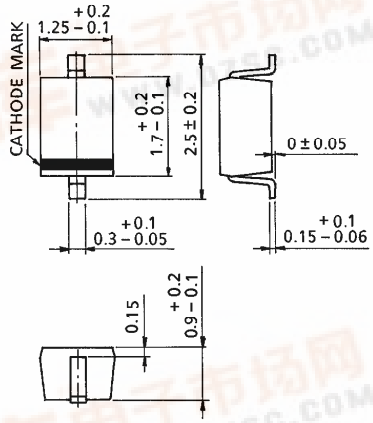
TENTATIVE TOSHIBA DIODE SILICON EPITAXIAL PLANAR TYPE

1SS403

HIGH VOLTAGE SWITCHING APPLICATIONS

Unit in mm



JEDEC	—
EIAJ	—
TOSHIBA	1-1E1A

- Two-pin small packages are suitable for higher mounting densities.
- Excellent in Forward Current and Forward Voltage Characteristics : $V_{F(2)} = 0.90$ V (Typ.)
- Fast Reverse Recovery Time : $t_{rr} = 60$ ns (Typ.)
- Small Total Capacitance : $C_T = 1.5$ pF (Typ.)

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	200 (*)	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	−55~125	°C

(*) When mounted on a glass epoxy board PCB : 20 mm × 20 mm, with copper pad 4 mm × 4 mm.

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_{F(1)}$	$I_F = 10$ mA	—	0.72	1.0	V
	$V_{F(2)}$	$I_F = 100$ mA	—	0.90	1.2	
Reverse Current	$I_{R(1)}$	$V_R = 50$ V	—	—	0.1	μA
	$I_{R(2)}$	$V_R = 200$ V	—	—	1.0	
Total Capacitance	C_T	$V_R = 0$, f = 1 MHz	—	1.5	3.0	pF
Reverse Recovery Time	t_{rr}	$I_F = 10$ mA (Fig.1)	—	10	60	ns

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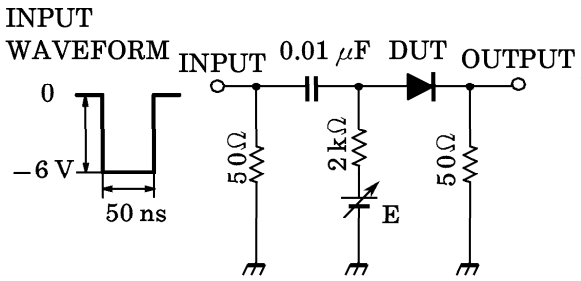
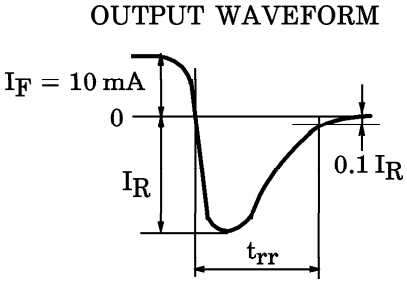
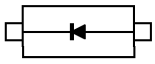
Fig1. REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT



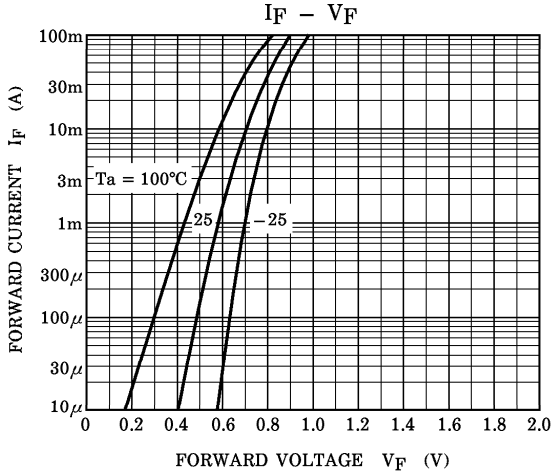


EQUIVALENT CIRCUIT
(TOP VIEW)

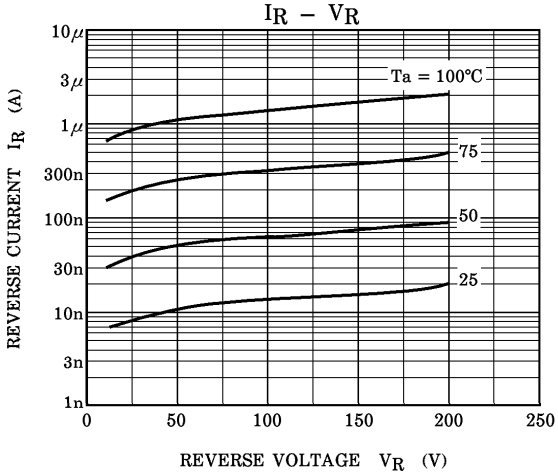


MARKING

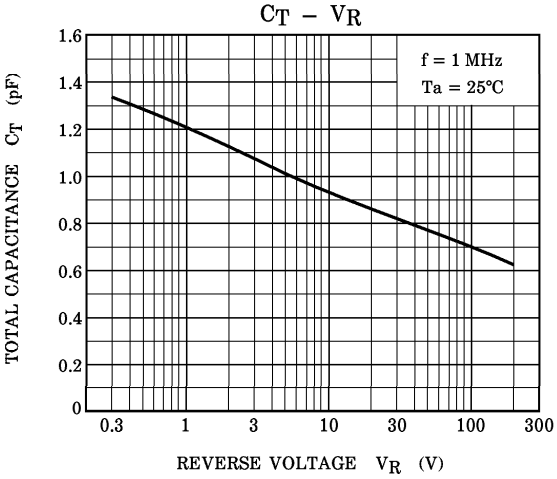
$I_F - V_F$



$I_R - V_R$



$C_T - V_R$



$t_{rr} - I_F$