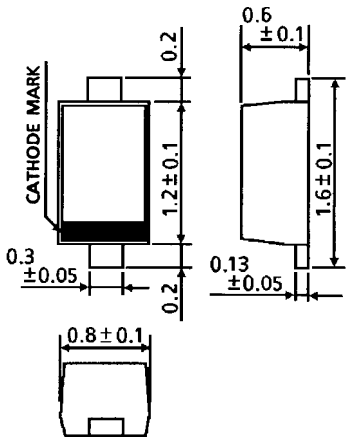
TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

1SV280

VCO for UHF Band Radio

Unit: mm

- High capacitance ratio: $C_{2\ V}/C_{10\ V}$ = 2.4 (typ.)
- Low series resistance: r_s = 0.44 Ω (typ.)
- Useful for small size tuner.



JEDEC	—
JEITA	—
TOSHIBA	1-1G1A

Weight: 0.0014 g (typ.)

Maximum Ratings (Ta = 25°C)

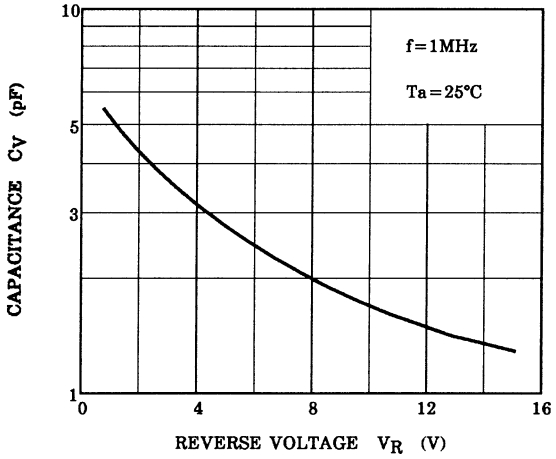
Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	15	V
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55~125	°C

Electrical Characteristics (Ta = 25°C)

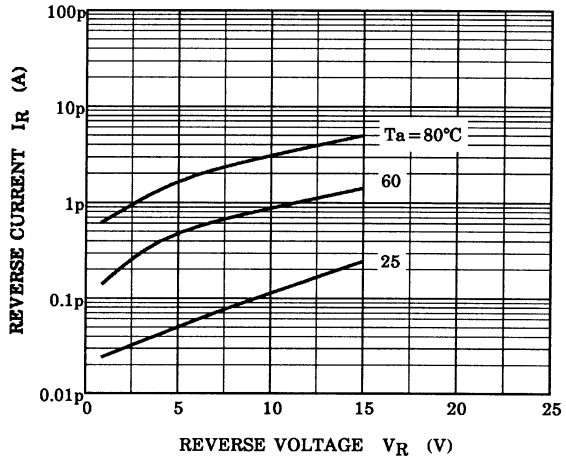
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	I_R = 1 μA	15	—	—	V
Reverse current	I_R	V_R = 15 V	—	—	3	nA
Capacitance	$C_{2\ V}$	V_R = 2 V, f = 1 MHz	3.8	—	4.7	pF
Capacitance	$C_{10\ V}$	V_R = 10 V, f = 1 MHz	1.5	—	2.0	pF
Capacitance ratio	$C_{2\ V}/C_{10\ V}$	—	2.0	2.4	—	—
Series resistance	r_s	V_R = 1 V, f = 470 MHz	—	0.44	0.6	Ω

Marking

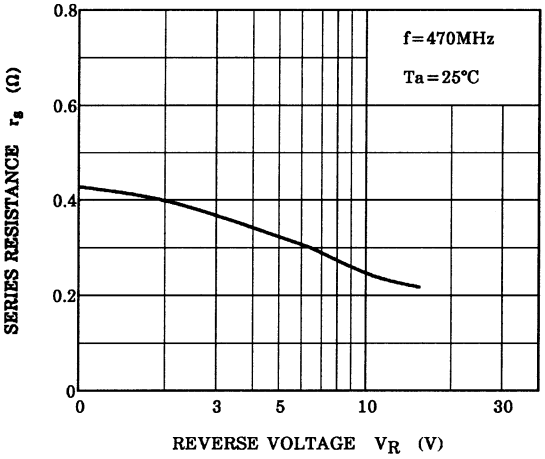
$C_V - V_R$



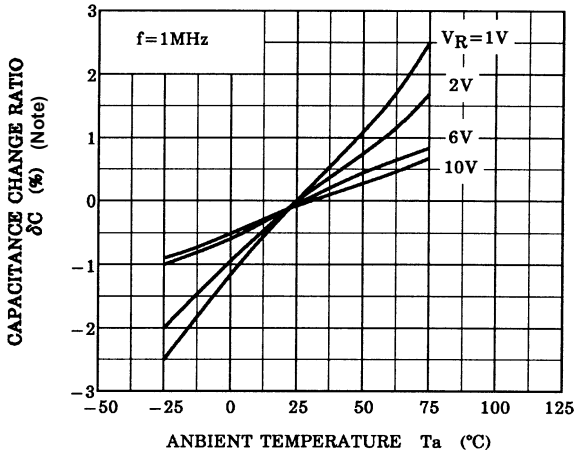
$I_R - V_R$



$r_S - V_R$



$\delta C - Ta$



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

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