

TOSHIBA Diode Silicon Epitaxial Planar Type

## JDV2S13FS

VCO for the UHF band

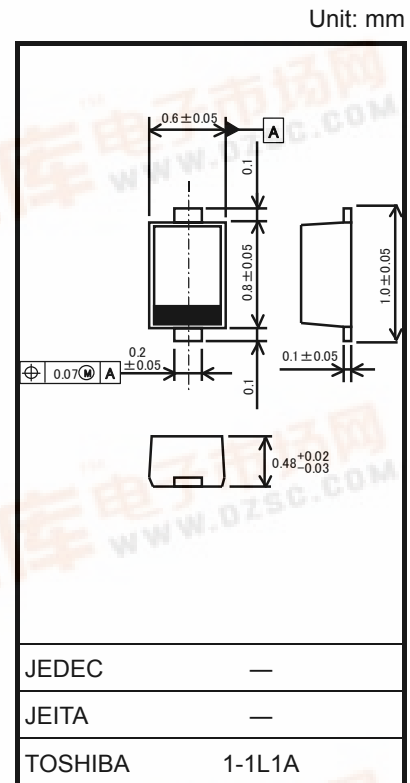
- High capacitance ratio:  $C_{1V}/C_{4V} = 2.8$  (typ.)
- Low series resistance:  $r_s = 0.55 \Omega$  (typ.)
- This device is suitable for use in a small-size tuner.

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

Characteristic	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.).



Weight: 0.0006 g (typ.)

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

Characteristic	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	$C_{1V}$	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$	5.7	—	6.7	pF
	$C_{4V}$	$V_R = 4 \text{ V}, f = 1 \text{ MHz}$	1.85	—	2.45	
Capacitance ratio	$C_{1V}/C_{4V}$	—	2.7	2.8	—	—
Series resistance	$r_s$	$V_R = 1 \text{ V}, f = 470 \text{ MHz}$	—	0.55	0.7	$\Omega$

Note: Signal level when capacitance is measured:  $V_{sig} = 100 \text{ mVrms}$

## Marking



**RESTRICTIONS ON PRODUCT USE**

20070701-EN GENERAL

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