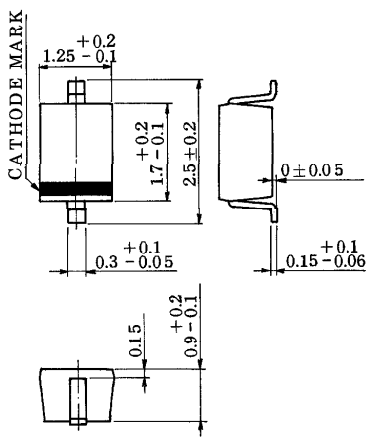
TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

1SV217

CATV TUNING.

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	1-1E1A

Weight : 0.004g

- High Capacitance Ratio : $C_{2V} / C_{25V} = 12.5$ (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)

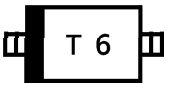
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Voltage	V_R	$I_R = 1\mu A$	30	—	—	V
Reverse Current	I_R	$V_R = 28V$	—	—	10	nA
Capacitance	C_{2V}	$V_R = 2V$, f = 1MHz	33	36	39	pF
Capacitance	C_{25V}	$V_R = 25V$, f = 1MHz	2.6	2.88	3.2	pF
Capacitance Ratio	C_{2V} / C_{25V}	—	11.5	12.5	—	—
Series Resistance	r_s	$V_R = 5V$, f = 470MHz	—	0.83	1.0	Ω

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

$$\frac{C\,(Max.) - C\,(Min.)}{C\,(Min.)} \leqq 0.025$$

($V_R = 2 \sim 25V$)

Marking



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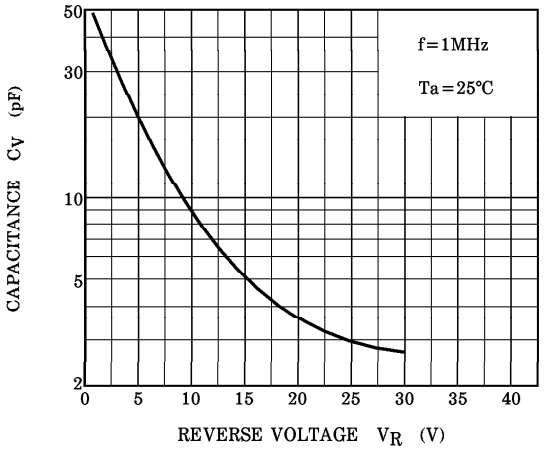
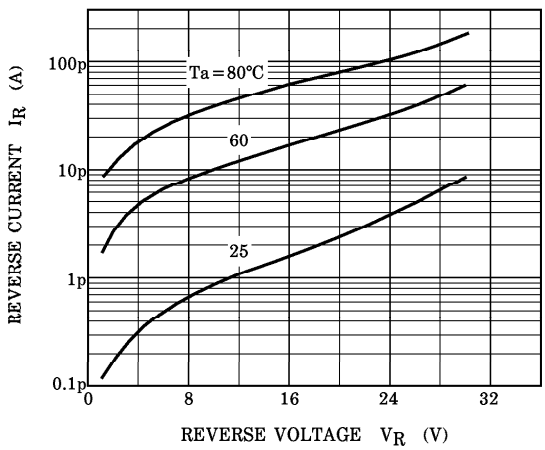
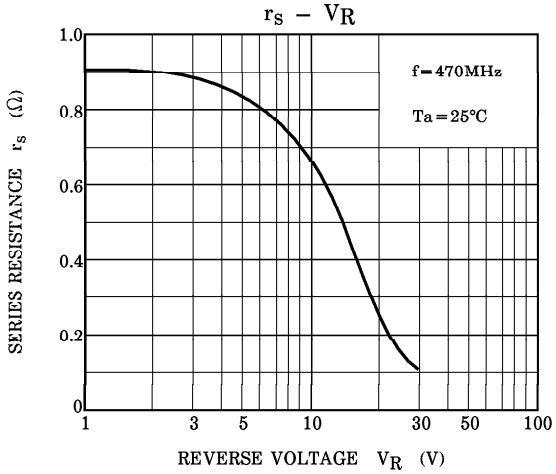
$C_V - V_R$



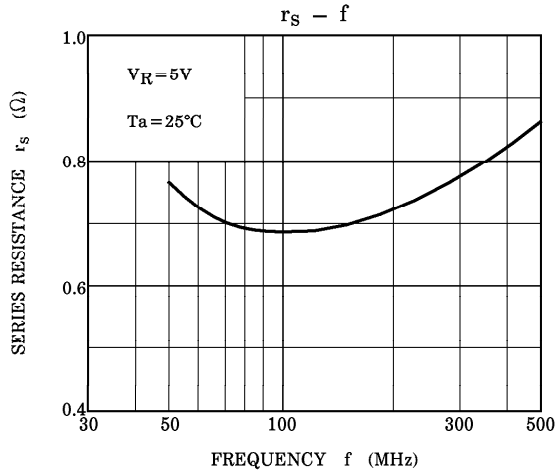
$I_R - V_R$



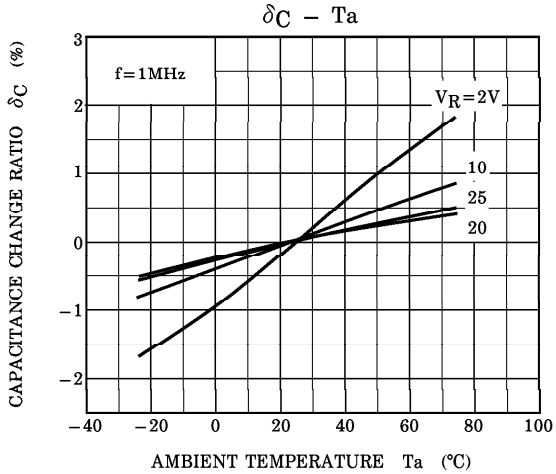
$r_S - V_R$



$r_S - f$



$\delta C - Ta$



NOTE : $\delta C\,(\%) = \dfrac{C\,(Ta) - C\,(25)}{C\,(25)} \times 100$