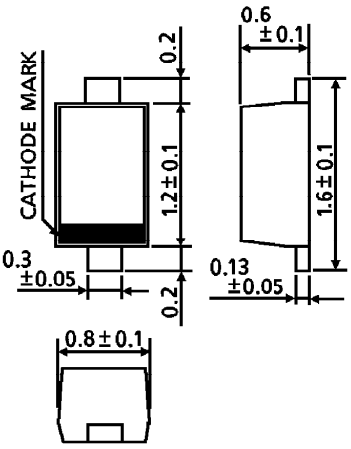
TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

1SV278

TV TUNING

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	1-1G1A

Weight : 0.0014g

- 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

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	Ω

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

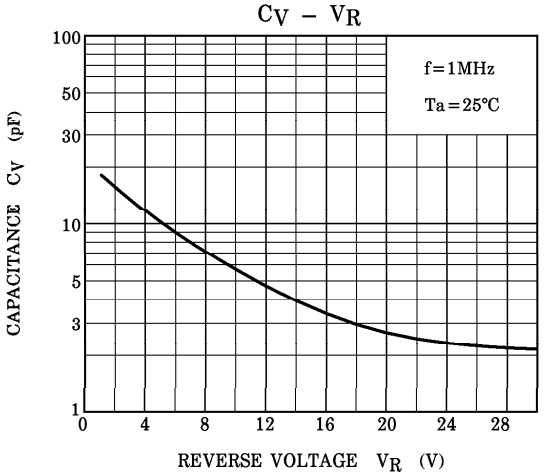
$$\frac{C(MAX.)-C(MIN.)}{C(MIN.)} \leqq 0.025$$

($V_R=2\sim25V$)

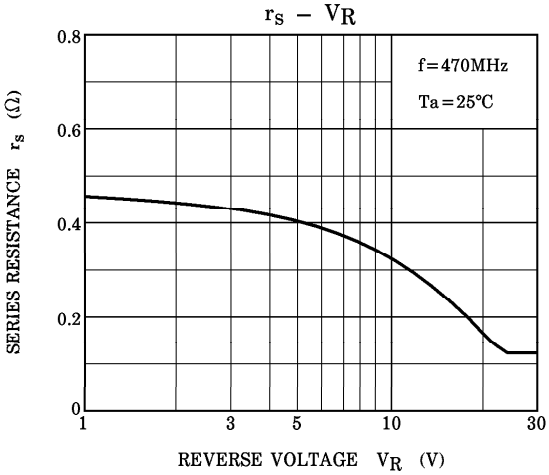
MARKING

961001EAA2

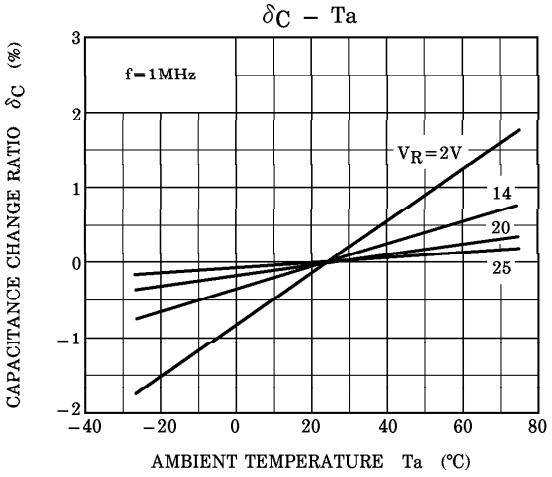
$C_V - V_R$



$r_S - V_R$



$\delta C - Ta$



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