

## D-Band, Active Frequency Multiplier

**WR-6.5/X12/110-170GHz/17dBm Output Power**

**Model: TMAM-110170-1217-06**

TMAM-110170-1217-06 is an active X12 frequency multiplier. The multiplier has an input frequency of 9.16 to 14.17 GHz with a typical input power of 5 dBm and an output frequency of 110 to 170 GHz with a typical output power of +17 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-6.5 waveguide with a UG-387/U-M anti-cocking flange.

### Features:

- Output Frequency: 110-170GHz
- Output Power: 17dBm Typ
- Low power consumption

### Applications:

- Frequency Extenders
- THz Systems

### Electrical Characteristics:

| Parameter            | Min  | Typ | Max   | Units |
|----------------------|------|-----|-------|-------|
| Output Frequency     | 110  |     | 170   | GHz   |
| Output Power         |      | 17  |       | dBm   |
| Input Frequency      | 9.16 |     | 14.17 | GHz   |
| Input Power          |      | 5   |       | dBm   |
| Multiply Factor      |      | 12  |       |       |
| Harmonic Suppression |      | -15 |       | dBc   |
| DC Voltage           |      | 12  |       | V     |

### Mechanical Specifications:

| Parameter        | Value           | Units |
|------------------|-----------------|-------|
| Output Connector | WR-6.5/UG-387/U |       |
| Input Connector  | SMA Female      |       |
| DC Bias          | Solder Pin      |       |
| Size             | 50*28*23        | mm    |

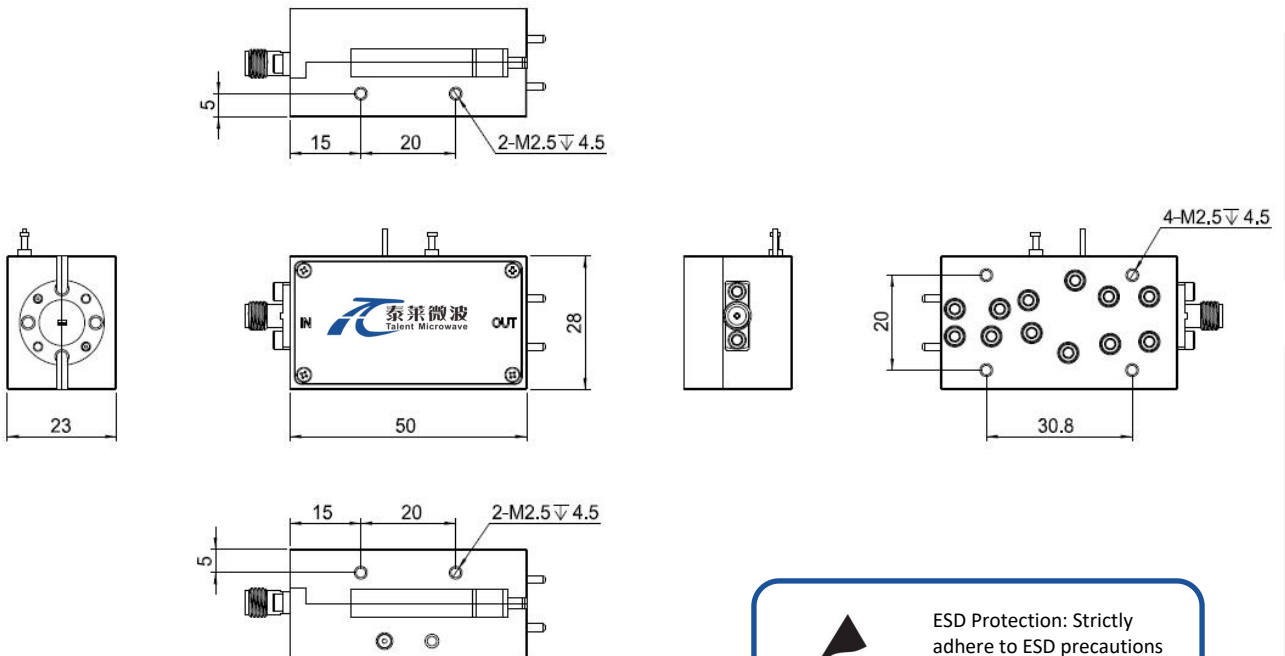
## Absolute Maximum Ratings:

| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +15 V                |
| RF Input Power        | 10dBm                |
| ESD sensitivity (HBm) | Class 0, passed 150V |

## Outline Drawing:

Unit:mm

## Regulatory Compliance:



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-110170-1217-06 | Active Multiplier,X12,110-170GHz, Output Power:17dBm,WR-6.5/UG-387/U,SMA Female | Rev.1.1  |