

TOSHIBA Diode Silicon Epitaxial Planar Type

## 1SV314

VCO for UHF Band Radio

Unit: mm

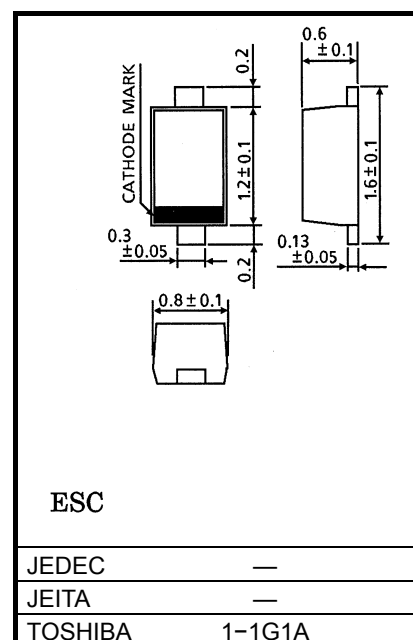
- High Capacitance Ratio :  $C_{0.5V} / C_{2.5V} = 2.5$  (Typ.)
- Low Series Resistance :  $r_s = 0.35 \Omega$  (Typ.)
- Useful for Small Size Tuner

Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Reverse Voltage	$V_R$	10	V
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 125	$^\circ\text{C}$

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).

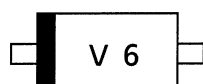


Weight: 0.0014g (typ.)

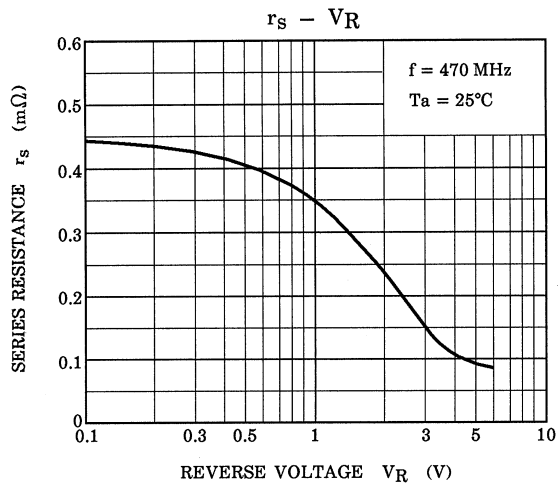
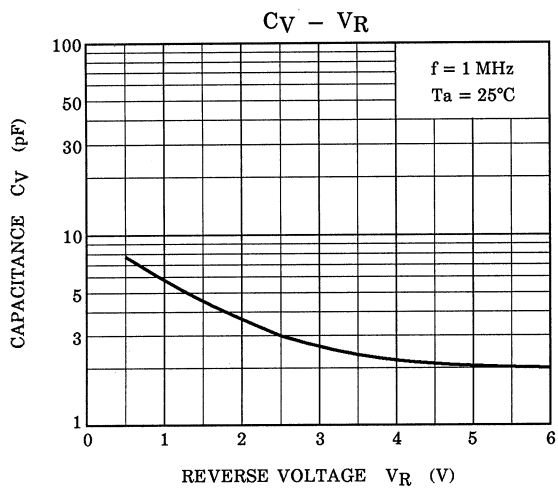
Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Reverse Voltage	$V_R$	$I_R = 1 \mu\text{A}$	10	—	—	V
Reverse Current	$I_R$	$V_R = 10 \text{ V}$	—	—	3	nA
Capacitance	$C_{0.5V}$	$V_R = 0.5 \text{ V}, f = 1 \text{ MHz}$	7.3	—	8.4	pF
Capacitance	$C_{2.5V}$	$V_R = 2.5 \text{ V}, f = 1 \text{ MHz}$	2.75	—	3.4	pF
Capacitance Ratio	$C_{0.5V} / C_{2.5V}$	—	2.4	2.5	—	—
Series Resistance	$r_s$	$V_R = 1 \text{ V}, f = 470 \text{ MHz}$	—	0.35	0.45	$\Omega$

## Marking



Start of commercial production  
1998-06



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