

TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

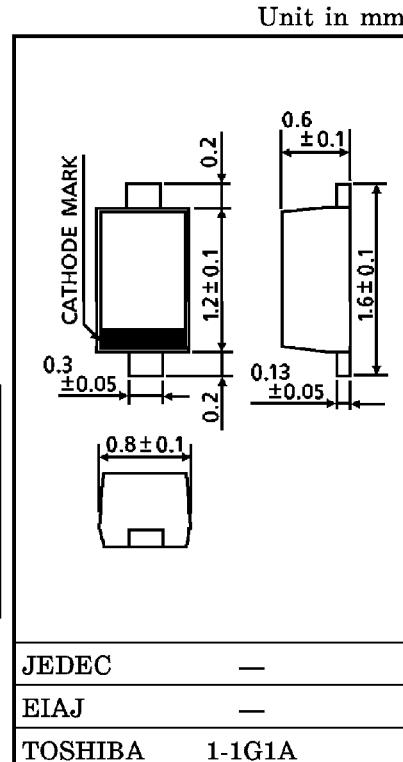
1SV278

TV TUNING

- High Capacitance Ratio : $C_{2V} / C_{25V} = 6.5$ (TYP.)
- Low Series Resistance : $r_s = 0.4\Omega$ (TYP.)
- Excellent C-V Characteristics, and Small Tracking Error.
- Useful for Small Size Tuner.

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	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}	-55~125	$^\circ\text{C}$



Weight : 0.0014g

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	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}	$V_R = 2\text{V}, f = 1\text{MHz}$	14.16	—	16.25	pF
Capacitance	C_{25V}	$V_R = 25\text{V}, f = 1\text{MHz}$	2.11	—	2.43	pF
Capacitance Ratio	C_{2V} / C_{25V}	—	5.90	6.50	7.15	—
Series Resistance	r_s	$V_R = 5\text{V}, f = 470\text{MHz}$	—	0.4	0.55	Ω

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

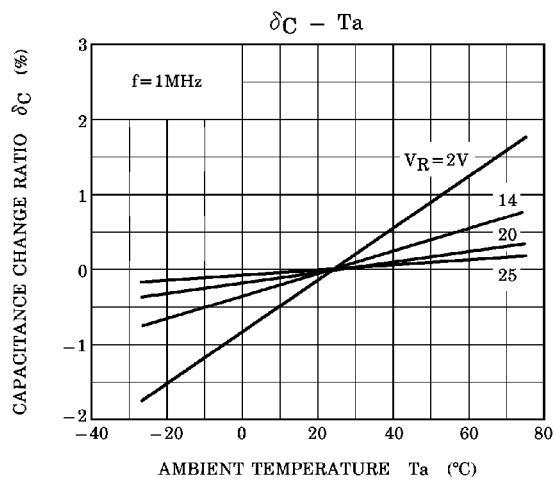
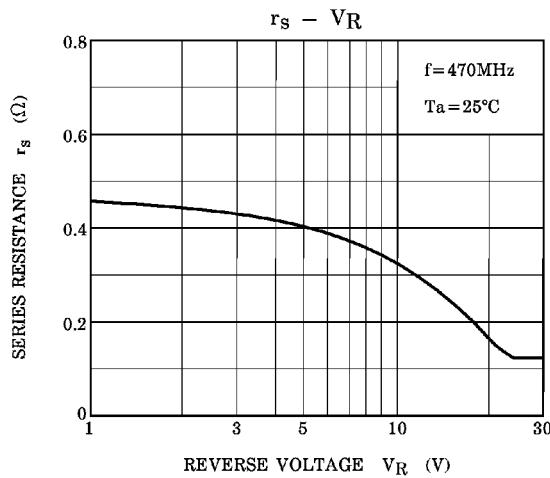
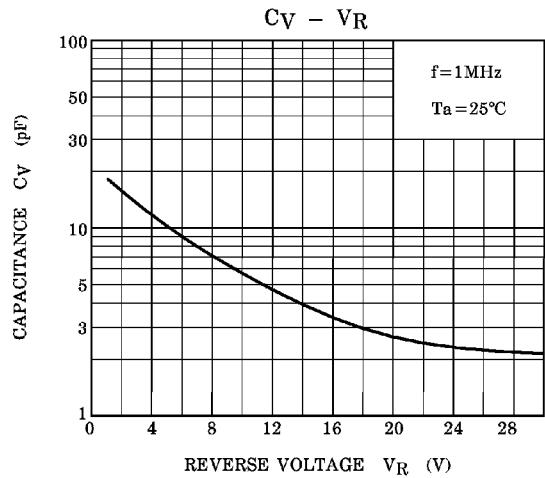
$$\frac{C(\text{MAX.}) - C(\text{MIN.})}{C(\text{MIN.})} \leq 0.025$$

MARKING

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

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