

# 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 :  $C_T = 0.5 \text{ pF (typ.)}$

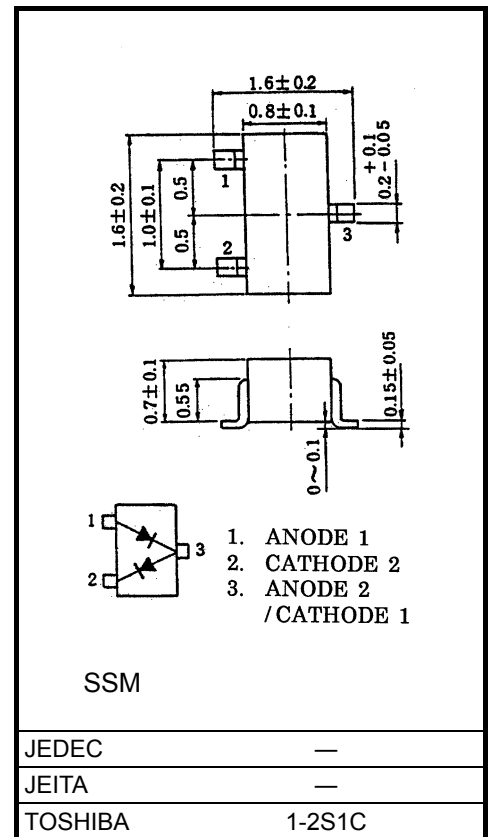
## Absolute Maximum Ratings (Ta = 25°C)

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	100	mW
Junction temperature	$T_j$	125	°C
Storage temperature	$T_{stg}$	-55 to 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).

\* Unit rating. Total rating = unit rating × 0.7



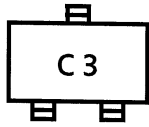
Weight: 2.4 mg (typ.)

## Electrical Characteristics (Ta = 25°C)

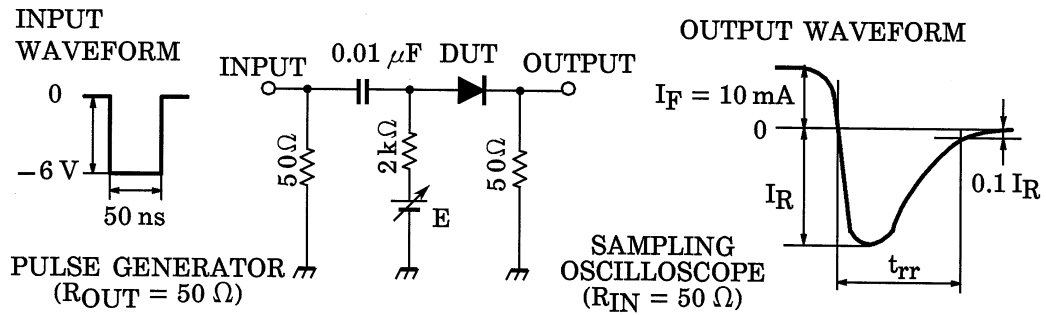
Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F (1)$	—	$I_F = 1 \text{ mA}$	—	0.63	—	V
	$V_F (2)$	—	$I_F = 10 \text{ mA}$	—	0.75	—	
	$V_F (3)$	—	$I_F = 100 \text{ mA}$	—	0.97	1.20	
Reverse current	$I_R (1)$	—	$V_R = 30 \text{ V}$	—	—	0.1	μA
	$I_R (2)$	—	$V_R =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

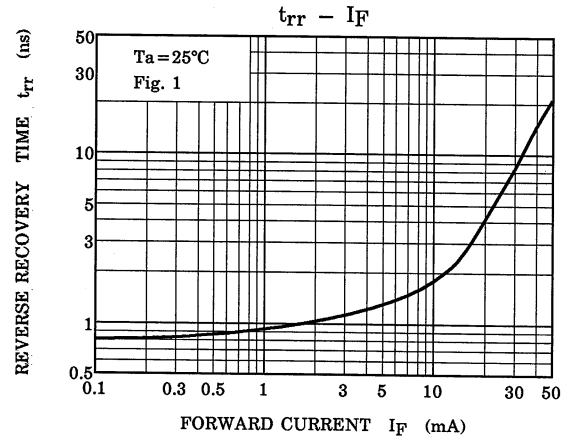
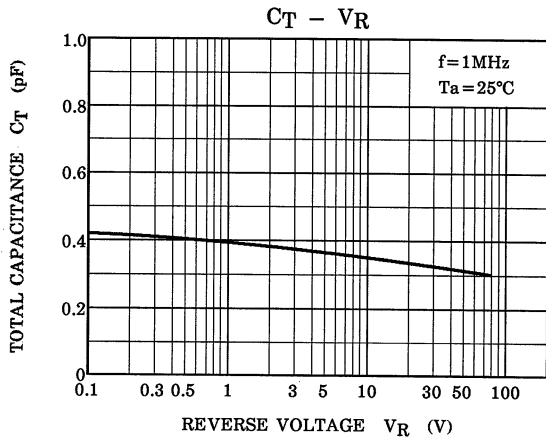
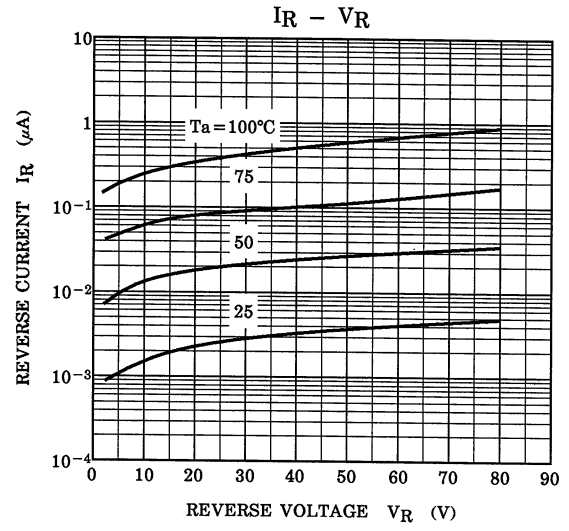
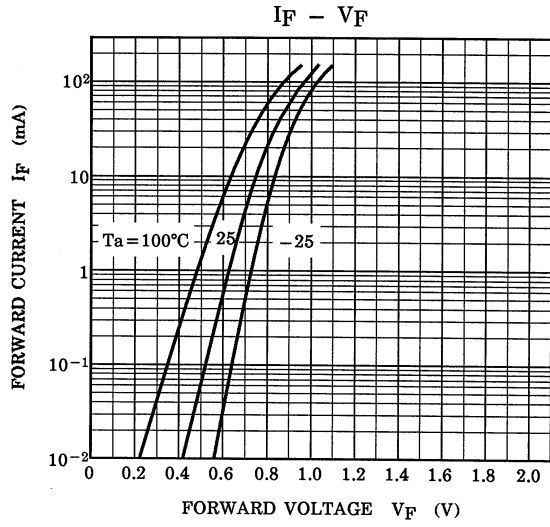
Start of commercial production  
1990-10

Marking



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





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