

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

1SV232

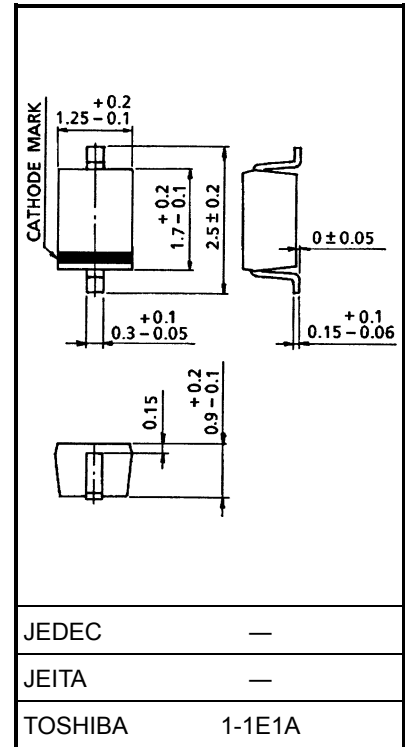
CATV Tuning

- High capacitance ratio: $C_2 \text{ V}/C_{25 \text{ V}} = 10.5$ (typ.)
- Excellent C-V characteristics, and small tracking error.
- Useful for small size tuner.

Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|---------------------------|-----------|-----------------------------------|------|
| Reverse voltage | V_R | 30 | V |
| Peak reverse voltage | V_{RM} | 35 ($R_L = 10 \text{ k}\Omega$) | V |
| Junction temperature | T_j | 125 | °C |
| Storage temperature range | T_{stg} | -55~125 | °C |

Unit: mm



Electrical Characteristics (Ta = 25°C)

Weight: 0.004 g (typ.)

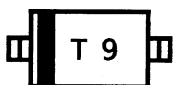
| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|-------------------|----------------------------------|--|------|------|------|----------|
| Reverse voltage | V_R | $I_R = 1 \text{ }\mu\text{A}$ | 30 | — | — | V |
| Reverse current | I_R | $V_R = 28 \text{ V}$ | — | — | 10 | nA |
| Capacitance | $C_2 \text{ V}$ | $V_R = 2 \text{ V}, f = 1 \text{ MHz}$ | 28 | 30.3 | 32 | pF |
| Capacitance | $C_{25 \text{ V}}$ | $V_R = 25 \text{ V}, f = 1 \text{ MHz}$ | 2.75 | 2.90 | 3.10 | pF |
| Capacitance ratio | $C_2 \text{ V}/C_{25 \text{ V}}$ | — | 10 | 10.5 | — | — |
| Series resistance | r_s | $V_R = 5 \text{ V}, f = 470 \text{ MHz}$ | — | 0.55 | 0.70 | Ω |

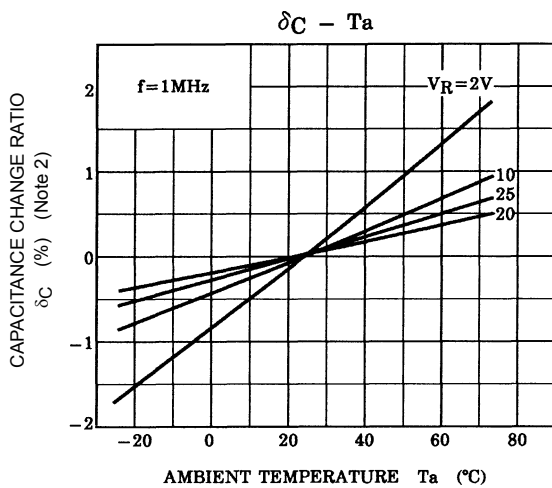
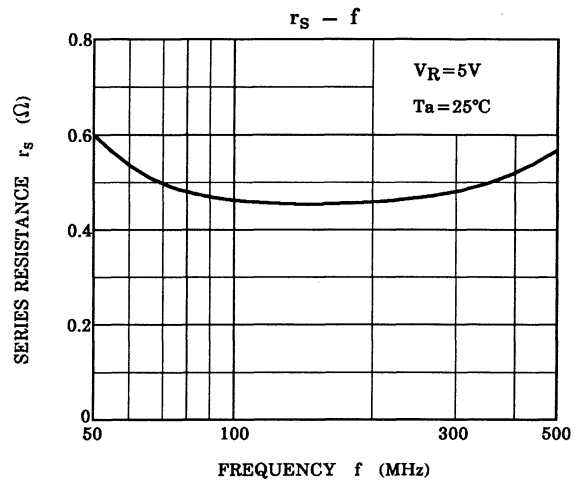
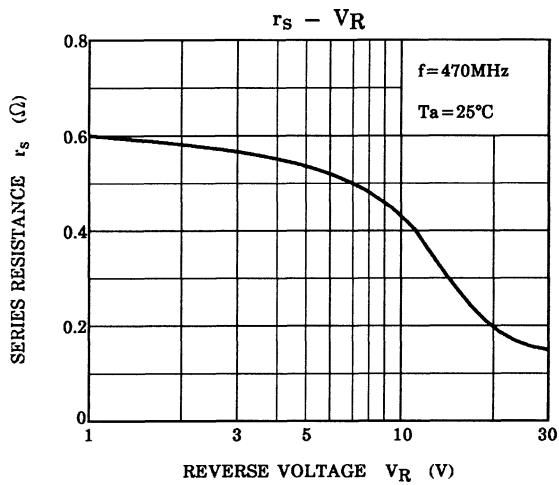
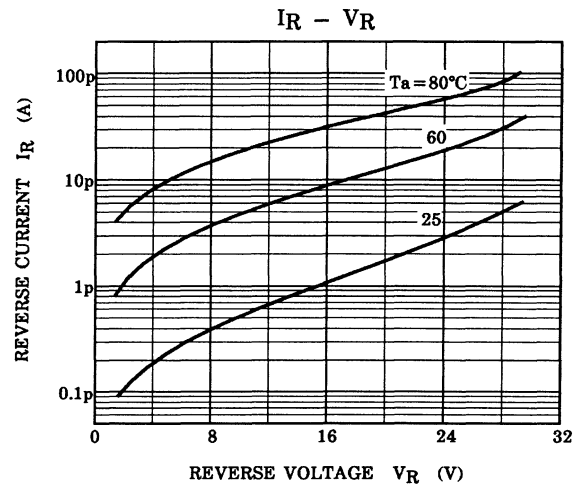
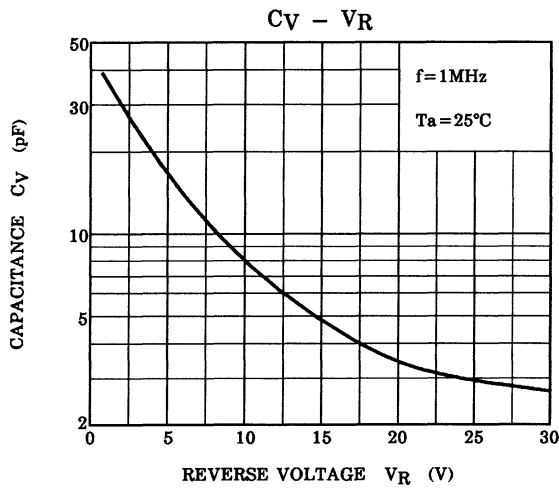
Note 1: Available in matched group for capacitance to 2.0%.

$$\frac{C(\text{max}) - C(\text{min})}{C(\text{min})} \leq 0.02$$

(V_R = 2~25 V)

Marking





Note 2: $\delta C = \frac{C(T_a) - C(25)}{C(25)} \times 100$ (%)

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