

# 1SS306

High Voltage, High Speed Switching Applications

Unit: mm

- Low forward voltage :  $V_F(2) = 0.90V$  (typ.)
- Fast reverse recovery time:  $t_{rr} = 30ns$  (max)
- Small total capacitance :  $C_T = 1.5pF$  (typ.)
- Small package : SC-61

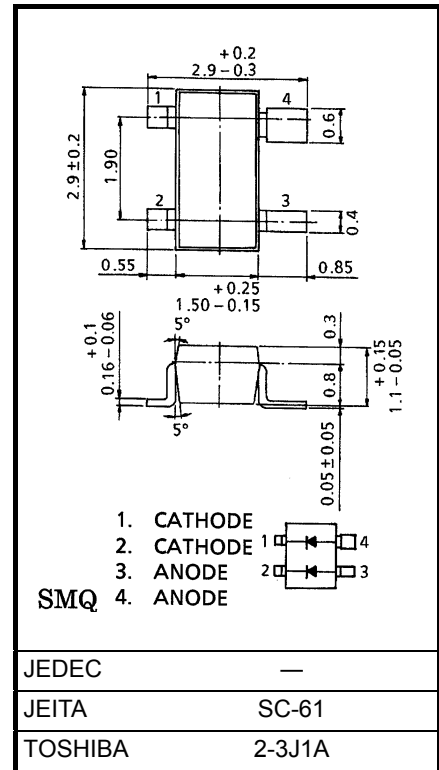
## Absolute Maximum Ratings (Ta = 25°C)

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	150	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).

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



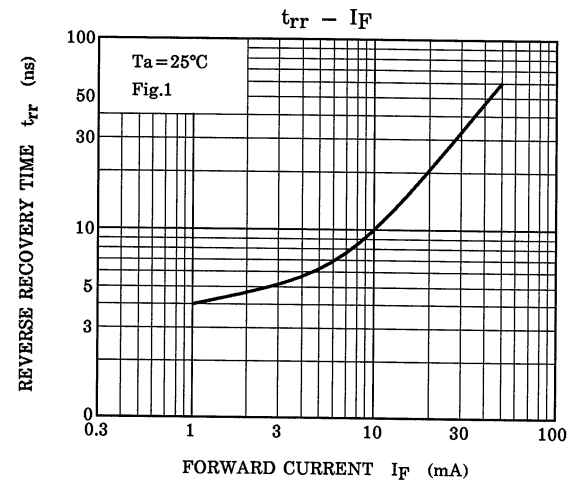
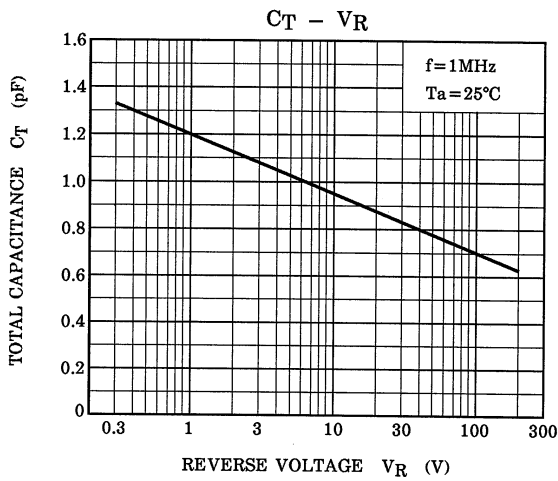
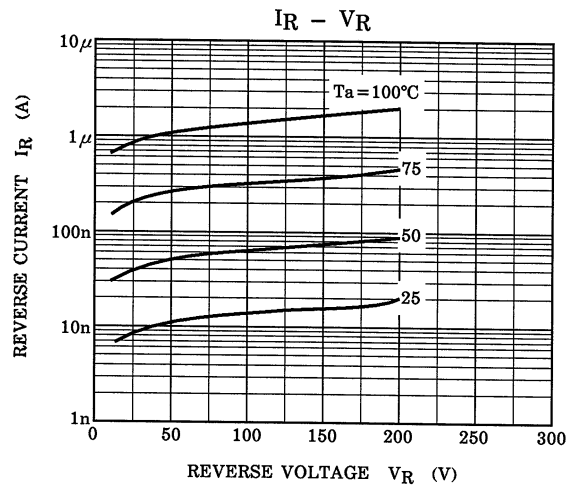
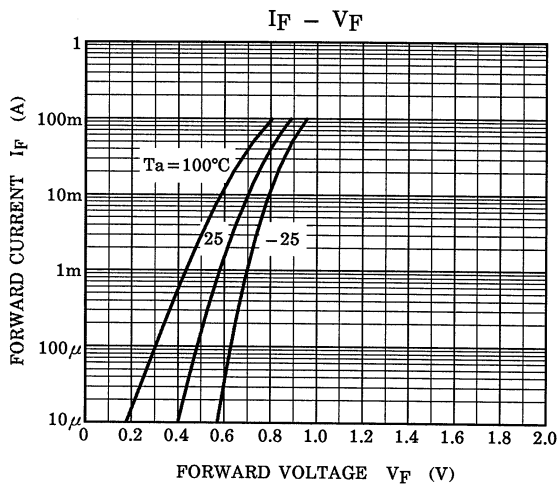
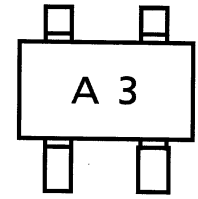
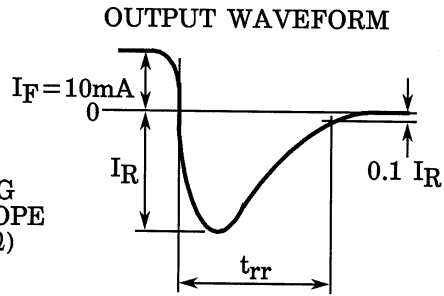
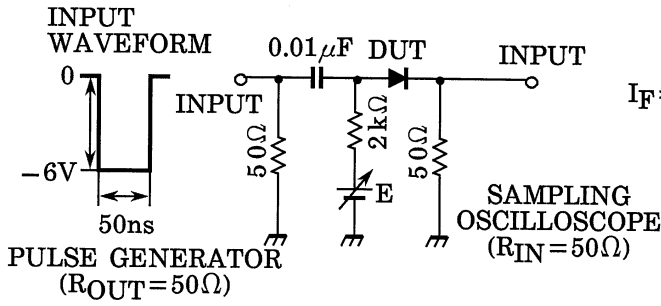
Weight: 0.013g (typ.)

## Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 10mA$	—	0.72	1.0	V
	$V_F(2)$	—	$I_F = 100mA$	—	0.9	1.2	
Reverse current	$I_R(1)$	—	$V_R = 50V$	—	—	0.1	$\mu A$
	$I_R(2)$	—	$V_R = 200V$	—	—	1.0	
Total capacitance	$C_T$	—	$V_R = 0, f = 1MHz$	—	1.5	3.0	pF
Reverse recovery time	$t_{rr}$	—	$I_F = 10mA$ Fig.1	—	30	60	ns

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

**Marking**



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