

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# 1SS392

## High Speed Switching Application

- Low forward voltage :  $V_F(3) = 0.54V$  (typ.)
- Low reverse current :  $I_R = 5\mu A$  (max)
- Small package : SC-59

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

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse Voltage	$V_{RM}$	45	V
Reverse voltage	$V_R$	40	V
Maximum (peak) forward current	$I_{FM}$	300 *	mA
Average forward current	$I_O$	100 *	mA
Surge current (10ms)	$I_{FSM}$	1 *	A
Power dissipation	P	150	mW
Junction temperature	$T_j$	125	$^\circ C$
Storage temperature range	$T_{stg}$	-55 to 125	$^\circ C$
Operating temperature range	$T_{opr}$	-40 to 100	$^\circ C$

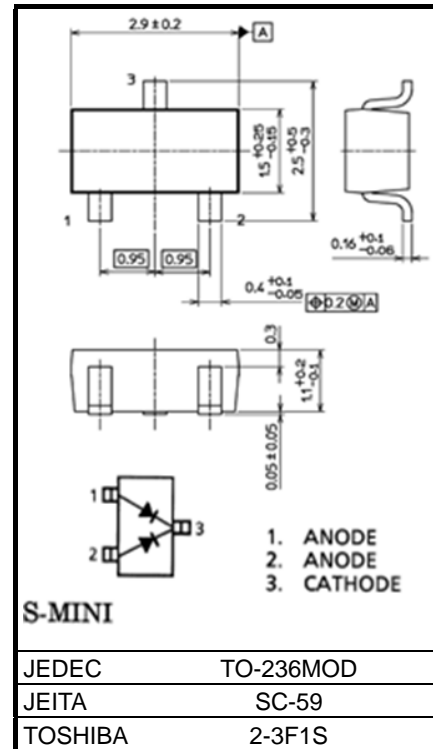
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

\* : Unit rating. Total rating = unit rating  $\times$  1.5

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

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	$I_F = 1mA$	—	0.28	—	V
	$V_F(2)$	$I_F = 10mA$	—	0.36	—	
	$V_F(3)$	$I_F = 100mA$	—	0.54	0.60	
Reverse current	$I_R$	$V_R = 40V$	—	—	5	$\mu A$
Total capacitance	$C_T$	$V_R = 0V, f = 1MHz$	—	18	25	pF

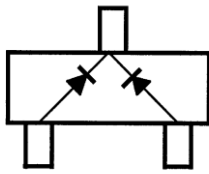
Unit: mm



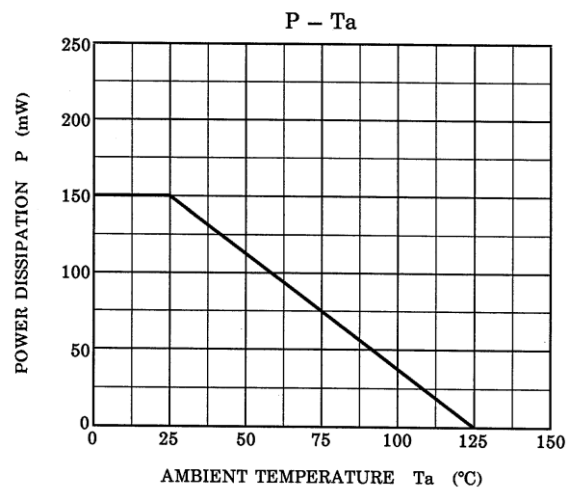
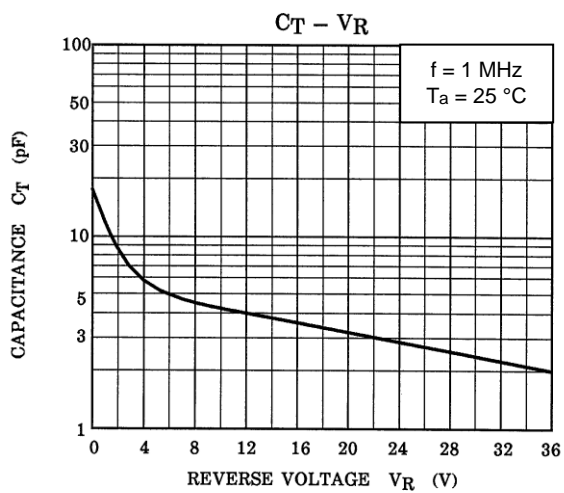
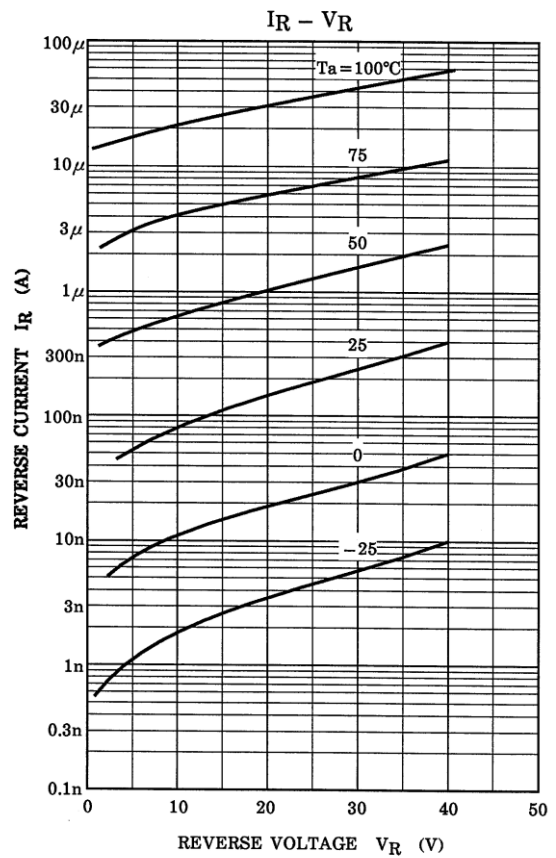
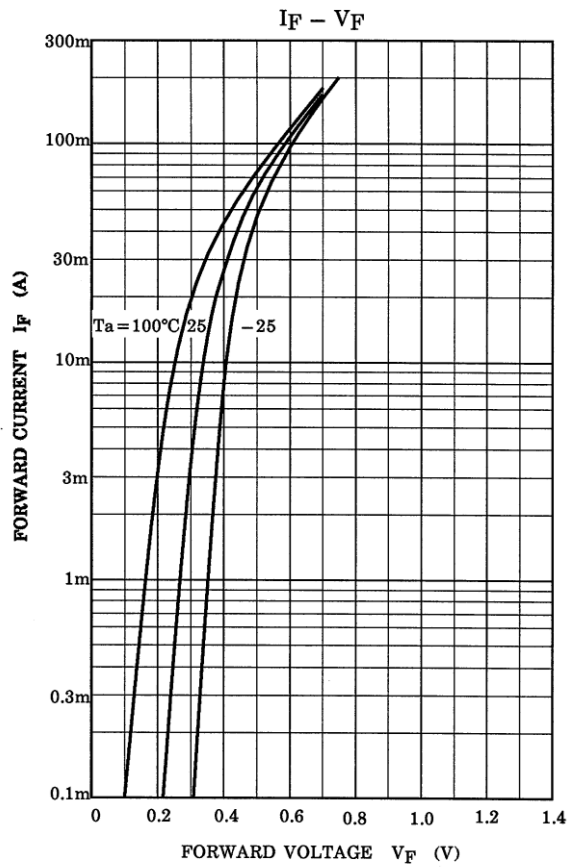
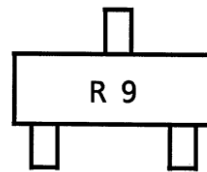
Weight: 12 mg (typ.)

Start of commercial production  
1994-12

## Equivalent Circuit (Top View)



## Marking



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