

TOSHIBA Diode Silicon Epitaxial Schottky Planar Type

## 1SS344

## Ultra High Speed Switching Application

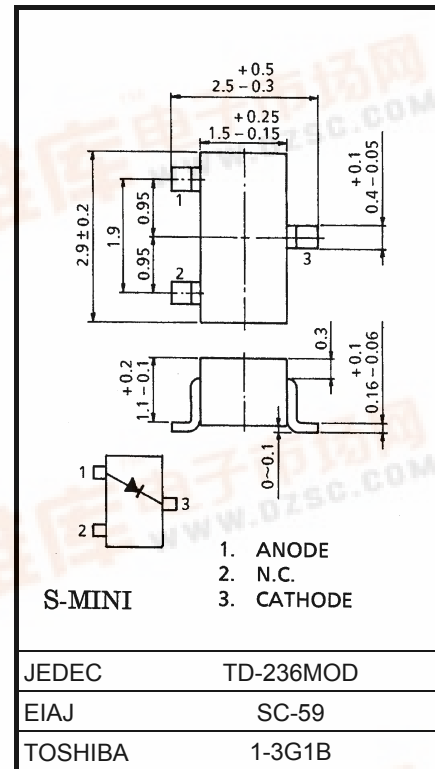
Unit: mm

- 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 ( $T_a = 25^\circ C$ )

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	$^\circ C$
Storage temperature	$T_{stg}$	-55~125	$^\circ C$
Operating Temperature	$T_{opr}$	-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).

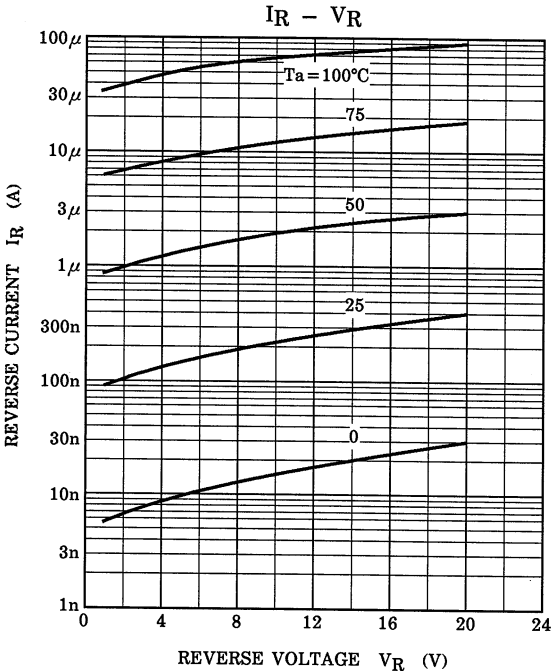
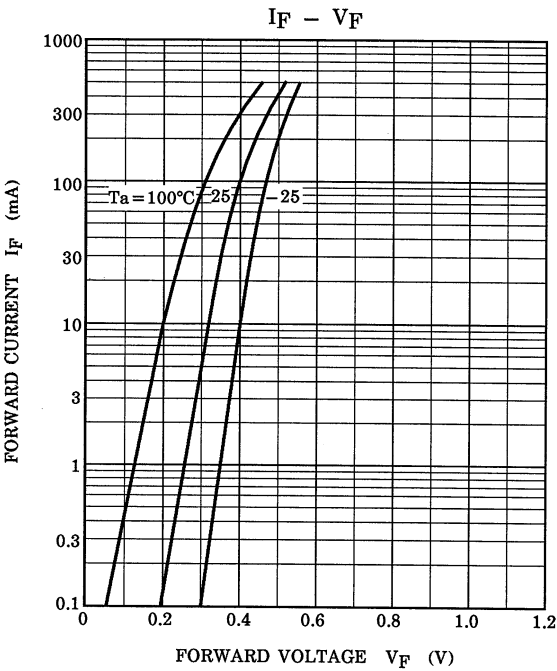
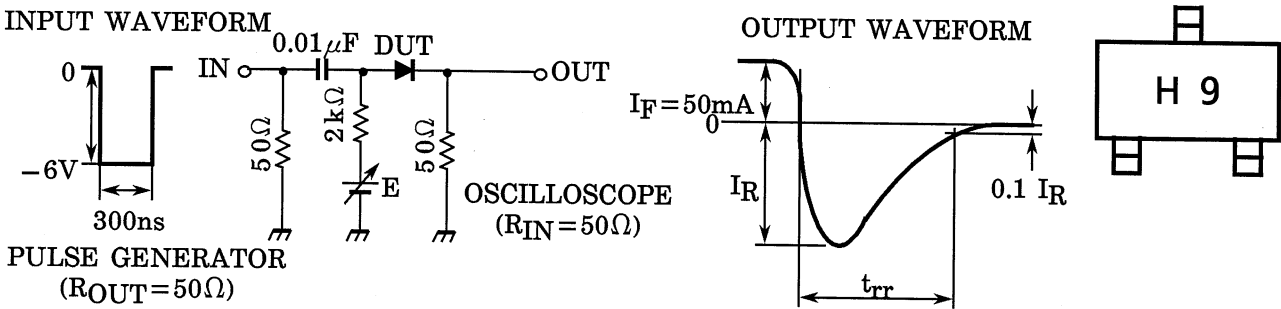


Weight: 0.012g

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

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	$\mu A$
	$I_R(2)$	—	$V_R = 20V$	—	—	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 ( $t_{rr}$ ) Test Circuit Marking



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20070701-EN GENERAL

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