TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

# 1SV304

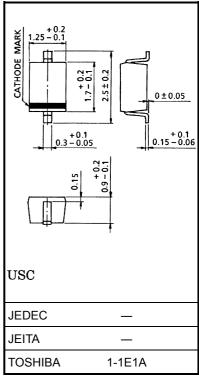
### VCO for VHF Band Radio

Unit: mm

- Small package
- High capacitance ratio:  $C_1 \text{ V/} C_4 \text{ V} = 3.0 \text{ (typ.)}$
- Low series resistance:  $r_s = 0.27 \Omega$  (typ.)

## Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	$V_{R}$	10	٧
Junction temperature	Tj	125	°C
Storage temperature range	T <sub>stg</sub>	-55~125	°C



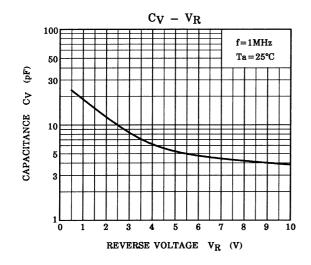
Weight: 0.004 g (typ.)

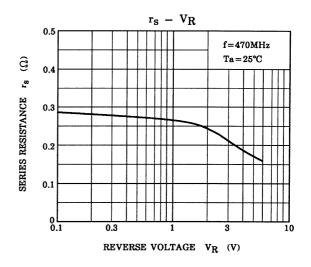
## **Electrical Characteristics (Ta = 25°C)**

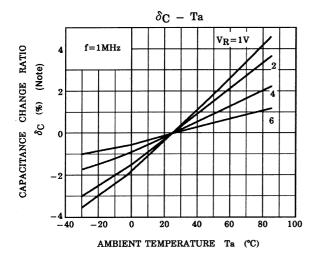
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Reverse voltage	$V_{R}$	Ι <sub>R</sub> = 1 μΑ	10	_	_	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> = 10 V	_	_	3	nA
Capacitance	C <sub>1 V</sub>	V <sub>R</sub> = 1 V, f = 1 MHz	17.3	18.3	19.3	pF
Capacitance	C <sub>4 V</sub>	V <sub>R</sub> = 4 V, f = 1 MHz	5.3	6.1	6.6	pF
Capacitance ratio	C <sub>1 V</sub> /C <sub>4 V</sub>	_	2.8	3	_	_
Series resistance	r <sub>s</sub>	V <sub>R</sub> = 1 V, f = 470 MHz	_	0.27	0.32	Ω

## Marking









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

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