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# HVD372B

Variable Capacitance Diode for VCO

# HITACHI

ADE-208-957 (Z)

Rev. 0  
Jul. 2000

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## Features

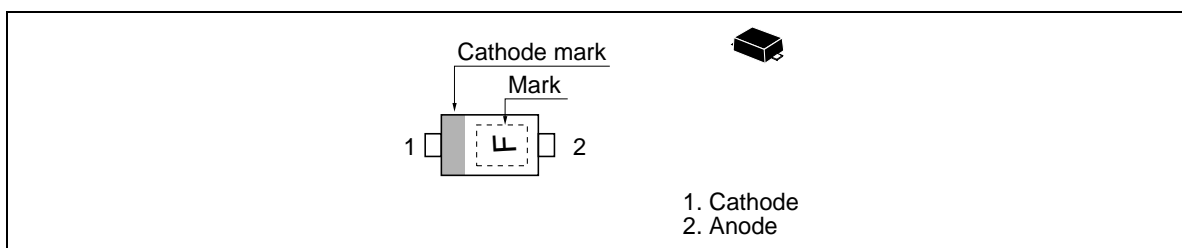
- High capacitance ratio. ( $n = 2.00$  min)
- Good linearity of C-V curve.
- Super small Flat Package (SFP) is suitable for surface mount design.

## Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HVD372B  | F          | SFP          |

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## Outline



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## HVD372B

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### Absolute Maximum Ratings

(Ta = 25°C)

| Item                 | Symbol | Value       | Unit |
|----------------------|--------|-------------|------|
| Reverse voltage      | $V_R$  | 15          | V    |
| 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 current   | $I_{R1}$ | —    | —   | 10   | nA       | $V_R = 15\text{ V}$                         |
|                   | $I_{R2}$ | —    | —   | 100  |          | $V_R = 15\text{ V}, T_a = 60^\circ\text{C}$ |
| Capacitance       | $C_1$    | 15.0 | —   | 17.0 | pF       | $V_R = 1\text{ V}, f = 1\text{ MHz}$        |
|                   | $C_4$    | 7.00 | —   | 8.50 |          | $V_R = 4\text{ V}, f = 1\text{ MHz}$        |
| Capacitance ratio | n        | 2.00 | —   | —    | —        | $C_1/C_4$                                   |
| Series resistance | $r_s$    | —    | —   | 0.4  | $\Omega$ | $V_R = 1\text{ V}, f = 470\text{ MHz}$      |

Note: Please do not use the soldering iron due to avoid high stress to the SFP package.

Main Characteristic

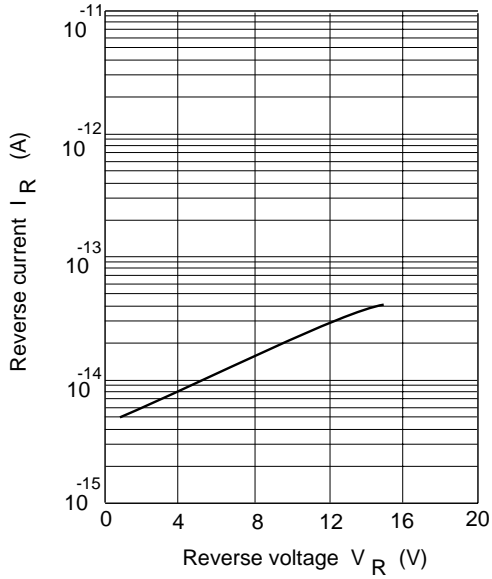


Fig.1 Reverse current Vs. Reverse voltage

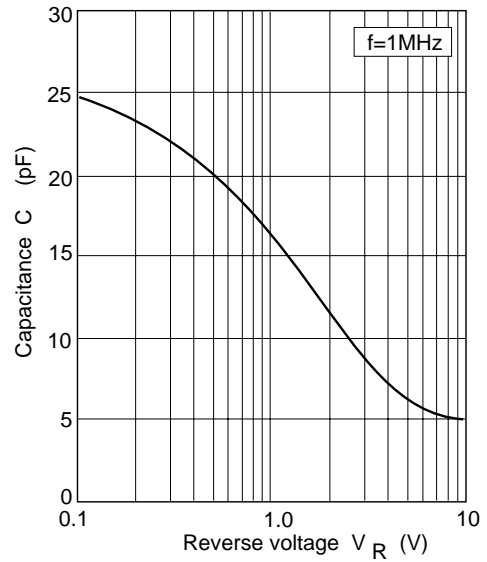


Fig.2 Capacitance Vs. Reverse voltage

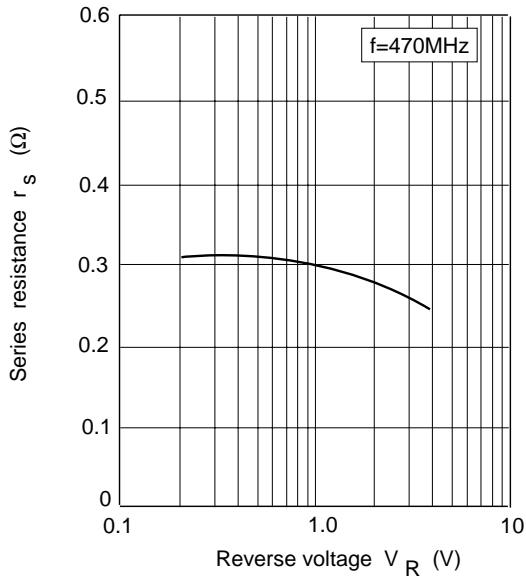


Fig.3 Series resistance Vs. Reverse voltage

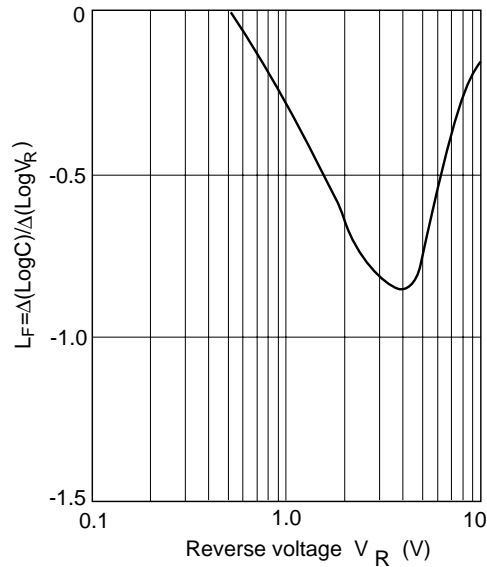
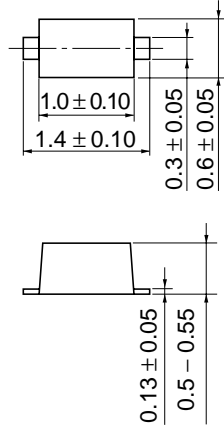


Fig.4 Linearity factor Vs. Reverse voltage

# HVD372B

## Package Dimensions

Unit: mm



|                        |          |
|------------------------|----------|
| Hitachi Code           | SFP      |
| JEDEC                  | —        |
| EIAJ                   | —        |
| Mass (reference value) | 0.0010 g |

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