

To all our customers

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

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# HSC277

Silicon Epitaxial Planar Diode for UHF/VHF tuner Band Switch



ADE-208-413A (Z)

Rev. 1  
Oct. 2000

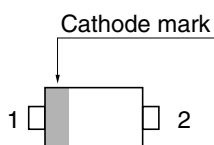
## Features

- Low forward resistance. ( $r_f = 0.7\Omega$  max)
- Ultra small Flat Package (UFP) is suitable for surface mount design.

## Ordering Information

| Type No. | Cathode Mark | Package Code |
|----------|--------------|--------------|
| HSC277   | Laser        | UFP          |

## Pin Arrangement



1. Cathode  
2. Anode

## Absolute Maximum Ratings

(Ta = 25°C)

| Item                  | Symbol | Value       | Unit |
|-----------------------|--------|-------------|------|
| Reverse voltage       | $V_R$  | 35          | V    |
| Junction temperature  | Tj     | 125         | °C   |
| Power dissipation     | Pd     | 150         | mW   |
| Operation temperature | Topr   | −20 to +60  | °C   |
| Storage temperature   | Tstg   | −45 to +125 | °C   |

## Electrical Characteristics

(Ta = 25°C)

| Item               | Symbol | Min | Typ | Max | Unit     | Test Condition                            |
|--------------------|--------|-----|-----|-----|----------|-------------------------------------------|
| Reverse voltage    | $V_R$  | 35  | —   | —   | V        | $I_R = 10 \mu A$                          |
| Forward voltage    | $V_F$  | —   | —   | 1.0 | V        | $I_F = 10 \text{ mA}$                     |
| Reverse current    | $I_R$  | —   | —   | 50  | nA       | $V_R = 25 \text{ V}$                      |
| Capacitance        | C      | —   | —   | 1.2 | pF       | $V_R = 6 \text{ V}, f = 1 \text{ MHz}$    |
| Forward resistance | $r_i$  | —   | —   | 0.7 | $\Omega$ | $I_F = 2 \text{ mA}, f = 100 \text{ MHz}$ |

## Main Characteristic

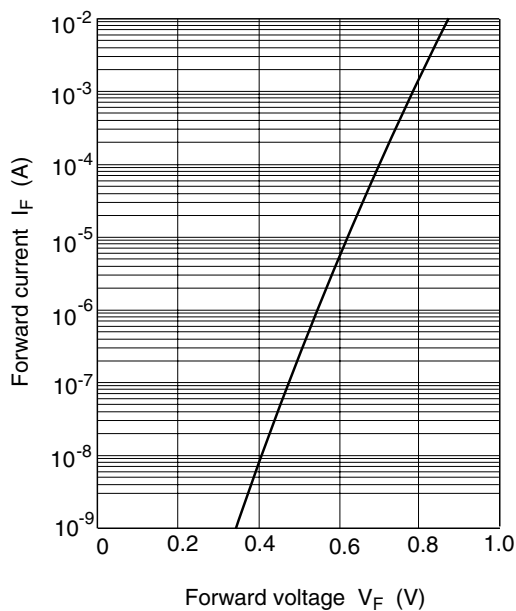


Fig.1 Forward current Vs. Forward voltage

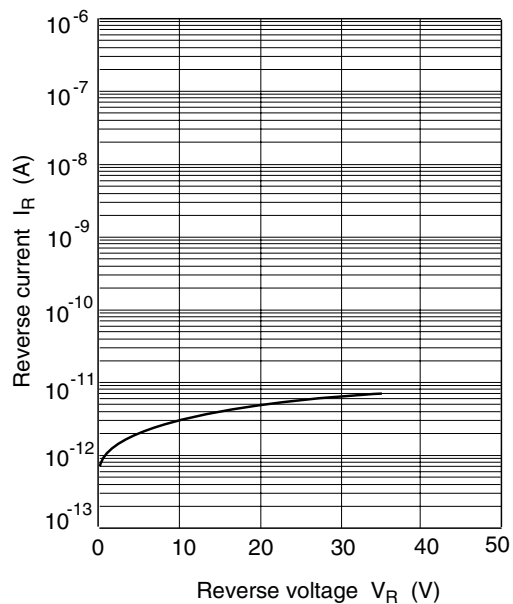


Fig.2 Reverse current Vs. Reverse voltage

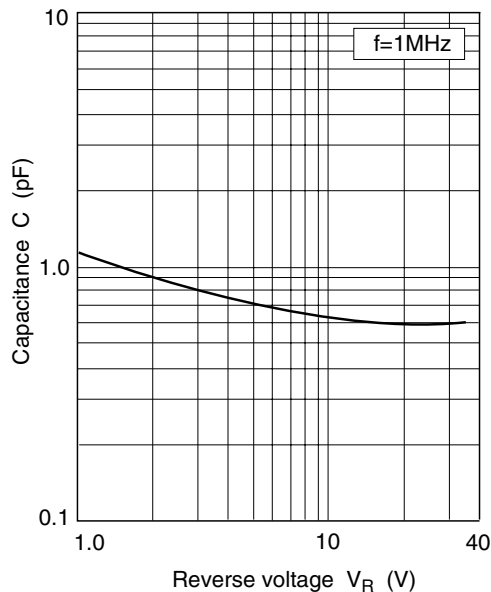


Fig.3 Capacitance Vs. Reverse voltage

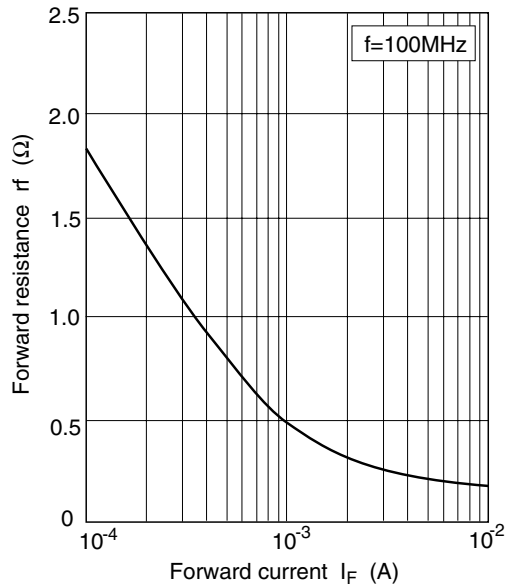
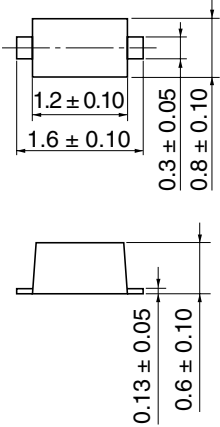


Fig.4 Forward resistance Vs. Forward current

Package Dimensions

Unit: mm



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

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