
HVU200A

Variable Capacitance Diode for Electronic Tuning

HITACHI

ADE-208-067D(Z)

Rev 4

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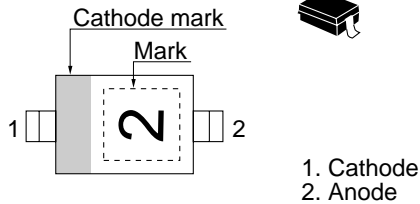
Features

- High capacitance ratio($n = 10\text{min}$) and suitable for wide band tuner.
- Ultra small Resin Package (URP) is suitable for surface mount design.
- Low series resistance and good C-V linearity.

Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HVU200A | 2 | URP |

Outline



HVU200A

Absolute Maximum Ratings (Ta = 25°C)

| Item | Symbol | Value | Unit |
|----------------------|-----------|-------------|------|
| Reverse voltage | V_R | 32 | 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 | $V_R = 30V$ |
| | I_{R2} | — | — | 100 | | $V_R = 30V, T_a = 60\text{ °C}$ |
| Capacitance | C_2 | 27.7 | — | 31.8 | pF | $V_R = 2V, f = 1\text{ MHz}$ |
| | C_{25} | 2.67 | — | 3.03 | | $V_R = 25V, f = 1\text{ MHz}$ |
| Capacitance ratio | n | 10.0 | — | — | — | C_2 / C_{25} |
| Series resistance | r_s | — | — | 0.70 | Ω | $V_R = 5V, f = 470\text{ MHz}$ |
| Matching error | $\Delta C/C^1$ | — | — | 2.0 | % | $V_R = 2\text{ to }25V, f = 1\text{ MHz}$ |

Note: 1. C.C system (Continuous Connected taping system) enable to make any 10 pcs of $\Delta C/C$ continuous in a reel , expect extention to another group.
Calculate Matching Error,

$$\Delta C/C = \frac{(C_{max} - C_{min})}{C_{min}} \times 100 (\%)$$

Main Characteristic

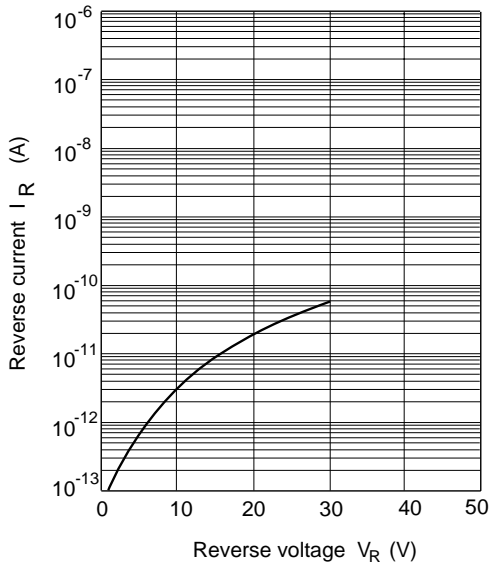


Fig.1 Reverse current Vs. Reverse voltage

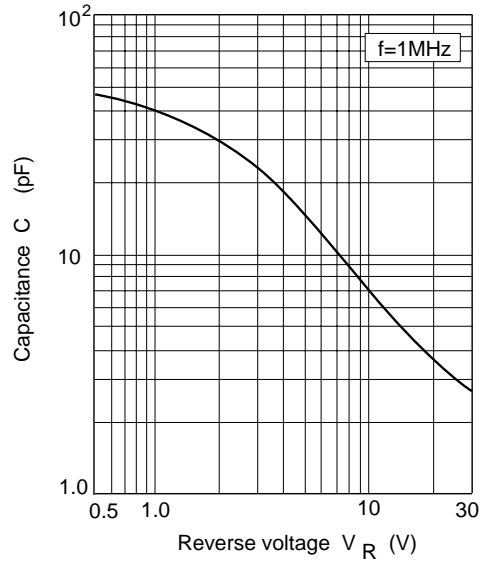


Fig.2 Capacitance Vs. Reverse voltage

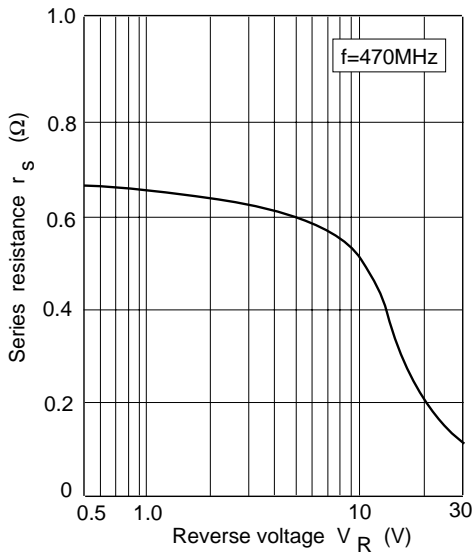


Fig.3 Series resistance Vs. Reverse voltage

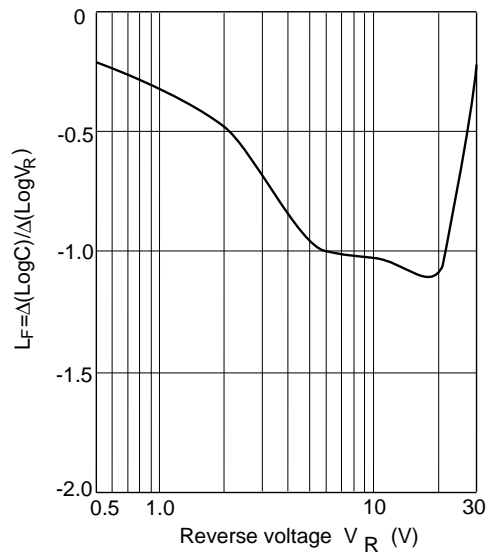
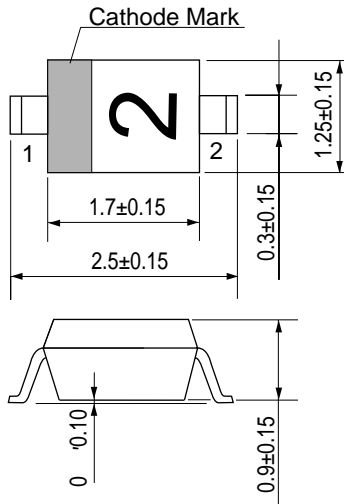


Fig.4 Linearity factor Vs. Reverse voltage

Package Dimensions

Unit : mm



- 1. Cathode
- 2. Anode

| | |
|--------------|------------|
| Hitachi Code | <i>URP</i> |
| JEDECCode | — |
| EIAJCode | — |
| Weight(g) | 0.004 |

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