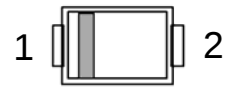
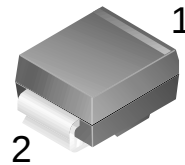




## S3AB-S3MB

## Features:

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

DO-214AA  
(SMB)

1. Cathode 2. Anode

## 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                            | S3AB       | S3BB | S3DB | S3GB | S3JB | S3KB | S3MB | Units                |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------|------|------|------|------|------|------|----------------------|
| Maximum Repetitive Peak Reverse Voltage                                                                                                 | $V_{RRM}$                          | 50         | 100  | 200  | 400  | 600  | 800  | 1000 | V                    |
| Maximum RMS voltage                                                                                                                     | $V_{RMS}$                          | 35         | 70   | 140  | 280  | 420  | 560  | 700  | V                    |
| Maximum DC Blocking Voltage                                                                                                             | $V_{DC}$                           | 50         | 100  | 200  | 400  | 600  | 800  | 1000 | V                    |
| Maximum Average Forward Rectified Current                                                                                               | $I_{F(AV)}$                        | 3          |      |      |      |      |      |      | A                    |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                                                      | $I_{FSM}$                          | 90         |      |      |      |      |      |      | A                    |
| Maximum Instantaneous Forward Voltage at 3 A                                                                                            | $V_F$                              | 1.1        |      |      |      |      |      |      | V                    |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage<br>$T_a = 25\text{ }^{\circ}\text{C}$<br>$T_a = 125\text{ }^{\circ}\text{C}$ | $I_R$                              | 5<br>100   |      |      |      |      |      |      | $\mu\text{A}$        |
| Typical Junction Capacitance <sup>(1)</sup>                                                                                             | $C_j$                              | 35         |      |      |      |      |      |      | pF                   |
| Typical Thermal Resistance <sup>(2)</sup>                                                                                               | $R_{\theta JA}$<br>$R_{\theta JC}$ | 48<br>16   |      |      |      |      |      |      | $^{\circ}\text{C/W}$ |
| Operating and Storage Temperature Range                                                                                                 | $T_j, T_{stg}$                     | -55 ~ +150 |      |      |      |      |      |      | $^{\circ}\text{C}$   |

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

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

## Typical Characteristics

Fig.1 Forward Current Derating Curve

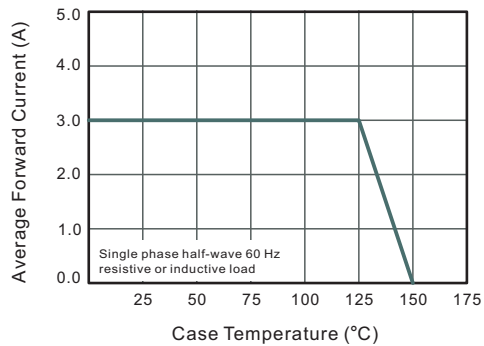


Fig.2 Typical Instantaneous Reverse Characteristics

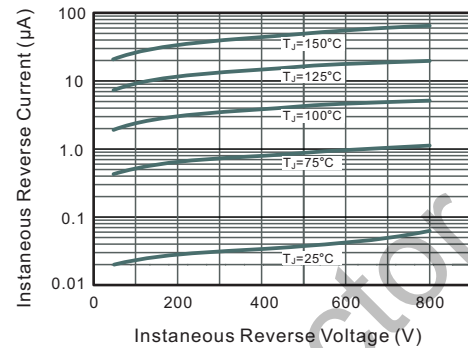


Fig.3 Typical Forward Characteristic

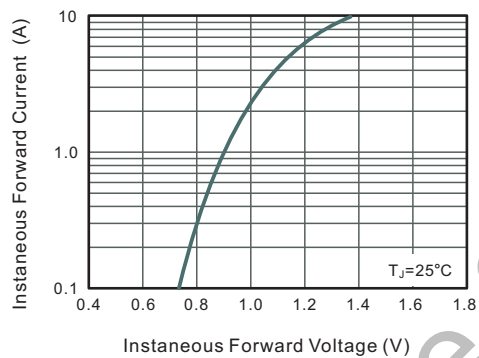


Fig.4 Typical Junction Capacitance

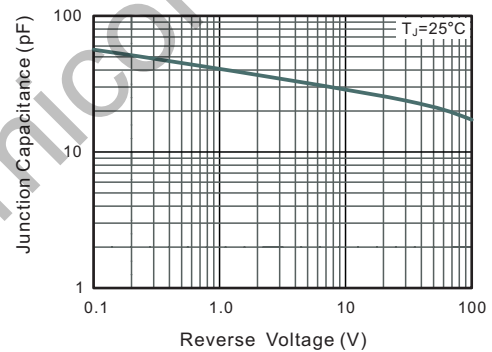
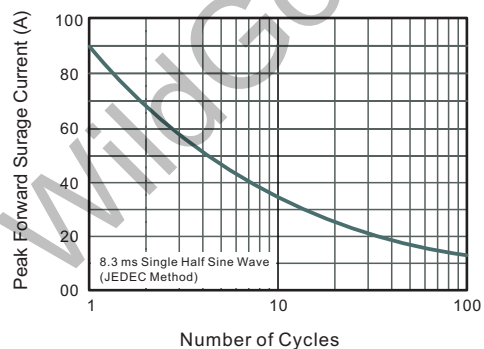
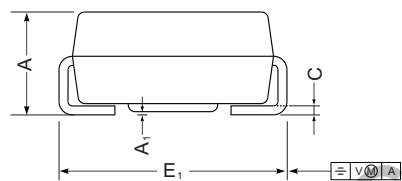
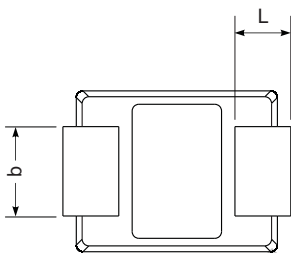
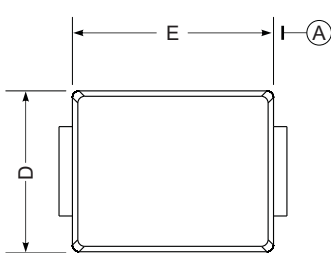


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



Package Dimension

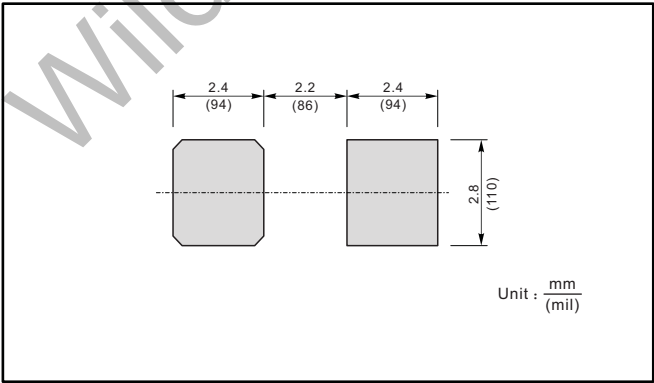
DO-214AA (SMB)



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



Marking

| Type number | Marking code |
|-------------|--------------|
| S3AB        | S3A          |
| S3BB        | S3B          |
| S3DB        | S3D          |
| S3GB        | S3G          |
| S3JB        | S3J          |
| S3KB        | S3K          |
| S3MB        | S3M          |