

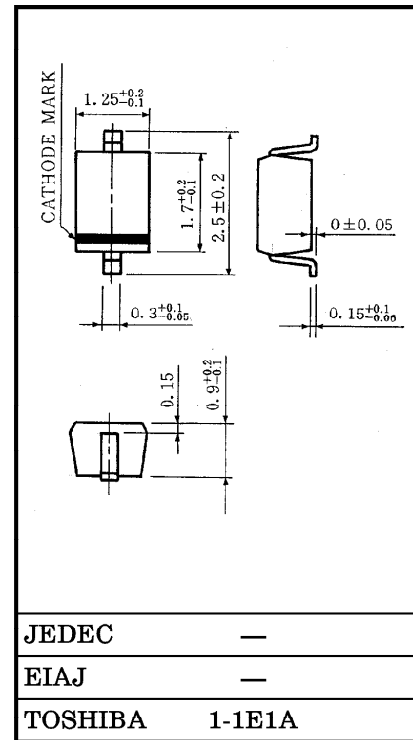
TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

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

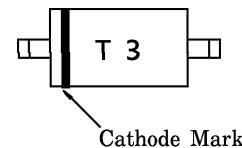
CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	$V_R$	30	V
Peak Reverse Voltage	$V_{RM}$	35 ( $R_L = 10k\Omega$ )	V
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~125	$^\circ\text{C}$

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	$\Omega$

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

Marking



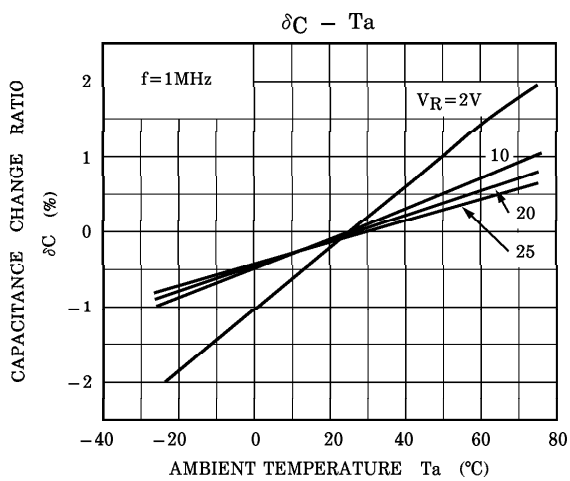
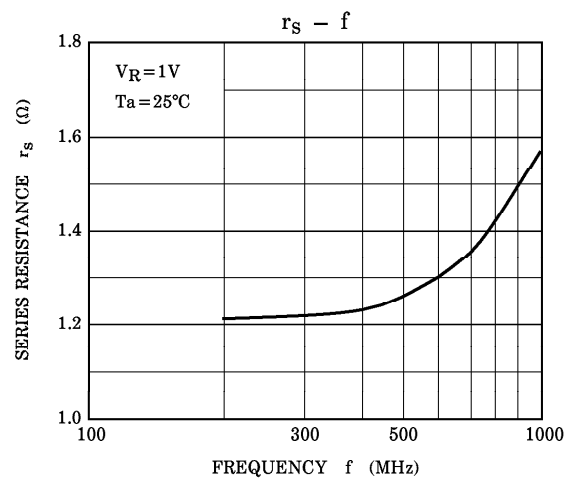
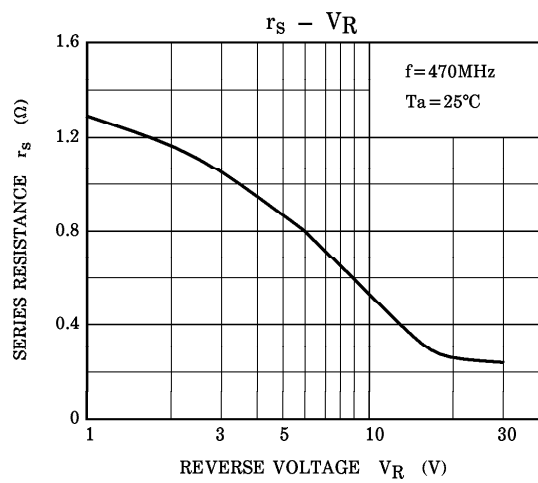
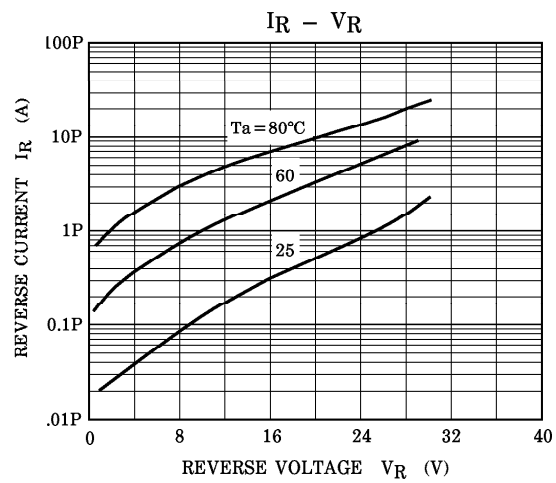
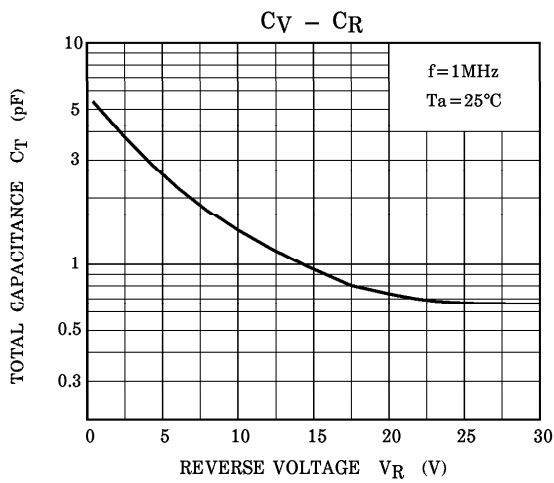
$$\frac{C(\text{Max.}) - C(\text{Min.})}{C(\text{Min.})} \leq 0.06 \quad (V_R = 2 \sim 25\text{V})$$

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