

TOSHIBA Diode Silicon Epitaxial Planar Type

JDV2S05E

VCO for UHF band

Unit: mm

- Small Package
- High Capacitance Ratio: $C_{1V}/C_{4V} = 1.9$ (typ.)
- Low Series Resistance : $r_s = 0.30 \Omega$ (typ.)

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

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	10	V
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~125	$^\circ\text{C}$

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).

		JEDEC	—
		JEITA	—
		TOSHIBA	1-1G1A

Weight: 0.0014 g (typ.)

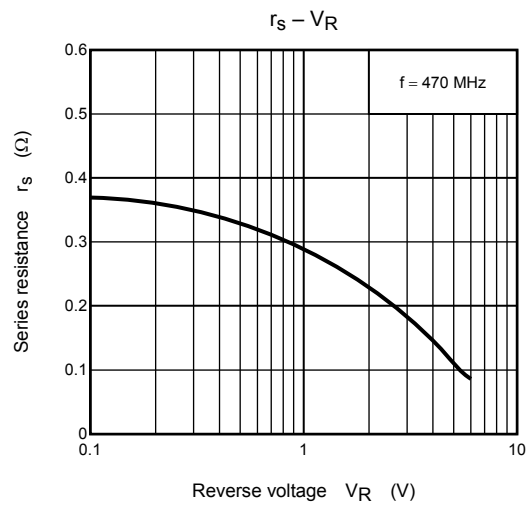
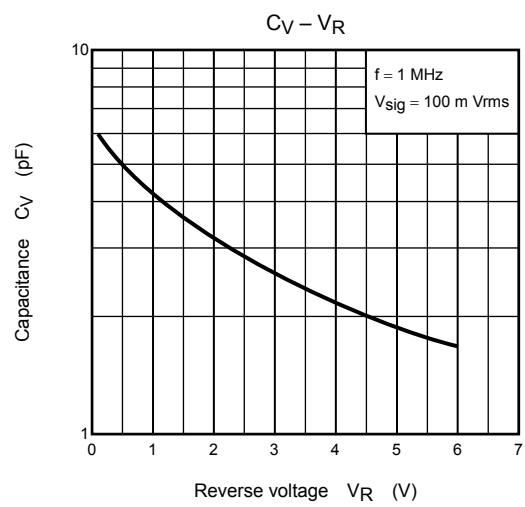
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Characteristics	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_{1V}	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$	3.85	4.2	4.55	pF
	C_{4V}	$V_R = 4 \text{ V}, f = 1 \text{ MHz}$	1.94	2.2	2.48	
Capacitance ratio	C_{1V}/C_{4V}	—	1.7	1.9	—	—
Series resistance	r_s	$V_R = 1 \text{ V}, f = 470 \text{ MHz}$	—	0.3	0.5	Ω

Note: Signal level when capacitance is measured. $V_{sig} = 100 \text{ mV}_{rms}$

Marking





RESTRICTIONS ON PRODUCT USE

20070701-EN GENERAL

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