

# HVU350B

Variable Capacitance Diode for VCO

# HITACHI

ADE-208-430A(Z)  
Rev 1  
Nov. 1998

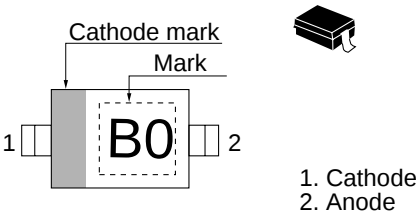
## Features

- High capacitance ratio. ( $n = 2.8 \text{ min}$ )
- Low series resistance. ( $r_s = 0.5 \Omega \text{ max}$ ).
- Good C-V linearity.
- Ultra small Resin Package (URP) is suitable for surface mount design.

## Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HVU350B  | B0         | URP          |

## Outline



Absolute Maximum Ratings (Ta = 25°C)

| Item                 | Symbol    | Value       | Unit |
|----------------------|-----------|-------------|------|
| Reverse voltage      | $V_R$     | 15          | V    |
| Junction temperature | $T_j$     | 125         | °C   |
| Storage temperature  | $T_{stg}$ | -55 to +125 | °C   |

Electrical Characteristics (Ta = 25°C)

| Item              | Symbol   | Min  | Typ | Max  | Unit     | Test Condition                  |
|-------------------|----------|------|-----|------|----------|---------------------------------|
| Reverse current   | $I_{R1}$ | —    | —   | 10   | nA       | $V_R = 15V$                     |
|                   | $I_{R2}$ | —    | —   | 100  |          | $V_R = 15V, T_a = 60\text{ °C}$ |
| Capacitance       | $C_1$    | 15.5 | —   | 17.0 | pF       | $V_R = 1V, f = 1\text{ MHz}$    |
|                   | $C_4$    | 5.0  | —   | 6.0  |          | $V_R = 4V, f = 1\text{ MHz}$    |
| Capacitance ratio | n        | 2.8  | —   | —    | —        | $C_1 / C_4$                     |
| Series resistance | $r_s$    | —    | —   | 0.5  | $\Omega$ | $V_R = 1V, f = 470\text{ MHz}$  |

Main Characteristic

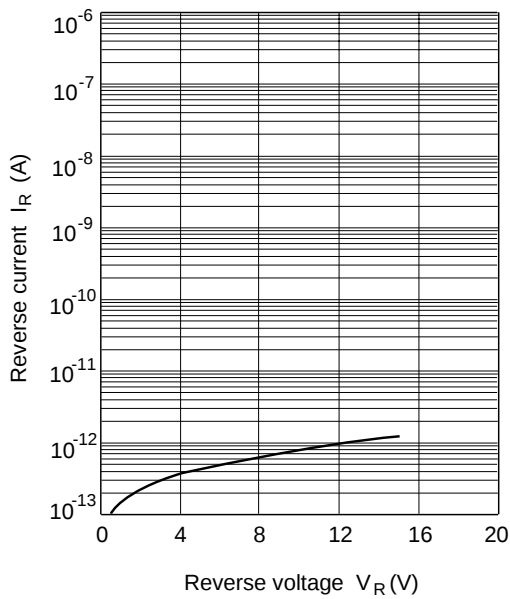


Fig.1 Reverse current Vs. Reverse voltage

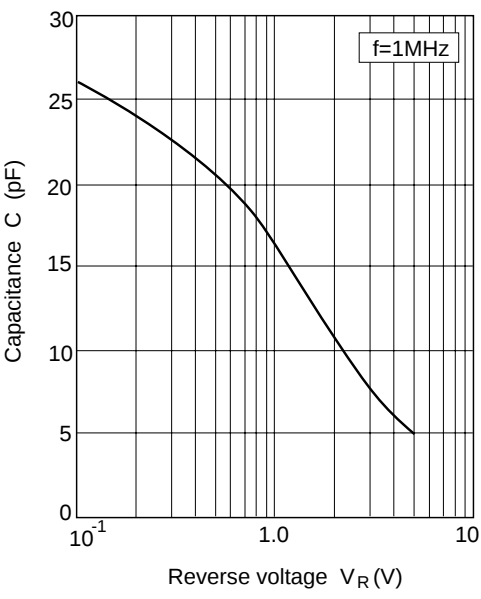


Fig.2 Capacitance Vs. Reverse voltage

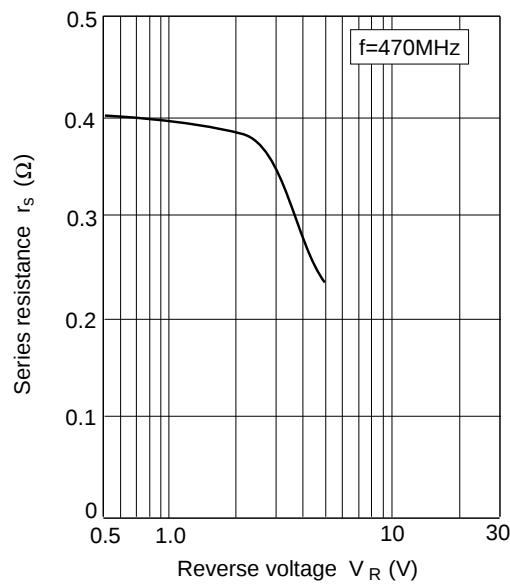


Fig.3 Series resistance Vs. Reverse voltage

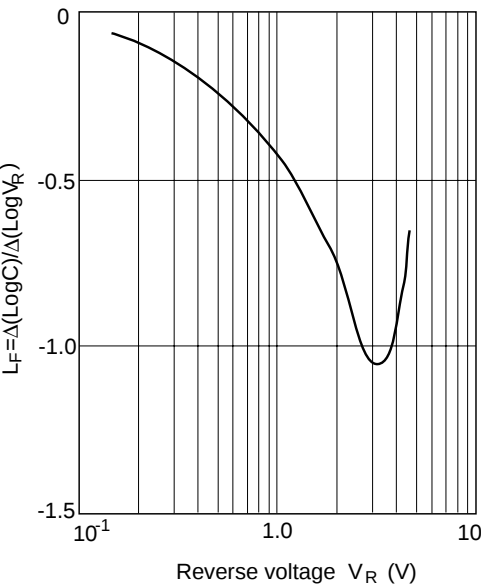
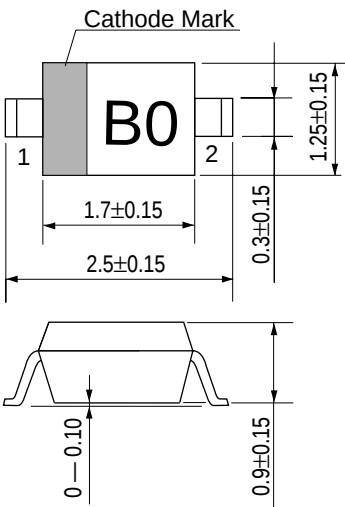


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit : mm



- 1. Cathode
- 2. Anode

|              |       |
|--------------|-------|
| Hitachi Code | URP   |
| JEDECCode    | —     |
| EIAJCode     | —     |
| Weight(g)    | 0.004 |

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