

### Major Ratings and Characteristics

|                    |                |
|--------------------|----------------|
| $I_{F(AV)}$        | 0.5 A          |
| $V_{RRM}$          | 50 V to 1000 V |
| $I_{FSM}$          | 15 A           |
| $I_R$              | 5 $\mu$ A      |
| $V_F$              | 1.1 V          |
| $T_j \text{ max.}$ | 150 °C         |

### Features

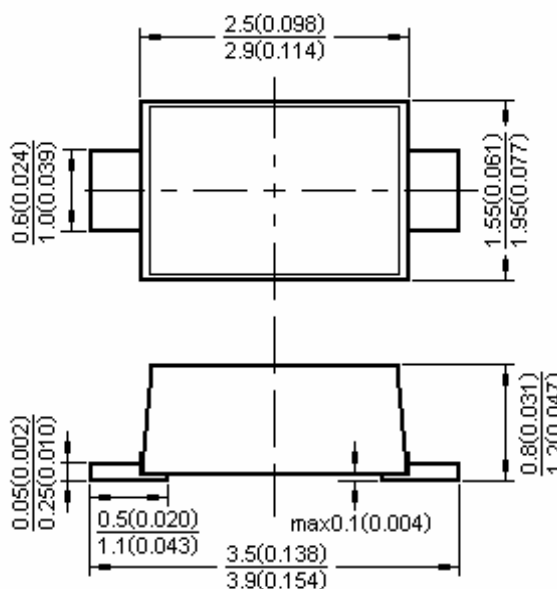
- Low profile space
- Ideal for automated placement
- Glass passivated chip junctions
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering:  
260°C/10 seconds at terminals
- Component in accordance to  
RoHS 2002/95/1 and WEEE 2002/96/EC

### Mechanical Date

- **Case:** JEDEC SOD-123FL molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end



SOD-123FL



Dimensions in millimeters and (inches)

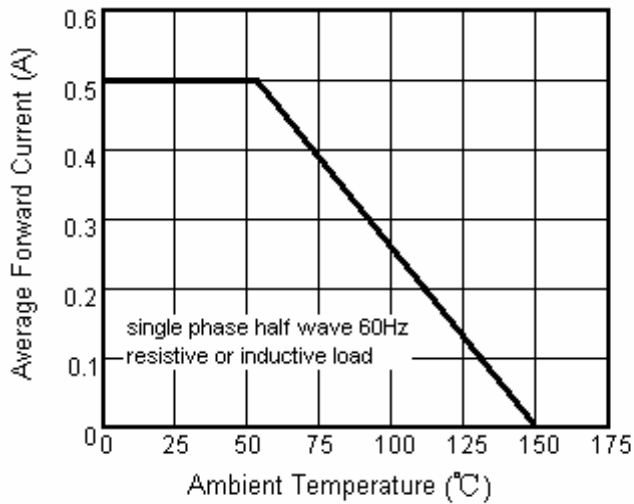
### Maximum Ratings & Thermal Characteristics & Electrical Characteristics

( $T_A = 25\text{ °C}$  unless otherwise noted)

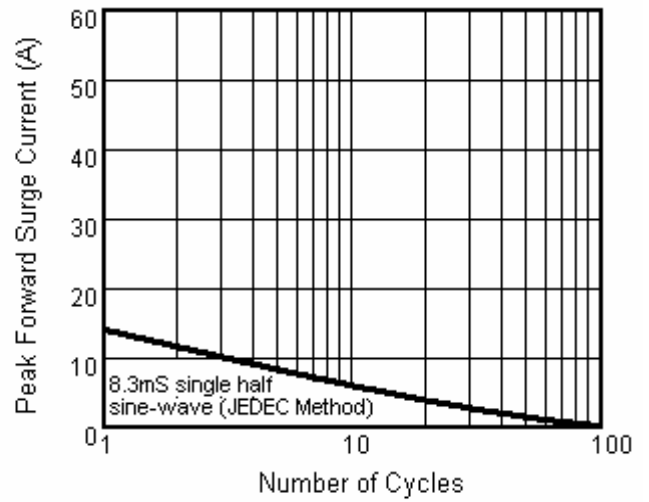
|   | DSR- | Symbol         | 0.5A        | 0.5B | 0.5D | 0.5G | 0.5J | 0.5K | 0.5M | UNIT    |
|---|------|----------------|-------------|------|------|------|------|------|------|---------|
| Maximum repetitive peak reverse voltage   |      | $V_{RRM}$      | 50          | 100  | 200  | 400  | 600  | 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   |      | $I_{F(AV)}$    | 0.5         |      |      |      |      |      |      | A       |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load                    |      | $I_{FSM}$      | 15          |      |      |      |      |      |      | A       |
| Maximum instantaneous forward voltage at 0.5A   |      | $V_F$          | 1.1         |      |      |      |      |      |      | V       |
| Maximum DC reverse current $T_A = 25\text{ °C}$<br>at Rated DC blocking voltage $T_A = 100\text{ °C}$ |      | $I_R$          | 5.0<br>50   |      |      |      |      |      |      | $\mu$ A |
| Typical junction capacitance at 4.0 V ,1MHz   |      | $C_J$          | 14          |      |      |      |      |      |      | p F     |
| Operating junction and storage temperature range  |      | $T_J, T_{STG}$ | -55 to +150 |      |      |      |      |      |      | °C      |

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

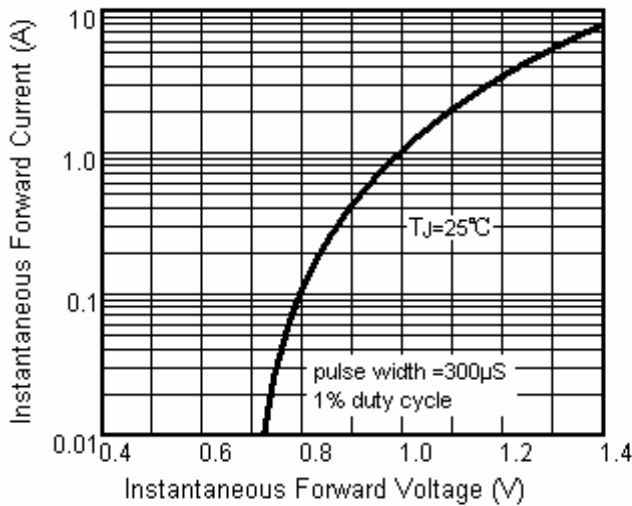
**Fig.1 Forward Current Derating Curve**



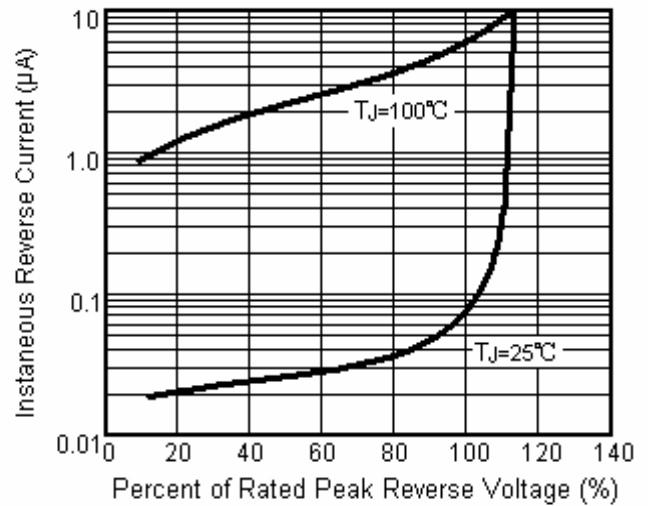
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Reverse Characteristics**



**Fig.5 Typical Junction Capacitance**

