

TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

# 1SV278

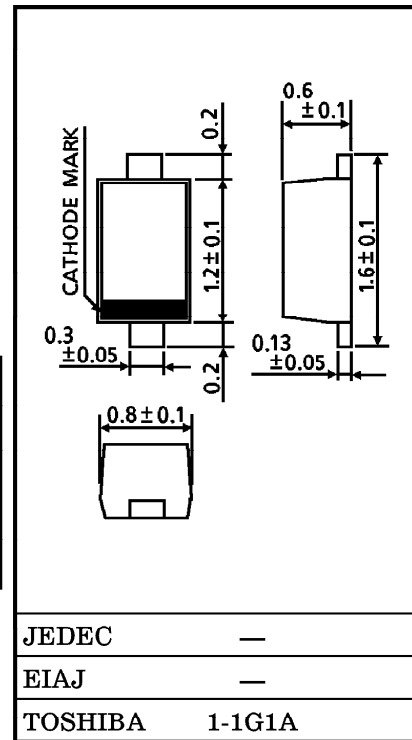
TV TUNING

Unit in mm

- 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 (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	$V_R$	30	V
Peak Reverse Voltage	$V_{RM}$	35 ( $R_L = 10k\Omega$ )	V
Junction Temperature	$T_j$	125	°C
Storage Temperature Range	$T_{stg}$	-55~125	°C



Weight : 0.0014g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

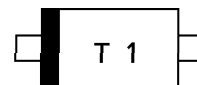
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Voltage	$V_R$	$I_R = 1\mu A$	30	—	—	V
Reverse Current	$I_R$	$V_R = 28V$	—	—	10	nA
Capacitance	$C_{2V}$	$V_R = 2V, f = 1MHz$	14.16	—	16.25	pF
Capacitance	$C_{25V}$	$V_R = 25V, f = 1MHz$	2.11	—	2.43	pF
Capacitance Ratio	$C_{2V} / C_{25V}$	—	5.90	6.50	7.15	—
Series Resistance	$r_s$	$V_R = 5V, f = 470MHz$	—	0.4	0.55	$\Omega$

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

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

( $V_R = 2 \sim 25V$ )

MARKING

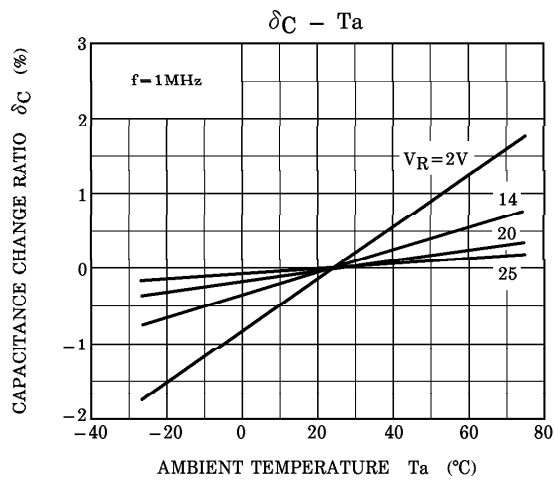
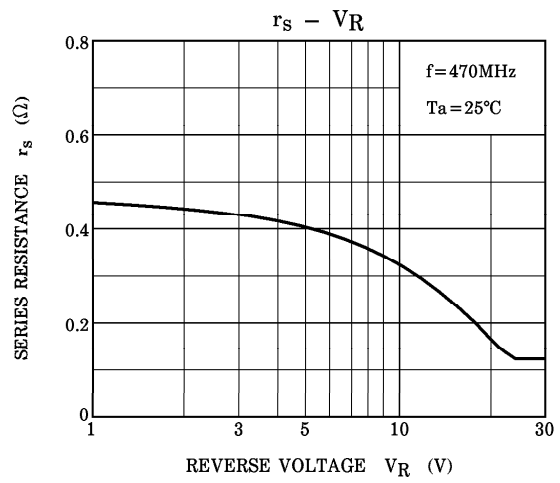
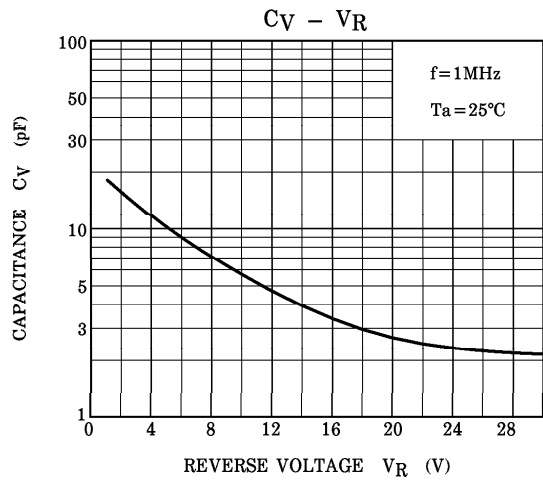


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NOTE : 
$$\delta C = \frac{C(T_a) - C(25)}{C(25)} \times 100$$