

1S2074(H) Silicon Epitaxial Planar Diode for High Speed Switching

HITACHI

Rev. 1
Aug. 1995

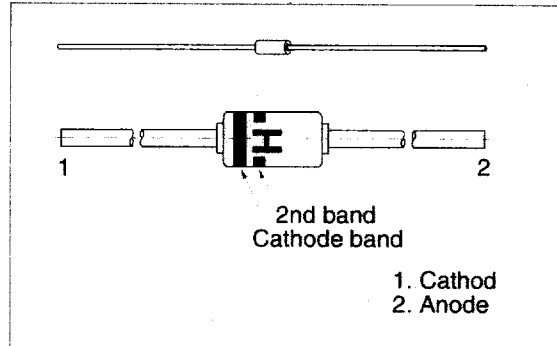
Features

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

Ordering Information

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

Outline



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

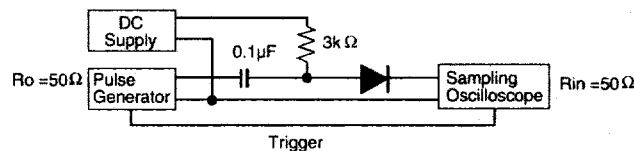
| Item | Symbol | Value | Unit |
|---|-------------|-------------|------------------|
| Peak reverse voltage | V_{RM} | 50 | V |
| Reverse voltage | V_R | 45 | V |
| Peak forward current | I_{FM} | 450 | mA |
| Non-Repetitive peak forward surge current | I_{FSM}^* | 600 | mA |
| Average forward current | I_o | 150 | mA |
| Power dissipation | P_d | 250 | mW |
| Junction temperature | T_j | 175 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -65 to +175 | $^\circ\text{C}$ |

* Within 1s forward surge current.

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

| 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 | $I_F=I_R=10\text{ mA}, I_{rr}=1\text{ mA}$ |

* Reverse recovery time test circuit



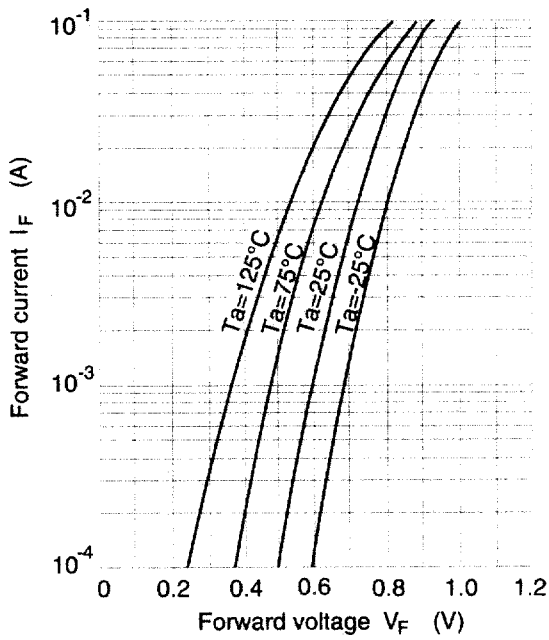


Fig.1 Forward current Vs. Forward voltage

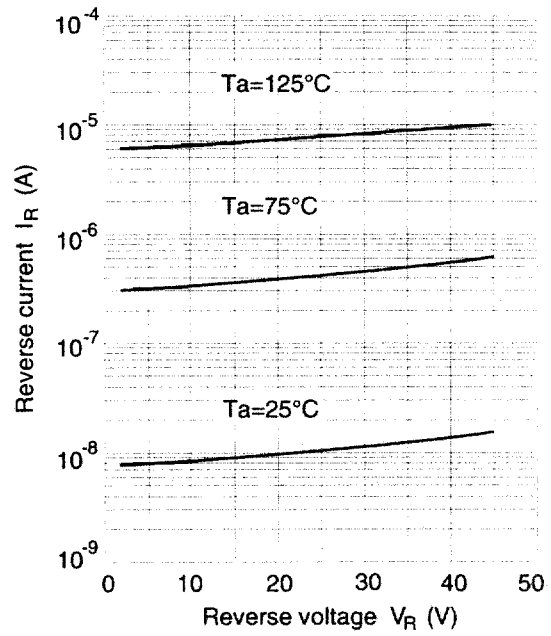


Fig.2 Reverse current Vs. Reverse voltage

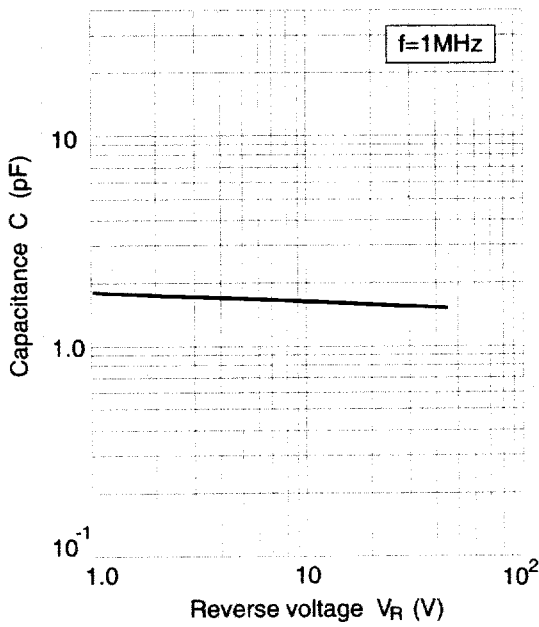
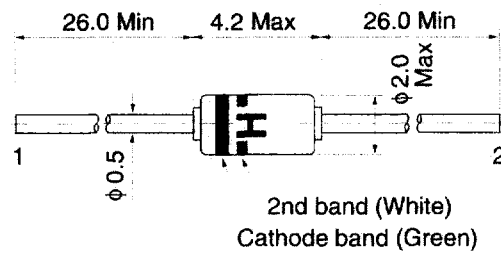


Fig.3 Capacitance Vs. Reverse voltage

Package Dimensions

Unit: mm



| | |
|--------------|-------|
| HITACHI Code | DO-35 |
| JEDEC Code | DO-35 |
| EIAJ Code | SC-48 |
| Weight (g) | 0.13 |