

TOSHIBA Diode Silicon Epitaxial Pin Type

1SV307

VHF Tuner Band Switch Applications

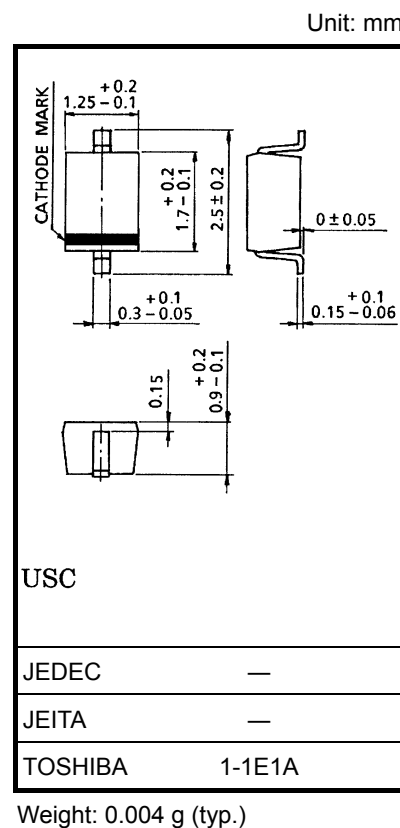
- Small package
- Low series resistance: $r_s = 1.1 \Omega$ (typ.)
- Small total capacitance: $C_T = 0.3 \text{ pF}$ (typ.)

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

Characteristics	Symbol	Rating	Unit
Reverse voltage	V_R	30	V
Forward current	I_F	50	mA
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.

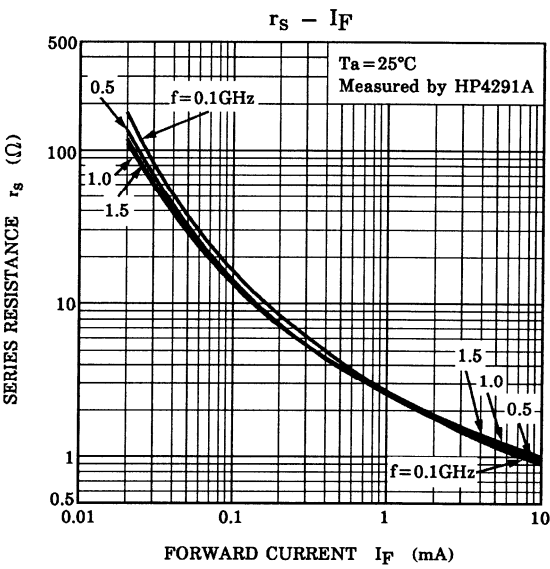
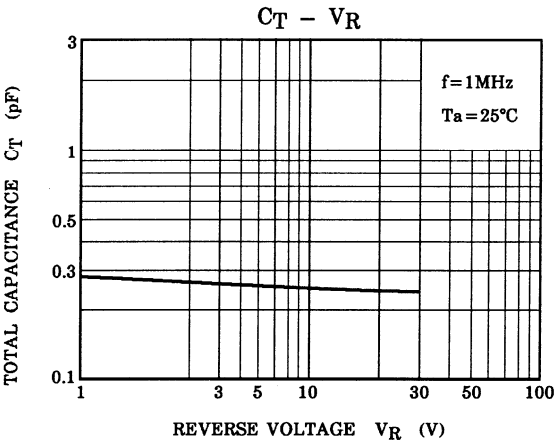
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

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

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Reverse voltage	V_R	$I_R = 10 \mu\text{A}$	30	—	—	V
Reverse current	I_R	$V_R = 30 \text{ V}$	—	—	0.1	μA
Forward voltage	V_F	$I_F = 50 \text{ mA}$	—	0.95	1.0	V
Total capacitance	C_T	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$	—	0.3	0.5	pF
Series resistance 1	$r_s (1)$	$I_F = 10 \text{ mA}, f = 100 \text{ MHz}$	—	1.0	1.5	Ω
Series resistance 2	$r_s (2)$	$I_F = 10 \text{ mA}, f = 1.5 \text{ GHz}$	—	1.1	—	Ω

Marking





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