

TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

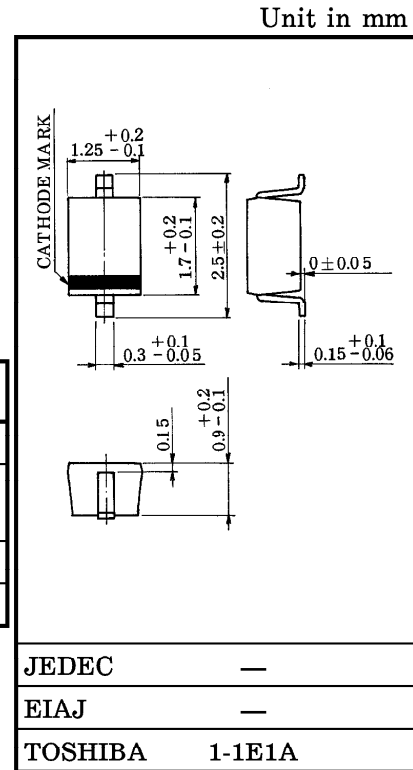
# 1SV232

CATV TUNING.

- High Capacitance Ratio :  $C_{2V} / C_{25V} = 10.5$  (Typ.)
- Excellent C-V Characteristics, and Small Tracking Error.
- Useful for Small Size Tuner.

MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

| CHARACTERISTIC            | SYMBOL    | RATING                      | UNIT             |
|---------------------------|-----------|-----------------------------|------------------|
| Reverse Voltage           | $V_R$     | 30                          | V                |
| Peak Reverse Voltage      | $V_{RM}$  | 35<br>( $R_L = 10k\Omega$ ) | V                |
| Junction Temperature      | $T_j$     | 125                         | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{stg}$ | $-55 \sim 125$              | $^\circ\text{C}$ |



Weight : 0.004g

ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

| CHARACTERISTIC    | SYMBOL             | TEST CONDITION                       | MIN. | TYP. | MAX. | UNIT     |
|-------------------|--------------------|--------------------------------------|------|------|------|----------|
| Reverse Voltage   | $V_R$              | $I_R = 1\mu\text{A}$                 | 30   | —    | —    | V        |
| Reverse Current   | $I_R$              | $V_R = 28\text{V}$                   | —    | —    | 10   | nA       |
| Capacitance       | $C_{2V}$           | $V_R = 2\text{V}, f = 1\text{MHz}$   | 28   | 30.3 | 32   | pF       |
| Capacitance       | $C_{25V}$          | $V_R = 25\text{V}, f = 1\text{MHz}$  | 2.75 | 2.90 | 3.10 | pF       |
| Capacitance Ratio | $C_{2V} / C_{25V}$ | —                                    | 10   | 10.5 | —    | —        |
| Series Resistance | $r_s$              | $V_R = 5\text{V}, f = 470\text{MHz}$ | —    | 0.55 | 0.70 | $\Omega$ |

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

Marking

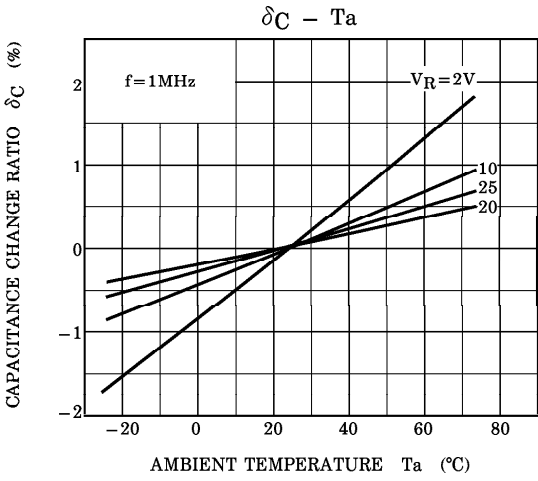
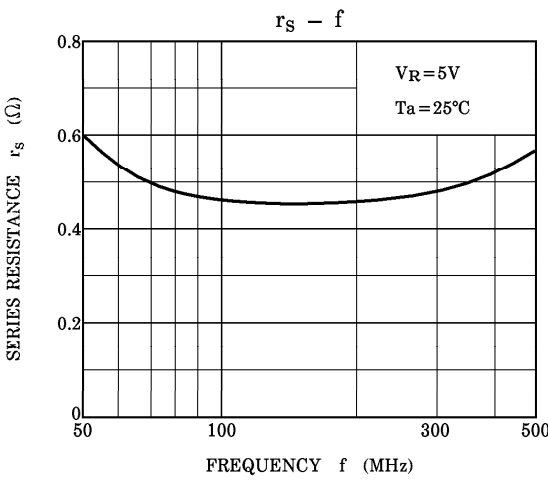
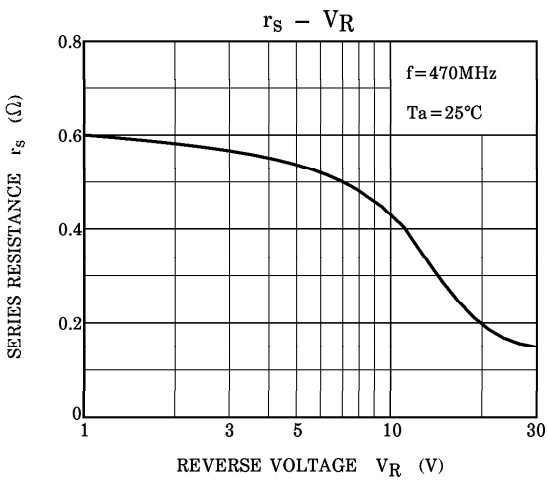
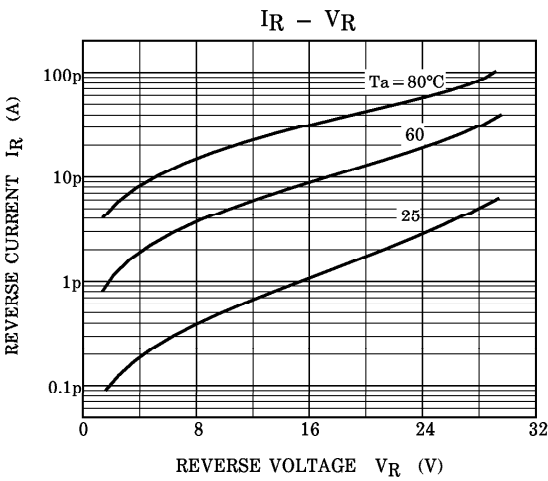
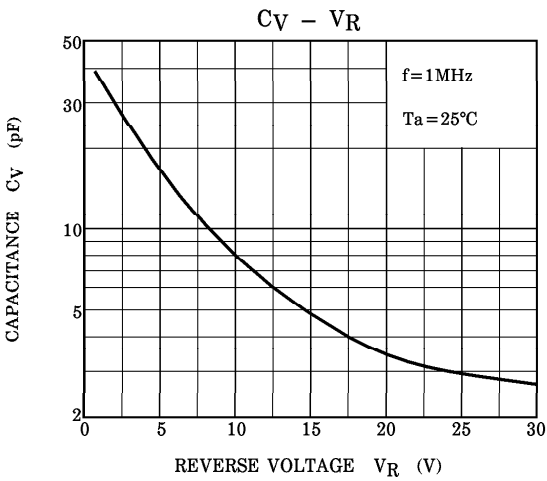
$$\frac{C(\text{Max.}) - C(\text{Min.})}{C(\text{Min.})} \leq 0.02$$

( $V_R = 2 \sim 25\text{V}$ )



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