

# 1SV283B

## CATV Tuning

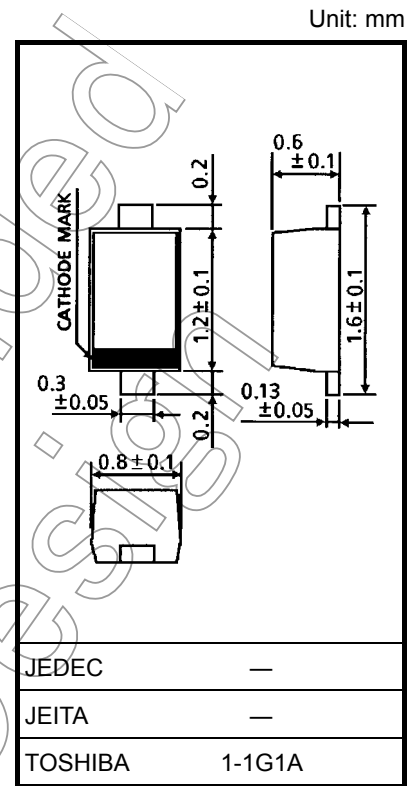
- High capacitance ratio:  $C_{2V}/C_{25V} = 11.5$  (typ.)
- Low series resistance:  $r_s = 0.55 \Omega$  (typ.)
- Excellent C-V characteristics and small tracking error
- Suitable for small tuners

## Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Reverse voltage	$V_R$	34	V
Peak reverse voltage	$V_{RM}$	36 ( $R_L = 10 k\Omega$ )	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)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	$V_R$	$I_R = 1 \mu A$	34	—	—	V
Reverse current	$I_R$	$V_R = 32 V$	—	—	10	nA
Capacitance	$C_{2V}$	$V_R = 2 V, f = 1 MHz$	29	31.5	34	pF
	$C_{25V}$	$V_R = 25 V, f = 1 MHz$	2.5	2.75	3	pF
Capacitance ratio	$C_{2V}/C_{25V}$	—	10.6	11.5	—	—
	$C_{25V}/C_{28V}$	—	1.03	—	—	—
Series resistance	$r_s$	$V_R = 5 V, f = 470 MHz$	—	0.55	0.75	$\Omega$

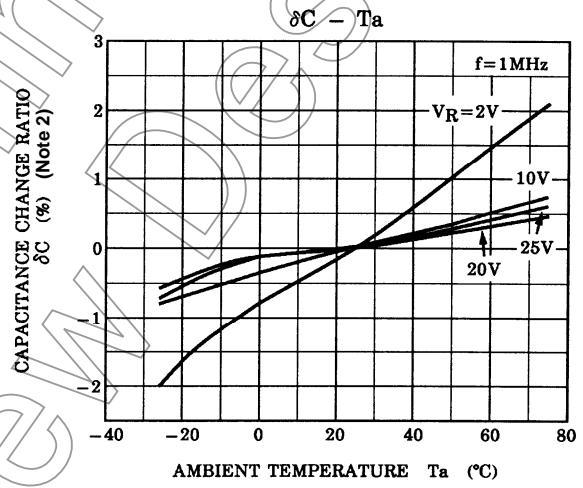
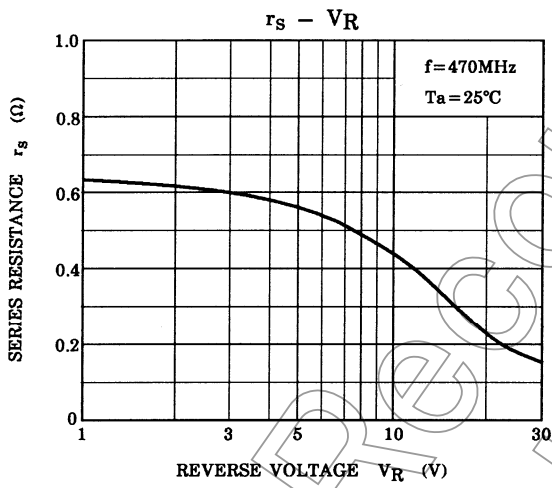
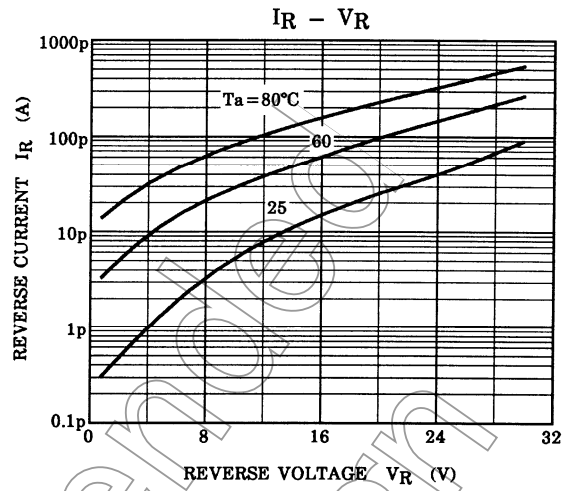
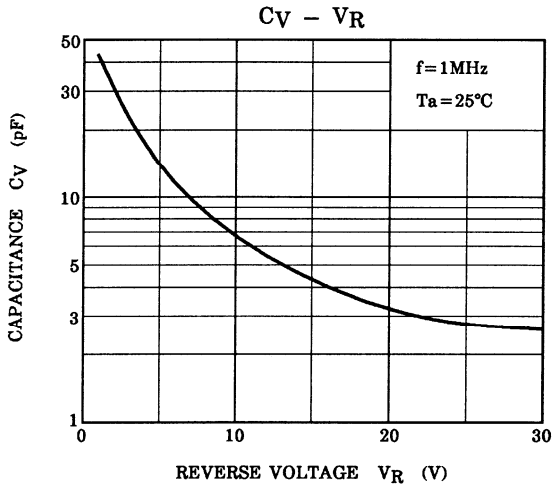
Note 1: Available in a matched group for capacitance to 2.0%.

$$\frac{C(\max) - C(\min)}{C(\min)} \leq 0.02$$

$$(V_R = 2 \sim 25 V).$$

## Marking





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

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