

TOSHIBA Diode Silicon Epitaxial Schottky Planar Type

# 1SS344

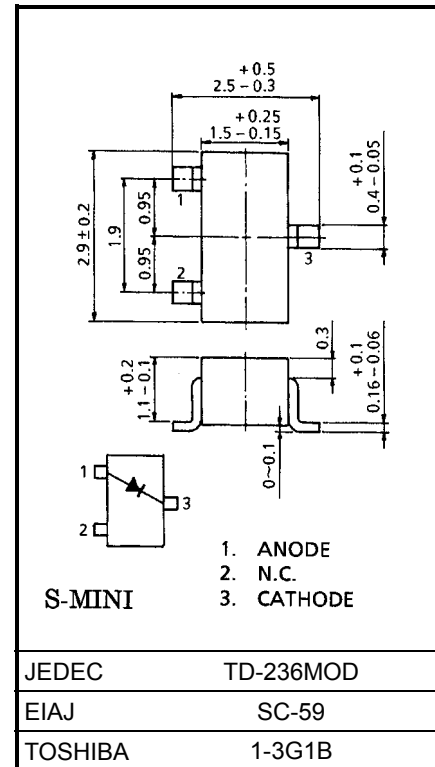
Ultra High Speed Switching Application

Unit in 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)

## 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



## Electrical Characteristics (Ta = 25°C)

Weight: 0.012g

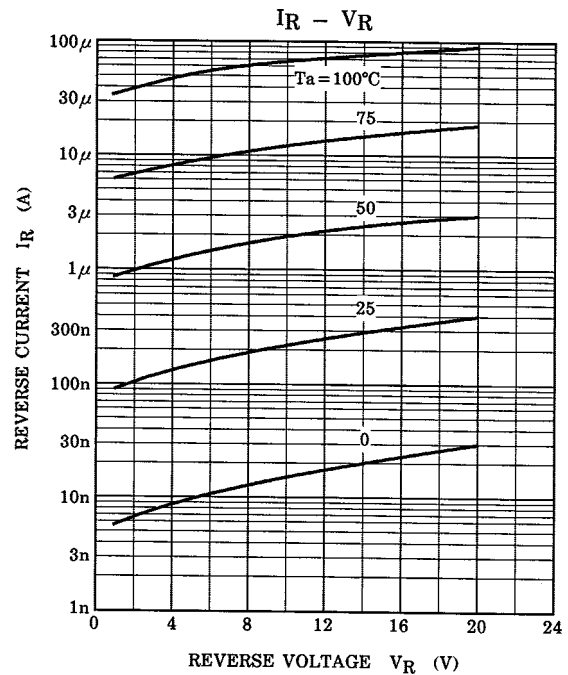
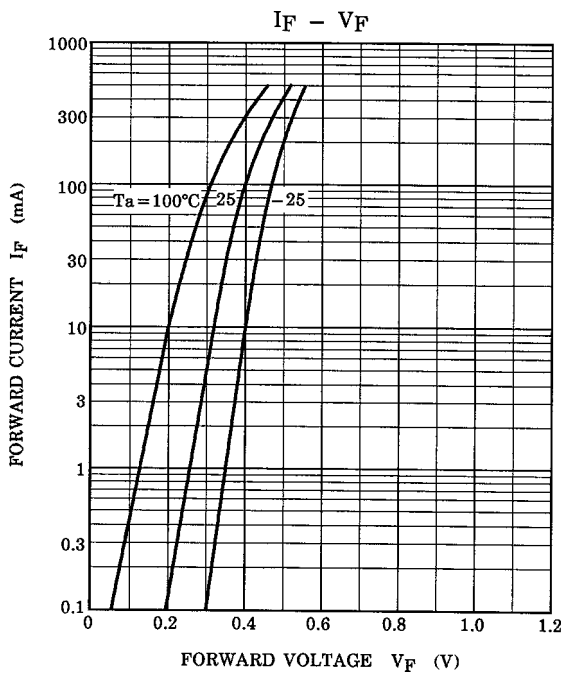
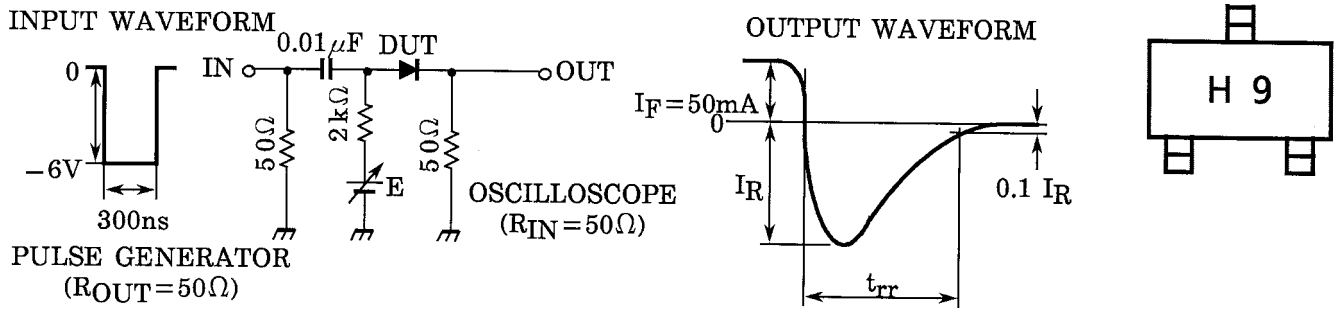
Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 10mA$	—	0.30	—	V
	$V_F(2)$	—	$I_F = 100mA$	—	0.38	—	
	$V_F(3)$	—	$I_F = 500mA$	—	0.50	0.55	
Reverse current	$I_R(1)$	—	$V_R = 10V$	—	—	20	μA
	$I_R(2)$	—	$V_R = 20V$	—	—	100	
Total capacitance	$C_T$	—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

961001EAA2

• TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

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

**Marking**



961001EAA2

• The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.  
 • The information contained herein is subject to change without notice.