

TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

# 1SV278

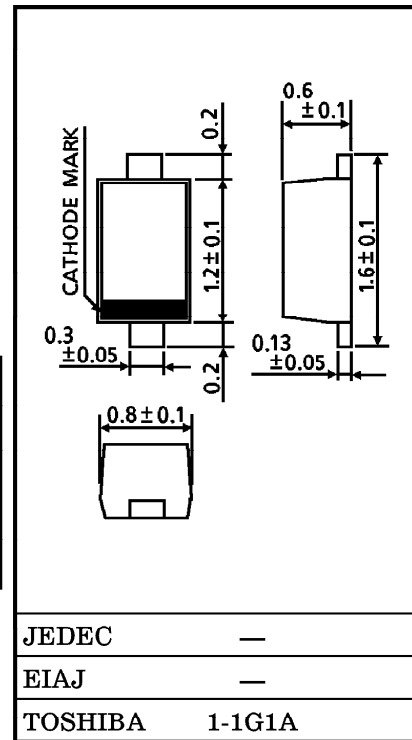
TV TUNING

Unit in mm

- High Capacitance Ratio :  $C_{2V} / C_{25V} = 6.5$  (TYP.)
- Low Series Resistance :  $r_s = 0.4\Omega$  (TYP.)
- Excellent C-V Characteristics, and Small Tracking Error.
- Useful for Small Size Tuner.

MAXIMUM RATINGS (Ta = 25°C)

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



Weight : 0.0014g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

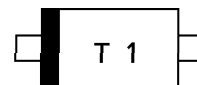
| CHARACTERISTIC    | SYMBOL             | TEST CONDITION         | MIN.  | TYP. | MAX.  | UNIT     |
|-------------------|--------------------|------------------------|-------|------|-------|----------|
| Reverse Voltage   | $V_R$              | $I_R = 1\mu A$         | 30    | —    | —     | V        |
| Reverse Current   | $I_R$              | $V_R = 28V$            | —     | —    | 10    | nA       |
| Capacitance       | $C_{2V}$           | $V_R = 2V, f = 1MHz$   | 14.16 | —    | 16.25 | pF       |
| Capacitance       | $C_{25V}$          | $V_R = 25V, f = 1MHz$  | 2.11  | —    | 2.43  | pF       |
| Capacitance Ratio | $C_{2V} / C_{25V}$ | —                      | 5.90  | 6.50 | 7.15  | —        |
| Series Resistance | $r_s$              | $V_R = 5V, f = 470MHz$ | —     | 0.4  | 0.55  | $\Omega$ |

Note 1 : Available in matched group for capacitance to 2.5%.

$$\frac{C(\text{MAX.}) - C(\text{MIN.})}{C(\text{MIN.})} \leq 0.025$$

( $V_R = 2 \sim 25V$ )

MARKING

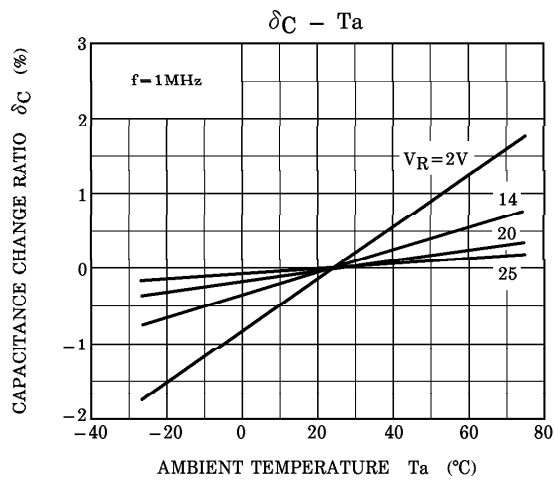
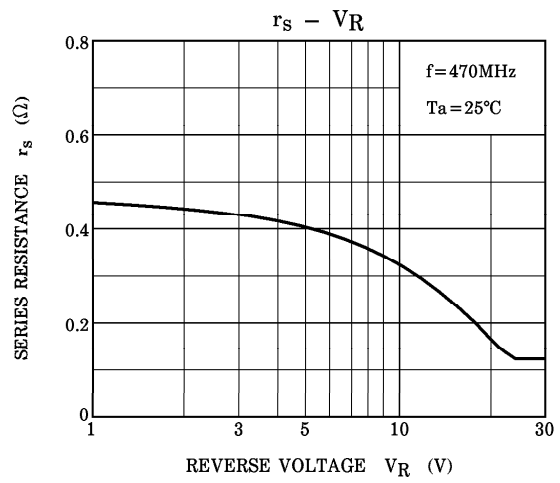
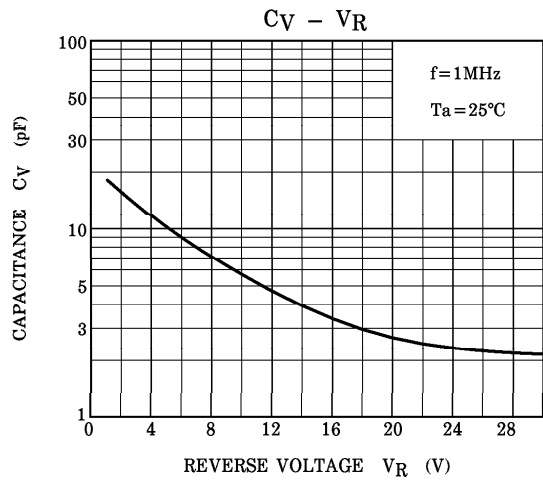


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NOTE :  $\delta C = \frac{C(T_a) - C(25)}{C(25)} \times 100$