

# High-voltage switching diode

## Features

1. Small surface mounting type
2. High reliability
3.  $V_{RM}=250V$

## Applications

High voltage switch and general purpose rectification

## Construction

Silicon epitaxial planar

## Absolute Maximum Ratings

$T_j=25^{\circ}C$

| Parameter                 | Test Conditions | Type | Symbol      | Value    | Unit        |
|---------------------------|-----------------|------|-------------|----------|-------------|
| Peak reverse voltage      |                 |      | $V_{RM}$    | 250      | V           |
| DC reverse voltage        |                 |      | $V_R$       | 220      | V           |
| Surge current             | $t_p=1s$        |      | $I_{Surge}$ | 1        | A           |
| Mean rectifying current   |                 |      | $I_O$       | 200      | mA          |
| Peak forward current      |                 |      | $I_{FM}$    | 625      | mA          |
| Power dissipation         |                 |      | P           | 300      | mW          |
| Junction temperature      |                 |      | $T_j$       | 175      | $^{\circ}C$ |
| Storage temperature range |                 |      | $T_{stg}$   | -65~+175 | $^{\circ}C$ |

## Maximum Thermal Resistance

$T_j=25^{\circ}C$

| Parameter        | Test Conditions             | Symbol     | Value | Unit |
|------------------|-----------------------------|------------|-------|------|
| Junction ambient | on PC board 50mm×50mm×1.6mm | $R_{thJA}$ | 500   | K/W  |

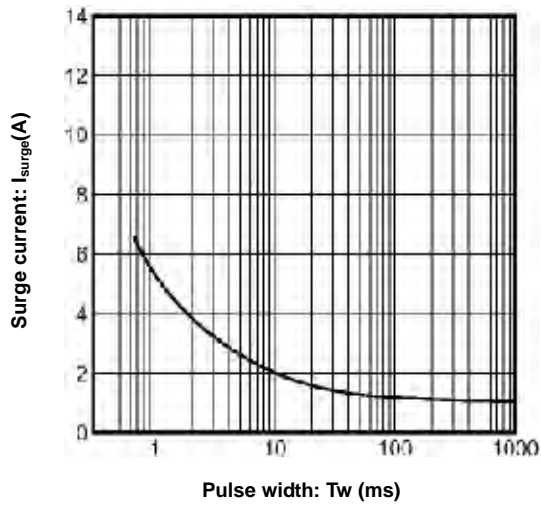


Figure 5. Surge current characteristics

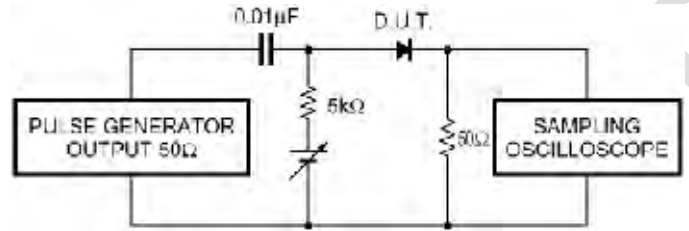
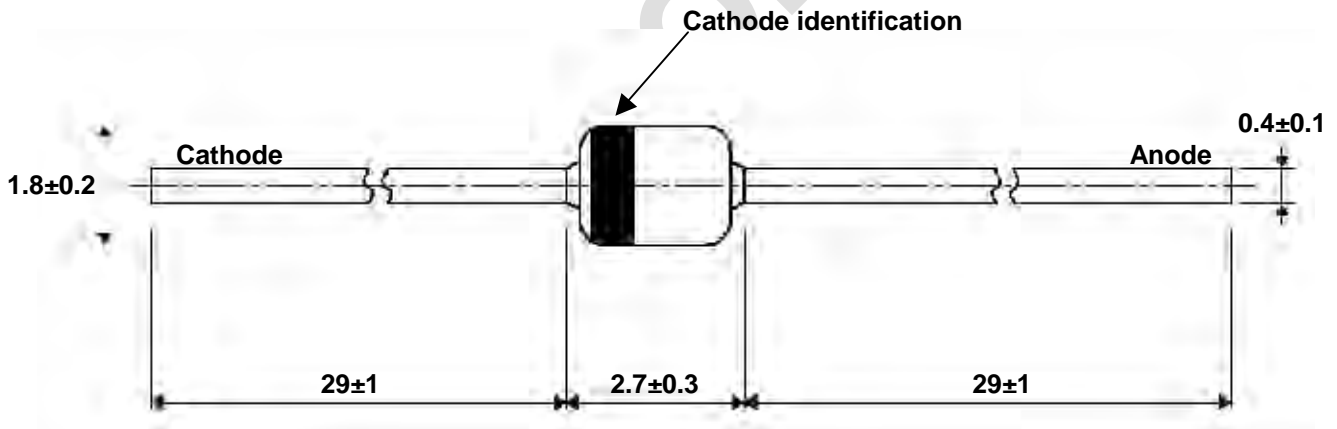


Figure 6. Reverse recovery time ( $t_{rr}$ ) measurement circuit

## Dimensions in mm



Standard Glass Case  
JEDEC DO 34

## Electrical Characteristics

$T_j=25^{\circ}\text{C}$

| Parameter             | Test Conditions                       | Type | Symbol   | Min | Typ  | Max | Unit          |
|-----------------------|---------------------------------------|------|----------|-----|------|-----|---------------|
| Forward voltage       | $I_F=200\text{mA}$                    |      | $V_F$    |     | 1.13 | 1.5 | V             |
| Reverse current       | $V_R=220\text{V}$                     |      | $I_R$    |     | 0.05 | 10  | $\mu\text{A}$ |
| Diode capacitance     | $V_R=0, f=1\text{MHz}$                |      | $C_D$    |     |      | 3   | pF            |
| Reverse recovery time | $I_F=I_R=20\text{mA}, R_L=50\ \Omega$ |      | $t_{rr}$ |     |      | 75  | ns            |

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

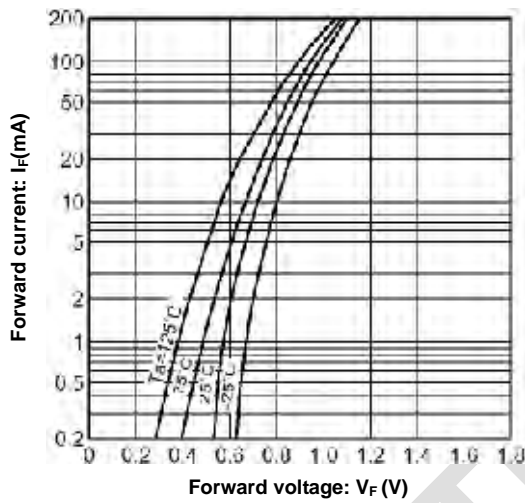


Figure 1. Forward characteristics

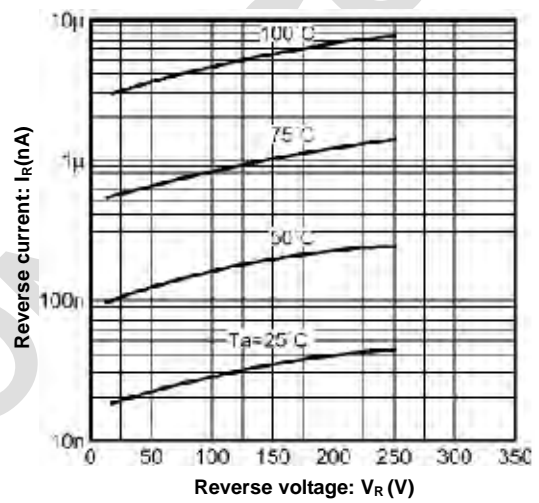


Figure 2. Reverse characteristics

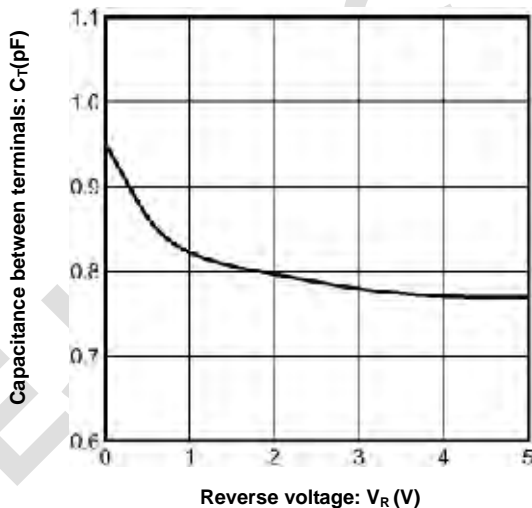


Figure 3. Capacitance between terminals characteristics

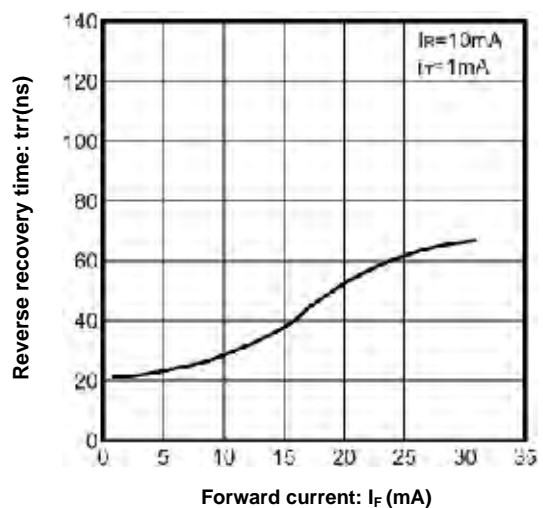


Figure 4. Reverse recovery time characteristics