

TOSHIBA Diode Silicon Epitaxial Planar Type

## 1SS352

## Ultra High Speed Switching Application

Unit: mm

- Small package
- Low forward voltage :  $V_F$  (3) = 0.98V (typ.)
- Fast reverse recovery time:  $t_{rr}$  = 1.6ns (typ.)
- Small total capacitance :  $C_T$  = 0.5pF (typ.)

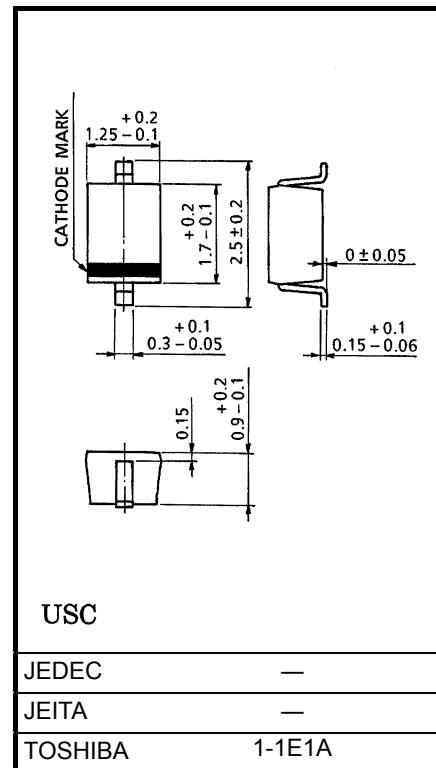
Absolute Maximum Ratings ( $T_a = 25^\circ C$ )

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	85	V
Reverse voltage	$V_R$	80	V
Maximum (peak) forward current	$I_{FM}$	200	mA
Average forward current	$I_O$	100	mA
Surge current (10ms)	$I_{FSM}$	1	A
Power dissipation	$P$	200 (*)	mW
Junction temperature	$T_j$	125	°C
Storage temperature	$T_{stg}$	-55~125	°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.).

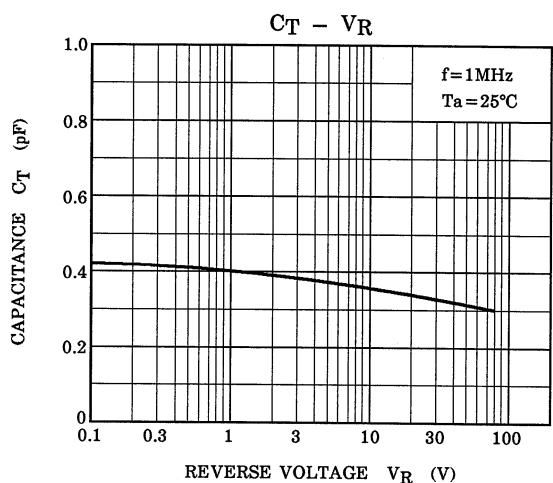
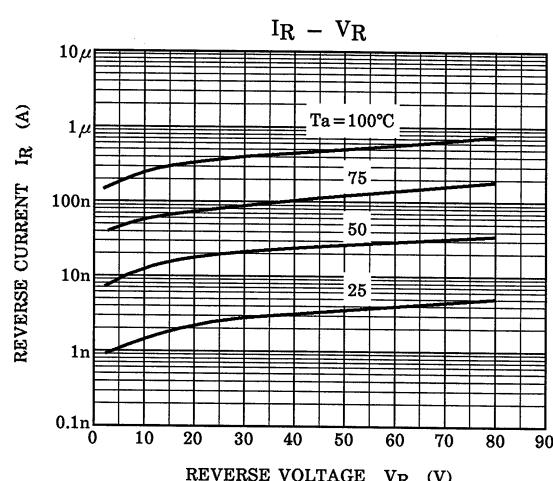
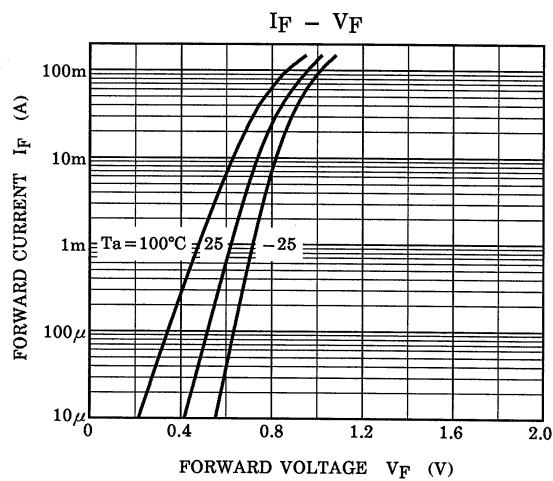
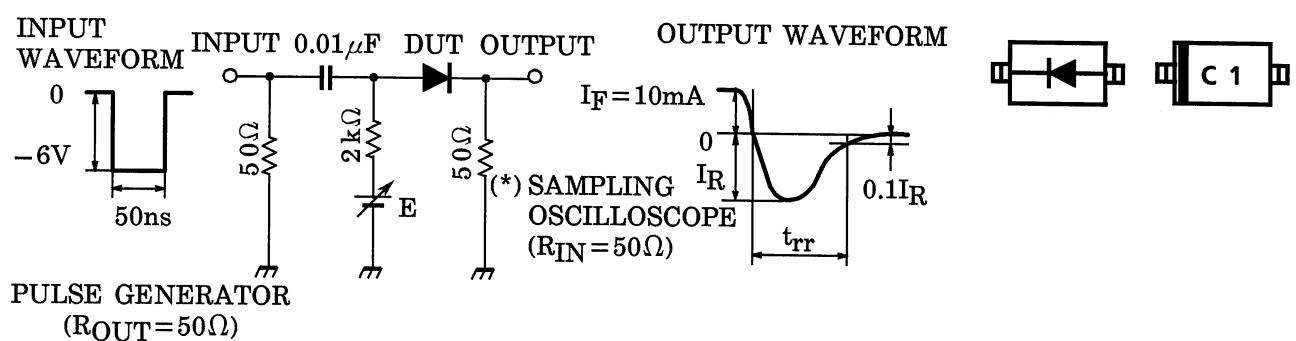
(\*) Mounted on a glass epoxy circuit board of  $20 \times 20$ mm, pad dimension of  $4 \times 4$ mm.



Weight: 0.004g (typ.)

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

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F$ (1)	—	$I_F = 1$ mA	—	0.62	—	V
	$V_F$ (2)	—	$I_F = 10$ mA	—	0.75	—	
	$V_F$ (3)	—	$I_F = 100$ mA	—	0.98	1.20	
Reverse current	$I_R$ (1)	—	$V_R = 30$ V	—	—	0.1	$\mu$ A
	$I_R$ (2)	—	$V_R = 80$ V	—	—	0.5	
Total capacitance	$C_T$	—	$V_R = 0$ , $f = 1$ MHz	—	0.5	3.0	pF
Reverse recovery time	$t_{rr}$	—	$I_F = 10$ mA, Fig.1	—	1.6	4.0	ns

Fig.1 Reverse Recovery Time ( $t_{rr}$ ) Test CircuitPin Assignment  
(Top View) Marking

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