

TOSHIBA DIODE SILICON EPITAXIAL PLANAR TYPE

1SS193

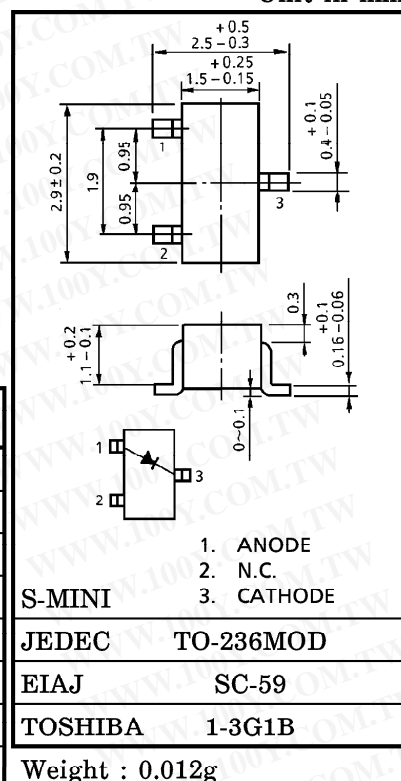
ULTRA HIGH SPEED SWITCHING APPLICATION.

Unit in 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.)

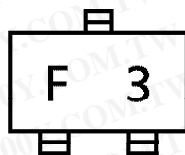
MAXIMUM RATINGS ($T_a = 25^\circ C$)

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	$^\circ C$
Storage Temperature Range	T_{stg}	$-55 \sim 125$	$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

CHARACTERISTIC	SYMBOL	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	μA
	$I_R(2)$	$V_R = 80V$	—	—	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

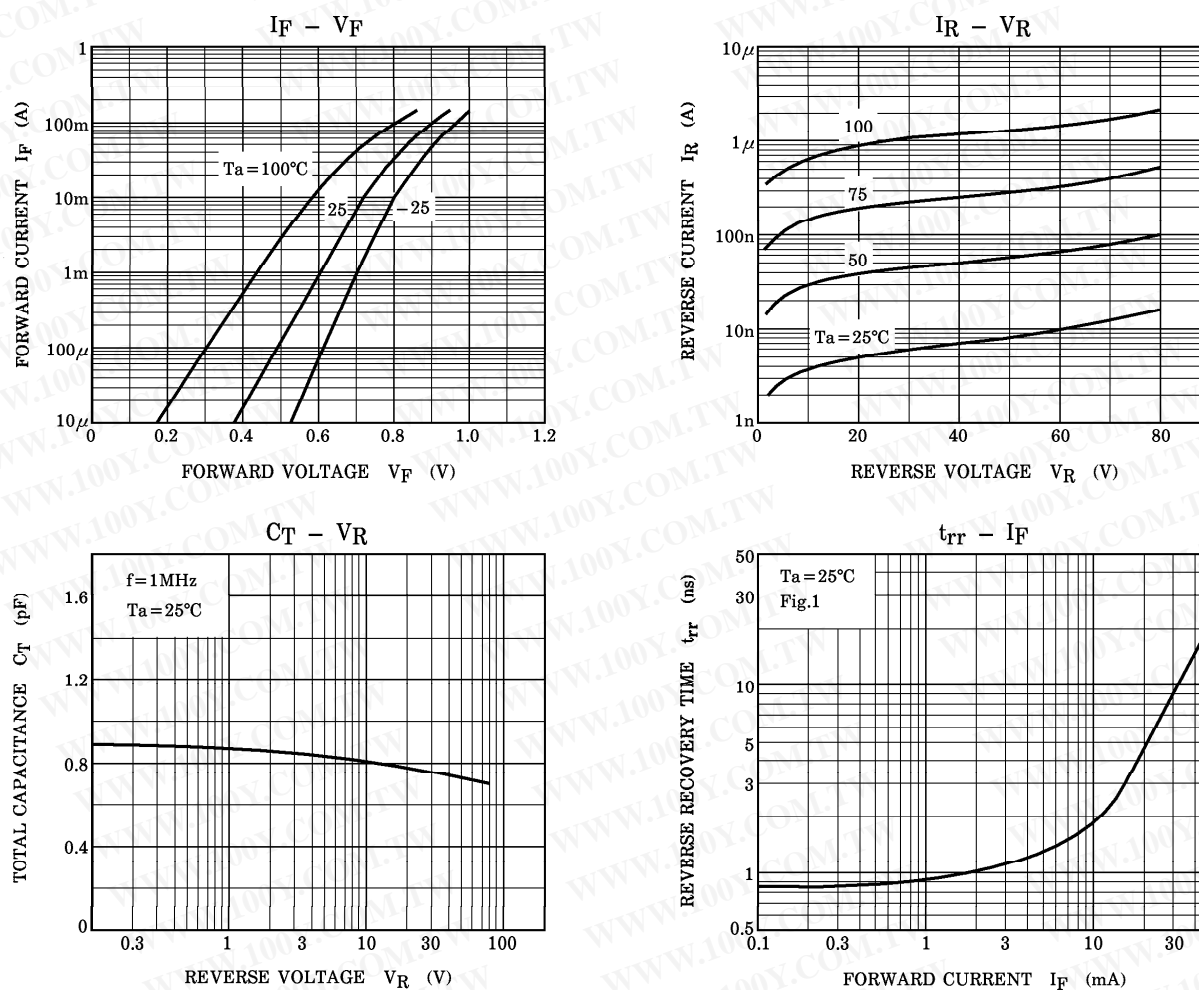
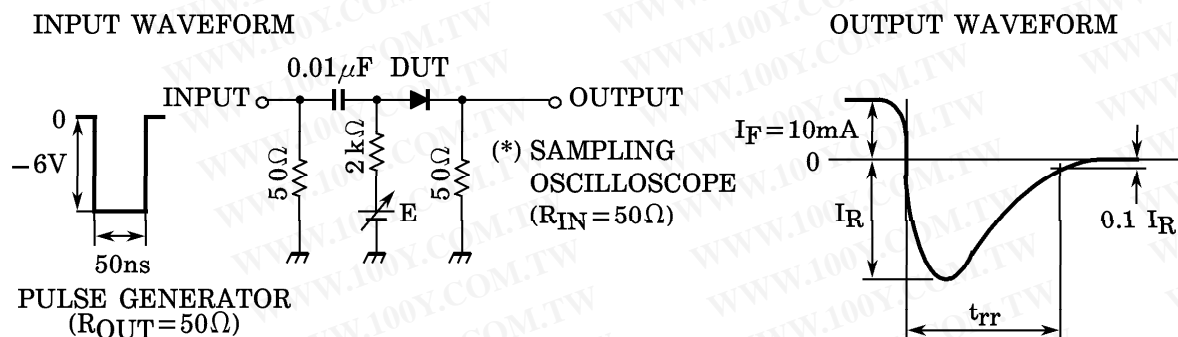
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Fig.1 Reverse recovery time (t_{rr}) test circuit

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