

## Features

- General rectification
- Low  $V_F$ ; Low  $I_R$
- High reliability

## Applications

- surface mount schottky barrier rectifier

## Ordering Information

- Shipping Qty:3000/7inch Tape& Reel



SOD123

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



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

| Parameter                                                | Symbol    | Value | Unit |
|----------------------------------------------------------|-----------|-------|------|
| Peak Repetitive Reverse Voltage                          | $V_{RRM}$ | 100   | V    |
| Repetitive Peak Forward Current                          | $I_{FRM}$ | 350   | mA   |
| Continuous Forward Current                               | $I_F$     | 150   | mA   |
| Peak Forward Surge Current (8.3ms single half sine-wave) | $I_{FSM}$ | 0.75  | A    |

## Thermal Characteristics

| Parameter                            | Symbol          | Value      | Unit               |
|--------------------------------------|-----------------|------------|--------------------|
| Power Dissipation                    | $P_D$           | 200        | mW                 |
| Thermal Resistance Junction-to-Air   | $R_{\theta JA}$ | 500        | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range | $T_J$           | -55 ~ +125 | $^\circ\text{C}$   |
| Storage Temperature Range            | $T_{STG}$       | -55 ~ +125 | $^\circ\text{C}$   |

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

| Parameter                     | Symbol      | Test Condition                              | Min. | Typ. | Max. | Unit          |
|-------------------------------|-------------|---------------------------------------------|------|------|------|---------------|
| Reverse Breakdown Voltage     | $V_{(BR)R}$ | $I_R = 100\mu\text{A}$                      | 100  | -    | -    | V             |
| Forward Voltage               | $V_F$       | $I_F = 0.1\text{mA}$                        | -    | -    | 0.25 | V             |
|                               |             | $I_F = 10\text{mA}$                         | -    | -    | 0.45 | V             |
|                               |             | $I_F = 250\text{mA}$                        | -    | -    | 1.00 | V             |
| Maximum Peak Reverse Current  | $I_R$       | $V_R = 1.5\text{V}$                         | -    | -    | 0.5  | $\mu\text{A}$ |
|                               |             | $V_R = 1.5\text{V}, T_J = 60^\circ\text{C}$ | -    | -    | 5    | $\mu\text{A}$ |
|                               |             | $V_R = 10\text{V}$                          | -    | -    | 0.8  | $\mu\text{A}$ |
|                               |             | $V_R = 10\text{V}, T_J = 60^\circ\text{C}$  | -    | -    | 7.5  | $\mu\text{A}$ |
|                               |             | $V_R = 50\text{V}$                          | -    | -    | 2    | $\mu\text{A}$ |
|                               |             | $V_R = 50\text{V}, T_J = 60^\circ\text{C}$  | -    | -    | 15   | $\mu\text{A}$ |
|                               |             | $V_R = 75\text{V}$                          | -    | -    | 5    | $\mu\text{A}$ |
|                               |             | $V_R = 75\text{V}, T_J = 60^\circ\text{C}$  | -    | -    | 20   | $\mu\text{A}$ |
| Capacitance Between Terminals | $C_J$       | $V_R = 0\text{V}, f = 1\text{MHz}$          | -    | -    | 10   | pF            |
|                               |             | $V_R = 1\text{V}, f = 1\text{MHz}$          | -    | -    | 6    | pF            |

## Typical Electrical Characteristic Curves

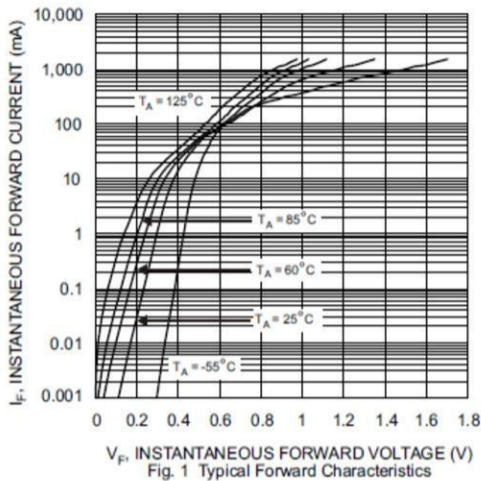


Fig 1 Typical Reverse Characteristic

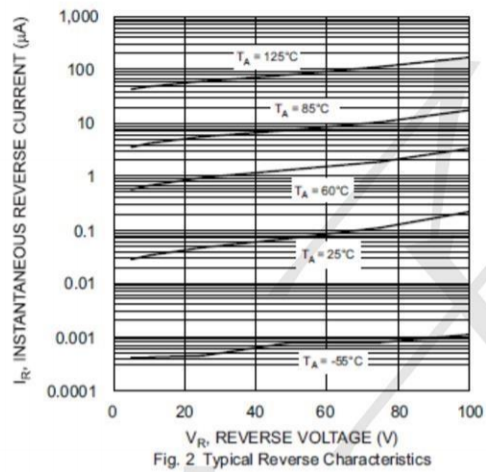


Fig 2 Typical Forward Characteristics

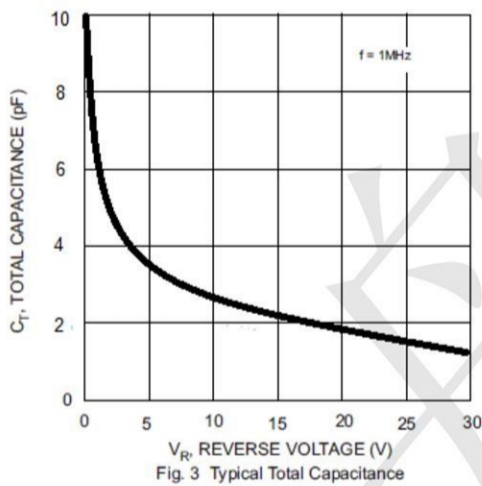


Fig 3 Capacitance Characteristics

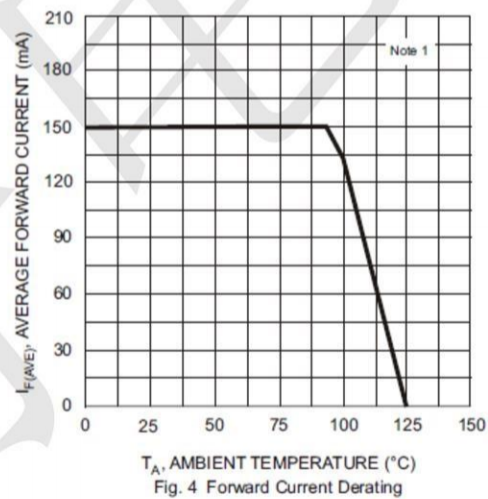
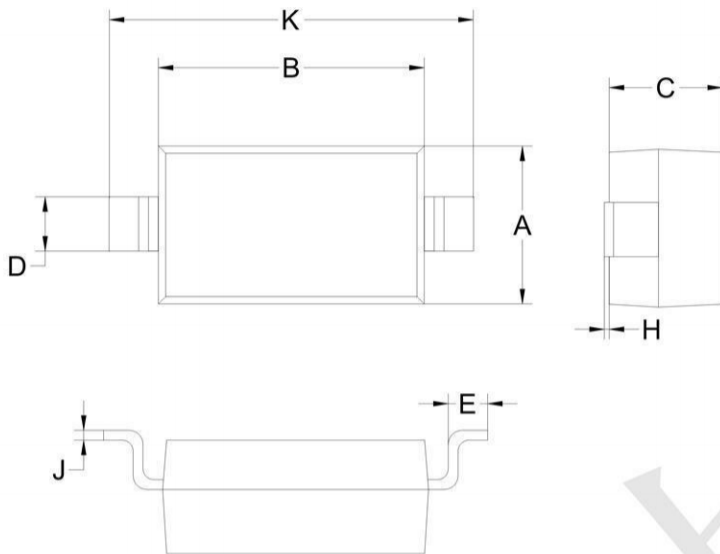


Fig 4 Derating Curve

**Outline Drawing - SOD123 (unit: mm)**



| SOD-123 |      |      |
|---------|------|------|
| Dim     | Min  | Max  |
| A       | 1.45 | 1.75 |
| B       | 2.55 | 2.85 |
| C       | 1.00 | 1.30 |
| D       | 0.50 | 0.60 |
| E       | 0.25 | 0.45 |
| H       | 0.02 | 0.10 |
| J       | 0.05 | 0.15 |
| K       | 3.55 | 3.85 |

**Mounting Pad Layout-SOD123 (unit: mm)**

