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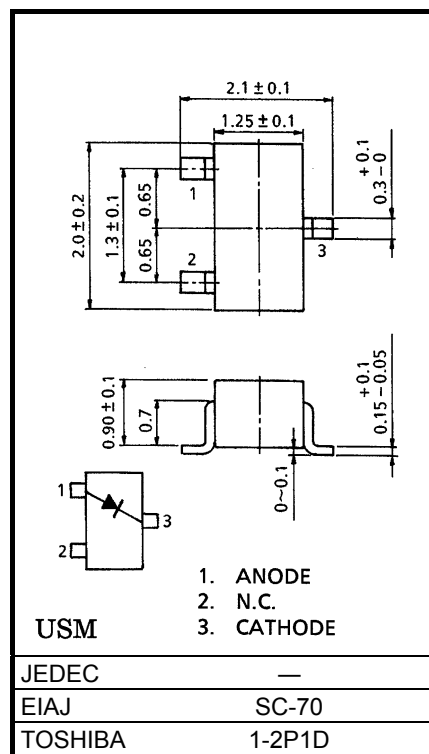
High Voltage, High Speed Switching Applications

Unit: mm

- Low forward voltage : $V_F = 1.0\text{V}$ (typ.)
- High voltage : $V_R = 400\text{V}$ (min.)
- Fast reverse recovery time: $t_{rr} = 0.5\mu\text{s}$ (typ.)
- Small total capacitance : $C_T = 2.5\text{pF}$ (typ.)
- Small package : SC-70

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

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse Voltage	V_{RM}	420	V
Reverse voltage	V_R	400	V
Maximum (peak) forward current	I_{FM}	300	mA
Average forward current	I_O	100	mA
Surge current (10ms)	I_{FSM}	2	A
Power dissipation	P	100	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~125	$^\circ\text{C}$



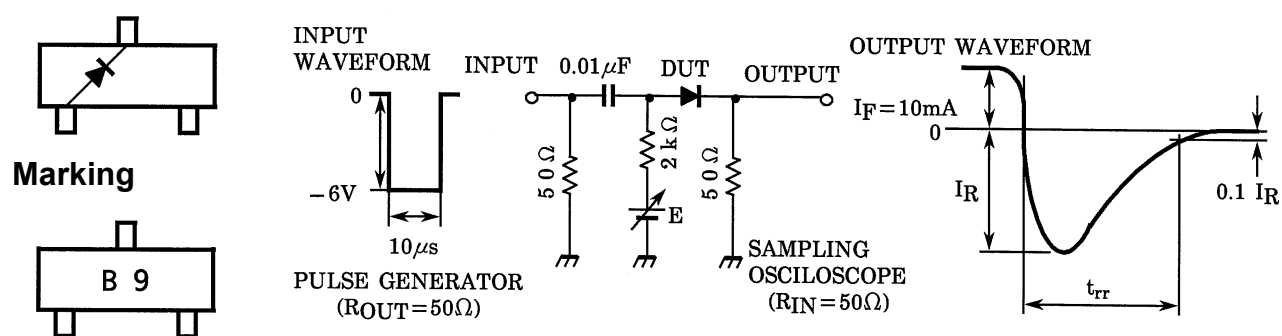
Weight: 0.006g

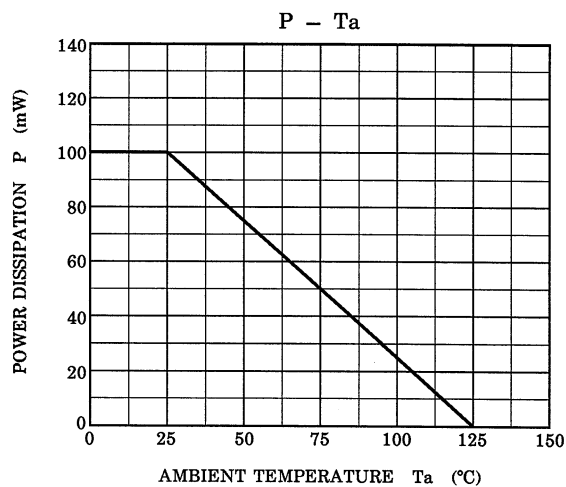
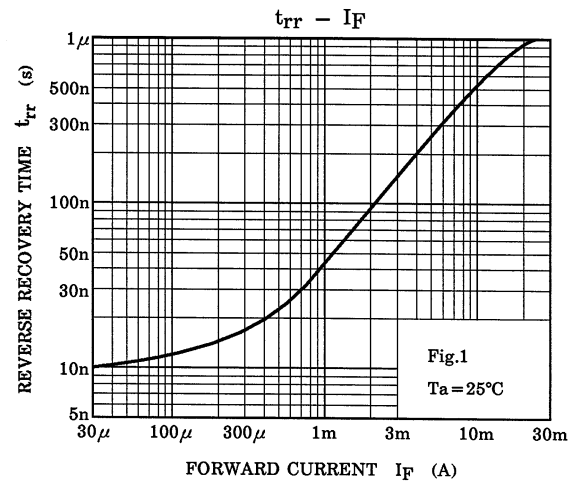
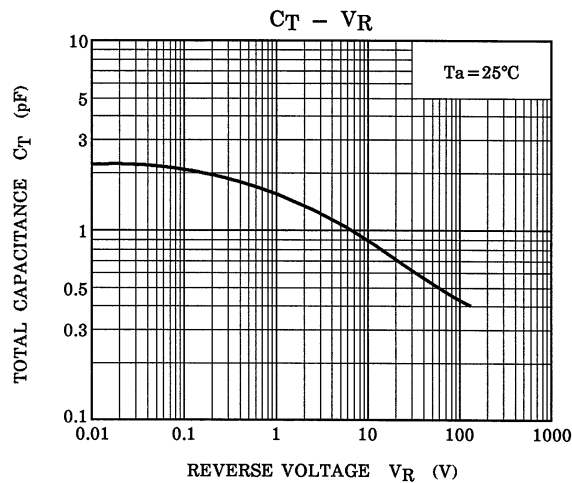
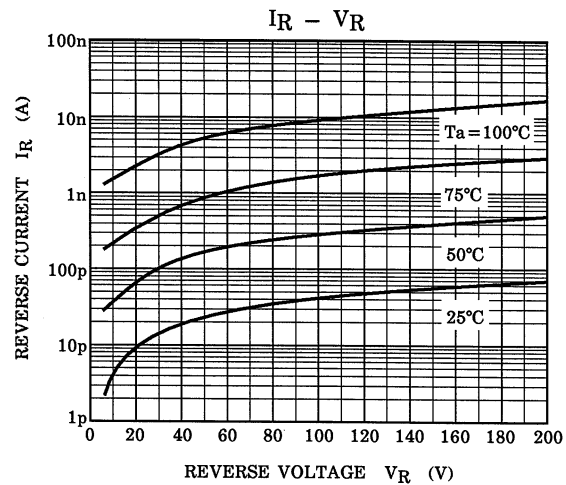
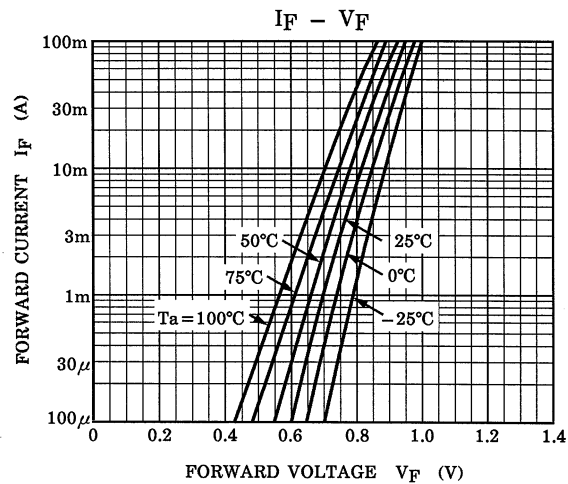
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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 ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F (1)	—	$I_F = 10\text{mA}$	—	0.8	—	V
	V_F (2)	—	$I_F = 100\text{mA}$	—	1.0	1.3	
Reverse current	I_R (1)	—	$V_R = 300\text{V}$	—	—	0.1	μA
	I_R (2)	—	$V_R = 400\text{V}$	—	—	1.0	
Total capacitance	C_T	—	$V_R = 0, f = 1\text{MHz}$	—	2.5	5.0	pF
Reverse recovery time	t_{rr}	—	$I_F = 10\text{mA}$ (Fig.1)	—	0.5	—	μs

Equivalent Circuit Fig.1 Reverse Recovery Time (t_{rr}) Test Circuit(Top View)





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20070701-EN GENERAL

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