

Features

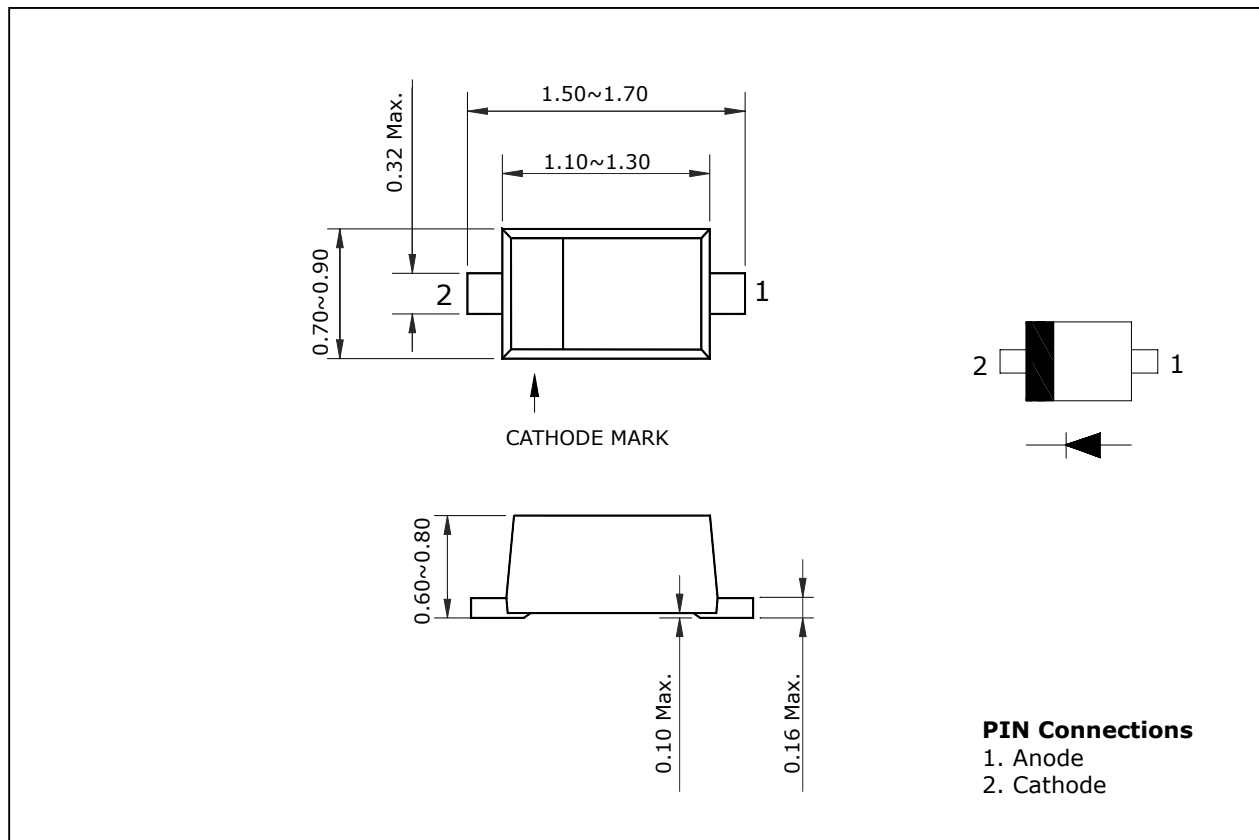
- Ultra high speed switching application
- Low forward voltage : $V_F=0.9V$ (Typ.)
- Fast reverse recovery time : $t_{rr}=1.6\text{ ns}$ (Typ.)
- Small total capacitance : $C_T=2.2\text{ pF}$ (Typ.)

Ordering Information

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| SDS511Q | S1 | SOD-523 |

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 | $V_R=80V$ | - | - | 0.5 | μA |
| 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

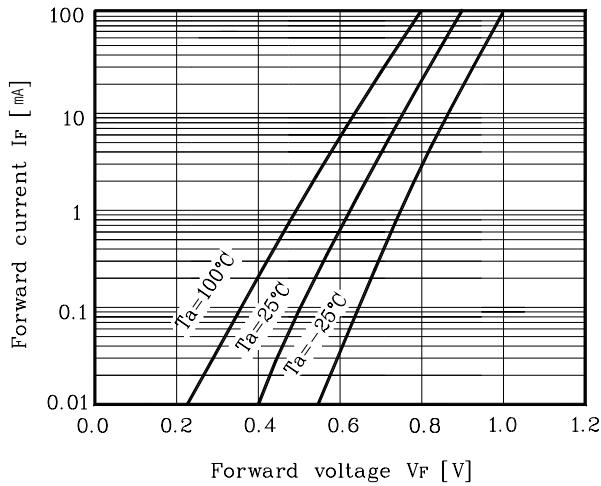


Fig. 2 I_R-V_R

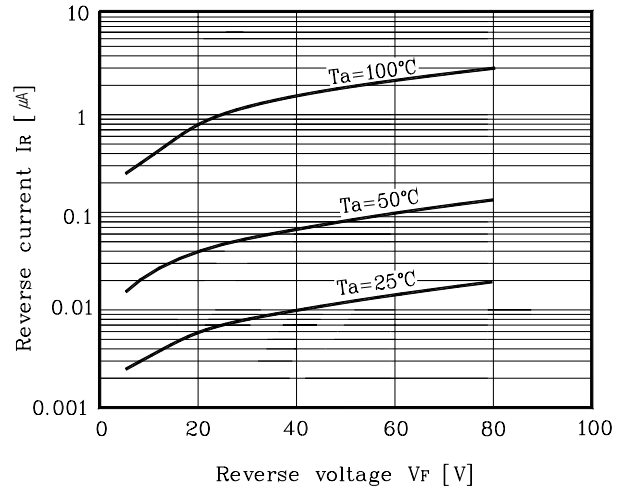


Fig. 3 C_T-V_R

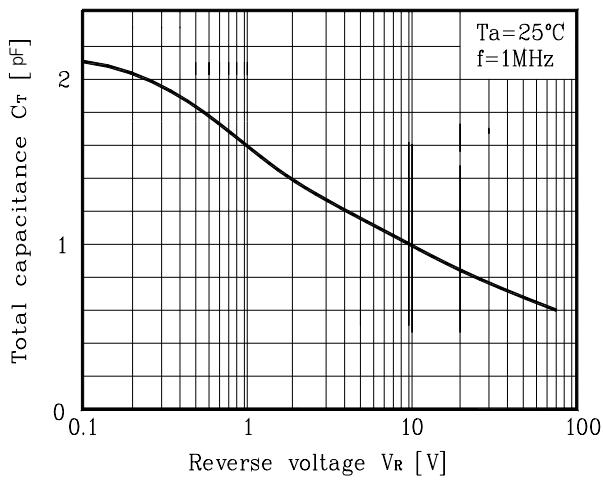


Fig. 4 $t_{rr}-I_F$

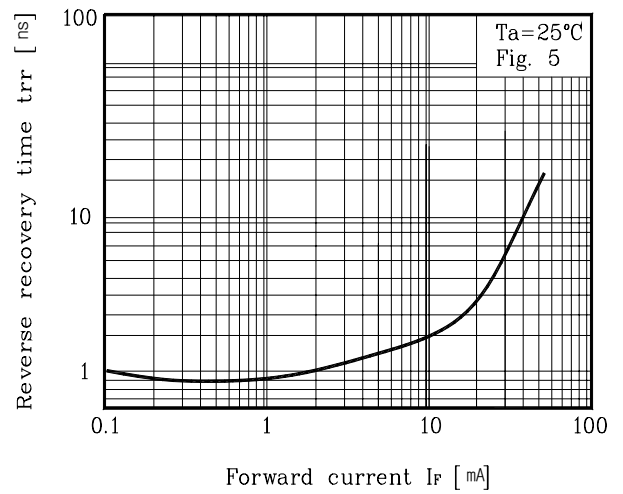
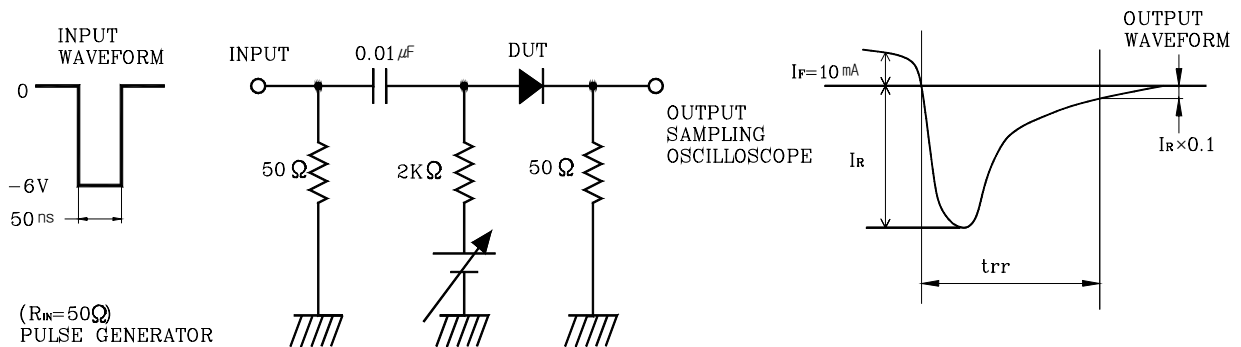


Fig. 5 Reverse recovery time(t_{rr}) test circuit



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