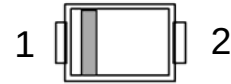
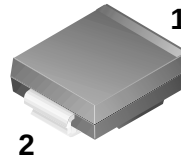


## S3A-S3M

### 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-214AB (SMC)



1.Cathode 2. Anode

### Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Parameter                                                                                                                               | Symbols                            | S3A        | S3C | S3D | S3G | S3J | S3K | S3M  | 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                                                                                            | $V_F$                              | 1.0        |     |     |     |     |     |      | 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>                                                                                             | $C_j$                              | 40         |     |     |     |     |     |      | pF                   |
| Typical Thermal Resistance <sup>(2)</sup>                                                                                               | $R_{\theta JA}$<br>$R_{\theta JC}$ | 40<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**

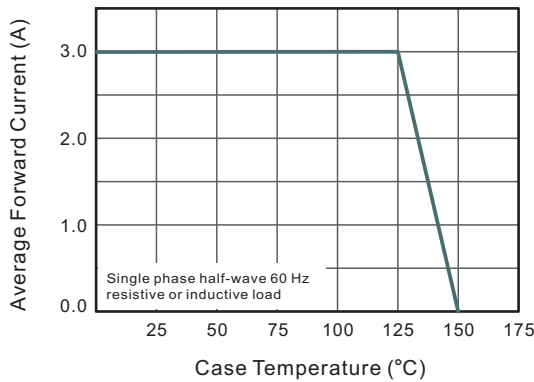


**Fig.2 Typical Reverse Characteristics**

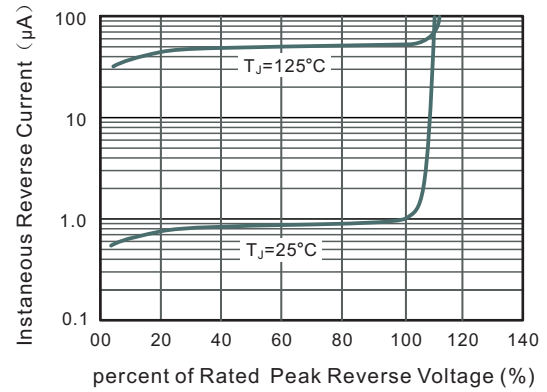


**Fig.3 Typical Forward Characteristic**

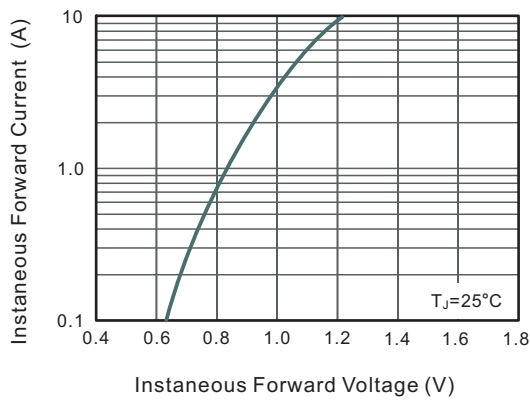


**Fig.4 Typical Junction Capacitance**

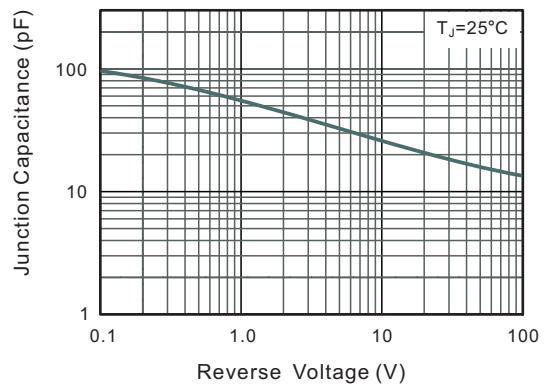
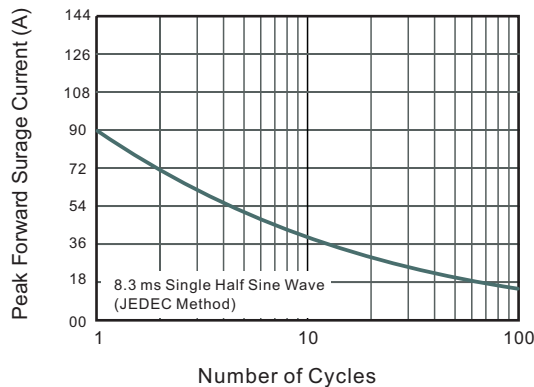


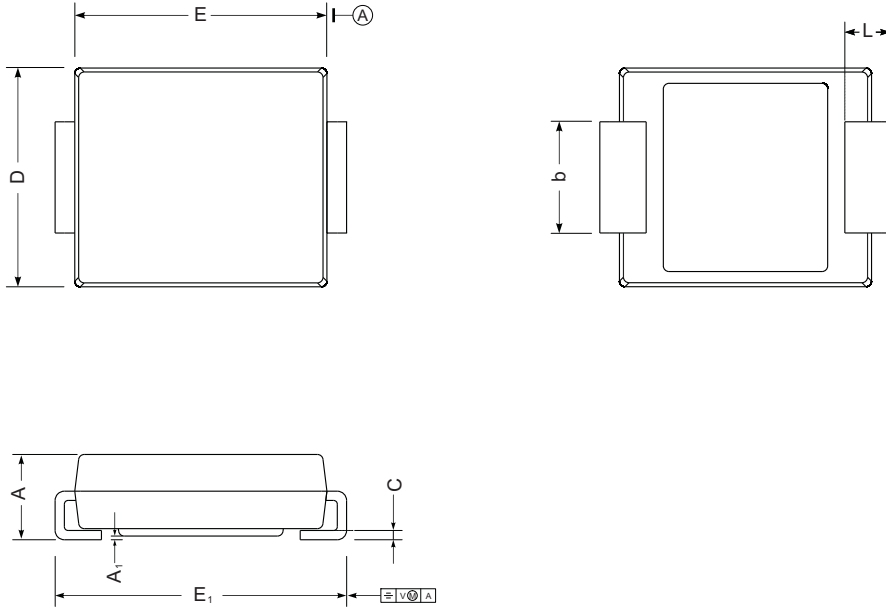
**Fig.6 Maximum Non-Repetitive Peak Forward Surge Current**





**Package Dimension**

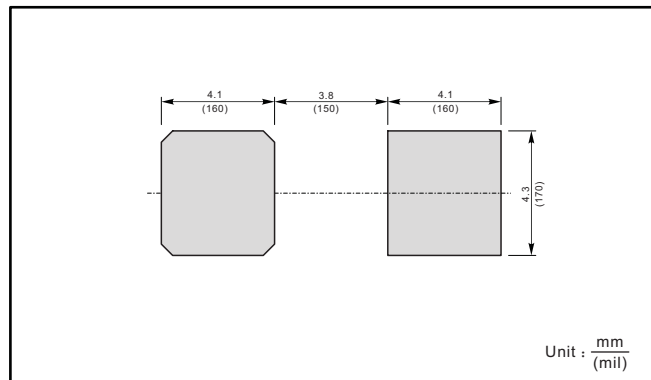
**DO-214AB (SMC)**



SMC mechanical data

| UNIT |     | A    | E   | D   | E <sub>1</sub> | A <sub>1</sub> | C    | L   | b    |
|------|-----|------|-----|-----|----------------|----------------|------|-----|------|
| mm   | max | 2.62 | 7.0 | 6.2 | 8.0            | 0.21           | 0.31 | 1.6 | 3.25 |
|      | min | 2.00 | 6.5 | 5.6 | 7.6            | 0.05           | 0.15 | 0.9 | 2.75 |
| mil  | max | 103  | 276 | 244 | 315            | 8.3            | 12   | 63  | 128  |
|      | min | 79   | 256 | 220 | 299            | 2.0            | 5.9  | 35  | 108  |

**The recommended mounting pad size**



Unit :  $\frac{\text{mm}}{(\text{mil})}$