

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

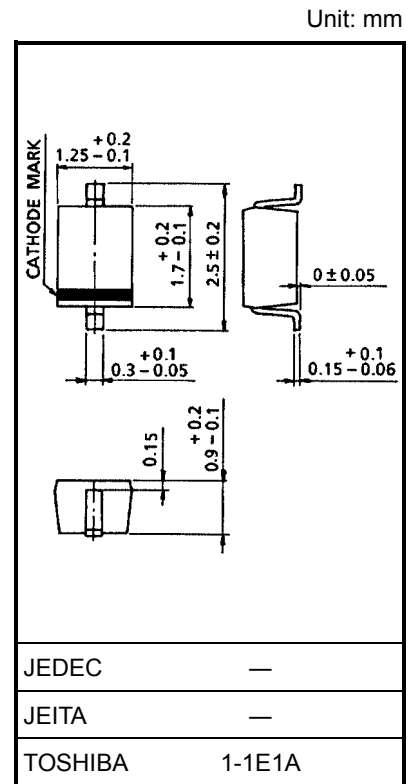
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CATV Tuning

- High capacitance ratio: $C2 V/C25 V = 11.5$ (typ.)
- Low series resistance: $r_s = 0.55 \Omega$ (typ.)
- Excellent C-V characteristics, and small tracking error.
- Small package

Maximum Ratings (Ta = 25°C)

Characteristics	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



Electrical Characteristics (Ta = 25°C)

Weight: 0.004 g (typ.)

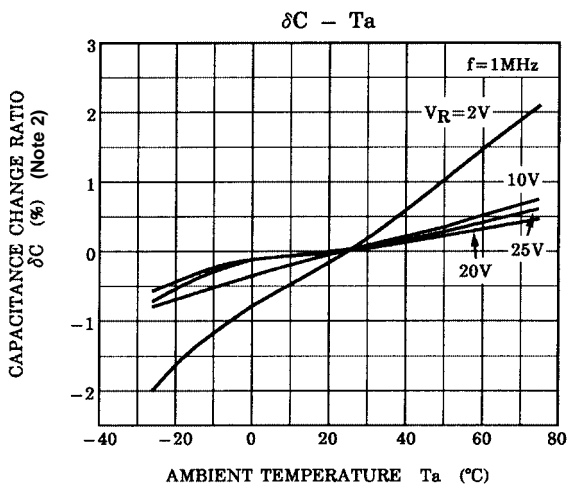
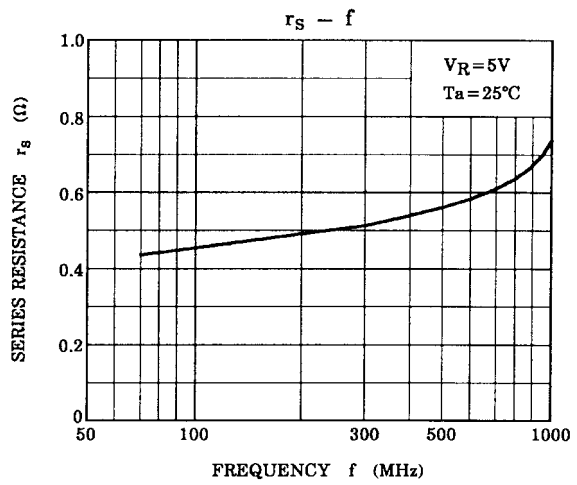
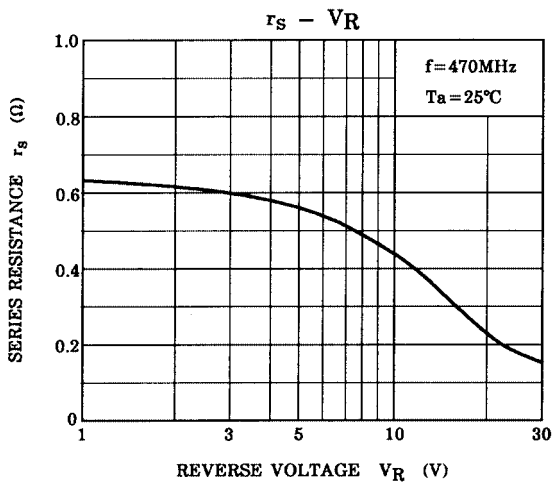
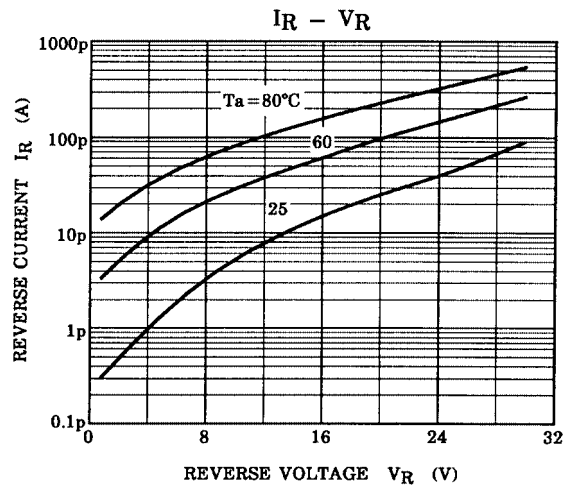
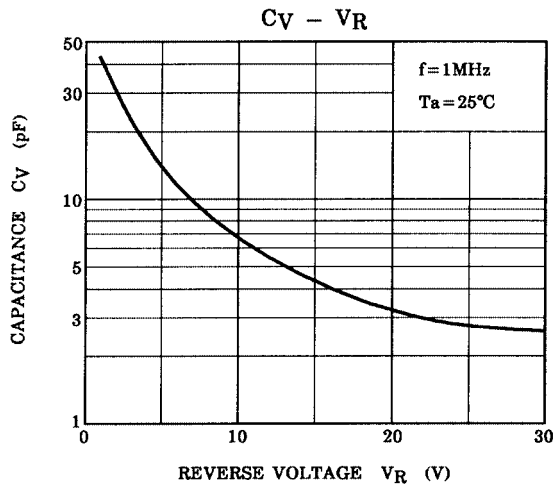
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	$I_R = 1 \mu A$	34	—	—	V
Reverse current	I_R	$V_R = 32 V$	—	—	10	nA
Capacitance	$C2 V$	$V_R = 2 V, f = 1 MHz$	29	31.5	34	pF
Capacitance	$C25 V$	$V_R = 25 V, f = 1 MHz$	2.5	2.75	2.9	pF
Capacitance ratio	$C2 V/C25 V$	—	11.0	11.5	—	—
Capacitance ratio	$C25 V/C28 V$	—	1.03	1.05	—	—
Series resistance	r_s	$V_R = 5 V, f = 470 MHz$	—	0.55	0.7	Ω

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

$$\frac{C(\max) - C(\min)}{C(\min)} \leq 0.02 \quad (V_R = 2\sim 25 V)$$

Marking





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

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