

TOSHIBA DIODE SILICON EPITAXIAL PLANAR DIODE

# 1SS398

HIGH VOLTAGE, HIGH SPEED SWITCHING APPLICATIONS.

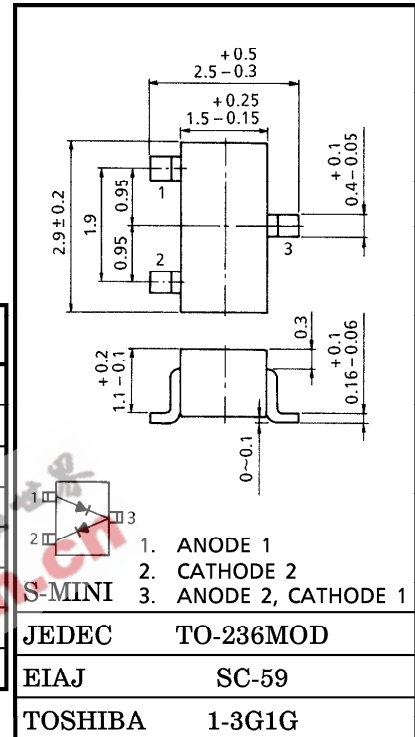
Unit in mm

- Low Forward Voltage :  $V_F = 1.0V$  (Typ.)
- High Voltage :  $V_R = 400V$  (Min.)
- Fast Reverse Recovery Time :  $t_{rr} = 0.5\mu s$  (Typ.)
- Small Total Capacitance :  $C_T = 2.5pF$  (Typ.)
- Small Package : SC-59

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum (Peak) Reverse Voltage	$V_{RM}$	420	V
Reverse Voltage	$V_R$	400	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	$T_{stg}$	-55~125	$^\circ C$

\* : Unit Rating. Total Rating = Unit Rating  $\times$  0.7



Weight : 0.012g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_F(1)$	$I_F = 10mA$	—	0.8	—	V
	$V_F(2)$	$I_F = 100mA$	—	1.0	1.3	
Reverse Current	$I_R(1)$	$V_R = 300V$	—	—	0.1	$\mu A$
	$I_R(2)$	$V_R = 400V$	—	—	1.0	
Total Capacitance	$C_T$	$V_R = 0, f = 1MHz$	—	2.5	5.0	pF
Reverse Recovery Time	$t_{rr}$	$I_F = 10mA$ (Fig.1)	—	0.5	—	$\mu s$

EQUIVALENT CIRCUIT (TOP VIEW)

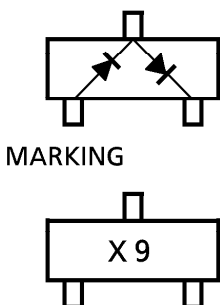
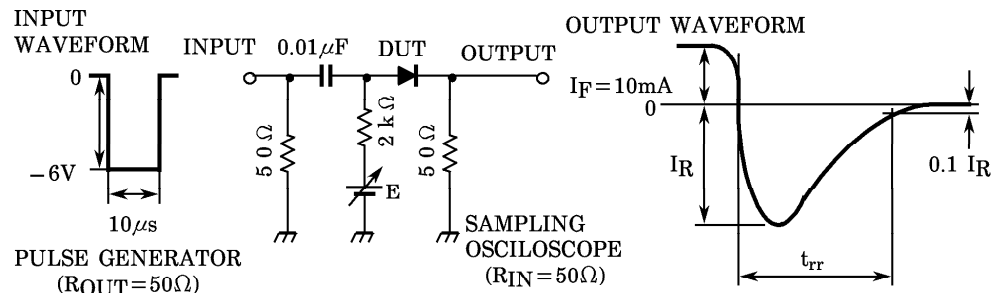
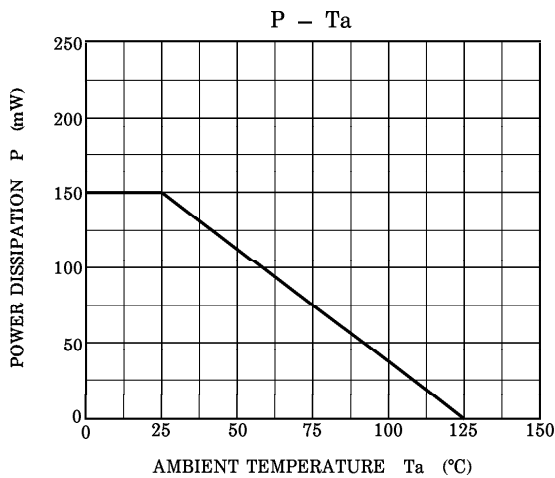
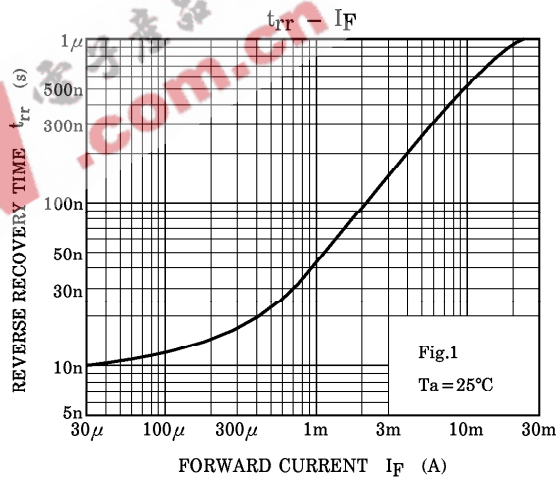
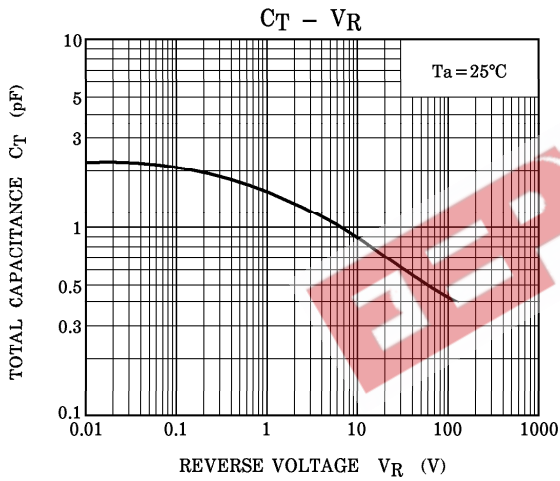
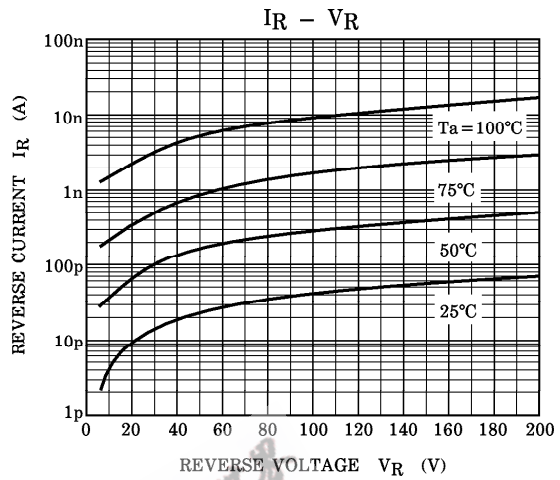
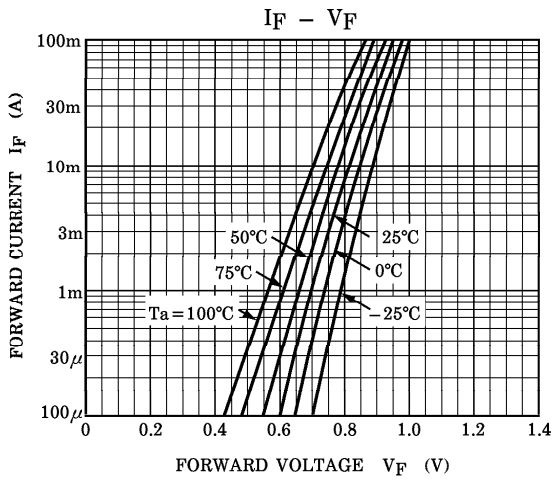


Fig1. REVERSE RECOVERY TIME ( $t_{rr}$ ) TEST CIRCUIT



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