

Preliminary

TOSHIBA Variable Capacitance Diode
Silicon Epitaxial Planar Type

1SV306

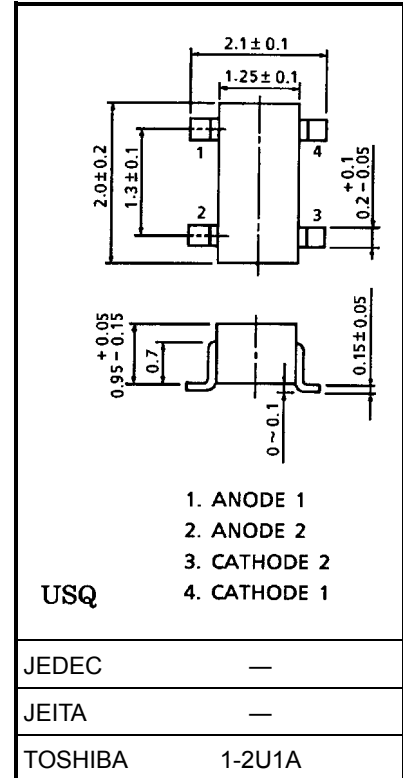
VCO for UHF Band Radio

Unit: mm

- Small package
- Ultra low series resistance: $r_s = 0.20 \Omega$ (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

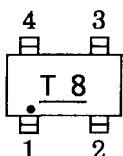


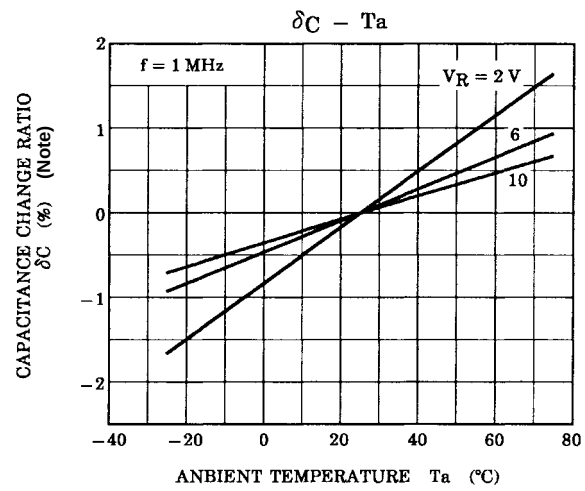
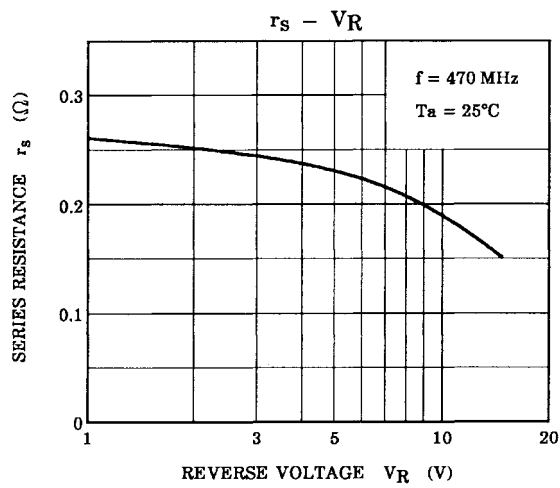
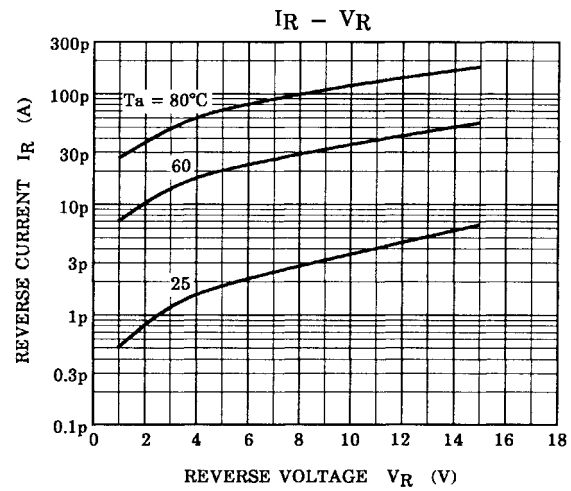
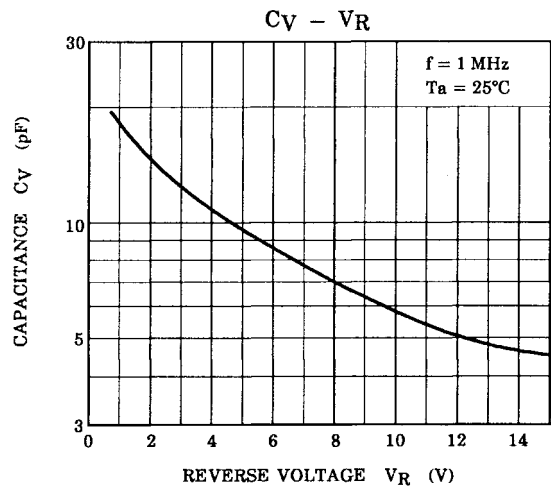
Electrical Characteristics (Ta = 25°C)

Weight: 0.006 g (typ.)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	$I_R = 1 \mu A$	15	—	—	V
Reverse current	I_R	$V_R = 15 V$	—	—	3	nA
Capacitance	C_{2V}	$V_R = 2 V, f = 1 MHz$	14	15	16	pF
Capacitance	C_{10V}	$V_R = 10 V, f = 1 MHz$	5.5	6	6.5	pF
Capacitance ratio	C_{2V}/C_{10V}	—	2	2.5	—	—
Series resistance	r_s	$V_R = 5 V, f = 470 MHz$	—	0.2	0.4	Ω

Marking





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

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