

## 1SV288

## CATV Tuning

- High capacitance ratio:  $C_2 \text{ V}/C_{25 \text{ V}} = 16$  (typ.)
- Low series resistance:  $r_s = 0.92 \Omega$  (typ.)
- Excellent C-V characteristics, and small tracking error.
- Useful for small size tuner.

Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| 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                               | $^\circ\text{C}$ |
| Storage temperature range | $T_{stg}$ | $-55 \sim 125$                    | $^\circ\text{C}$ |

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Unit: mm

|         |        |
|---------|--------|
| JEDEC   | —      |
| JEITA   | —      |
| TOSHIBA | 1-1E1A |

Weight: 0.004 g (typ.)

Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

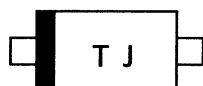
| Characteristics   | Symbol                             | Test Condition                           | Min | Typ. | Max  | Unit     |
|-------------------|------------------------------------|------------------------------------------|-----|------|------|----------|
| Reverse voltage   | $V_R$                              | $I_R = 1 \mu\text{A}$                    | 30  | —    | —    | V        |
| Reverse current   | $I_R$                              | $V_R = 28 \text{ V}$                     | —   | —    | 10   | nA       |
| Capacitance       | $C_{2 \text{ V}}$                  | $V_R = 2 \text{ V}, f = 1 \text{ MHz}$   | 41  | 45   | 49.5 | pF       |
| Capacitance       | $C_{25 \text{ V}}$                 | $V_R = 25 \text{ V}, f = 1 \text{ MHz}$  | 2.5 | 2.8  | 3.2  | pF       |
| Capacitance ratio | $C_{2 \text{ V}}/C_{25 \text{ V}}$ | —                                        | 15  | 16   | —    | —        |
| Series resistance | $r_s$                              | $V_R = 5 \text{ V}, f = 470 \text{ MHz}$ | —   | 0.92 | 1.05 | $\Omega$ |

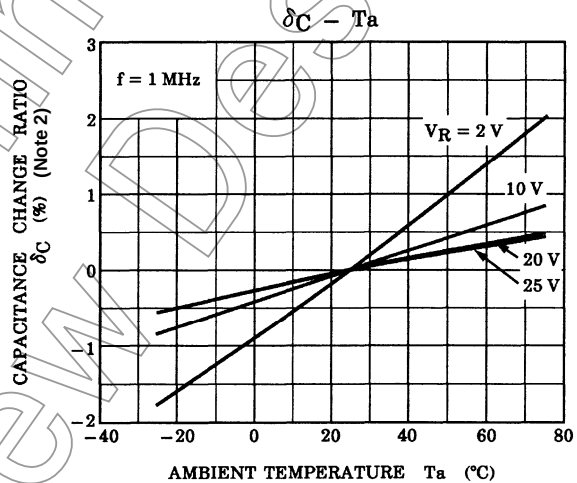
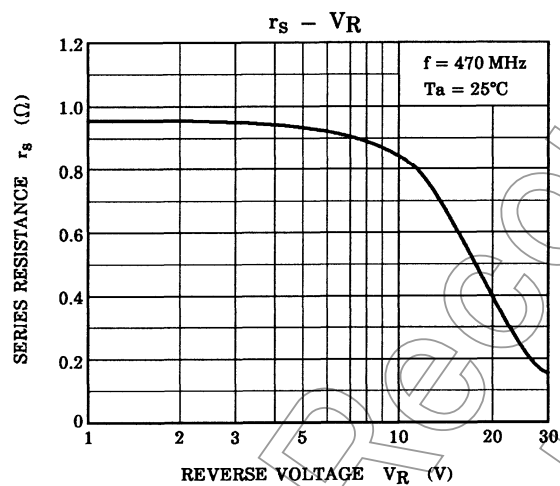
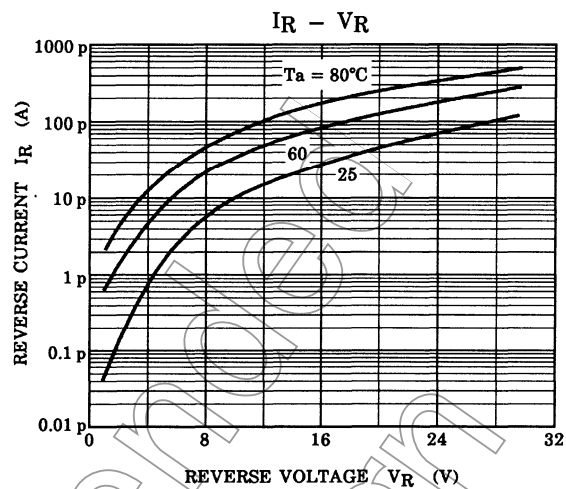
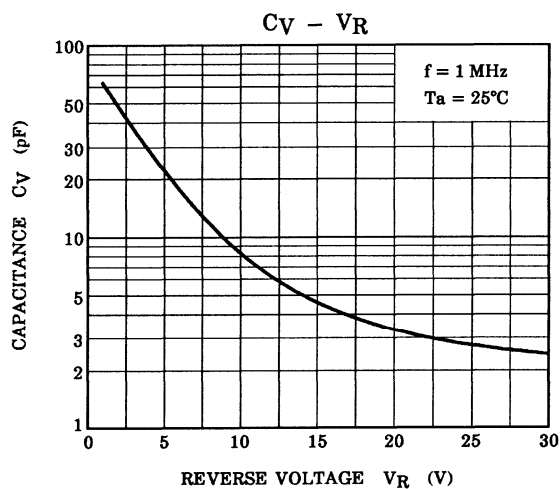
Note 1: Available in matched group for capacitance to 2.5%.

$$\frac{C(\text{max}) - C(\text{min})}{C(\text{min})} \leq 0.025$$

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

## Marking





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

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