

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

# 1SV286

## CATV Converter 1'st OSC Tuning

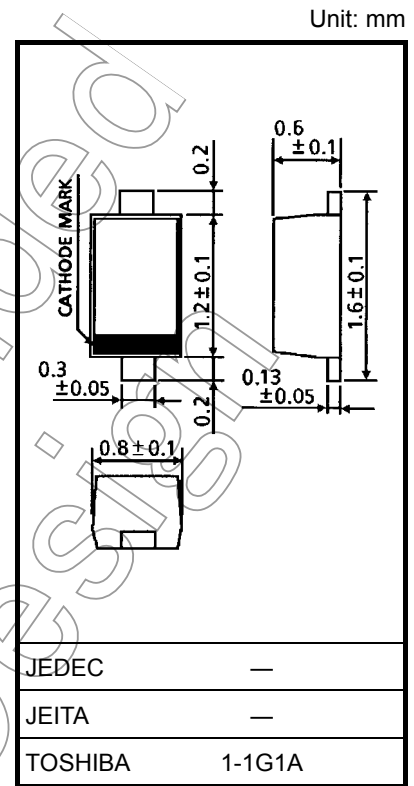
- High capacitance ratio:  $C_{2V}/C_{20V} = 8.9$  (typ.)
- Low series resistance:  $r_s = 0.73 \Omega$  (typ.)
- Useful for small size tuner.

### Absolute Maximum Ratings (Ta = 25°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	°C
Storage temperature range	$T_{stg}$	-55~125	°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.).

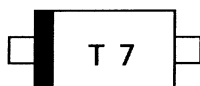


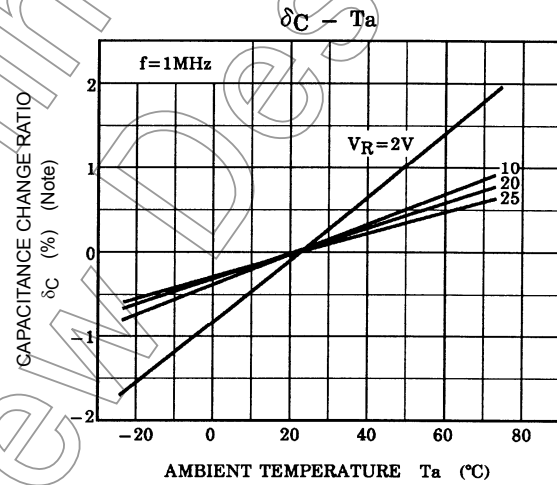
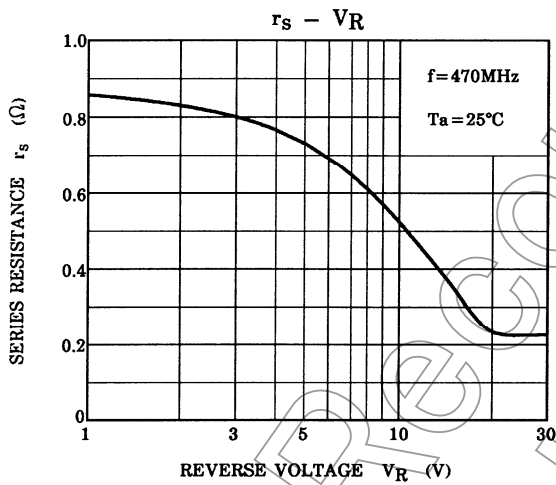
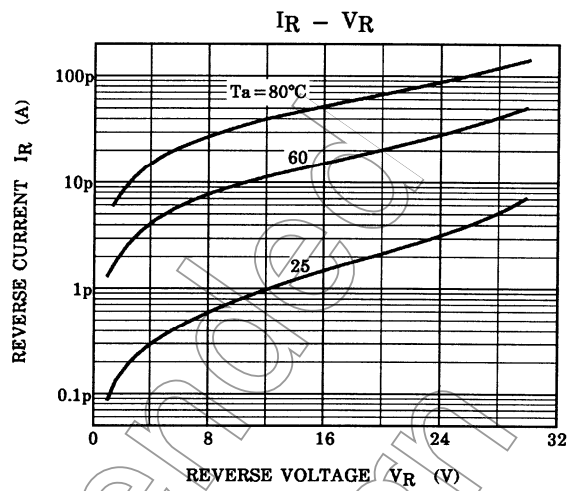
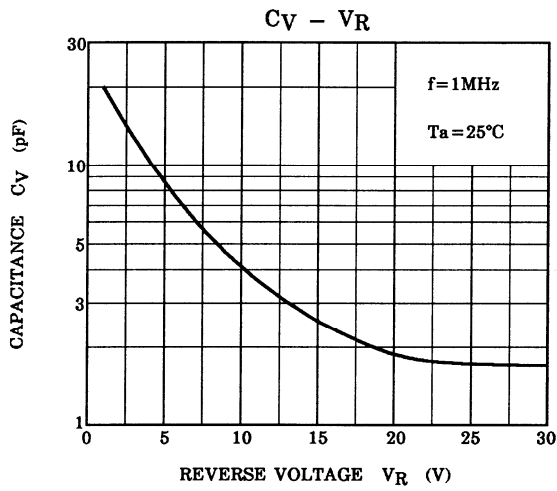
Weight: 0.0014 g (typ.)

### Electrical Characteristics (Ta = 25°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	$C_{2V}$	$V_R = 2 \text{ V}, f = 1 \text{ MHz}$	14.5	—	16.1	pF
Capacitance	$C_{20V}$	$V_R = 20 \text{ V}, f = 1 \text{ MHz}$	1.56	—	1.86	pF
Capacitance ratio	$C_{2V}/C_{20V}$	—	7.8	8.9	—	—
Series resistance	$r_s$	$V_R = 5 \text{ V}, f = 470 \text{ MHz}$	—	0.73	0.9	$\Omega$

### Marking





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

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