

9097250 TOSHIBA (DISCRETE/OPTO)

67C 09366 DT-07-19

Silicon Epitaxial Planar Type
Variable Capacitance Diode

1SV123

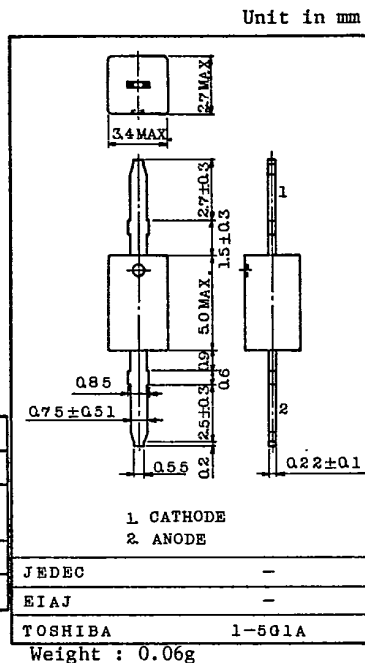
TV TUNER, VHF UHF BAND ELECTRONIC TUNING APPLICATIONS.

FEATURES:

- High Capacitance Ratio : $C_{3V}/C_{25V}=5.3$ (Typ.)
- Low Series Resistance : $r_s=0.45\Omega$ (Typ.)

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	$^\circ\text{C}$



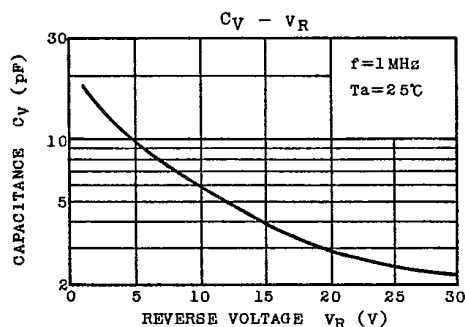
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

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_{3V}	$V_R=3\text{V}, f=1\text{MHz}$	12.04	-	13.63	pF
Capacitance	C_{25V}	$V_R=25\text{V}, f=1\text{MHz}$	2.172	-	2.454	pF
Capacitance Ratio	C_{3V}/C_{25V}		4.95	-	6.05	
Series Resistance	r_s	$C=9\text{pF}, f=470\text{MHz}$	-	-	0.6	Ω

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

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

($V_R=3\text{V} \sim 25\text{V}$)



TOSHIBA CORPORATION