

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

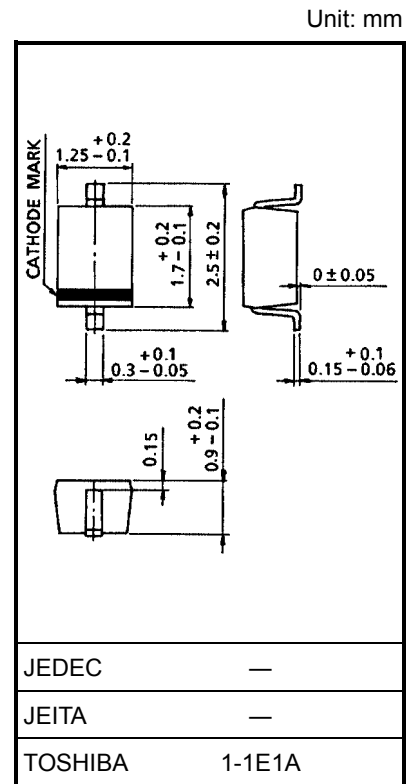
1SV230

CATV Converter 1st OSC Tuning

- High capacitance ratio: $C_2 \text{ V}/C_{20} \text{ V} = 8$ (typ.)
- Low series resistance: $r_s = 0.73 \Omega$ (typ.)
- Useful for small size tuner.

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	30	V
Peak reverse voltage	V_{RM}	35 ($R_L = 10 \text{ k}\Omega$)	V
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	-55~125	°C



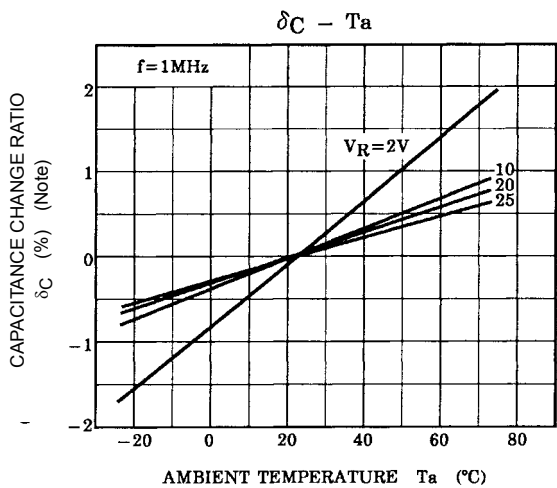
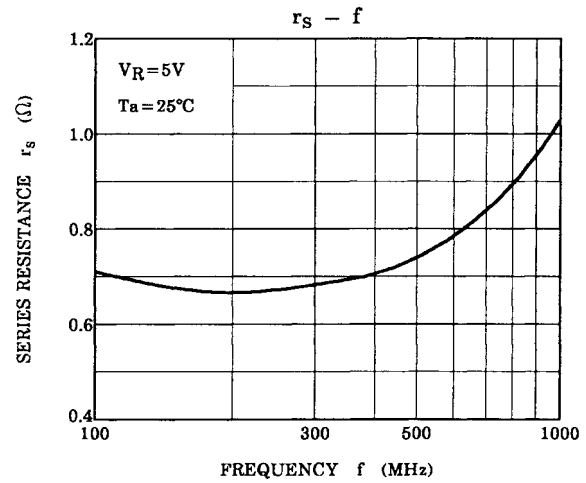
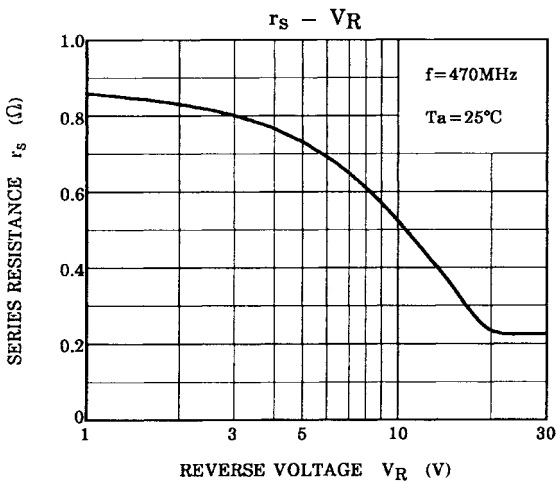
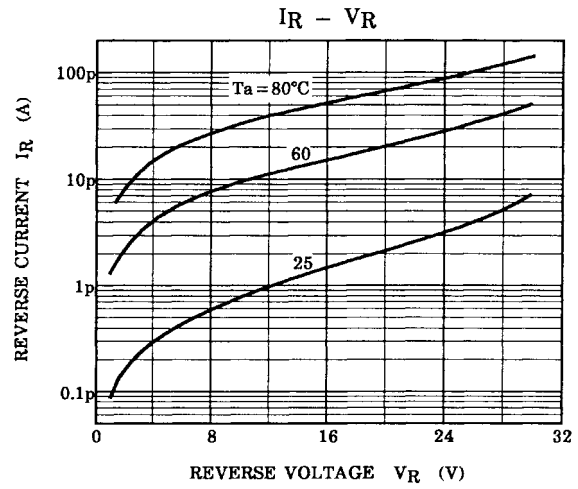
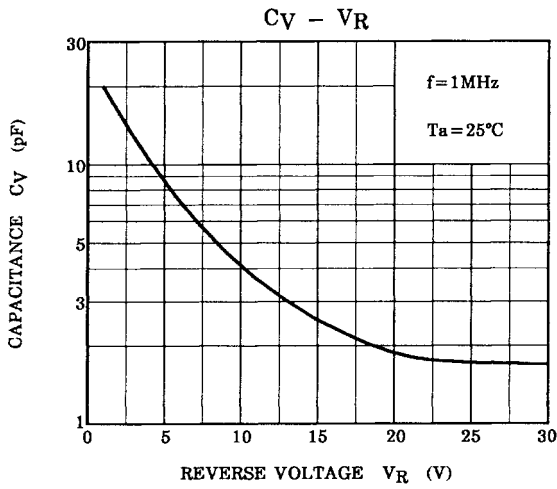
Electrical Characteristics (Ta = 25°C)

Weight: 0.004 g (typ.)

Characteristics	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	$C_{2 \text{ V}}$	$V_R = 2 \text{ V}, f = 1 \text{ MHz}$	13.9	15	16.1	pF
Capacitance	$C_{20 \text{ V}}$	$V_R = 20 \text{ V}, f = 1 \text{ MHz}$	1.7	1.9	2.1	pF
Capacitance ratio	$C_{2 \text{ V}}/C_{20 \text{ V}}$	—	7.1	8	—	—
Series resistance	r_s	$V_R = 5 \text{ V}, f = 470 \text{ MHz}$	—	0.73	0.9	Ω

Marking





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

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