

9097250 TOSHIBA (DISCRETE/OPTO)

67C 09374 DT-07-19

Silicon Epitaxial Planar Type

Variable Capacitance Diode

**1SV153**

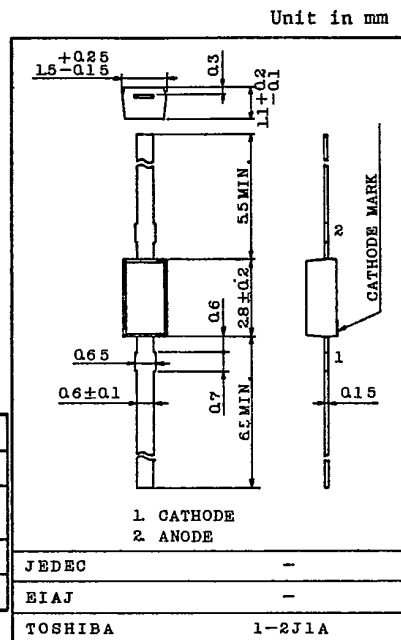
TV TUNING.

## FEATURES:

- High Capacitance Ratio :  $C_{2V}/C_{25V}=6.5$  (Typ.)
- Low Series Resistance :  $r_s=0.45\Omega$  (Typ.)

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 ~ 125                 | $^\circ\text{C}$ |

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

Weight : 0.02g

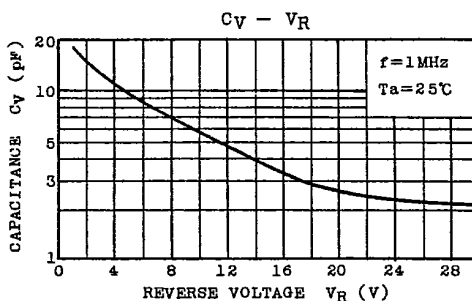
| CHARACTERISTIC    | SYMBOL           | TEST CONDITION                  | MIN.  | TYP. | MAX.  | UNIT     |
|-------------------|------------------|---------------------------------|-------|------|-------|----------|
| Reverse Voltage   | $V_R$            | $I_R=1\mu\text{A}$              | 30    | -    | -     | V        |
| Reverse Current   | $I_R$            | $V_R=28\text{V}$                | -     | -    | 10    | nA       |
| Capacitance       | $C_{2V}$         | $V_R=2\text{V}, f=1\text{MHz}$  | 14.16 | -    | 16.25 | pF       |
| Capacitance       | $C_{25V}$        | $V_R=25\text{V}, f=1\text{MHz}$ | 2.11  | -    | 2.43  | pF       |
| Capacitance Ratio | $C_{2V}/C_{25V}$ | -                               | 5.90  | -    | 7.15  |          |
| Series Resistance | $r_s$            | $C=9\text{pF}, f=470\text{MHz}$ | -     | -    | 0.6   | $\Omega$ |

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

$$\frac{C(\text{Max.}) - C(\text{Min.})}{C(\text{Min.})} \leq 0.025$$

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

CATHODE MARK: RED



TOSHIBA CORPORATION