

TOSHIBA Diode Silicon Epitaxial Planar Type

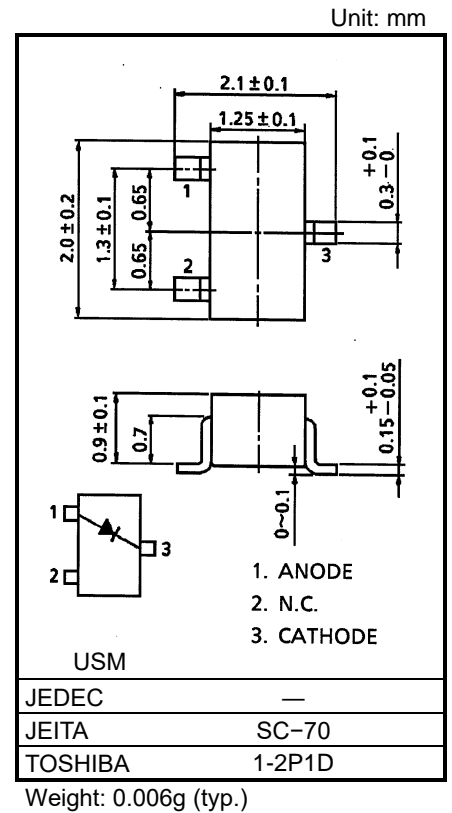
## 1SS370

### High Voltage, High Speed Switching Applications

- Small package : SC-70
- Low forward voltage :  $V_F(2) = 0.9\text{ V (typ.)}$
- Fast reverse recovery time:  $t_{RR} = 60\text{ ns (max)}$
- Small total capacitance :  $C_T = 1.5\text{ pF (typ.)}$

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

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	250	V
Reverse voltage	$V_R$	200	V
Maximum (peak) forward current	$I_{FM}$	300	mA
Average forward current	$I_O$	100	mA
Surge current (10ms)	$I_{FSM}$	2	A
Power dissipation	$P_D$ (Note 1, 3)	200	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	



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 LF(T).

Note 2: For devices with the ordering part number in other than LF(T).

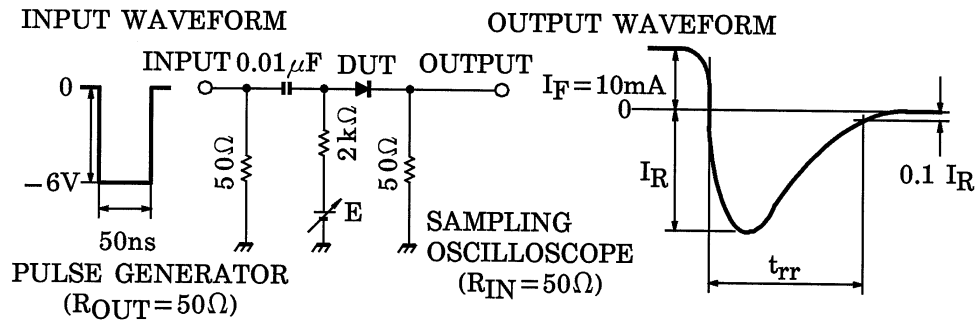
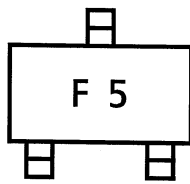
Note 3: Mounted on a FR4 board. (25.4 mm × 25.4 mm × 1.6 mm, Cu pad: 0.5 mm<sup>2</sup> × 3)

Start of commercial production  
1993-09

## Electrical Characteristics (Ta = 25°C)

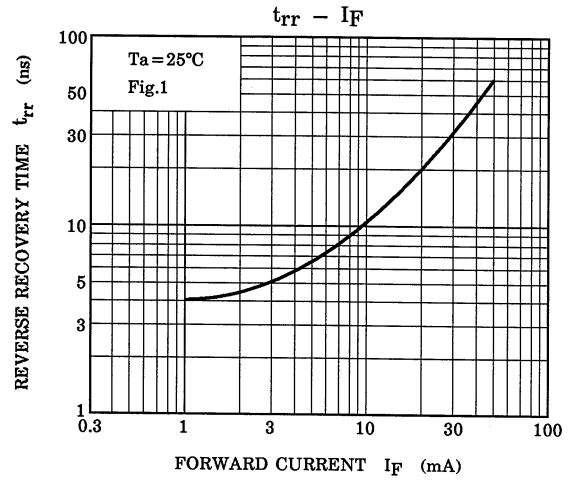
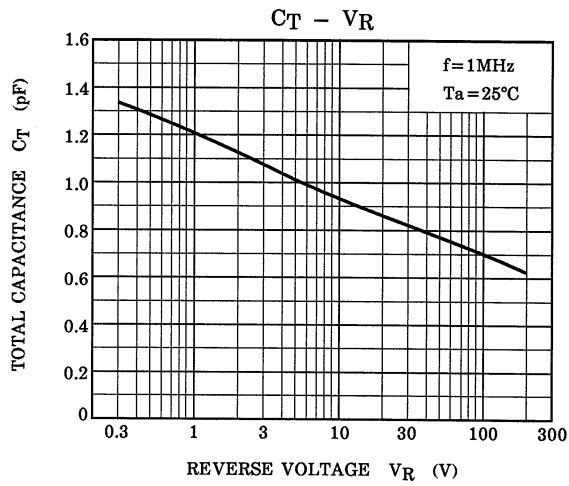
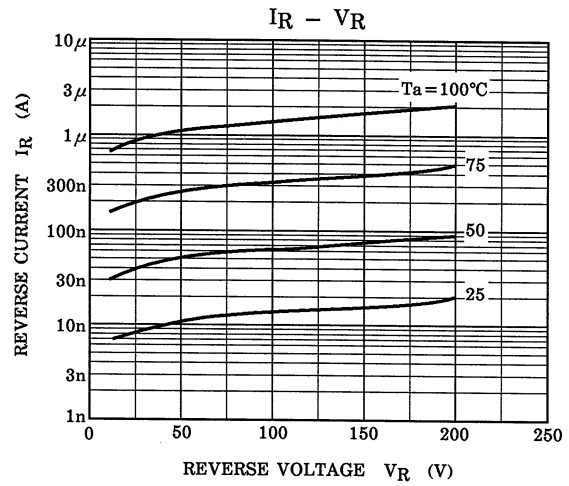
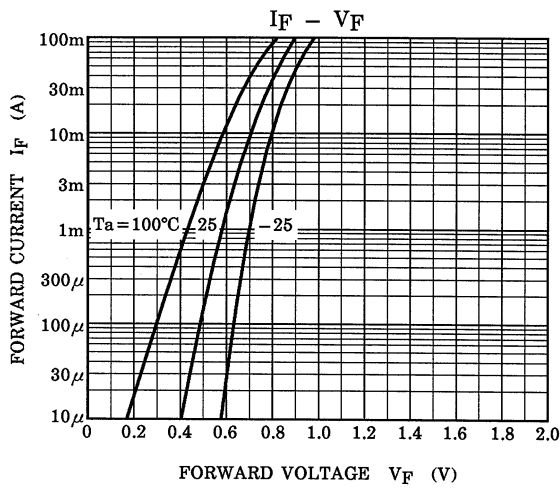
Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V <sub>F</sub> (1)	I <sub>F</sub> = 10 mA	—	0.72	1.0	V
	V <sub>F</sub> (2)	I <sub>F</sub> = 100 mA	—	0.90	1.2	
Reverse current	I <sub>R</sub> (1)	V <sub>R</sub> = 50 V	—	—	0.1	μA
	I <sub>R</sub> (2)	V <sub>R</sub> = 200 V	—	—	1.0	
Total capacitance	C <sub>T</sub>	V <sub>R</sub> = 0 V, f = 1 MHz	—	1.5	3.0	pF
Reverse recovery time	t <sub>rr</sub>	I <sub>F</sub> = 10 mA, Fig.1	—	10	60	ns

## Marking



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

## Characteristics Curves



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

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