

# 1SS133

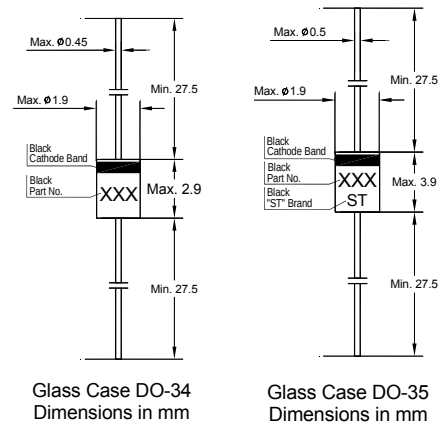
## Silicon Epitaxial Planar Switching Diode

### Features

- Glass sealed envelope
- High speed
- High reliability

### Applications

- High-speed switching

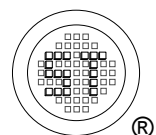


### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                          | Symbol      | Value         | Unit             |
|------------------------------------|-------------|---------------|------------------|
| Peak Reverse Voltage               | $V_{RM}$    | 90            | V                |
| DC Reverse Voltage                 | $V_R$       | 80            | V                |
| Average Rectified Forward Current  | $I_{F(AV)}$ | 130           | mA               |
| Peak Forward Current               | $I_{FM}$    | 400           | mA               |
| Surge Forward Current at $t < 1$ s | $I_{FSM}$   | 600           | mA               |
| Power Dissipation                  | $P_{tot}$   | 300           | mW               |
| Junction Temperature               | $T_j$       | 175           | $^\circ\text{C}$ |
| Storage Temperature Range          | $T_{stg}$   | - 65 to + 175 | $^\circ\text{C}$ |

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

| Parameter                                                                 | Symbol   | Max. | Unit          |
|---------------------------------------------------------------------------|----------|------|---------------|
| Forward Voltage<br>at $I_F = 100$ mA                                      | $V_F$    | 1.2  | V             |
| Reverse Current<br>at $V_R = 80$ V                                        | $I_R$    | 0.5  | $\mu\text{A}$ |
| Capacitance between Terminals<br>at $V_R = 0.5$ V, $f = 1$ MHz            | $C_T$    | 2    | pF            |
| Reverse Recovery Time<br>at $I_F = 10$ mA, $V_R = 6$ V, $R_L = 50 \Omega$ | $t_{rr}$ | 4    | ns            |



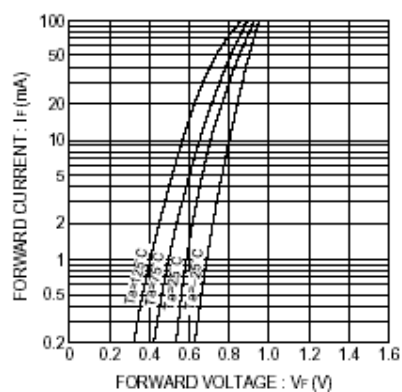


Fig. 1 Forward characteristics

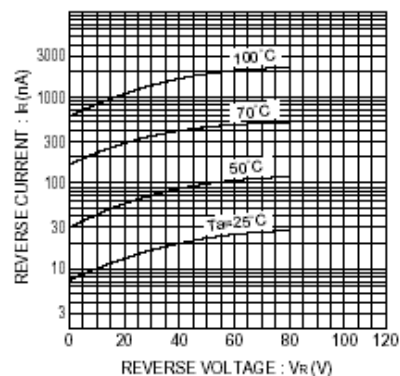


Fig. 2 Reverse characteristics

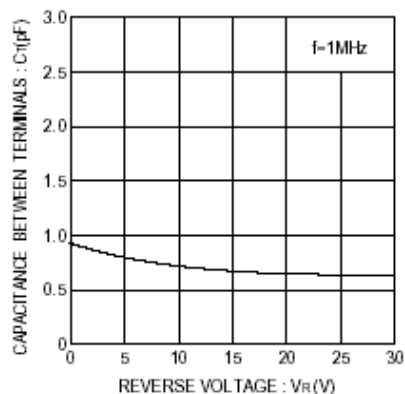


Fig. 3 Capacitance between terminals characteristics

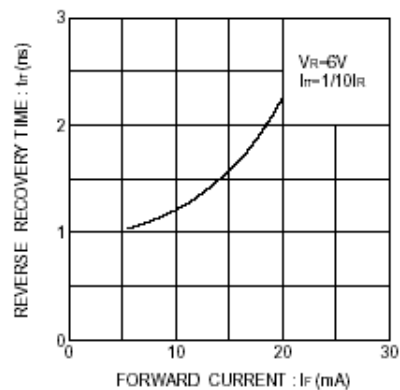


Fig. 4 Reverse recovery time characteristics

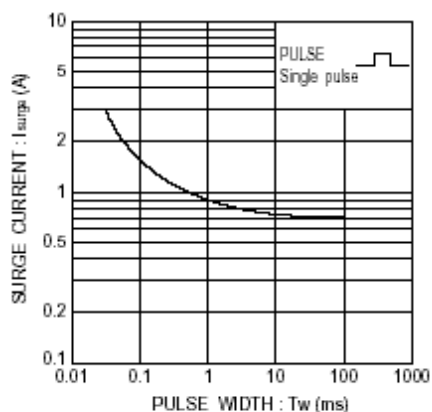


Fig. 5 Surge current characteristics

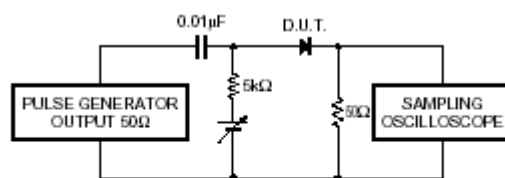


Fig. 6 Reverse recovery time ( $t_r$ ) measurement circuit

