

1SV228

Electronic Tuning Applications of FM Receivers

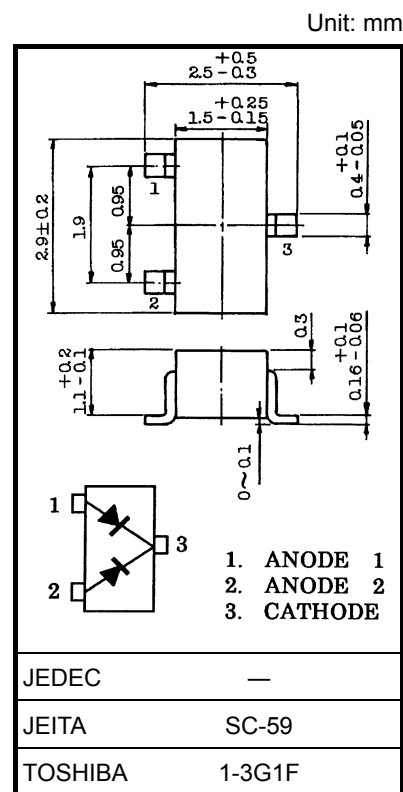
- Low r_s : $r_s = 0.3 \Omega$ (typ.)
- Small package

Absolute 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 to 125	°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).



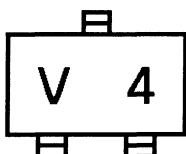
Weight: 0.013 g (typ.)

Electrical Characteristics (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



Start of commercial production
1995-12

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

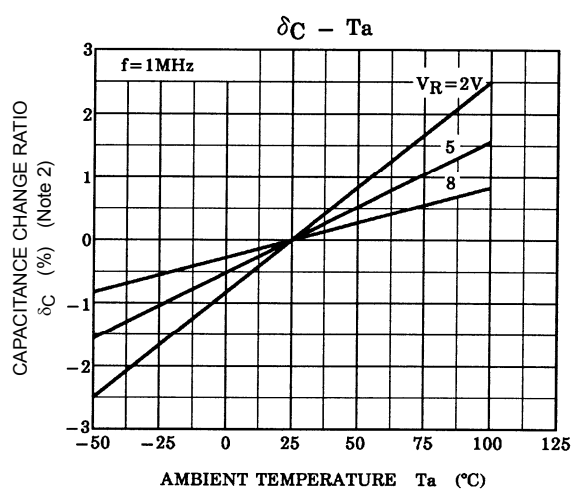
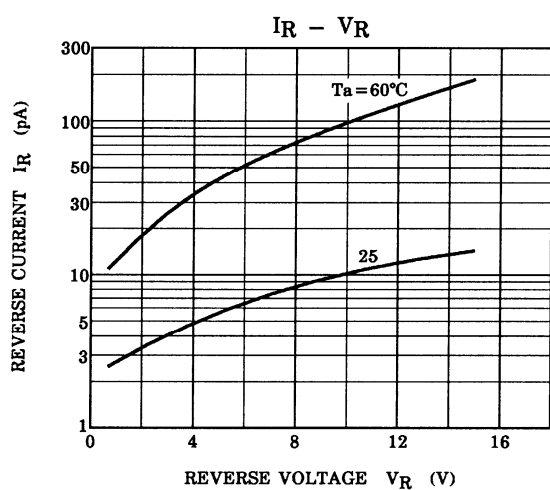
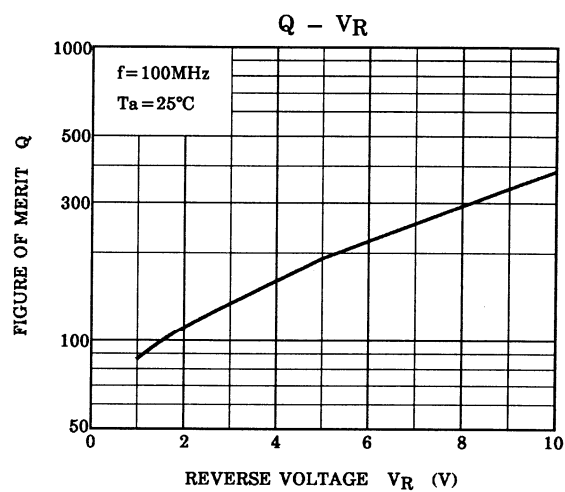
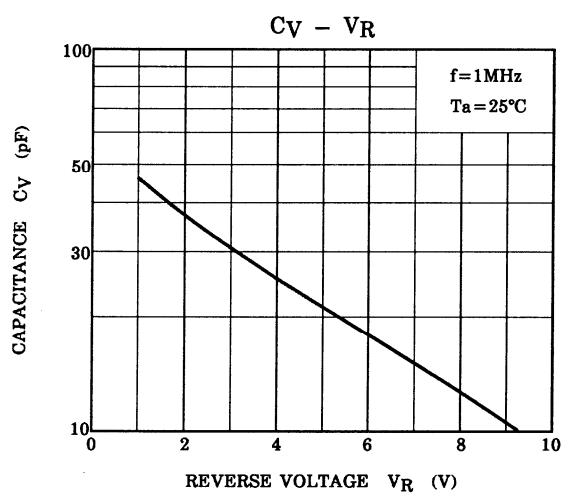
No.	C _{2V}	C _{3V}	C _{6V}	C _{8V}
1	34.70 to 35.74	28.60 to 29.45	16.80 to 17.30	11.72 to 12.07
2	35.56 to 36.62	29.31 to 30.18	17.21 to 17.72	12.01 to 12.37
3	36.44 to 37.53	30.03 to 30.93	17.63 to 18.15	12.31 to 12.67
4	37.35 to 38.47	30.77 to 31.69	18.06 to 18.60	12.61 to 12.98
5	38.27 to 39.41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

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

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

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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