



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

# 1SV305

VCO for VHF Band Radio

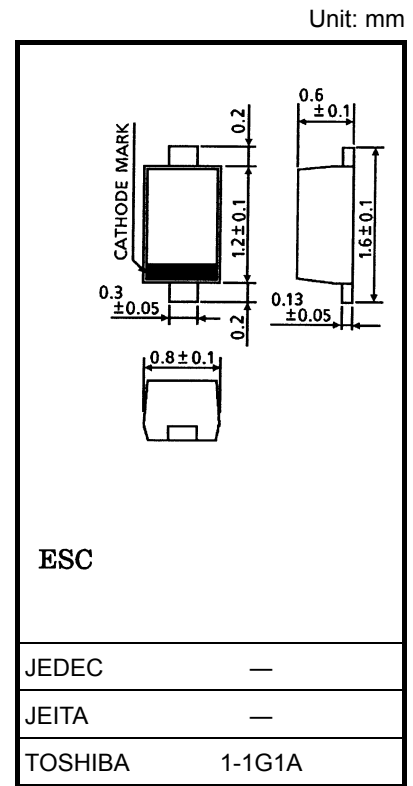
- Small package
- High capacitance ratio:  $C_{1V} / C_{4V} = 3.0$  (typ.)
- Low series resistance:  $r_s = 0.27 \Omega$  (typ.)

### Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Reverse voltage	$V_R$	10	V
Junction temperature	$T_j$	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.)

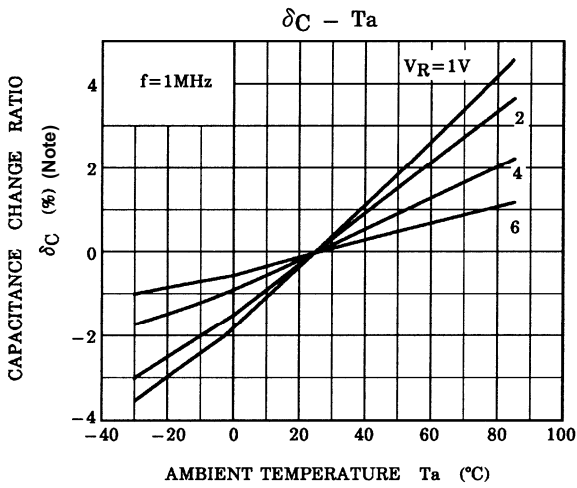
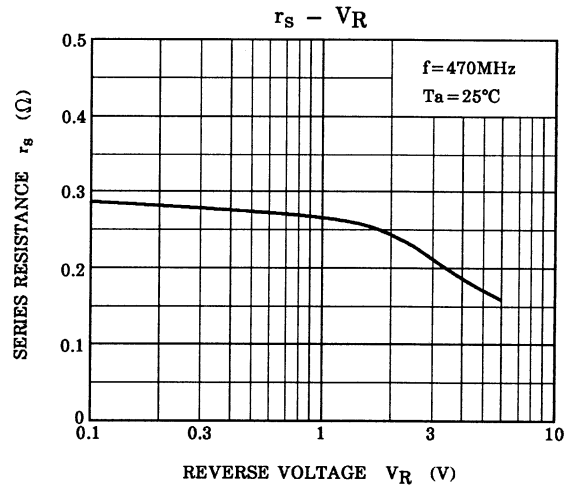
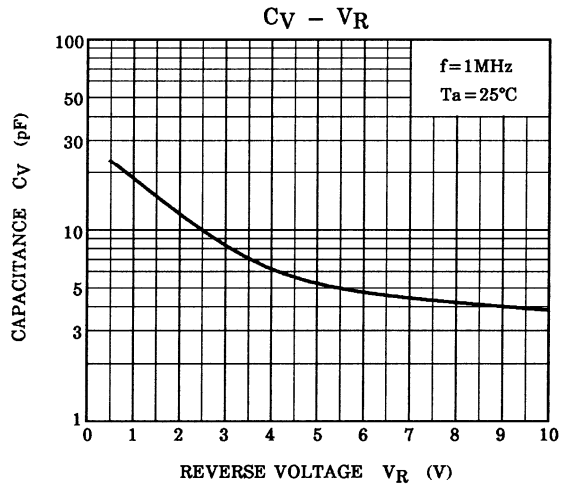
### Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	$V_R$	$I_R = 1 \mu A$	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	$\Omega$

### Marking



Start of commercial production  
1997-03



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

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