



# RHU2AM THRU RHU2MM

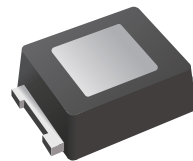
## Surface Mount Ultra Fast Recovery Rectifier

### Features

- Top-side Cooling(TSC) Packaging technology
- Compact and Slim Packaging Solutions
- For surface mounted applications
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

### Mechanical Data

- Case: SMHM
- Terminals: leads solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end



### Ordering Information

| Part Number       | Shipping           | Reel     |
|-------------------|--------------------|----------|
| RHU2AM THR RHU2MM | 15000PCS Tape&Reel | 13 inchs |

### Absolute Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

| Parameter                                                                                                    | Symbol                               | RHU2AM      | RHU2BM | RHU2DM | RHU2GM | RHU2JM | RHU2KM | RHU2MM | Unit |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------|--------|--------|--------|--------|--------|--------|------|
|                                                                                                              | Marking                              | U2A         | U2B    | U2D    | U2G    | U2J    | U2K    | U2M    |      |
| Maximum repetitive peak reverse voltage                                                                      | V <sub>RRM</sub>                     | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V    |
| Maximum RMS voltage                                                                                          | V <sub>RMS</sub>                     | 35          | 70     | 140    | 280    | 420    | 560    | 700    | V    |
| Maximum DC blocking voltage                                                                                  | V <sub>DC</sub>                      | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | V    |
| Maximum average forward rectified current                                                                    | I <sub>F(AV)</sub>                   | 2           |        |        |        |        |        |        | A    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)       | I <sub>FSM</sub>                     | 50          |        |        |        |        |        |        | A    |
| Maximum instantaneous forward voltage at 2.0A                                                                | V <sub>F</sub>                       | 1.0         |        |        | 1.3    | 1.65   |        |        | V    |
| Maximum DC reverse current     T <sub>A</sub> =25°C<br>at rated DC reverse voltage     T <sub>A</sub> =100°C | I <sub>R</sub>                       | 1<br>100    |        |        |        |        |        |        | μA   |
| Typical junction capacitance (Note1)                                                                         | C <sub>j</sub>                       | 20          |        |        |        |        |        |        | pF   |
| Maximum reverse recovery time (Note2)                                                                        | t <sub>rr</sub>                      | 50          |        |        |        | 75     |        |        | ns   |
| Typical thermal resistance (Note3)                                                                           | R <sub>θJA</sub><br>R <sub>θJC</sub> | 54<br>6     |        |        |        |        |        |        | °C/W |
| Operating and StorageTemperature Range                                                                       | T <sub>j</sub> , T <sub>stg</sub>    | -55 to +150 |        |        |        |        |        |        | °C   |

Note: (1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Measured with  $I_F = 0.5 A$ ,  $I_R = 1 A$ ,  $t_{rr} = 0.25 A$ .

(3) P.C.B. mounted with 0.08" × 0.08"(2mm × 2mm) copper pad areas.



### Characteristics Curves

Fig.1 Forward Current Derating Curve

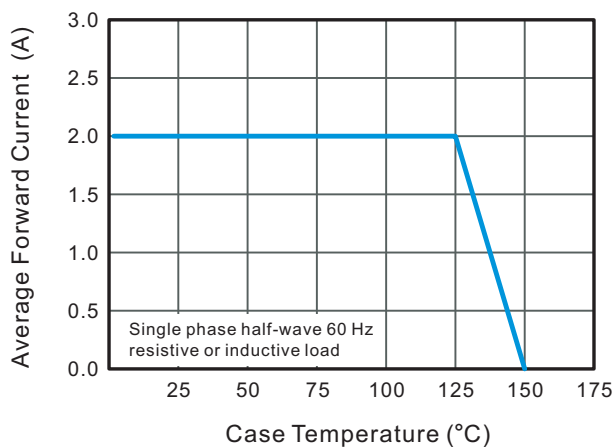


Fig.2 Typical Reverse Characteristics

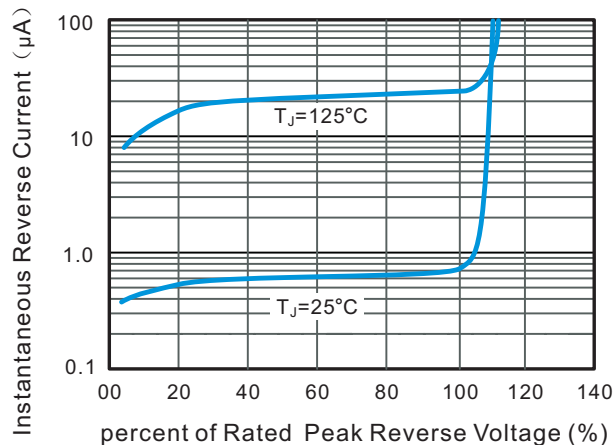


Fig.3 Typical Forward Characteristics

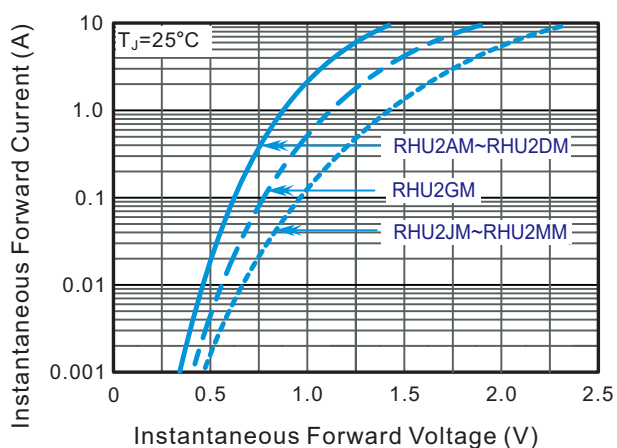
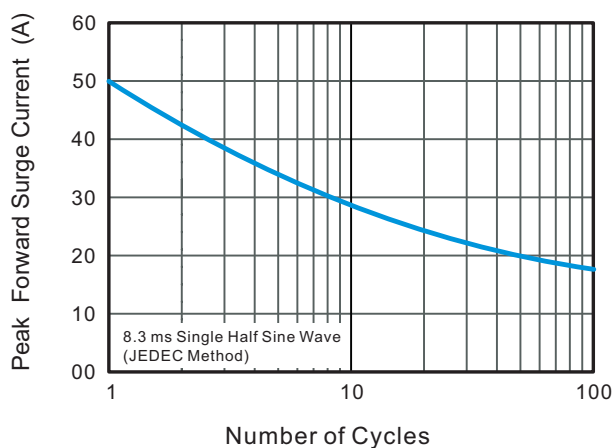


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current





# SMHM

Technical drawing of a square flange with a central hole, showing three views: Top View, Bottom View, and Front View.

- Top View:** Shows the square flange with a central hole. Dimensions include:
  - $D$ : Overall width of the flange.
  - $E$ : Overall height of the flange.
  - $f$ : Width of the central hole.
  - $e$ : Height of the central hole.
- Bottom View:** Shows the underside of the flange. Dimensions include:
  - $d$ : Width of the central hole.
  - $h$ : Thickness of the flange.
- Front View:** Shows the side profile of the flange. Dimensions include:
  - $A$ : Height of the flange.
  - $H_E$ : Overall width of the flange.
  - $C$ : Thickness of the flange.
  - $\angle$  ALL ROUND: Indicates rounded corners.

| UNIT |     | A    | C    | D    | E    | H <sub>E</sub> | d    | e    | f    | h    | ∠  |
|------|-----|------|------|------|------|----------------|------|------|------|------|----|
| mm   | max | 0.99 | 0.25 | 3.60 | 3.00 | 4.30           | 2.10 | 2.10 | 2.00 | 0.70 | 6° |
|      | min | 0.83 | 0.15 | 3.20 | 2.60 | 3.70           | 1.90 | 1.90 | 1.78 | 0.50 |    |

**SMHM**

1. Controlling dimension:in millimeters.
2. General tolerance:±0.05mm.
3. The pad layout is for reference purpose only.

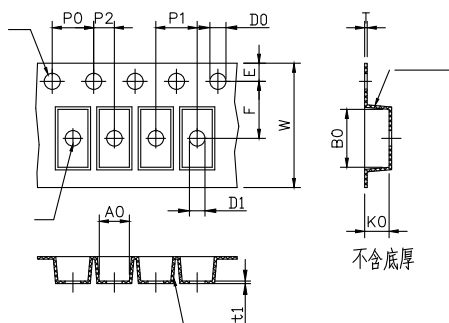


# RHU2AM THRU RHU2MM

## Surface Mount Ultra Fast Recovery Rectifier

### Carrier Tape Dimensions

Unit : mm

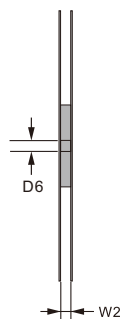
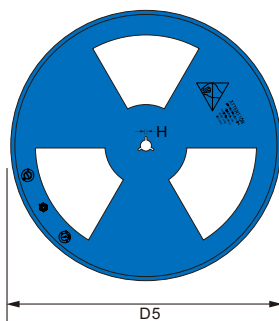


| Symbol | Spec      | Symbol | Spec      |
|--------|-----------|--------|-----------|
| W      | 12.0±0.10 | P2     | 2.00±0.10 |
| E      | 1.75±0.10 | t      | 0.25±0.03 |
| F      | 5.50±0.10 | t1     | 0.05+     |
| D0     | 1.55±0.10 | A0     | 3.05±0.10 |
| D1     | 1.50±0.10 | B0     | 4.15±0.10 |
| P0     | 4.00±0.10 | K0     | 1.15±0.10 |
| P1     | 4.00±0.10 |        |           |

### Reel Dimensions

Unit : mm

13" Reel



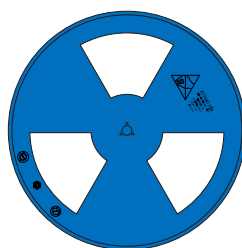
|    |            |
|----|------------|
| D5 | Φ330.0±5.0 |
| D6 | Φ13.5±0.5  |
| H  | 2.5±1.0    |
| W2 | 12±2.0     |

Quantity: 15000PCS

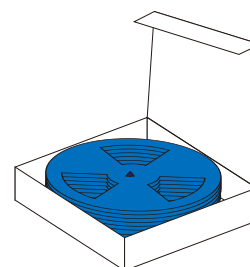
### Packaging



15000 PCS/Reel

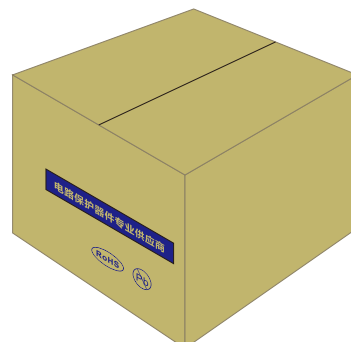


5 Reel/Inner Box  
75 KPCS/Inner Box



Dim(Unit:mm)  
340mm\*340mm\*85mm

Dim(Unit:mm)  
360mm\*360mm\*355mm



4 Boxes per carton  
300 KPCS per carton

13 inches Reel



### Recommended Soldering Conditions



#### Recommended Conditions

| Profile Feature                                      | Pb-Free Assembly |
|------------------------------------------------------|------------------|
| Average ramp-up rate ( $T_L$ to $T_P$ )              | 3°C/second max.  |
| Preheat                                              |                  |
| -Temperature Min ( $T_{S\ min}$ )                    | 150°C            |
| -Temperature Max ( $T_{S\ max}$ )                    | 200°C            |
| -Time (min to max) ( $t_s$ )                         | 60-180 seconds   |
| $T_{S\ max}$ to $T_L$                                |                  |
| -Ramp-up Rate                                        | 3°C/second max.  |
| Time maintained above:                               |                  |
| -Temperature ( $T_L$ )                               | 217°C            |
| -Time ( $t_L$ )                                      | 60-150 seconds   |
| Peak Temperature ( $T_P$ )                           | 260°C            |
| Time within 5°C of actual Peak Temperature ( $t_p$ ) | 20-40 seconds    |
| Ramp-down Rate                                       | 6°C/second max.  |
| Time 25°C to Peak Temperature                        | 8 minutes max.   |