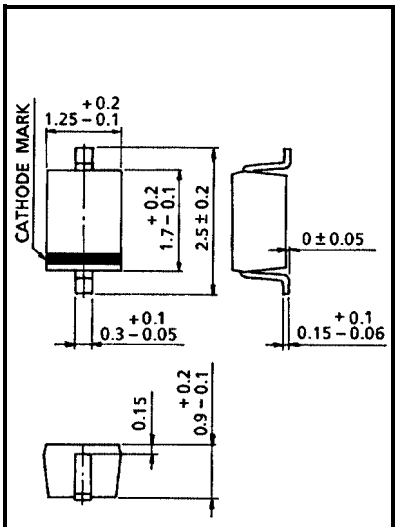
TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

1SV277

VCO for UHF Band Radio

Unit: mm



JEDEC	—
JEITA	—
TOSHIBA	1-1E1A

Weight: 0.004 g (typ.)

- High capacitance ratio: $C_{1\ V}/C_{4\ V}$ = 2.3 (typ.)
- Low series resistance: r_s = 0.42 Ω (typ.)
- Small package

Maximum Ratings (Ta = 25°C)

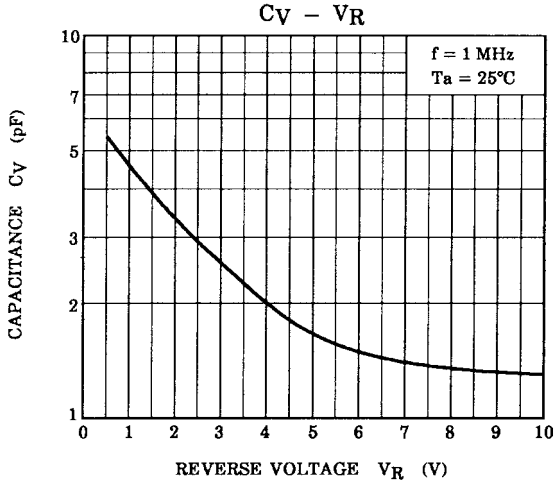
Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	10	V
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55~125	°C

Electrical Characteristics (Ta = 25°C)

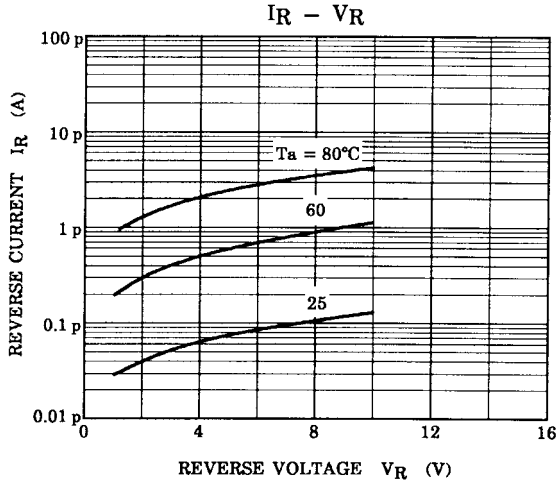
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	I_R = 1 μA	10	—	—	V
Reverse current	I_R	V_R = 10 V	—	—	3	nA
Capacitance	$C_{1\ V}$	V_R = 1 V, f = 1 MHz	4.0	4.5	4.9	pF
Capacitance	$C_{4\ V}$	V_R = 4 V, f = 1 MHz	1.85	2.0	2.35	pF
Capacitance ratio	$C_{1\ V}/C_{4\ V}$	—	2.0	2.3	—	—
Series resistance	r_s	V_R = 1 V, f = 470 MHz	—	0.42	0.55	Ω

Marking

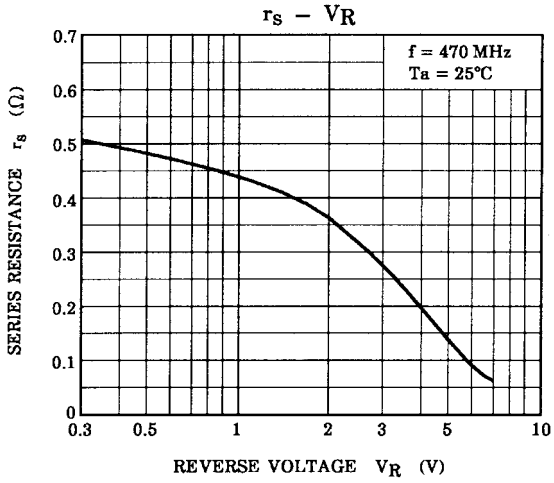
$C_V - V_R$



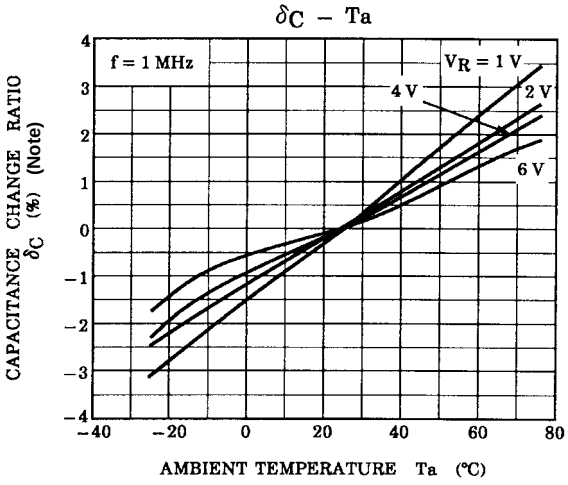
$I_R - V_R$



$r_s - V_R$



$\delta_C - Ta$



Note: $\delta_C = \dfrac{C\,(Ta) - C\,(25)}{C\,(25)} \times 100 \quad (\%)$

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