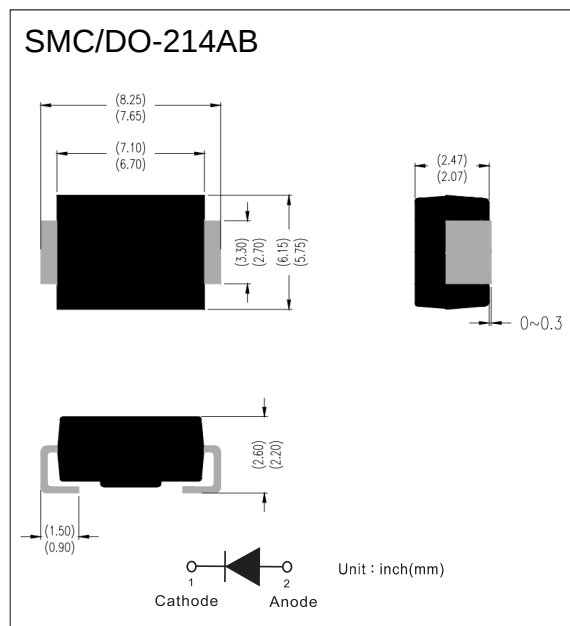


## ■ Features

- Glass passivated junction chip
- Ideal for automated placement
- Super fast recovery time for high efficiency
- Comply with RoHS standard, halogen-free

## ■ Mechanical Data

- package: SMC/DO-214AB
- Polarity: Indicated by cathode band
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position : Any



## ■ Absolute Maximum Ratings( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER                                                                                     | SYMBOL       | ES3A         | ES3B | ES3C | ES3D | ES3F | ES3G | ES3H | ES3J | UNIT               |
|-----------------------------------------------------------------------------------------------|--------------|--------------|------|------|------|------|------|------|------|--------------------|
| Repetitive peak reverse voltage                                                               | $V_{RRM}$    | 50           | 100  | 150  | 200  | 300  | 400  | 500  | 600  | V                  |
| Reverse voltage, total rms value                                                              | $V_{R(RMS)}$ | 30           | 70   | 105  | 140  | 210  | 280  | 350  | 420  | V                  |
| Maximum DC blocking voltage                                                                   | $V_{DC}$     | 50           | 100  | 150  | 200  | 300  | 400  | 500  | 600  | V                  |
| Forward current                                                                               | $I_{F(AV)}$  | 3            |      |      |      |      |      |      |      | A                  |
| Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode | $I_{FSM}$    | 100          |      |      |      |      |      |      |      | A                  |
| Junction temperature                                                                          | $T_J$        | - 55 to +150 |      |      |      |      |      |      |      | $^{\circ}\text{C}$ |
| Storage temperature                                                                           | $T_{STG}$    | - 55 to +150 |      |      |      |      |      |      |      | $^{\circ}\text{C}$ |

■ Thermal Performance( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

| PARAMETER                                        | SYMBOL          | TYP | UNIT                 |
|--------------------------------------------------|-----------------|-----|----------------------|
| Junction-to-lead thermal resistance per diode    | $R_{\theta JL}$ | 12  | $^{\circ}\text{C/W}$ |
| Junction-to-ambient thermal resistance per diode | $R_{\theta JA}$ | 47  | $^{\circ}\text{C/W}$ |

■ Electrical Specifications( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

| PARAMETER                                              |                              | CONDITIONS                                                     | SYMBOL   | TYP. | MAX. | UNIT          |
|--------------------------------------------------------|------------------------------|----------------------------------------------------------------|----------|------|------|---------------|
| Forward voltage per diode <sup>(1)</sup>               | ES3A<br>ES3B<br>ES3C<br>ES3D | $I_F = 3\text{A}$ , $T_J = 25^{\circ}\text{C}$                 | $V_F$    | -    | 0.95 | V             |
|                                                        | ES3F<br>ES3G                 |                                                                |          | -    | 1.30 | V             |
|                                                        | ES3H<br>ES3J                 |                                                                |          | -    | 1.70 | V             |
| Reverse current @ rated $V_R$ per diode <sup>(2)</sup> |                              | $T_J = 25^{\circ}\text{C}$                                     | $I_R$    | -    | 10   | $\mu\text{A}$ |
|                                                        |                              | $T_J = 100^{\circ}\text{C}$                                    |          | -    | 500  | $\mu\text{A}$ |
| Junction capacitance                                   | ES3A<br>ES3B<br>ES3C<br>ES3D | 1 MHz, $V_R=4.0\text{V}$                                       | $C_J$    | 45   | -    | pF            |
|                                                        | ES3F<br>ES3G<br>ES3H<br>ES3J |                                                                |          | 30   | -    | pF            |
| Reverse recovery time                                  |                              | $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$<br>$I_{RR}=0.25\text{A}$ | $t_{rr}$ | -    | 35   | ns            |

Notes:

1. Pulse test with  $PW=0.3\text{ ms}$
2. Pulse test with  $PW=30\text{ ms}$



■ Characteristics Curves( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

Fig.1 Forward Current Derating Curve

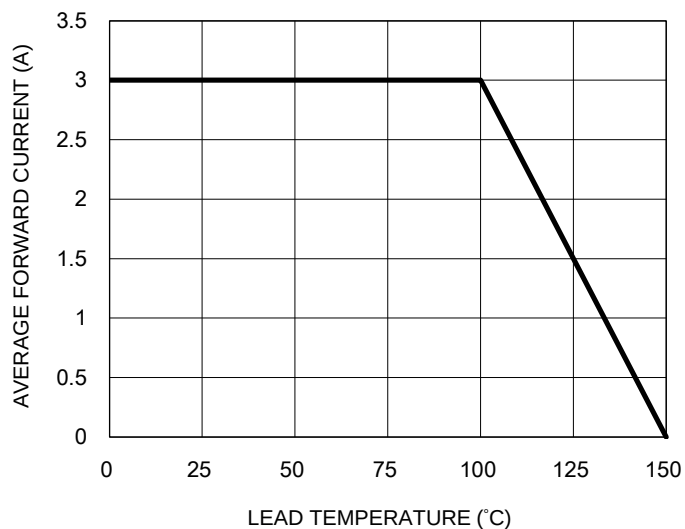


Fig.2 Typical Junction Capacitance

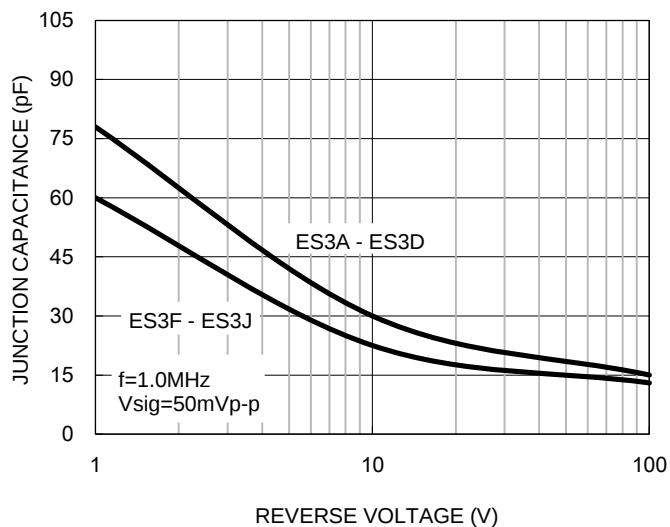


Fig.3 Typical Reverse Characteristics

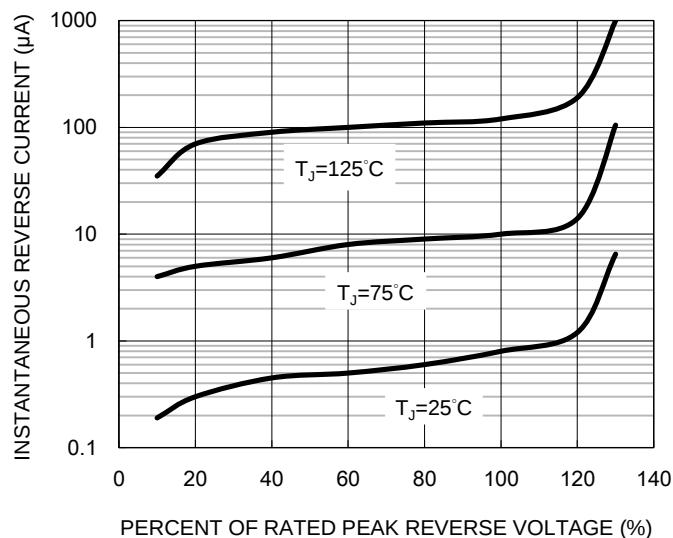


Fig.4 Typical Forward Characteristics

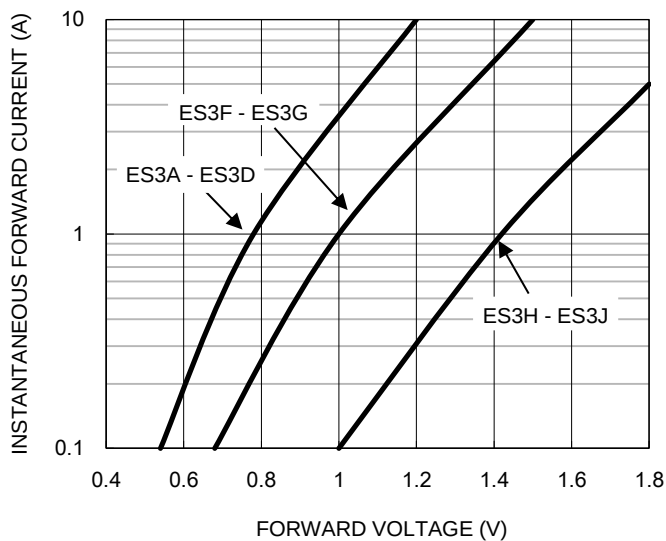


Fig.5 Maximum Non-repetitive Forward Surge Current

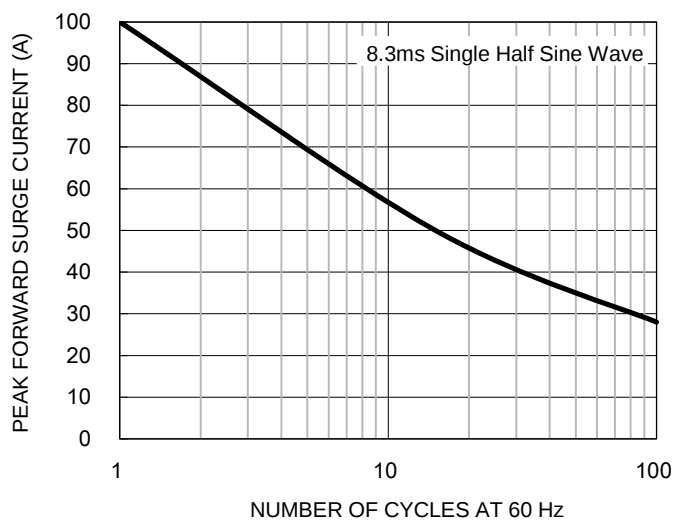


Fig.6 Typical Transient Thermal Characteristics

