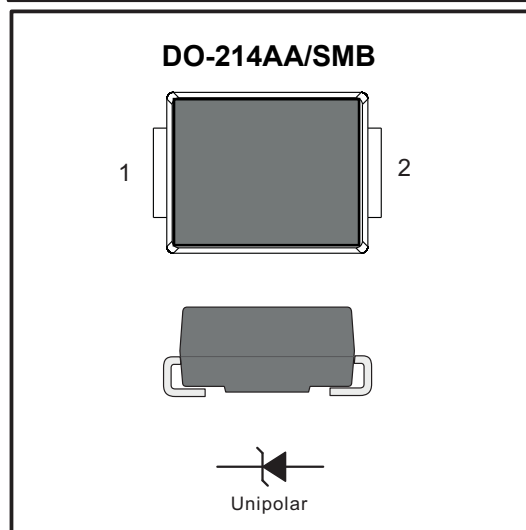


## PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



## FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Glass Passivated Chip Junction
- ◆ Easy to pick and place
- ◆ High efficiency
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

## MECHANICAL DATA

- ◆ Case: SMB
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 0.095g / 0.003oz

## 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 %.

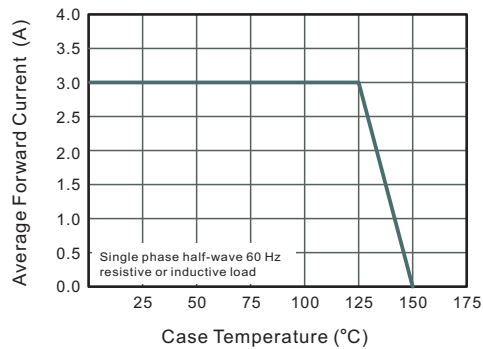
| Parameter                                                                                                      | Symbols                              | US3A       | US3B | US3D | US3G | US3J | US3K | US3M | Units |
|----------------------------------------------------------------------------------------------------------------|--------------------------------------|------------|------|------|------|------|------|------|-------|
| 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>                   | 3          |      |      |      |      |      |      | A     |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                             | I <sub>FSM</sub>                     | 90         |      |      |      |      |      |      | A     |
| Maximum Instantaneous Forward Voltage at 3 A                                                                   | V <sub>F</sub>                       | 1.0        |      |      | 1.3  | 1.68 |      |      | V     |
| Maximum DC Reverse Current    T <sub>a</sub> = 25 °C<br>at Rated DC Blocking Voltage    T <sub>a</sub> =125 °C | I <sub>R</sub>                       | 5<br>100   |      |      |      |      |      |      | μA    |
| Maximum Reverse Recovery Time <sup>(1)</sup>                                                                   | t <sub>rr</sub>                      | 50         |      |      |      | 75   |      |      | ns    |
| Typical Thermal Resistance <sup>(2)</sup>                                                                      | R <sub>θJA</sub><br>R <sub>θJC</sub> | 45<br>15   |      |      |      |      |      |      | °C/W  |
| Operating and Storage Temperature Range                                                                        | T <sub>j</sub> , T <sub>stg</sub>    | -55 ~ +150 |      |      |      |      |      |      | °C    |

( 1 ) Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

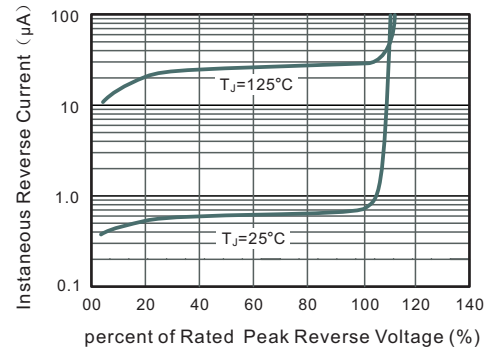
( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

## Typical Characteristics

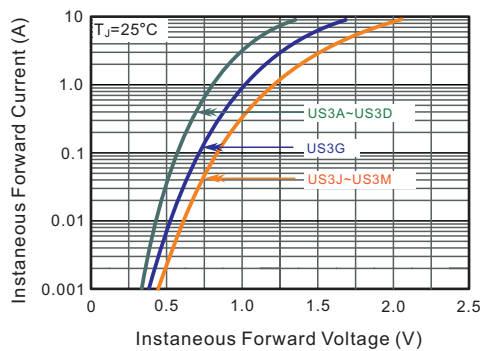
**Fig.1 Maximum Average Forward Current Rating**



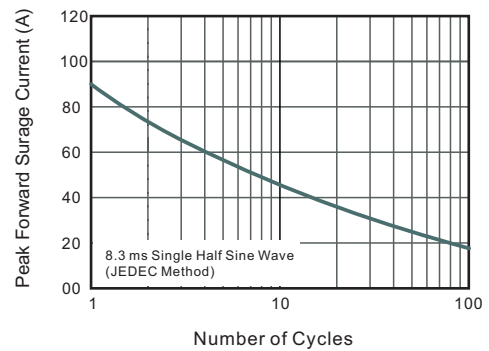
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Forward Characteristics**



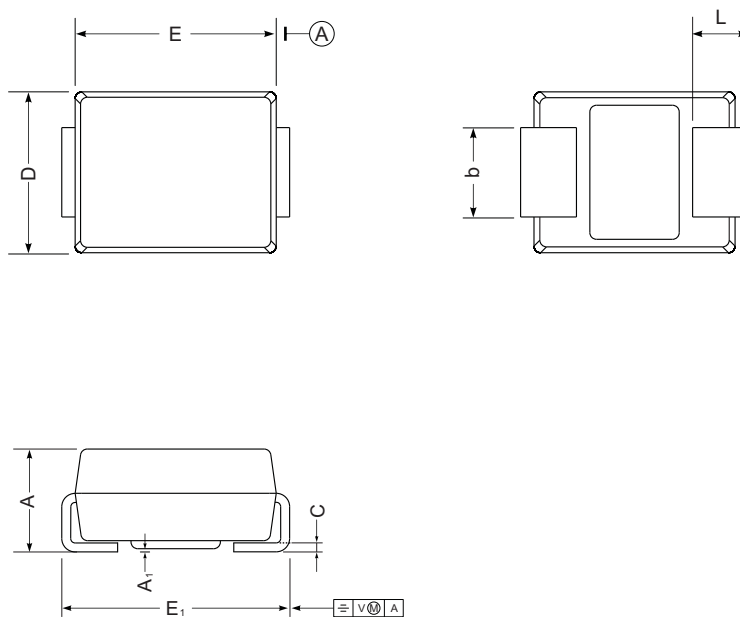
**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**



## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMB



SMB mechanical data

| UNIT |     | A    | E    | D    | E <sub>1</sub> | A <sub>1</sub> | L   | C     | b   |
|------|-----|------|------|------|----------------|----------------|-----|-------|-----|
| mm   | max | 2.44 | 4.70 | 3.94 | 5.59           | 0.20           | 1.5 | 0.305 | 2.2 |
|      | min | 2.13 | 4.06 | 3.3  | 5.08           | 0.05           | 0.8 | 0.152 | 1.9 |
| mil  | max | 96   | 185  | 155  | 220            | 7.9            | 59  | 12    | 87  |
|      | min | 84   | 160  | 130  | 200            | 2.0            | 32  | 6     | 75  |

### The recommended mounting pad size

