

**Features**

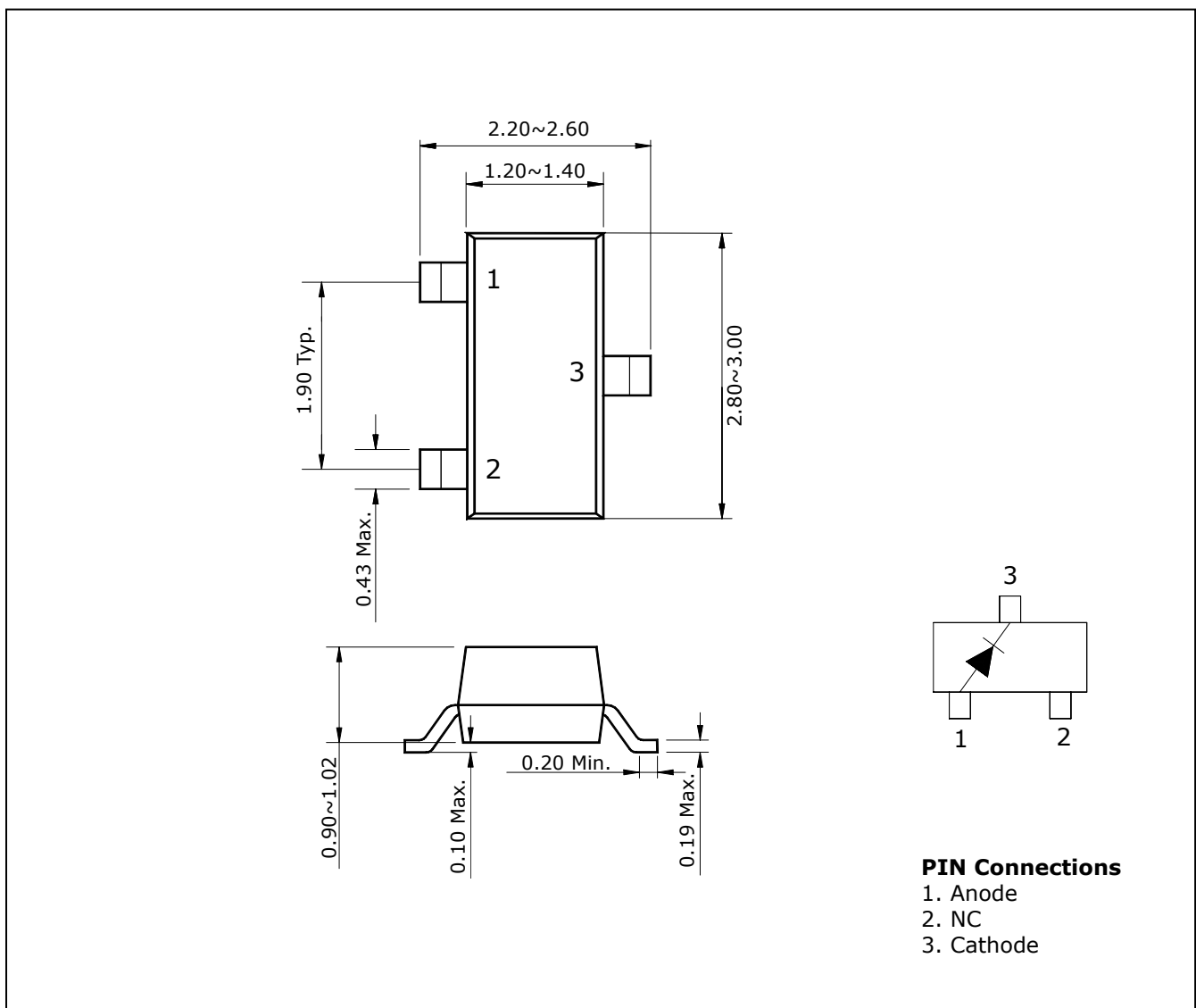
- SMD package : SOT-23
- Low forward voltage :  $V_F=0.9V$ (Typ.)
- Fast reverse recovery time :  $t_{rr}=1.6\text{ ns}$ (Typ.)
- Small total capacitance :  $C_T=2.2\text{ pF}$ (Typ.)

**Ordering Information**

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| SDS914   | C5D     | SOT-23       |

**Outline Dimensions**

unit : mm



## Absolute maximum ratings

Ta=25°C

| Characteristic                   | Symbol    | Rating    | Unit |
|----------------------------------|-----------|-----------|------|
| Peak reverse voltage             | $V_{RM}$  | 85        | V    |
| Reverse voltage                  | $V_R$     | 80        | V    |
| Peak forward current             | $I_{FM}$  | 300       | mA   |
| Average forward current          | $I_O$     | 100       | mA   |
| Peak forward surge current(10ms) | $I_{FSM}$ | 2         | A    |
| Power dissipation                | $P_D$     | 150       | mW   |
| Junction temperature             | $T_j$     | 150       | °C   |
| Storage temperature range        | $T_{stg}$ | -55 ~ 150 | °C   |

## Electrical Characteristics

Ta=25°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 | $t_{rr}$   | $I_F=10\text{ mA}$ (Fig. 5) | -    | 1.6  | 4.0  | ns            |

Electrical Characteristic Curves

Fig. 1  $I_F$ - $V_F$

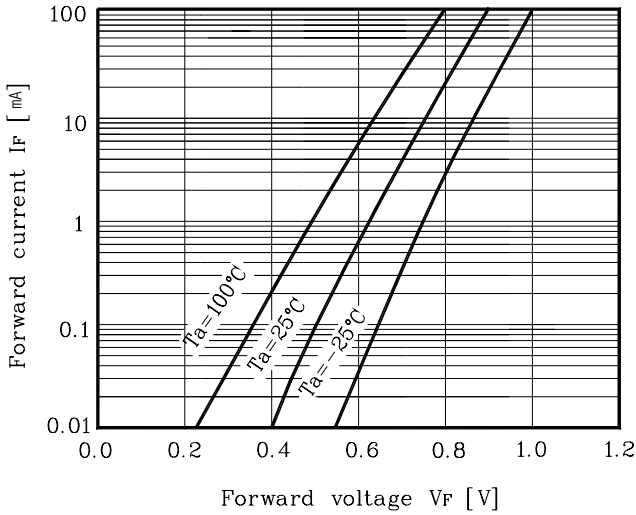


Fig. 2  $I_R$ - $V_R$

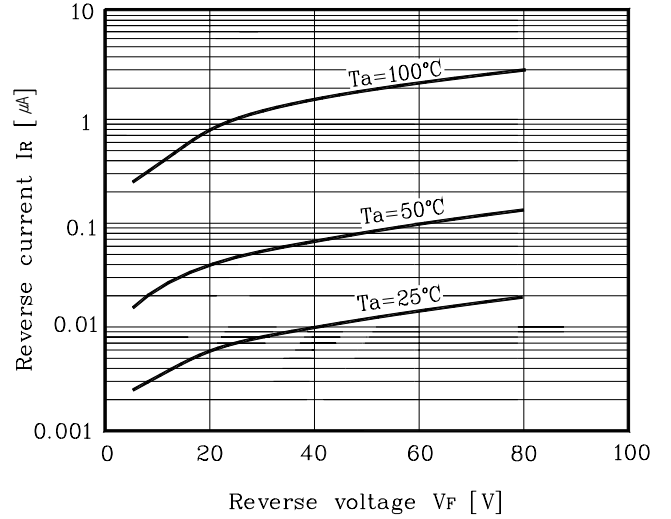


Fig. 3  $C_T$ - $V_R$

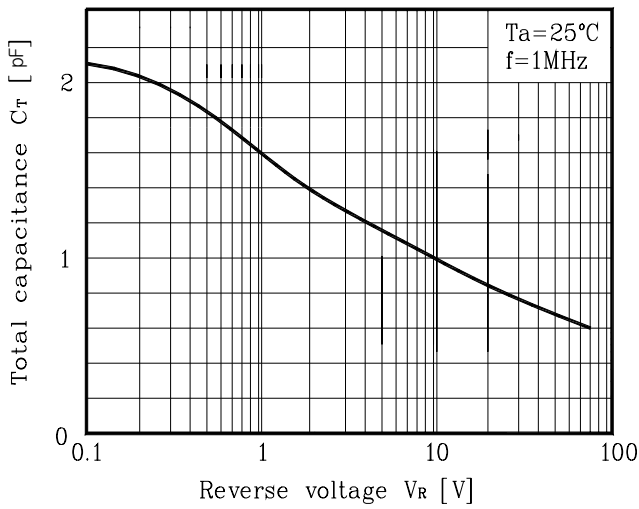


Fig. 4  $t_{rr}$ - $I_F$

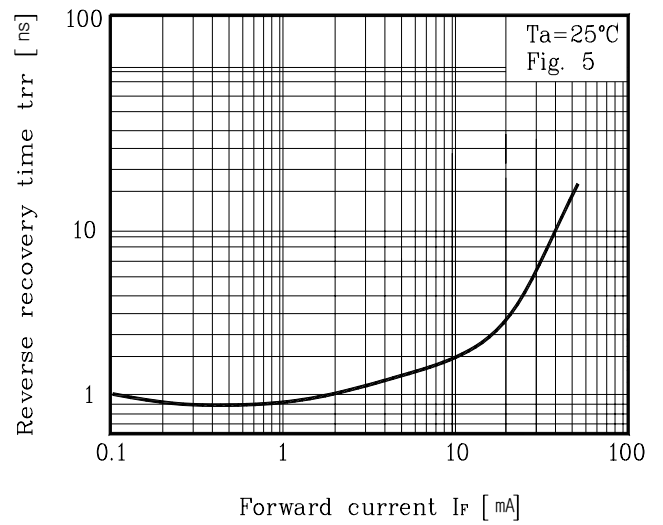
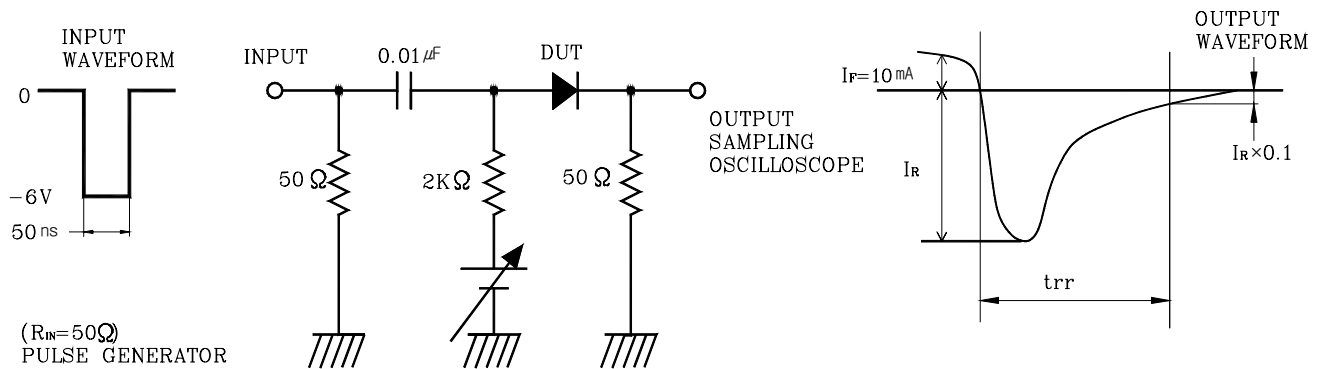


Fig. 5 Reverse recovery time( $t_{rr}$ ) test circuit



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