

## Features

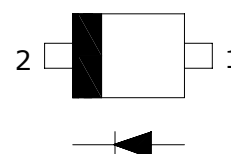
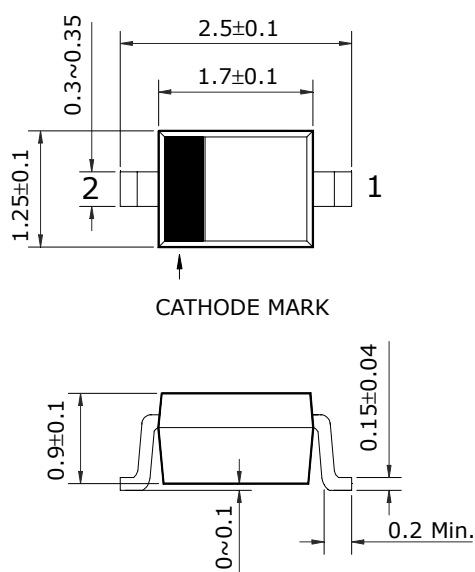
- Ultra high speed switching application
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance

## Ordering Information

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| SDS511   | S1      | SOD-323      |

## Outline Dimensions

unit : mm



### PIN Connections

1. Anode
2. Cathode

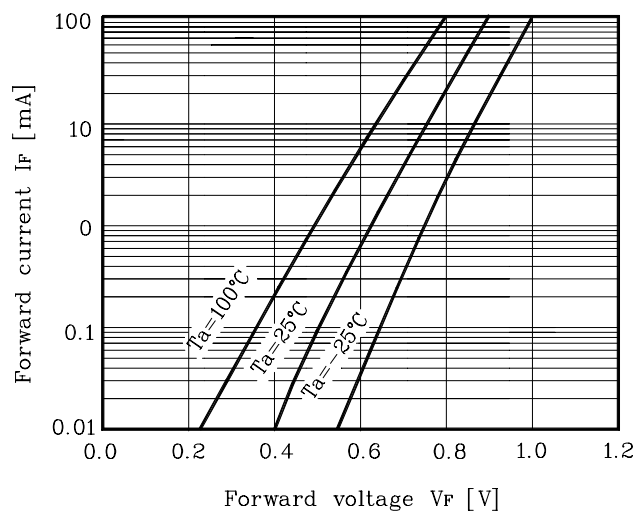
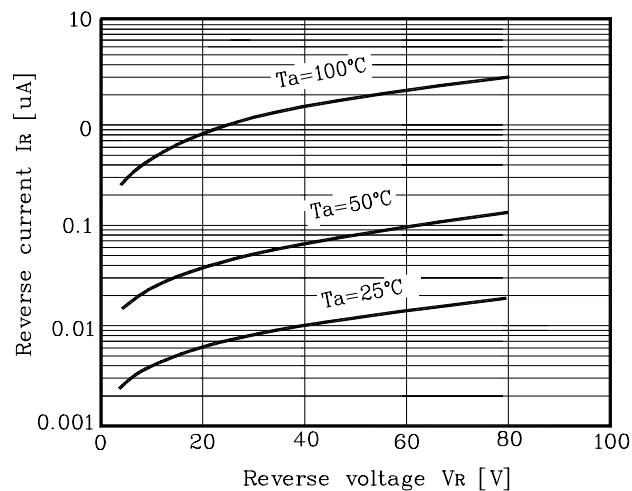
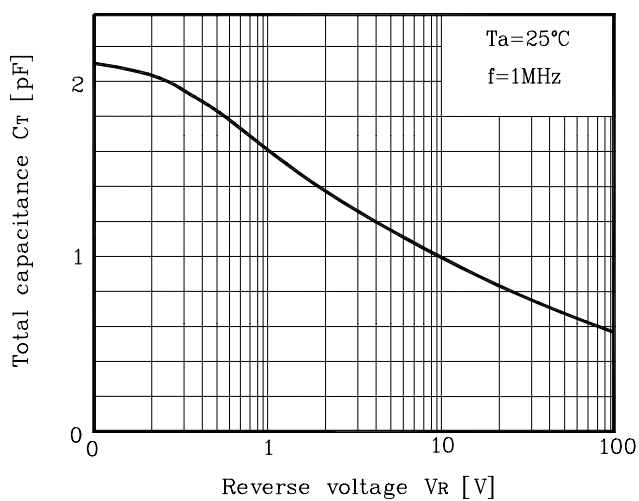
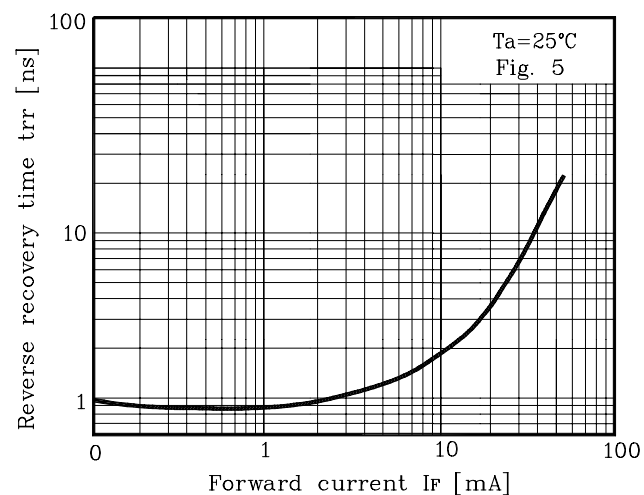
**Absolute maximum ratings** $T_a=25^{\circ}\text{C}$ 

| Characteristic                | Symbol    | Ratings   | Unit               |
|-------------------------------|-----------|-----------|--------------------|
| Maximum(peak) reverse voltage | $V_{RM}$  | 85        | V                  |
| Reverse voltage               | $V_R$     | 80        | V                  |
| Maximum(peak) forward current | $I_{FM}$  | 300       | mA                 |
| Average forward current       | $I_O$     | 100       | mA                 |
| Surge current(10ms)           | $I_{FSM}$ | 2         | A                  |
| Power dissipation             | $P_D$     | 150       | mW                 |
| Junction temperature          | $T_j$     | 150       | $^{\circ}\text{C}$ |
| Storage temperature           | $T_{stg}$ | -55 ~ 150 | $^{\circ}\text{C}$ |

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

| Characteristic        | Symbol     | Test Condition         | Min. | Typ. | Max. | Unit          |
|-----------------------|------------|------------------------|------|------|------|---------------|
| Forward voltage       | $V_{F(1)}$ | $I_F=1\text{mA}$       | -    | 0.6  | -    | V             |
|                       | $V_{F(2)}$ | $I_F=10\text{mA}$      | -    | 0.7  | -    |               |
|                       | $V_{F(3)}$ | $I_F=100\text{mA}$     | -    | 0.9  | 1.2  |               |
| Reverse current       | $I_R$      | $V_R=80\text{V}$       | -    | -    | 0.5  | $\mu\text{A}$ |
| Total capacitance     | $C_T$      | $V_R=0, f=1\text{MHz}$ | -    | 2.2  | 4.0  | pF            |
| Reverse recovery time | $t_{rr}$   | $I_F=10\text{mA}$      | -    | 1.6  | 4.0  | ns            |

## Electrical Characteristic Curves

Fig. 1  $I_F$ - $V_F$ Fig. 2  $I_R$ - $V_R$ Fig. 3  $C_T$ - $V_R$ Fig. 4  $t_{rr}$ - $I_F$ Fig. 5 Reverse recovery time( $t_{rr}$ ) test circuit