

TOSHIBA Variable Capacitance Diode Silicon Epitaxial Planar Type

JDV2S41AFS

○ VCO for V/UHF Band Radio

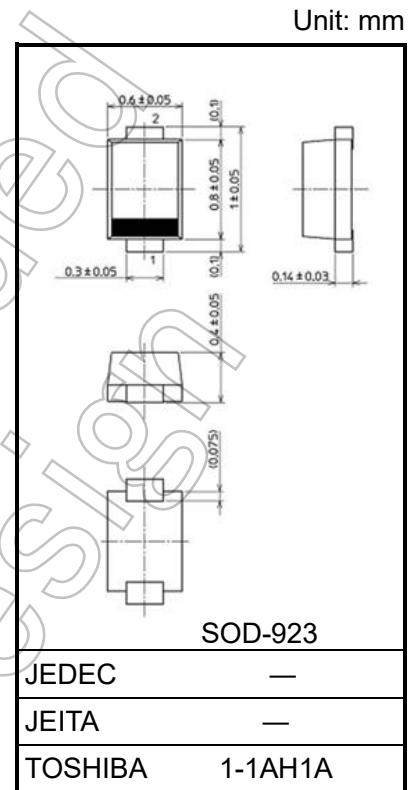
- Low series resistance: $r_s = 0.2 \Omega$ (typ.)
- High capacitance ratio: $C_{2V} / C_{10V} = 2.5$ (typ.)
- Useful for small size tuner.

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

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	15	V
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 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).

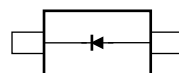
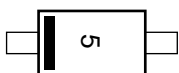


Weight: 0.7mg (typ.)

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

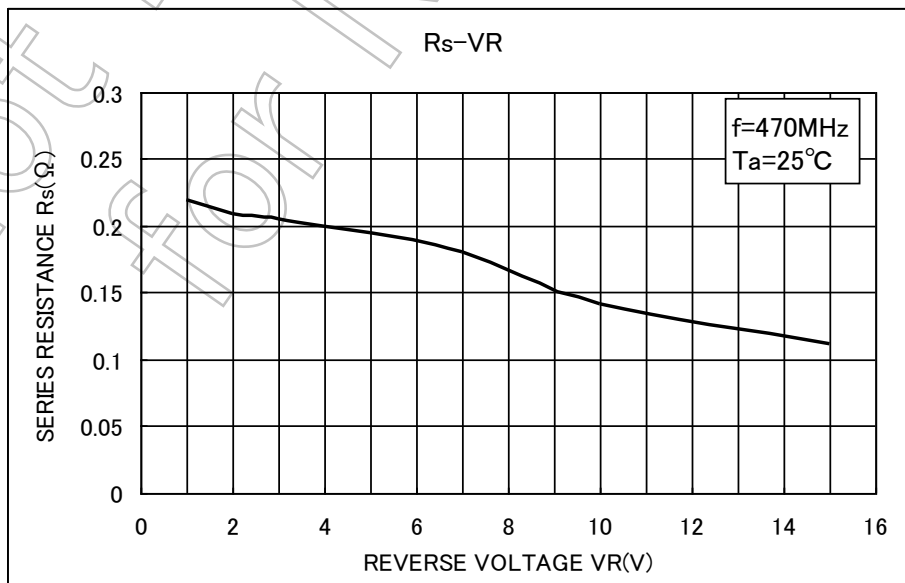
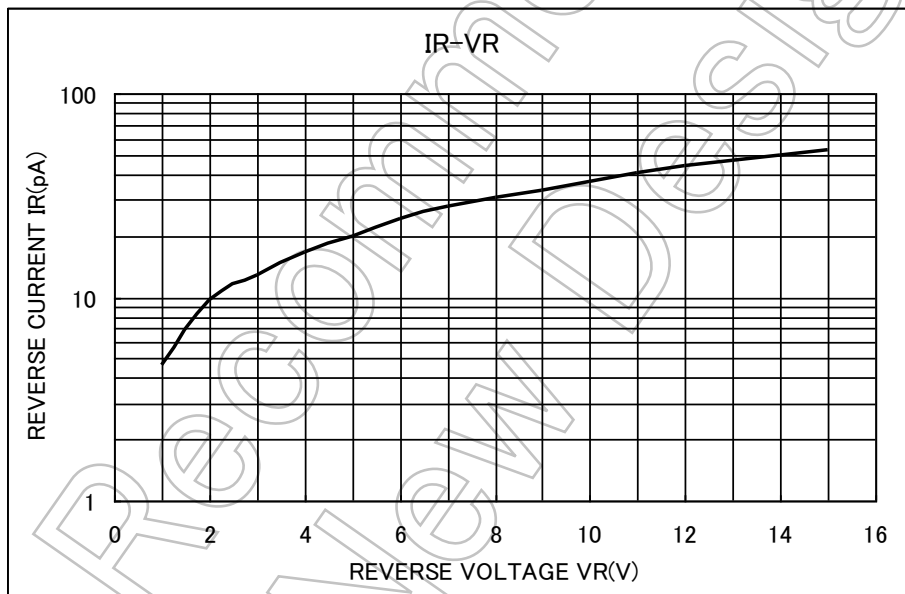
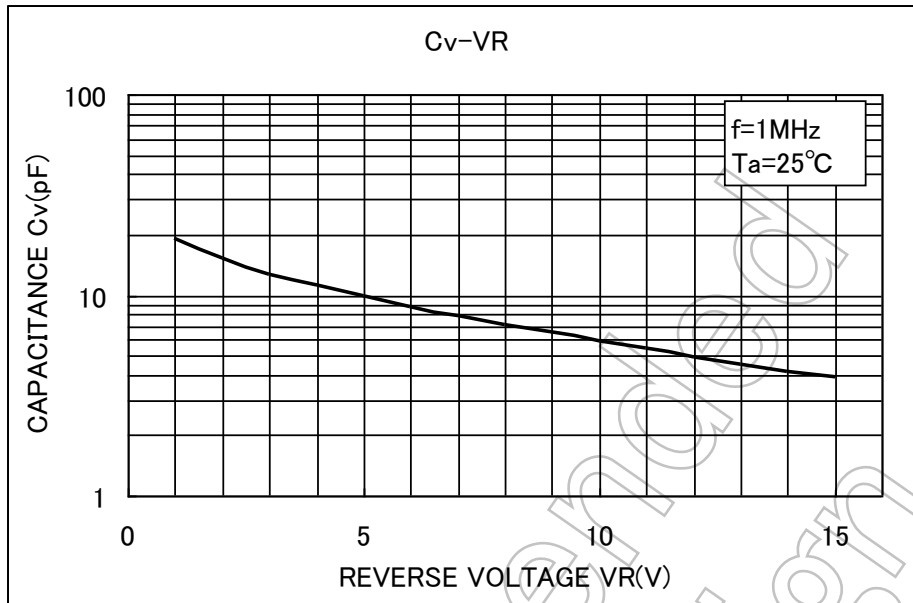
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	$I_R = 1 \mu\text{A}$	15	—	—	V
Reverse current	I_R	$V_R = 15 \text{V}$	—	—	35	nA
Capacitance	C_{2V}	$V_R = 2 \text{V}, f = 1 \text{MHz}$	14	—	16	pF
Capacitance	C_{10V}	$V_R = 10 \text{V}, f = 1 \text{MHz}$	5.5	—	6.5	
Capacitance ratio	C_{2V} / C_{10V}	—	2.0	2.5	—	—
Series resistance	r_s	$V_R = 5 \text{V}, f = 470 \text{MHz}$	—	0.2	0.4	Ω

Marking Equivalent Circuit (top view)



Start of commercial production
2022-11

Characteristics Curves (Note)



Note: The characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

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