

# 1SS81

Silicon Epitaxial Planar Diode for High Voltage Switching

# HITACHI

ADE-208-148A (Z)

Rev. 1

Jul. 1995

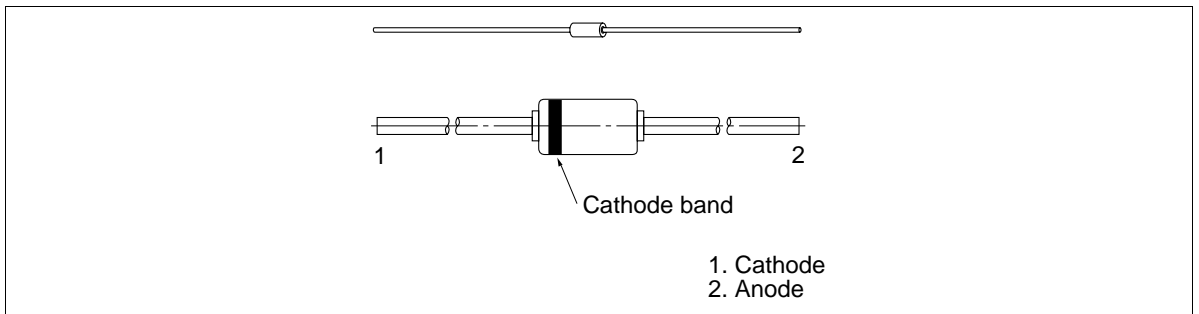
## Features

- High reverse voltage. ( $V_R = 150V$ )
- High reliability with glass seal.

## Ordering Information

| Type No. | Cathode band | Package Code |
|----------|--------------|--------------|
| 1SS81    | Verdure      | DO-35        |

## Outline



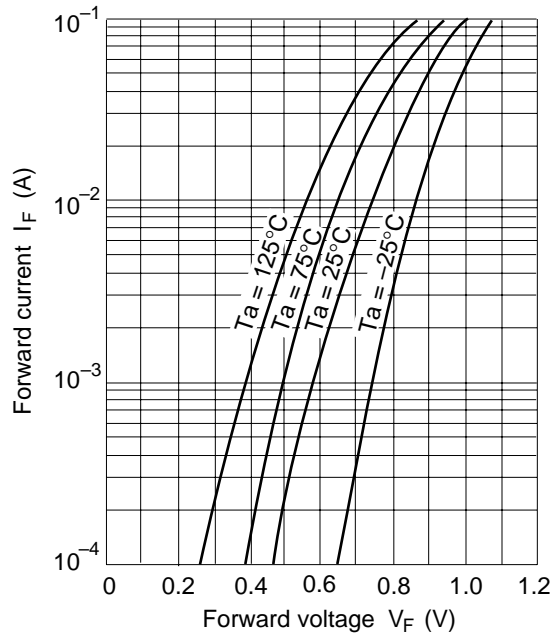
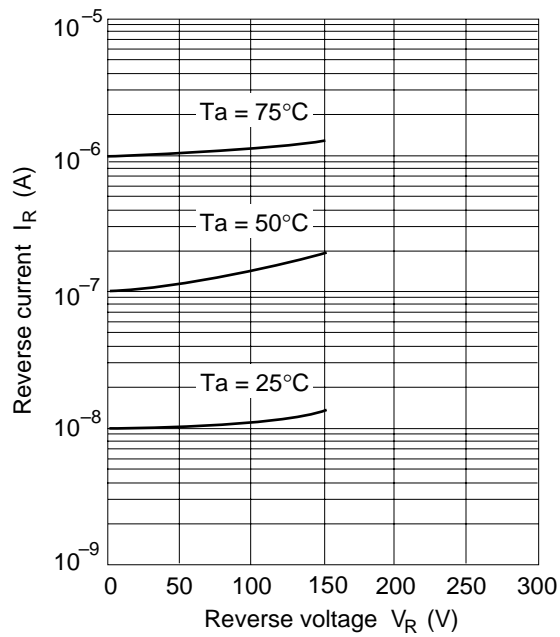
**Absolute Maximum Ratings**<sup>\*2</sup> (Ta = 25°C)

| Item                                      | Symbol         | Value       | Unit |
|---|----------------|-------------|------|
| Peak reverse voltage                      | $V_{RM}^{*1}$  | 200         | V    |
| Reverse voltage                           | $V_R$          | 150         | V    |
| Peak forward current                      | $I_{FM}$       | 625         | mA   |
| Non-Repetitive peak forward surge current | $I_{FSM}^{*2}$ | 1           | A    |
| Average forward current                   | $I_O$          | 200         | mA   |
| Power dissipation                         | Pd             | 400         | mW   |
| Junction temperature                      | Tj             | 175         | °C   |
| Storage temperature                       | Tstg           | -65 to +175 | °C   |

Notes: 1. Reverse voltage in excess of peak reverse voltage may deteriorate electrical characteristic.  
2. Within 1s forward surge current.

**Electrical Characteristics** (Ta = 25°C)

| Item                  | Symbol   | Min | Typ | Max | Unit          | Test Condition  |
|-----------------------|----------|-----|-----|-----|---------------|---|
| Forward voltage       | $V_F$    | —   | —   | 1.0 | V             | $I_F = 100\text{mA}$  |
| Reverse current       | $I_{R1}$ | —   | —   | 0.2 | $\mu\text{A}$ | $V_R = 150\text{V}$   |
|                       | $I_{R2}$ | —   | —   | 100 |               | $V_R = 200\text{V}$   |
| Capacitance           | C        | —   | 1.5 | —   | pF            | $V_R = 0\text{V}$ , $f = 1\text{MHz}$                                 |
| Reverse recovery time | $t_{rr}$ | —   | —   | 100 | ns            | $I_F = I_R = 30\text{mA}$ , $I_{rr} = 3\text{mA}$ , $R_L = 100\Omega$ |

**Fig.1 Forward current Vs. Forward voltage****Fig.2 Reverse current Vs. Reverse voltage**

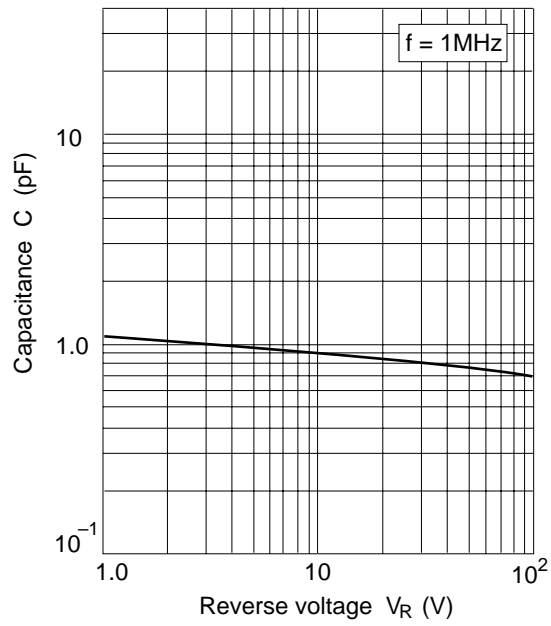
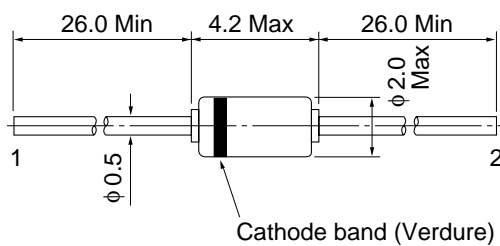


Fig.3 Capacitance Vs. Reverse voltage

## Package Dimensions

Unit: mm



1 Cathode  
2 Anode

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

## Cautions

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