

1SS404

High Speed Switching Applications

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- Two-pin small packages are suitable for higher mounting densities
- Low forward voltage : $V_F (3) = 0.38 \text{ V (typ.)}$
- Low reverse current: $I_R = 50 \text{ } \mu\text{A (max)}$
- Small total capacitance: $C_T = 46 \text{ pF (typ.)}$

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

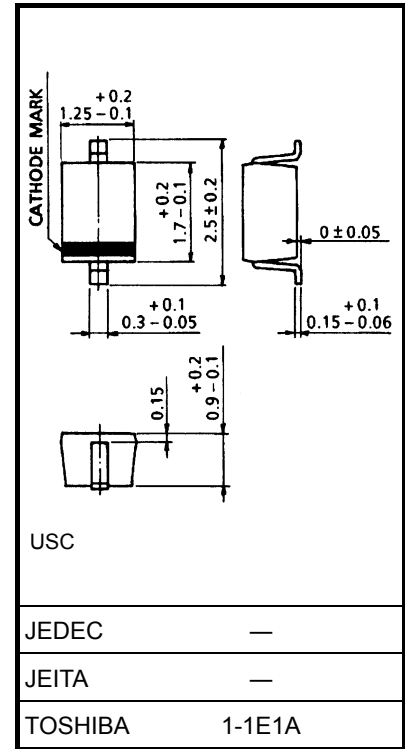
Characteristics	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	25	V
Reverse voltage	V_R	20	V
Maximum (peak) forward current	I_{FM}	700	mA
Average forward current	I_O	300	mA
Power dissipation	P	200 (Note 1)	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 ~ 125	$^\circ\text{C}$
Operating temperature range	T_{opr}	-40 ~ 100	$^\circ\text{C}$

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).

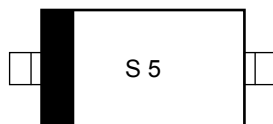
Note 1: Mounted on a glass epoxy board of 20 mm × 20 mm, pad dimension 4 mm × 4 mm.

Unit: mm

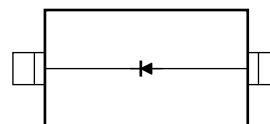


Weight: 0.004 g (typ.)

Marking

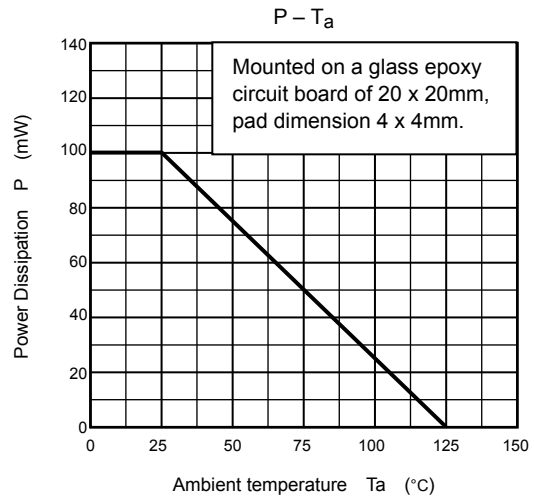
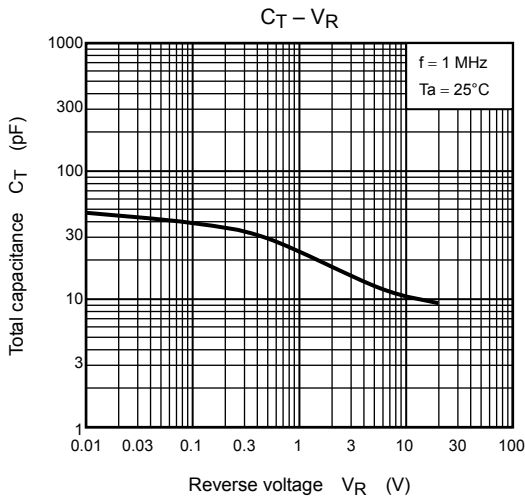
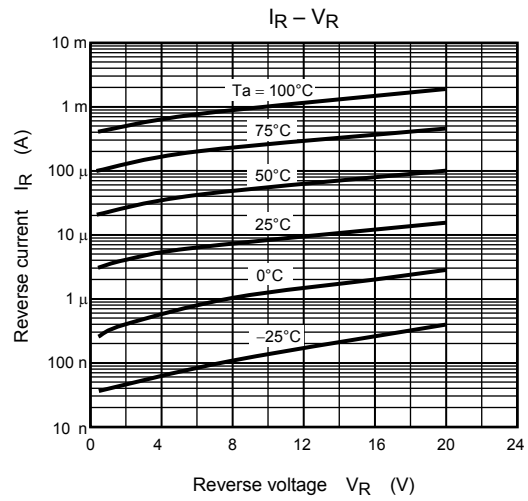
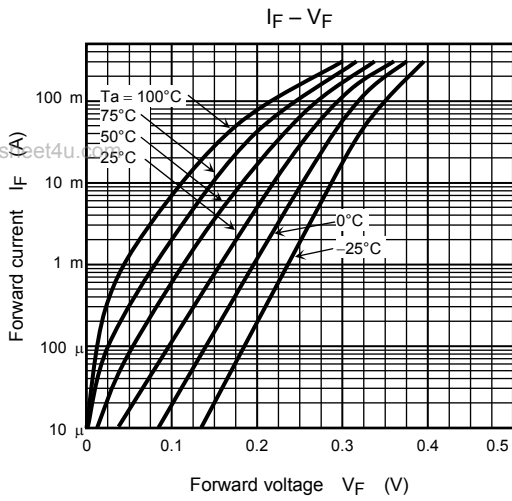


Equivalent Circuit (top view)



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

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F (1)$	$I_F = 1 \text{ mA}$	—	0.16	—	V
	$V_F (2)$	$I_F = 10 \text{ mA}$	—	0.22	—	
	$V_F (3)$	$I_F = 300 \text{ mA}$	—	0.38	0.45	
Reverse current	I_R	$V_R = 20 \text{ V}$	—	—	50	μA
Total capacitance	C_T	$V_R = 0, f = 1 \text{ MHz}$	—	46	—	pF



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20070701-EN GENERAL

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