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Renesas Technology Corp.
Customer Support Dept.
April 1, 2003

Cautions

Keep safety first in your circuit designs!

1. Renesas Technology Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage.

Remember to give due consideration to safety when making your circuit designs, with appropriate measures such as (i) placement of substitutive, auxiliary circuits, (ii) use of nonflammable material or (iii) prevention against any malfunction or mishap.

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1S2074(H)

Silicon Epitaxial Planar Diode for High Speed Switching

RENESAS

ADE-208-142B (Z)

Rev.2
Oct. 2000

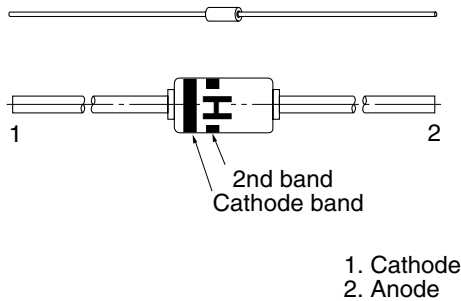
Features

- Low capacitance. ($C = 3.0 \text{ pF max}$)
- Short reverse recovery time. ($t_r = 4.0 \text{ ns max}$)
- High reliability with glass seal.

Ordering Information

| Type No. | Cathode band | 2nd band | Mark | Package Code |
|-----------|--------------|----------|------|--------------|
| 1S2074(H) | Green | White | H | DO-35 |

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Value | Unit |
|---|-------------|-------------|------|
| Peak reverse voltage | V_{RM} | 50 | V |
| Reverse voltage | V_R | 45 | V |
| Peak forward current | I_{FM} | 450 | mA |
| Non-Repetitive peak forward surge current | I_{FSM}^* | 600 | mA |
| Average forward current | I_O | 150 | mA |
| Power dissipation | Pd | 250 | mW |
| Junction temperature | Tj | 175 | °C |
| Storage temperature | Tstg | -65 to +175 | °C |

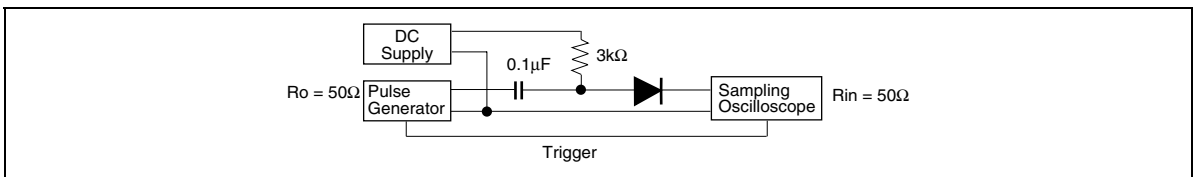
Note: Within 1s forward surge current.

Electrical Characteristics

(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test Condition |
|-----------------------|------------|------|-----|-----|---------------|--|
| Forward voltage | V_F | 0.64 | — | 0.8 | V | $I_F = 10 \text{ mA}$ |
| Reverse current | I_R | — | — | 0.1 | μA | $V_R = 30 \text{ V}$ |
| Capacitance | C | — | — | 3.0 | pF | $V_R = 1 \text{ V}, f = 1 \text{ MHz}$ |
| Reverse recovery time | t_{rr}^* | — | — | 4.0 | ns | $I_F = I_R = 10 \text{ mA}, I_{rr} = 1 \text{ mA}$ |

Note: Reverse recovery time test circuit



Main Characteristic

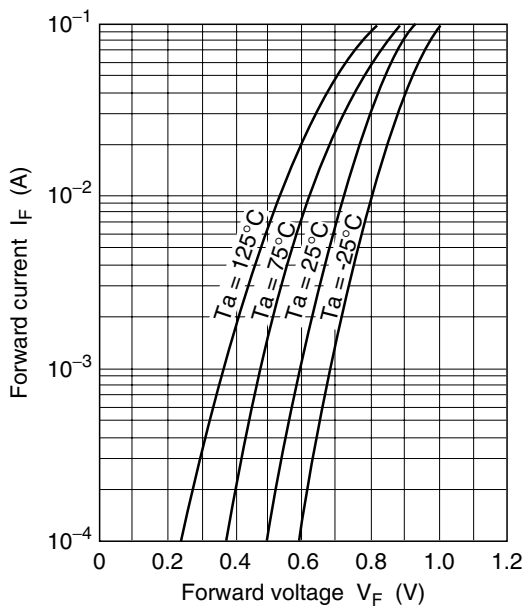


Fig.1 Forward current Vs. Forward voltage

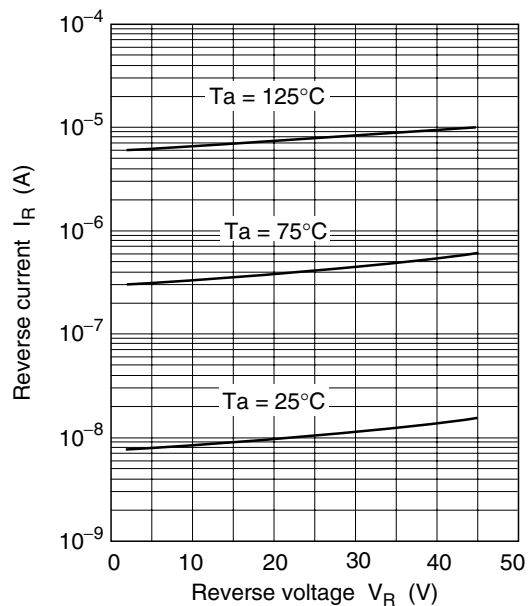


Fig.2 Reverse current Vs. Reverse voltage

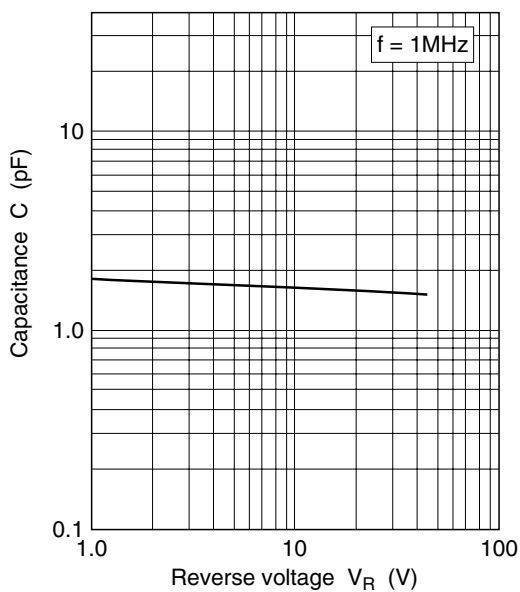
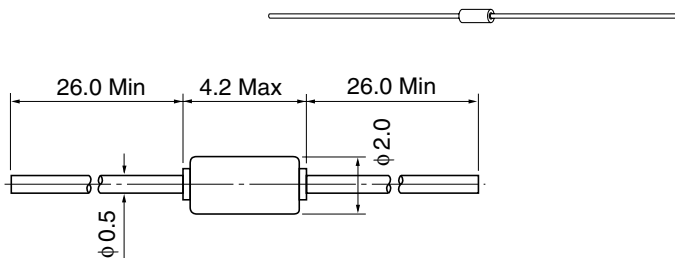


Fig.3 Capacitance Vs. Reverse voltage

Package Dimensions

Unit: mm



| | |
|------------------------|----------|
| Hitachi Code | DO-35 |
| JEDEC | Conforms |
| EIAJ | Conforms |
| Mass (reference value) | 0.13 g |

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