To all our customers

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

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# HSB278S

## Silicon Schottky Barrier Diode for High Speed Switching

ADE-208-1383 (Z)

Rev.0
Mar. 2001

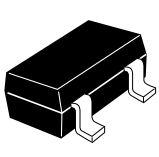
### Features

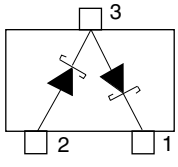
- Low forward voltage, Low capacitance.
- CMPAK package is suitable for high density surface mounting and high speed assembly.

### Ordering Information

| Type No. | Laser Mark | Package Code |
|---|---|---|
| HSB278S | S2 | 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 |
|---|---|---|---|
| Repetitive peak reverse voltage | $V_{RRM}$ | 30 | V |
| Reverse voltage | $V_R$ | 30 | V |
| Non-Repetitive peak forward surge current | $I_{FSM}$ *1 *2 | 200 | mA |
| Peak forward current | $I_{FM}$ *2 | 150 | mA |
| Average rectified current | $I_O$ *2 | 30 | mA |
| Junction temperature | Tj | 125 | °C |
| Storage temperature | Tstg | –55 to +125 | °C |

Notes: 1. 10 msec sine wave 1 pulse
2. Per one device.

## Electrical Characteristics

(Ta = 25°C) *1

| Item | Symbol | Min | Typ | Max | Unit | Test Condition |
|---|---|---|---|---|---|---|
| Forward voltage | $V_{F1}$ | — | — | 0.30 | V | $I_F$ = 1 mA |
| | $V_{F2}$ | — | — | 0.95 | | $I_F$ = 30 mA |
| Reverse current | $I_R$ | — | — | 700 | nA | $V_R$ = 10 V |
| Capacitance | C | — | — | 1.50 | pF | $V_R$ = 1 V, f = 1 MHz |
| ESD-Capability *1 | — | 100 | — | — | V | C = 200 pF, $R_L$ = 0 Ω, Both forward and reverse direction 1 pulse. |

Notes: 1. Per one device.
2. Failure criterion ; $I_R$ > 1.4 μA at $V_R$ = 10 V

## Main Characteristic

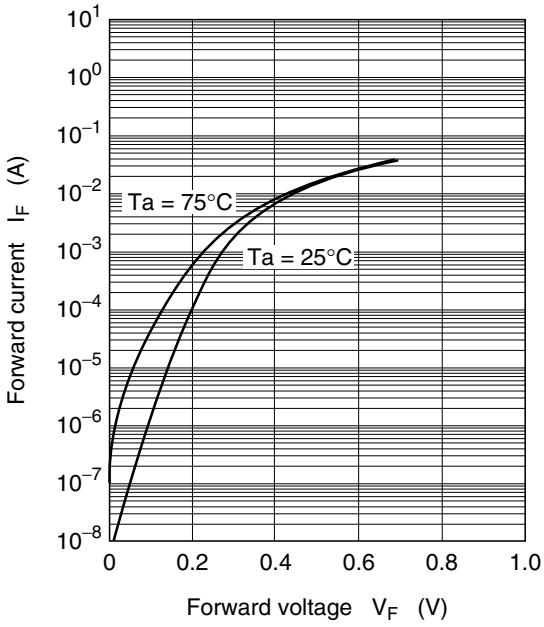



Fig.1 Forward current Vs. Forward voltage

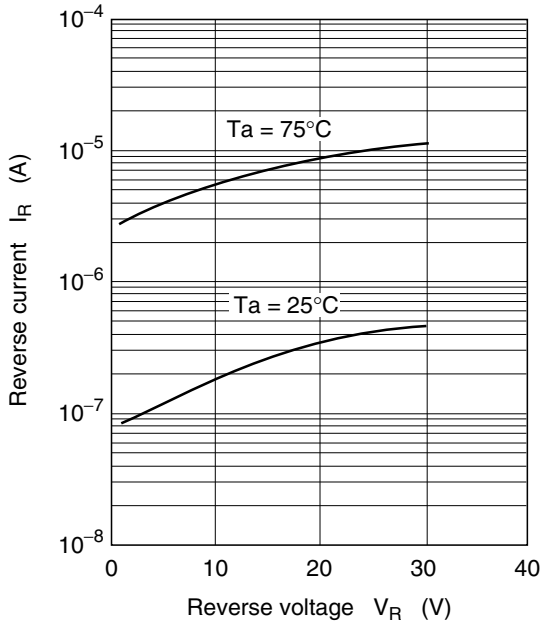



Fig.2 Reverse current Vs. Reverse voltage

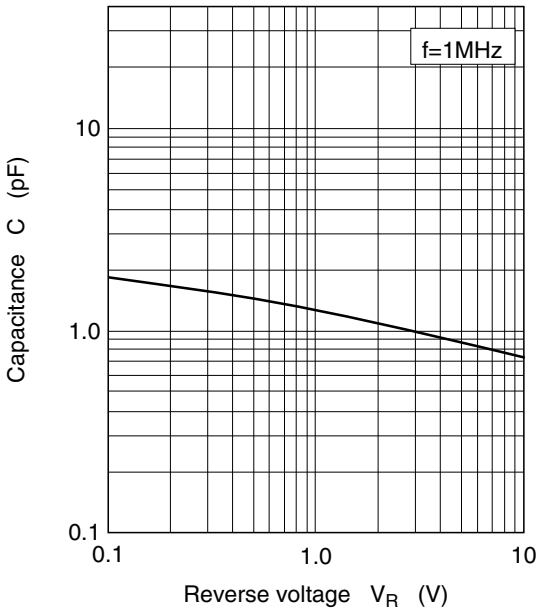
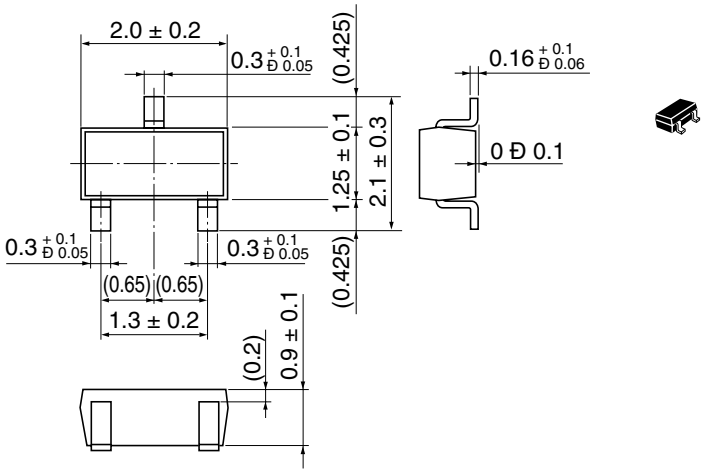



Fig.3 Capacitance Vs. Reverse voltage

## Package Dimensions

As of January, 2001

Unit: mm




| | |
|---|---|
| Hitachi Code | CMPAK |
| JEDEC | Ñ |
| 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: Tokyo (03) 3270-2111 Fax: (03) 3270-5109

URL NorthAmerica : http://semiconductor.hitachi.com/
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**For further information write to:**

Hitachi Semiconductor
(America) Inc.
179 East Tasman Drive,
San Jose,CA 95134
Tel: <1> (408) 433-1990
Fax: <1>(408) 433-0223

Hitachi Europe Ltd.
Electronic Components Group.
Whitebrook Park
Lower Cookham Road
Maidenhead
Berkshire SL6 8YA, United Kingdom
Tel: <44> (1628) 585000
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
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