

## 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       |



Marking:SL

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

| Parameter                                               | Symbol      | TPB1A40-123-1 | Units |
|---------------------------------------------------------|-------------|---------------|-------|
| Peak Repetitive Reverse Voltage                         | $V_{RRM}$   | 40            | V     |
| RMS Reverse Voltage                                     | $V_{RMS}$   | 28            | V     |
| Maximum Average Forward Output Current                  | $I_{F(AV)}$ | 1             | A     |
| Peak Forward Surge Current, 8.3ms Single Half-sine-wave | $I_{FSM}$   | 10            | A     |

## Thermal Characteristics

| Parameter                            | Symbol            | TPB1A40-123-1 | Units                     |
|--------------------------------------|-------------------|---------------|---------------------------|
| Power Dissipation                    | $P_D$             | 500           | mW                        |
| Typical Thermal Resistance per leg   | $R_{\theta JA}^*$ | 200           | $^\circ\text{C}/\text{W}$ |
| Operating Junction Temperature Range | $T_J$             | 125           | $^\circ\text{C}$          |
| Storage Temperature Range            | $T_{STG}$         | -55 to +150   | $^\circ\text{C}$          |

\* Part mounted on FR-4 board with recommended pad layout

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

| Parameter                     | Symbol     | Test conditions                | Min. | Typ. | Max. | Units |
|-------------------------------|------------|--------------------------------|------|------|------|-------|
| Forward Voltage               | $V_F^*$    | $I_F=1\text{A}$                | -    | -    | 0.60 | V     |
|                               |            | $I_F=3\text{A}$                | -    | -    | 0.90 |       |
| Maximum Peak Reverse Current  | $I_R^{**}$ | $V_R=40\text{V}$               | -    | -    | 1    | mA    |
| Capacitance Between Terminals | $C_T$      | $V_R=4\text{V}, f=1\text{MHz}$ | -    | 39   | 120  | pF    |

\*Pulse width  $\leq 380\text{ }\mu\text{s}$ , Duty cycle  $< 2\%$   
 \*\*pulse test ,  $t_p \leq 5\text{ms}$

**Typical Electrical Characteristic Curves**

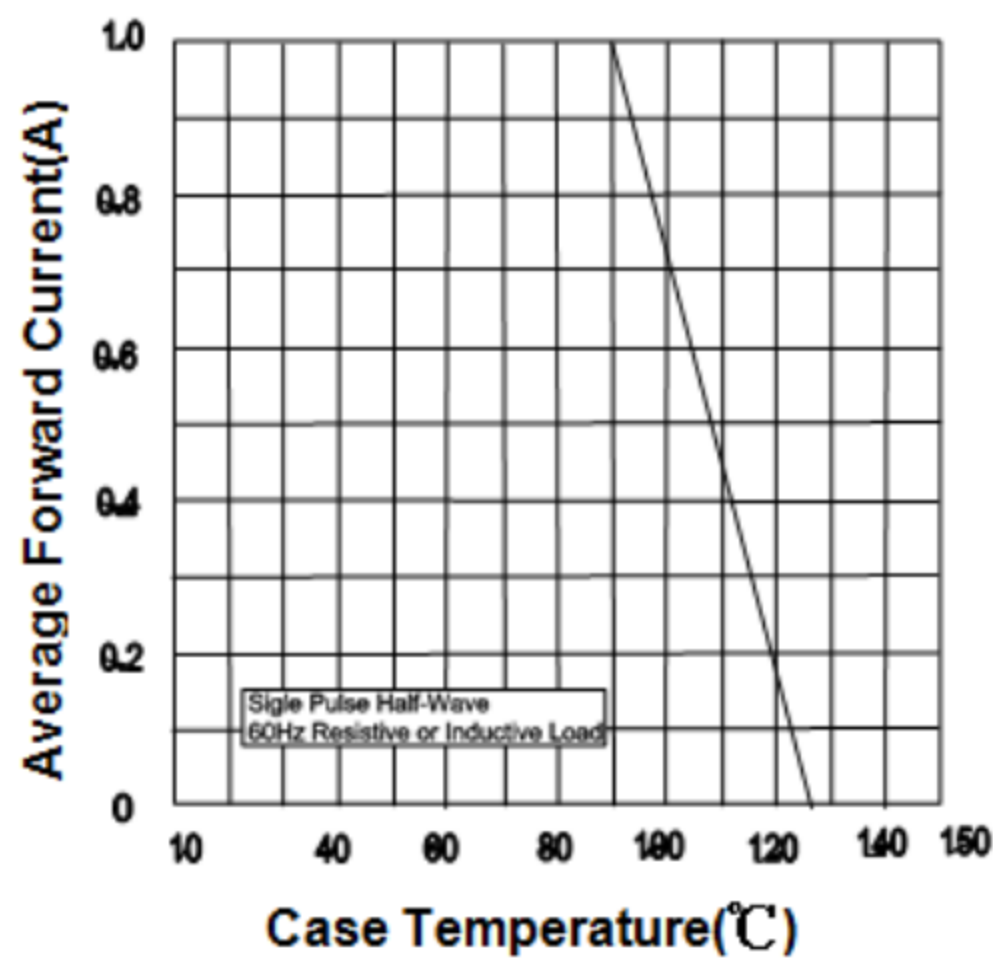


Fig.1 Forward Current Derating Curve

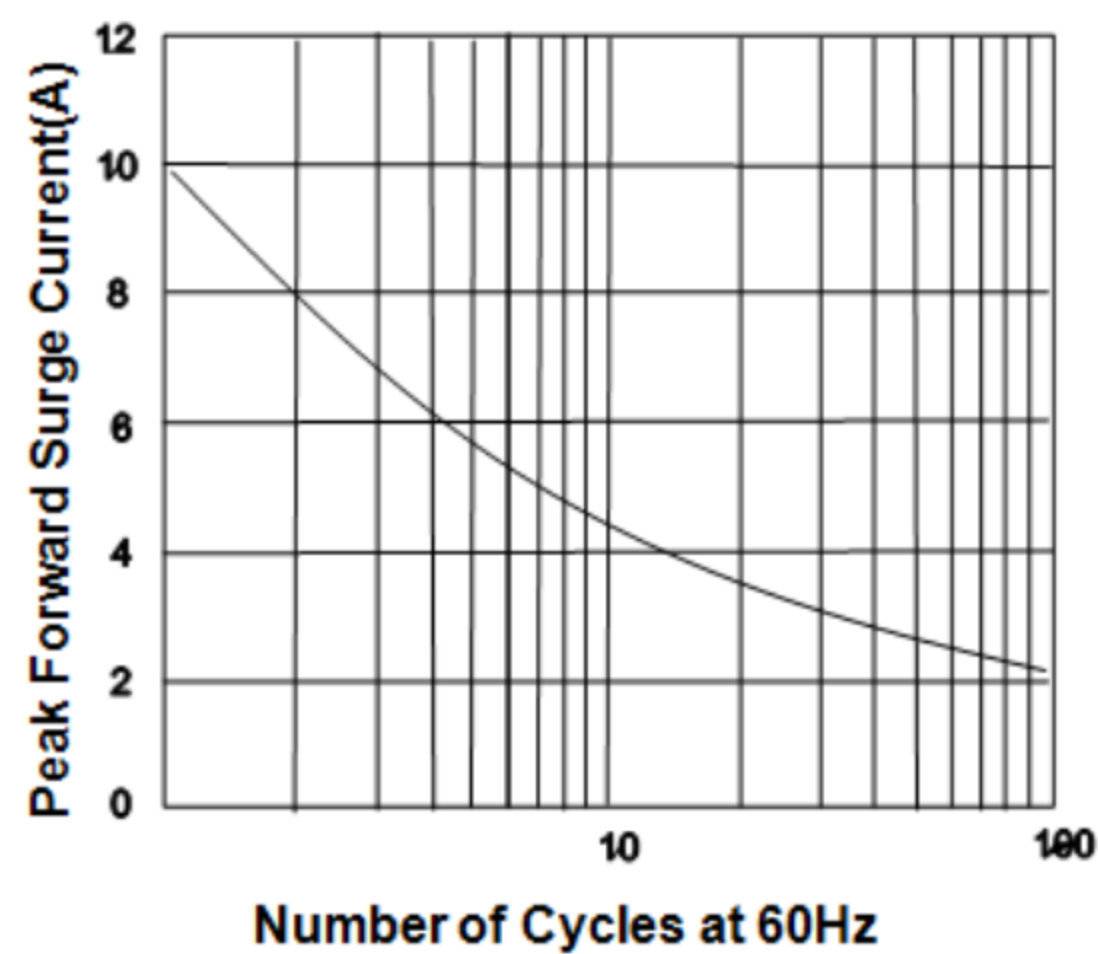


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

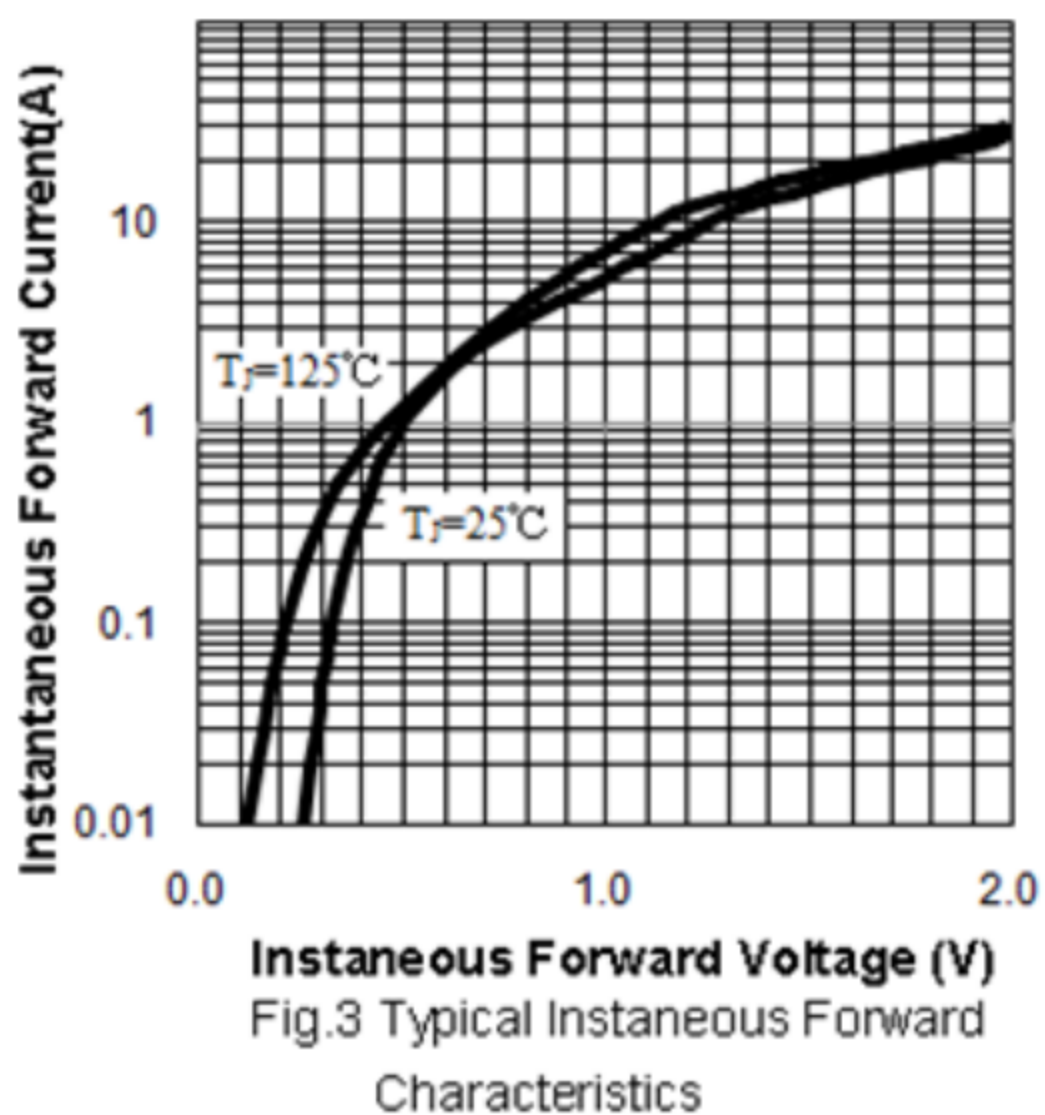


Fig.3 Typical Instantaneous Forward Characteristics

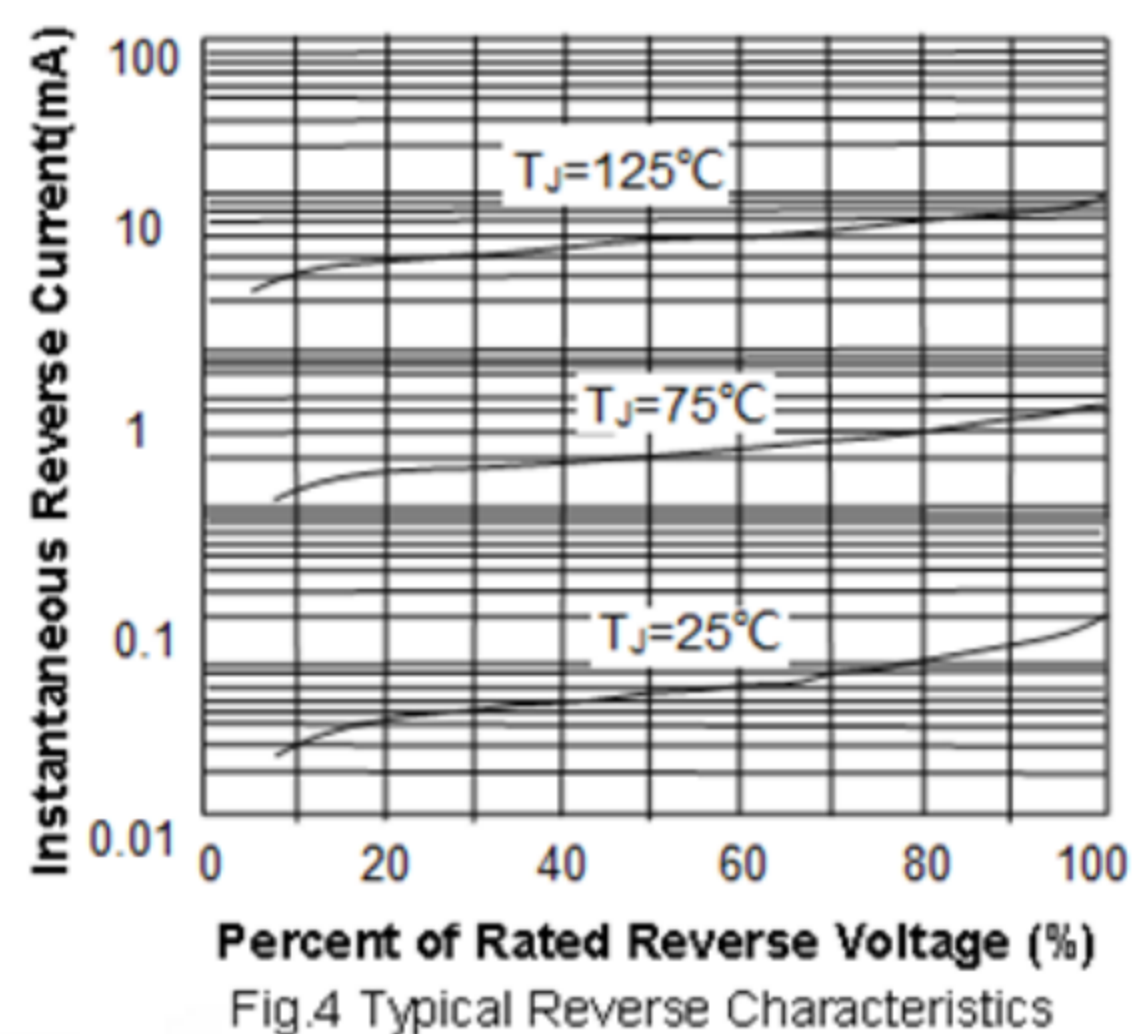
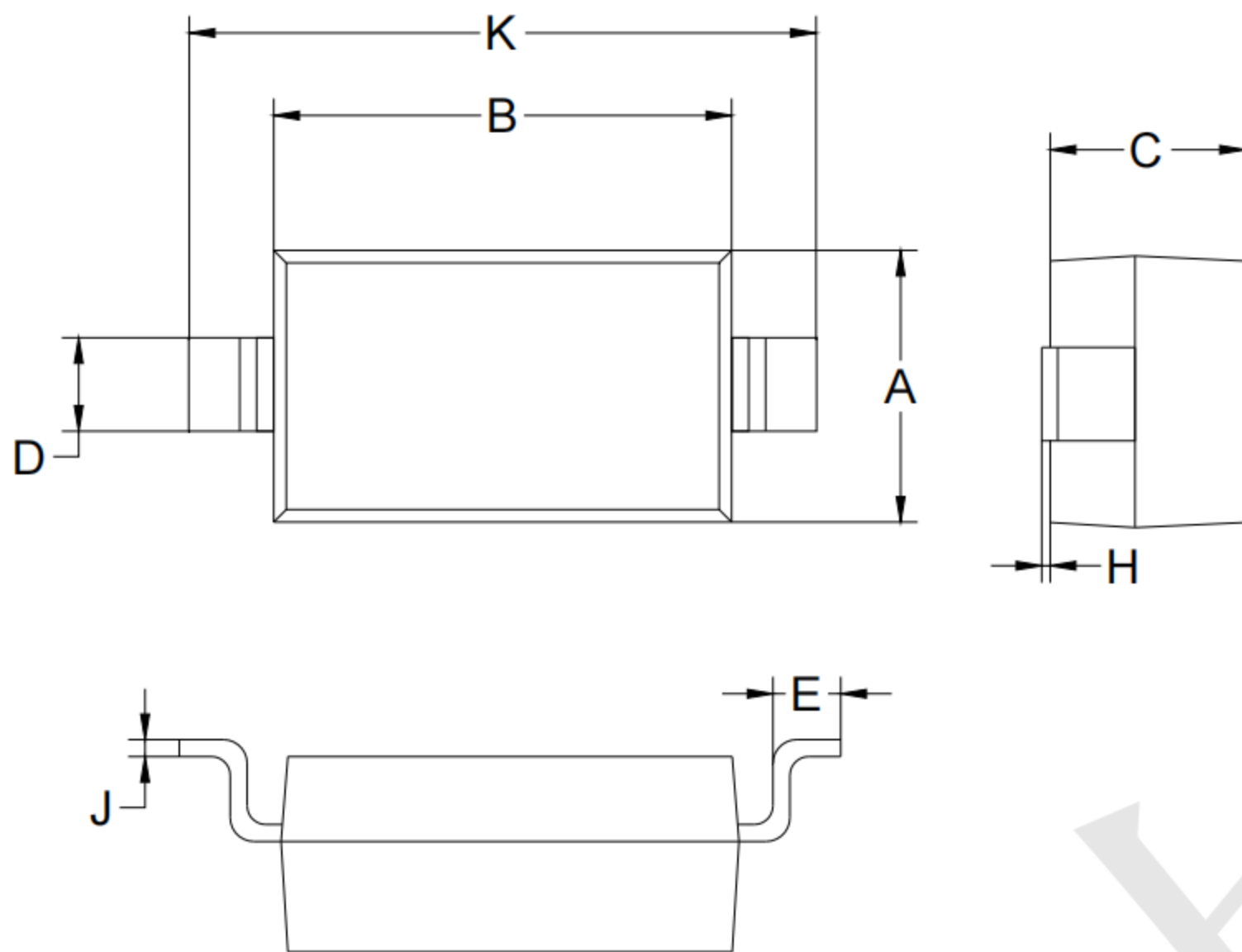


Fig.4 Typical Reverse Characteristics

**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)

