

1SS344

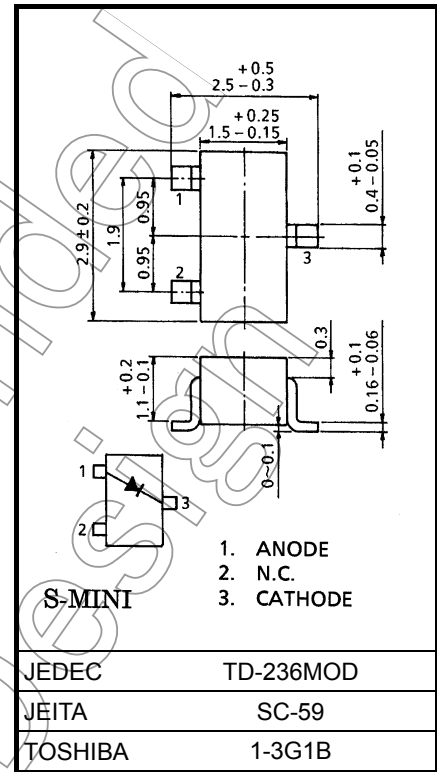
Ultra High Speed Switching Application

Unit: mm

- Low forward voltage : $V_F(3) = 0.50V$ (typ.)
- Fast reverse recovery time : $t_{rr} = 20ns$ (typ.)
- High average forward current : $I_O = 0.5A$ (max)

Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	25	V
Reverse voltage	V_R	20	V
Maximum (peak) forward current	I_{FM}	1500	mA
Average forward current	I_O	500	mA
Surge current (10ms)	I_{FSM}	5	A
Power dissipation	P	200	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55~125	°C
Operating Temperature	T_{opr}	-40~100	°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).

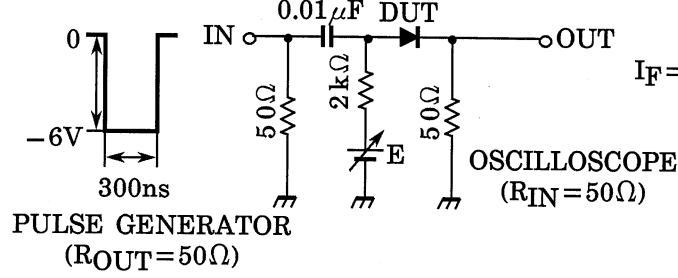
Weight: 0.012g (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 10mA$	—	0.30	—	V
	$V_F(2)$	—	$I_F = 100mA$	—	0.38	—	
	$V_F(3)$	—	$I_F = 500mA$	—	0.50	0.55	
Reverse current	$I_R(1)$	—	$V_R = 10V$	—	—	20	μA
	$I_R(2)$	—	$V_R = 20V$	—	—	100	
Total capacitance	C_T	—	$V_R = 0, f = 1MHz$	—	120	—	pF
Reverse recovery time	t_{rr}	—	$I_F = 50mA, (Fig.1)$	—	20	—	ns

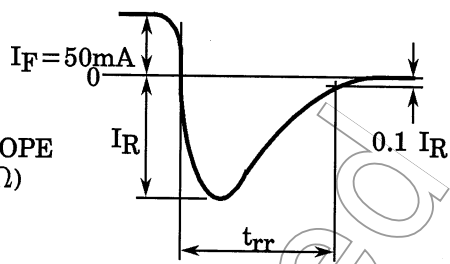
Fig.1 Reverse Recovery Time (t_{rr})

INPUT WAVEFORM

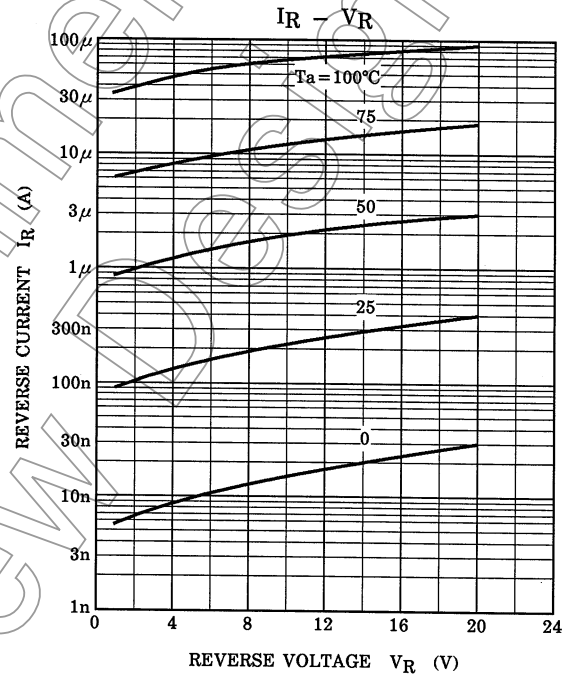
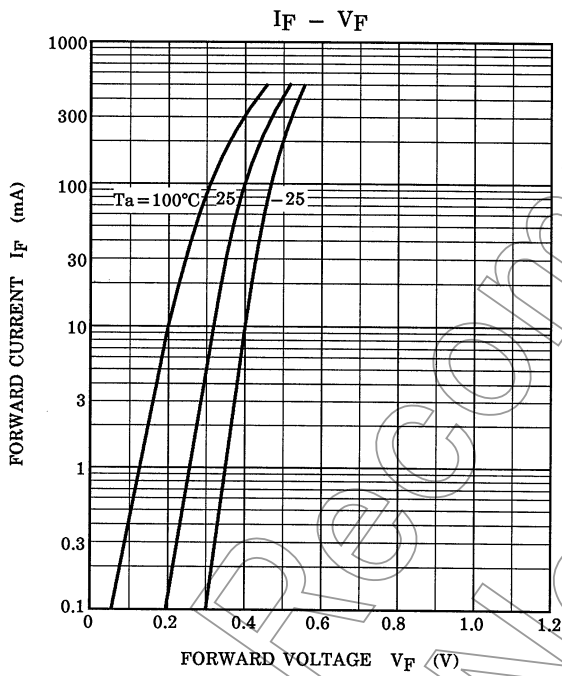
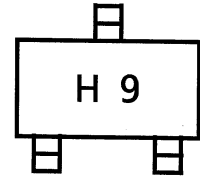


Test Circuit

OUTPUT WAVEFORM



Marking



Not for New

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