

# 1S2075(K)

## Silicon Epitaxial Planar Diode for High Speed Switching

REJ03G0558-0400  
(Previous: ADE-208-144C)  
Rev.4.00  
Mar 16, 2005

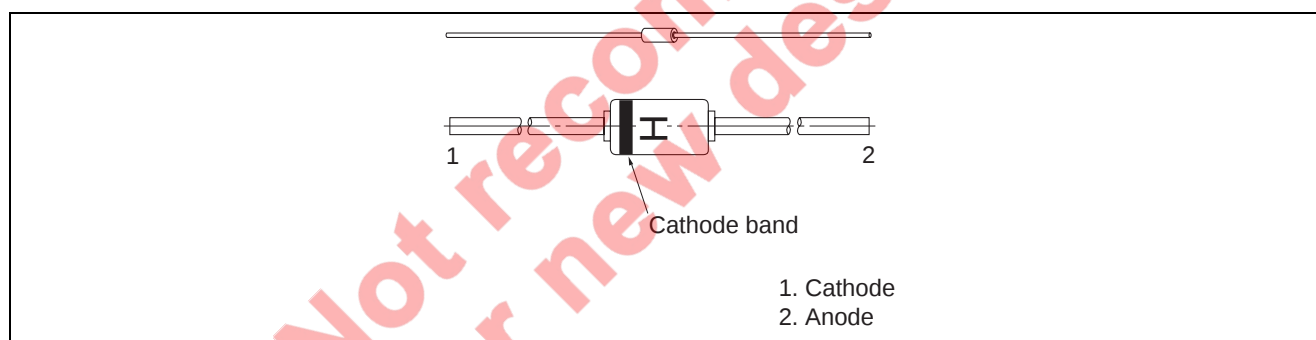
### Features

- Low capacitance. ( $C = 3.5 \text{ pF max}$ )
- Short reverse recovery time. ( $t_{rr} = 8.0 \text{ ns max}$ )
- High reliability with glass seal.

### Ordering Information

| Type No.  | Cathode band | Mark | Package Name | Package Code<br>(Previous Code) |
|-----------|--------------|------|--------------|---------------------------------|
| 1S2075(K) | Green        | H    | DO-35        | GRZZ0002ZB-A<br>(DO-35)         |

### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

| Item                                      | Symbol      | Value       | Unit |
|-------------------------------------------|-------------|-------------|------|
| Peak reverse voltage                      | $V_{RM}$    | 35          | V    |
| Reverse voltage                           | $V_R$       | 30          | V    |
| Peak forward current                      | $I_{FM}$    | 450         | mA   |
| Non-Repetitive peak forward surge current | $I_{FSM}^*$ | 600         | mA   |
| Average rectified current                 | $I_O$       | 100         | mA   |
| Power dissipation                         | $P_d$       | 250         | mW   |
| Junction temperature                      | $T_j$       | 175         | °C   |
| Storage temperature                       | $T_{stg}$   | -65 to +175 | °C   |

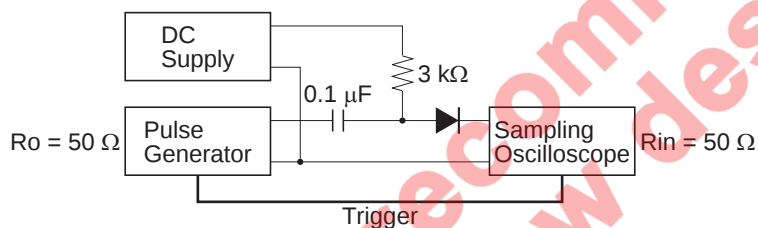
Note: Within 1s forward surge current.

## Electrical Characteristics

(Ta = 25°C)

| Item                  | Symbol     | Min | Typ | Max | Unit | Test Condition                                     |
|-----------------------|------------|-----|-----|-----|------|----------------------------------------------------|
| Forward voltage       | $V_F$      | —   | —   | 0.8 | V    | $I_F = 10 \text{ mA}$                              |
| Reverse current       | $I_R$      | —   | —   | 100 | nA   | $V_R = 30 \text{ V}$                               |
| Capacitance           | $C$        | —   | —   | 3.5 | pF   | $V_R = 1 \text{ V}, f = 1 \text{ MHz}$             |
| Reverse recovery time | $t_{rr}^*$ | —   | —   | 8.0 | ns   | $I_F = I_R = 10 \text{ mA}, I_{rr} = 1 \text{ mA}$ |

Note: Reverse recovery time test circuit



## Main Characteristic

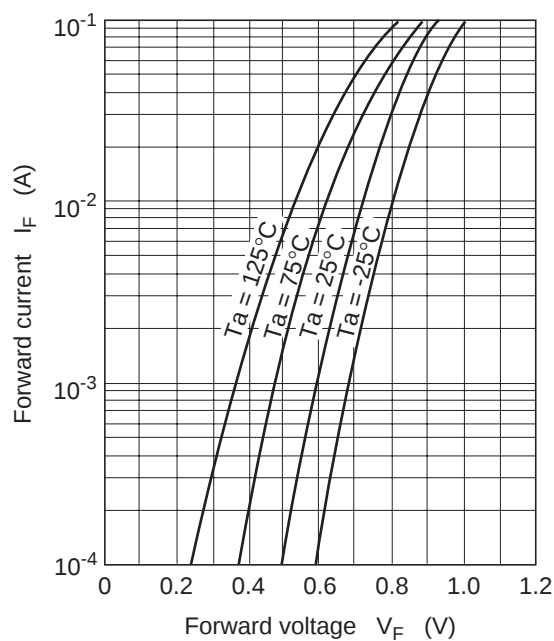


Fig.1 Forward current vs. Forward voltage

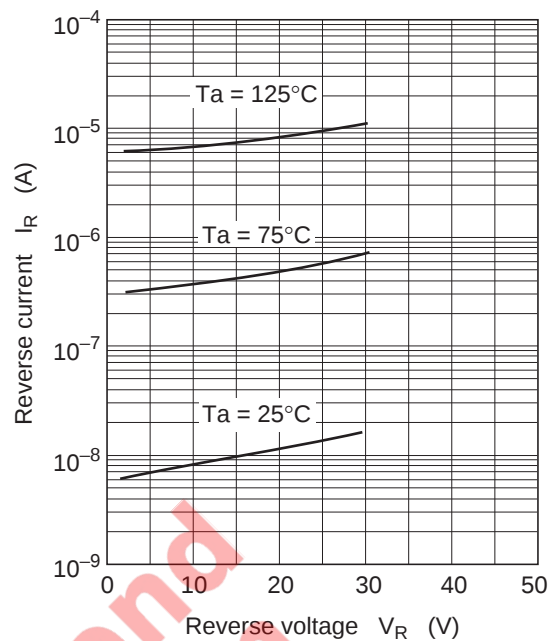


Fig.2 Reverse current vs. Reverse voltage

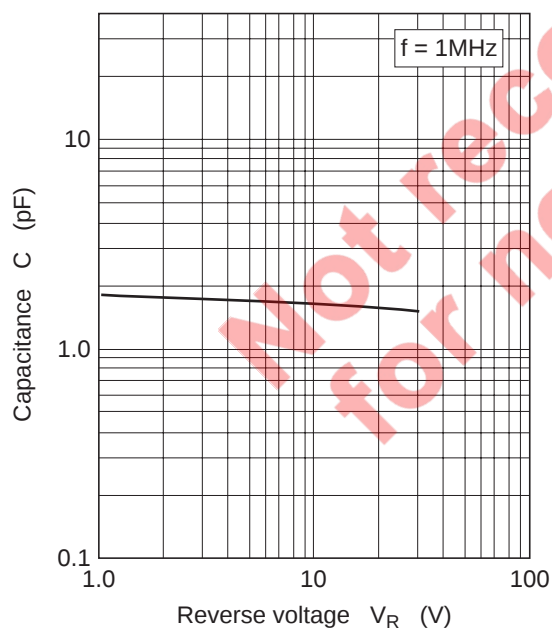
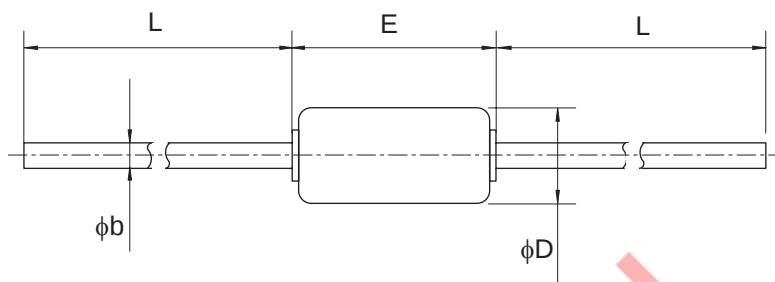


Fig.3 Capacitance vs. Reverse voltage

## Package Dimensions

|                    |              |                |            |
|--------------------|--------------|----------------|------------|
| JEITA Package Code | RENESAS Code | Previous Code  | MASS[Typ.] |
| SC-40              | GRZZ0002ZB-A | DO-35 / DO-35V | 0.13g      |



| Reference Symbol | Dimension in Millimeters |     |     |
|------------------|--------------------------|-----|-----|
|                  | Min                      | Nom | Max |
| φb               | -                        | 0.5 | -   |
| φD               | -                        | 2.0 | -   |
| E                | -                        | -   | 4.2 |
| L                | 26.0                     | -   | -   |

Not recommend  
for new design

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