

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

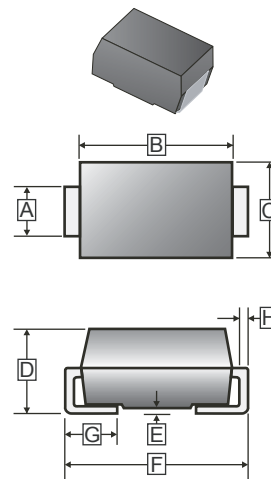
## FEATURES

- High Current Capability
- Extremely Low Thermal Resistance
- For Surface Mount Application
- Higher Temp Soldering : 250°C for 10 Seconds at Terminals
- Low Reverse Current

## MECHANICAL DATA

- Case: Molded Plastic
- Epoxy: UL 94V-0 Rate Flame Retardant
- Lead: Axial Leads, Solderable per MIL-STD-202 method 208 Guaranteed
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

### SMB



## PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---------|-----|-------------|
| SMB     | 3K  | 13' inch    |

| REF. | Millimeter |      | REF. | Millimeter |       |
|------|------------|------|------|------------|-------|
|      | Min.       | Max. |      | Min.       | Max.  |
| A    | 1.91       | 2.20 | E    | -          | 0.203 |
| B    | 4.06       | 4.70 | F    | 5.08       | 5.59  |
| C    | 3.30       | 3.94 | G    | 0.76       | 1.52  |
| D    | 2.13       | 2.44 | H    | 0.15       | 0.305 |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, de-rate current by 20%.)

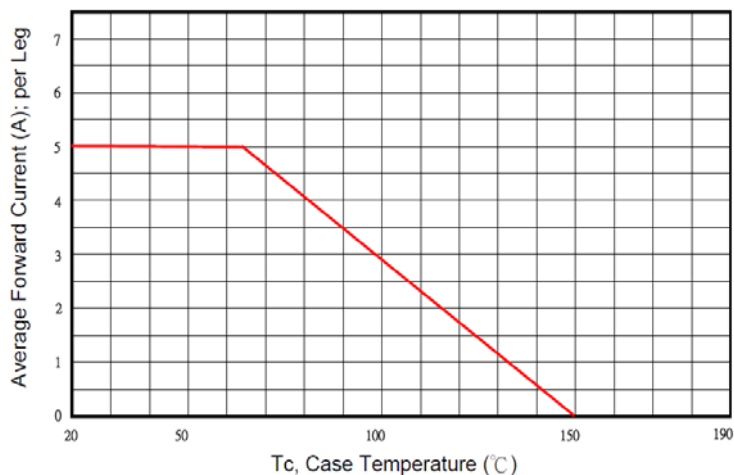
| Parameter                                                               |                                                   | Symbol          | Ratings | Unit                     |
|-------------------------------------------------------------------------|---------------------------------------------------|-----------------|---------|--------------------------|
| Peak Repetitive Peak reverse voltage                                    |                                                   | $V_{RRM}$       | 100     | V                        |
| Working Peak Reverse Voltage                                            |                                                   | $V_{RWM}$       | 100     | V                        |
| Maximum DC Blocking Voltage                                             |                                                   | $V_R$           | 100     | V                        |
| Average Forward Current @ $T_J=25^\circ\text{C}$                        |                                                   | $I_{F(AV)}$     | 5       | A                        |
| Peak Forward Current @ 8.3 ms Half Sine                                 |                                                   | $I_{FSM}$       | 125     | A                        |
| Maximum Instantaneous Forward Voltage                                   | $I_{FM} = 5.0 \text{ A}, T_A = 25^\circ\text{C}$  | $V_F$           | 0.82    | V                        |
|                                                                         | $I_{FM} = 5.0 \text{ A}, T_A = 75^\circ\text{C}$  |                 | 0.73    |                          |
|                                                                         | $I_{FM} = 5.0 \text{ A}, T_A = 125^\circ\text{C}$ |                 | 0.65    |                          |
| Maximum DC Reverse Current<br>At Rated DC Blocking Voltage <sup>4</sup> | $T_J = 25^\circ\text{C}$                          | $I_R$           | 100     | $\mu\text{A}$            |
|                                                                         | $T_J = 100^\circ\text{C}$                         |                 | 800     |                          |
| Typical Junction Capacitance                                            |                                                   | $C_J$           | 350     | pF                       |
| Typical Thermal Resistance <sup>2</sup>                                 |                                                   | $R_{\theta JA}$ | 60      | $^\circ\text{C/W}$       |
| Typical Thermal Resistance <sup>3</sup>                                 |                                                   | $R_{\theta JC}$ | 20      | $^\circ\text{C/W}$       |
| Voltage Rate of Change (Rated $V_R$ )                                   |                                                   | $dv/dt$         | 1000    | $\text{V} / \mu\text{s}$ |
| Operating Temperature Range                                             |                                                   | $T_J$           | -50~150 | $^\circ\text{C}$         |
| Storage temperature                                                     |                                                   | $T_{STG}$       | -65~150 | $^\circ\text{C}$         |

Notes:

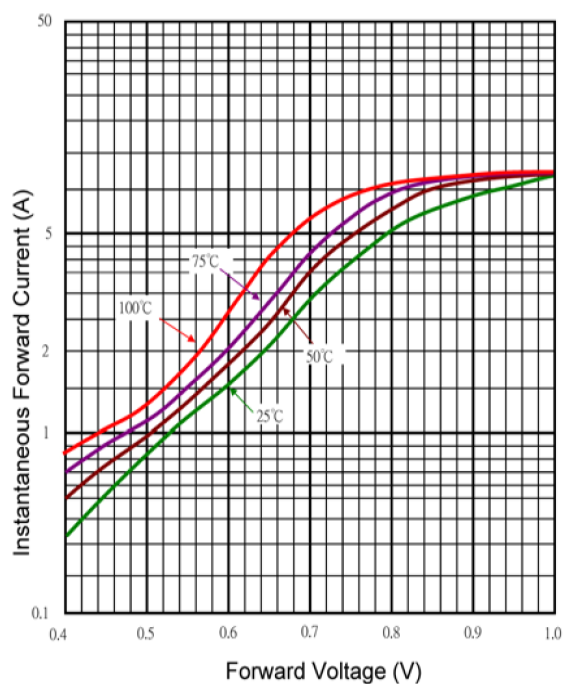
1. Measured at 1MHz and applied reverse voltage of 5.0 V D.C.
2. Thermal Resistance Junction to Ambient.
3. Thermal Resistance Junction to Case.
4. Pulse Test : Pulse Width  $\leq 300 \mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .

## RATINGS AND CHARACTERISTIC CURVES

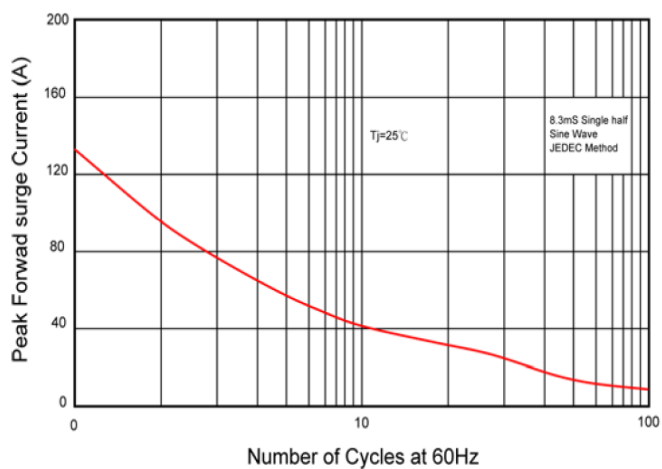
Typical Forward Current Derating Curve



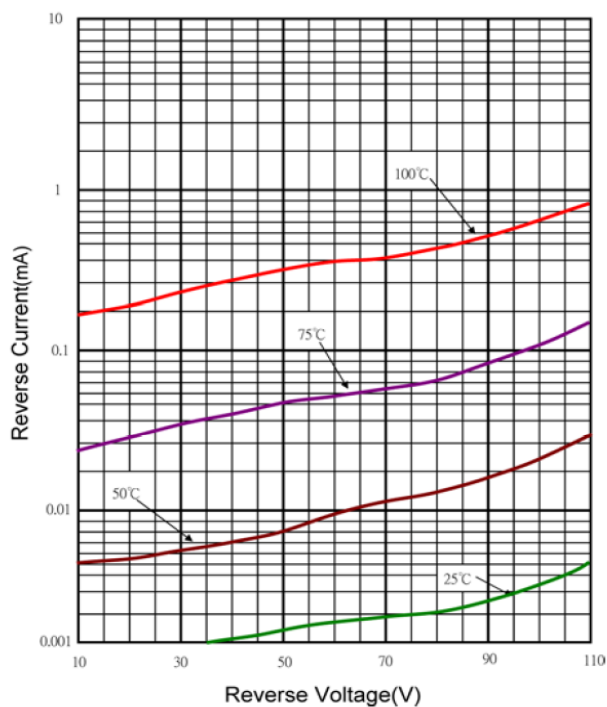
Typical Forward Characteristic



Maximum Non- Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

