

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

1SV225

Electronic Tuning Applications of FM Receivers

Unit: mm

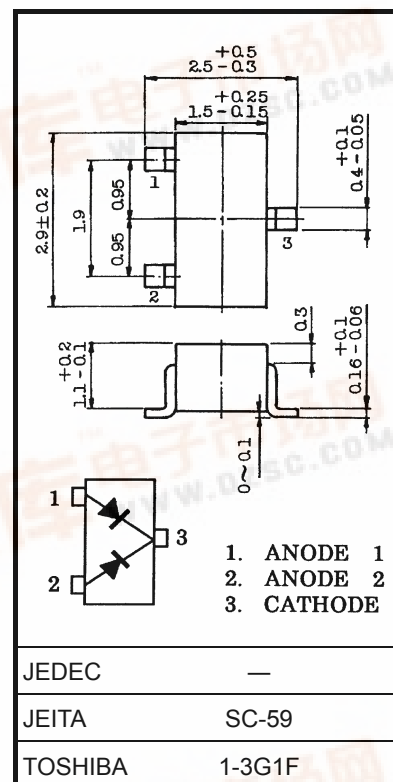
- Low series resistance: $r_s = 0.35$ (typ.)
- Small package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	32	V
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~125	$^\circ\text{C}$

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc.).



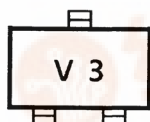
Weight: 0.013 g (typ.)

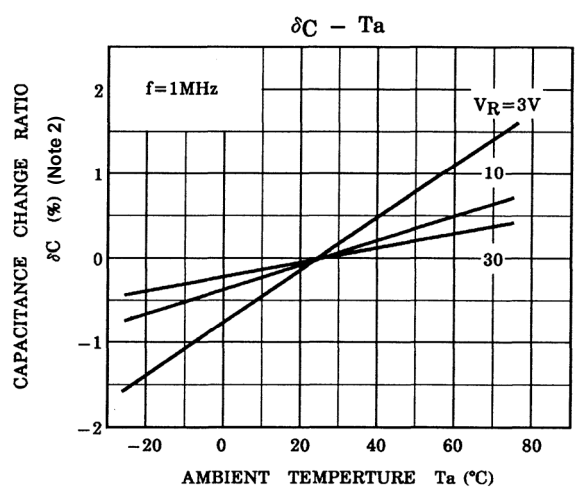
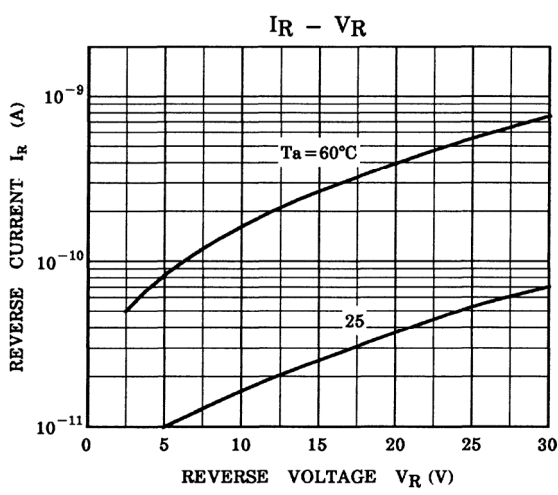
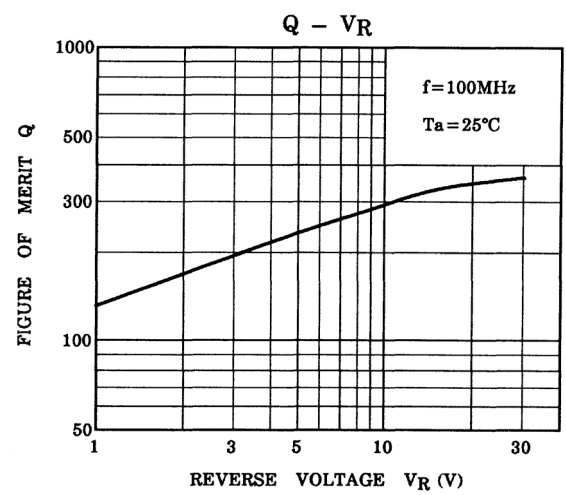
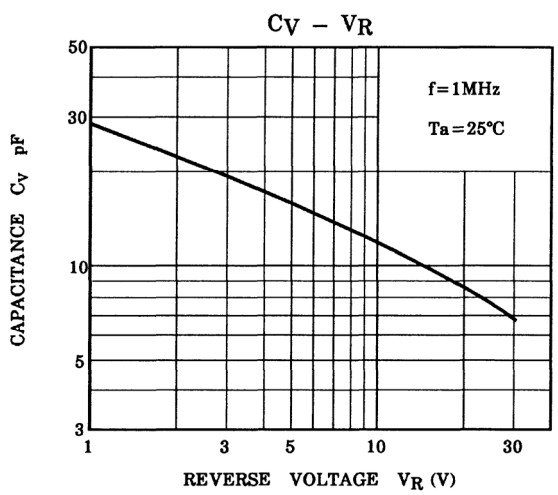
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	$I_R = 10 \mu\text{A}$	32	—	—	V
Reverse current	I_R	$V_R = 30 \text{ V}$	—	—	50	nA
Capacitance	$C_{3 \text{ V}}$	$V_R = 3 \text{ V}, f = 1 \text{ MHz}$ (Note 1)	18.5	19.7	21	pF
Capacitance	$C_{30 \text{ V}}$	$V_R = 30 \text{ V}, f = 1 \text{ MHz}$ (Note 1)	6.6	7.2	7.7	pF
Capacitance ratio	$C_{3 \text{ V}}/C_{30 \text{ V}}$	— (Note 1)	2.6	—	2.9	—
Series resistance	r_s	$V_R = 3 \text{ V}, f = 100 \text{ MHz}$ (Note 1)	—	0.35	0.5	Ω

Note 1: Characteristics between anode 1 and anode 2

Marking





Note 2:
$$\delta C = \frac{C(T_a) - C(25)}{C(25)} \times 100 \text{ (%)}$$

RESTRICTIONS ON PRODUCT USE

20070701-EN GENERAL

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