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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# HSC278

Silicon Schottky Barrier Diode

ADE-208-931B (Z)

Rev. 2
Dec. 2000

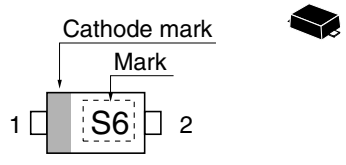
## Features

- Low forward voltage, Low capacitance.
- Ultra small Flat Package (UFP) is suitable for surface mount design.

## Ordering Information

| Type No. | Laser Mark | Package Code |
|---|---|---|
| HSC278 | S6 | UFP |

## Pin Arrangement




1. Cathode
2. Anode

## 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 | $I_{FSM}$ * | 200 | mA |
| Peak forward current | $I_{FM}$ | 150 | mA |
| Average rectified current | $I_O$ | 30 | mA |
| Junction temperature | Tj | 125 | °C |
| Storage temperature | Tstg | –55 to +125 | °C |

Note: 10 msec sine wave 1 pulse

## Electrical Characteristics

(Ta = 25°C)

| 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. |

Note: 1. Failure criterion ; $I_R \geq 1.4$ μA at $V_R$ = 10 V

## Main Characteristic

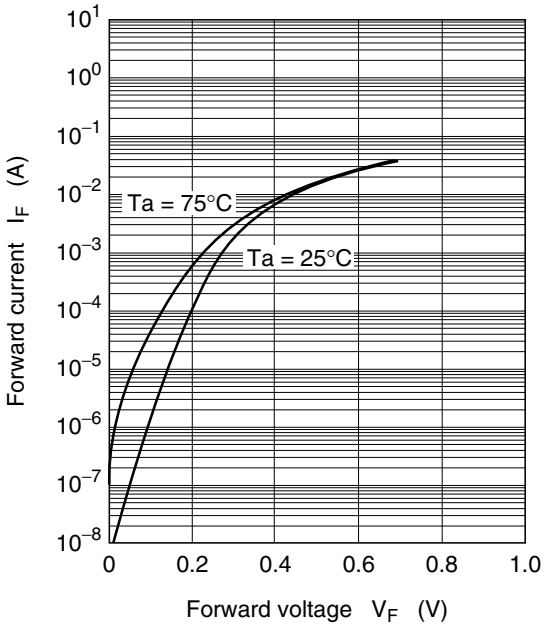



Fig.1 Forward current Vs. Forward voltage

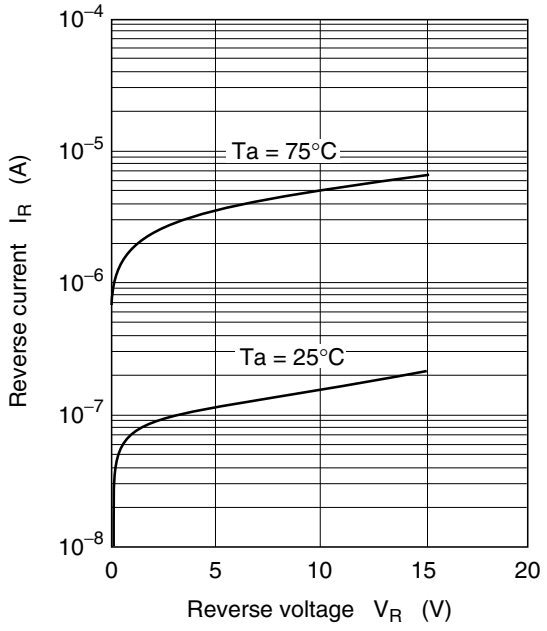



Fig.2 Reverse current Vs. Reverse voltage

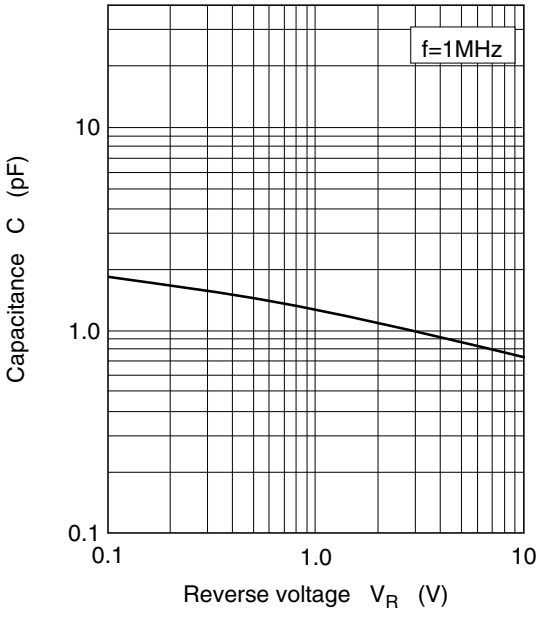
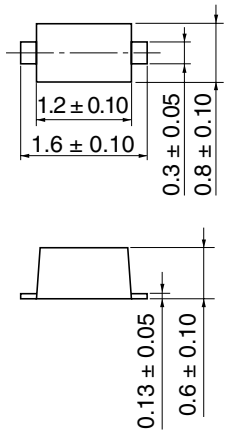



Fig.3 Capacitance Vs. Reverse voltage

## Package Dimensions

Unit: mm




| | |
|---|---|
| Hitachi Code | UFP |
| JEDEC | — |
| EIAJ | Conforms |
| Mass (reference value) | 0.0016 g |

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