

TOSHIBA Diode Silicon Epitaxial Planar Type

## 1SS360

## Ultra High Speed Switching Application

- AEC-Q101 Qualified (Note1)
- Small package
- Low forward voltage :  $V_F(3) = 0.92\text{ V (typ.)}$
- Fast reverse recovery time:  $t_{rr} = 1.6\text{ ns (typ.)}$
- Small total capacitance :  $C_T = 2.2\text{ pF (typ.)}$

Note1: For detail information, please contact our sales.

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	$I_{FM}$	300 *	mA
Average forward current	$I_O$	100 *	mA
Surge current (10ms)	$I_{FSM}$	2 *	A
Power dissipation	$P_D$ (Note 2, 4)	120	mW
	$P_D$ (Note 3)	100	
Junction temperature	$T_j$ (Note 2)	150	$^\circ\text{C}$
	$T_j$ (Note 3)	125	
Storage temperature	$T_{stg}$ (Note 2)	-55 to 150	$^\circ\text{C}$
	$T_{stg}$ (Note 3)	-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 2: For devices with the ordering part number ending in LF(T).

Note 3: For devices with the ordering part number in other than LF(T).

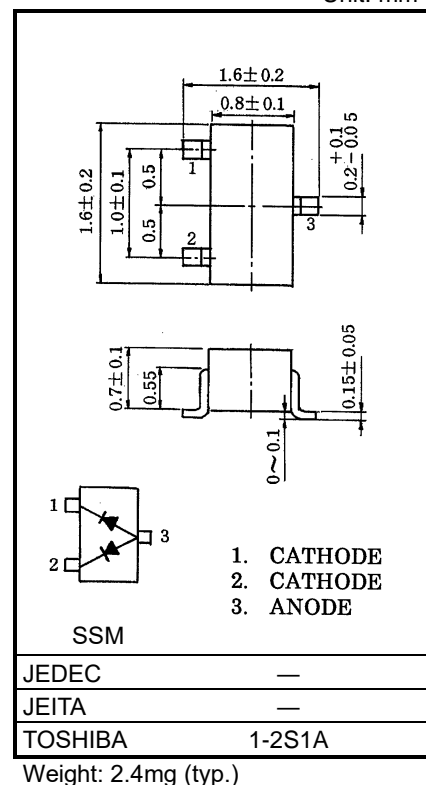
Note 4: Mounted on a FR4 board. (25.4 mm × 25.4 mm × 1.6 mm, Cu pad: 0.36 mm<sup>2</sup> × 3)

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

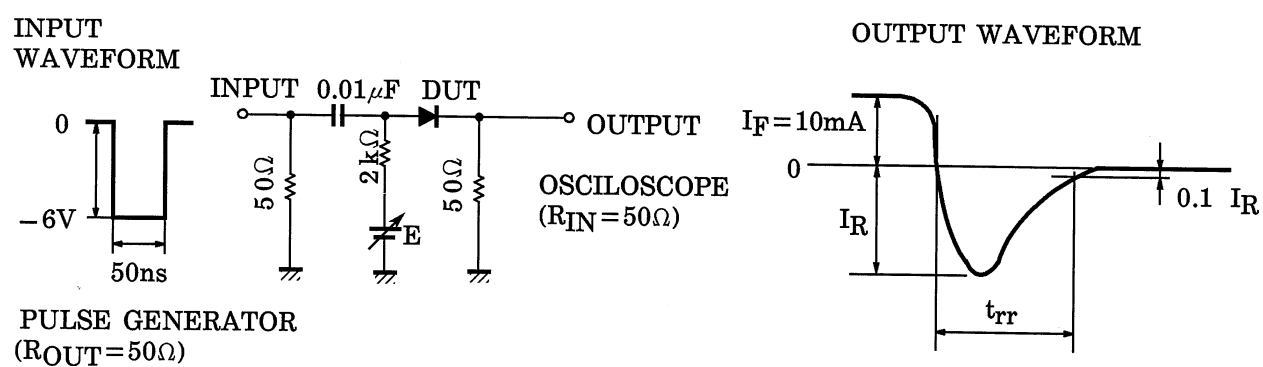
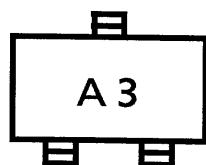
Electrical Characteristics ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1\text{ mA}$	—	0.61	—	V
	$V_F(2)$	—	$I_F = 10\text{ mA}$	—	0.74	—	
	$V_F(3)$	—	$I_F = 100\text{ mA}$	—	0.92	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	$C_T$	—	$V_R = 0\text{ V}, f = 1\text{ MHz}$	—	2.2	4.0	pF
Reverse recovery time	$t_{rr}$	—	$I_F = 10\text{ mA}, \text{Fig.1}$	—	1.6	4.0	ns

Unit: mm

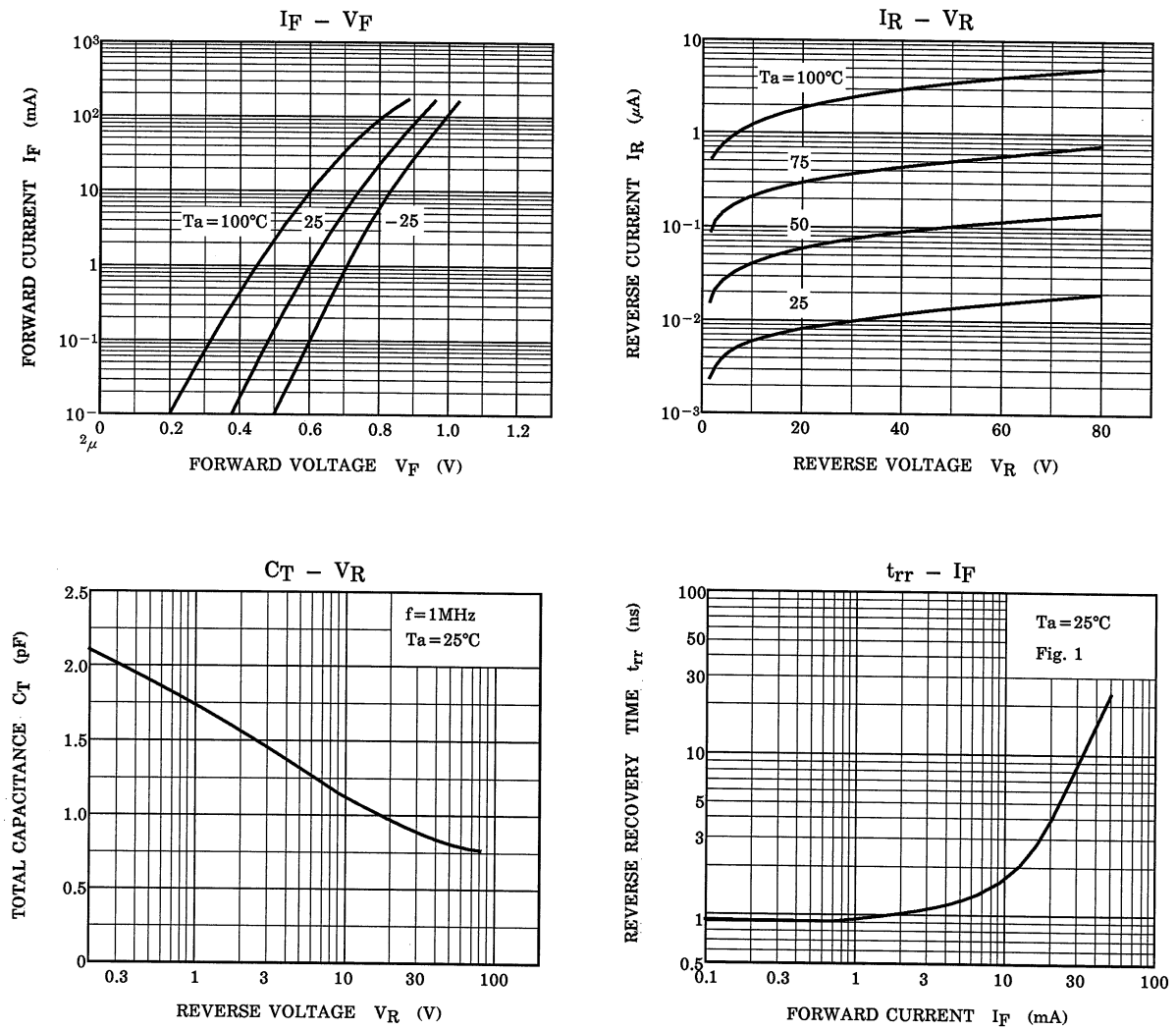
Start of commercial production  
1990-10

## 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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