

# HSB2838

Silicon Epitaxial Planar Diode for High Speed Switching

# HITACHI

ADE-208-486A (Z)

Rev.1  
Mar. 2002

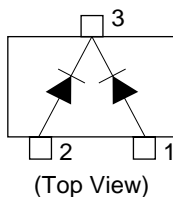
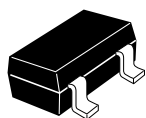
## Features

- Fast recovery time.
- CMPAK package is suitable for high density surface mounting and high speed assembly.

## Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HSB2838  | A6         | CMPAK        |

## Pin Arrangement



1. Anode
2. Anode
3. Cathode

**Absolute Maximum Ratings**

(Ta = 25°C)

| Item                                      | Symbol         | Value       | Unit |
|---|----------------|-------------|------|
| Peak reverse voltage                      | $V_{RM}$       | 85          | V    |
| Reverse voltage                           | $V_R$          | 80          | V    |
| Average rectified current                 | $I_O^{*1}$     | 100         | mA   |
| Peak forward current                      | $I_{FM}^{*1}$  | 300         | mA   |
| Non-Repetitive peak forward surge current | $I_{FSM}^{*2}$ | 4           | A    |
| Junction temperature                      | Tj             | 125         | °C   |
| Storage temperature                       | Tstg           | -55 to +125 | °C   |

Notes: 1. Two device total.

2. Value at duration of 1 μsec, two device total.

**Electrical Characteristics \***

(Ta = 25°C)

| Item                  | Symbol   | Min | Typ | Max | Unit | Test Condition  |
|-----------------------|----------|-----|-----|-----|------|---|
| Forward voltage       | $V_{F1}$ | —   | —   | 1.0 | V    | $I_F = 10 \text{ mA}$                                     |
|                       | $V_{F2}$ | —   | —   | 1.0 |      | $I_F = 50 \text{ mA}$                                     |
|                       | $V_{F3}$ | —   | —   | 1.2 |      | $I_F = 100 \text{ mA}$                                    |
| Reverse current       | $I_R$    | —   | —   | 0.1 | μA   | $V_R = 80 \text{ V}$                                      |
| Capacitance           | C        | —   | —   | 2.0 | pF   | $V_R = 0 \text{ V}, f = 1 \text{ MHz}$                    |
| Reverse recovery time | $t_{rr}$ | —   | —   | 3.0 | ns   | $I_F = 10 \text{ mA}, V_R = 6 \text{ V}, R_L = 50 \Omega$ |

Note: Per one device.

Main Characteristic

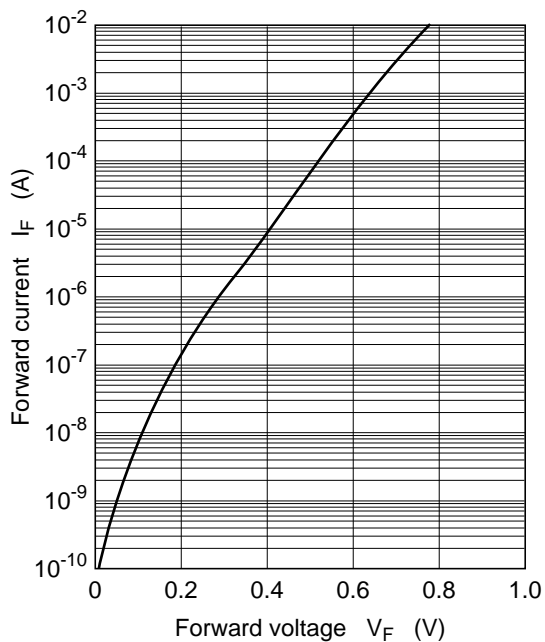


Fig.1 Forward current vs. Forward voltage

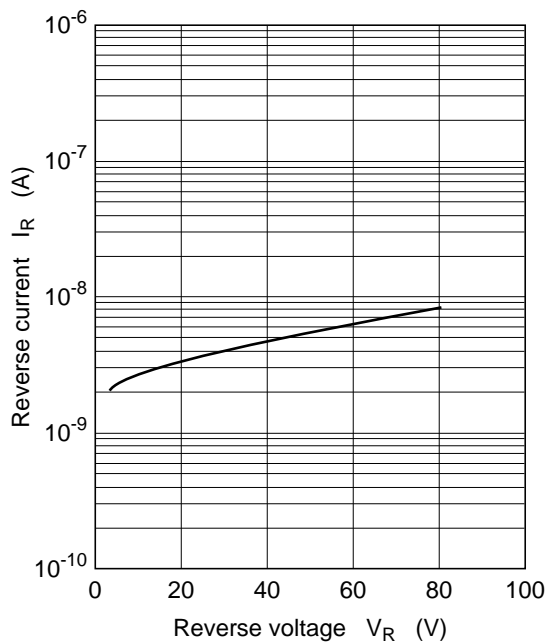


Fig.2 Reverse current vs. Reverse voltage

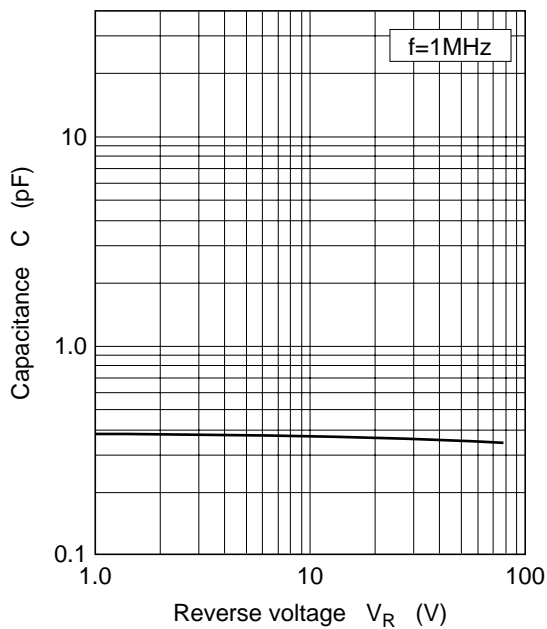
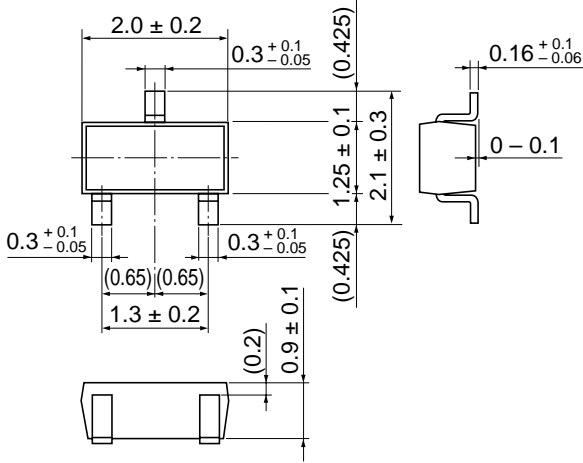


Fig.3 Capacitance vs. Reverse voltage

## Package Dimensions

As of July, 2001  
Unit: mm



|                        |          |
|------------------------|----------|
| Hitachi Code           | CMPAK    |
| JEDEC                  | —        |
| JEITA                  | Conforms |
| Mass (reference value) | 0.006 g  |

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