

1SS417

High Speed Switching Application

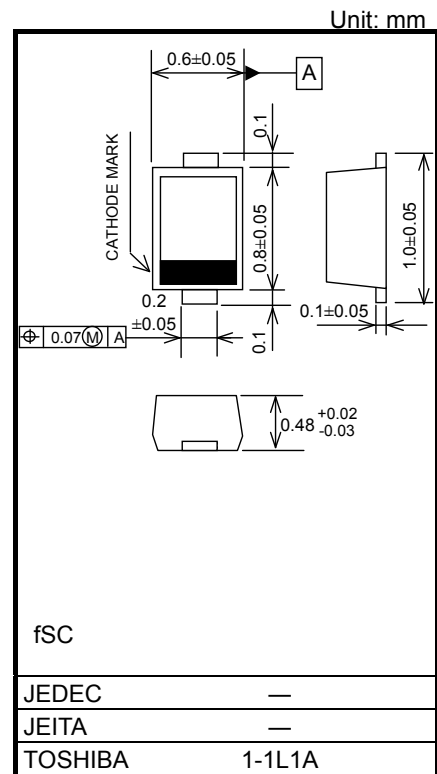
- Small package
- Low forward voltage: $V_F (3) = 0.56V$ (typ.)
- Low reverse current: $I_R = 5\mu A$ (Max.)

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

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	45	V
Reverse voltage	V_R	40	V
Maximum (peak) forward current	I_{FM}	200	mA
Average forward current	I_O	100	mA
Surge current (10ms)	I_{FSM}	1	A
Power dissipation	P^*	100	mW
Junction temperature	T_j	125	$^\circ C$
Storage temperature range	T_{stg}	-55~125	$^\circ C$
Operating temperature range	T_{opr}	-40~100	$^\circ C$

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).

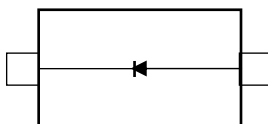
* Mounted on a glass epoxy circuit board of 20 × 20 mm, pad dimension of 4 × 4 mm.



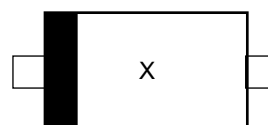
Electrical Characteristics ($T_a = 25^\circ C$)

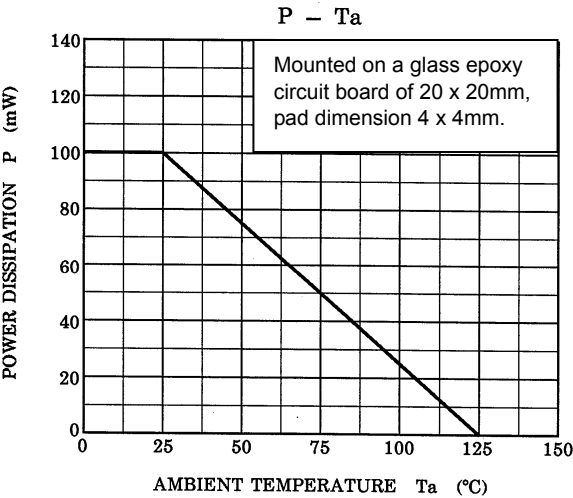
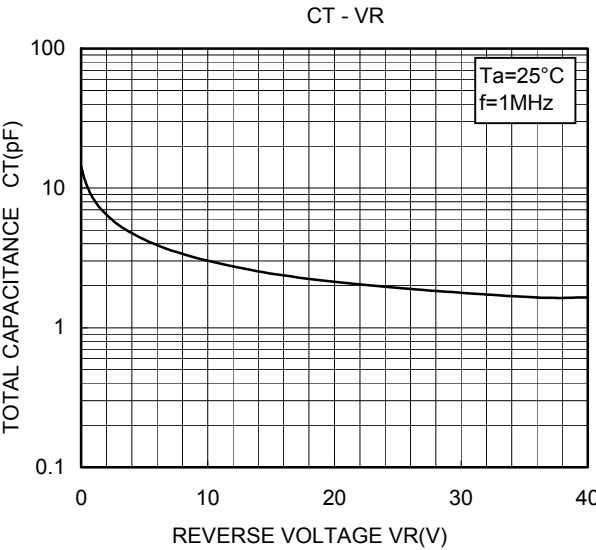
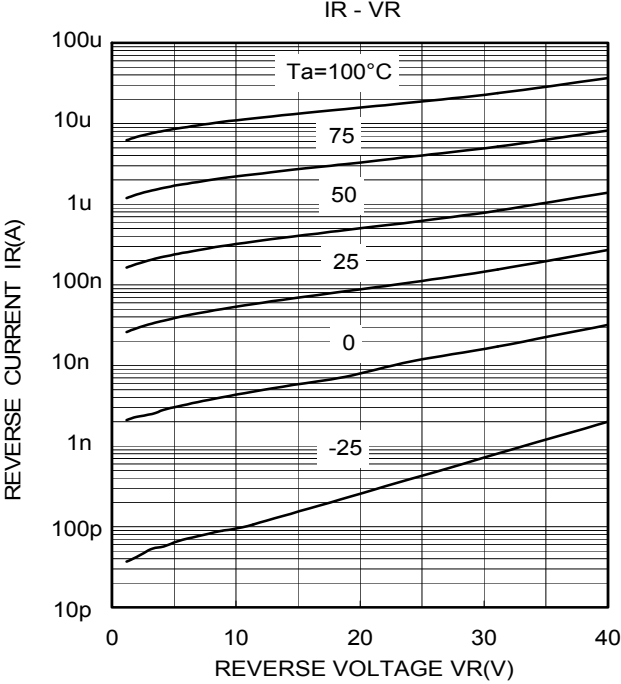
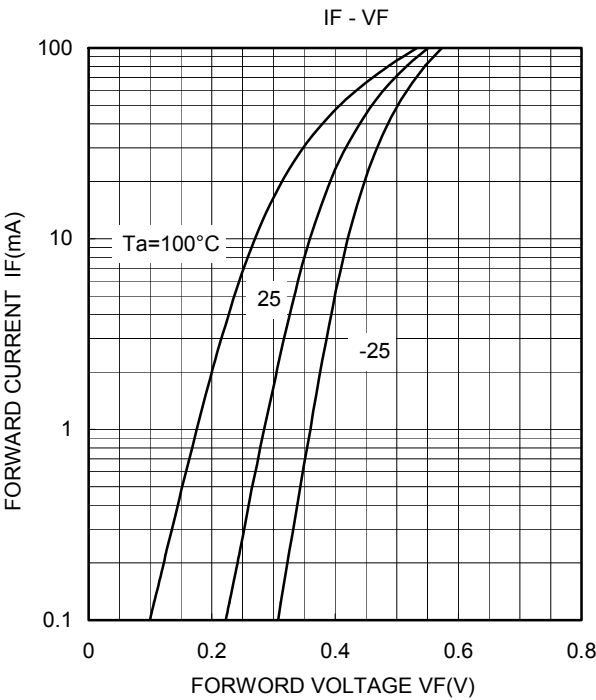
Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F (1)$	—	$I_F = 1mA$	—	0.28	—	V
	$V_F (2)$	—	$I_F = 10mA$	—	0.36	—	
	$V_F (3)$	—	$I_F = 50mA$	—	0.56	0.62	
Reverse current	I_R	—	$V_R = 40V$	—	—	5	μA
Total capacitance	C_T	—	$V_R = 0, f = 1MHz$	—	15	—	pF

Equivalent Circuit (Top View)



Marking





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20070701-EN GENERAL

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