

To all our customers

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

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Keep safety first in your circuit designs!

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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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# HSB88AS

Silicon Schottky Barrier Diode for High Speed Switching



ADE-208-964 (Z)

Rev. 0  
Aug. 2000

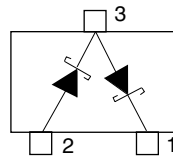
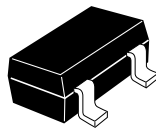
## Features

- Low reverse current, Low capacitance.
- CMPAK package is suitable for high density surface mounting and high speed assembly.

## Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HSB88AS  | C1         | CMPAK        |

## Pin Arrangement



(Top View)

- 1 Cathode 2
- 2 Anode 1
- 3 Cathode 1  
Anode 2

## Absolute Maximum Ratings

(Ta = 25°C)

| Item                      | Symbol  | Value       | Unit |
|---------------------------|---------|-------------|------|
| Reverse voltage           | $V_R$   | 10          | V    |
| Average rectified current | $I_O^*$ | 15          | mA   |
| Junction temperature      | Tj      | 125         | °C   |
| Storage temperature       | Tstg    | -55 to +125 | °C   |

Note: Per one device.

## Electrical Characteristics \*<sup>1</sup>

(Ta = 25°C)

| Item                         | Symbol       | Min   | Typ | Max   | Unit          | Test Condition                                                           |
|------------------------------|--------------|-------|-----|-------|---------------|--------------------------------------------------------------------------|
| Forward voltage              | $V_{F1}$     | 0.350 | —   | 0.420 | V             | $I_F = 1 \text{ mA}$                                                     |
|                              | $V_{F2}$     | 0.500 | —   | 0.580 |               | $I_F = 10 \text{ mA}$                                                    |
| Reverse current              | $I_{R1}$     | —     | —   | 0.2   | $\mu\text{A}$ | $V_R = 2 \text{ V}$                                                      |
|                              | $I_{R2}$     | —     | —   | 10    |               | $V_R = 10 \text{ V}$                                                     |
| Capacitance                  | C            | —     | —   | 0.80  | pF            | $V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$                                |
| Capacitance deviation        | $\Delta C$   | —     | —   | 0.10  | pF            | $V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$                                |
| Forward voltage deviation    | $\Delta V_F$ | —     | —   | 10    | mV            | $I_F = 10 \text{ mA}$                                                    |
| ESD-Capability <sup>*2</sup> | —            | 30    | —   | —     | V             | C = 200 pF, R = 0 $\Omega$ , Both forward and reverse direction 1 pulse. |

Notes: 1. Per one device.

2. Failure criterion ;  $I_R > 0.4 \mu\text{A}$  at  $V_R = 2\text{V}$

# Main Characteristic

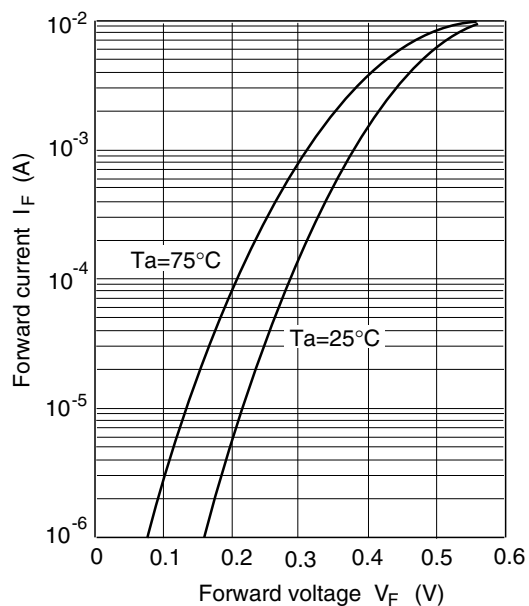


Fig.1 Forward current Vs. Forward voltage

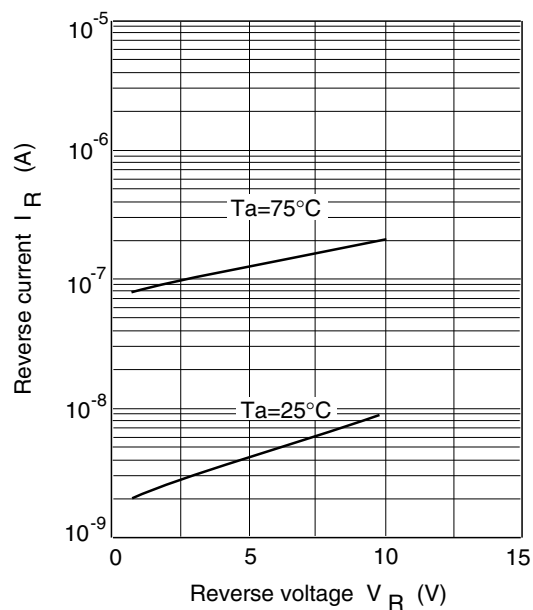


Fig.2 Reverse current Vs. Reverse voltage

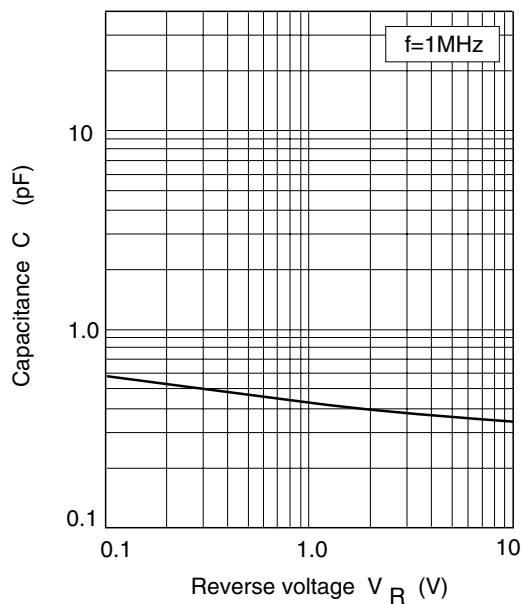
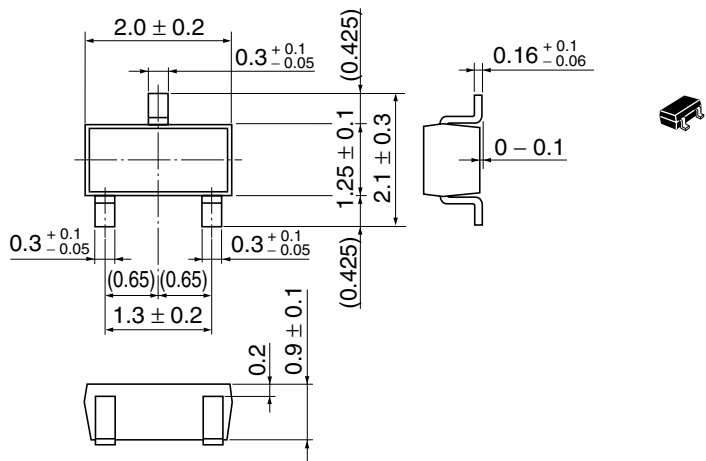


Fig.3 Capacitance Vs. Reverse voltage

Package Dimensions

Unit: mm



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

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## Sales Offices

# HITACHI

### Hitachi, Ltd.

Semiconductor & Integrated Circuits

Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan  
Tel: (03) 3270-2111 Fax: (03) 3270-5109

|     |              |                                                                                               |
|-----|--------------|-----------------------------------------------------------------------------------------------|
| URL | NorthAmerica | : <a href="http://semiconductor.hitachi.com/">http://semiconductor.hitachi.com/</a>           |
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### For further information write to:

|                                                                                                                                           |                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hitachi Semiconductor (America) Inc.<br>179 East Tasman Drive<br>San Jose, CA 95134<br>Tel: <1> (408) 433-1990<br>Fax: <1> (408) 433-0223 | Hitachi Europe Ltd.<br>Electronic Components Group<br>Whitebrook Park<br>Lower Cookham Road<br>Maidenhead<br>Berkshire SL6 8YA, United Kingdom<br>Tel: <44> (1628) 585000<br>Fax: <44> (1628) 585200 |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Hitachi Europe GmbH  
Electronic Components Group  
Dornacher Straße 3  
D-85622 Feldkirchen, Munich  
Germany  
Tel: <49> (89) 9 9180-0  
Fax: <49> (89) 9 29 30 00

Hitachi Asia Ltd.  
Hitachi Tower  
16 Collyer Quay #20-00  
Singapore 049318  
Tel: <65>-538-6533/538-8577  
Fax: <65>-538-6933/538-3877  
URL: <http://www.hitachi.com.sg>

Hitachi Asia Ltd.  
(Taipei Branch Office)  
4/F, No. 167, Tun Hwa North Road  
Hung-Kuo Building  
Taipei (105), Taiwan  
Tel: <886>-(2)-2718-3666  
Fax: <886>-(2)-2718-8180  
Telex: 23222 HAS-TP  
URL: <http://www.hitachi.com.tw>

Hitachi Asia (Hong Kong) Ltd.  
Group III (Electronic Components)  
7/F., North Tower  
World Finance Centre,  
Harbour City, Canton Road  
Tsim Sha Tsui, Kowloon  
Hong Kong  
Tel: <852>-(2)-735-9218  
Fax: <852>-(2)-730-0281  
URL: <http://semiconductor.hitachi.com.hk>

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