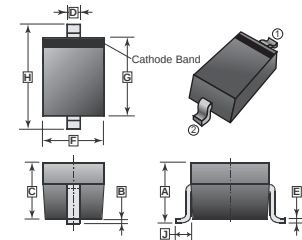


RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

**SOD-123**

## FEATURES

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



## MECHANICAL DATA

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

## MARKING CODE

BT

| REF. | Millimeter |      | REF. | Millimeter |      |
|------|------------|------|------|------------|------|
|      | Min.       | Max. |      | Min.       | Max. |
| A    | 0.95       | 1.35 | F    | 1.40       | 1.80 |
| B    | 0.10 REF.  |      | G    | 2.55       | 2.85 |
| C    | 1.05       | 1.15 | H    | 3.55       | 3.85 |
| D    | 0.30       | 0.78 | J    | -          | -    |
| E    | 0.08       | 0.25 |      |            |      |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise specified)

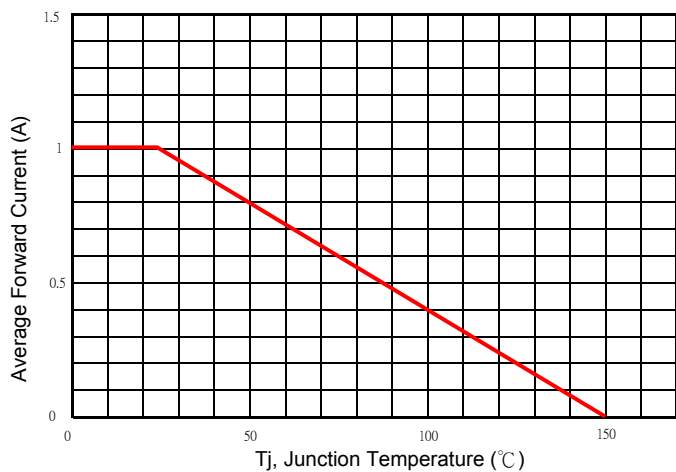
| PARAMETER                                                                               | SYMBOL          | RATING | UNITS              |
|-----------------------------------------------------------------------------------------|-----------------|--------|--------------------|
| Maximum Recurrent Peak Reverse Voltage                                                  | $V_{RRM}$       | 30     | V                  |
| Working Peak Reverse Voltage                                                            | $V_{RWM}$       | 30     | V                  |
| Maximum DC Blocking Voltage                                                             | $V_R$           | 30     | V                  |
| Average Forward Current @ $T_J=25^\circ\text{C}$                                        | $I_{F(AV)}$     | 1      | A                  |
| Peak Forward Current @ 8.3 ms Half Sine                                                 | $I_{FSM}$       | 10     | A                  |
| Maximum Instantaneous Forward Voltage<br>$I_{FM} = 1\text{ A}, T_A = 25^\circ\text{C}$  | $V_{F1}$        | 0.52   | V                  |
| Maximum Instantaneous Forward Voltage<br>$I_{FM} = 1\text{ A}, T_A = 125^\circ\text{C}$ | $V_{F2}$        | 0.45   | V                  |
| Maximum DC Reverse Current<br>At Rated DC Blocking Voltage @ $T_J = 25^\circ\text{C}$   | $I_{R1}$        | 0.1    | mA                 |
| Maximum DC Reverse Current<br>At Rated DC Blocking Voltage @ $T_J = 125^\circ\text{C}$  | $I_{R2}$        | 5      | mA                 |
| Typical Junction Capacitance (Note 1)                                                   | $C_J$           | 160    | pF                 |
| Typical Thermal Resistance (Note 2)                                                     | $R_{\theta JA}$ | 310    | $^\circ\text{C/W}$ |
| Operating Temperature Range                                                             | $T_J$           | 150    | $^\circ\text{C}$   |
| Storage temperature                                                                     | $T_{STG}$       | 150    | $^\circ\text{C}$   |

Notes:

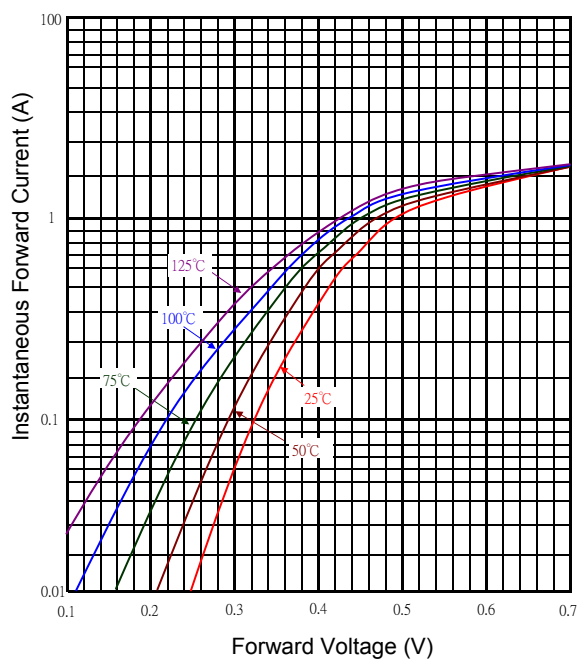
1. Measured at 1MHz and applied reverse of 0V DC.
2. FR-4 PCB, 2 oz. 0.7mm x 1.2mm copper pad.

## RATINGS AND CHARACTERISTIC CURVES

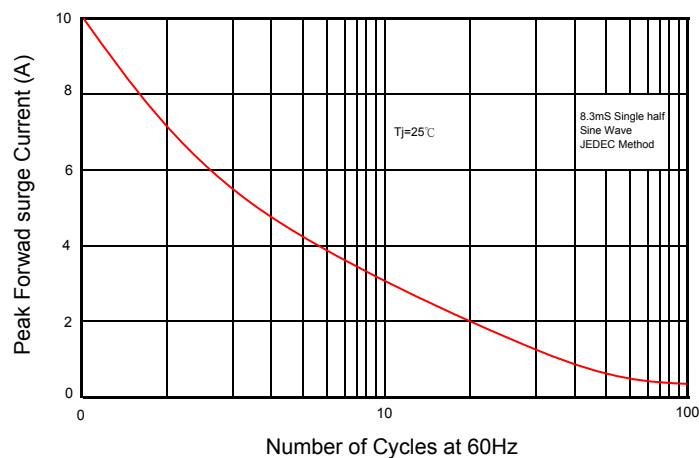
Typical Forward Current Derating Curve



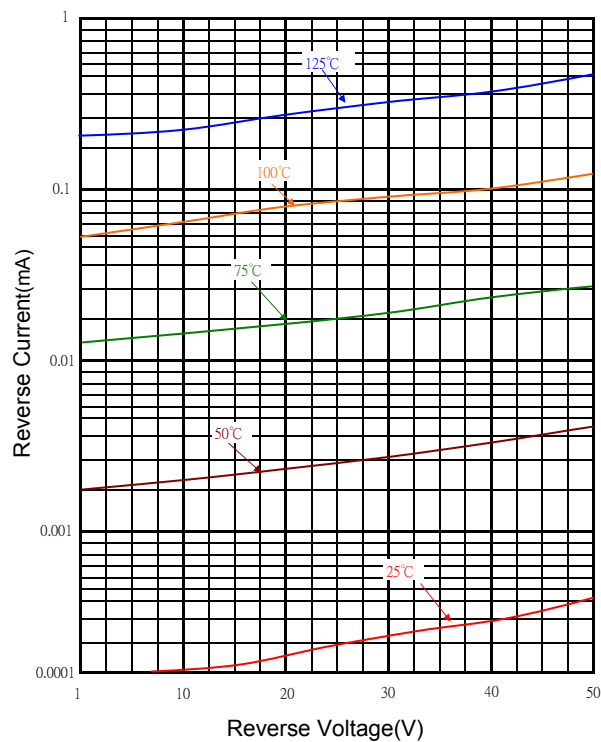
Typical Forward Characteristic



Maximum Non- Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

