

TOSHIBA Diode Silicon Epitaxial Planar Type

## 1SS362

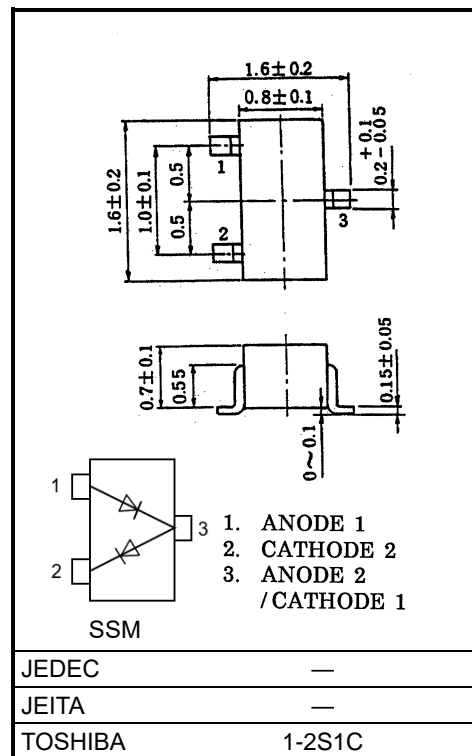
## Ultra High Speed Switching Application

Unit: mm

- Small package
- Low forward voltage :  $V_F(3) = 0.97 \text{ V (typ.)}$
- Fast reverse recovery time:  $t_{rr} = 1.6 \text{ ns (typ.)}$
- Small total capacitance :  $C_T = 0.5 \text{ pF (typ.)}$

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

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	85	V
Reverse voltage	$V_R$	80	V
Maximum (peak) forward current	$I_{FM}$	240 *	mA
Average forward current	$I_O$	80 *	mA
Surge current (10ms)	$I_{FSM}$	1 *	A
Power dissipation	$P_D$ (Note 1, 3)	120	mW
	$P_D$ (Note 2)	100	
Junction temperature	$T_j$ (Note 1)	150	$^\circ\text{C}$
	$T_j$ (Note 2)	125	
Storage temperature	$T_{stg}$ (Note 1)	-55 to 150	$^\circ\text{C}$
	$T_{stg}$ (Note 2)	-55 to 125	



Weight: 2.4 mg (typ.)

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.).

Note 1: For devices with the ordering part number ending in (TE85L,F).

Note 2: For devices with the ordering part number in other than (TE85L,F).

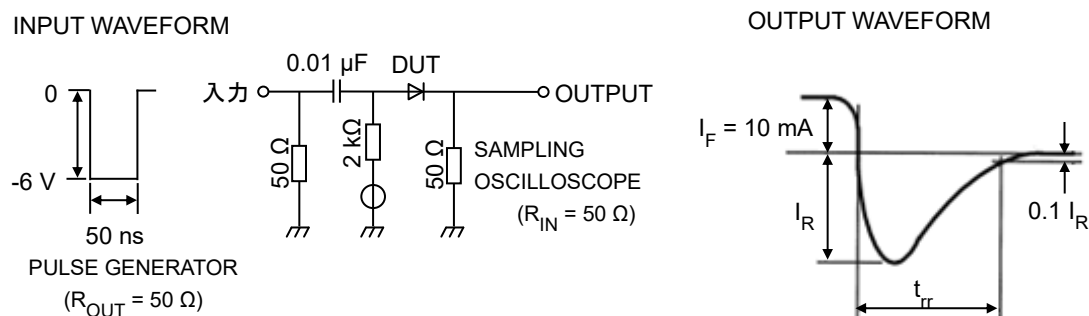
Note 3: Mounted on a FR4 board. (25.4 mm × 25.4 mm × 1.6 mm, Cu pad: 0.36 mm<sup>2</sup> × 3)

\*: Unit rating. Total rating = Unit rating × 1.5.

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

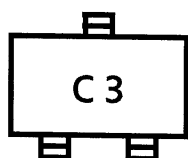
Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F$ (1)	$I_F = 1 \text{ mA}$	—	0.63	—	V
	$V_F$ (2)	$I_F = 10 \text{ mA}$	—	0.75	—	
	$V_F$ (3)	$I_F = 100 \text{ mA}$	—	0.97	1.20	
Reverse current	$I_R$ (1)	$V_R = 30 \text{ V}$	—	—	0.1	$\mu\text{A}$
	$I_R$ (2)	$V_R = 80 \text{ V}$	—	—	0.5	
Total capacitance	$C_T$	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	—	0.5	3.0	pF
Reverse recovery time	$t_{rr}$	$I_F = 10 \text{ mA}, \text{ Fig.1}$	—	1.6	4.0	ns

Start of commercial production  
1990-10

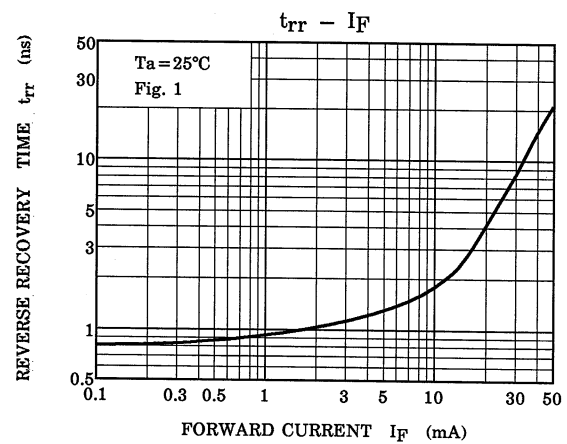
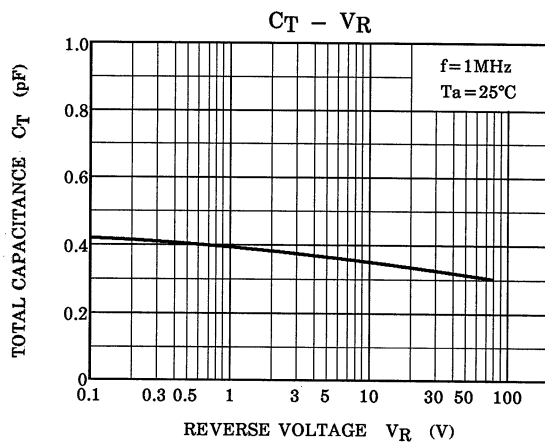
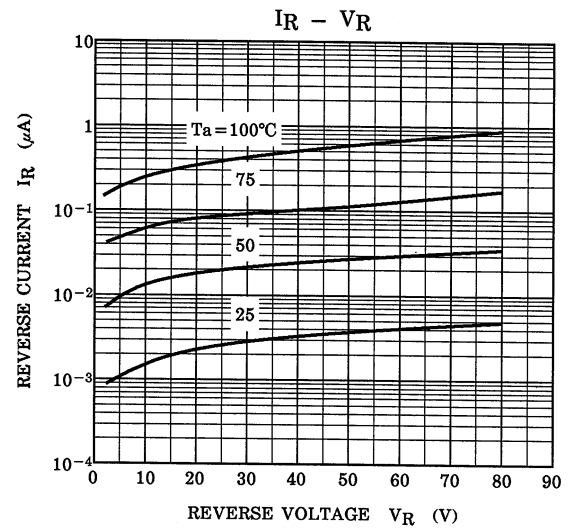
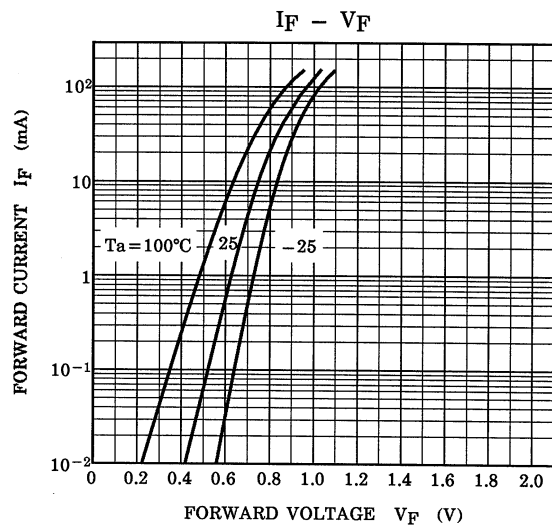


**Fig.1 Reverse Recovery Time ( $t_{rr}$ ) Test Circuit**

### Marking



## Characteristics Curves



The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

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