

TOSHIBA Diode Silicon Epitaxial Planar Type

# 1SS193

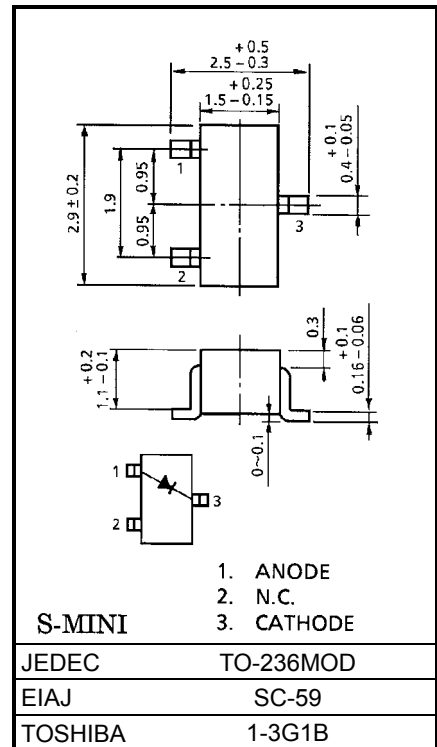
## Ultra High Speed Switching Application

Unit: mm

- Small package : SC-59
- Low forward voltage :  $V_F(3) = 0.9V$  (typ.)
- Fast reverse recovery time:  $t_{rr} = 1.6ns$  (typ.)
- Small total capacitance :  $C_T = 0.9pF$  (typ.)

### Maximum Ratings (Ta = 25°C)

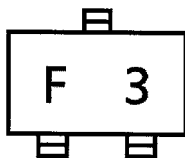
Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	85	V
Reverse voltage	$V_R$	80	V
Maximum (peak) forward current	$I_{FM}$	300	mA
Average forward current	$I_O$	100	mA
Surge current (10ms)	$I_{FSM}$	2	A
Power dissipation	P	150	mW
Junction temperature	$T_j$	125	°C
Storage temperature range	$T_{stg}$	-55~125	°C



### Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1mA$	—	0.60	—	V
	$V_F(2)$	—	$I_F = 10mA$	—	0.72	—	
	$V_F(3)$	—	$I_F = 100mA$	—	0.90	1.20	
Reverse current	$I_R(1)$	—	$V_R = 30V$	—	—	0.1	$\mu A$
	$I_R(2)$	—	$V_R = 80V$	—	—	0.5	
Total capacitance	$C_T$	—	$V_R = 0, f = 1MHz$	—	0.9	3.0	pF
Reverse recovery time	$t_{rr}$	—	$I_F = 10mA$ (Fig.1)	—	1.6	4.0	ns

### Marking



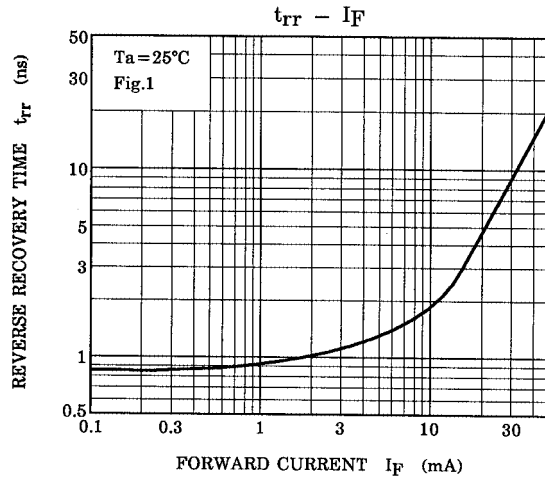
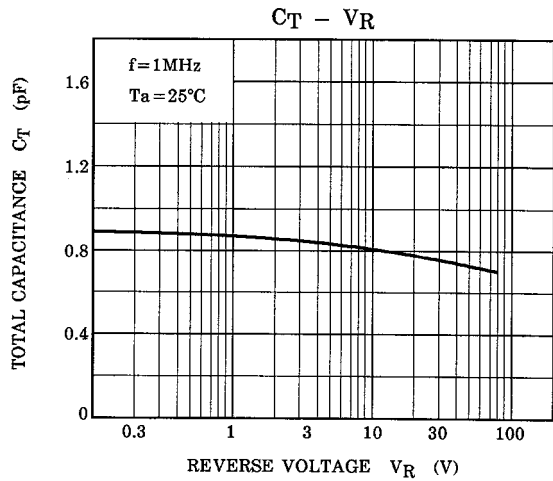
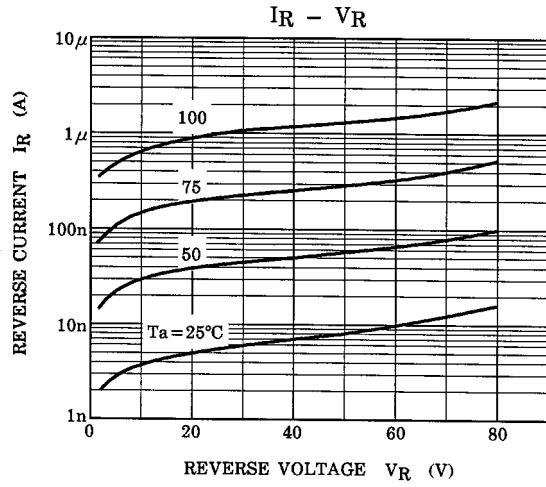
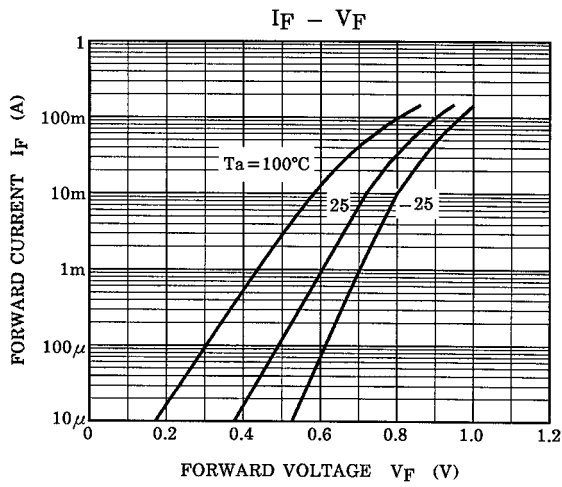
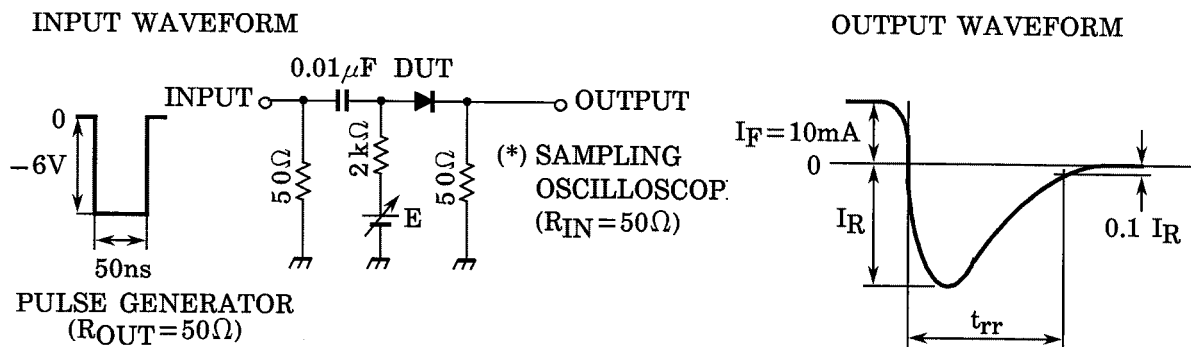


Fig.1 Reverse recovery time ( $t_{rr}$ ) test circuit



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