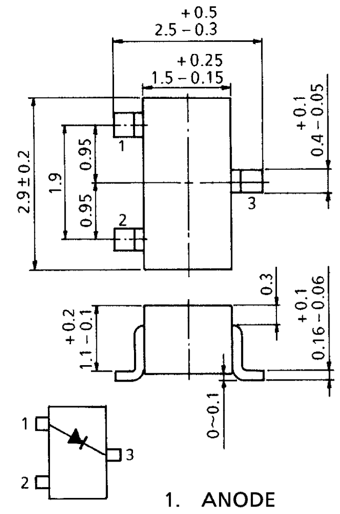
TOSHIBA DIODE SILICON EPITAXIAL SCHOTTKY BARRIER TYPE

1SS344

ULTRA HIGH SPEED SWITCHING APPLICATION.

Unit in mm



S-MINI

1. ANODE
2. N.C.
3. CATHODE

JEDEC	TO-236MOD
EIAJ	SC-59
TOSHIBA	1-3G1B

Weight : 0.012g

- Low Forward Voltage : $V_{F(3)} = 0.50V$ (Typ.)
- Fast Reverse Recovery Time : $t_{rr} = 20ns$ (Typ.)
- High Average Forward Current : $I_O = 0.5A$ (Max.)

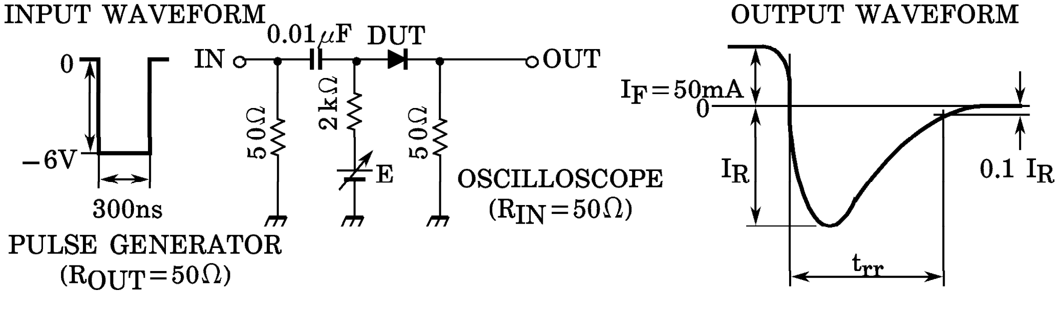
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum (Peak) Reverse Voltage	V_{RM}	25	V
Reverse Voltage	V_R	20	V
Maximum (Peak) Forward Current	I_{FM}	1500	mA
Average Forward Current	I_O	500	mA
Surge Current (10ms)	I_{FSM}	5	A
Power Dissipation	P	200	mW
Junction Temperature	T_j	125	°C
Storage Temperature	T_{stg}	−55~125	°C
Operating Temperature	T_{opr}	−40~100	°C

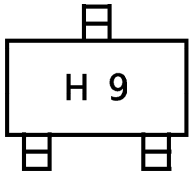
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

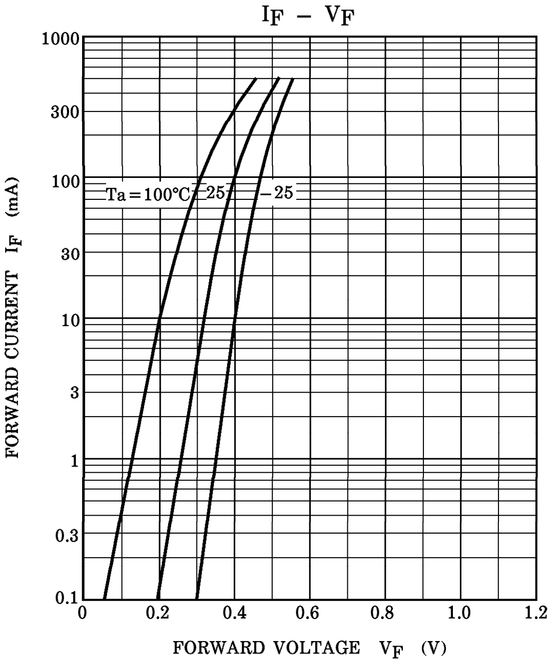
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_{F(1)}$	$I_F = 10mA$	—	0.30	—	V
	$V_{F(2)}$	$I_F = 100mA$	—	0.38	—	
	$V_{F(3)}$	$I_F = 500mA$	—	0.50	0.55	
Reverse Current	$I_{R(1)}$	$V_R = 10V$	—	—	20	μA
	$I_{R(2)}$	$V_R = 20V$	—	—	100	
Total Capacitance	C_T	$V_R = 0$, f = 1MHz	—	120	—	pF
Reverse Recovery Time	t_{rr}	$I_F = 50mA$ (Fig.1)	—	20	—	ns

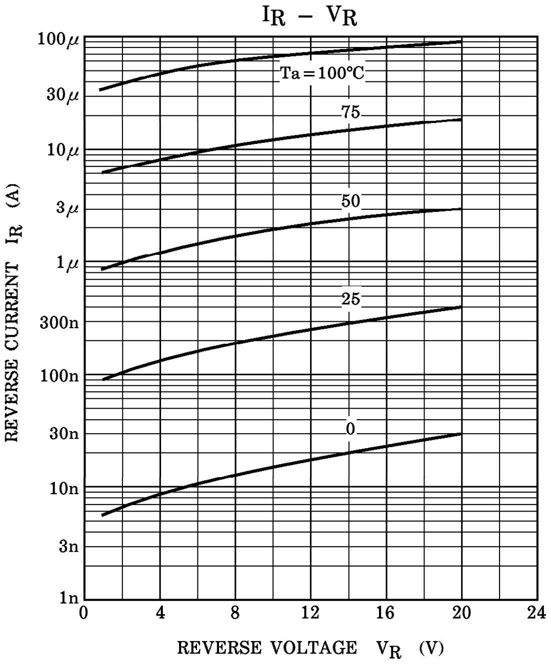
Fig.1 Reverse Recovery time (t_{rr}) test circuit



MARKING




I_F – V_F
FORWARD CURRENT I_F (mA)
1000
300
100
30
10
3
1
0.3
0.1
Ta = 100°C
25
−25
0
0.2
0.4
0.6
0.8
1.0
1.2
FORWARD VOLTAGE V_F (V)


I_R – V_R
REVERSE CURRENT I_R (A)
100μ
30μ
10μ
3μ
1μ
300n
100n
30n
10n
3n
1n
Ta = 100°C
75
50
25
0
0
4
8
12
16
20
24
REVERSE VOLTAGE V_R (V)