

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

1SV228

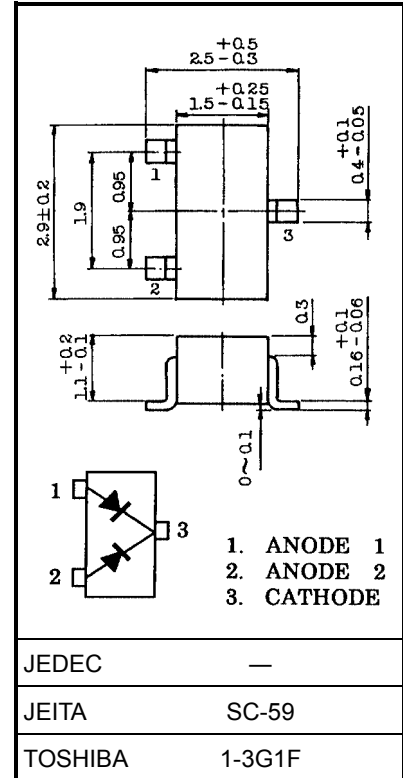
Electronic Tuning Applications of FM Receivers

Unit: mm

- Low r_s : $r_s = 0.3 \Omega$ (typ.)
- Small package

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	15	V
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55~125	°C



Weight: 0.013 g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	$I_R = 10 \mu A$	15	—	—	V
Reverse current	I_R	$V_R = 15 V$	—	—	10	nA
Capacitance	C_{3V}	$V_R = 3 V, f = 1 MHz$ (Note 1)	28.5	30.5	32.5	pF
Capacitance	C_{8V}	$V_R = 8 V, f = 1 MHz$ (Note 1)	11.7	12.7	13.7	pF
Capacitance ratio	C_{3V}/C_{8V}	— (Note 1)	2.1	—	2.6	—
Series resistance	r_s	$V_R = 3 V, f = 100 MHz$ (Note 1)	—	0.3	0.5	Ω

Note 1: Characteristics between anode 1 and anode 2

Marking

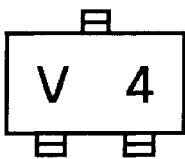


Table 1 Address Classification of Capacitance
Test Condition: f = 1 MHz, Ta = 25°C

No.	C _{2V}	C _{3V}	C _{6V}	C _{8V}
1	34.70~35.74	28.60~29.45	16.80~17.30	11.72~12.07
2	35.56~36.62	29.31~30.18	17.21~17.72	12.01~12.37
3	36.44~37.53	30.03~30.93	17.63~18.15	12.31~12.67
4	37.35~38.47	30.77~31.69	18.06~18.60	12.61~12.98
5	38.27~39.41	31.53~32.47	18.50~19.05	12.92~13.30
6	—	—	18.95~19.51	13.23~13.62

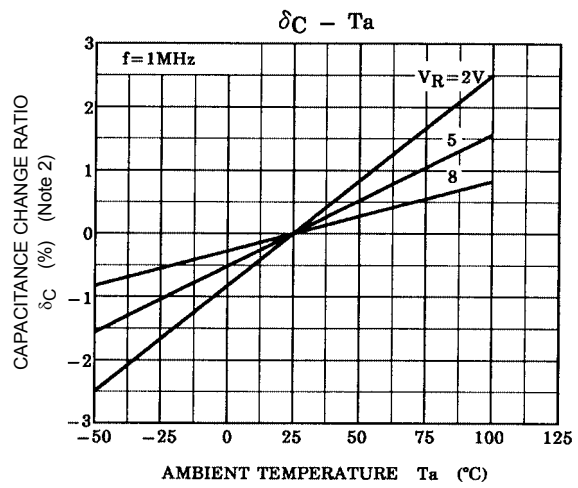
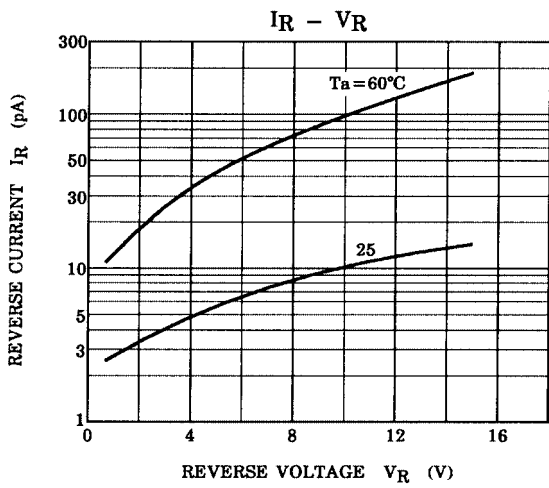
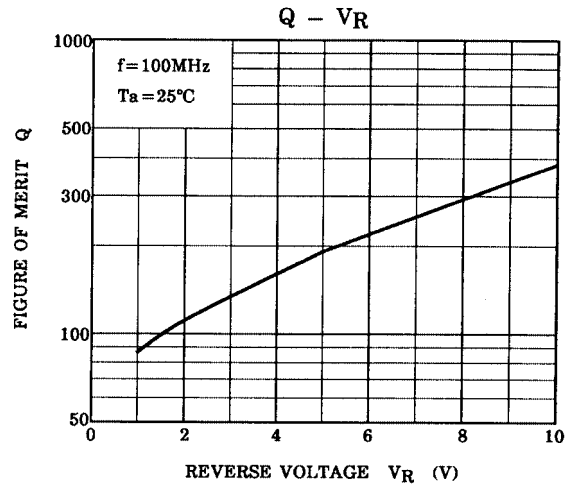
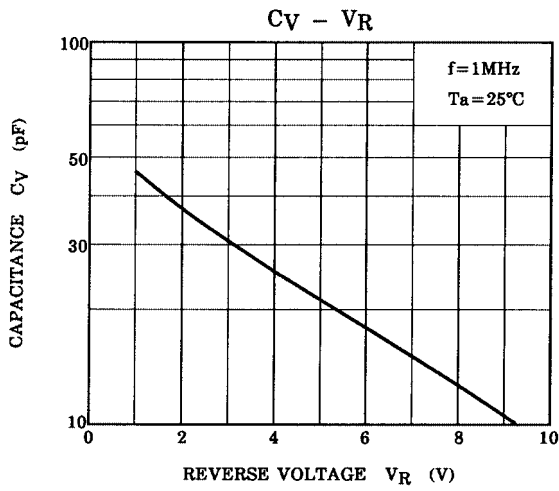
(1) Units are compounded in one package and are matched to 3%.

$$\frac{C(\max) - C(\min)}{C(\min)} \leq 0.03 \quad (V_R = 2\sim 8 \text{ V})$$

and capacitance is classified as Table 1.

(2) C_{2V}, C_{3V}, C_{6V}, C_{8V} are A1-A2 capacitance.

(3) The tolerance of address is ±1 address.



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

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