

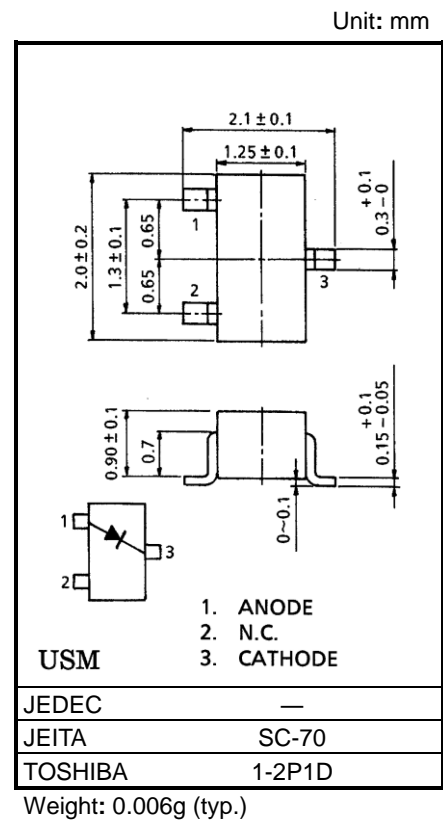
1SS397

High Voltage, High Speed Switching Applications

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

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

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	$^\circ C$
Storage temperature range	T_{stg}	-55 to 125	$^\circ C$



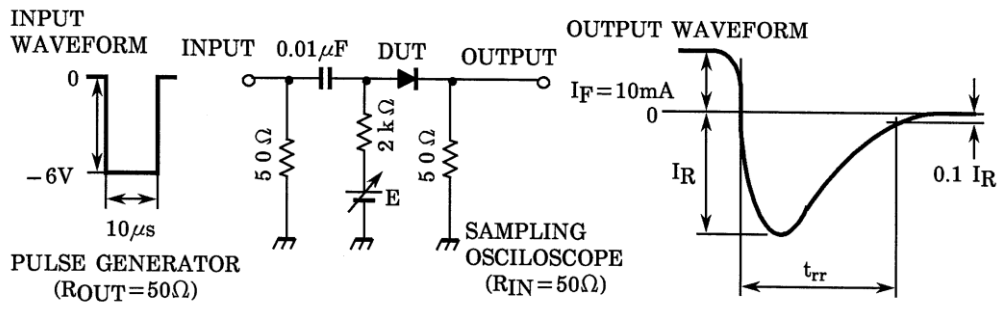
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

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

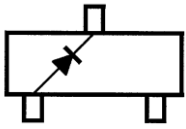
Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F (1)	$I_F = 10mA$	—	0.8	—	V
	V_F (2)	$I_F = 100mA$	—	1.0	1.3	
Reverse current	I_R (1)	$V_R = 300V$	—	—	0.1	μA
	I_R (2)	$V_R = 400V$	—	—	1.0	
Total capacitance	C_T	$V_R = 0 V, f = 1MHz$	—	2.5	5.0	pF
Reverse recovery time	t_{rr}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

Start of commercial production
1995-10

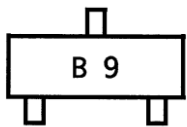
Fig.1 Reverse Recovery Time (t_{rr}) Test Circuit

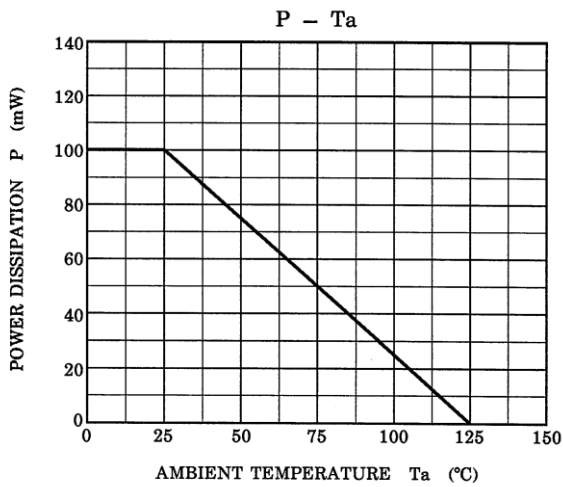
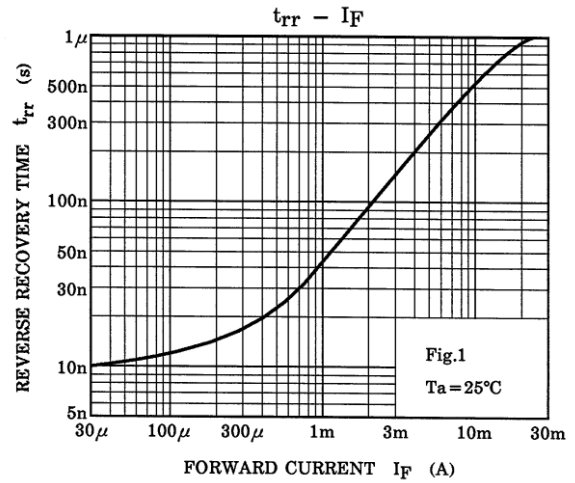
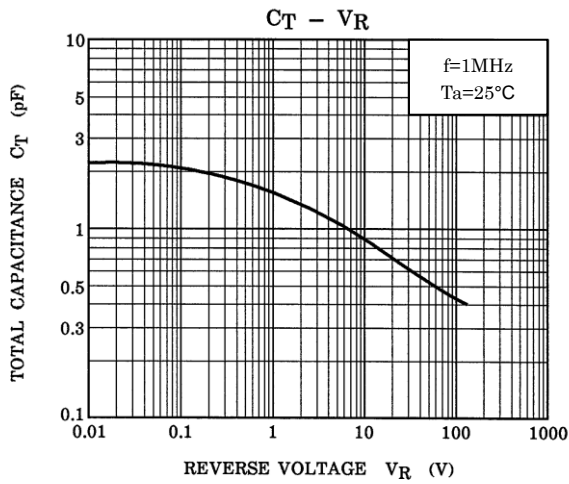
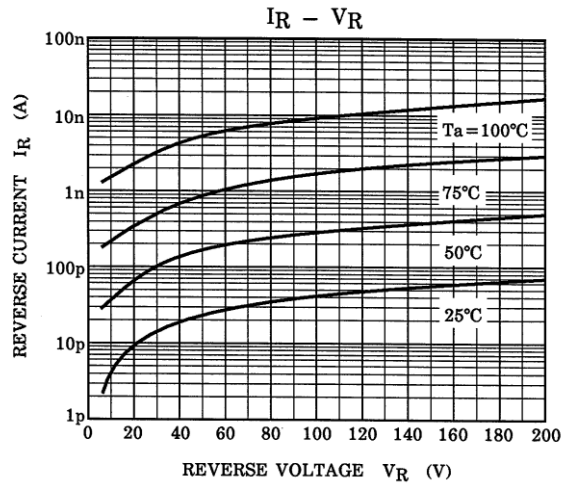
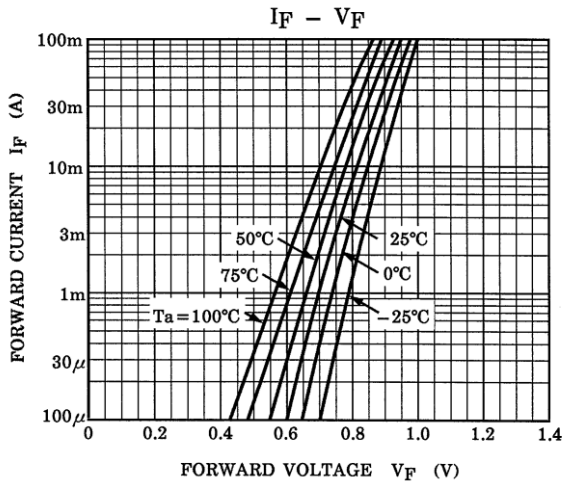


Equivalent Circuit (Top View)



Marking





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