

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

1SV282

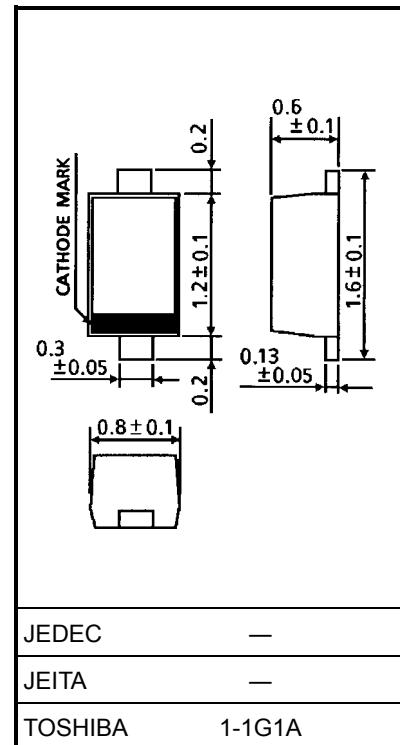
CATV Tuning

Unit: mm

- High capacitance ratio: $C_2 \text{ V}/C_{25 \text{ V}} = 12.5$ (typ.)
- Low series resistance: $r_s = 0.6 \Omega$ (typ.)
- Excellent C-V characteristics, and small tracking error.
- Useful for small size tuner.

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	34	V
Peak reverse voltage	V_{RM}	36 ($R_L = 10 \text{ k}\Omega$)	V
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	-55~125	°C

**Electrical Characteristics (Ta = 25°C)**

Weight: 0.0014 g (typ.)

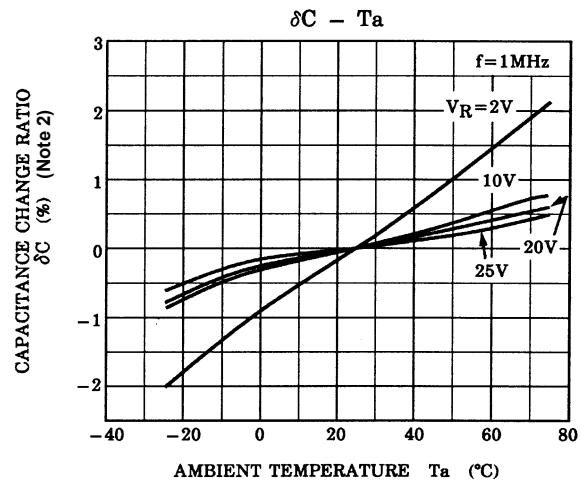
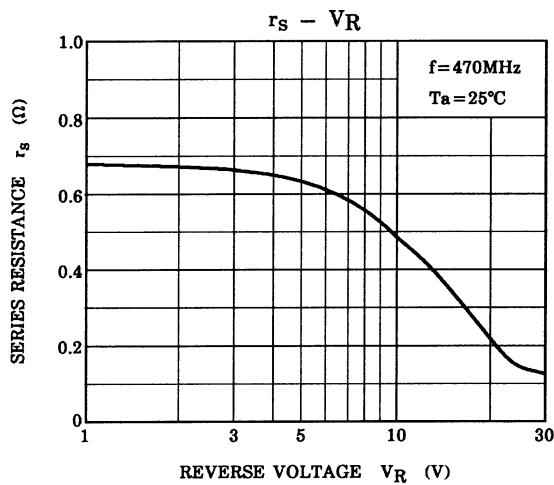
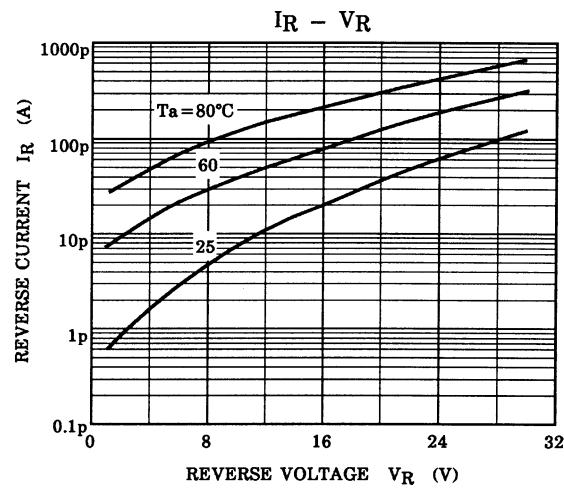
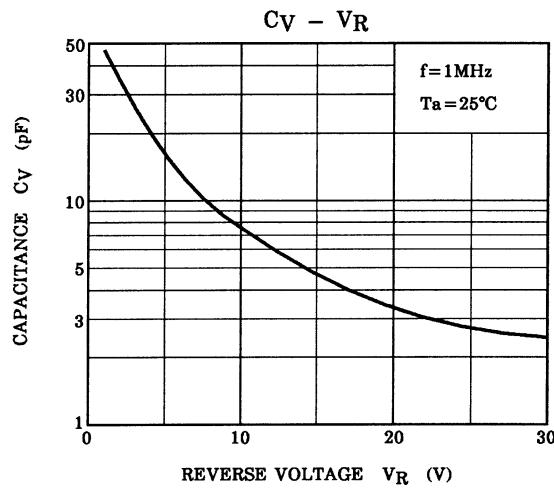
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	$I_R = 1 \mu\text{A}$	34	—	—	V
Reverse current	I_R	$V_R = 32 \text{ V}$	—	—	10	nA
Capacitance	$C_{2 \text{ V}}$	$V_R = 2 \text{ V}, f = 1 \text{ MHz}$	33	—	38	pF
Capacitance	$C_{25 \text{ V}}$	$V_R = 25 \text{ V}, f = 1 \text{ MHz}$	2.6	—	3.0	pF
Capacitance ratio	$C_2 \text{ V}/C_{25 \text{ V}}$	—	12.0	12.5	—	—
Capacitance ratio	$C_{25 \text{ V}}/C_{28 \text{ V}}$	—	1.03	—	—	—
Series resistance	r_s	$V_R = 5 \text{ V}, f = 470 \text{ MHz}$	—	0.6	0.8	Ω

Note 1: Available in matched group for capacitance to 2%.

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

(VR = 2~25 V)

Marking



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

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