TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

1SV305

VCO for VHF Band Radio

· Small package

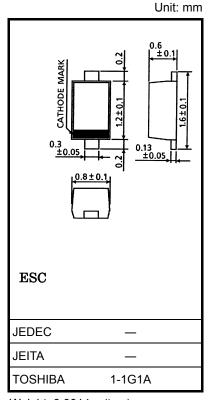
- High capacitance ratio: $C_{1V} / C_{4V} = 3.0$ (typ.)
- Low series resistance: $r_s = 0.27 \Omega$ (typ.)

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_{R}	10	V
Junction temperature	Tj	125	°C
Storage temperature range	T _{stg}	-55 to 125	°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: 0.0014 g (typ.)

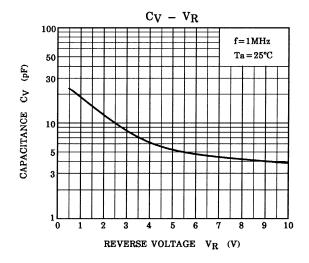
Electrical Characteristics (Ta = 25°C)

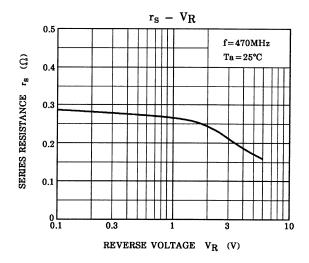
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Reverse voltage	V_{R}	Ι _R = 1 μΑ	10	_	_	V
Reverse current	I _R	V _R = 10 V	_	_	3	nA
Capacitance	C _{1V}	V _R = 1 V, f = 1 MHz	17.3	18.3	19.3	pF
Capacitance	C _{4V}	V _R = 4 V, f = 1 MHz	5.3	6.1	6.6	pF
Capacitance ratio	C _{1V} / C _{4V}	_	2.8	3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

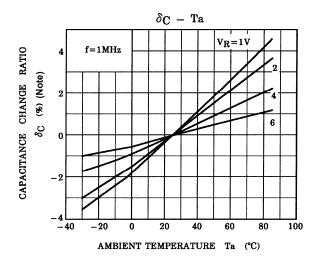
Marking



Start of commercial production 1997-03







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

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