



# RHB06 THRU RHB16

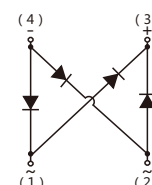
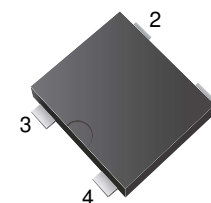
## Surface Mount Bridge Rectifier

### Features

- Reverse Voltage 600 to 1600V
- Forward Current 1 A
- High Surge Current Capability
- Designed for Surface Mount Application
- Lead free in comply with EU RoHS 2011/65/EU directives

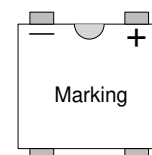
### Mechanical Data

- Case:LTB
- Terminal:Leads solderable per MIL-STD-750 Method 2026



### Ordering Information

| Part Number      | Shipping          | Reel      |
|------------------|-------------------|-----------|
| RHB06 THRU RHB16 | 5000PCS Tape&Reel | 13 inches |



### 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%.

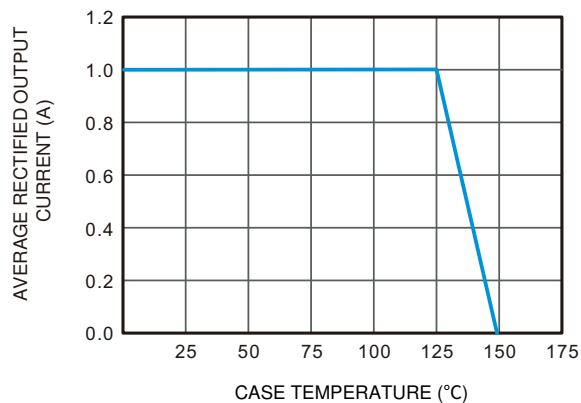
| Parameter                                                                                                           | Symbol         | RHB06      | RHB10 | RHB16 | Unit             |
|---------------------------------------------------------------------------------------------------------------------|----------------|------------|-------|-------|------------------|
|                                                                                                                     | Marking        | M06B       | M10B  | M16B  |                  |
| Maximum Repetitive Peak Reverse Voltage                                                                             | $V_{RRM}$      | 600        | 1000  | 1600  | V                |
| Maximum RMS voltage                                                                                                 | $V_{RMS}$      | 420        | 700   | 1120  | V                |
| Maximum DC Blocking Voltage                                                                                         | $V_{DC}$       | 600        | 1000  | 1600  | V                |
| Average Rectified Output Current<br>at $T_c = 125^\circ\text{C}$                                                    | $I_O$          | 1          |       |       | A                |
| Peak Forward Surge Current 8.3 ms Single Half<br>Sine Wave Superimposed on Rated Load<br>(JEDEC Method)             | $I_{FSM}$      | 40         |       | 25    | A                |
| Maximum Forward Voltage at 1 A                                                                                      | $V_F$          | 1          |       |       | V                |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage<br>@ $T_A=25^\circ\text{C}$<br>@ $T_A=125^\circ\text{C}$ | $I_R$          | 1<br>150   |       |       | $\mu\text{A}$    |
| Typical Junction Capacitance ( Note1 )                                                                              | $C_J$          | 20         |       |       | pF               |
| Operating and Storage Temperature Range                                                                             | $T_J, T_{stg}$ | -55 ~ +150 |       |       | $^\circ\text{C}$ |

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

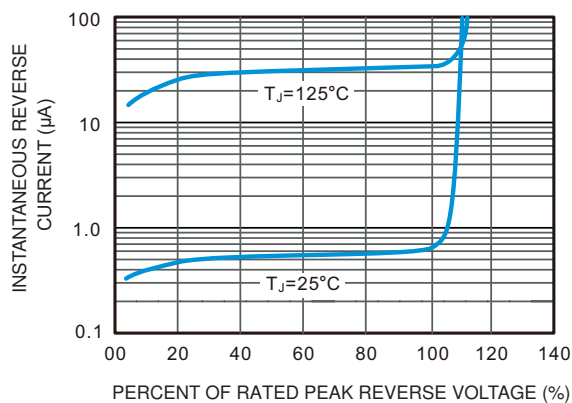


### Characteristics Curve

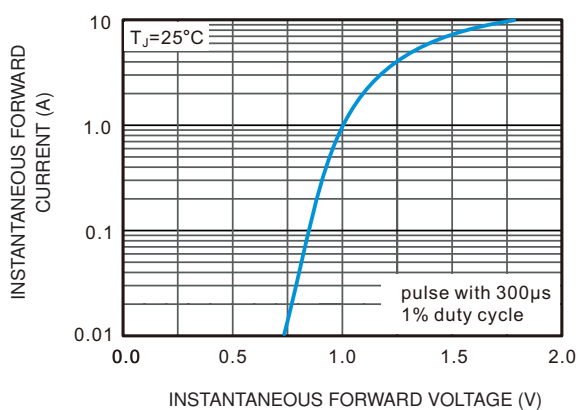
**FIG.1 AVERAGE RECTIFIED OUTPUT CURRENT DERATING CURVE**



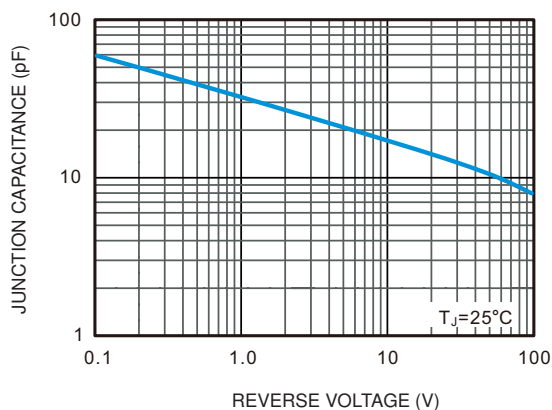
**FIG. 2 TYPICAL REVERSE CHARACTERISTICS**



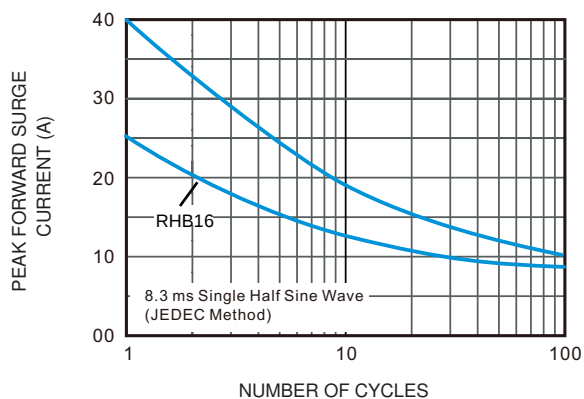
**FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 TYPICAL JUNCTION CAPACITANCE**

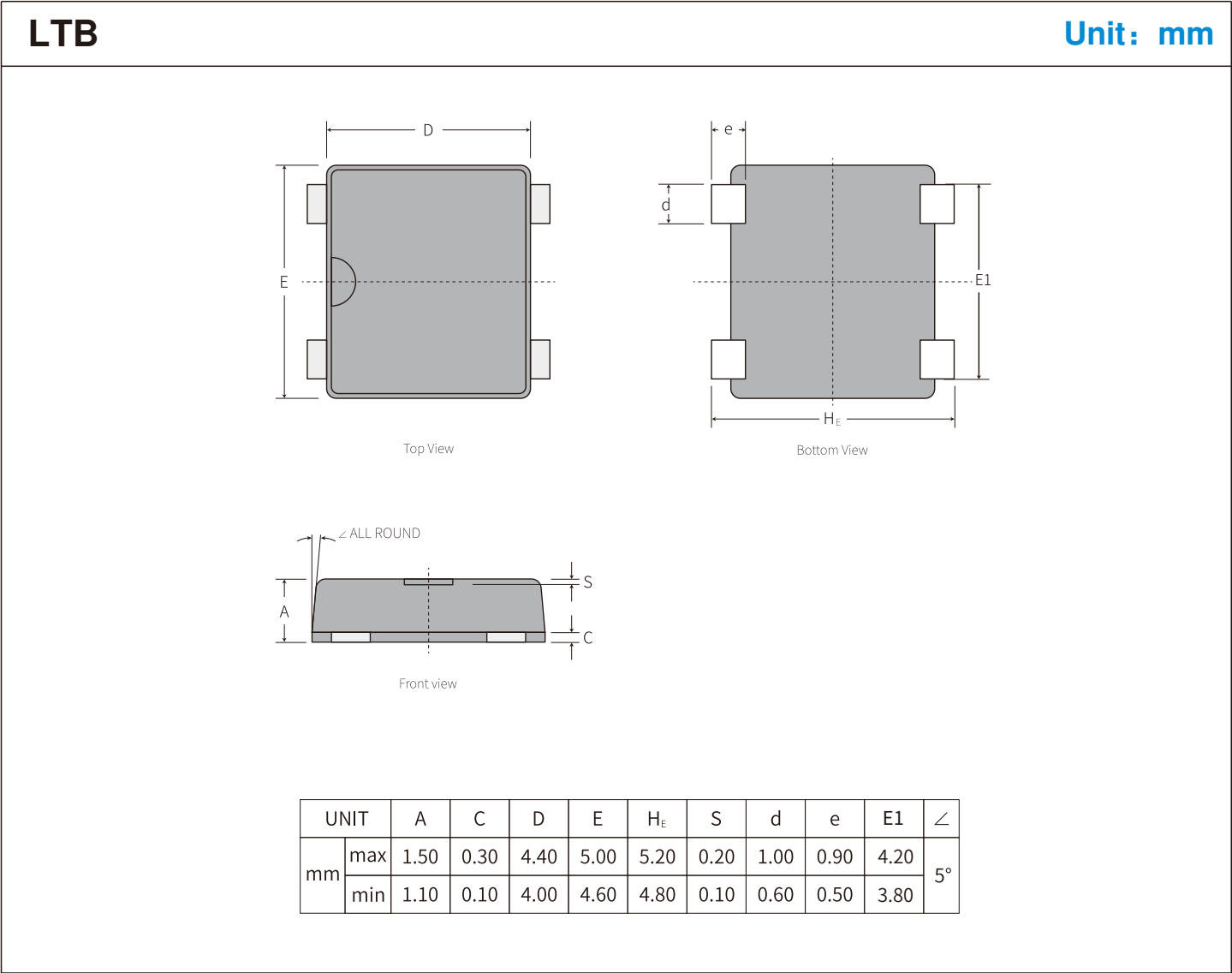


**FIG. 2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

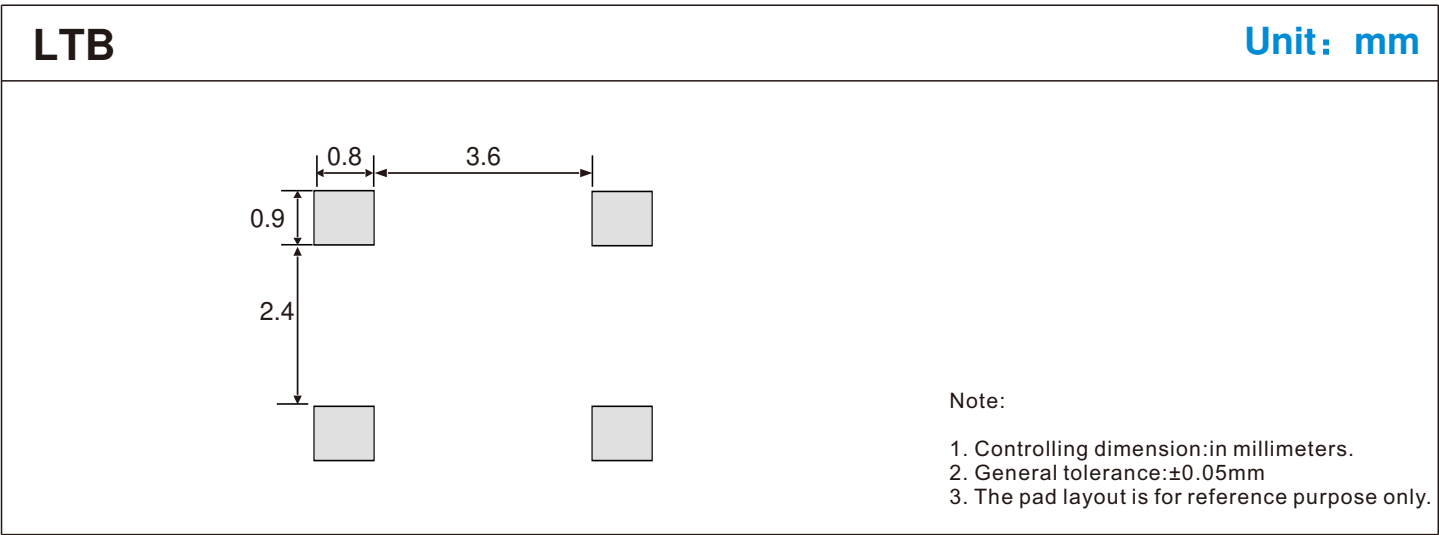




Package Outline



Suggested Pad Layout



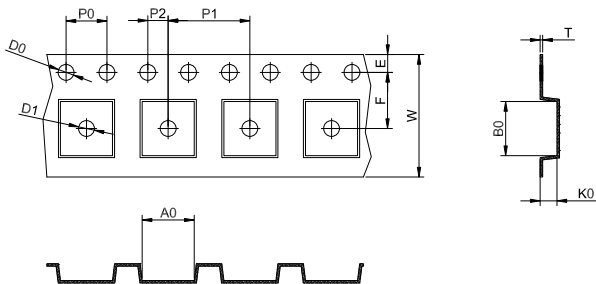


# RHB06 THRU RHB16

## Surface Mount Bridge Rectifier

### Carrier Tape Dimensions

Unit: mm

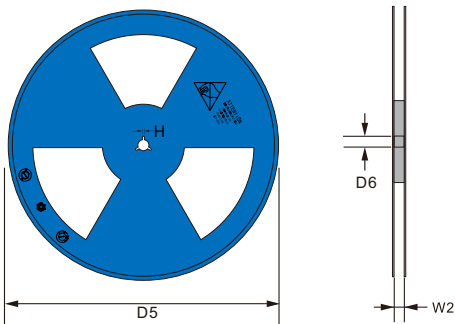


| Symbol | Spec       | Symbol | Spec      |
|--------|------------|--------|-----------|
| W      | 12.00±0.10 | P1     | 8.00±0.10 |
| E      | 1.75±0.10  | P2     | 2.00±0.05 |
| F      | 5.50±0.05  | T      | 0.25±0.02 |
| D0     | 1.55±0.05  | A0     | 5.10±0.10 |
| D1     | 1.55±0.10  | B0     | 5.30±0.10 |
| P0     | 4.00±0.10  | K0     | 1.65±0.05 |

### Reel Dimensions

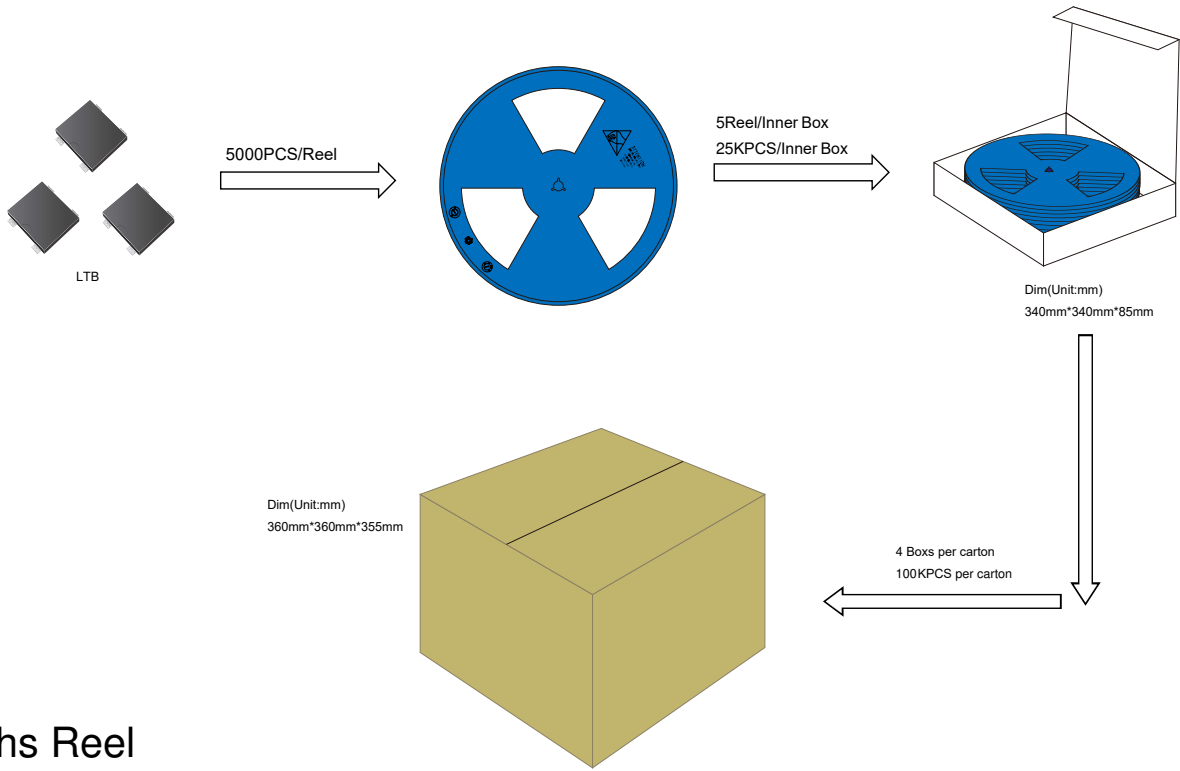
Unit: mm

13" Reel



|                   |            |
|-------------------|------------|
| D5                | Φ330.0±2.0 |
| D6                | Φ13.5±0.5  |
| H                 | 2.5±1.0    |
| W2                | 12±2.0     |
| Quantity: 5000PCS |            |

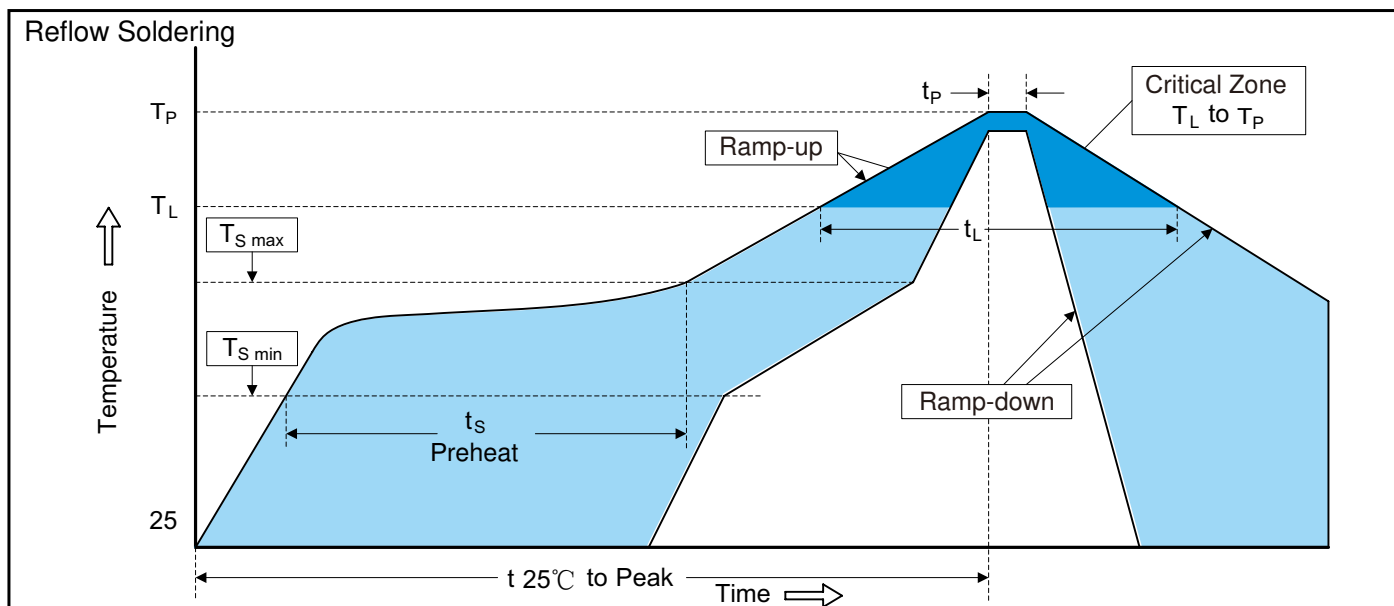
### Packaging



13 inchs 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.   |