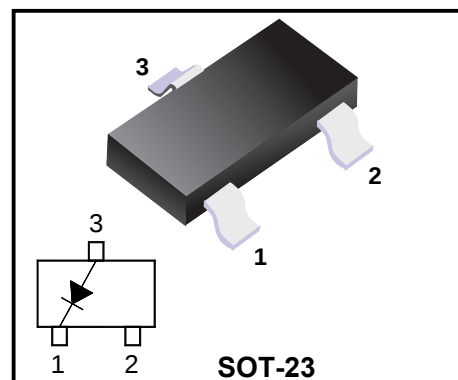


## High Speed Switching Diode

### Features

- Fast reverse recovery time:  $t_{rr}=1.6\text{ns}(\text{typ.})$
- Diode capacitance :  $C_d=2.2\text{pF}(\text{typ.})$

| Marking Code |    |
|--------------|----|
| 1SS187       | D3 |



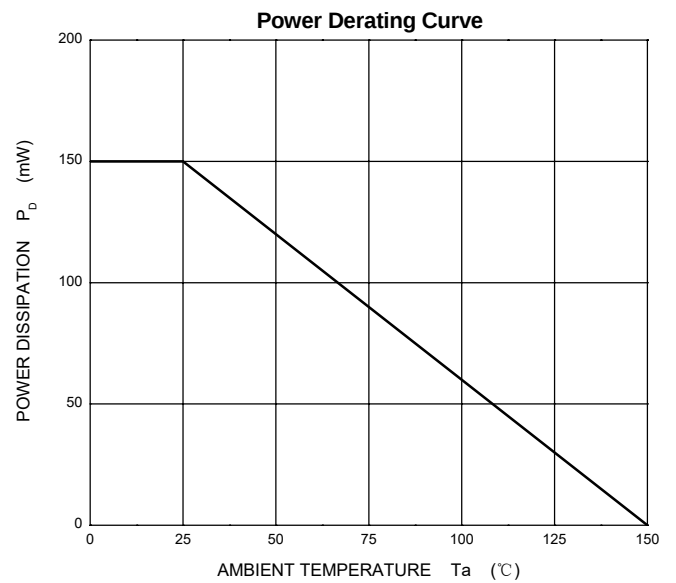
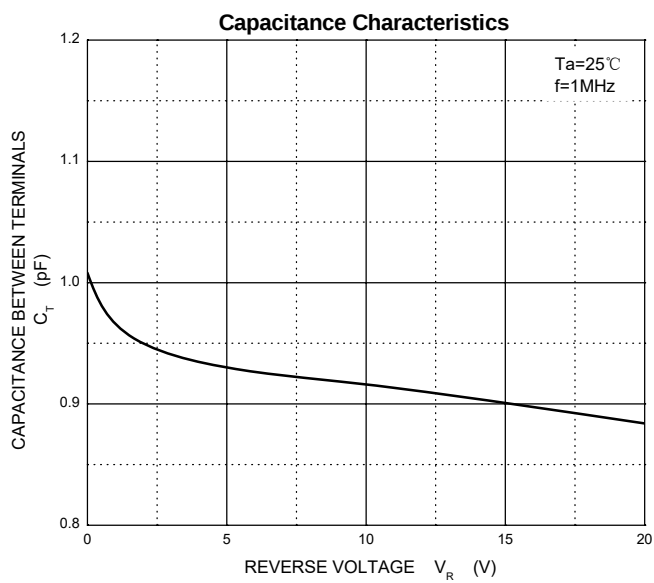
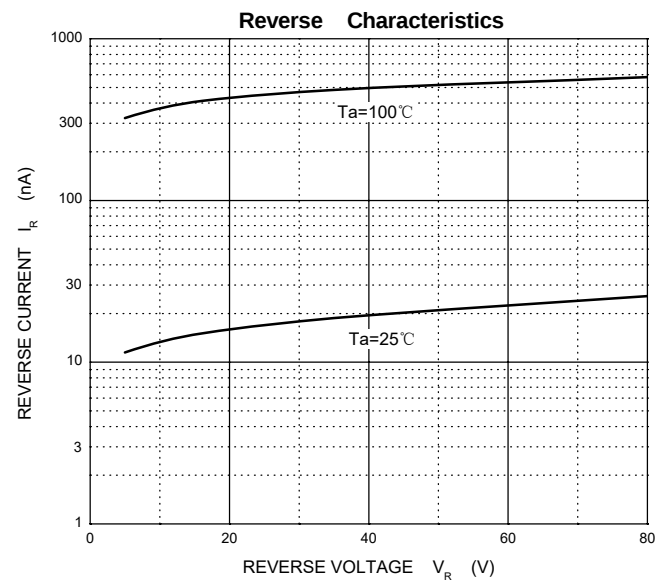
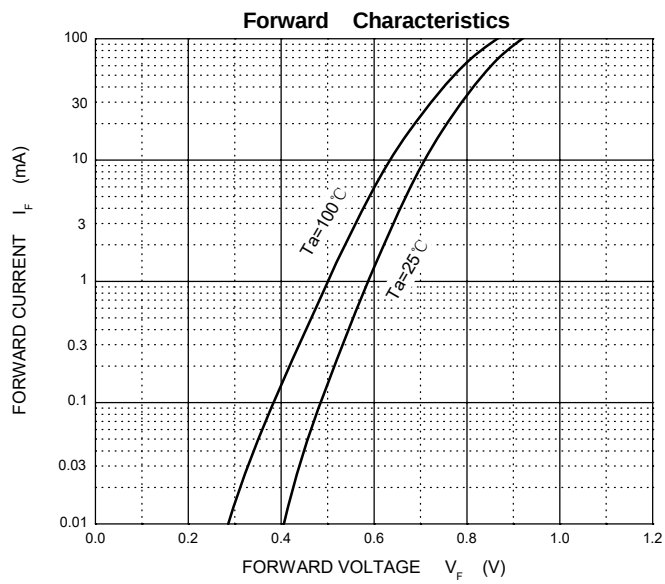
### Absolute Maximum Ratings ( $T_a=25^{\circ}\text{C}$ )

| Parameter                 | Symbol    | Rating     | Unit |
|---------------------------|-----------|------------|------|
| Maximum reverse voltage   | $V_{RM}$  | 85         | V    |
| Reverse voltage           | $V_R$     | 80         | V    |
| Average forward current   | $I_O$     | 100        | mA   |
| Maximum forward current   | $I_{FM}$  | 300        | mA   |
| Surge current             | $I_{FSM}$ | 2          | A    |
| Power dissipation         | $P_D$     | 150        | mW   |
| Junction temperature      | $T_J$     | 125        |      |
| Storage temperature range | $T_{stg}$ | -55 to 125 |      |

### Electrical Characteristics ( $T_a=25^{\circ}\text{C}$ unless otherwise specified.)

| Parameter                       | Symbol   | Test conditions                   | Min | Typ  | Max | Unit          |
|---------------------------------|----------|-----------------------------------|-----|------|-----|---------------|
| Forward voltage                 | $V_F$    | $I_F=1\text{mA}$                  |     | 0.61 |     | V             |
|                                 |          | $I_F=10\text{mA}$                 |     | 0.74 |     |               |
|                                 |          | $I_F=100\text{mA}$                |     | 0.92 | 1.2 |               |
| Reverse voltage leakage current | $I_R$    | $V_R=30\text{V}$                  |     |      | 0.1 | $\mu\text{A}$ |
|                                 |          | $V_R=80\text{V}$                  |     |      | 0.5 |               |
| Diode capacitance               | $C_D$    | $V_R=0\text{V}$ , $f=1\text{MHz}$ |     | 2.2  | 4   | pF            |
| Reverse recovery time           | $t_{rr}$ | $I_F=10\text{mA}$                 |     | 1.6  | 4   | ns            |

Typical Characteristics



### Ordering information

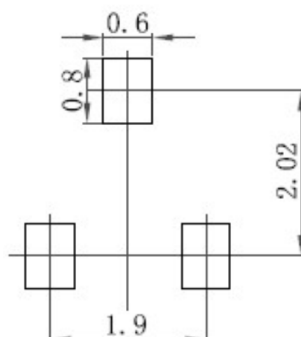
| Package | Packing Description | Base Quantity | Packing Quantity              |
|---------|---------------------|---------------|-------------------------------|
| SOT-23  | Tape/Reel, 7" reel  | 3000pcs/Reel  | 24000PCS/Box 120000PCS/Carton |

### Package Dimensions

#### SOT-23

| Dim. | Millimeter (mm) |      | mil  |      |
|------|-----------------|------|------|------|
|      | Min.            | Max. | Min. | Max. |
| A    | 0.9             | 1.15 | 35   | 45   |
| A1   | 0.1             |      | 3.9  |      |
| bp   | 0.38            | 0.48 | 15   | 19   |
| C    | 0.09            | 0.15 | 3.54 | 5.9  |
| D    | 2.8             | 3.0  | 110  | 118  |
| E    | 1.2             | 1.4  | 47   | 55   |
| E    | 1.9             |      | 75   |      |
| E1   | 0.95            |      | 37   |      |
| HE   | 2.1             | 2.55 | 83   | 100  |
| Lp   | 0.15            | 0.45 | 5.9  | 18   |
| Q    | 0.45            | 0.55 | 18   | 22   |
| v    | 0.2             |      | 7.9  |      |
| W    | 0.1             |      | 4    |      |

### The recommended mounting pad size



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