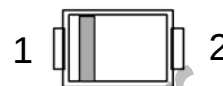
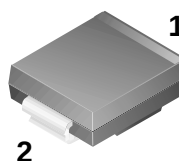




## S6AC-S6MC

## 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

## 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                            | S6AC       | S6BC | S6DC | S6GC | S6JC | S6KC | S6MC | 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                                                                                         | $I_{F(AV)}$                        | 6          |      |      |      |      |      |      | A                    |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                                                | $I_{FSM}$                          | 150        |      |      |      |      |      |      | A                    |
| Maximum Instantaneous Forward Voltage at 6 A                                                                                      | $V_F$                              | 1.15       |      |      |      |      |      |      | V                    |
| Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$<br>at Rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$ | $I_R$                              | 5<br>100   |      |      |      |      |      |      | $\mu\text{A}$        |
| Typical Junction Capacitance <sup>(1)</sup>                                                                                       | $C_j$                              | 100        |      |      |      |      |      |      | pF                   |
| Typical Thermal Resistance <sup>(2)</sup>                                                                                         | $R_{\theta JA}$<br>$R_{\theta JC}$ | 35<br>13   |      |      |      |      |      |      | $^{\circ}\text{C/W}$ |
| 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

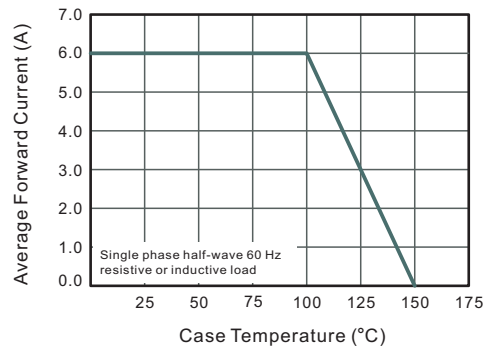


Fig.2 Typical Reverse Characteristics

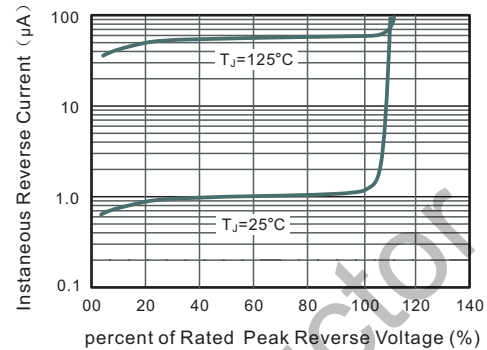


Fig.3 Typical Forward Characteristic

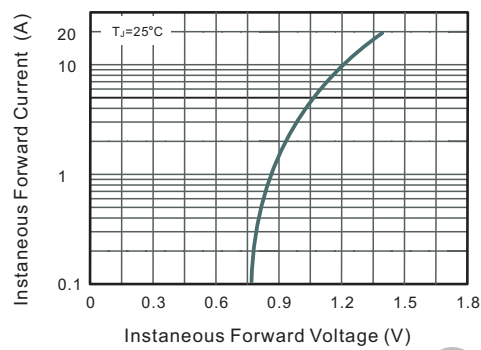


Fig.4 Typical Junction Capacitance

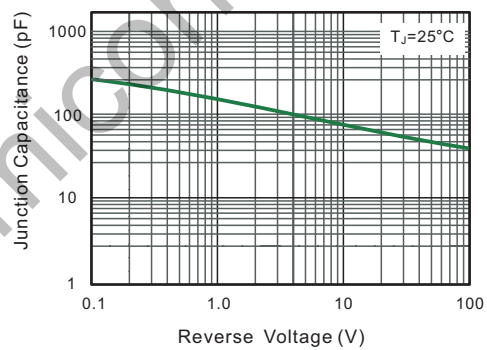
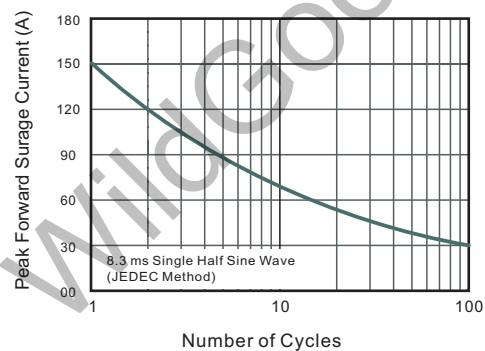
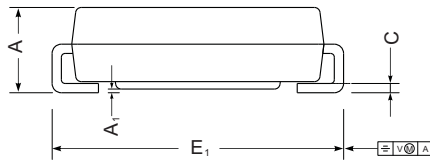
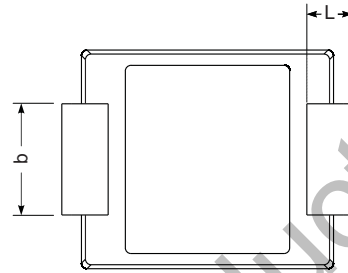
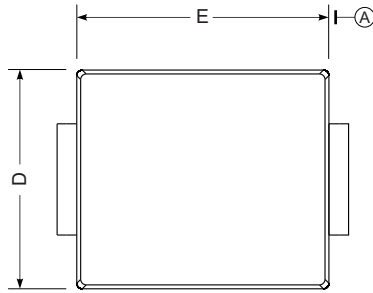


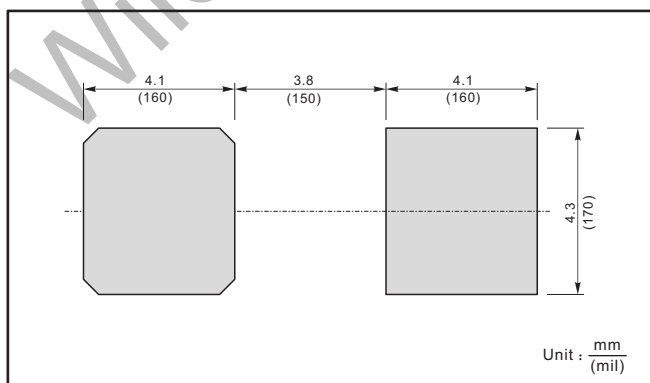
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



**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****Marking**

| Type number | Marking code |
|-------------|--------------|
| S6AC        | S6A          |
| S6BC        | S6B          |
| S6DC        | S6D          |
| S6GC        | S6G          |
| S6JC        | S6J          |
| S6KC        | S6K          |
| S6MC        | S6M          |