

HVU383B

Variable Capacitance Diode for VCO

REJ03G0082-0100Z
(Previous: ADE-208-824)
Rev.1.00
Sep.17.2003

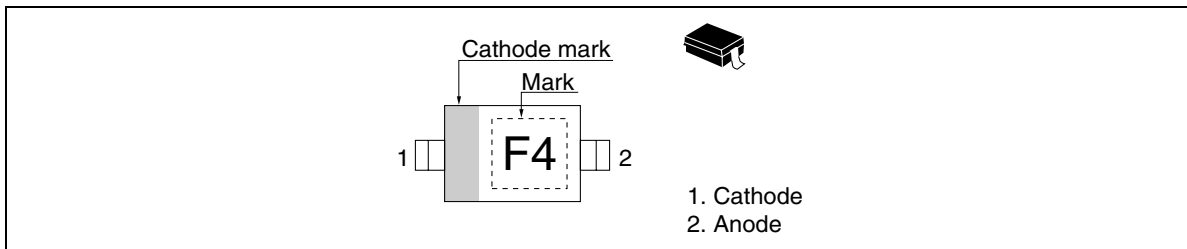
Features

- High capacitance ratio. ($n = 2.0$ min)
- Low series resistance. ($r_s = 0.5 \Omega$ max)
- Good C-V linearity.
- Ultra small Resin Package (URP) is suitable for surface mount design.

Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HVU383B | F4 | URP |

Pin Arrangement



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 | $V_R = 15\text{ V}$ |
| | I_{R2} | — | — | 100 | | $V_R = 15\text{ V}, T_a = 60^\circ\text{C}$ |
| Capacitance | C_1 | 19.0 | — | 21.0 | pF | $V_R = 1\text{ V}, f = 1\text{ MHz}$ |
| | C_4 | 8.5 | — | 10.0 | | $V_R = 4\text{ V}, f = 1\text{ MHz}$ |
| | C_7 | 4.5 | — | 5.5 | | $V_R = 7\text{ V}, f = 1\text{ MHz}$ |
| Capacitance ratio | n_1 | 2.0 | — | — | — | C_1/C_4 |
| | n_2 | 3.5 | — | — | — | C_1/C_7 |
| Series resistance | r_s | — | — | 0.5 | Ω | $V_R = 1\text{ V}, f = 470\text{ MHz}$ |

Main Characteristic

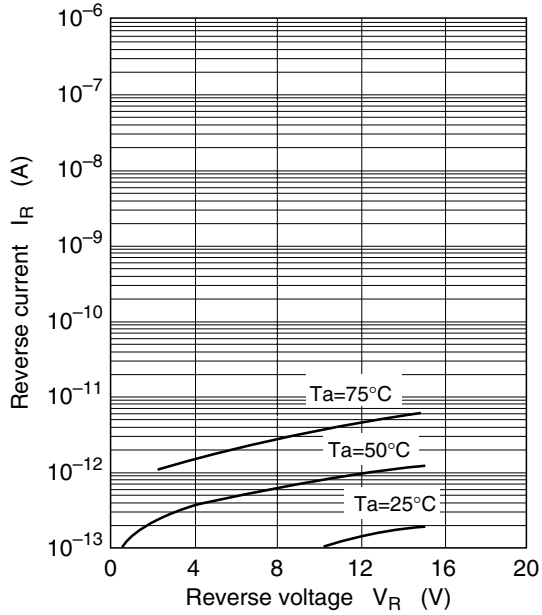


Fig.1 Reverse current vs. Reverse voltage

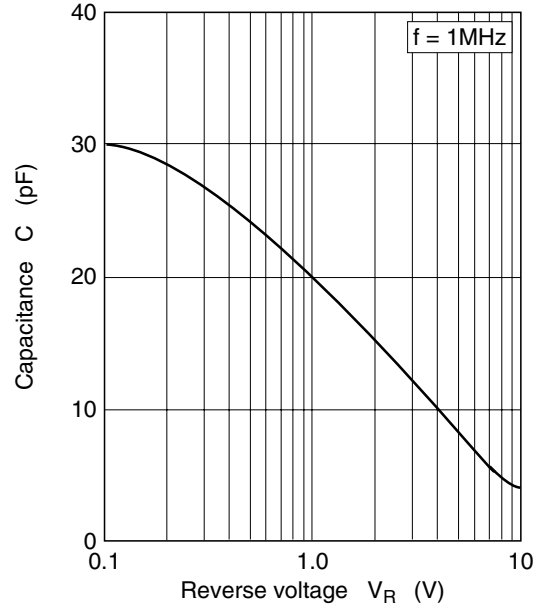


Fig.2 Capacitance vs. Reverse voltage

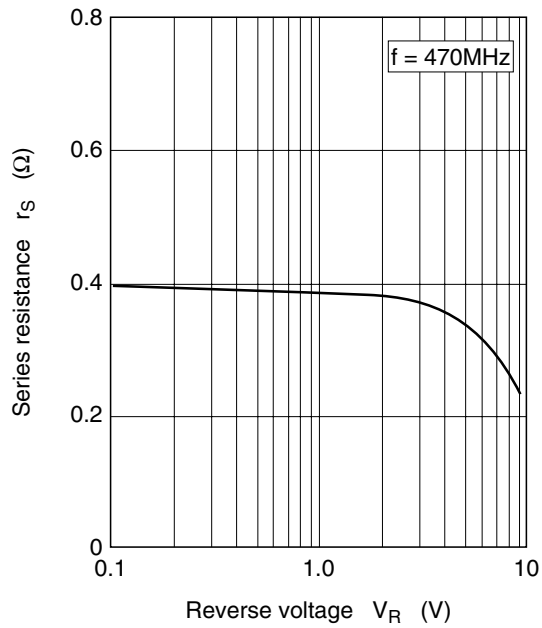


Fig.3 Series resistance vs. Reverse voltage

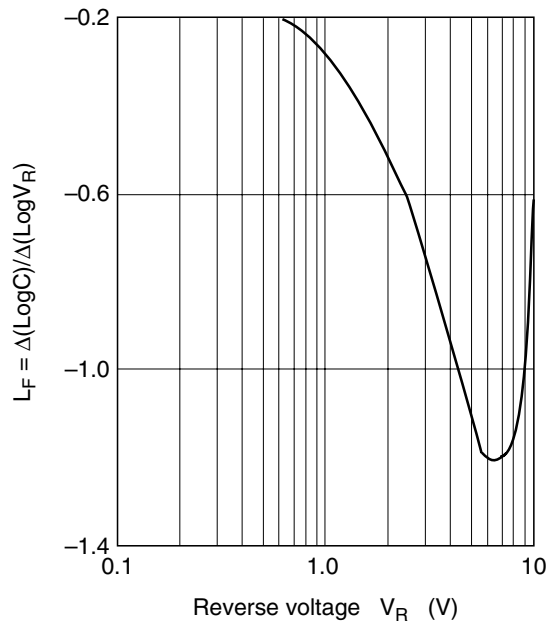
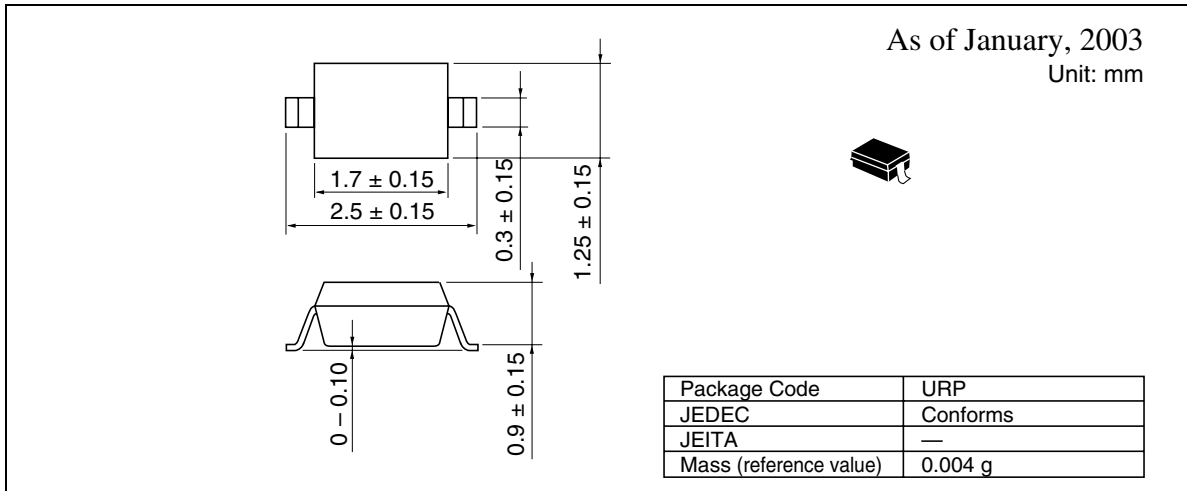


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions



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April 1st, 2010
Renesas Electronics Corporation

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