

# SB4510WT

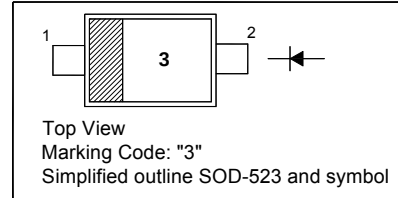
## SCHOTTKY BARRIER DIODE

### Features

- Very low forward voltage
- Ultra small SMD package

### PINNING

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



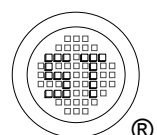
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

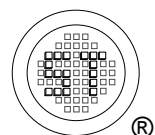
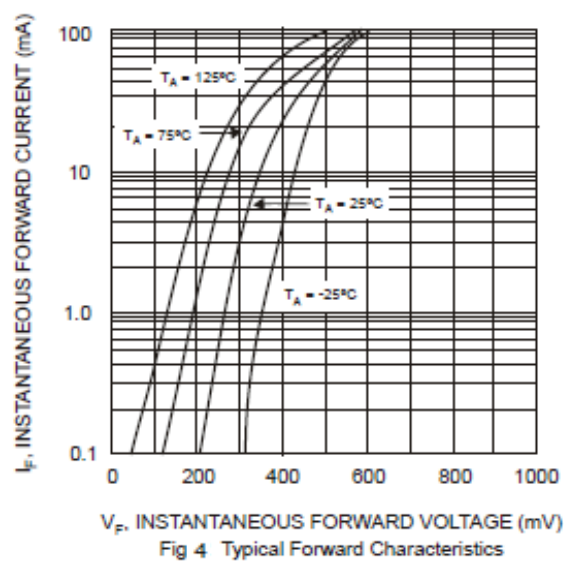
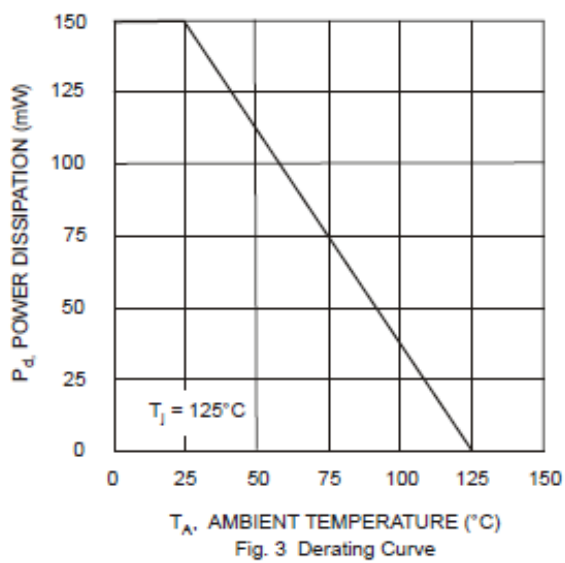
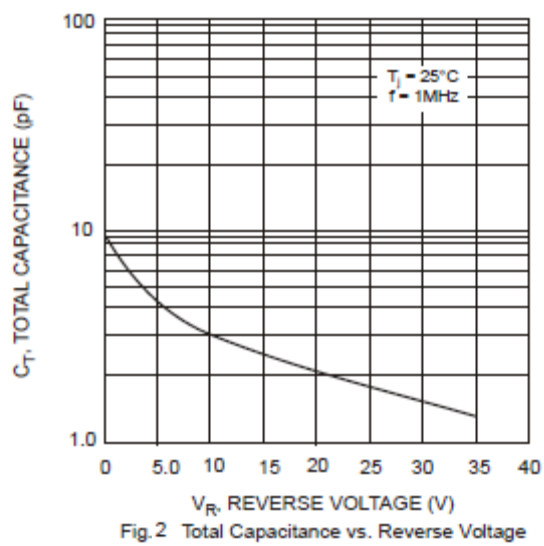
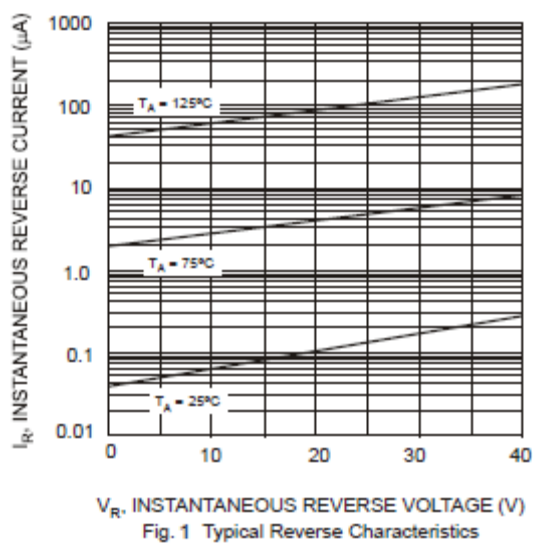
| Parameter                                              | Symbol          | Value         | Unit               |
|--------------------------------------------------------|-----------------|---------------|--------------------|
| Peak Repetitive Reverse Voltage                        | $V_{RRM}$       | 45            | V                  |
| Working Peak Reverse Voltage                           | $V_{RWM}$       | 45            | V                  |
| DC Blocking Voltage                                    | $V_R$           | 40            | V                  |
| Non-repetitive Peak Forward Surge Current              | $I_{FSM}$       | 1             | A                  |
| Non-Repetitive Peak Forward Current                    | $I_{FM}$        | 300           | mA                 |
| Power Dissipation <sup>1)</sup>                        | $P_{tot}$       | 150           | mW                 |
| Thermal Resistance (Junction to Ambient) <sup>1)</sup> | $R_{\theta JA}$ | 667           | $^\circ\text{C/W}$ |
| Junction and Storage Temperature Range                 | $T_j, T_{stg}$  | - 40 to + 125 | $^\circ\text{C}$   |

<sup>1)</sup> Part mounted on FR-4 board with recommended pad layout.

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

| Parameter                                                                | Symbol      | Min.   | Typ.   | Max.        | Unit          |
|--------------------------------------------------------------------------|-------------|--------|--------|-------------|---------------|
| Reverse Breakdown Voltage<br>at $I_R = 100 \mu\text{A}$                  | $V_{(BR)R}$ | 30     | -      | -           | V             |
| Forward Voltage<br>at $I_F = 50 \text{ mA}$<br>at $I_F = 100 \text{ mA}$ | $V_F$       | -<br>- | -<br>- | 0.55<br>0.8 | V             |
| Reverse Current<br>at $V_R = 25 \text{ V}$                               | $I_R$       | -      | -      | 1           | $\mu\text{A}$ |
| Diode Capacitance<br>at $V_R = 10 \text{ V}$ , $f = 1 \text{ MHz}$       | $C_{tot}$   | -      | -      | 15          | pF            |



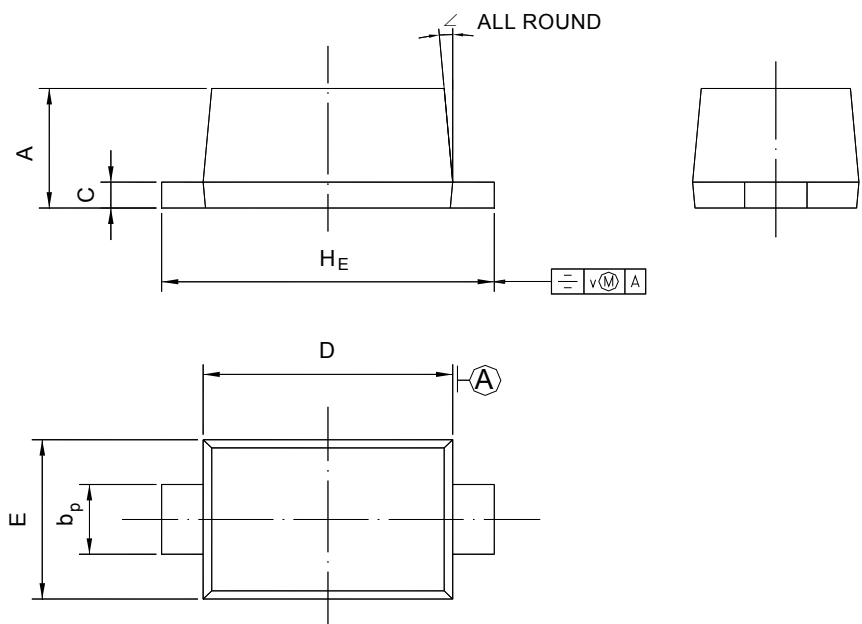


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## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-523



| UNIT | A            | b <sub>p</sub> | C              | D            | E            | H <sub>E</sub> | V   | ∠  |
|------|--------------|----------------|----------------|--------------|--------------|----------------|-----|----|
| mm   | 0.70<br>0.60 | 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° |

