

TOSHIBA Diode Silicon Epitaxial Pin Type

# 1SV271

## VHF~UHF Band RF Attenuator Applications

- Useful for small size tuner
- Small total capacitance:  $C_T = 0.25 \text{ pF}$  (typ.)
- Low series resistance:  $r_s = 3 \Omega$  (typ.)

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

Characteristics	Symbol	Rating	Unit
Reverse voltage	$V_R$	50	V
Forward current	$I_F$	50	mA
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	$-55 \sim 125$	$^\circ\text{C}$

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).

Unit: mm

JEDEC	—
JEITA	—
TOSHIBA	1-1E1A

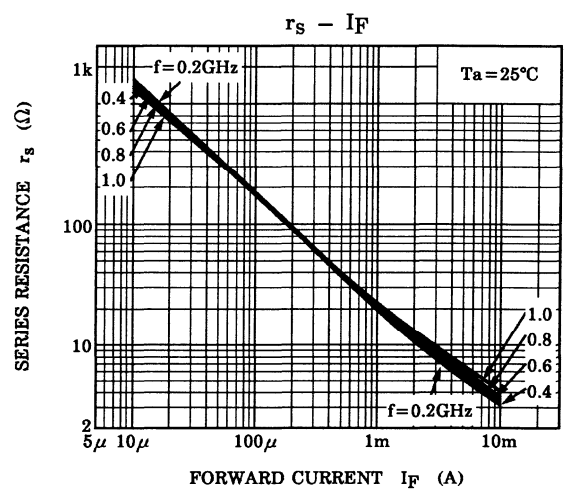
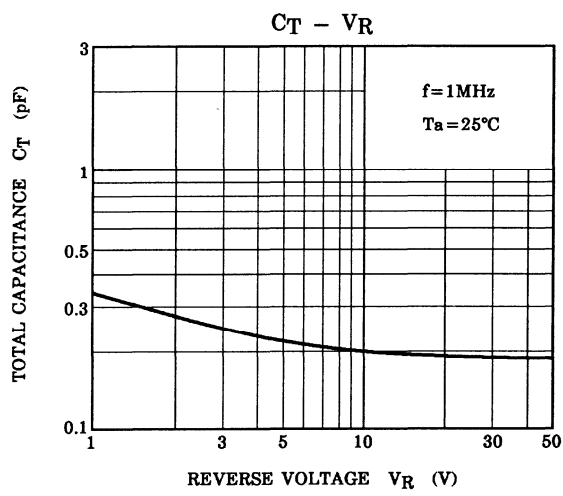
Weight: 0.004 g (typ.)

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

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	$V_R$	$I_R = 10 \mu\text{A}$	50	—	—	V
Reverse current	$I_R$	$V_R = 50 \text{ V}$	—	—	0.1	$\mu\text{A}$
Forward voltage	$V_F$	$I_F = 50 \text{ mA}$	—	0.93	1.0	V
Total capacitance	$C_T$	$V_R = 50 \text{ V}, f = 1 \text{ MHz}$	—	0.25	0.4	pF
Series resistance	$r_s$	$I_F = 10 \text{ mA}, f = 100 \text{ MHz}$	—	3	—	$\Omega$

## Marking





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