

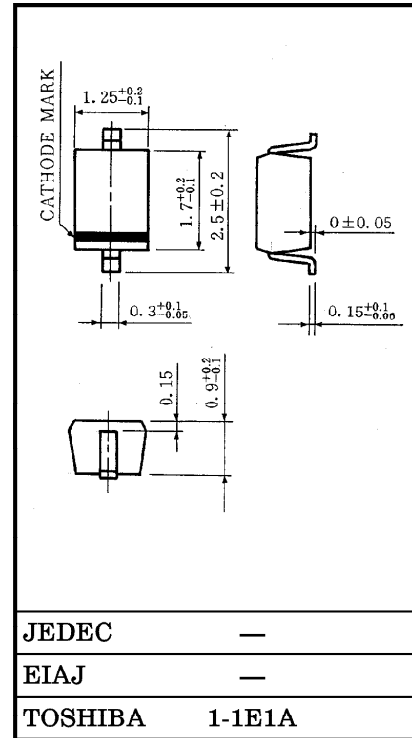
TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

1SV245

UHF SHF TUNING

Unit in mm

- High Capacitance Ratio : $C_{2V} / C_{25V} = 5.7$ (Typ.)
- Low Series Resistance : $r_s = 1.2\Omega$ (Typ.)
- Excellent C - V Characteristics, and Small Tracking Error.



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

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

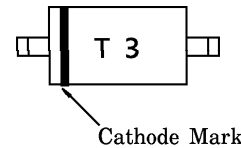
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

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}	$V_R = 2\text{V}, f = 1\text{MHz}$	3.31	—	4.55	pF
Capacitance	C_{25V}	$V_R = 25\text{V}, f = 1\text{MHz}$	0.61	—	0.77	pF
Capacitance Ratio	C_{2V} / C_{25V}	—	5.0	5.7	6.5	—
Series Resistance	r_s	$V_R = 1\text{V}, f = 470\text{MHz}$	—	1.2	2.0	Ω

Note1 : Unites are compounded in one package and are matched to 6.0%.

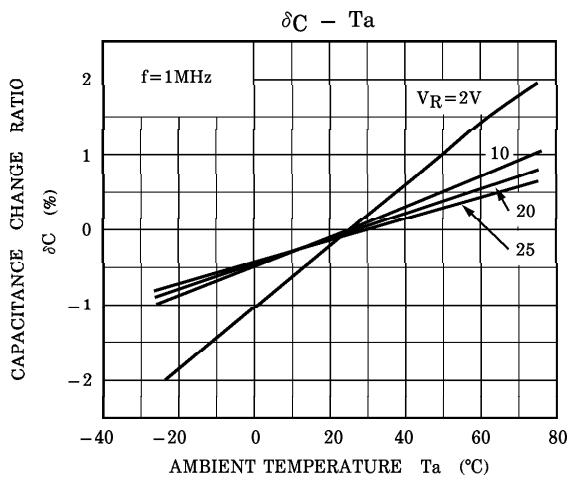
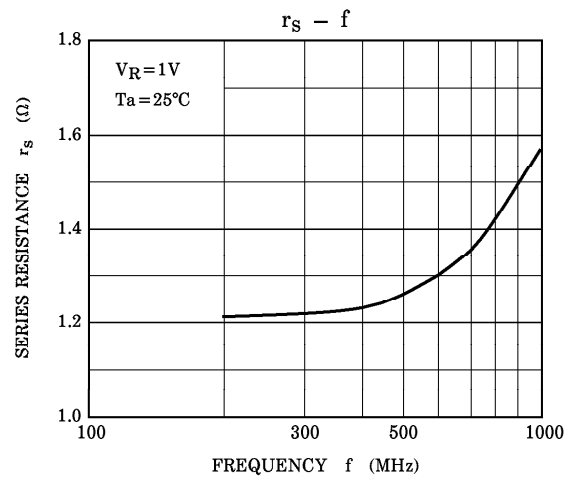
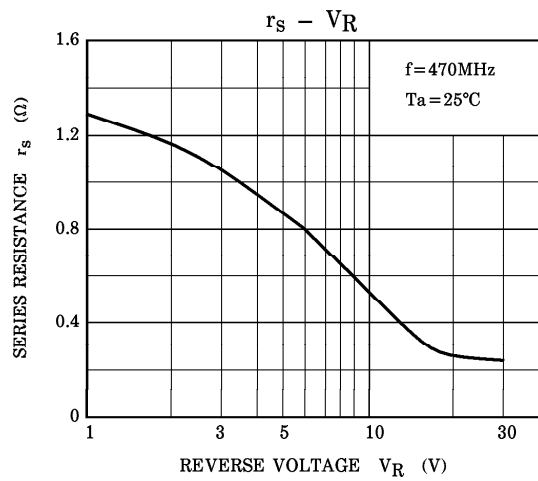
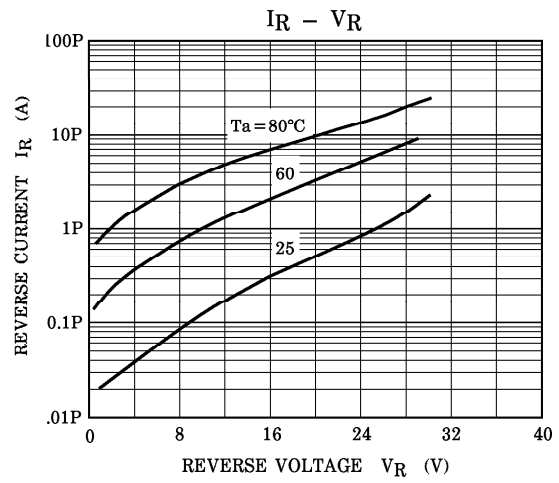
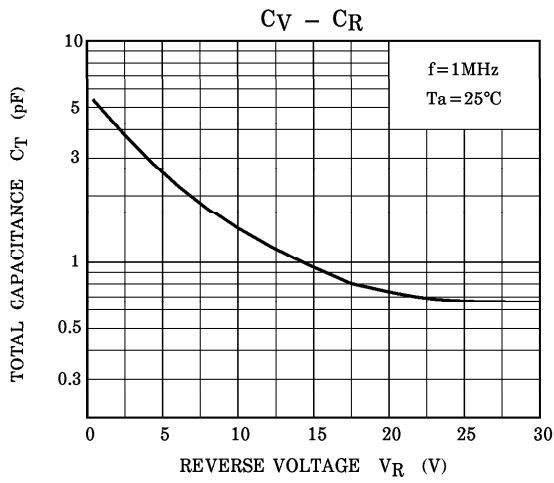
Marking

$$\frac{C(\text{Max.}) - C(\text{Min.})}{C(\text{Min.})} \leq 0.06 \quad (V_R = 2 \sim 25\text{V})$$



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