

TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

1SV242

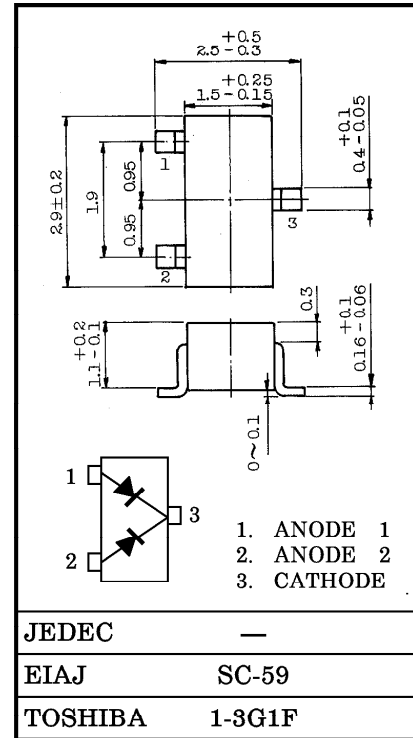
TV VHF WIDE BAND TUNING

Unit in mm

- High Capacitance Ratio : $C_{1V}/C_{28V}=14.5$ (Typ.)
- Low Series Resistance : $r_s=0.65\Omega$ (Typ.)
- Excellent C - V Characteristics, and Small Tracking Error.
- Small Package

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



Weight : 0.013g

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

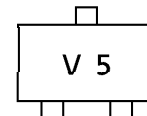
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Voltage	V_R	$I_R=1\mu\text{A}$	30	—	—	V
Reverse Current	I_R	$V_R=28\text{V}$	—	—	10	nA
Capacitance	C_{1V}	$V_R=1\text{V}$, $f=1\text{MHz}$ (Note 1)	36	39	42	pF
Capacitance	C_{28V}	$V_R=28\text{V}$, $f=1\text{MHz}$ (Note 1)	2.43	2.7	3.0	pF
Capacitance Ratio	C_{1V}/C_{28V}	— (Note 1)	13.4	14.5	—	—
Series Resistance	r_s	$V_R=5\text{V}$, $f=470\text{MHz}$ (Note 1)	—	0.65	0.8	Ω

Note 1 : Characteristic between Anode 1 and Anode 2

Note 2 : Units are compounded in one package and are matched to 2.5%

$$\frac{C(\text{Max.}) - C(\text{Min.})}{C(\text{Min.})} \leq 0.025 \quad (V_R=1\sim 28\text{V})$$

Marking



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