

HVU328C

Variable Capacitance Diode for VHF tuner

REJ03G0216-0100Z

Rev.1.00

Apr 16, 2004

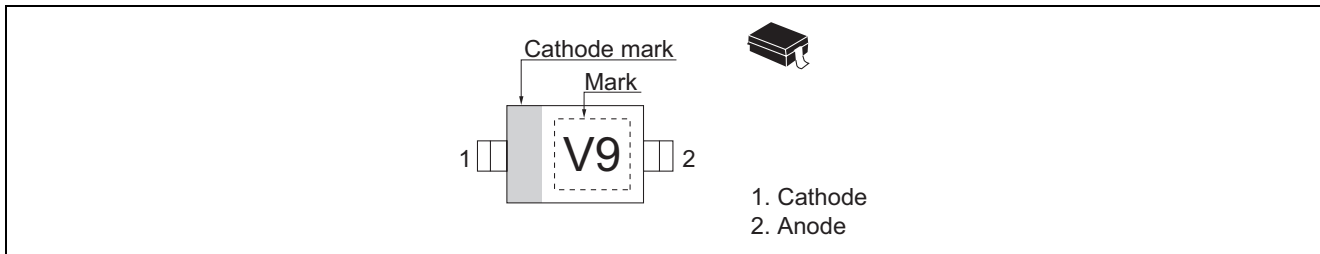
Features

- Low voltage type (tuning voltage 1 to 10V), it is suitable for ET without DC/DC converter.
- High capacitance ratio ($n = 14.5$ min) and suitable for wide band tuner.
- Low series resistance and good C-V linearity.
- Ultra small Resin Package (URP) is suitable for surface mount design.

Ordering Information

| Type No. | Laser Mark | Package Code |
|----------|------------|--------------|
| HVU328C | V9 | 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 = 10 V |
| | I _{R2} | — | — | 100 | | V _R = 10 V, Ta = 60°C |
| Capacitance | C ₁ | 41.0 | — | 45.0 | pF | V _R = 1 V, f = 1 MHz |
| | C ₁₀ | 2.6 | — | 2.9 | | V _R = 10 V, f = 1 MHz |
| Capacitance ratio | n | 14.5 | — | — | — | C ₁ / C ₁₀ |
| Series resistance | r _s | — | — | 1.2 | Ω | V _R = 5 V, f = 470 MHz |
| Matching error | ΔC/C *1 | — | — | 2.0 | % | V _R = 1 to 10 V, f = 1 MHz |

Note: 1. C.C system (Continuous Connected taping system) enable to make any 10 pcs of C/C continuous in a reel , expect extension to another group.

Calculate Matching

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

Main Characteristic

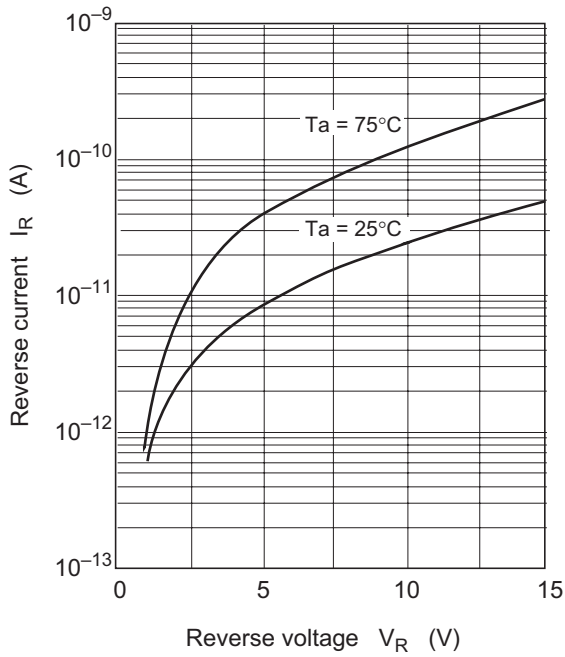


Fig.1 Reverse current vs. Reverse voltage

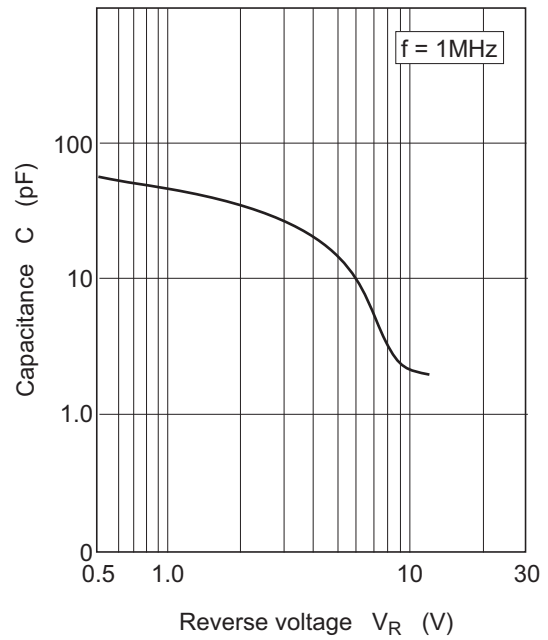


Fig.2 Capacitance vs. Reverse voltage

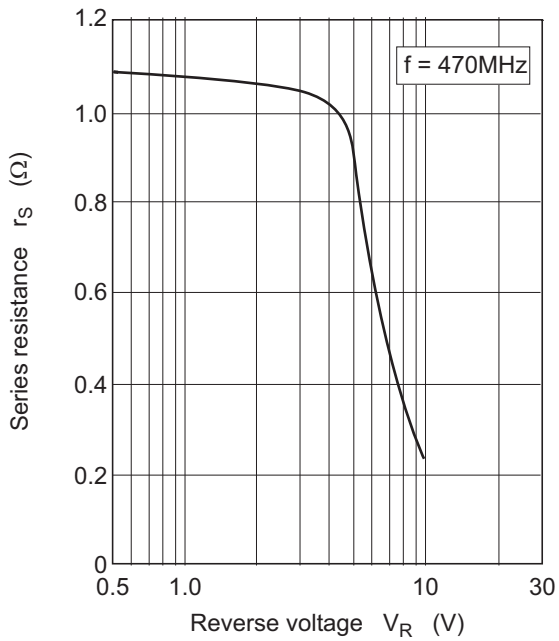


Fig.3 Series resistance vs. Reverse voltage

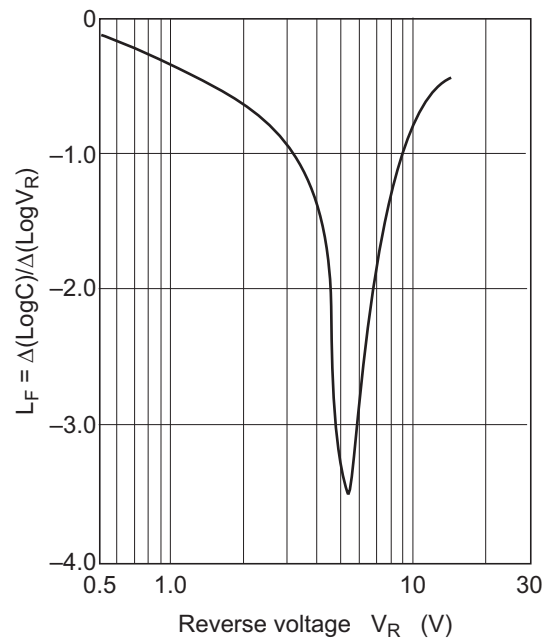
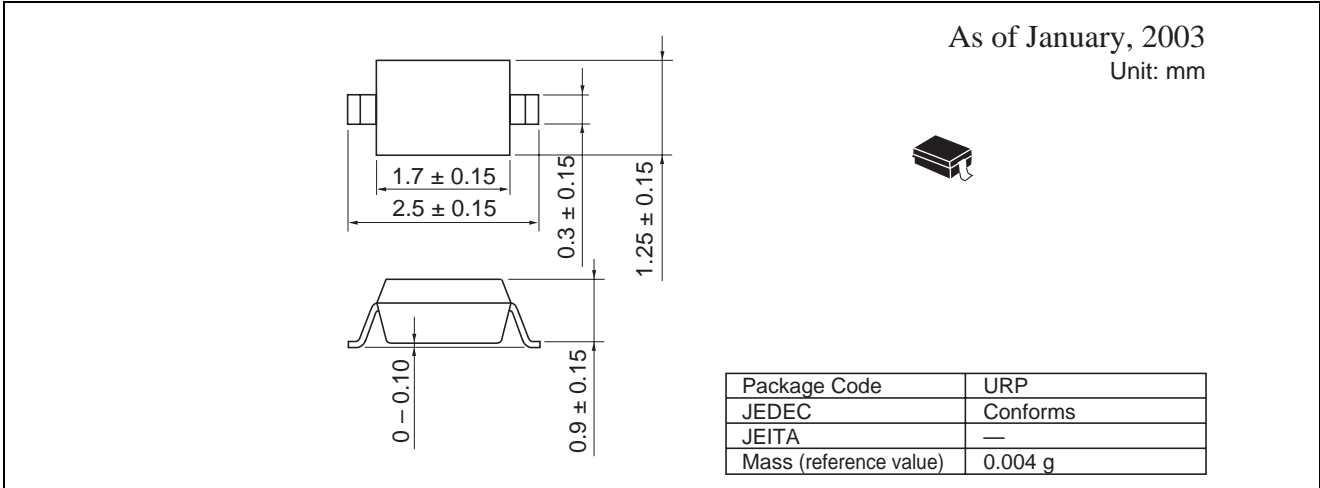


Fig.4 Linearity factor vs. Reverse voltage

Package Dimensions



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