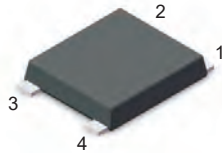


## Ultrasoft Recovery Bridge



MSB Package

### PINNING

| PIN | DESCRIPTION        |
|-----|--------------------|
| 1   | Input Pin (~)      |
| 2   | Input Pin (~)      |
| 3   | Output Anode (+)   |
| 4   | Output Cathode (-) |

### Features

- Glass Passivated Chip Junction
- Reverse Voltage - 1000 V
- Forward Current - HA
- High Surge Current Capability
- Designed For Surface Mount Application

### Benefits

- Case: MSB
- Terminals: Solderable Per MIL-STD-750
- Reduced power loss and switching transistor

### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

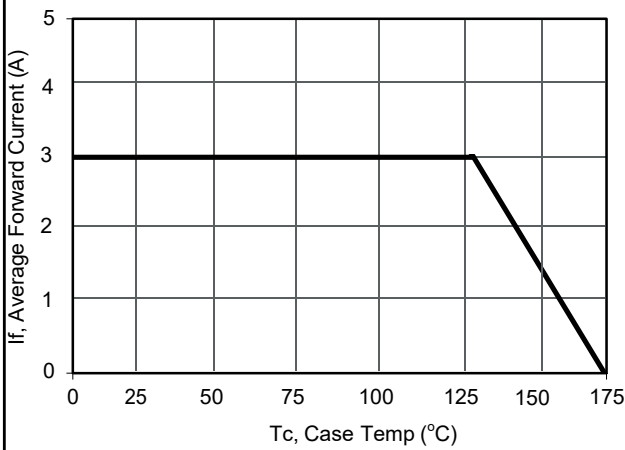
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter   | Symbols                                | WRMSB30JG  | WRMSB30KG | WRMSB30MG | Units            |
|---|--|------------|-----------|-----------|------------------|
| Maximum Repetitive Peak Reverse Voltage   | VRRM                                   | 600        | 800       | 1000      | V                |
| Maximum RMS voltage   | VRMS                                   | 420        | 560       | 700       | V                |
| Maximum DC Blocking Voltage   | VDC                                    | 600        | 800       | 1000      | V                |
| Average Rectified Output Current  | I <sub>o</sub>                         | 3.0        |           |           | A                |
| Reverse Recovery Time.<br>IF=0.5A,IR=1A,IRR=0.25A   | T <sub>rr</sub>                        | 10         |           |           | us               |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | IFSM                                   | 160        |           |           | A                |
| I <sup>2</sup> t rating for fusing ( 1ms< t < 10ms)   | I <sup>2</sup> t                       | 128        |           |           | A <sup>2</sup> S |
| Maximum Forward Voltage at 1.5 A  | V <sub>F</sub>                         | 1.1        |           |           | V                |
| Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=125 °C                      | I <sub>R</sub>                         | 5<br>100   |           |           | μA               |
| Typical Junction Capacitance (Note1)  | C <sub>j</sub>                         | 40         |           |           | pF               |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>stg</sub>      | -55 ~ +175 |           |           | °C               |
| Typical thermal resistance (Note 2)   | R <sub>thJC</sub><br>R <sub>thJA</sub> | 6<br>12    |           |           | °C/W             |

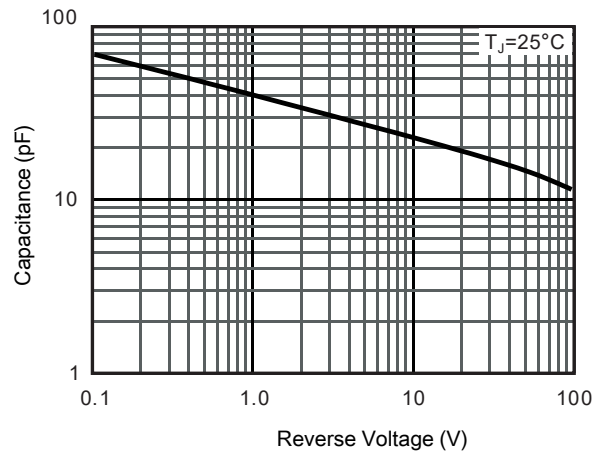
Note: 1. Measured at 1MHz and applied reverse voltage of 4 VDC.

2. Thermal resistance from Junction to case, lead and ambient in accordance with JESD-51. Unit mounted on 15mm\*12mm\*1.6mm AL pad attach 195mm\*195mm\*10mm steel plate

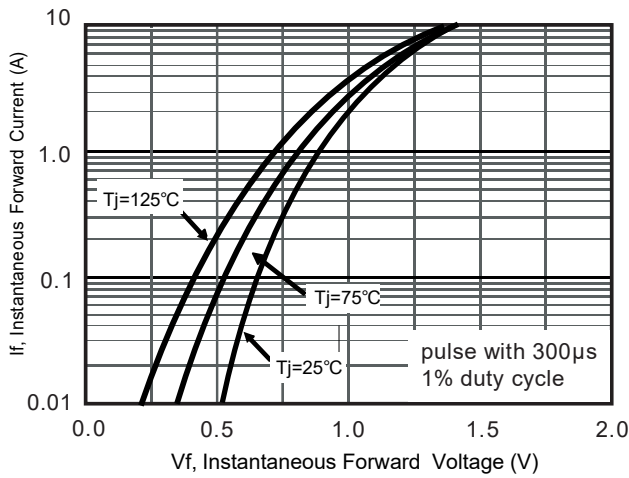
## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



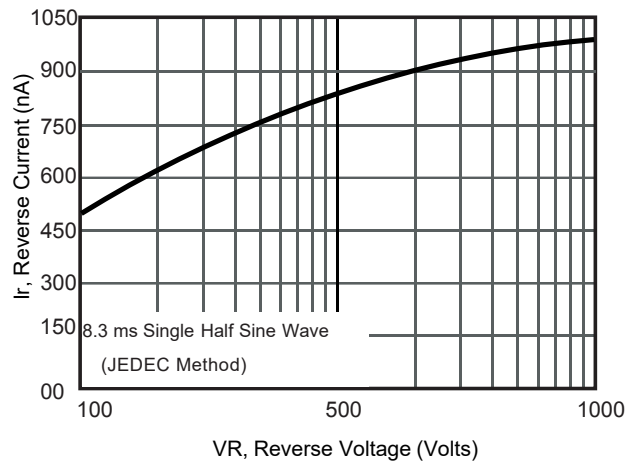
Current Derating, Case



Typical Junction Capacitance



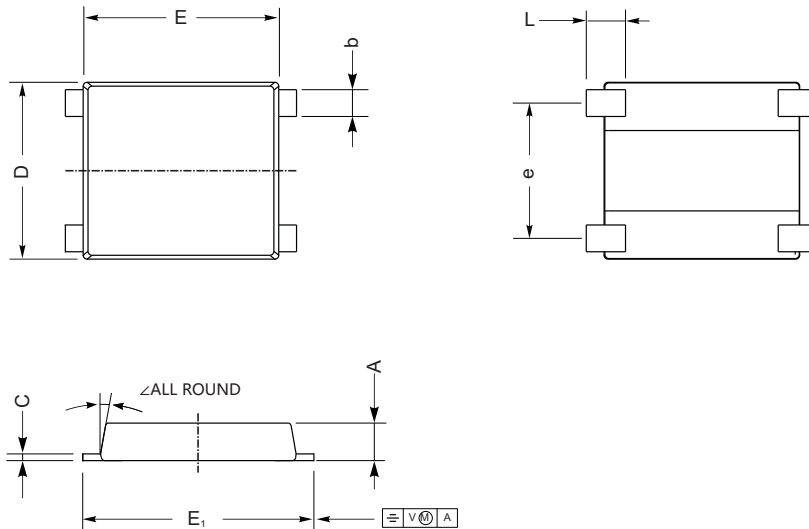
Typical Forward Voltage



Typical Reverse Current

## PACKAGE OUTLINE DIMENSIONS

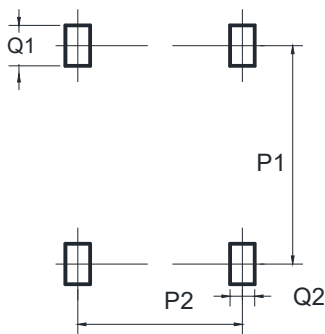
### MSB



### MSB mechanical data

| UNIT |     | A   | C    | D   | E   | E1  | L    | e   | b    | ∠  |
|------|-----|-----|------|-----|-----|-----|------|-----|------|----|
| mm   | max | 1.5 | 0.29 | 7.0 | 7.6 | 8.9 | 1.6  | 5.3 | 1.15 | 7° |
|      | min | 1.3 | 0.17 | 6.2 | 7.1 | 8.4 | 1.0  | 4.9 | 0.95 |    |
| mil  | max | 59  | 12   | 276 | 299 | 350 | 63   | 209 | 45   |    |
|      | min | 51  | 7    | 244 | 280 | 331 | 39.3 | 193 | 37   |    |

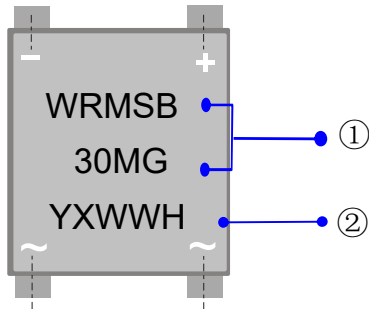
### MSB Suggested Pad Layout



| UNIT |     | P1     | P2     | Q1   | Q2    |
|------|-----|--------|--------|------|-------|
| mm   | min | 8.30   | 5.10   | 1.6  | 1.2   |
| mil  | min | 326.77 | 200.79 | 63.0 | 47.25 |

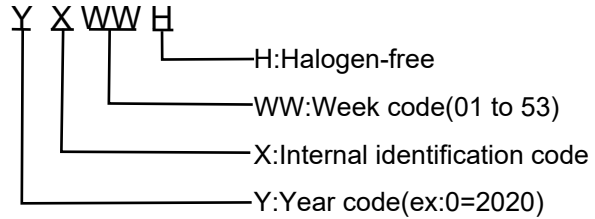
Dimensions is millimeters

## Marking Information



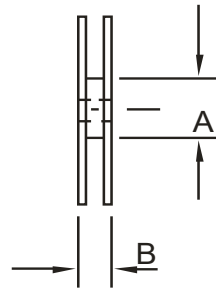
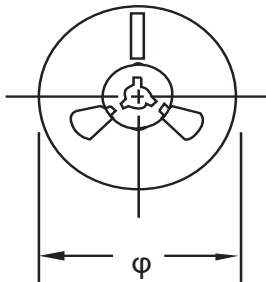
① Product model : WRMSB30JG or WRMSB30KG or WRMSB30MG

② PDC information:

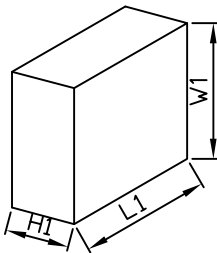


## Packaging Information

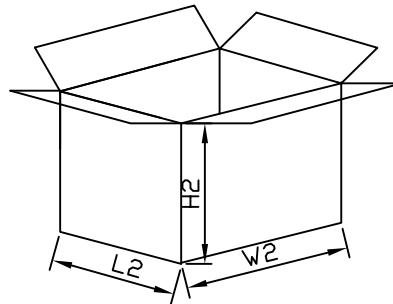
### 1.Reel Dimensions



### 2. Inside Box



### 3. Outside Box



## Packaging Information

| NO   | UNIT   | Reel Dimensions               |     |    | Inside Box               |     |    | Outside Box                      |     |     |
|------|--|-------------------------------|-----|----|--------------------------|-----|----|----------------------------------|-----|-----|
|      |  | φ                             | A   | B  | L1                       | W1  | H1 | L2                               | W2  | H2  |
| Size | mm   | 330                           | 100 | 15 | 340                      | 340 | 46 | 360                              | 360 | 270 |
| QTY  | PCS  | Smallest package,3000PCS/reel |     |    | 6,000PCS,2 reel in total |     |    | 30,000PCS/carton,5boxes in total |     |     |
| Note | Tolerance ≤20mm,±3mm; 21-100mm,±5mm; 101-500mm,±10mm |                               |     |    |                          |     |    |                                  |     |     |