

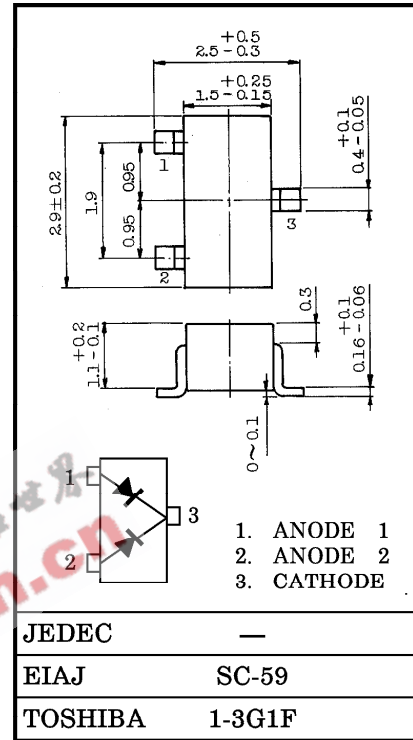
TOSHIBA VARIABLE CAPACITANCE DIODE SILICON EPITAXIAL PLANAR TYPE

# 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 (Ta = 25°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	°C
Storage Temperature Range	$T_{stg}$	-55~125	°C

Weight : 0.013g

**ELECTRICAL CHARACTERISTICS (Ta = 25°C)**

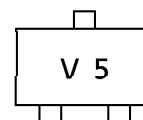
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Voltage	$V_R$	$I_R = 1\mu A$	30	—	—	V
Reverse Current	$I_R$	$V_R = 28V$	—	—	10	nA
Capacitance	$C_{1V}$	$V_R = 1V, f = 1MHz$ (Note 1)	36	39	42	pF
Capacitance	$C_{28V}$	$V_R = 28V, f = 1MHz$ (Note 1)	2.43	2.7	3.0	pF
Capacitance Ratio	$C_{1V}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

Note 1 : Characteristic between Anode 1 and Anode 2

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

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

Marking



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