

# Schottky Barrier Diode

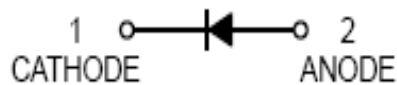
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Compliant



## Features

- High reliability
- Small surface mounting type
- Low reverse current and low forward voltage



## Maximum Ratings (@TA=25°C unless otherwise specified)

| Parameter   | Symbol      | Value | 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            | Value       | Units |
|--------------------------------------|-------------------|-------------|-------|
| Power Dissipation                    | $P_D$             | 250         | mW    |
| Typical Thermal Resistance per leg   | $R_{\theta JA}^*$ | 500         | °C /W |
| Typical Thermal Resistance per leg   | $R_{\theta JL}$   | 323         |       |
| Typical Thermal Resistance per leg   | $R_{\theta JC}$   | 276         |       |
| Operating Junction Temperature Range | $T_J$             | -55 to +150 | °C    |
| Storage Temperature Range            | $T_{STG}$         |             |       |

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

## Electrical Characteristics (@TA=25°C unless otherwise specified)

| Parameter                     | Symbol     | Test conditions | Min. | Typ. | Max. | Units |
|-------------------------------|------------|-----------------|------|------|------|-------|
| Forward Voltage               | $V_F^*$    | IF=1A           | -    | -    | 0.6  | V     |
|                               |            | IF=3A           |      |      | 0.9  |       |
| Maximum Peak Reverse Current  | $I_R^{**}$ | VR= 40V         |      |      | 1    | mA    |
| Capacitance Between Terminals | $C_T$      | VR=4V, f=1MHZ   |      |      | 39   | 120   |

\*Pulse width  $\leq 380$  uS, Duty cycle < 2%

\*\*pulse test,  $t_p \leq 5$ ms

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## Ratings and Characteristic Curves (TA=25°C unless otherwise noted)

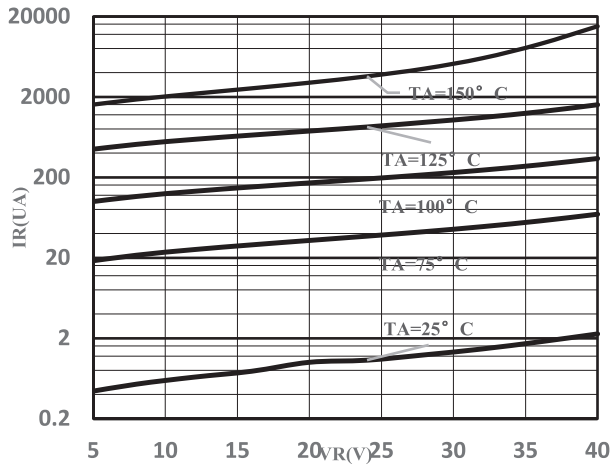


Fig.1- Typical Reverse Characteristic

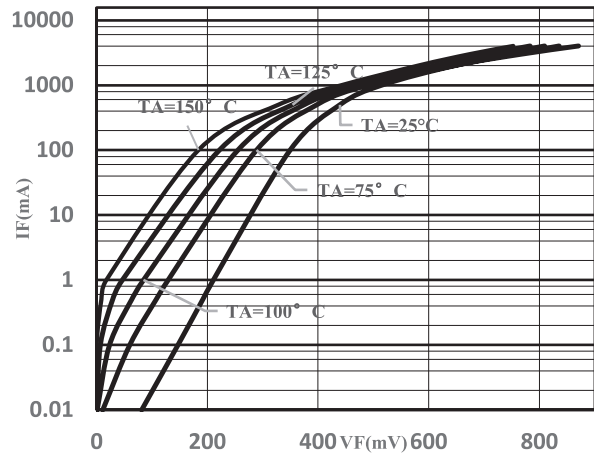


Fig.2- Typical Forward Characteristics

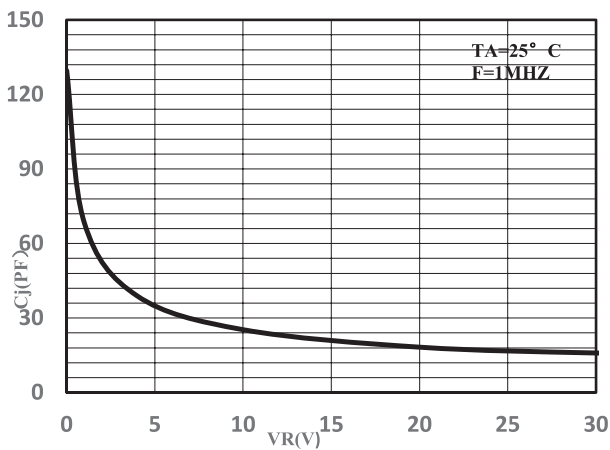


Fig.3- Capacitance Characteristics

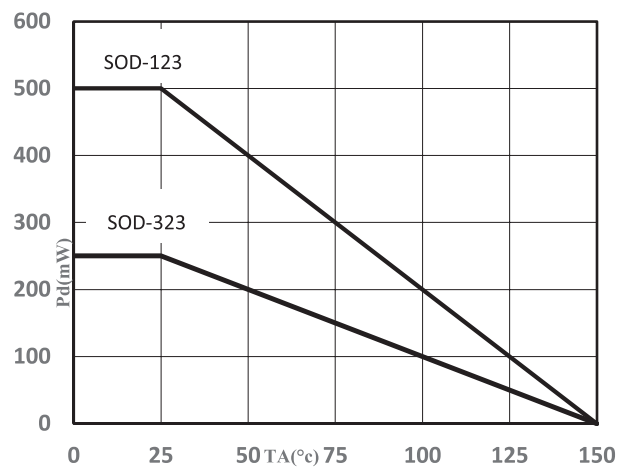
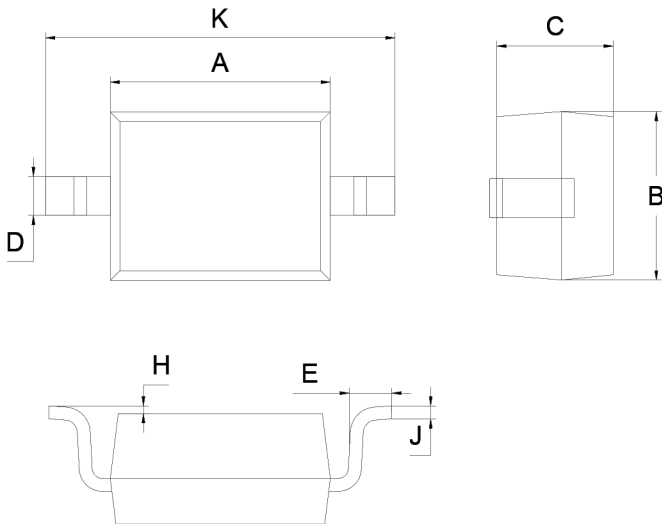


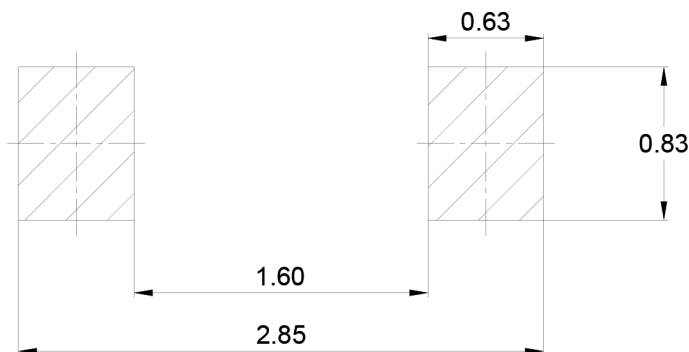
Fig.4- Derating Curve

## Package Outline Dimensions



| SOD-323 |      |      |
|---------|------|------|
| Dim     | Min  | Max  |
| A       | 1.60 | 1.80 |
| B       | 1.20 | 1.40 |
| C       | 0.80 | 0.90 |
| D       | 0.25 | 0.35 |
| E       | 0.22 | 0.42 |
| H       | 0.02 | 0.10 |
| J       | 0.05 | 0.15 |
| K       | 2.55 | 2.75 |

## Mounting Pad Layout



## Part Number Table

| Description   | Part Number |
|---|-------------|
| Schottky Barrier Diode, Small Signal, 40V, 250mW, SOD-323 | MP008356    |

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