

TOSHIBA DIODE Silicon Epitaxial Planar Type

JDV2S08S

VCO for UHF Band Radio

- High Capacitance Ratio: $C_{1V}/C_{4V} = 3.0$ (typ.)
- Low Series Resistance : $r_s = 0.35 \Omega$ (typ.)
- This device is suitable for use in a small-size tuner.

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

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	10	V
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~150	$^\circ\text{C}$

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).

Unit: mm

JEDEC	—
JEITA	—
TOSHIBA	1-1K1A

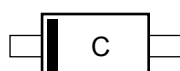
Weight: 0.0011 g (typ.)

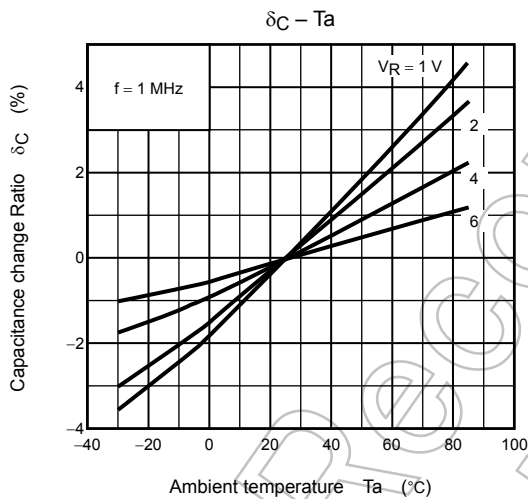
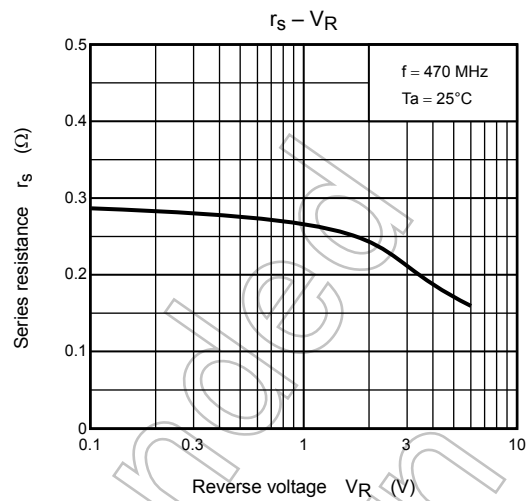
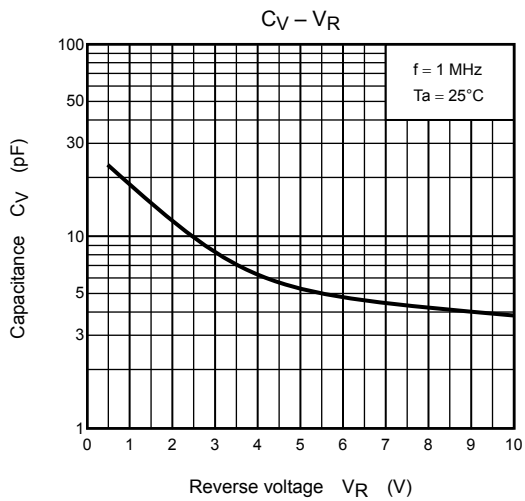
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

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}	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$	17.3	18.3	19.3	pF
	C_{4V}	$V_R = 4 \text{ V}, f = 1 \text{ MHz}$	5.3	6.1	6.6	
Capacitance ratio	C_{1V}/C_{4V}	—	2.8	3	—	—
Series resistance	r_s	$V_R = 1 \text{ V}, f = 470 \text{ MHz}$	—	0.35	0.45	Ω

Note: Signal level when capacitance is measured: $V_{sig} = 500 \text{ mVrms}$

Marking





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

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