

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!

1. Renesas Technology Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage.

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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# HSC276A

Silicon Schottky Barrier Diode for Mixer



ADE-208-836 (Z)

Rev. 0  
Feb. 2000

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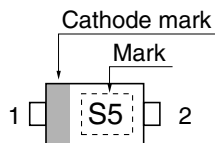
## Features

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

## Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HSC276A  | S5         | UFP          |

## Pin Arrangement



1. Cathode
2. Anode

## Absolute Maximum Ratings

(Ta = 25°C)

| Item                            | Symbol    | Value       | Unit |
|---------------------------------|-----------|-------------|------|
| Repetitive peak reverse voltage | $V_{RRM}$ | 5           | V    |
| Reverse voltage                 | $V_R$     | 3           | V    |
| Average rectified current       | $I_O$     | 30          | mA   |
| Junction temperature            | Tj        | 125         | °C   |
| Storage temperature             | Tstg      | -55 to +125 | °C   |

## Electrical Characteristics

(Ta = 25°C)

| Item                         | Symbol | Min | Typ | Max  | Unit          | Test Condition  |
|------------------------------|--------|-----|-----|------|---------------|---|
| Reverse voltage              | $V_R$  | 3   | –   | –    | V             | $I_R = 1 \text{ mA}$  |
| Reverse current              | $I_R$  | –   | –   | 50   | $\mu\text{A}$ | $V_R = 0.5\text{V}$   |
| Forward current              | $I_F$  | 35  | –   | –    | mA            | $V_F = 0.5\text{V}$   |
| Capacitance                  | C      | –   | –   | 0.85 | pF            | $V_R = 0.5\text{V}$ , $f = 1 \text{ MHz}$                                 |
| ESD-Capability <sup>†1</sup> | –      | 30  | –   | –    | V             | C=200 pF, R = 0 $\Omega$ ,<br>Both forward and reverse direction 1 pulse. |

Notes 1. Failure criterion ;  $I_R \geq 100\mu\text{A}$  at  $V_R = 0.5 \text{ V}$

Main Characteristic

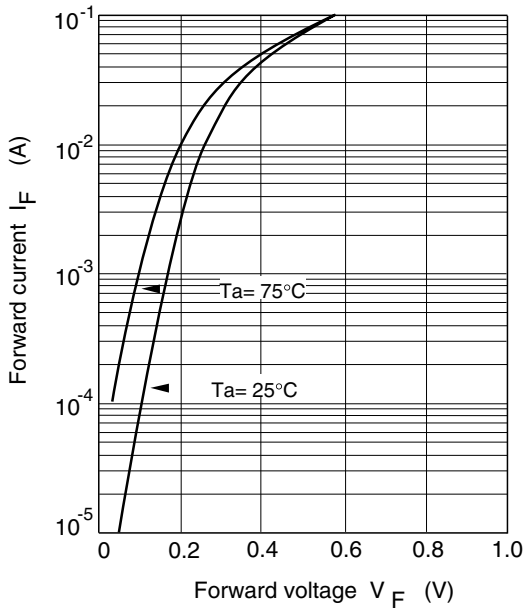


Fig.1 Forward current Vs. Forward voltage

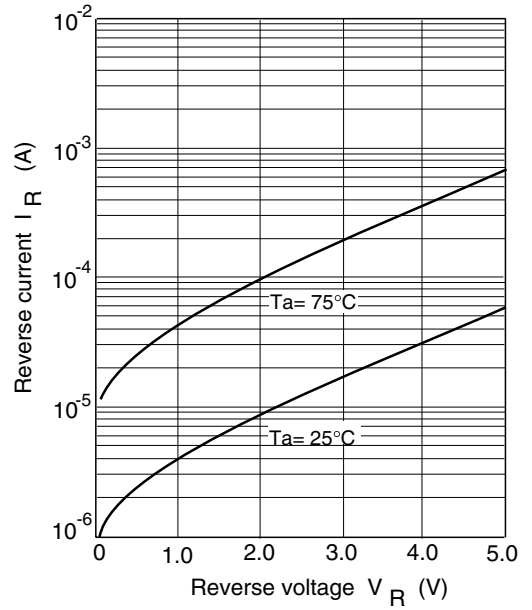


Fig.2 Reverse current Vs. Reverse voltage

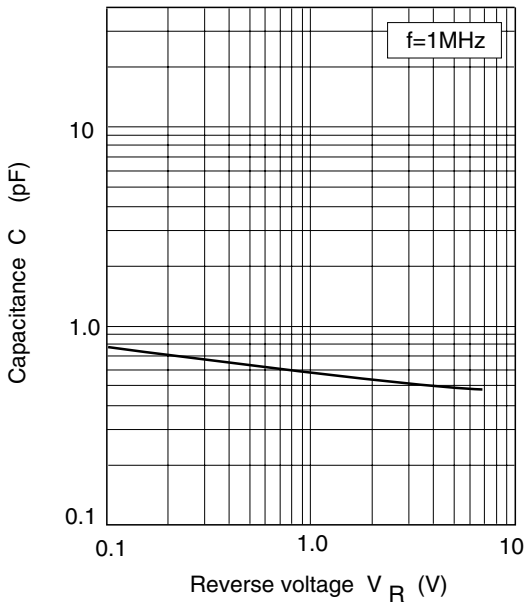
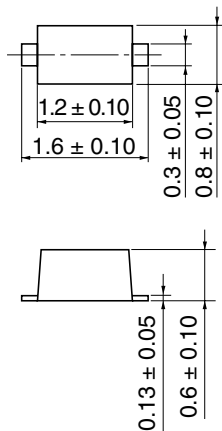


Fig.3 Capacitance Vs. Reverse voltage

## Package Dimensions

Unit: mm



|              |          |
|--------------|----------|
| Hitachi Code | UFP      |
| JEDEC        | —        |
| EIAJ         | Conforms |
| Mass         | 0.0016 g |

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