

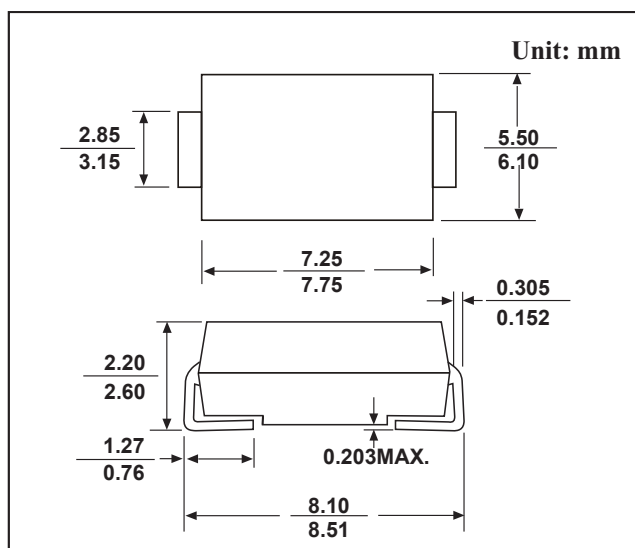
## SMC Ultra-Fast Recovery Rectifier Diodes

### FEATURES

- The plastic package carries Underwrites Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- High reliability
- High temperature soldering guaranteed:260 °C/10 seconds at terminals
- Component in accordance to RoHs 2015/863 and WEEE 2012/19/EU

### MECHANICAL DATA

- Case style: SMC molded plastic
- Mounting position: Any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Parameter                                                                                                   | Symbols                              | ES5AC      | ES5BC | ES5CC | ES5DC | ES5EC | ES5GC | ES5JC | Units |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                     | V <sub>RRM</sub>                     | 50         | 100   | 150   | 200   | 300   | 400   | 600   | V     |
| Maximum RMS voltage                                                                                         | V <sub>RMS</sub>                     | 35         | 70    | 105   | 140   | 210   | 280   | 420   | V     |
| Maximum DC Blocking Voltage                                                                                 | V <sub>DC</sub>                      | 50         | 100   | 150   | 200   | 300   | 400   | 600   | V     |
| Maximum Average Forward Rectified Current at T <sub>c</sub> = 100 °C                                        | I <sub>F(AV)</sub>                   | 5          |       |       |       |       |       |       | A     |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                          | I <sub>FSM</sub>                     | 150        |       |       |       |       |       |       | A     |
| Maximum Forward Voltage at 5 A                                                                              | V <sub>F</sub>                       | 1          |       |       |       | 1.25  |       | 1.68  | V     |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br>T <sub>a</sub> = 25 °C<br>T <sub>a</sub> =125 °C | I <sub>R</sub>                       | 5<br>100   |       |       |       |       |       |       | μA    |
| Typical Junction Capacitance at V <sub>R</sub> =4V, f=1MHz                                                  | C <sub>j</sub>                       | 50         |       |       |       |       |       |       | pF    |
| Maximum Reverse Recovery Time <sup>(1)</sup>                                                                | t <sub>rr</sub>                      | 35         |       |       |       |       |       |       | ns    |
| Typical Thermal Resistance <sup>(2)</sup>                                                                   | R <sub>θJA</sub><br>R <sub>θJC</sub> | 35<br>13   |       |       |       |       |       |       | °C/W  |
| Operating and Storage Temperature Range                                                                     | T <sub>j</sub> , T <sub>stg</sub>    | -55 ~ +150 |       |       |       |       |       |       | °C    |

## RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

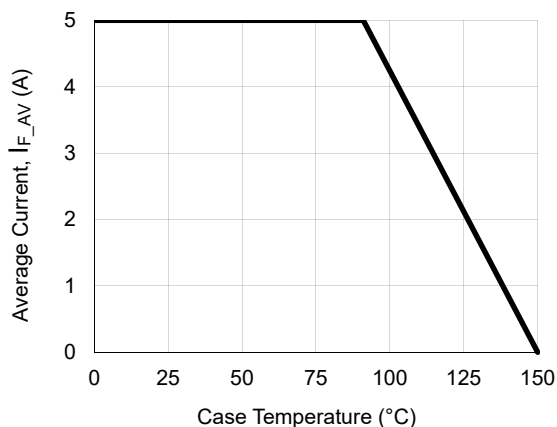


Fig.2 Surge Current Derating Curve

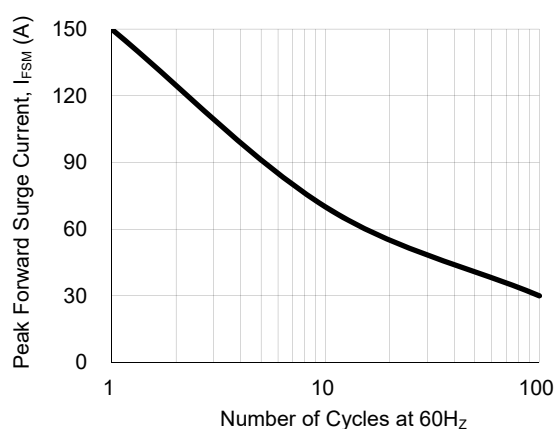


Fig.3 Typical Forward Voltage Characteristics

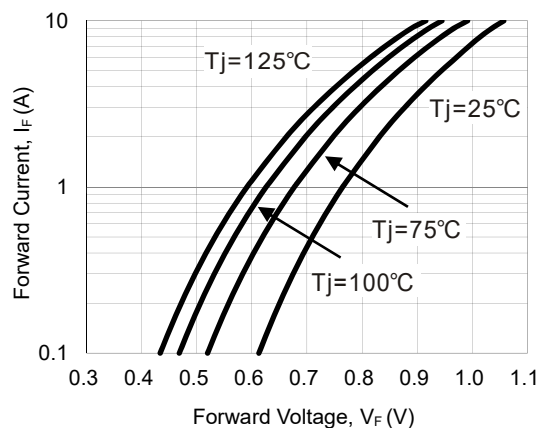


Fig.4 Typical Reverse Characteristics

