UG-387/U,SMA Female | Rev.1.1  |

### Typical Performance Data:

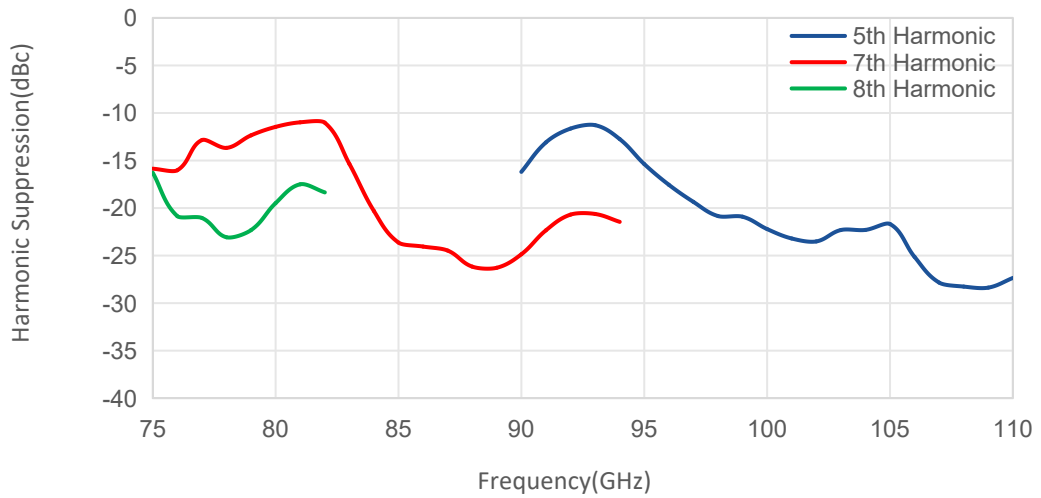
Output Power vs Frequency



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.

## 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.