

TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

1SV290

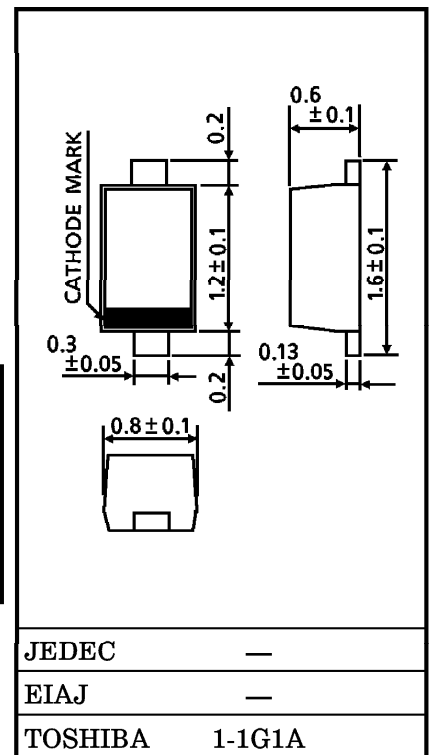
CATV TUNING

Unit in mm

- High Capacitance Ratio : $C_{2V} / C_{25V} = 16$ (TYP.)
- Low Series Resistance : $r_s = 0.92\Omega$ (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 ($R_L = 10k\Omega$) | V |
| Junction Temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55~125 | $^\circ\text{C}$ |



Weight : 0.0014g

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} | $V_R = 2\text{V}, f = 1\text{MHz}$ | 41 | — | 49.5 | pF |
| Capacitance | C_{25V} | $V_R = 25\text{V}, f = 1\text{MHz}$ | 2.5 | — | 3.2 | pF |
| Capacitance Ratio | C_{2V} / C_{25V} | — | 15 | 16 | — | — |
| Series Resistance | r_s | $V_R = 5\text{V}, f = 470\text{MHz}$ | — | 0.92 | 1.05 | Ω |

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

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

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

MARKING



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