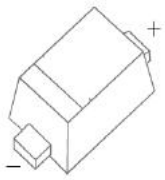
## Schottky Barrier Diode

| Parameter | Value | Unit |
|---|---|---|
| $V_R$ | 40 | V |
| $I_{F(AV)}$ | 1.0 | A |



SOD-523

## Features

- Low Forward Voltage
- Surface Mount device
- For use in low voltage high frequency inverters and polarity protection applications

## Absolute Maximum Ratings(Ta=25℃unless otherwise noted)

| Parameter | Symbol | Value | Units |
|---|---|---|---|
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | 40 | V |
| Average Forward Rectified Current | $I_{F(AV)}$ | 1.0 | A |
| Non-Repetitive Peak Forward Surge Current ( @t=8..3ms ) | $I_{FSM}$ | 6 | A |
| Operating Junction Temperature | $T_J$ | 125 | ℃ |
| Storage Temperature Range | $T_{STG}$ | -50 to +125 | ℃ |

## Electrical Characteristics(Ta=25℃unless otherwise noted)

| Parameter | Symbol | Conditions | Min | Max | Units |
|---|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$=0.3A<br>$I_F$=1A | | 0.5<br>0.68 | V<br>V |
| Reverse current | $I_R$ | $V_R$=40V | | 100 | uA |
| Reverse breakdown voltage | $V_{BR}$ | $I_R$=0.5mA | 40 | | V |
| Capacitance | $C_T$ | $V_R$=0V, f=1MHz | | 100 | pF |

## Typical Characteristics

Fig. 1 - Forward Current Derating Curve

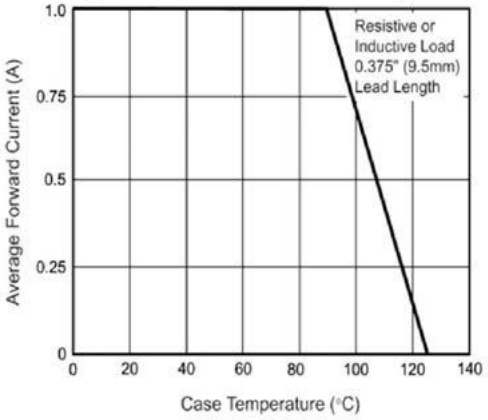



Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

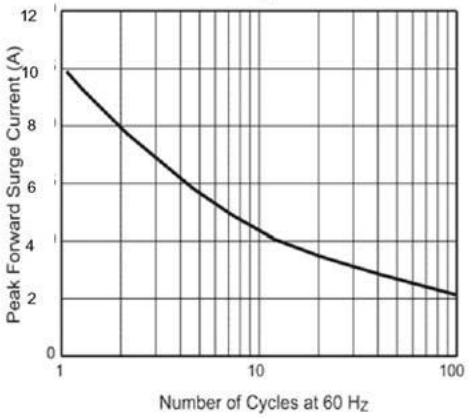



Fig. 3 - Typical Instantaneous Forward Characteristics

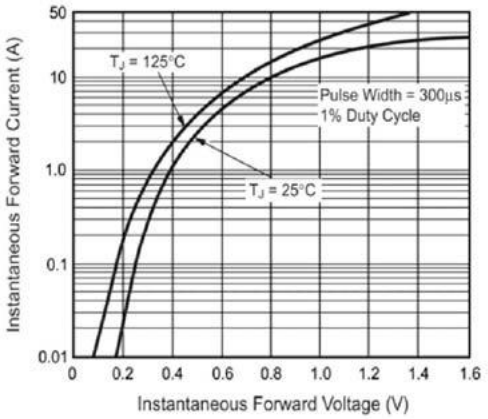



Fig. 4 - Typical Reverse Characteristics

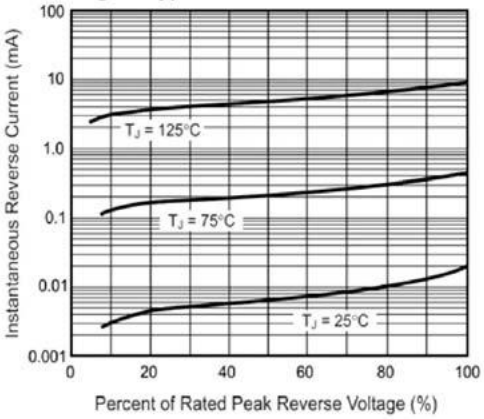



Fig. 5 - Typical Junction Capacitance

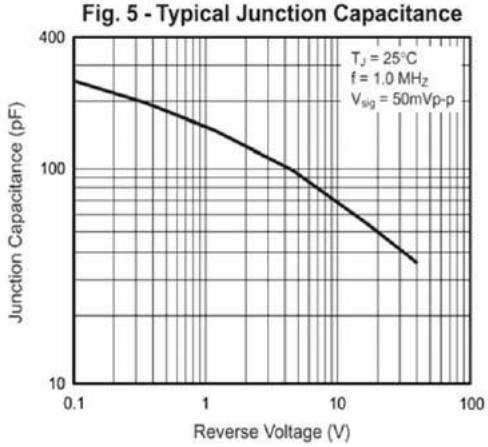
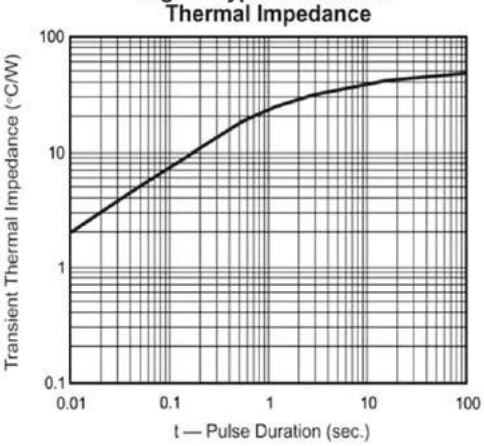
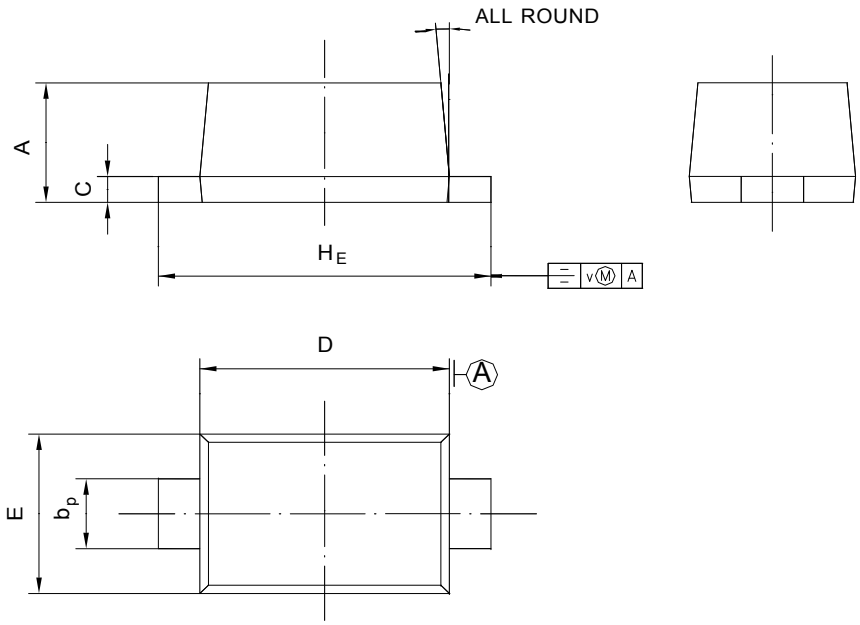



Fig. 6 - Typical Transient Thermal Impedance



## Package Outline (Units: mm)

## SOD-523




| UNIT | A | $b_p$ | C | D | E | $H_E$ | V | ∠ |
|---|---|---|---|---|---|---|---|---|
| mm | 0.68<br>0.58 | 0.4<br>0.3 | 0.135<br>0.100 | 1.25<br>1.15 | 0.85<br>0.75 | 1.7<br>1.5 | 0.1 | 5° |

***Important Usage Information and Disclaimer**

The specifications of Zhuhai Hypersemi Co., Ltd. products are not guarantees of product characteristics. They reflect typical performance expected in standard applications, which may vary with specific uses. Users must conduct prior testing for their applications and make necessary adjustments.

Users are responsible for the safety of applications utilizing our products and must implement adequate safety measures to prevent physical injury, fire, or other risks in case of product failure. It is the user's duty to ensure that application designs comply with all applicable laws and standards. Our products must not be used in any applications where a product failure could reasonably result in personal injury, unless specifically authorized in a signed document by Zhuhai Hypersemi Co., Ltd.

No representations or warranties are made regarding the accuracy or completeness of this information, including any claims of non-infringement of third-party intellectual property rights. Zhuhai Hypersemi Co., Ltd. assumes no liability for any applications or uses of its products and does not grant any licenses to its intellectual property rights or those of others. We also make no claims regarding non-infringement of third-party intellectual property rights that may arise from applications.

Due to technical requirements, our products may contain hazardous substances. For details, please contact your nearest sales office. This document replaces all previous information and may be updated. We reserve the right to make changes.