

# HSM122

## Silicon Epitaxial Planar Diode for High Voltage Switching

REJ03G1299-0100

Rev.1.00

Oct 27, 2005

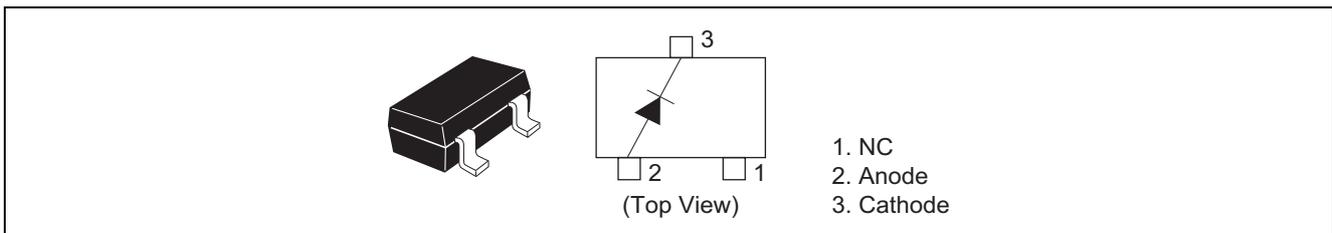
### Features

- High reverse voltage. ( $V_R = 400\text{ V}$ )
- MPAK package is suitable for high density surface mounting and high speed assembly.

### Ordering Information

| Type No. | Laser Mark | Package Name | Package Code<br>(Previous Code) |
|----------|------------|--------------|---------------------------------|
| HSM122   | F8         | MPAK         | PLSP0003ZC-A<br>(MPAK)          |

### Pin Arrangement



## Absolute Maximum Ratings

(Ta = 25°C)

| Item                                      | Symbol         | Value       | Unit |
|---|----------------|-------------|------|
| Peak reverse voltage                      | $V_{RM}$       | 420         | V    |
| Reverse voltage                           | $V_R$          | 400         | V    |
| Peak forward current                      | $I_{FM}$       | 625         | mA   |
| Non-Repetitive peak forward surge current | $I_{FSM}^{*1}$ | 1           | A    |
| Average rectified current                 | $I_o$          | 150         | mA   |
| Power dissipation                         | $P_d^{*2}$     | 150         | mW   |
| Junction temperature                      | $T_j$          | 125         | °C   |
| Storage temperature                       | $T_{stg}$      | -55 to +125 | °C   |

Notes: 1. Value at duration of 1s.

2. Standard substrate mounting (20mm × 15mm × 0.8t mm, With Polyimide board)

## Electrical Characteristics

(Ta = 25°C)

| Item                  | Symbol   | Min | Typ | Max | Unit          | Test Condition   |
|-----------------------|----------|-----|-----|-----|---------------|--|
| Forward voltage       | $V_F$    | —   | —   | 1.2 | V             | $I_F = 100 \text{ mA}$   |
| Reverse current       | $I_R$    | —   | —   | 1.0 | $\mu\text{A}$ | $V_R = 400 \text{ V}$  |
| Capacitance           | C        | —   | —   | 10  | pF            | $V_R = 0 \text{ V}, f = 1 \text{ MHz}$                             |
| Reverse recovery time | $t_{rr}$ | —   | —   | 20  | $\mu\text{s}$ | $I_F = 30 \text{ mA}, V_R = 10 \text{ V}, R_L = 2 \text{ k}\Omega$ |

### Main Characteristic

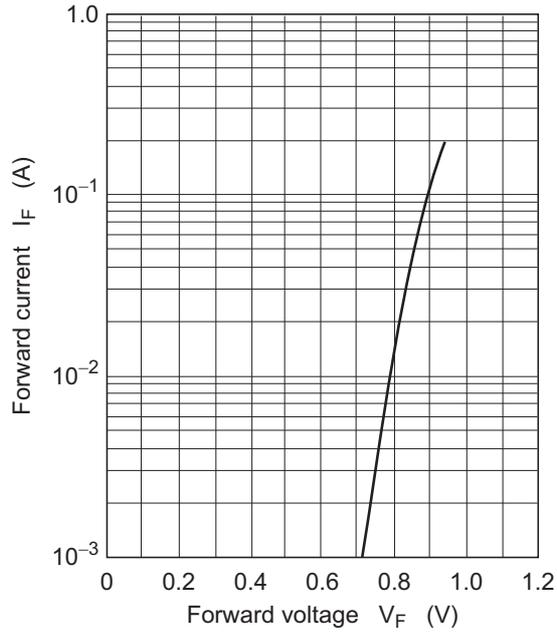


Fig.1 Forward current vs. Forward voltage

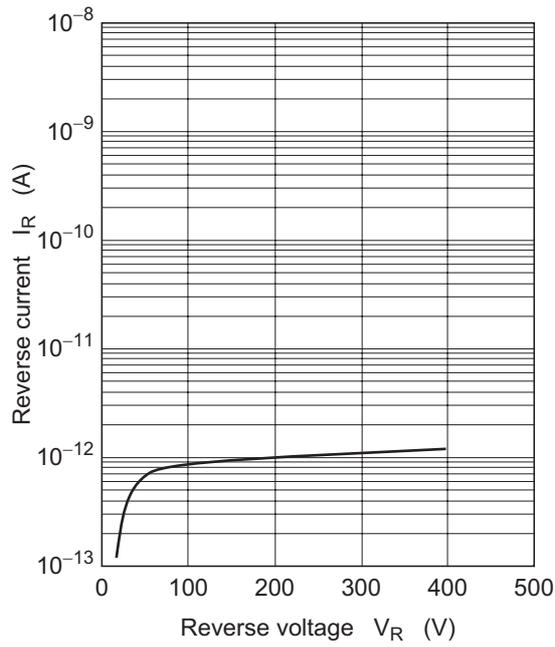
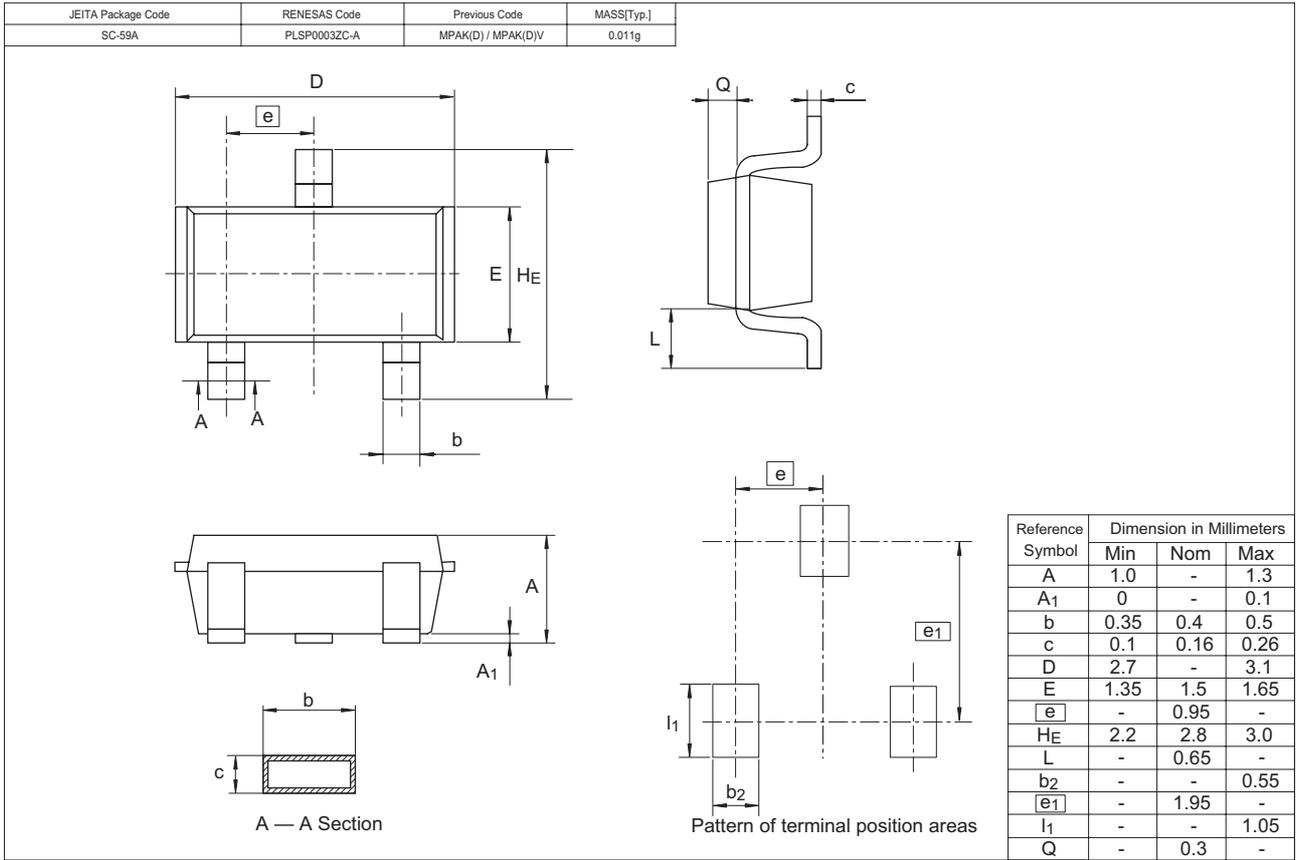


Fig.2 Reverse current vs. Reverse voltage

### Package Dimensions



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