

TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

1SV303

CATV TUNING

- High Capacitance Ratio : $C_{2V}/C_{25V}=17.5$ (Typ.)
- Low Series Resistance : $r_s=1.05\Omega$ (Typ.)
- Useful for Small Size Tuner

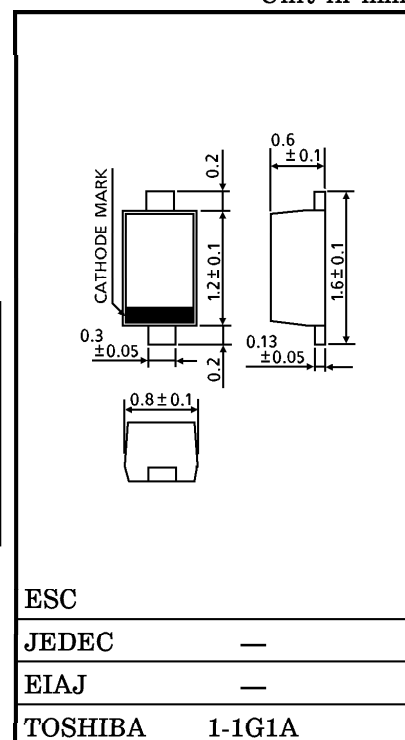
MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATIN	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}	$-55\sim 125$	$^\circ\text{C}$

MARKING



Unit in mm

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}	$V_R=2\text{V}, f=1\text{MHz}$	42	47	51	pF
Capacitance	C_{25V}	$V_R=25\text{V}, f=1\text{MHz}$	2.1	2.6	3.1	pF
Capacitance Ratio	C_{2V}/C_{25V}	—	17	17.5	—	—
Series Resistance	r_s	$V_R=5\text{V}, f=470\text{MHz}$	—	1.05	1.25	Ω

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

$$\frac{C(\text{Max.}) - C(\text{Min.})}{C(\text{Min.})} \leq 0.025$$

($V_R=2\sim 25\text{V}$)

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