

SCHOTTKY BARRIER DIODE

Features

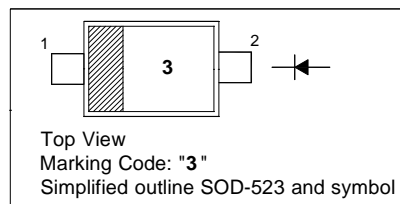
- Low forward voltage

Applications

- Ultra high-speed switching
- Voltage clamping
- Protection circuits

PINNING

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



Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|---|------------|---------------|------------------|
| Reverse Voltage | V_R | 30 | V |
| Forward Current | I_F | 200 | mA |
| Repetitive Peak Forward Current | I_{FRM} | 300 | mA |
| Peak Forward Surge Current ($t_p = 10\text{ ms}$) | I_{FSM} | 600 | mA |
| Power Dissipation | P_D | 200 | mW |
| Thermal Resistance from Junction Ambient | R_{thJA} | 500 | K/W |
| Junction Temperature | T_J | 125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 65 to + 150 | $^\circ\text{C}$ |

Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter | Symbol | Min | Max. | Unit |
|---|-------------|-----|-----------------------------------|---------------|
| Forward Voltage at $I_F = 0.1\text{ mA}$ at $I_F = 1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 30\text{ mA}$ at $I_F = 100\text{ mA}$ | V_F | - | 0.24 0.32 0.4 0.5 0.8 | V |
| Reverse Breakdown Voltage at $I_R = 10\text{ }\mu\text{A}$ | $V_{(BR)R}$ | 30 | - | V |
| Reverse Current at $V_R = 25\text{ V}$ | I_R | - | 2 | μA |
| Total Capacitance at $V_R = 1\text{ V}$, $f = 1\text{ MHz}$ | C_T | - | 15 | pF |
| Reverse Recovery Time at $I_F = 10\text{ mA}$, $V_R = 6\text{ V}$, $I_R = 10\text{ mA}$, $R_L = 100\text{ }\Omega$ | t_{rr} | - | 6 | ns |

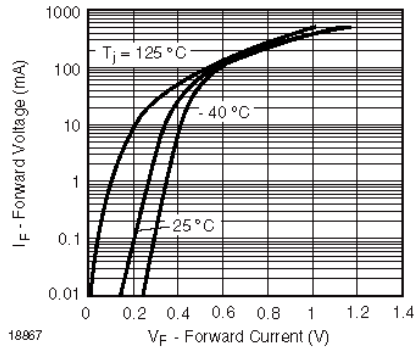


Figure 1. Typical Forward Voltage Forward Current at Various Temperatures

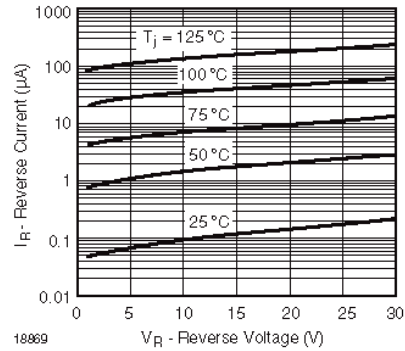


Figure 3. Typical Variation of Reverse Current at Various Temperatures

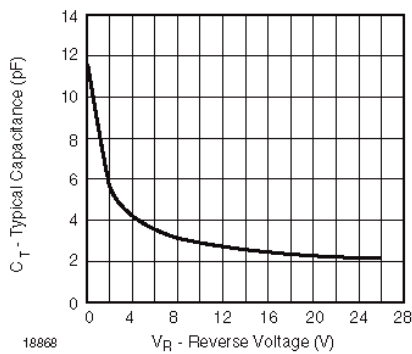
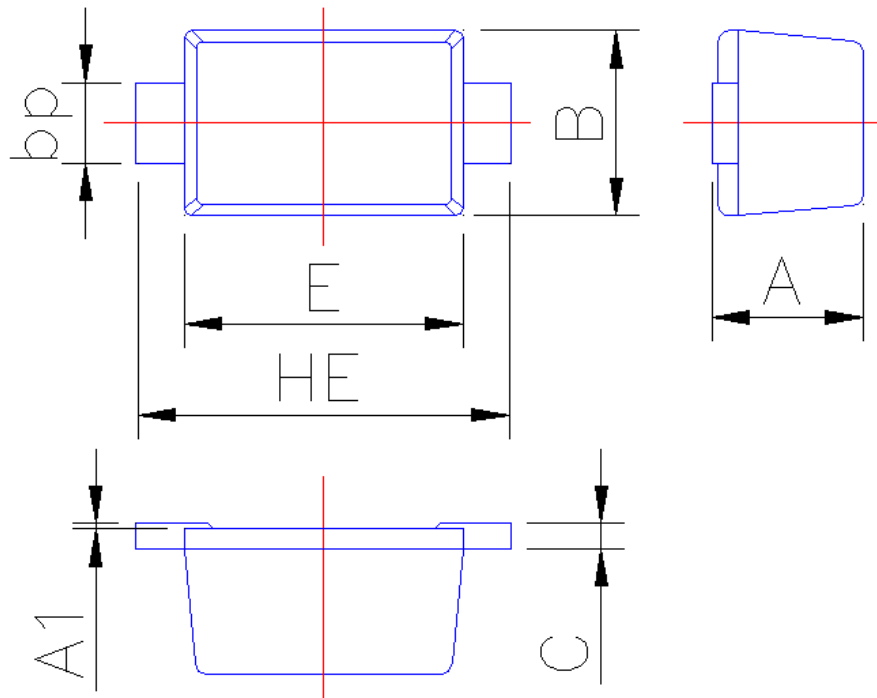


Figure 2. Typical Capacitance °C vs. Reverse Applied Voltage V_R

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-523



| Symbol | Dimension in Millimeters | |
|--------|--------------------------|------|
| | Min | Max |
| A | 0.60 | 0.70 |
| A1 | 0 | 0.05 |
| B | 0.75 | 0.85 |
| bp | 0.25 | 0.40 |
| C | 0.09 | 0.15 |
| E | 1.15 | 1.25 |
| HE | 1.50 | 1.70 |